THE ROLE OF FUNCTIONAL FEATURES IN THE DERIVATIONAL PROCEDURE: A NEW
ACCOUNT OF THE EPP-EFFECTS, CASE AND AGREEMENT

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0.   Introduction

In this paper, we propose an alternative account of feature checking/valuation based solely on categorial features. One of the main assumptions is that lexical heads have an exclusively lexical feature matrix, whereas functional heads have an exclusively functional feature matrix (with relevant specifications and values for each particular head). The next assumption is that only lexical features allow strictly local feature checking/valuation (i.e. under Agree); functional features, on the other hand, require a syntactic operation (Merge or Move) to check/value their functional features. Interaction between functional heads (Probes) and lexical heads/categories (Goals) is ensured and made possible only via the mediating functional heads c-selecting the lexical ones (e.g. D selects N/NP, *v* selects V/VP). The mediating functional heads provide lexical heads/categories with a functional layer indispensable for "communication" with the functional Probes (as in Chomsky 1999: 9).

The analysis proposed here accounts for the facts traditionally ascribed to the Extended Projection Principle (EPP) without resorting to the EPP itself or postulating the existence of EPP features. We show on the basis of the data from English and Icelandic that the EPP-effects can be reduced to categorial functional feature checking (see also Pesetsky & Torrego 2000 and Haeberli 2000 exploiting similar ideas), and thus cannot be reduced to either Case (Martin 1999, Boeckx 2000, Alexiadou & Anagnostopoulou 2001) or agreement (Alexiadou & Anagnostopulou 1998); rather, Case and agreement are intertwined in the processes of categorial feature checking/valuation and constitute their output, but crucially not their goal. We believe that syntax does not operate on such notions as Case or agreement, and thus the derivations cannot be driven to check either of these. Although unrecognizable to syntax, Case and agreement are recognizable at the interface, where evaluation takes place.

The paper is divided into two parts: in the first one we introduce the system and its workings, as well as present and discuss the motivation behind our main assumptions; in the second part, we show how the proposed system handles the English and Icelandic data. Here,

we concentrate mainly on EXPL(etive)- constructions in their various guises and show how the facts can be not only accommodated in the present framework but are also predicted by it.

1.   The Proposal: What drives the syntactic derivation?

In the analysis to be presented here, the driving force behind syntactic derivations is the need of functional probes to check/value their categorial functional features. Functional heads exist solely for their function, to ensure they perform it, syntax employs the strategy of feature checking/valuation. The lexical features of the lexical heads, on the other hand, constitute their intrinsic features, and thus need not be checked. The lexical heads/categories are c-selected by functional heads which provide them with a functional feature layer thanks to which they may take part in syntactic operations and help functional heads in performing their functions. This does not mean that lexical features cannot enter into any checking procedures: they can, they just do not require syntactic operations such as Move or Merge to do so and can be fully satisfied in situ under Agree. It follows, then, that these are functional features, not the lexical ones, that push the derivation forwards.

1.1. *Categorial feature matrices of lexical and functional heads/categories*

This framework is based on the fundamental distinction between lexical and functional heads, namely that lexical heads are equipped with lexical features only ([N, V]), whereas functional heads bear an exclusively functional feature matrix ([D, T]). Below we present a detailed account of the categorial feature matrices of all of the relevant heads with their respective specifications.

1.1.1. *Lexical heads*

1.1.1.1.   N   -   [+N, -V]

This categorial feature matrix of N is uncontroversial (see e.g. Chomsky (1982)). We believe that the [+N] part of the feature matrix is the residue of the noun's agreement (φ-) features. The NP projected from N can be c-selected by a functional head D and the agreement features borne by N can be accessed by functional probes via the functional feature layer that the DP provides.

1.1.1.2.   V   -   [-N, +V]

The verbal feature matrix stands in a clear opposition to the nominal one above. The lexical verb is also a Θ-role assigner and to fulfil that role it subcategorizes for lexical (or functional) categories. Bearing the feature matrix [-N, +V], it can also establish an Agree relation if it finds a matching [+N, -V] feature matrix in its complement. There is another lexical category that shares the feature matrix with the lexical verb: preposition (P). Unaccusative verbs, on the other hand, are assumed to be [+N, +V] categories, just like adjectives, and, similarly to adjectives, they cannot establish Agree with a nominal complement. Lexical verbs are c-selected by a functional "light" verb *v*, which provides the functional feature layer for the lexical verb.

1.1.1.3.   P   -   [-N, +V]

Prepositions, similarly to lexical verbs, are predicative and have the ability to value lexical Case and thus they will be treated here on a par with lexical verbs. The difference between V and P boils down to the fact that P is not selected by any functional category[1].

1.1.1.4.   A   -   [+N, +V]

Adjectives are also similar to verbs in that they are predicative, but they are known not to license Case - a property they share with unaccusative verbs. We believe that the lexical adjective is c-selected by a functional head *a* (similar to the light *v*). We will discuss its properties when presenting the functional heads in the next section.

1.1.2.   *Functional heads*

1.1.2.1.   D   -   [+D, -T]

The determiner performs a vital function in a syntactic derivation. It is the head which c-selects nominal categories (NPs) and provides them with a functional feature layer which mediates between the probing functional heads and NPs. The functional probes seeking a goal are blind to the lexical feature matrices, thus were it not for the DP layer encompassing the

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[1] Nevertheless, we believe that functional probes, are blind to lexical features and should be able to "see" the complement DP within a PP and be able to probe it. The restricted options for the PPs here my be due to the fact that P affects the lexical feature matrix of the NP within it (via an Agree relation they establish) and, just like a verb, changes it into [+N, +V] - which is no longer a nominal feature matrix and no φ-feature sharing will ever take place between a functional probe (e.g. *v* or T) and the affected DP/NP embedded within the PP.

NP, the NPs would never take part in any syntactic operations[2]. If the NP c-selected by D enters into an Agree relation with a purely lexical head (e.g. a verb [-N, +V]) and comes out of this relation with a changed feature matrix, the D head will no longer be able to transmit the specific values (φ-features) of the affected NP to the probing functional heads, even though its own functional features are unaffected by that operation.

1.1.2.2. v - $[-D, +T_{val}]$

The "light" verb is a functional head c-selecting a lexical VP. It also mediates between the lexical verb and its external argument in the external Θ-role assignment. The "light" verb has a functional feature matrix which includes an uninterpretable D-feature and an interpretable valued T-feature. We believe that it is v, and not T, that introduces the tense content into the derivation, and it may be lexically represented by auxiliaries/modals. The uninterpretable D-feature must be satisfied via either Merge or Move, i.e. if v has a Θ-role to transmit for V, meaning that Spec,vP is a Θ-position, it will be satisfied via Merge (as movement to Θ-positions is banned[3]), on the other hand, if there is no external Θ-role, v will employ Move and attract an element from within its c-command domain[4].

1.1.2.3.   T   - $[-D, +T_{uv}]$

T's feature matrix is similar to the one of the "light" verb, however, its T-feature, though interpretable, is devoid of content; to satisfy its requirements T will need to move either v itself or a nominal entering a feature checking/valuation relation with v (e.g. SUBJ which will assume an identical functional feature matrix to v thanks to that relation), alternatively, it may attract both of them, since they bear an identical functional feature matrix (this is what we believe takes place in English). The question arises why T exists at all? We believe that it has

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[2] This seems to be generally the case: a bare nominal (BN) must usually stay in a postverbal position. The ones that look like bare nominals but appear to Move are assumed to contain a (silent) DP layer (see also Landau 2005 for a thorough discussion of BNs).

[3] This is in accordance with TRAP (Theta-Role Assignment Principle): Θ-roles can only be assigned under a Merge operation (Hornstein, Nunes & Grohmann 2005: 68).

[4] Even if this may result only in checking, but not valuation. This is exactly what seems to take place in the so-called Accusative Unaccusatives (Lavine & Freidin 2003) (Bailyn's (2004) Adversity Impersonals), where a structurally ACC Case-marked object surfaces in the matrix subject position and the observed agreement is default. These constructions are easily accommodated in the present framework and furthermore show that despite what Lavine & Freidin (2003) and Bailyn (2004) claim, we do not need an independent EPP to account for these facts.

an interpretational function to perform, i.e. it hosts elements moved out of focus (Miyagawa 2005: 14) , however, it has nothing to do with Case or agreement as is traditionally assumed.

1.1.2.4.   C   -   [+D, +T_{uv}]

We believe that C may have varying feature matrices, depending on what is merged in its head position and what its role is meant to be. The feature matrix above is assumed to represent an empty C°. The important thing about the C° head is that it is usually endowed with other features alongside its categorial ones (e.g. [+wh], [TOP], etc.), whose checking may also result in a free-ride categorial feature checking. These are some of the elements merged in C:

- *that* -   [+D, +T_{val}]; following Pesetsky & Torrego (2000), we believe *that* to be an instantiation of valued tense features in C which can be merged in C only if it c-selects a TP with valued tense features; nothing need to merge in Spec,CP, as C is a [+D] category; we believe that there is also a silent counterpart of *that* with the same feature matrix.

- *for* -   [-N, +V]; *for* is often referred to as a prepositional complementizer and thus the prepositional feature matrix; *for* is merged in C when it selects an infinitival TP (with unvalued T already in *v* [-D, +T_{uv}]); this C bearing a full categorial feature matrix [+D, +T_{uv}, -N, +V] enters an Agree relation with the subject of the infinitival clause (during which lexical Case is licensed), but being a functional/lexical category it probes through the functional feature layer - an operation which deactivates the functional feature layer of the probed DP (which then is literally frozen in place).

