# ON EPP EFFECTS*

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*Abstract*. In this paper I argue that EPP effects are of two different types, NP-movement and the Filled Left Edge Effect. While NP-movement is driven in Narrow Syntax by the computation of Person, some Filled Left Edge phenomena, including Icelandic Stylistic Fronting, seem to take place in PF. Even so, these phenomena also reflect the clausal computation, that is, the matching processes that value clause internal elements in relation to features of the speech event.

## 1. Introduction

EPP (The Extended Projection Principle) effects are of two different types:

(1) EPP effects:
    a. NP-MOVEMENT
    b. The FILLED LEFT EDGE EFFECT, FLEE for short (leading to the finite declarative clause having a spelled-out left edge),[1] exemplified by phenomena such as topicalization, locative inversion, expletive merger and Icelandic Stylistic Fronting

These two types of effects often overlap and they are also commonly conflated in the literature.[2] In the approach of Chomsky (2007), FLEE should follow from the Edge Feature. Much like EPP itself however, the notion 'Edge Feature' is unclear and poorly understood. According to Lasnik (2003:1) the "EPP has been … a pervasive mystery since it was first formulated by Chomsky (1981)". Introducing the 'Edge Feature' does not clarify or remove the mystery.

While languages evidently display *effects* that have commonly been attributed to EPP, Universal Grammar contains no Extended Projection *Principle*.[3] The terms 'NP-movement' and 'FLEE' are thus just convenient descriptive labels. On the basis of evidence from mainly Icelandic and English, I argue that these two types of EPP effects have common as

[1] The informal notion 'left edge' refers to both Spec-C in 'full' finite clauses and Spec-T in clausal structures that lack an active CP layer, such as ECM infinitives. X-bar theoretic notions like Spec-C and Spec-T have no status in the approach adopted here (see section 2), but I use them occasionally as descriptive terms for expository ease.

[2] For overviews of the EPP and its history in generative research, see Lasnik (2003), Epstein & Seely (2006), Boeckx (2007).

[3] My arguments to this effect are different from the arguments developed by others (e.g., Epstein & Seely 2006), but I will not compare my approach with alternative accounts of EPP effects; it would take us much too far afield.

well as different properties. Common to both types is that they are reflections of the clausal computation, that is, the grammatical machinery that values clause internal elements in relation to features of the *speech event*.[4] They also differ, however, in that NP-movement typically involves *Person matching*, whereas FLEE may be substantiated by elements that do not match Person, including the Icelandic expletive *það* 'there, it' and non-arguments fronted by Stylistic Fronting (Holmberg 2000). An additional difference is that FLEE reflects computational relations only indirectly, in PF, while abstract NP-movement is directly driven in syntax, by the computation of Person.[5]

More specifically, I argue that EPP effects show that we need to tease apart the covert matching mechanisms behind them, that is:

   I. Matching of grammatical Person, **Pn**, in the T-domain
   II. Matching of Finiteness, **Fin**, at the TP/CP border
   III. Matching of speech event participants, Λ ('speaker'/'hearer'), higher in the C-domain than Fin
   IV. Matching of a Context-Linking feature, **CLn**, still higher in the C-domain

I will illustrate that different types of EPP effects differ with respect to these matching relations, NP-movement regularly involving relations I–III, whereas Stylistic Fronting, for instance, involves only (negative) Fin matching. Case is unrelated to EPP effects in the present approach (see further section 3).

Before I can discuss EPP effects in more detail, general background assumptions about clausal structure and the computation must be introduced. I will do so in section 2. Section 3 discusses NP-movement and the syntactic impact of Person, and section 4 discusses the properties and distribution of different types of expletives, in particular Icelandic *það* and English *there*. I develop an analysis of Stylistic Fronting in section 5, and in section 6 I discuss 'EPP-exceptions' in certain kinds of verb-initial clauses. Section 7 concludes the paper.

## 2. Clausal architecture

I adopt a cartographic approach to clausal architecture, inspired by the work of Rizzi (1997), Cinque (1999) and others. I cannot discuss the virtues of this approach in any detail here, so I will have to limit myself to

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[4] See further shortly. The *syntactic* notion of the speech event, argued for in Sigurðsson (2004b *et seq*.) and assumed here, is much more limited in scope or minimalistic than the speech event notion of Jakobson (1990 [1959]).
[5] I say 'abstract' NP movement because structures and constituents are not linked to phonological material in syntax in the approach assumed here and argued for in previous work (e.g. Sigurðsson 2006a). However, this aspect of my approach is not of any central importance for my present purposes.

introducing only those properties of it that are essential to my purposes in this article.

As has been widely discussed in the generative literature, Rizzi (1997) proposed an approach where C splits into several heads, including **Force**, **Foc**(us), **Fin**(iteness) and multiple **Top**(ics), where Force and Fin take the highest and the lowest positions, respectively. Abstracting away from Foc and multiple Top, this gives us the following minimal architecture for the ForceP, here simply referred to with the cover term CP:[6]

(2) [$_{CP}$ Force ... Top ... Fin [$_{TP}$ ...

Fin corresponds roughly to the 'core' C, attracting the finite verb in V1 and V2 contexts, whereas Force and Top are 'Spec-C elements', licensing e.g. topicalized arguments and *wh*-phrases (in cooperation with Foc).

Frascarelli (2007) and Frascarelli & Hinterhölzl (2007) argue, convincingly in my view, that several types of Top features must be distinguished (aboutness-shift topics, contrastive topics and familiar topics), suggesting that each type heads its own projection in the broad C-domain. However, not only true argumental topics but also many adverbials are semantic variables, getting their values set in relation to elements in the context (either the deictic context or the discourse context). Thus, an adverb like *then* in *Then* I saw Peter is a temporal variable with roughly the meaning "time $y$ simultaneous to or later than time $x$", where time $x$ is a contextually decided temporal referent. Generalizing, we may refer to the C heads that license context sensitive variables of this sort, arguments as well as adverbials, with the cover term *Context-Linkers*, **CLn** for short.[7] We can thus replace (2) with the more general (3):

(3) [$_{CP}$ Force ... CLn ... Fin [$_{TP}$ ...

On this understanding, 'topicalization' of both arguments (*Peter I saw*) and adverbials (*Then I saw Peter*) in e.g. the Germanic languages involves movement into the vicinity of CLn. I use the term 'vicinity of' rather than 'Spec of' for reasons to be addressed shortly.
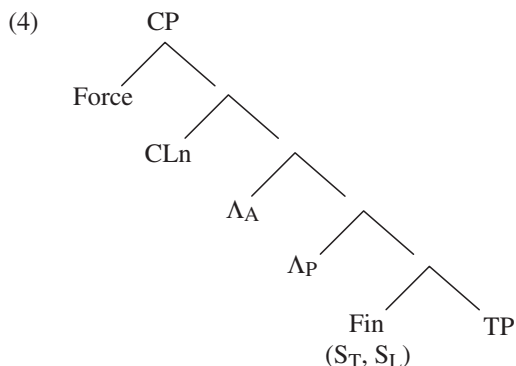
According to Rizzi & Shlonsky (2006:349) it "appears that Fin can be either nominal or verbal, but not both at the same time". Adopting the approach in Sigurðsson (2004b), I assume instead that Fin splits into two separate (but commonly indistinguishable) head features, a temporal one and a locational one, that is, *Speech Time* and *Speech Location,* $S_T$ and $S_L$ (the basic NOW and HERE of the utterance). However, I will mostly be

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[6] CP, TP and vP are here used as labels for domains, and not as X'-theoretic labels of projections. For an early, conceptually related split C-domain approach to some of the issues discussed here, see Branigan (1996).

[7] Context-linking is a more general notion than D(iscourse)-linking in Pesetsky (1987). It has a clause-internal computational side (C/Edge-linking) and a clause-external side (context-scanning). I am only concerned with the clause-internal computational side here.

using only the cover term 'Fin', as it is sufficiently accurate for most of my purposes.

