Stylistic fronting as remnant movement∗

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Abstract
This paper presents a novel analysis of the phenomenon of stylistic fronting in Icelandic. It is argued that stylistic fronting is not a head-movement operation, but rather phrasal movement to subject position. In many cases, however, independent factors determine evacuation of the phrase prior to raising, i.e. the fronted phrase can be a remnant. It is shown that this approach can account for a variety of otherwise puzzling properties of stylistic fronting.

1 Introduction
This paper argues that the fronting operation known as Stylistic Fronting (henceforth, SF) should be uniformly analyzed as phrasal movement. Throughout, the discussion will focus on Icelandic, although SF also exists in Faroese and perhaps other languages (for a survey, see Holmberg 2006).1

SF was first discussed by Maling (1980) (reprinted as Maling 1990), who observed that under certain conditions, Icelandic allows for inversion of the finite verb and some postverbal element, e.g. the negation:

(1) a. þetta er tilboð sem er ekki hægt að hafna
   this is an offer that is not possible to reject

b. þetta er tilboð sem ekki òr tó hægt að hafna
   this is an offer that is not possible to reject

As (1) shows, SF is optional. It is “stylistic” in the sense of not having any semantic or pragmatic implications; in particular, it has no emphasis or focus effect as is typically associated with topicalization (see Holmberg 2006 and references cited there).

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1 On (what appear to be) very similar phenomena in Old English, see Platzack (1995), Kroch and Taylor (2000), Trips (2002), Biberauer and Roberts (2005), and Mathieu (2006) for Old French. SF in these languages will not play a role in what follows.
Superficially, SF comes in two basic varieties: The fronted element is either an XP or an X⁰-category (a single terminal). The most obvious instances of the latter type are cases in which a verb particle or a participle verb undergoes SF (examples from Hrafnbjargarson 2003: 165):

(2) a. Hann síndi mér flóskurnar sem inni hafði verið smyglad tₗ
   he showed me the bottles that in had been smuggled
b. Hann síndi mér flóskurnar sem smyglad hafði verið tₗ ín
   he showed me the bottles that smuggled had been in

Data of this kind have led many to believe that SF of head-like categories is the general case (see, e.g., Anderson 1993: 93). However, it has since been recognized that there are clear instances of phrasal elements undergoing SF, i.e. fronting of full NPs or PPs (Holmberg 2000, 2006):

(3) a. Þeir sem hafa búið [PP í Öslo] segja að...
   those that have lived in Oslo say that
b. Þeir sem [PP í Öslo], hafa búið tₗ segja að...
   those that in Oslo have lived say that

(4) a. Hver heldur þú að verði að taka [NP þessa erfiðu ákvördðun]...
   who think you that has to take this difficult decision
b. Hver heldur þú að [NP þessa erfiðu ákvördðun], verði að taka tₗ
   who think you that this difficult decision has to take

These and similar instances of SF cast serious doubt on any account that uniformly analyzes SF as head movement (e.g. Jónsson 1991). The facts leave room, however, for a hybrid view of SF as either head or phrasal movement, depending on the fronted element (cf. Hrafnbjargarson 2003, 2004). Other than all existing analyses of SF that I know of, I will argue in this paper that all SF is in fact movement of a phrasal category.²

The paper is structured as follows. After a presentation of the key properties of SF in §2, I will discuss some aspects of previous approaches to SF in §3, pointing out some weaknesses that I will try to overcome with my own analysis, which will be presented in §4. I will discuss case by case, i.e. SF of NPs/PPs, adverbs/negation, adjectives, participles, and particles, and argue in each case that the fronting operation should be analyzed as phrasal movement, allowing for a uniform treatment. To this end, I will argue that in some cases SF involves remnant movement (in the sense of Webelhuth and den Besten 1987), i.e. fronting of an “incomplete” category containing traces.³ The analysis will be refined in §5, where it is argued that SF is one among several “EPP strategies” available in Icelandic. Some tentative remarks about the parametric source of SF will be made in §6: §7 concludes the paper.

² According to Platzack (2009: 15), a remnant-movement analysis is also proposed in Håkansson 2008. I have not seen this work, hence cannot include discussion of it here.