When C bears a Q(uestion)-feature or a *wh*-feature it will proceed to satisfy its functional features via Move, rather than Merge. And thus, in *yes/no* questions, it attracts T - the best matching goal[5], in subject *wh*-questions it attracts the subject, but not T, as the subject bears all the relevant functional features ([+D, +N, +T, -V]], plus it is a *wh*-category; in object *wh*-questions, however, T will have to be attracted, as the object has never entered any feature checking/valuation with a T-feature bearing head (it is a [+D, +N, +V, -T] category).

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[5] Even though the subject and T by that time bear an identical functional feature matrix, it is possible that C will show preference for head rather than category movement, which may have something to do with the economy of projection, i.e. by moving a head, C is exempted from projecting a specifier and needs not add any more structure.

1.1.2.5.   *a*   -   [-D, -T]

The functional head c-selecting a predicative AP can attract a DP occupying its complement domain and move it to Spec,*a*P, where they enter feature checking/valuation, hence the observed concord between the adjective and its nominal argument.

1.1.3. *DP, NP and EXPL*

A DP category with a c-selected NP occupying its complement position has the following feature matrix [+D, +N, -V, -T] and the following form:

(1)   DP

D°$_{[+D,-T]}$ NP

          N°$_{[+N,-V]}$
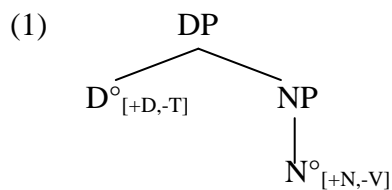
A DP category that does not have for an NP in its complement will bear the following feature matrix: [+D, -N, -T, -V]; we believe that this feature matrix is representing an EXPL(etive) category, which will have to satisfy its features derivationally (i.e. via an Agree relation with a matching goal[6]). In the analysis proposed here, it is [N] that constitutes the residue of agreement features, whereas [D] is responsible for their transmission. When an EXPL seeks a matching goal and probes it, being a lexical/functional head itself, it will have to access the associate's N-feature through the functional feature layer, the D head if the goal is a DP/NP; it can access the N-feature directly, if the associate is a pure NP unselected by D. The EXPL that chooses to select a DP-associate will deactivate the associate's D-feature, i.e. it will freeze the associate in place (this is also the source of the so-called Definiteness Effect[7]). Via the Agree relation with the associate, the EXPL accesses and assumes the associate's N-feature values, i.e. its φ-features. What then looks like verb-associate agreement is actually an EXPL-verb agreement.

Another interesting case is represented by lexically and inherently Case-marked DP/NPs. The lexically Case-marked DP/NPs are the ones that have been affected in syntax via an Agree relation with a lexical head (V/P). Agree changes their lexical feature matrix into

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[6] Being a category, the EXPL cannot induce movement.

[7] The associate will show the behaviour of an NP and will not leave the postverbal position. Because its D-feature is inactive, it becomes truly invisible to functional probes and thus will never be displaced.

[+N, +V] and thus their functional feature layer can no longer access the lexical (φ-) feature values[8]. This does not mean, however, that they will be ineligible for Move. When a DP/NP enters Agree with a purely lexical probe (one that does not have any functional features, such as V or P), its functional feature layer remains active, it just cannot transmit the specific values buried in the NP, but this is due to the changed lexical feature matrix (see footnote 8). The inherently Case-marked DP/NPs enter the derivation with the following feature matrix [+D, +N$_{3rd}$, -V, -T]. Crucially, we want to propose following Boeckx (2000b: 366-367) that inherently Case-marked DPs induce agreement, but have an incomplete φ-feature set (a result of inherent Case-assignment), to be precise they just have a 3rd Person[9] feature. Having not entered any Agree relations in the course of the derivation, the inherently Case-marked DP/NPs can check/value the functional features of functional probes, i.e. share with them their 3rd person feature[10].

1.2.   *Feature checking/valuation, Case and agreement*

Feature checking and feature valuation, though ideally occur simultaneously, can occur separately. The difference between the two processes is as follows: feature checking involves switching features from negative to positive, provided they find themselves in an appropriate configuration (Agree is enough for lexical features, Merge/Move will have to apply in the case of functional features). Feature valuation involves MUTUAL sharing of specific values carried by the heads engaged in the process (such as φ-features or specific tense features, e.g. [±Past]) and it must also observe the required configurational requirements of the features involved as well.

Bearing this in mind, as well as the assumptions introduced in the previous section concerning DP/NPs categorial features, we need to know what happens with Case and agreement in the system proposed here.

As stated in the introduction, we believe that syntax does not operate on such notions as Case or agreement; hence, neither Case, nor agreement, is responsible for driving the derivation. Also, we want to propose that derivations do not crash because such and such DP/NP has no

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[8]   From the computational point of view, the category is no longer nominal as the same feature matrix is characteristic of adjectives and unaccusative verbs.

[9] Boeckx claims that Datives are generally human and thus must at least bear a [+person] feature.

[10] The probe is allowed to complete its D(N)-feature valuation (it has been already checked, but not fully valued) by searching for another goal. The secondary goal will be shown to be capable of moving overtly in Icelandic.

Case, but it will crash when faced with an unrecognizable (illicit) feature matrix. This does not mean that it must only be faced with positive feature values, if it were so, we would end up with no differences between the lexically and inherently Case-marked DP/NPs on the one hand, and the ones bearing no Case, on the other. We would also completely lose the distinction between all the lexical categories. Thus, it appears that (at least) lexical categories are welcome at the interface even with some of their categorial features unchecked, i.e. a DP with the following feature matrix [+D, +N, +V, -T] has the history of this its relations established in the course of the derivation engraved in the feature matrix (it has entered an Agree relation with a lexical head, bears lexical Case, and will be interpreted accordingly), a DP bearing a slightly different feature matrix [+D, +N, -V, +T] must have entered a relation with a functional head bearing a T-feature (*v* or T) with which it shared its lexical feature values (agreement) (also this DP will be interpreted accordingly at the interface). Functional heads (probes such as *v*, T and C) are a different story: their existence reduces to their function and the need to check their features is what truly drives the derivation. Lexical categories seem to be mere participants in the actions initiated by the functional probes. So, for instance, if we find an underlying OBJ(ect) in the SUBJ(ect) position, it is not because it moved there, but because it was moved there. To show how the system works, let us consider the following two English constructions.

(2) a. *Three men have arrived.*

   b. *There have arrived three men.*

In (2a) the internal argument of the unaccusative verb surfaces in the subject position (Spec,TP); in (2b) this very same argument stays in the postverbal position and the Spec,TP is filled with an EXPL. To this day, some claim that the movement taking place in (2a) is Case-driven, but where does this leave (2b)? (2b) exemplifies the so-called EXPL-construction and the Case situation in such examples has been a subject matter of many discussions. The analyses range from the Case-transmission from the EXPL to the associate (the associate moves to the EXPL) (Chomsky 1986), formal feature movement of the associate to the EXPL at LF (Chomsky 1995), to Lasnik's (1999, inspired by (Belletti 1988)) treatment of the EXPL as an LF-affix requiring an associate/host bearing Partitive Case. Here, we propose yet a different approach. First, we deny the existence of both the Case Filter and the Inverse Case Filter, i.e. we do not believe that the movement in (2a) is triggered by Case or in any way

connected to it[11]; second, the Case that supposedly triggers the movement in (2a) does not exist in our approach: we propose that NOM(inative) Case is NO CASE, a form displayed by nouns with unaffected lexical features (thus showing no morphology usually associated with Cases). Because the lexical features of a noun bearing NO Case are unaffected, it is free to share them with any probing head. Let us depict the derivations of the examples in (2).

(3) (=2a)

$$\text{DP:OBJ}_{[+D,+N,+Tval,-V]}$$

*Three men$_i$ have$_j$ t$_i$ t$_j$ arrived   t$_i$*
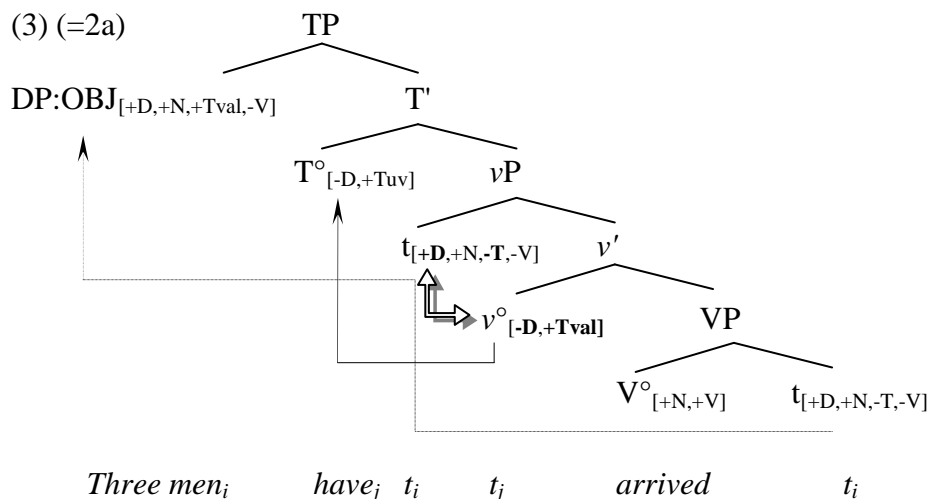
In the above derivation the underlying OBJ (*three men*) does not undergo any feature checking/valuation with the unaccusative lexical verb. The newly introduced v probe has no external Θ-role to assign, and thus no Merge into its specifier will take place. To satisfy its functional features it attracts the OBJ and they enter a feature checking/valuation relation in which v checks/values its D-feature ($v \rightarrow$ [+D, +T$_{val}$]) and the OBJ checks/values its T-feature (OBJ $\rightarrow$ [+D, +T$_{val}$]). When T [-D, +T$_{uv}$] is merged in, it will find two matching goals in its c-command domain (OBJ and v). In the derivation depicted above both of them are attracted to TP.[12, 13] Once the required goal(s) find themselves in TP, T checks/values its uninterpretable D-feature and values its T-feature (T $\rightarrow$ [+D, +T$_{val}$]). What we see on the

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[11] This does not mean that nominals do not receive Case at all; they may receive lexical Case under Agree or bear inherent Case, crucially, they do not receive NOM(inative) Case.