Following much recent work, I assume that the C-domain also contains silent but probing (i.e., syntactically active) 'speaker' and 'hearer' features, referred to as the *logophoric agent*, $\Lambda_A$, and the *logophoric patient*, $\Lambda_P$, in Sigurðsson (2004a, 2004b *et seq*.).[8] The CP structure that I will be assuming here is thus as follows:

(4)

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        CP
       /  \
   Force    \
           CLn
          /   \
       ΛA      \
              ΛP
             /   \
          Fin     TP
       (S_T, S_L)
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CLn, $\Lambda_A$, $\Lambda_P$ and Fin are inherent features of the syntactic speech event, in the sense argued for in Sigurðsson (2004b). Similar approaches have been developed in semantic terms in earlier works, including Sigurðsson (1990) and the influential study of Schlenker (2003).

This approach is conceptually related to the *performative hypothesis* (Ross 1970), but it is formally different from it (importantly, it does not involve any performative null-predicate and is embedded in a minimalist theory of Agree, see below). See also Bianchi (2003, 2006), Di Domenico (2004), Speas (2004), Tenny (2006), Frascarelli (2007), Poletto & Zanuttini (2007), Holmberg et al. (2009), Baker (2008), Zanuttini (2008), to mention only a few works that either adopt or pursue related ideas. For speculations that silent speech event features might be needed to 'round off' the CP phase, see Chomsky (2004:108 and 125, fn. 17).

I adopt the Inclusiveness Condition on the (narrowly syntactic) computation, stated as follows by Chomsky (1995:228):

> A 'perfect language' should meet the condition of inclusiveness: any structure is … constituted of elements already present in … the items selected for [the] N[umeration]; no new objects are added in the course of computation … in particular, no indices, bar-levels in the sense of X-bar theory, etc. …

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[8] I use lambda in line with θ and φ, but I opt for a capital Λ to avoid confusion with lambda calculus. As illustrated in Sigurðsson (2004b) and (1990), the more common notions 'speaker' and 'hearer' are too simple and partly misleading, although I also use them, for ease.

Accordingly, as seen, I do not indicate any X-bar levels or projections in (4) (or in syntactic structures in general). Throughout, I also adopt the approach in Sigurðsson (2004c, 2006a, 2006b) and Sigurðsson & Holmberg (2008), where movement *tucks in* to the right of its probe rather than adding structure to its left. On this approach, Agree/Merge has properties that are reminiscent of those of a chemical reaction (where the negative electrons of one atom 'agree' with and are attracted by the positive nucleus of another atom): An abstract silent head feature **Ø** probes for a goal **G** inside of a structure X, potentially triggering movement of G as a part of the merging process (at a stage prior to the completion of Merge, when G and X are still distinct but 'mutually attracted' objects, no tampering or backtracking down into X thus being involved). If X contains an intervener INT between G and Ø, G has to move into the vicinity of Ø (or else G will be uninterpretable):[9]

(5) a. Agree (Ø probes for G):  $[\emptyset] + [_X (\text{INT}) \dots G \dots]$  >
   b. G moves (circumventing
      intervention, yielding
      successful matching of [Ø]): $[\emptyset] + [_X G [_X \text{INT} \dots \cancel{G} \dots]$  >
   c. Completion of Merge:  $[_Y \emptyset [_X G \dots]]$

Since Ø is silent, movement of G to the left edge of X illusorily looks like movement into 'Spec-Y' (Ø-G and G-Ø being overtly string identical).

   All the CP features in (4) are abstract silent features, probing for TP-internal goals. Probing is an inescapable 'reflex', whereas successful matching is only mandatory if the probed structure contains a goal that can match the probe. A matching goal either moves (tucks in) into the vicinity of the probe, as in (5b), or is matched under distant Agree (in the absence of a potential intervener). In case the probed structure does not contain any matching goal, probing is legitimately vacuous or 'ineffective' (leading to default agreement morphology, as in many impersonal constructions). In contrast, grammar prohibits vacuous *matching*. A single item *XY* commonly matches a number of features, a pronominal subject like *she* for instance being both a negative matcher of the Λ features ('neither the speaker nor the hearer') and a positive matcher of CLn (in addition to matching TP internal features to be discussed shortly). However, merging an additional item, *X* or *Y*, that *only* matches a subset of the features matched by *XY* leads to a crash. An example would be a clause like *\*Who they said this*?, where *they* only matches a subset of the features matched by *who*. Another type, to be discussed in more detail,

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[9] A special case of that arises when INT itself is an exhaustive matcher of Ø, thereby blocking G from matching it as well. For a discussion of what counts as an intervener, see Sigurðsson (2006b), cf. also Starke (2001), Rizzi (2001). Labels violate the Inclusiveness Condition and should arguably be dispensed with, but I use 'X' and 'Y' for expository ease.

would be \**There have probably been **we** elected*, where the expletive only matches a subset of the features matched by the subject *we*.

Grammar thus applies *optimal matching*, in the sense that it prohibits vacuous matching of this sort.[10] Optimal matching is a kind of an Inclusiveness Condition on the numeration: Much as the Inclusiveness Condition excludes superfluous 'alien' objects from being added in the course of the derivation, optimal matching precludes completely redundant items from being included in the numeration. As a special case of optimal matching, positive matching takes precedence over negative matching, an issue I will return to.

These assumptions are not innocent or self-evident. Many constructions in various languages would seem to violate optimal matching. Left and right dislocated constituents would for instance seem to violate it and so would various other kinds of 'partial copies' and duplicates (like, e.g., *han* 'he' in a Swedish clause like *Han är duktig han*, lit. 'He is smart he', cf. Engdahl 2003). However, abstracting away from obvious (hence commonly tolerated) performance accidents, I hypothesize that all such apparently contentless elements in grammar are contentful or functional, matching at least one feature (commonly Foc(us)) that is not also matched by the copied constituent. Conversely, I hypothesize that the copied constituent always matches at least one feature that is not also matched by its copy. This may be a too optimistic hypothesis or view, but it is not clear what other theoretical options there are or even could be.

Adopting the approach suggested in Shlonsky (1989) and later developed by Sigurðsson (2000, 2004a, 2004b, etc.), I assume that Person and Number are separate clausal heads, **Pn** and **Nr** (see also Sigurðsson & Holmberg 2008; Rezac 2008; Rizzi 2008).[11] I thus assume that universal clausal structure minimally contains the following heads (**M** = Mood):

(6) $[_{CP}$ Force … CLn … $\Lambda_A$ … $\Lambda_P$ … Fin … $[_{TP}$ Pn … Nr … M … T … $[_{vP}$ v … (NP) …]]]

The individual features of the T-domain (the T-complex), are thus independently active in syntax (the spelling out of T, M, Nr and Pn markers being a later morphological/PF process). While Pn and Nr are contentful categories, morphological Pn/Nr agreement of finite verbs in languages like French and Icelandic is uninterpretable in the sense of Chomsky (1995 *et seq.*), arising in PF in the approach assumed here (see shortly).

In radical pro drop and non-agreement languages, such as Chinese, Pn and Nr may remain unexpressed in finite clauses, whereas they are

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[10] See also 'Maximize matching effects' in Chomsky (2001:15).

[11] I am abstracting away from many features that are arguably heads in the clausal cartography, such as Foc(us), abstract Gender (as opposed to morphological gender) and numerous features of the modal and aspectual domains. For the most part, I will also be abstracting away from non-subject Person and Number.

commonly doubly spelled out in languages like French, German and Icelandic, both on an overt subject and in verbal agreement. English commonly expresses Pn and Nr on only arguments (*We stayed-ø there*, etc.), and, e.g., Afrikaans and the mainland Scandinavian languages do so exclusively (lacking all finite verb agreement). Such variation in the overt expression of syntactic categories does not generally seem to have any deep syntactic or semantic correlates. Plausibly, though, adjacent silent features that are not separately treated by any process in syntax or morphology bundle up by simple addition, thereby functioning as a single head:

$$\Lambda_A + \Lambda_P = \Lambda_A\text{--}\Lambda_P (= \Lambda \text{ for short}) \qquad S_T + S_L = S_T\text{--}S_L (= \text{Fin})$$
$$\Lambda + \text{Fin} = \Lambda\text{--Fin}, \text{etc.}$$

I adopt this *Head Unification* hypothesis, as informally stated in (7):

(7) Adjacent silent heads bundle up, thereby functioning as a single head, unless they are separately active in the derivation[12]

In addition, inactive silent heads are obviously indistinguishable from their spelled out immediate neighbors in PF. Thus, using 'T' as a cover term for the T-complex is descriptively 'PF-adequate' for languages like Afrikaans and the mainland Scandinavian languages and 'almost PF-adequate' for English. However, Pn and Nr are separately active in the syntax of all these languages, and presumably universally, crucially partaking in the computation of arguments (and licensing their lexicalization, when they are spelled out).