³ I will set aside here the various problems and questions that remnant movement raises for syntactic theory; see Müller (1998) and Abels (2008) for some pertinent discussion.
2 Key properties of SF

SF is an operation that fronts some element to a position immediately preceding the finite verb. One of the key characteristics of SF is the “subject-gap condition”: SF can only apply if there is no overt subject present in the canonical subject position (examples from Holmberg 2006: 535):

(5) a. Hveri heldur þú að tì hafi stolið hjólinu
   who think you that has stolen the bike

   b. Hver heldur þú að stolið tì hafi tì hjólinu
      who think you that stolen has the bike

(6) a. Hvaða hjóli heldur þú að hann hafi stolið tì
      which bike think you that he has stolen

   b. * Hvaða hjóli heldur þú að stolið hann hafi tì
      which bike think you that stolen he has

From the subject-gap condition it follows that there are essentially three types of environments in which SF is licensed (cf. Maling 1990: 77, 79f.): embedded clauses with a relativized or extracted subject, clauses with “late” indefinite subjects, and impersonal clauses that are subject-less. The following examples illustrate (cf. Holmberg 2006: 535; Thráinsson 2007: 353; Jónsson 1991: 24):

(7) SF in embedded clauses with subject gap:
   a. Hver heldur þú [CP að stolið tì hafi tì hjólinu ]
      who think you that stolen has the bike

   b. Þetta er mál [CP sem rættì hefur verið tì ]
      this is an issue that discussed has been

(8) SF in clauses with “late” subject:
   a. Ég hélt að kysstì hefðu tì hana margir stúdentar
      I thought that kissed had her many students

   b. Keyptì hafa tì þessa bók margir stúdentar
      bought have this book many students

(9) SF in impersonal clauses:
   a. Keyptì hefur verið tì tölva fyrir starfsfólkið
      bought has been a computer for the staff

   b. Verðbólgan varð verri ìn viðì hafð verið [VP búist tì ]
      inflation was worse than PRT had been expected

In (7a), the subject has undergone long wh-movement into the matrix clause, hence SF is licensed in the lower clause. Relativization of the subject (7b) has the same effect.

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4 Extraction of a promoted object (as in passives) likewise licenses SF (cf. Rögnvaldsson and Thráinsson 1990: 27), a case I will set aside here; but see §4.4 on unaccusatives.

5 For now, I’m omitting the subject trace in the examples with SF; I will return to this problem in §5 below.
of allowing SF to apply optionally. Likewise, when the subject is indefinite and does not raise to Spec-T (8), or when a subject is not licensed by the predicate (9), SF can apply.

As (8) shows, SF requires the derived subject position (Spec-T) to be empty. Since the definiteness restriction applies in Modern Icelandic (Thráinsson 1979: ch. 7), it follows that SF can only apply in connection with indefinite subjects, which need not raise. Witness the following contrast (from Maling 1990: 80):

(10) a. * bæinn þar sem byrjaði höfðu t₁ trésmiðir
    the town where that begun had the carpenters

b. bæinn þar sem byrjaði höfðu t₁ nokkrir trésmiðir
    the town where that begun had some carpenters

(10a) is bad because either the definite subject stays low (incurring a definiteness effect), or else it raises, but then SF applies despite there not being a subject gap. Either way, the result is bad. By contrast, a subject that can stay low does not interfere with SF (10b). I will not attempt to explain the fact that definite subjects in Icelandic have to raise to Spec-T in this paper, but simply take it as given.

It is known that SF can target a fairly broad variety of categories (for examples and discussion, see §4 below). Given that SF targets a position to the left of the finite verb, SF of phrasal categories such as NPs and PPs (as shown in (3–4) above) bears some resemblance to (embedded) topicalization. Notice, however, that an antecedent reason for distinguishing the two movement types is that SF is natural in embedded clauses, while topicalization (in Icelandic as in Germanic in general) is severely restricted in non-root environments (Maling 1990: 76). Recall also that topicalization typically facilitates an emphasis/focus reading of the fronted constituent, whereas SF is information-structurally vacuous.

The aforementioned subject-gap requirement on SF represents a further asymmetry between SF and topicalization. This is illustrated transparently by the following examples (from Holmberg 2000: 449), which should be compared to (3) and (4), respectively:

(11) SF of PP without subject gap (compare to (3)):
    a. * vinnan sem hann [ₚₚ í Øsló], hef haft t₁
       the job that he in Oslo has had
    b. * vinnan sem [ₚₚ í Øsló], hann hef haft t₁
       the job that he in Oslo has had
    c. * vinnan sem [ₚₚ í Øsló], hef hann haft t₁
       the job that he in Oslo has had

(12) SF of NP without subject gap (compare to (4)):
    a. * þegar hann [ₚₚ Þessa erfiðu ákvörðun], hafði tekið t₁
       when he this difficult decision had taken

6 Embedded topicalization in Icelandic is limited to complements of (some) bridge-verbs and generally impossible in embedded questions and relative clauses (cf. Thráinsson 2007: 41, 352 and Vikner 1995: 71f.).
b. *þegar [\text{NP} þessa erfiðu ákvörðun]i hann hafði tekið til \\
when this difficult decision he had taken

c. *þegar [\text{NP} þessa erfiðu ákvörðun]i hafði hann tekið til \\
when this difficult decision had he taken