[12] Possibly, the probe can attract both goals since they have an identical functional feature matrix (T is blind to the lexical features of OBJ).

[13] We assume that English always makes use of auxiliaries which are merged in v. The auxiliaries are usually overt, however in the Past and Present Simple Tenses they are silent in indicative sentences. A silent auxiliary cannot host a tense morpheme, which will thus be spelled-out on the lexical verb. In sentences requiring the presence of an overt auxiliary (questions, negations), a "dummy" overt auxiliary is inserted to host the tense morpheme. We believe that the silent auxiliary is not able to move, and the insertion of "dummy" *do* enables it to do so (it is a Last Resort sort of operation). In indicative sentences, we would expect then that it is only the moved subject that satisfies all the requirements of T. For an interesting analysis of the English auxiliary/participle system see Solà (1996: 217-251).

surface is a classical instance of subject-(aux)verb agreement, but NO Case has been assigned or checked in this derivation. More evidence to support this claim can be found in the derivation of (2b) depicted below under (4).

(4) (=2b)

$$\text{There}_i \qquad \text{have}_j \qquad t_i \qquad t_j \qquad \text{arrived} \qquad \text{three men.}$$
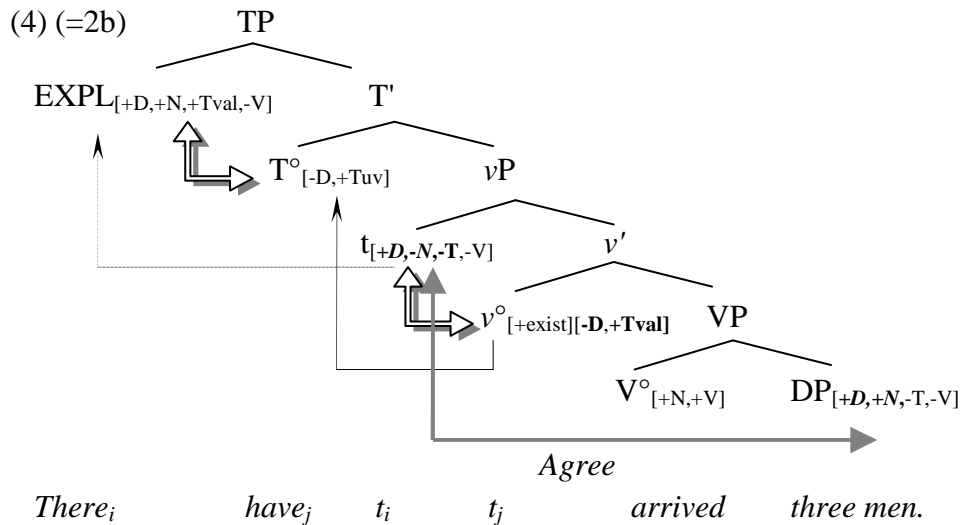
In the derivation of the EXPL-construction we have added a special property to *v* [+exist], which we believe to be a kind of Θ-role assigned to the EXPL merged in Spec,vP.[14] This special semantic property of *v* will stop it from satisfying its features via Move (which would be in violation of the aforementioned TRAP (see footnote 3)) and will force it to employ Merge instead. The EXPL is a defective lexical/functional category with a feature matrix [+D, -N, -V, -T]. It is only able to check, but not value the features of *v*, however being both functional and lexical it can establish Agree with a matching goal - the associate ([+D, +N, -V, -T]).[15] Through that Agree relation, the EXPL gains specific values for its N-feature and is thus able to share them with *v*, and later on with T. The observed agreement is thus established directly between the EXPL and the *v* head, and later passed on to T. The associate DP will be subject to the Definiteness Effect, as the EXPL deactivated its D-feature.[16] As

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[14] For a similar idea of base-generating the EXPL in Spec,vP see also Bowers (2002: 196): "Following Chomsky (1981), we might speculate that even though expletives are not referential expressions, they are nevertheless "quasi arguments" and are therefore excluded from direct Merge in a pure non-Θ-position." In Bowers's analysis this position is a specifier of the predication phrase (Spec,PrP).

[15] The EXPL will not probe the lexical verb even though it contains a positive N feature. Being both lexical and functional, the EXPL seeks a goal with the same categorial feature matrix, in this case it means a full matrix containing D, N, T and V, the verb does not have the matching categorial feature matrix.

[16] The EXPL can only deactivate a [-specific] D. A [+specific] D on the associate would clash with the EXPL's [+specific] D, i.e. they do not match and cannot establish Agree. In a situation like this the EXPL would not value its N-feature, and subsequently would have nothing to share with *v* and T, whose D-features would remain unvalued (though checked) throughout the derivation. This, essentially, should be all right for syntax; however this derivation would crash at the interface because the EXPL's feature matrix is unrecognizable as a DP

proposed earlier, Case per se plays no part in the depicted derivations, and agreement is an output, rather than a target. We also have not made a single reference to the EPP, whose effects are derived from categorial feature checking.

2. The Analysis: English vs. Icelandic EXP-constructions

In this section, we present English and Icelandic data and show how the system proposed here handles it. We concentrate on three types of EXPL-constructions: (i) the simple existential EXPL-construction, (ii) the raising EXPL-construction (also with the optional Experiencer argument of the raising verb), and (iii) the transitive EXPL-construction (TEC). Before we proceed however, we devote a section to a comparison of the English and Icelandic EXPL pronouns and another one to the process known as Object Shift (OS).

2.1. *English and Icelandic EXPL pronouns*

Before we move on to the core data, we believe that a word or two needs to be said about the nature of EXPL pronouns in the two languages under discussion.

The English EXPL *there* is restricted to unaccusative constructions. As proposed in the previous section, we believe that the special semantics of these constructions is responsible for the earlier than generally assumed Merge of the EXPL, i.e. into Spec,*v*P, whose head assigns the relevant Θ-role. The EXPL satisfies the requirements of *v* (and its own, thanks to the Agree relation established with the associate) and moves on to T. The English EXPL shows behavior of a syntactic: it occupies the subject position, raises and inverts with the verb:

(5) a. *There is a book on the table.*

  b. *Is there a book on the table?*

  c. *There seems to be a book on the table.*

The Icelandic EXPL *það* seems to pose more problems for the subject-analysis, i.e. its syntactic subjecthood is not so straightforward, for instance it does not invert with the verb and must always be sentence-initial (Holmberg 2002: 90-91):

(6) a. *Það hafa komið nokkrir stúdentar.*

  EXPL has come some students

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category: DPs must contain an interpretable N-feature and since the EXPL has not found an associate and has not entered any Agree, its N-feature remained unchecked/unvalued throughout the derivation.

b. *Hafa (*það) komið nokkrir stúdentar?*

   has   EXPL   come some students

c. *Í dag hafa (*það) ekki komið neinir stúdentar*

   today have   EXPL not come any   students

Some earlier analyses, concerning Transitive Expletive Constructions in particular, proposed that the EXPL is introduced in Spec, AgrSP (above TP, which would host the indefinite subject) (Jonas 1996: 181); Chomsky (1995: 360, 368) assumed that the EXPL must be in Spec,TP and proposed a multiple specifier construction to accommodate both the subject and the EXPL in TP (the main problem of his analysis was that it predicted the wrong surface word order leaving no room for the verb which happens to sit between the EXPL and the subject; Chomsky assumes this movement to take place post-syntactically, at PF). This has led some linguists to believe that the EXPL is actually introduced into the derivation as late as Spec,CP (Bowers 2002: 196, Holmberg 2002: 91). Attractive though this idea may seem, it is not unproblematic because the EXPL follows the complementizer in embedded clauses (Platzack 1987: 390, fn. 7; originally from Röngvaldsson 1984):

(7) *Ég veit að *(það) var dansað á skipinu í gær.*

     I know that it was danced on the ship yesterday.

In the analysis proposed here, we partly agree with Holmberg (2002) and Bowers (2002) in that we believe that the EXPL surfaces in Spec,CP, but as opposed to them, we propose that it is base-generated in Spec,TP (and sometimes even in Spec,*v*P) and moves to Spec,CP; this would explain both why it does not co-occur with topicalizations and does not invert with the finite verb, and why it can follow a complementizer in embedded clauses. Now the only question that remains is: why is the EXPL attracted to Spec,CP? We propose that the C selecting a [+exist] T (in Icelandic, this special semantic property - carried by *v* in English - must be carried by T), will have a categorial feature matrix identical to T, i.e. [-D, +T_{uv}]. In English the [+exist] *v*P is selected by T [-D, +T_{uv}], in Icelandic the same situation takes place one projection up, between C and T. When a complementizer *að* [+D, +T_{val}] is merged in C, it fully satisfies the features of a [-D, +T_{uv}] C, hence nothing else will be attracted to CP.

2.2. *A quick note on Object Shift*

Another important issue that cannot be omitted when analyzing Icelandic data is the possibility of Object Shift (OS). Since Holmberg's Generalization (Holmberg 1986) it has

been assumed that there is a correlation between verb movement and OS, i.e. OS is disallowed if the verb does not leave the VP. Importantly, it must be the lexical verb, not the auxiliary, as OS is prohibited in 'auxiliary + participle' constructions (Bobaljik & Thráinsson 1998: 53, fn. 16). We believe that apart from the verb movement condition on OS, there is another one, i.e. subject movement. Drawing on the idea proposed by Holmberg (2000: 448), namely that Stylistic Fronting moves an(y) item to the Spec,TP emptied by the subject (according to Holmberg SF observes a "subject gap" condition), we propose that OS is a similar process taking place one projection below, in *v*P.