Arguments are complex syntactic structures with phi-feature variables, $Pn_\alpha$, $Nr_\beta$, etc. (cf. Déchaine & Wiltschko 2002; Platzack 2004 and others). As pointed out in Sigurðsson & Holmberg (2008), a predication like *write (x, y)* or *write ($\theta_1$, $\theta_2$),* can of course be expressed as in (8):

(8) writer write (to) writee

However, this is not how language typically works. Rather, any argument must match the clausal Pn head as being either +Pn or –Pn, +Pn arguments in turn entering a further matching relation with the $\Lambda$ features, this second and higher matching yielding the actual person values of a pronoun. This is sketched below, where the arrow reads 'gets valued as':

(9) $NP_{\alpha Pn} \rightarrow NP_{+Pn}$ or $NP_{-Pn}$

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[12] I assume that bundled up features (in contrast to matched features) are in principle 'domain homogeneous', C-domain features bundling up with only C-domain features, etc. If so, T-domain elements match C-features, but are unable to silently bundle up with them.

(10) a.  $+\text{Pn} \rightarrow +\Lambda_A, -\Lambda_P = $ 1P by computation
   b.  $+\text{Pn} \rightarrow -\Lambda_A, +\Lambda_P = $ 2P by computation
   c.  $+\text{Pn} \rightarrow -\Lambda_A, -\Lambda_P = $ 3P by computation
   d.  $-\text{Pn}:$ $\qquad\qquad\quad = $ 3P by default[13]

Similarly, a vP event is either valued as $+\text{T(ensed)}$ or $-\text{T}$, $+\text{T}$ in turn entering a further matching relation with (the $S_T$ feature of) Fin.[14] Thus, the T-domain of grammatical features mediates between the (largely silent) 'context domain' of the C-layer and the 'content domain' of the vP (this is inspired by Platzack 2001, who pursues the same intuition, though approaching and formalizing it differently).[15]

In this approach, all syntactic features are interpretable (uninterpretable agreement arising in PF, cf. Marantz 2000; Sigurðsson 2004c, 2006a). However, they enter syntax unvalued (uninterpreted), being valued (interpreted) in the course of the derivation, as just sketched for Person. The syntactic computation is thus about merging vP internal categories and valuing or interpreting them, via T-features, in relation to C-features.

Having laid out my background assumptions about clausal architecture and the computation, I now move on to discuss EPP effects, first NP-movement (section 3) and then FLEE (sections 4–6).

## 3. Person computation and NP-movement

It has been argued that case is not a syntactic feature (see Sigurðsson 2009 and the references there, e.g. Marantz 2000), and there is now a broad consensus that "Case assignment is divorced from movement" (Chomsky 2001:17). A wide array of facts considered in Zaenen et al. (1985) and in Sigurðsson (1989) and subsequent work indicates that this is correct (see e.g. (15) below), raising the question of what other factors might drive NP-movement. In Sigurðsson (2003), I proposed that Person matching is the crucial factor behind it, at least in nominative-accusative systems.[16] This hypothesis falls into place in the approach outlined above, as I will illustrate in the following.

Reconsider the structure in (6) = (11):

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[13] The 'no person' approach to the 3 person (of Benveniste 1966 and others) has long been tantalizingly 'correct and incorrect', as is well known. The dilemma disappears under the present approach.

[14] This is a simplification, but it is sufficiently accurate for my present purposes.

[15] More is required to account for Number computation and for in-/exclusiveness of plural arguments, but I will not go into further details here. This sketch is sufficiently detailed to demonstrate the general approach.

[16] Boeckx (2007) also argues in favor of Person being crucially important with respect to (certain) EPP effects. Others, including Miyagawa (2005), have also pursued (different implementations of) the idea that EPP effects result from more than one matching correlation.
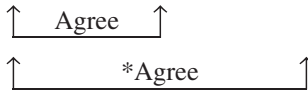
(11) [$_{CP}$ Force … CLn ... $\Lambda_A$ ... $\Lambda_P$ ... Fin ... [$_{TP}$ Pn ... Nr ... M … T ...
[$_{vP}$ v ... (NP) ...]]]

In order to get valued as +Pn and to subsequently match the $\Lambda$ features, an NP has to move into the vicinity of Pn, where it tucks in. Notice that if the argument would only need to match Pn, it should be able to do so under distant Agree. That is, the reason why it has to raise is plausibly that it also has to match the $\Lambda$ features of the C-domain, i.e., it cannot match both Pn and $\Lambda$ *across Pn* by distant Agree. In other words, (12) below is well formed, whereas (13) is not. The notation Pn/NP indicates that the moved NP tucks in under Pn, thereby matching Pn. The Pn matching values NP as NP$_{+Pn}$, NP$_{+Pn}$ in turn, matching the $\Lambda$ features, positively or negatively:[17]

(12)     [$_{CP}$ ... $\Lambda$-Fin ... [$_{TP}$ ... Pn/**NP$_{+Pn}$** … [$_{vP}$ v ... ~~NP$_{\alpha Pn}$~~...]]

        ↑   Agree   ↑↑   Move   ↑

(13)   * [$_{CP}$ ... $\Lambda$-Fin ... [$_{TP}$ ... Pn ... [$_{vP}$ v ... NP$_{\alpha Pn}$... ]]

        ↑   Agree   ↑

        ↑   *Agree   ↑

As indicated, I assume that (the locational factor of) Fin and $\Lambda$ bundle up in structures like (12), by Head Unification (yielding $\Lambda$-Fin). Plausibly, also, a fully matched probe like Pn in (12) that has attracted its goal thereby vanishes as a syntactic object, that is, Pn/NP$_{+Pn}$ = NP$_{+Pn}$. However, for expository ease, I will use the notation $X/Y$ here to indicate that $Y$ has been attracted by $X$.

The Definiteness Effect (the correlation between definiteness, NP-movement and Pn) bears on this approach. By (10c, d), 3p is either a 'true', computed person, +Pn, or 'no person' (default, arbitrary or generic 3p, i.e. –Pn). Definiteness and Person are closely related categories (cf. Lyons 1999:313ff.), both interpreting vP internal thematic elements (propositional event participants) in relation to participants that are deictically or contextually known or given (discourse/speech event participants). The relation between these categories (Def and Pn) seems to be such that they are independent computational features (valuing arguments as +Def or –Def and as +Pn or –Pn), the value +Def nonetheless preconditioning the value +Pn.[18] If so, all +Pn arguments

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[17] Pn matching of $\Lambda$-Fin is an (extended) A-relation and not an A′-relation. Thus, Chomsky's (2008) disjunction of A- and A′-chains is not relevant here.

[18] In a sense, definiteness is a general focalizer, narrowing the 'relevant set of discourse elements', S$_{disc}$. True person narrows the set still further, down to '(speech and discourse) local participants'.

should also be $+$Def, which seems to be essentially correct. The correlation does not hold in both directions: Clearly, not all $+$Def arguments are semantically also 'truly personal' (*the car*, *the country*, etc.). However, all $+$Def arguments that are in the 1st or the 2nd persons and many 3rd person $+$Def arguments get valued $+$Pn by computation. It is thus plausible to assume that the formal Person valuing for $+$Def arguments tends to get 'grammaticalized' or conventionalized as $+$Pn, yielding 3p by computation rather than by default. If we assume that this is true of languages like English and Icelandic, we have an account of the core facts of the Definiteness Effect in these languages, that is, it can then be analyzed as involving raising of $+$Pn arguments.[19] Consider (14):

(14) a.   There have probably been **some democrats** elected to the board.
      b. *There have probably been **the democrats** elected to the board.
      c. *There have probably been **I/you/we/they** elected to the board.

Chomsky (2001:7) argues that "expletives must have the feature [person]". That seems to be true of English *there*, as suggested by the fact that its associate triggers number agreement (plural *have* in (14a)), but cannot trigger true person agreement. That follows if *there* enters into a matching relation with Pn, which is thus 'taken' (Richards 2004). It also follows that the expletive is incompatible with the true person matching pronouns in (14c), that is, the personal pronouns are 'stronger' Pn matchers than the expletive, thus rendering it superfluous and hence ungrammatical (i.e., including it in the numeration would violate optimal matching).

   This is simple and elegant. However, Icelandic illustrates that the issues at stake are more complex. First, it shows that the Definiteness Effect is not about the expletive but about the argument NP (cf. e.g. Sigurðsson 1989). This is illustrated in (15), where the clause-initial element is the context-linking adverbial *þá* 'then', there thus not being any expletive in the clause:

(15) a. Þá    hafa      sennilega verið kosnir **einhverjir**
        then have.3PL  probably   been  elected some
        **demókratar**    í   stjórnina.
        democrats.NOM    to  board.the
        'Then there have probably been some democrats elected to the board.'

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[19] See also Lyons (1999:313ff.) for arguments that "definiteness and person should be conflated." However, a number of facts indicate that this may be a too optimistic view, in which case clausal architecture or its computation is more complex than assumed here. One such fact, pointed out by a reviewer, is that English locative inversion is compatible with definite postverbal NPs (*Among the guests of honor was sitting the mayor/my friend Rose*), as opposed to anaphoric pronouns (*\*Rose$_i$? Among the guests of honor was sitting she$_i$/her$_i$*, cf. Bresnan 1994:86). Another such fact is that Icelandic tolerates certain violations of the Definiteness Effect by definite full NPs, to a limited extent, whereas subject pronouns never fail to raise (see Thráinsson 2007, chapter 6). All facts of this sort suggest that the present approach may need to be complemented by a finer grained theory of definiteness and NP types, a task that I will however not undertake here.

  b. *Þá     hafa     sennilega verið kosnir **demókratarnir**        í
     then have.3PL probably  been  elected democrats.the.NOM to
     stjórnina.
     board.the
  c. Þá     hafa     **demókratarnir**        sennilega verið kosnir í
     then have.3PL democrats.the.NOM probably  been  elected to
     stjórnina.
     board.the
     'Then the democrats have probably been elected to the board.'

Second, Icelandic shows that nominative case is fully grammatical vP-internally, as in (15a) (this is a general phenomenon in Icelandic and many other languages, see the discussion in e.g. Sigurðsson 1989, 2008, 2009). Nonetheless, the definite NP in (15b,c) has to raise. Parallel facts are illustrated for a personal pronoun in (16):

(16) a. *Þá     höfum    sennilega verið kosnir **við**    í   stjórnina.
        then have.1PL probably  been  elected we.NOM to board.the
     b. Þá     höfum    **við**    sennilega verið kosnir í   stjórnina.
        then have.1PL we.NOM probably  been  elected to board.the

These facts raise the question of why +Pn and +Def subjects should have to move from a legitimate nominative case position.[20]

Simple as it is, this is a big problem for the approach to Agree developed in Chomsky (2000, 2001): Since the clause in (16a) does not contain any NP other than precisely the nominative *við*, it is not ruled out by containing a non-licensed 'extra' NP (in contrast to the English (14b, c)), and, seemingly, intervention does not arise either, suggesting that the finite verb should be free to probe for the person of the nominative. As seen in (15a), it does probe the nominative for number, so why should it not also be able to probe it for person?

As suggested above, the reason does not seem to have to do with Pn matching as such (yielding +Pn); if only that was at stake, plain Agree should do:

(17)  [CP .. [TP Pn ..    [vP NP ..]]
          ↑ Agree ↑

Plausibly, therefore, the reason why the pronoun in (16) has to raise into the vicinity of Pn is that it does not only have to match Pn but also the Λ features, in order to yield the exact value of +Pn, as 1, 2, or 3

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[20] Another question raised by examples like (15a) in the Scandinavian languages is why these languages differ from English in allowing indefinite NPs in the object position of passives and unaccusatives (cf. English *Then there have probably been *elected some democrats* vs *Then there have probably been *some democrats elected*). I will not discuss this intriguing question here.

(by computation), see (12)–(13) above. On this account, Λ-Fin may probe Pn/NP$_{+Pn}$ under Agree, as in (12), whereas it cannot probe NP$_{\alpha Pn}$ across Pn, as in (13), Pn in that case acting as an intervener. That is, clauses like (16a) are ruled out by covert intervention of Pn, between NP$_{\alpha Pn}$ and Λ-Fin.

If definite NPs like *the democrats* in (14b) and *demókratarnir* in (15b, c) are valued as +Pn, as suggested above, thus being 3p by computation rather than by default, this analysis of the ungrammaticality of (16a) extends to (14b) and (15b).

Pn-matching is independent of case, a conclusion that gains further support from so-called quirky agreement. As has been widely discussed (see Sigurðsson & Holmberg 2008 and the references there), nominative 3p objects control number agreement in Icelandic DAT-NOM constructions, as illustrated in (18):

(18) Henni    mund**u**    ekki  líka  **þeir**.
     her.DAT  would.3PL   not   like  they.NOM
     'She would not like them.'

In contrast, nominative objects never control (unambiguous) 1st and 2nd person agreement, as illustrated in (19):

(19) a. *Henni    mund**um**   ekki  líka  **við**.
         her.DAT  would.1PL   not   like  we.NOM
         Intended: 'She would not like us.'
     b. *Henni    mund**uð**   ekki  líka  **þið**.
         her.DAT  would.2PL   not   like  you.NOM.PL
         Intended: 'She would not like you.'

The agreement contrast between (18) and (19) is understandable if Icelandic quirky subjects are as 'subjecty' as they are by entering a covert Agree relation with Pn, Pn thus not being able to also overtly agree with the nominative object. This is illustrated in (20) and (21):[21]

(20)    her.DAT would.3PL not like they.NOM        DAT    Pn / Nr    NOM
                                                  ↑ covert ↑ ↑ overt ↑

(21) a. * her.DAT would.1PL not like we.NOM        DAT       Pn / Nr     NOM
     b. * her.DAT would.2PL not like you.NOM.PL   ↑  covert  ↑↑  overt   ↑
                                                  *↑      overt        ↑

In contrast to Icelandic quirky subjects, dative experiencers in numerous other languages (German, Russian, many South-Asian languages, etc.),

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[21] The diagrams in (20)–(21) are just surface descriptions. As discussed in Sigurðsson & Holmberg (2008), the Pn-agreement relation is arguably established prior to A-movement.

do not have unequivocal subject properties, nor do they interfere with or block Person agreement. Undergoing NP-movement and 'being a subject' thus seems to be intimately related to Pn matching. The computation of Person in relation to the Λ features of the C-domain may not be the only factor that can possibly trigger NP-movement (cf. Miyagawa 2005). However, I contend that that it is at least the central 'EPP-factor' behind NP-movement in nominative-accusative languages like Icelandic and English.

## 4. *Það* and CLIC

As mentioned above, English expletive *there* can be successfully analyzed as a [person] element, matching the clausal Pn feature:

(22) [$_{CP}$ ... Force ... CLn ... Λ-Fin ... [$_{TP}$ Pn/*there* ...

I assume that Pn/*there* (negatively) matches Λ-Fin (and potentially also CLn), under Agree (i.e., without moving into the C-domain). Assuming that *there* is –Λ and –Speech Local, thus negatively matching the speech participant features and the locational factor of Fin, seems to be essentially correct. A regular, definite subject also matches the CP speech event features under Agree, the difference being that it matches at least one of them positively ($+\Lambda_A$ and $+$Speech Local in the case of the first person pronoun, $+$CLn in the case of 3 person pronouns, and so on).

In short, English *there* shows much the same NP-movement type of EPP effects as regular definite arguments, plausibly because it is a [person] element. The Icelandic expletive *það* 'there, it' behaves very differently, not sharing any A-properties with regular subjects. Thus, it differs from English *there* and for instance Mainland Scandinavian *det* in never interfering with any kind of agreement. Compare the Swedish clause in (23a) with the Icelandic one in (23b) (from Sigurðsson 2004b):

(23) a. **Det**      blev skjut<u>et</u>      älgar.
        it.NT.SG was shot.NT.SG moose
        'There were some moose shot.'
     b. Það vor<u>u</u>      skotn<u>ir</u>      **hvalir**.
        it    were.3PL shot.NOM.M.PL whales.NOM.M.PL
        'There were some whales shot.'