It is also necessary to remember that full DP OS is generally believed to be optional in Icelandic, however, we think that it might not be. If the verb moves, but the subject does not, the OBJ will have no place to shift to - this looks like optionality if we assume OS contingent solely on verb movement; however, if we assume that the OBJ can OS only if both the SUBJ and the verb move, there seems to be no optionality involved.[17] More support for this idea may be found in Holmberg (1999: 15): "Object Shift cannot apply across a phonologically visible category asymmetrically c-commanding the object position except adjuncts" - this, naturally, concerns both the verb and the subject. Holmberg proposes that OS is a PF-phenomenon, it might just as well be so, however, it seems to observe syntactic restrictions. It is a well-known fact that Mainland Scandinavian Languages (MSc) do not allow full DP OS, but they exhibit obligatory Weak Pronoun OS (Hiraiwa 2001: 299). The Weak Pronominal OS is often assumed to be a PF-phenomenon and is believed to take place because weak pronouns must not be stressed (hence must escape the sentence-final position). Consider the following Danish examples supporting these views (Thomas Mathiasen, p.c.):

(8) a. *Studenterne læste ikke bogen.*

     the.students read not the.book

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[17] This can be supported by the adverb-placement facts. *Alveg* is considered to be a VP-adverb (just like negation) (Jonas 1996: 171), *sennilega* in our analysis is considered to be a *v*P adverb (it is generally believed to be a TP adverb, more on this subject in the sections to come). The example below comes from Bobaljik & Jonas (1996: 212), the bracketing and traces are ours:

(i)   *[$_{CP}$ Það$_i$ [$_{C'}$ luku$_j$ [$_{TP}$ t$_i$ [$_{T'}$ t$_j$ [$_{vP}$ sennilega [$_{vP}$ einhverjir stúdentar [$_{v'}$ t$_j$ [$_{VP}$ alveg [$_{VP}$ t$_j$ verkefninu]]]]]]]].*
      EXPL finished   probably   some students   completely   the.assignment

In the example above the lexical verb has moved, but no OS took place. In our analysis there is an explanation for this fact: the position to which it would need to move (Spec,*v*P) is still occupied by the subject. There is no optionality involved.

    b.   *Studenterne læste den$_i$ ikke t$_i$.*

            the.students read   it   not

    c.   **Studenterne læste ikke den.*

As mentioned above, Icelandic OS is banned in 'auxiliary + participle' constructions; interestingly, weak pronouns in Danish observe exactly the same restriction, and are not allowed to escape the sentential stress, which makes one wonder whether it was the real reason for the escape in the first place. Perhaps, then, Weak Pronominal OS is just like full DP OS? There have been proposals for treating Weak Pronominal OS as cliticization (Holmberg 1986), but then it is unclear why it should be banned in the 'auxiliary + participle' constructions. If Hiraiwa (2001: 300) is right in claiming that weak pronouns are shifted to Spec,*v*P and must later on cliticize onto T, then they should be allowed in the 'auxiliary + participle' constructions, just as they are in the constructions where the full lexical verb moves (naturally, it does not in Danish). We believe that the weak pronouns may move from the post-verbal position only when the lexical verb V moves to *v*, and they are allowed to stay there, because they cliticize onto the verb (which bears a valued T-feature). In the 'auxiliary + participle' constructions this V-to-*v* movement does not take place (the auxiliary moves to T on its own, hence no V-to-*v*). Because full DP OS is only allowed when the lexical verb actually moves OUT of the *v*P, which it does not in Danish, it follows that there will be no full DP OS in that language (and other MSc Languages). The relevant examples are given below.

(9)   a.   *Studenterne har ikke læst bogen.*

            the.students have not read the.book

    b.   **Studenterne har den ikke læst.*

    c.   *Studenterne har ikke læst den.*

            the.students have not read it

Our main assumption, namely that OS moves the OBJ to the specifier previously occupied by the SUBJ, might on the face of it raise Θ-theoretic questions. We believe that it is only an apparent problem. When the lexical verb V raises to join the "light" verb, the Spec,*v*P will no

longer constitute the Θ-position of the subject. Actually, we think that this is why OS does not induce any semantic change.[18]

It naturally follows from our assumptions that had the subject not moved out of its base-position, OS should not take place. We can say without a doubt that this prediction is borne out. We would like to, however, quote three examples, which constitute evidence against our proposal.

(10) *Það lauk einhver verkefninu$_i$ alveg t$_i$.*   (Jonas & Bobaljik 1996: 213)
       there finished someone the.assignment completely

(11) *Það borðuðu margir kettir allar mýsnar$_i$ stundum t$_i$.*   (Jonas 1996: 172)
       ther ate   many cats   all the mice sometimes

(12) *Það borðuðu margir strákar bjúgun$_i$ ekki öll t$_i$.*   (Jonas & Bobaljik 1996: 214)
       there ate   many boys   sausages not all

All of the above examples involve an OS-ed OBJ. In the analysis proposed here, the subject is predicted not to leave the Spec,*v*P in TECs (the EXPL is merged in Spec,TP and thus the subject cannot move). This would mean that either (i) we postulate multiple specifiers for *v*P, or (ii) keep just the one specifier and wrongly predict (10)-(12) ungrammatical. The good news is that we do not have to do either of the above, because the examples in (10)-(12) ARE UNGRAMMATICAL (!), not to mention "strange for semantic/pragmatic reasons" (Gunnar Hrafn Hrafnbjargarson and Øystein Vangsnes, personal communication). Vangsnes (2002: 65, fn. 3) quotes exactly one of the above examples - (10) - and writes: "However, several speakers of Icelandic consider this sentence highly deviant, and I have therefore chosen not to copy the example." When it comes to OS, Gunnar Hrafn Hrafnbjargarson (p.c.) wrote: "To the extent that I allow sentential adverbs in TECs, I do not allow full DP OS." Hence, we can honestly say, that our predictions are borne out (and confirmed by a native speaker).

2.3. *Deriving the EPP-Effects: English vs. Icelandic*

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[18] The raising of the OBJ in the passive should on no account be compared to OS. Firstly, the passive is a rather obvious example of an 'auxiliary + participle' construction; secondly, there is no subject occupying Spec,*v*P, hence the movement of the OBJ is always obligatory (unless there is an EXPL); and thirdly, we do witness a change in the interpretation of the OBJ (which becomes the topic here).

2.3.1. *Existential constructions and the Definiteness Effect*

In section 1.2., we have given a detailed analysis of an English unaccusative construction (with and without the EXPL). In this section we want to compare English and Icelandic on the basis of these two parallel constructions:

(13) a.   *There has been a cat in the kitchen.*

     b.   **There has a cat been in the kitchen.*

(14) a.   *Það hefur verið einhver köttur í eldhúsinu.*   (Vangsnes 2002: 44)
        there has been some   cat   in the kitchen

     b.   *Það hefur einhver köttur verið í eldhúsinu.*
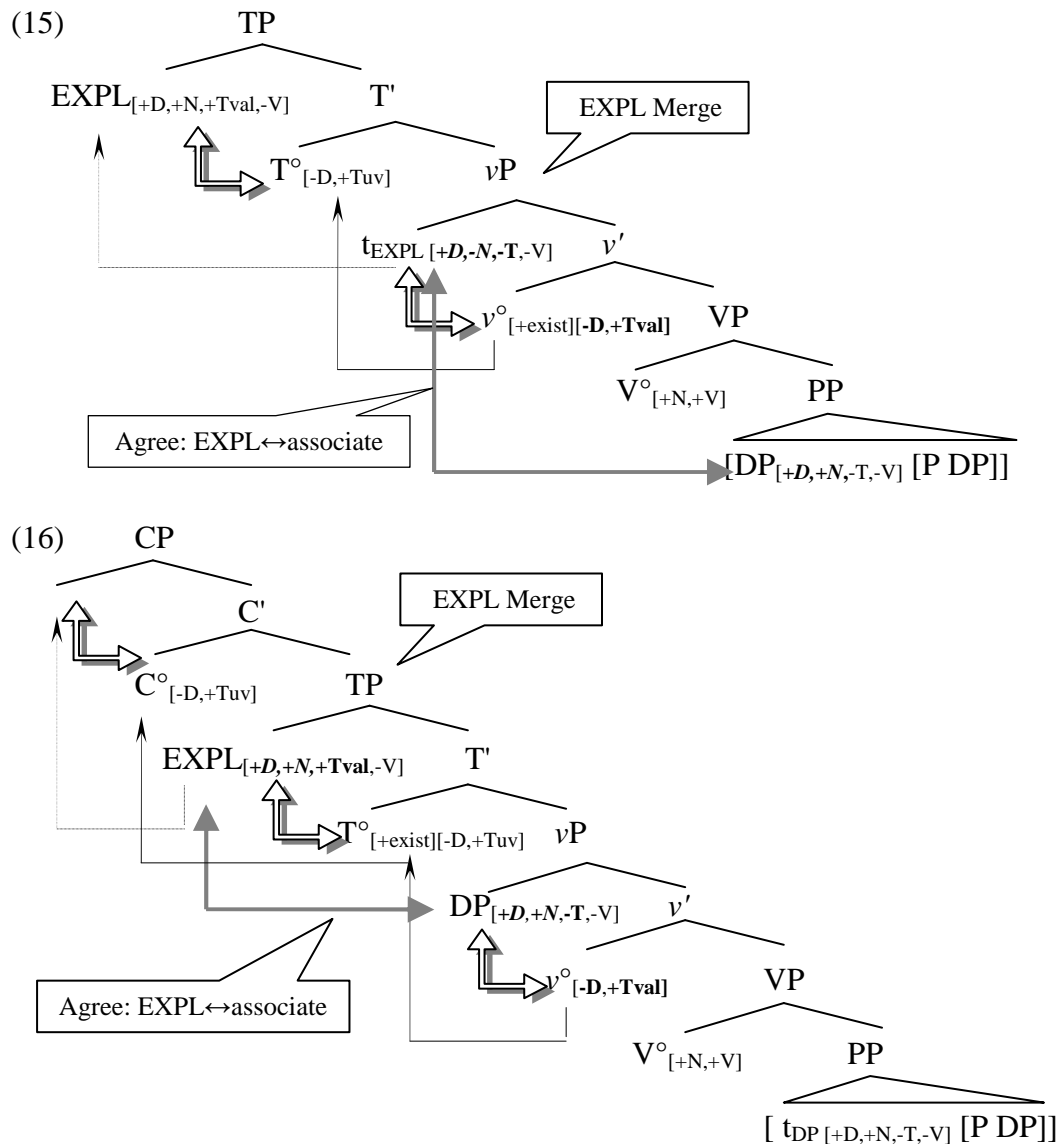   there has some   cat   been in the kitchen