The Swedish expletive *det* triggers (underlined) agreement of the participle *skjutet*, whereas both verbal and participial agreement in Icelandic is controlled by the post-verbal nominative associate of *það*, *það* itself never having any agreement effects whatsoever. Rather, it merely instantiates the FLEE in (1b), repeated here:

(1) EPP effects:
    a. NP-movement
    b. The Filled Left Edge Effect, FLEE for short (leading to the finite declarative clause having a spelled-out left edge), exemplified by phenomena such as topicalization, locative inversion, expletive merger and Icelandic Stylistic Fronting

Thus, *það* is subject to a remarkable restriction, *The Clause Initial Constraint*, CLIC.[22] That is, it is confined to the first position in finite clauses, both main and subordinate clauses, thereby differing from referential subjects, in fact from all other lexical items in the language. This is illustrated with English glosses in (24):

(24) a. **Það** had been sold some boats at the auction.
    b. Had (\***það**) been sold some boats at the auction?
    c. Then had (\***það**) been sold some boats at the auction.
    d. … that [**það** had been sold some boats at the auction].
    e. … whether [then had (\***það**) been sold some boats at the auction].
    f. … at what time [**það** had been sold some boats at the auction].
    g. I believed [(??**það**) have been sold some boats at the auction].[23]

In the influential analysis of Platzack (1987) and Holmberg & Platzack (1995), it was assumed that *það* was strictly confined to (an unsplit) Spec-C and hence that subordinate clauses with *það* had to be analyzed as involving a recursive CP layer, as illustrated for two examples in (25):

(25) a. … $[_{CP}^1$ Ø $[_{C'}$ that $[_{CP}^2$ **það** $[_{C'}$ had $[_{IP}$ …
    b. … $[_{CP}^1$ at what time $[_{C'}$ Ø $[_{CP}^2$ **það** $[_{C'}$ had $[_{IP}$ …

However, if only recursion of C and its projections was involved, both its occurrences should be featurally non-distinct, which, if taken to its extreme, predicts that grammar allows endlessly duplicated, non-distinct features. It is not a trivial matter to theoretically exclude such an approach, but it will remain unattractive unless it can be embedded

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[22] The term The Clause Initial Constraint was coined in Sigurðsson (2004b), but the properties of the Icelandic expletive have been widely discussed. See, for instance, Thráinsson (1979, 2005, 2007), Rögnvaldsson (1984), Zaenen (1985), Platzack (1987), Ottósson (1989), Sigurðsson (1989), Magnússon (1990), Rögnvaldsson & Thráinsson (1990), Jónsson (1991, 1996), Holmberg & Platzack (1995), Holmberg (2000), Vangsnes (2002).

[23] Some speakers accept the expletive in ECM infinitives (see Thráinsson 1979:357, 446, 481f.), but authentic examples are hard to find, it seems (on Google, for instance). I restrict my account to my own (and, I believe, the central) variety, where the expletive is unacceptable in ECM albeit not as sharply ungrammatical as in post-verbal position in finite clauses.

in a theory that somehow restricts feature 'stuttering' (this may be just a matter of pragmatics, but that remains to be shown, as far as I know). In fact, it is evident that the C heads in the structures in (25) are feature distinct, hence being differently lexicalized and also licensing different types of 'specifiers'. Thus, the expletive is only licensed in the lower CP, that is, the order of CP$^1$ and CP$^2$ is irreversible: *$\textit{það}$ *that had*, etc.

Expletive *það* in embedded clauses is common and neutral, as extensively demonstrated by Magnússon (1990). Consider (26):

(26) a. ... að  **það**  væri draugur í  eldhúsinu.
      ... that there was  ghost   in kitchen.the
      '... that there was a ghost in the kitchen.'
   b. ... hvort  (að)  **það**  væri draugur í  eldhúsinu.
      ... whether (that) there was  ghost   in kitchen.the
   c. ... hvenær (að)  **það**  væri draugur í  eldhúsinu.
      ... when  (that) there was  ghost   in kitchen.the
   d. ... eins og (að)  **það**  væri draugur í  eldhúsinu.
      ... as   if (that) there was  ghost   in kitchen.the
   e. ... þegar (að)  **það**  væri draugur í  eldhúsinu.
      ... when (that) there was  ghost   in kitchen.the

And so on. As very clearly demonstrated by Magnússon (1990), *það* is neutral in almost any kind of subordinate clauses, with basically only one type of exceptions, namely:

(27) *Það* can act as an intervener between an operator and a variable, blocking a matching relation between the two

That is, *það* is excluded from many relatives, comparatives, interrogatives and clauses extracted from. This holds in particular if the variable is the subject of the 'gapped' clause, as in (28):

(28) a. Þetta er maður sem (*það)  elskar allar bækur.
      this  is man  who (*there) loves all   books
      'This is a man who loves all books.'
   b. Hún spyr hver (*það)  elski allar bækur.
      she  asks who (*there) loves all   books
   c. Þessi maður veit  ég að  (*það)  elskar allar bækur.
      this  man   know I  that (*there) loves all   books

This is much as in English and many other related languages (apart from the fact that Icelandic does not show any *that*-trace effects). I will return to this is section 5, where I argue that it is directly accounted for if *það*

has a matching function that is already served by the empty subject variable.[24]

The most central and general fact about *það* is CLIC, namely that *það* must not be spelled out *when some other element takes the first position of the clause*. We saw this in (24) and it is further illustrated in (29) (for the transitive expletive construction, but the same holds for other expletive constructions, such as intransitive existential predicates and weather predicates):

(29) a. **Það** höfðu margir stúdentar lesið auglýsinguna       í
         there had  many  students  read announcement.the in
         gærdag.
         yesterday
         'Many students had read the announcement yesterday.'
     b. Margir stúdentar höfðu (\*það) lesið auglýsinguna í gærdag.
     c. Auglýsinguna höfðu (\*það) margir stúdentar lesið í gærdag.
     d. Í gærdag höfðu (\*það) margir stúdentar lesið auglýsinguna.

This even holds in yes/no-questions, where Spec-C is not lexicalized:

(30) Höfðu (\*það)   margir stúdentar lesið auglýsinguna       í
     had    (\*there) many   students  read announcement.the in
     gærdag?
     yesterday

In Sigurðsson (2004b), I proposed an analysis where *það* negatively matches Fin (its locational factor) and other speech event features under distant Agree, *það* thereby representing the values –Λ, –Fin.[25] As illustrated in (31), where '[Ø]' denotes phonetic emptiness, this gives us a uniform account of the CLIC in both main and subordinate clauses:[26]

[24] Notice that the distribution of Icelandic *það* is markedly different from the distribution of German (existential) *es* 'there', the latter being strictly confined to main clause initial position (cf. Mohr 2005):
(i) a. **Það** er draugur í  eldhúsinu.
       there is ghost  in kitchen.the
       'There is a ghost in the kitchen.'
    b. … hvers vegna **það** er   draugur í kitchen.the
       … what for       there was ghost   in kitchen.the
       '… why there is a ghost in the kitchen'.
(ii) a. **Es**  ist ein Gespenst in der Küche.
        there is a  ghost     in the kitchen
     b. \*… warum **es**   ein Gespenst in der Küche ist.
        … why       there a  ghost      in the kitchen is
[25] As I also argued, a distinction has to be made between negative matching (yielding negative valuing) and no matching (yielding no valuing).
[26] The analysis in (31) is slightly different from my (2004b) approach, where I assumed that *það* is in Spec-T (as in, e.g., Ottósson 1989; Rögnvaldsson & Thráinsson 1990; Magnússon 1990). *Hvort, ef, þegar* in (31c–d) are plausibly Force elements.

(31) a. *Main clauses*: [$_{CP}$      [Ø]  Fin/*það* [$_{TP}$ Pn … 'there'
    *Subordinate*
    *clauses*:
  b. Declarative:  [$_{CP}$     *að*  Fin/*það* [$_{TP}$ Pn … 'that there'
  c. Interrogative: [$_{CP}$ *hvort* (*að*) Fin/*það* [$_{TP}$ Pn … 'whether (that) there'
  d. Conditional:  [$_{CP}$ *ef*  (*að*) Fin/*það* [$_{TP}$ Pn … 'if (that) there'
  e. Temporal:   [$_{CP}$ *þegar* (*að*) Fin/*það* [$_{TP}$ Pn … 'when (that) there'

  f. …

In all instances, then, *það* tucks in immediately to the right of Fin.

Expletive *það* is excluded in the presence of a regular definite subject, as positive matching takes precedence over negative matching (a subcase of optimal matching). A first person subject pronoun, for instance, matches both $\Lambda_A$ and the locational factor of Fin positively (as being $+$ Speech Local), thereby excluding the expletive (from simultaneously matching $\Lambda_A$ and the locational Fin feature negatively).

If the finite verb in verb-second languages moves into the vicinity of Fin (and sometimes also to Force), as commonly assumed, we have a simple account of CLIC:

(32) *Það* is only licensed in the immediately subjacent vicinity of Fin, hence it a) blocks the finite verb from moving to Fin, and b) cannot occur any lower in the structure

Thus, (33a) and (33d) are well-formed, in contrast to (33b) and (33c):

(33) a. [$_{CP}$ … Fin/*það*    [$_{TP}$ Pn V$_{fin}$ …    *það var kalt* 'þ. was cold'
  b. *[$_{CP}$ … Fin/V$_{fin}$/*það* [$_{TP}$ Pn ~~V$_{fin}$~~ …    *\*var **það** kalt?* 'was þ. cold?'
  c. *[$_{CP}$ … Fin/V$_{fin}$    [$_{TP}$ Pn/*það* ~~V$_{fin}$~~ …    *\*var **það** kalt?* 'was þ. cold?'
  d. [$_{CP}$ … Fin/V$_{fin}$    [$_{TP}$ Pn ~~V$_{fin}$~~ …    *var kalt?* 'was cold?'

This follows as *það*, in contrast to English *there*, Swedish *det*, etc., does not match Pn, thus having no 'business' other than negatively matching $\Lambda$-Fin. In contrast, Mainland Scandinavian *det* and English *there* and *it* attach to (tuck in under) Pn, hence not competing for Fin with the finite verb:

(34) a. [$_{CP}$ … Fin/*was* [$_{TP}$ Pn/*it* …  *was it cold?*
  b. [$_{CP}$ … Fin/*var* [$_{TP}$ Pn/*det* …  *var det kallt?*        (Swedish)

Finally, notice that topicalization of e.g. an object or an adverbial is not, as such, incompatible with *það*. Rather, in accordance with (32), the presence of *það* would block obligatory V2 verb raising, yielding ungrammatical structures like *\*XP – það – (subj –) V$_{fin}$.

## 5. Teasing FLEE further apart: Stylistic Fronting

Mainland Scandinavian *det* as well as English *there* and *it* are largely obligatory in the absence of a 'stronger' (positive) Λ-Fin matcher; the examples in (36) are Swedish:

(35) a. Did *(**it**) rain much?
    b. I believe *(**it**) is raining.
    c. Does *(**there**) seem to be anyone in the house?

(36) a. Regnade *(**det**) mycket?
        rained    it     much
    b. Har *(**det**) blivit valt   en ny  president?
        has   there been elected a  new president
    c. Jag anser     *(**det**) vara för kallt för     att bada.
        I   consider it   be   too cold for (one) to swim
    d. Verkar *(**det**) kanske ha   varit någon    i  huset?
        seems   there maybe  have been somebody in house.the

Due to CLIC, expletive *það* is excluded from comparable clauses in Icelandic:

(37) a. Rigndi (*það) mikið?
        rained it     much
    b. Hefur (*það) verið kosinn nýr forseti?
        has   there  been elected new president
    c. Ég tel      (??það) vera of kalt til     að synda.
        I   consider it   be   too cold for (one) to swim
    d. Virðist (??það) kannski hafa verið einhver   í  húsinu?
        seems   there  maybe  have been somebody in house.the

As we have seen, we have an account of the Icelandic facts if *það* is only licensed in the immediately subjacent vicinity of Fin, thus neither being available in infinitives nor in finite clauses with verb raising to Fin.

    In English and Swedish a [person] element (e.g. *there* and *det*) matches both Pn and Λ-Fin in finite clauses, only Pn in ECM infinitives, and neither in PRO infinitives:

(38) a. [$_{CP}$ … Λ-Fin ... [$_{TP}$ Pn/*there*  $^{ok}$*there* in finite clauses
    b. [$_{TP}$ Pn/*there*               $^{ok}$*there* in ECM
    c. *[$_{CP}$ ... [$_{IP}$ Pn/*there*        *there* in PRO infinitives

The unacceptability of *það* in ECM infinitives like (37c) is expected if ECM structures contain no Fin but do contain Pn (licensing English *there*). This analysis is further supported by the fact that ECM infinitives are sensitive to the Definiteness Effect in much the same manner as finite clauses:

(39) a. Ég taldi     hafa verið selda **fjóra bíla/**\*bílana.
        I    believe have been sold    four cars.ACC/\*cars.the.ACC
        'I believed there to have been four cars sold.'
   b. Ég taldi     **bílana**        hafa verið selda.
        I    believed cars.the.ACC have been sold

Recall, however, that matching Pn as such should be possible under mere Agree, that is, Move is triggered by a matching relation with a still higher head. In finite clauses the head in question, as we have seen, is Λ-Fin, but in ECM it is the matrix clause object Pn (cf. Sigurðsson 2006b). Matching of both the infinitival subject Pn head and the matrix object Pn heads yields the well-known amalgam matrix object/subordinate subject properties of ECM NPs (discussed at length with respect to Icelandic in Thráinsson 1979).

EPP effects thus boil down to an interplay of Person matching and matching of CP speech event features, either involving both types of matching relations or only one of them. It follows that parameterization or other kinds of generalizations in terms of 'EPP' are unprincipled and theoretically underivable. Such generalizations can be catching descriptive approximations, but they tell us nothing about how grammar works.

Icelandic Stylistic Fronting, **SF**, offers additional evidence that the mechanisms behind EPP effects must be teased apart, that is:

(40) a. Pn matching
   b. Fin matching
   c. Λ matching
   d. CLn matching

SF has several rather special characteristics (Maling 1980; Rögnvaldsson & Thráinsson 1990; Jónsson 1991; Holmberg 2000; among others):

(41) a. SF fronts non-subjects, typically an adverb or a participle but sometimes a particle, a preposition, an infinitive, a PP or an N(P)
   b. SF seemingly targets the canonical subject position (Spec-T)
   c. SF is preconditioned by a 'subject gap', that is, it only applies in case the canonical subject position is (phonologically) empty or vacated[27]
   d. SF applies in finite clauses only, most commonly in subject gapped subordinate clauses (relative clauses, etc.) but also in main clauses that meet the subject gap condition; it is also finite clause bounded

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[27] According to Hrafnbjargarson (2004), SF is only mildly degraded (one question mark) in the presence of a (phonological) subject clitic, yielding the order Comp-Cl-SF (type: 'that'(h)e read had'). I do not share Hrafnbjargarson's intuition in this respect, that is, all such examples are clearly ungrammatical to me. In view of the fact that such examples can be found in Italian (Cardinaletti 2003), some Icelandic speaker variation in this respect is perhaps not unexpected. However, I have never come across an authentic Comp-Cl-SF example in any form of Icelandic, so I refrain from considering such examples here.

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A few examples (the dashes indicate the position from where the fronted element has moved):[28]

(42) a. **Tekin** hefur  verið __ sú  ákvörðun að fresta
        taken has.3sg been     the decision  to postpone
          kosningunum.
          election.the
        'They have decided to postpone the election.'
     b. **Sagt** er   __ að **kosið** verði   __í júní.
        said is.3sg    that elected will-be.3sg  in June
        'It is said that there will be election in June.'
     c. Þetta er vandamál sem **leysa** þyrfti        __ strax.
        this is problem   that solve would-need.3sg    at-once
        'This is a problem one would need to solve at once.'
     d. Við gerum þetta, eins og **um**  var    talað__.
        we will-do this   as  og about was.3sg spoken
        'We will do this, as had been discussed.'

In most respects, SF has much the same distribution as expletive *það*, suggesting that SF elements are in some sense 'expletives' (Holmberg 2000):

(43) a. SF and *það* are both excluded in the presence of a definite
        (Pn matching) subject
     b. SF elements are always clause initial, like *það*, that is, both
        *það* and SF are ruled out when the finite verb moves to Fin
     c. SF and *það* are both generally excluded in infinitives

These facts are illustrated for SF in (45)–(46), which should be compared to the grammatical examples in (44):

(44) a. **Skrifuð** hefur  verið ný  bók  um   þessar tilraunir.
        written has.3sg been new book about these  experiments
        'There has been a new book written about these experiments.'
     b. **Skrifað** hefur  verið um   þessar tilraunir.
        written has.3sg been about these  experiments
        'Somebody has written about these experiments.'