The English construction (13b) is ungrammatical, whereas its Icelandic counterpart (14b) is good. This contrast can be accounted for if we make the following two assumptions: (i) the English EXPL is base-generated in Spec,vP, whereas the Icelandic EXPL may be introduced in either Spec,vP or Spec,TP[19], and (ii) nominals - DP/NP categories - can only be displaced by a [-D, +T] functional probe (v, T) if their own D-feature is active. As discussed in detail in section 1.2., when the EXPL enters the computation, it seeks an appropriate goal (the associate) with which it establishes Agree. Equipped with the associate's specific N-features, it is able to check/value the functional features of both v and T (and C in Icelandic). We have also proposed that the Definiteness Effect results from the expletive's probing/Agree relation with the associate which it freezes in place by deactivating its D-feature. We believe that *einhver köttur* (some cat) is a DP/NP category in both (14a) and (14b), understood as non-specific in both constructions, however, only the one in (14a) is parallel to the English construction exhibiting the Definiteness Effect with the associate displaying NP-behaviour, (it had its D-feature deactivated and will be completely unattractable[20]). The one in (14b) moves to Spec,vP thanks to its active D-feature, which will only be deactivated when the EXPL

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[19] This means that in Icelandic the semantic property [+exist] can feature in either v or T. Icelandic must have [+exist] available in T to derive TECs, and it is plausible that unaccusatives should only use the option with v; but since the language has both options, it seems that unaccusatives are just as well derivable if the EXPL merges in T. The derivation converges as all the functional features are checked/valued.

[20] Vangsnes (2002: 48-49) gives examples with truly Bare NPs (BN) which are showed to always follow the verb. In our terms, this means that they lack the functional feature layer responsible for any interaction with functional probes that can force displacement.

finally merges in Spec,TP[21]. In English this second option is unavailable due to the fact that the EXPL always merges in *v*P. The derivations (13a)/(14a) depicted under (15) proceed in a parallel fashion until they complete the TP, after that the Icelandic EXPL further moves to Spec,CP, which does not take place in English. Under (16) we depict the derivation (14b).

(15)

```
                          TP
              ┌───────────┴──────────┐
EXPL[+D,+N,+Tval,-V]                 T'            ┌─────────────┐
                           ┌─────────┴──────┐     │ EXPL Merge  │
                        T°[-D,+Tuv]         vP     └─────────────┘
                                     ┌───────┴───────┐
                         t_EXPL[+D,-N,-T,-V]         v'
                                          ┌──────────┴──────────┐
                                      v°[+exist][-D,+Tval]      VP
                                                          ┌─────┴─────┐
                                                      V°[+N,+V]       PP
        ┌───────────────────────┐                              ┌──────┴──────┐
        │ Agree: EXPL↔associate │                        [DP[+D,+N,-T,-V] [P DP]]
        └───────────────────────┘
```

(16)

```
                      CP
           ┌──────────┴──────────┐
                                 C'          ┌─────────────┐
                        ┌────────┴───────┐   │ EXPL Merge  │
                     C°[-D,+Tuv]         TP  └─────────────┘
                                  ┌──────┴──────┐
                        EXPL[+D,+N,+Tval,-V]    T'
                                        ┌───────┴───────┐
                                    T°[+exist][-D,+Tuv]  vP
                                                  ┌───────┴───────┐
                                         DP[+D,+N,-T,-V]          v'
                                                         ┌────────┴────────┐
                                                     v°[-D,+Tval]          VP
        ┌───────────────────────┐                                   ┌──────┴──────┐
        │ Agree: EXPL↔associate │                               V°[+N,+V]         PP
        └───────────────────────┘                                           ┌─────┴─────┐
                                                                  [ t_DP[+D,+N,-T,-V] [P DP]]
```

As showed above, the EPP effects are accounted for without a single reference to the EPP. They are derived by the need to check the functional features of the probing functional heads. The observed agreement patterns result solely from feature checking/valuation relations and are unconnected to the EPP or Nominative Case, as there is NO Case in the constructions under discussion. We also have an account of the EXPL-associate relation,

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[21] The movement of the associate to Spec,*v*P in (14b) is not OS: (i) it is not optional, something must move to Spec,*v*P to satisfy the functional features of *v*, (ii) if it were to be treated as OS, it would have to be disallowed in this example, which is an 'auxiliary + participle' construction.

which in the analysis proposed here is established via Agree in syntax. This Agree relation leaves the associate's D-feature inactive, hence the perceived Definiteness Effect (were it not for the presence of the EXPL, this very same DP could get as far as Spec,TP and enter a D/T feature checking/valuation relation with v and T), it also allows the EXPL to assume the φ-features of the associate, hence the apparent associate-verb agreement, which in fact is the EXPL-verb agreement.

2.3.2. *Raising EXPL-constructions*

This section comprises two parts: the first one is devoted to constructions involving a raising verb subcategorizing for an infinitival clause with an EXPL subject (in this part we also offer an analysis of parallel constructions without the EXPL); the second part of the section concentrates on the constructions parallel to the ones in part one but this time there is an additional Experiencer argument taken by the raising verb intervening between the matrix subject position and the embedded subject. Let us begin with the following contrast between English and Icelandic:

(17)   a.   *There$_j$ seems [$_{TP}$ t$_j$ [$_{vP}$ t$_j$ to [$_{VP}$ be someone in the room]]].*

   b.   **There$_j$ seems[$_{TP}$ t$_j$ [$_{vP}$ someone$_i$ to [$_{VP}$ be t$_i$ in the room]]].*

   c.   *Someone$_i$ seems [$_{TP}$ t$_i$ [$_{vP}$ t$_i$ to [$_{VP}$ be t$_i$ in the room]]].*

(18)   a.   *Það$_j$ virðist [$_{TP}$ t$_j$ [$_{vP}$ t$_j$ [$_{VP}$ vera einhver í herberginu]]].*

   there seems   be someone in the.room

   b.   *Það$_j$ virðist [$_{TP}$ t$_j$ [$_{vP}$ einhver$_i$ [$_{VP}$ vera t$_i$ í herberginu]]].*

   there seems   someone   be   in the.room

   c.   *Einhver$_i$ virðist [$_{TP}$ t$_i$ [$_{vP}$ t$_i$ [$_{VP}$ vera t$_i$ í herberginu]]].*

   someone seems   be   in the.room

The one ungrammatical English example (17b) has a grammatical counterpart in Icelandic (18b). We believe that the difference between the two languages in the case of the EXPL-constructions boils down to the availability of the Spec,TP position for EXPL-Merge in Icelandic, which is the option used in (18b).

In both (17a) and (18a), there is an unaccusative infinitival verb (V = [+V, +N], v = [-D, +T$_{uv}$]). The associate merged in the complement position of *be/vera* is a non-specific DP *someone/einhver* with a following feature matrix: [+D, +N, -V, -T], which due to the verb's unaccusativity will not enter into any Agree relation with it. The light verb v [-D, +T$_{uv}$] is endowed with a [+exist] Θ-role and is thus waiting for Merge to apply and fill its specifier

(were it not for the Θ-role, it would employ Move to satisfy its functional features; this is what happens in the Icelandic example (18b)). The EXPL merges in Spec,vP and establishes Agree with the associate; the specific agreement features the EXPL acquires through this Agree are subsequently shared with v (and T, after it is attracted to Spec,TP). The associate remains in the postverbal position due to its deactivated functional feature layer (it is completely unattractable, invisible to functional probes). The only element available for raising is the EXPL. Because it shares the agreement features with the associate, it will carry them on into the matrix clause and share them with the matrix functional probes v and T, hence the observed apparent long-distance verb-associate agreement, which is literally just regular subject-verb agreement. We depict the derivation below.