Ungrammaticality in the presence of a definite subject or verb raising:

(45) a. *Skrifuð hefur **bókin**   verið/verið **bókin**   um   þessar
         written has.3sg book.the been/been book.the about these
          tilraunir.
          experiments
     b. *Hefur **skrifað** verið um  þessar tilraunir?
         has.3sg written been about these  experiments

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[28] As suggested by the examples in (42), SF typically fronts event-denoting categories, in the absence of any category that denotes a (speech local) participant.

Ungrammaticality in infinitives:

(46) a. *Hún vonast til að **skrifað** hafa __ um    þessar
       she hopes for to written have    about these
       tilraunir    fyrir jól.
       experiments before Christmas.
   b. [?]*Hún taldi    **skrifað** hafa verið __ um    þessar
       she believed written have been    about these
       tilraunir    í Science.
       experiments in Science
   c. *Hún virðist **skrifað** hafa __ um    þessar tilraunir
       she seems written have    about these experiments
       í   Science.
       in Science

Like SF, *það* is degraded in all these contexts. In one respect, however, the distribution of *það* and SF is radically different:

(47) *Það* may act as an intervener between an operator and a variable, whereas SF does not generally block operator-variable 'binding' (see (53)–(54) below)[29]

This is illustrated (in part only) in (48)–(49); the dashes here indicate an empty target position for *það* vs SF:[30]

(48) a. *Þetta er bók   sem **það**   hefur verið skrifuð um    einmitt
       this   is book that there has    been written about exactly
       þetta.
       this
   b. Þetta er bók sem **skrifuð** hefur verið um einmitt þetta.
       'This is a book that has been written about exactly this.'
   c. Þetta er bók   sem __ hefur verið **skrifuð** um    einmitt þetta.
       this   is book that    has    been written about exactly this

(49) a. *Veit   hún hver **það** hefur skrifað um    þetta?
       knows she who that has    written about this
   b. Veit   hún hver **skrifað** hefur um    þetta?
       knows she who written has    about this
       'Does she know who has written about this?'

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[29] I only present the core facts, but, as has been discussed by e.g. Rögnvaldsson (1984) and Magnússon (1990), some other factors may affect the well-formedness of expletive *það*. Thus, while it is impossible when the variable is a subject, it is commonly well-formed when the variable is a prepositional complement or an adverbial. This tallies with the analysis proposed here, but I refrain from going into further details.

[30] In fact there is another difference: *það* is more easily compatible with transitive verbs (the transitive expletive construction) than is Stylistic Fronting, at least in my speech (type ***Það*** *have many students bought this book*, vs [??]***Bought*** *have many students this book*). I will not develop an analysis of this difference here.

    c.   Veit    hún  hver__ hefur **skrifað** um    þetta?
         knows  she  who    has   written  about  this

(50) a. *Hver heldur þú  að  **það**  hafi skrifað um    þetta?
         who  believe you that there has  written about this
     b.  Hver heldur þú  að   **skrifað** hafi um    þetta?
         who  think  you that written has  about this
         'Who do you think has written about this.'
     c.  Hver heldur þú  að  __ hafi **skrifað** um    þetta?
         who  think  you that    has  written about this

SF does not have any clear semantic effects, a fact that led Holmberg (2000) to suggest that it is a syntactic movement that satisfies 'EPP' by moving only the phonological features of a word or a constituent, stranding its semantic and formal features. However, assuming that syntax can divorce meaningful units from their phonological representations calls for, 1) a general theory of such form-meaning splits (principles, conditions, etc.), and, 2) a theory of why and how form-meaning pairs should come into being in the first place (cf. Burton-Roberts & Poole 2006).[31]

    I propose the following understanding: SF often has (formal) stylistic flavor to it, but it does not correlate with propositional semantics, so it is not surprising that it generally has vague or even non-detectable semantic effects.[32] Like expletive *það*, however, it negatively matches Fin (its speech local component). There is one crucial difference, though, explaining why SF is possible in 'binding domains' in examples like the ones in (48)–(50) above, while *það* is impossible there:

(51) a. *Það* matches both (the speech local feature of) Fin *and* the
        speaker/hearer CP features (thus, representing –Speech Local
        as well as –Λ)
     b. A stylistically fronted element matches only (the speech local
        feature of) Fin  (representing only –Speech Local)

Given that copies of A′-moved subjects are valued $+$Pn, they are like regular definite subjects in being matchers of the speaker/hearer CP features (Λ), thus rendering the expletive superfluous and ill-formed.

    That copies of A′-moved subjects have largely the same matching properties as regular overt subjects is evidenced by various factors, for instance verb agreement (the empty subject copy might be in Spec-v

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[31] There are strong reasons to believe that syntactic structures and syntactic 'words' have no phonological material attached to them, but that assumption is not available under the general approach pursued by Holmberg (2000).
[32] Hrafnbjargarson (2004:93ff.) claims that SF may have truth-conditional focus effects. I do not share that intuition, but SF is *compatible* with contrastive focus, given the right context (Sigurðsson 1997).

rather than Spec-T, but the difference is irrelevant here, as far as I can judge):

(52) a. Hvaða málfræðingar heldur     þú   að __ hefð**u**/  *hefði
         what   linguists.PL   think.2SG you that   had.3PL/ *3SG
           skrifað  svona?
           written  such
         'Which linguists do you believe would have written like this?'
     b. Hvaða málfræðingar heldur     þú   að  **skrifað** hefð**u**/
         what   linguists.PL   think.2SG you that  written   had.3PL/
           *hefði svona?
           *3SG   such

On the present tucking-in approach to movement, the structure of the stylistically fronted version in (52b) is roughly as in (53) (where I make no distinction between Agree and Agree + Move):

(53)  [$_{CP}$ wh … [$_{CP}$ … *wh* … $\Lambda$ … Fin/*skrifað* [$_{IP}$ Pn/e$_{subj}$

The corresponding ungrammatical structure containing *það* is sketched in (54):

(54)  *[$_{CP}$ wh … [$_{CP}$ … *wh* … $\Lambda$-Fin/*það* [$_{IP}$ Pn/e$_{subj}$

That is, *það* blocks Pn/e$_{subj}$ from matching the $\Lambda$-Fin head by intervention, hence being ungrammatical (like expletives in comparable constructions in related languages).

   A fact highlighted by this approach, but not explained by it (or by any other approach I'm aware of), is that the locational component of Fin *does not need to be overtly matched*, as seen in (52a) and the c-examples in (48)–(50). In the next section, I will discuss some further examples bearing on this issue.


## 6. The optionality problem

In addition to topicalization (CLn-matching), Icelandic has three overt 'EPP strategies':

   • NP-movement matching Person locally (Pn/NP$_{+Pn}$), and commonly also matching CP speech event features under Agree, that is, Fin (its speech local factor), the speaker/hearer features, $\Lambda$, and potentially also CLn (in the absence of a 'stronger' CLn-matcher, such as a topicalized object or a context-linking adverbial)

- Expletive merger, negatively matching Fin and Λ but not matching Pn
- Stylistic Fronting, negatively matching only Fin

Icelandic thus demonstrates that EPP effects are reflections of distinct matching relations that overlap rather generally in languages like English, but can be teased apart when a richer cross-linguistic variation is scrutinized.

There can be little doubt that Pn and the features of the speech event are meaningful features of Universal Grammar. That is, EPP effects are not just some mystery but follow from factors that are central to language and 'make perfect sense'. Nonetheless, there are numerous 'EPP exceptions', even in English:

(55) a.  As (*it) is well known ...
     b.  As far as (*it) can be seen ...
     c.  She is much smarter than (*it/*there) is her boss.
     d.  (I) saw him yesterday. (I) was a bit surprised.

Facts of this sort should not, in my view, be interpreted such that EPP effects are uninteresting or unimportant, but they should get *some* theoretical interpretation.