(19) …   TP   →   the matrix clause
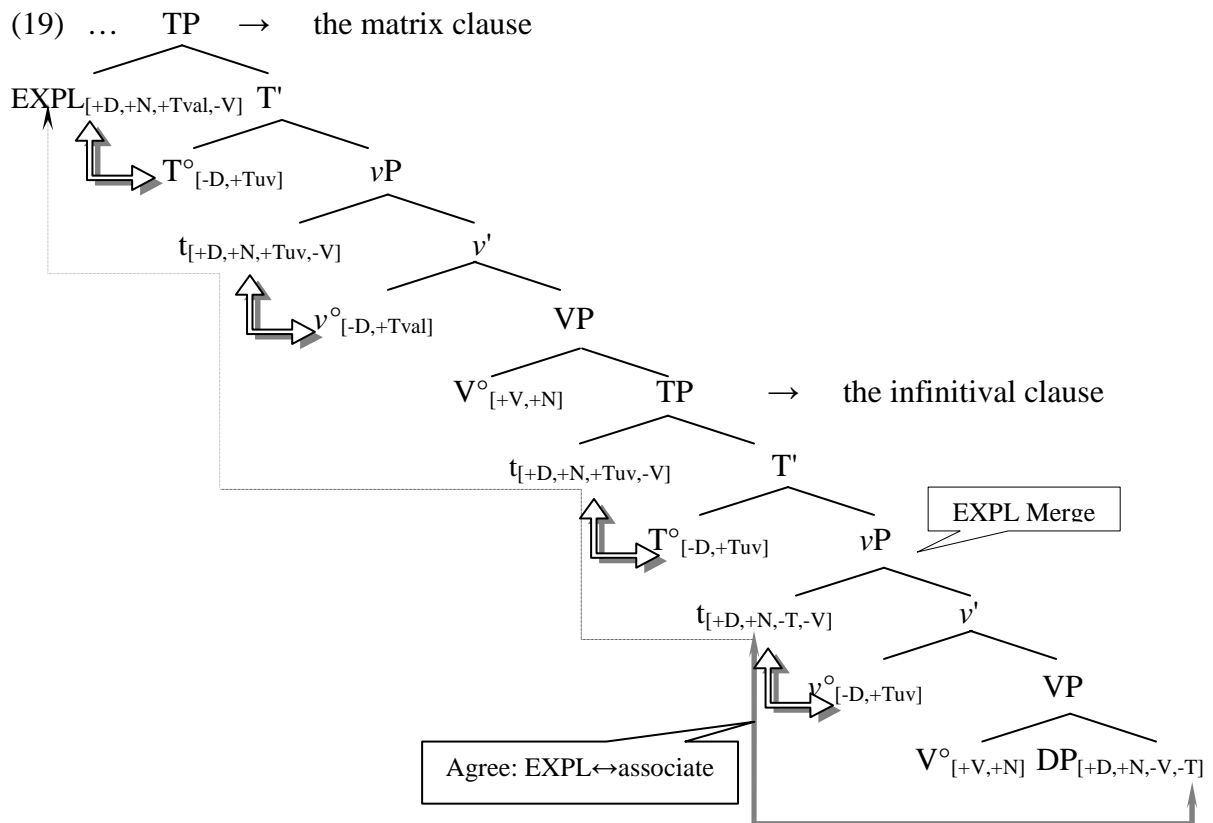
The derivation of the grammatical Icelandic example (18b), differs from the one presented above at the point where in (19) the EXPL is merged. In (18b) what happens at this point is v attracting the underlying object to its specifier (v checks/values its functional features against the DP object). The EXPL will only be merged in TP from where it will establish the EXPL-associate relation with the moved object. At the point of movement to Spec,vP, the functional features of the underlying object are active (hence attractable); these features become deactivated through the Agree relation established between the EXPL and the underlying object when the EXPL (merged in Spec,TP) marks it as its goal and makes it

its associate. This derivation is unavailable in the English existential construction, because in English existentials the EXPL can only be merged in Spec,vP, never in Spec,TP.[22]

The (c) examples have identical derivations where the underlying object surfaces in the sentential subject position. On the way there, it has moved through the specifiers of the embedded v, T, the matrix v, eventually ending up in the matrix Spec,TP. Its functional features are active throughout the derivation, it visibly agrees with the matrix verb (though it checked the features of all the functional heads it has been attracted by, it has not valued the features of the embedded ones; this is due to the fact that valuation involves mutual sharing of specific feature values, which both the embedded v and T lack being [+T_{uv}] - they have no T features to share, hence just checking, no valuation).

In all of the above examples the embedded TP is infinitival (v = [-D, +T_{uv}], T = [-D, +T_{uv}]) and thus must be selected if the derivation is to converge (without the tense content, the TP is not a legitimate syntactic object unless subcategorized for). The derivations of (17a) and (17c) have thus the following intermediate stages under (20a) and (20b) respectively:

(20) a.   …   *[$_{TP}$ **there**$_i$ [$_{vP}$ **t**$_i$ to [$_{VP}$ be someone in the room]]]*

                  [+D, +N, +T_{uv}, -V]

    b.   …   *[$_{TP}$ **someone**$_i$ [$_{vP}$ **t**$_i$ to [$_{VP}$ be **t**$_i$ in the room]]]*

                  [+D, +N, +T_{uv}, -V]

At these intermediate stages of their respective derivations the infinitival TPs may be selected by an ECM verb, a raising verb or by a prepositional complementizer *for*. We know what happens to the embedded subject when a raising verb subcategorizes for one of these TPs, however the fate of the embedded subject is different when selected by ECM/*for*. Both the EXPL and the DP have so far unaffected lexical features in their feature matrix. The lexical verb and the prepositional complementizer are both specified [-N, +V] and may thus establish an Agree relation with the embedded subjects. This relation will change their lexical feature matrix into [+N, +V] (the DPs will surface as ACC) due to which they will disallow access to their agreement features, but they will remain visible to functional probes because Agree with

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[22] Possibly in the English passive EXPL-constructions the EXPL is merged in TP, hence we derive the following:

(i)   There was a man killed in the accident.

This may be due to the fact that there is actually an external Θ-role present in vP. Though the theta-role is present, it cannot be actually discharged, and the Spec,vP is not a theta-position. The problem is that the vP cannot be at the same time specified as [+exist], hence the EXPL cannot be merged there. The EXPL, whenever present, will then have to be merged in Spec,TP.

purely lexical heads does not deactivate the functional feature layer (the purely lexical heads are blind to functional features and reach directly for the lexical features).

Again, we have derived the above constructions and accounted for the differences between them without reference to the EPP, Case or agreement. The DP associates involved in the discussed constructions under (17) and (18) bear no Case thanks to which they can actually share their agreement features. If it were agreement features that were responsible for movement, we would need to assume that the EXPL possesses its own agreement features, which mysteriously happen to be identical to the ones of the associate. If it were Case that driving movement, then again it is quite surprising that the associate would choose to be left behind. In our analysis, it is neither Case nor agreement that drives the derivations, nevertheless they constitute visible (often morphological) evidence, that particular feature checking/valuation operations took place.

We now move on to a discussion concerning constructions very similar to those in (17) and (18), but this time the raising verb subcategorizes for an Experiencer argument which in English takes the form of a PP (within which there is a lexically Case-marked DP/NP) and in Icelandic an inherently Case-marked DP. As proposed in section 1.1.1., the main difference between the inherently and lexically Case-marked DP/NPs is that the former, but crucially not the latter, can share their agreement features with functional probes. The lexically Case-marked nominals lost this ability the moment they entered into Agree with a lexical head (V, P); the inherently Case-marked nominals bear Case, but it has not been assigned derivationally, i.e. the DP/NP bears no markings of an Agree relation, in that way, the inherently Case-marked DP/NPs resemble the ones without Case: just like them they can share their agreement features through their active functional feature layer. What makes an inherently Case-marked DP/NP different from the nominals bearing no Case, is that it has an incomplete φ-feature set, to be precise it only bears a [+3rd person] feature, which it is free to share with functional probes (these probes, however, will be allowed to complete their defective D(N)-feature (agreement) set against another goal). Below, we give the relevant examples (the Icelandic examples are taken from Holmberg & Hróarsdóttir (2003: 998)).

(21) a. *The horses$_i$ seem to me [t$_i$ to be slow].*

    b. **To me$_i$ seem t$_i$ [the horses to be slow].*

    c. **There seem to me [the horses to be slow].*

(22) a. **Hestarnir$_i$ virðast mér [t$_i$ vera seinir].*

     the.horses seem me.DAT be   slow

b. *Mér$_i$ virðist/virðast t$_i$ [hestarnir vera seinir].*

me.DAT seems/seem   the.horses be slow

c. *Það virðist/*virðast einhverjum manni [hestarnir vera seinir].*

there seems/*seem some man.DAT   the.horses be slow

In English the only grammatical option (if we want to keep the embedded clause infinitival) is (21a) in which the embedded subject surfaces in the matrix subject position. To the naked eye the data in (21) and (22) seem to show that whatever is good in Icelandic is bad in English, and vice versa. More precisely, the embedded subject in Icelandic cannot reach the matrix subject position, whereas this is the only available option in English. Now, this suggests that we should be looking for the contrast between these constructions in the Experiencers. We believe that this is exactly where the contrast can be found and it has everything to do with the nature of Case borne by the Experiencer: lexical in English and inherent in Icelandic, but is not necessarily connected to the fact that one of them is a PP and the other a DP[23]. To translate it into the language of the system introduced here, the English Experiencer will not share its N-features with any functional probe, whereas the Icelandic one will. This difference also sheds light on why the EXPL is allowed in the Icelandic example (22c) and absolutely forbidden in the English counterpart (21c). If, as proposed in the preceding sections, the EXPL must enter into an Agree relation with the closest goal (Agree is strictly local, as opposed to functional probing), then it follows that the English *there* marking the Experiencer as its goal will not be able to establish Agree with it as its lexical features have already been affected by the preposition and are thus unavailable. The lexical features of the Icelandic inherently Case-marked Experiencer, on the other hand, are ready to be shared under Agree.
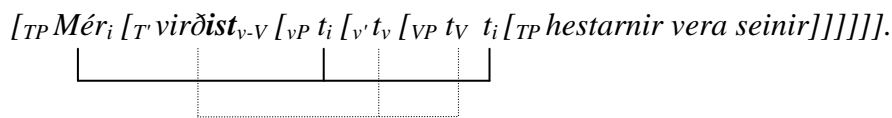
As mentioned above, we believe that there is a difference between functional probing and Agree, i.e. Agree must be local and cannot skip any potential goal with the matching categorial feature matrix (meaning, containing the same categorial features irrespective of their values and specifications); the locality involved in the functional probing is different in that, apart from searching the required categorial features, the functional probe must be sensitive to their content (active/inactive, specific/non-specific, wh-DP/DP, transparent/non-transparent, i.e. able/not able to transmit the lexical features, etc.). In the Icelandic examples there seems to be no competition for the Dative Experiencer - it is the closest matching goal,

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[23] We believe that functional probes ignore lexical heads, hence for the matrix *v*, both the English and the Icelandic Experiencer is a DP, the difference boils down to the lexical feature matrix of the NP within the DP, which is affected by Agree in English, and unaffected in Icelandic.

and it can function as the associate for the EXPL in (22c). In English, on the other hand, the closest matching goal for movement is the embedded subject of the infinitival clause, hence the grammaticality of (21a) as opposed to (21b). Nevertheless, the Experiencer is enough to block the EXPL from associating with the embedded subject (21c).
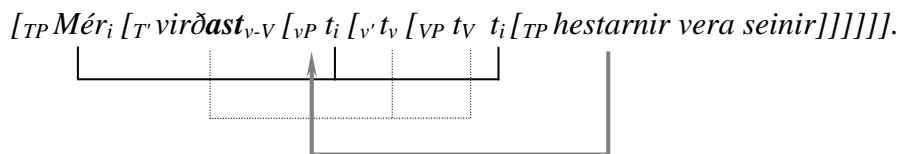
There is one interesting fact about the Icelandic example (22b): the finite verb optionally exhibits agreement either with the Dative Experiencer (SG) or with the embedded subject (PL). The construction with the EXPL allows only one agreement pattern: the one with the EXPL sharing the features of its Dative associate (SG). In this paper we essentially follow Boeckx (2000b) in assuming that inherently Case-marked DPs have an incomplete φ-feature set ([+3rd person]), nonetheless, we need to account for the optionality of this agreement and its derivability within the present framework. Consider the proposed derivations of (22b) with two different agreement patterns:

(23) Dative Experiencer → person and number agreement (3rd. SG)

*[$_{TP}$ Mér$_i$ [$_{T'}$ virð**ist**$_{v-V}$ [$_{vP}$ t$_i$ [$_{v'}$ t$_v$ [$_{VP}$ t$_V$ t$_i$ [$_{TP}$ hestarnir vera seinir]]]]]].*

(24) Dative Experiencer → person agreement (3rd.)
Embedded subject → number agreement (PL)

*[$_{TP}$ Mér$_i$ [$_{T'}$ virð**ast**$_{v-V}$ [$_{vP}$ t$_i$ [$_{v'}$ t$_v$ [$_{VP}$ t$_V$ t$_i$ [$_{TP}$ hestarnir vera seinir]]]]]].*

When the Dative Experiencer [+D, +N$_{3rd}$, -V, -T] moves to Spec,*v*P in both (23) and (24), it checks/values the functional D-feature of *v* and its own T feature. The moment the matrix T is merged, it will seek an appropriate goal to satisfy its functional features. At that point in the derivation the Dative Experiencer and *v* bear an identical functional feature matrix and thus T may attract them both. This is where we believe the optionality applies:

- <u>if *v* moves first</u>, there will never be any relation between *v* and the embedded subject, even if the embedded subject were to move to Spec,*v*P, it would not enter any relation with *v* because it has already moved on to T and is no longer there to check/value its remaining φ-features (they will be set by default as SG); as in (23);

- <u>if the Dative Experiencer moves first</u>, it will leave the Spec,*v*P empty and thus make it possible for *v* to attract another matching goal into this position and complete the valuation of its D (N)-features. This agreement will always be only partial (Boeckx

2000b), i.e. it will only show a different number value than the Dative subject, the person value established by the Dative is not re-valued and no matter what person the embedded   subject is, the agreement will always be 3rd person; as in (24).

Holmberg & Hróarsdóttir (2003: 998) show that when the Dative Experiencer is a *wh*-element, the only possible agreement is the default one (3rd.SG).

(25)   *[$_{CP}$ Hverjum$_i$ [$_{C'}$ hafa$_j$ [$_{TP}$ (t$_i$) hestarnir$_k$ [$_{T'}$ t$_j$ [$_{vP}$ t$_i$ t$_j$ [$_{VP}$ virst t$_i$ [$_{TP}$ t$_k$ vera seinir]]]]]]].*
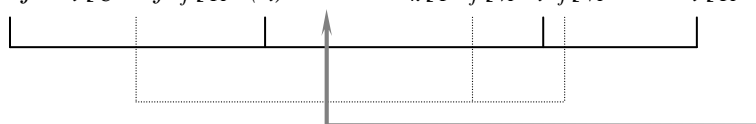
We believe that in such a construction it is always the verb that is attracted first to TP, and the *wh* -element follows (if at all, see Holmberg & Hróarsdóttir (2003: 1007)[24]). When the C$_{wh}$ is finally introduced, it will be the *wh*-element that goes first as the maximally matching goal, it is at that point that the embedded subject moves to Spec,TP. We propose that this movement heads directly towards Spec,TP, not stopping by in Spec,*v*P, as there is nothing in *v*P to attract there. We consider this movement to be an instance of Stylistic Fronting, which has been proposed by Holmberg (2000: 448) to be contingent on the presence of a "subject gap" and assumed to involve only the movement of the phonological matrix of the moving category (PF-movement). The agreement pattern is clearly unchanged, which seems to support this solution - if there are no categorial features of the embedded subject present, then nothing can re-value the functional feature matrix of *v* in T.

2.3.4.   *Transitive Expletive Constructions (TECs)*

This section will, naturally, be mostly devoted to the Icelandic data, as English does not allow TECs. If our assumptions concerning the base-generation position of the EXPL in English are correct, then this alone constitutes enough evidence for the lack of TECs: the EXPL would

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[24] Holmberg & Hróarsdóttir (2003: 1007) suggest that the *wh*-Dative does not move through the Spec,TP and this is why the position is available for the embedded subject. We believe, however, that the *wh*-Dative must be moved to the edge of TP anyway (before C is merged) because it contains a feature unrecognizable to the phasal probe (T in this case). Following Bošković (2004), we assume that any element bearing a feature not checked by its phasal probe, hence unrecognizable to it, will be "thrown out" of the spell-out domain of a given phase and moved to the edge. This operation is of the Last Resort kind and applies at the point when the phase is ready to be sent off to Spell-Out, it is a kind of "avoid crashing" strategy. This kind of analysis gives us an account of object *wh*-movement (even a long distance one) without any look-ahead: the object will be consecutively thrown out of each phase that cannot check its *wh*-feature. We believe that this is the only kind of operation that can create an additional specifier. In English multiple wh-questions *v* will not raise the *wh*-object to its specifier if it has a *wh*-subject at its edge, however, Polish *v* seems capable of applying this operation multiply.

compete with the external argument for the Spec,*v*P position where both of them are usually merged, hence one excludes the other. We also claim that in English EXPL-constructions *v* bears a special semantic role ([+exist]) which can only be assigned to an EXPL and which stops *v* from attracting the underlying OBJ into Spec,*v*P. As illustrated in section 2.3.1., Icelandic makes use of two options for EXPL-Merge: it can be merged in either Spec,*v*P or Spec,TP (in which case the underlying OBJ is moved to Spec,*v*P). In TECs the EXPL must always and only be merged in Spec,TP for the reasons we have mentioned for English: we need both the EXPL and the external argument, and they both must receive their theta-roles. The EXPL in Icelandic always moves on to Spec,CP and thus the constructions are structurally comparable to topicalized structures (though, naturally, the topicalized element has not moved through the Spec,TP). Consider the following construction (Alexiadou & Anagnostopoulou (1998: 497), originally from Holmberg (1986)):

(26) *Það hefur sennilega einhver alveg   lokið verkefninu.*
      there has   probably someone completely finished the.assignment

Numerous authors (Alexiadou & Anagnostopoulou (1998) and Jonas & Bobaljik (1996) among others) take the adverb placement in such examples to suggest that the non-specific subject *einhver* (someone) is external to the VP. With that, we could not agree more. However, we do not agree that it is in a derived position, either. We believe that it is in its base position, but this position is the Spec,*v*P, an assumption surely not unheard of. Interestingly, the aforementioned authors also propose that *sennilega* (probably) is a TP adverb, hence it precedes the non-specific subject they assume to be in Spec,TP. We believe that the adverbs such as *sennilega* (probably) are actually *v*P-adjoined, while adverbs such as *alveg* (completely), *stundum* (sometimes), *aldrei* (never) or *ekki* (not) are VP-adjoined (Jonas 1996: 171), hence the bracketed version of (26), would be as follows:

(27) *[CP Það_i [C' hefur_j [TP t_i [T' t_j [vP **sennilega** [vP einhver t_j [VP **alveg** [VP lokið verkefninu]]]]]]]].*

Consider also the following topicalized structures from Jonas & Bobaljik (1996: 196):

(28) a.   *Í gær   kláruðu **þessar mýs**DEF sennilega (*þessar mýs) ostinn.*
           yesterday finished these mice probably   the.chees

      b.   *Í gær   kláruðu (?margar mýs) sennilega **margar mýs**INDEF ostinn.*
           yesterday finished   probably many mice   the.cheese

If the definite subject in (28a) occupies the Spec,TP (and apparently must move out of the *v*P) and precedes the adverb *sennilega*, and if the indefinite subject is actually preferred to appear in the post-*sennilega* position, then, we think there is good reason to believe that it remains in Spec,*v*P (as the indefinite associate in the EXPL-constructions) and that the adverb marks the edge of *v*P, and not TP.

Svenonius (2002: 220-222) quotes the examples copied above and claims that definite subjects are not generally felicitous in a post-adverbial position and gives more examples of the same kind taken originally from Sigurðsson (1990: 50).