'EPP violations' quite generally lead to ungrammaticality in English and they are commonly stilted or awkward in Icelandic too (cf. Kosmeijer 1993), as illustrated in (56). The minus sign in front of (56a) denotes a variable and a commonly degraded acceptability, that is, clauses of this sort are only fully acceptable to some speakers:[33]

(56) a.  – Ég  vona  að   __   verði   ekki  of  kalt  til  að  synda.
            I    hope  that        will-be  not   too  cold  for  to  swim
            'I hope it won't be too cold (for one) to swim.'
     b.  Ég  vona  að  **það**  verði  ekki  of  kalt  til  að  synda.
            I    hope  that  it      will-be  not   too  cold  for  to  swim
     c.  Ég  vona  að  **ekki**  verði  of  kalt  til  að  synda.
            I    hope  that  not     will-be  too  cold  for  to  swim

Thus, it seems clear that filling the left edge is in some sense a 'desirable goal'. Leaving it empty is typically construction specific, that is, clauses with a phonologically empty left edge strongly tend to serve some special function, as partly illustrated in (57); the dashes indicate a phonetically empty left edge (Spec-C):

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[33] The example in (56a) is stilted but acceptable to me. *Að*-clauses ('that' clauses) of this sort are variably acceptable to individual speakers, depending on a number of factors, such as the semantics of the matrix predicate and the mood of the subordinate clause. I put this aside here.

(57) a. __ Hafa    þau lesið bókina?                          Question
             have.3PL they read  book.the

    b. __ Lásu    þau því bókina   og ...    Narrative Inversion[34]
             read.3PL they thus book.the and
        'Thus they read the book and ....'

    c. __ Kemur    bíllinn!                       V1 exclamatives
             comes3SG car.the
        'Ah, there comes the car!'

    d. __ Las     hana ekki.            Colloquial argument drop
             read.1SG it     not
        '(I) didn't read it.'

Facts like (55) and (57) suggests that the *Fill the Left Edge* requirement in (58) applies:

(58)  Fill the left edge unless leaving it empty serves some special
      function X, X subject to cross-linguistic variation

This generalization has a suspicious conspiracy flavor and is arguably not a Narrow Syntax principle. Nonetheless, it is evidently a part of the expressive (externalization) strategies applied in individual languages such as English and Icelandic, that is, it seems to be a common PF or performance target.

    Arguably, silent but syntactically active elements are present in the left edge of all the clauses in (57): a question particle (operator) in (57a), a 'maintained topic' in (57b), a context-linking adverbial in (57c), and a positively set logophoric agent ('speaker') feature, $+\Lambda_A$, in (57d).[35] More problematically, however, there are also some true exceptions from (overtly) Filled Left Edge, that is, cases where leaving the left edge empty does *not* seem to serve any special function, as in (59):[36]

(59) a. Við förum þegar __ verður    kallað á  okkur.
       we   go   when    will-be.3SG called on us
       'We will go when somebody calls (for) us.'

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[34] Typical of certain narrative texts, signaling 'narrative cohesion' (usually conditioned by a maintained aboutness topic).

[35] Actually, these elements are only segmentally silent, as clauses containing them have different prosodic properties (as far as I know, this has not been measured for Icelandic but speakers have clear intuitions in this regard; cf. also the measurement results for Swedish in Mörnsjö 2002:149ff.). Since these elements thus have both semantic and phonological correlates, they are arguably syntactically present.

[36] Notice, however, that the 'gap' in most cases of this sort is in the scope of some operator (temporal, comparative, relative, interrogative, ...). This is presumably a relevant factor, but it does not alter the fact that phonologically empty left edges are common (in operator scope domains), even in cases where the phonological emptiness serves no special function (in these cases, it also seems to me, the left edge emptiness does not have any discernible prosodic correlates).

b. Getum við farið eitthvert   þar   sem __ er      betra næði?
   can   we go  somewhere where SEM   is.3SG better peace
   'Can we go somewhere where it is quieter?'

c. Við fórum ekki fyrr   en   eftir að __ byrjaði    að rigna.
   we went   not before than after AÐ     began.3SG to rain
   'We did not leave until after it began raining.'

d. Láttu mig vita   ef __ slokknar     ekki á  ljósinu.
   let   me know if    goes-out.3SG not on light.the
   'Let me know if the light does not go out.'

e. Það er ekki satt, eins og __ sést        á  þessu.
   it   is not true, as   OG   is-seen.3SG on this
   'It is not true, as can be seen by this.'

f. Þetta var galli sem ég hélt    að __ mætti      laga.
   this  was flaw that I thought that   might.3SG fix
   'This was a flaw I thought one could fix.'

It has sometimes been claimed or assumed that examples like these are marked and rare (e.g., Kosmejer 1993), but they are neutral, and comparable authentic examples are easily found (e.g., on Google).

Icelandic 'true EPP violations' of this sort are confined to impersonal constructions. One might therefore wish to argue that they contain an expletive or an impersonal *pro* which negatively matches Pn and the CP speech event features under distant Agree (cf. Holmberg 2005 on somewhat similar facts in Finnish). There are two problems with this approach, though. First, EPP effects, both NP movement and Filled Left Edge, are *overt* effects. It frankly does not seem to make much sense to assume that these overt effects are *obligatorily* triggered by feature matching relations and then say that these same feature matching requirements may be satisfied by silent (semantically meagre) elements. Second, both the expletive and Stylistic Fronting are optional (without any clear semantic correlates) in many examples of this kind, as illustrated in (60):

(60) a. Láttu mig vita   ef __ slokknar     ekki á  ljósinu.  = (59d)
        let   me know if    goes-out.3SG not on light.the
        'Let me know if the light does not go out.'

     b. Láttu mig vita   ef **það** slokknar     ekki á  ljósinu.
        let   me know if it    goes-out.3SG not on light.the

     c. Láttu mig vita   ef **ekki** slokknar     á  ljósinu.
        let   me know if not   goes-out.3SG on light.the

The unavoidable conclusion is that the matching correlations signaled by merger of *það* and Stylistic Fronting need not always be overtly expressed. In other words, the Fin matching part of Filled Left Edge, indicating that a new Fin domain is being initiated, seems to be a performance target, a 'desirable PF goal'. In this respect, Filled Left Edge

differs from (prototypical) NP-movement, which is syntactically driven by the computation of Person.

If this analysis is on the right track, many traditional 'syntax' operations actually take place in PF, rather than in Narrow Syntax in the minimalist sense (PF comprising much of GB-theoretic S-structure). Another way to put this is to say that PF is more complex and 'more syntactic' than often assumed.

## 7. Conclusion

In this paper, I have discussed clausal structure and EPP effects, in particular in the light of facts and phenomena in Icelandic and English, mainly NP-movement, expletive merger and Stylistic Fronting. I have argued that these overt EPP effects illustrate that we need to tease apart the covert matching mechanisms behind them, that is:

   I. Matching of grammatical Person, **Pn**, in the T-domain
  II. Matching of Finiteness, **Fin**, at the TP/CP border
 III. Matching of speech event participants, $\Lambda$ ('speaker'/'hearer'), higher in the C-domain than Fin
 IV. Matching of a Context-Linking feature, **CLn**, still higher in the C-domain

While NP-movement regularly involves relations I–III, expletive merger (in Icelandic) involves only negative $\Lambda$ and Fin matching, and Stylistic Fronting involves only negative Fin matching. The latter two phenomena, as well as topicalization (involving positive CLn-matching), yield a *Filled Left Edge*, i.e., they show or bear witness to the *Filled Left Edge Effect*, FLEE.[37] NP-movement commonly seems to do so as well, when the moved NP is clause-initial. In many or most such cases, the NP arguably matches C-features under distant Agree, thus not moving into the C-domain (in the absence of an intervener).

All this might seem to be amenable to a strictly syntactic analysis. Problematically for such an analysis however, there are numerous true exceptions from Filled Left Edge, that is, cases where leaving the left edge empty does not serve any special function, as far as can be seen. This suggests that Filled Left Edge, in contrast to NP-movement, is a performance target, that is, a 'desirable PF goal' rather than a syntactic requirement. Nonetheless (and interestingly), the PF processes yielding Filled Left Edge reflect syntactic matching relations. NP-movement, on the other hand, seems to be both syntactically driven (by Person computation) and to also take place in syntax, prior to transfer.

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[37] This is a simple statement of facts. Topicalization is not 'EPP-driven' (nothing is on the present approach), but it leads to Filled Left Edge, thus bearing witness to (the epiphenomenon of) FLEE.

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