(29) a.   Núna hafa **bófarnir** líklega stolið smjörinu.
            now have the.gangsters probably stolen the.butter

      b.   ?? Núna hafa líklega **bófarnir** stolið smjörinu.
            now have probably the.gangsters stolen the.butter

So, unless we want to go back to AgrPs, or postulate the existence of yet a different functional projection somewhere between C and *v*, we cannot see any other possibility then to assume that the indefinite subject in Icelandic is allowed to stay in its original position throughout the derivation (it checks/values the features of *v* in that position anyway, so the agreement is taken care of there and then, and the *v* (or *v*-V) movement to T can handle its spreading). We believe then that both in Icelandic TECs and topicalized structures, the indefinite subjects are allowed to remain *v*P-internally throughout the derivation. Naturally, TECs being EXPL-constructions only allow indefinite subjects (associates), plus the EXPL is merged in Spec,TP which excludes the subject's movement to that position (the EXPL then moves on to CP). In the topicalized structures above, it is possible that the Spec,TP is not filled at all if the subject is indefinite, and the functional features of T are satisfied solely via verb movement (as in Null Subject Languages). Having said that, we predict the impossibility of Object Shift in TECs (see section 2.2. for details), a prediction which is borne out.

2.4.   *Summary and conclusions*

In this paper we have proposed a novel account of the EPP-Effects which is neither based on Case, not agreement. We have showed that the EPP as an independent property of language is dispensable as its apparent effects are derivable form the functional feature checking/valuation operations.

We have proposed a purely functional categorial feature matrix for functional heads and an exclusively lexical one for the lexical heads. To account for the interaction between functional probes and lexical categories, we have proposed that the functional heads c-selecting the lexical ones play the role of intermediaries in the exchange of feature values.

Without reference to such notions as Case-checking or agreement-checking, we have been able to derive the output traditionally ascribed to these operations. We believe that the names of the aforementioned operations falsely lead us to believe that this is what syntax is about and what it is driven by, while in reality the presence of particular Case or agreement we witness constitutes the result of the categorial feature checking operations employed in syntax, but crucially, not its driving force. We have also proposed that there exists no such Case as Nominative: what is perceived as NOM is lack of Case[25], and in the present terms it means that the DP in question has not entered into any Agree relation and its lexical features remain unaffected (hence available for sharing with functional probes). We have also established the distinctions between DPs bearing lexical, inherent and no Case in the framework proposed here. Even though their categorial feature matrices contain the same set of categorial features, they have varying specific values (lexical [+D, +N, -T, +V], inherent [+D, +N$_{3rd}$, ±T, -V], no Case [+D, +N, ±T, -V][26]). The values may be affected derivationally (the lexical ones via Agree, the functional ones via Merge/Move), which may then influence the agreement pattern in a given derivation.

Thanks to the comparison of the English and Icelandic data, we have shown why Object Shift is possible in Icelandic but impossible in English. OS is contingent on lexical verb movement and subject movement, and even though the latter does take place in English, the former never does. Object Shift has been assumed here to move the object into the specifier previously occupied by the subject. In that respect, OS resembles Stylistic Fronting (SF) which requires the presence of a "subject gap". It appears then that OS and SF are parallel processes applying in different phases. The fact that they do not affect interpretation follows partly from the fact that the positions to which they move are non-Θ-positions, and partly from the fact that it is an instance of PF-movement.[27] Our analysis also predicted the

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[25] We deny the existence of both the Case Filter and the Inverse Case Filter.

[26] [±T] means that it may or may not have entered a checking relation with a T-bearing functional head.

[27] If OS ever takes place in syntax, it must be induced by functional categorial feature-checking as showed in the constructions with a Quirky subject (section 2.3.2.).

impossibility of OS in TECs whose non-specific subject remains *v*P-internally and thus blocks any attempt to move to that position.

Finally, the analysis presented here makes use of the categorial feature matrices - theoretical primitives, whose existence is assumed in every other analysis anyway. We have thus kept our analysis as minimal as it is only possible - a desired result.

REFERENCES

Alexiadou, Artemis & Elena Anagnostopoulou. 1998. "Parametrizing Agr: word order, V-movement and EPP-checking."*Natural Language & Linguistic Theory* 16: 491-539.

Alexiadou, Artemis & Elena Anagnostopoulou. 2001. "The Subject-in-Situ Generalization and the Role of Case in Driving Computations." *Linguistic Inquiry* 32.2: 193-231.

Bailyn, John F. 2004. "Generalized Inversion." *Natural Language & Linguistic Theory* 22: 1-49.

Bobaljik Jonathan D. & Dianne Jonas. 1996. "Subject Positions and the Roles of TP." *Linguistic Inquiry* 27.2: 195-236.

Bobaljik, Jonathan & Höskuldur Þráinsson. 1998. "Two heads aren't always better than one." *Syntax* 1.1: 37-71.

Boeckx, Cedric. 2000a. "EPP Eliminated." Ms., University of Connecticut.

Boeckx, Cedric. 2000b. "Quirky Agreement." *Studia Linguistica* 54.3: 354-380.

Bošković, Željko. 2002. "A-movement and the EPP." *Syntax* 5.3: 167-218.

Bošković, Željko. 2004. (in press). "On the locality of Move and Agree: eliminating the Activation Condition, generalized EPP, Inverse case Filter and Phase Impenetrability Condition."

Bowers, John. 2002. "Transitivity." *Linguistic Inquiry* 33.2: 183-224.

Chomsky, Noam. 1986. *Knowledge of Language.* New York/Westport, Connecticut/London: Praeger.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, Mass.: MIT Press.

Chomsky, Noam. 1998. "Minimalist Inquiries: The Framework." *MITWPL* 15: 1-56.

Chomsky, Noam. 1999. "Derivation by Phase." *MITWPL* 18: 1-40.

Chomsky, Noam. 2001. "Beyond Explanatory Adequacy." *MITWPL* 20: 1-28.

Chomsky, Noam. 2005. "On Phases." (unpublished manuscript)

Collins, Chris. 2005. "A Smuggling Approach to Raising in English." *Linguistic Inquiry* 36: 289-298.

Haeberli, Eric. 2000. "Towards Deriving the EPP and Abstract Case." *Generative Grammar in Geneva* 1: 105-139.

Harley, Heidi. 2000. "Irish, the EPP and PRO." (unpublished manuscript)

Hiraiwa, Ken. 2001. "EPP: Object Shift and Stylistic Fronting in Scandinavian." In: K. Megerdoomian and L.A. Barel (eds.) *WCCFL 20 Proceedings* 290-303. Somerville, MA: Cascadilla Press.

Holmberg, Anders. 1986. *Word Order and Syntactic Features.* PhD, University of Stockholm.

Holmberg, Anders. 1999. "Remarks on Holmberg's Generalization." *Studia Linguistica* 53.1: 1-39.

Holmberg, Anders. 2000a. "Scandinavian Stylistic Fronting: How Any Category Can Become an Expletive." *Linguistic Inquiry* 31.3: 445–483.

Holmberg, Anders. 2002. "Expletives and Agreement in Scandinavian Passives." *Journal of Comparative Germanic Linguistics* 4: 85-128.

Holmberg, Anders & Thorbjörg Hróarsdóttir. 2003. "Agreement and movement in Icelandic raising constructions." *Lingua* 113: 997-1019.

Hornstein, Norbert, Jairo Nunes & Kleanthes K. Grohmann. 2005. *Understanding Minimalism.* Cambridge University Press.

Jonas, Dianne. 1996. "Clause Structure, Expletives and Verb Movement." In: Abraham, Werner, et al. (eds.) *Minimal Ideas.* John Benjamins Publishing Company.

Landau, Idan. 2005. "EPP Extensions." Ms., Ben Gurion University.

Lasnik, Howard. 1999a. "Chains of Arguments." In: Epstein, S.D. & N. Hornstein (eds.) *Working Minimalism.* The MIT Press.

Lasnik, Howard. 1999b. *Minimalist Analysis.* Oxford: Blackwell.

Lavine, James & Robert Freidin. 2002. "The Subject of Defective T(ense) in Slavic." *Journal of Slavic Linguistics* 10: 253–89.

Martin, Roger. 1999. "Case, the Extended Projection Principle,and Minimalism." In: Epstein, S.D. & N. Hornstein (eds.) *Working Minimalism.* The MIT Press.

Miyagawa, Shigeru. 2005. "On the EPP." In: Richards, Norvin & Martha McGinnis, (eds.) *Perspectives on Phases. MITWPL 49.*

Pesetsky, David & Esther Torrego. 2000. "T-to-C Movement: Causes and Consequences" in Michael Kenstowicz, ed. (2000) *Ken Hale: a Life in Language.* MIT Press.

Platzack, Christer. 1987. "The Scandinavian Languages and the Null-Subject Parameter." *Natural Language & Linguistic Theory* 5: 377-401.

Rögnvaldsson, Eiríkur: 1984. "Iclandic Word Order and það-Insertion." *WPSS 8.*

Sigurðsson, Halldór Á. 1989. *Verbal Syntax and Case in Icelandic. In a Comparative GB Approach.* PhD, University of Lund.

Sigurðsson, Halldór Á. 1990. "V1 declaratives and verb raising in Icelandic." In: Maling, Joan & Annie Zænen (eds.) *Modern Icelandic Syntax*, 41-69. New York: Academic Press .

Solà, Jaume. 1996. "Morphology and Word Order in Germanic Languages." In: Abraham, Werner, et al. (eds.) *Minimal Ideas*. John Benjamins Publishing Company.

Svenonius, Peter. 2002. "Subject Positions and the Placement of Adverbials." In: Svenonius, P. (ed.) *Subjects, Expletives, and the EPP*. Oxford University Press.

Thráinsson, Höskuldur. 1979. *On Complementation in Icelandic*. New York and London: Garland.

Vangsnes, Øystein A. 2002. "Icelandic Expletive Constructions and the Distribution of Subject Types." In: Svenonius, P. (ed.) *Subjects, Expletives, and the EPP*. Oxford University Press.

Witkoś, Jacek. 2004. "Raising Expletives." *Poznań Studies in Contemporary Linguistics* 39: 175-195.