Moreover, SF is strictly clause-bound (Thráinsson 2007: 373; cf. also Jónsson 1991: 15), contrasting with A’-movement such as topicalization:

\[(13) * \text{Bókin } [\text{CP} \text{sem stoliði var sagt } [\text{CP} að þú hefðið til] \text{ the book that stolen was said that you had} \]

A further asymmetry arises in connection with extraction. While embedded topicalization creates a topic island (14a), extraction across an element that has undergone SF is possible (14b) (cf. Maling 1990, Rögnvaldsson and Thráinsson 1990, Jónsson 1991, Holmberg 2006):

\[(14) a. * \text{Maríu } [að þessum hringum lofaði Ólafur til] \text{ Maria know I that this ring promised Olaf} \text{‘I know that Olaf promised Maria this ring.’} \]

\[b. þennan mann við ég [að fariði hefði verið með til á sjúkrahúsi] \text{ this man I thought had been to hospital} \text{‘This man I thought had been taken to hospital.’} \]

\[(15) a. * \text{Hversu lengi heldur þú } [\text{CP að } [\text{PP í Ósló}i hafi hann būið til] \text{ how long think you that in Oslo has he lived} \]

\[b. \text{Hversu lengi heldur þú } [\text{CP að } [\text{PP í Ósló}i hafi verið būið til] \text{ how long think you that in Oslo has been lived} \text{‘How long do you think that people have lived in Oslo?’} \]

Uncontroversially, I assume that the topicalized phrase in (14a) and (15a) occupies Spec-C of the embedded clause, which can therefore not function as an “escape hatch” for further elements to be extracted. By contrast, the escape hatch is evidently available in (14b) and (15b), i.e. the fronted element in this case does not occupy Spec-C. With Maling (1990) and Holmberg (2006), among others, I conclude that SF is distinct from embedded topicalization in terms of underlying operations.

I will now turn to a brief discussion of previous theoretical analyses of SF in Icelandic before turning to my own proposal in §4.

3 Previous approaches to SF

SF has been analyzed in various ways since Maling’s seminal work on this topic. In this section, I will briefly discuss some previous approaches to SF, outlining their strengths and weaknesses.\(^7\)

\(^7\) Two theories of SF I will not discuss here are those outlined in Poole 1997 (prosodic inversion) and Sells 2002 (base generation). These accounts diverge sharply from my basic assumptions, which is why a
Platzack (1987) argues that stylistic fronting is simply movement into the subject position (Spec-T, in my terms). This is problematic, since he seems to assume that the moving elements are heads, e.g. participles and particles. It is left open by his theory why X^0-categories should be allowed to move to a phrasal position. Neither Platzack nor Maling discuss SF of NPs or PPs as described in §2. Likewise, neither author explains why SF can target the subject position, given that – at least in embedded clauses with subject extraction or relativization – this position is standardly taken to be occupied by a trace. Even if we assume that the subject trace is somehow deleted after further movement of the subject, subsequent SF in the lower clause would be countercyclic.

In response to these problems, Rögnvaldsson and Thráinsson (1990) (building on Rögnvaldsson 1982) propose an analysis that amounts to a denial that SF exists as a separate operation in the grammar; rather, it is reduced to a subcase of topicalization, analyzed as movement to Spec-T. I gave some (to my mind, conclusive) arguments to the opposite conclusion in the preceding section, and in fact none of the asymmetries described there can be made to follow from their account. Perhaps even more problematically for this reductionist account, standard cases of SF involve nonfinite verbs and verb particles, but both categories cannot be topicalized in Icelandic (Thráinsson 2007: 343). Despite these grave problems, there is one aspect of Rögnvaldsson and Thráinsson’s account which I will adopt in my own approach (see §5 below): In order to avoid the problem of moving an element into a position occupied by a trace, they assume that the subject trace is in a lower position than Spec-T (adjoined to VP, in their terms). My slightly modified version of this claim will be that subjects are extracted directly from their base position within vP.

A novel movement-to-subject account of SF is developed in Holmberg 2000. Holmberg suggests to split the EPP-requirement of Icelandic T into two parts: One feature ([D]) of T requires agreement with a nominal category, another feature ([P]) requires filling of Spec-T. The idea is that in SF constructions, both features are satisfied (checked) by distinct means: [D] (agreement with a nominal category) can be satisfied under Agree; the [P]-feature can then be satisfied by movement of some other category to Spec-T. But this movement, Holmberg argues, inserts only the phonological features of the attracted element into Spec-T, leaving behind formal and semantic features. In effect, the fronted element is “derived expletive”, and the semantic vacuity of SF follows.

While Holmberg’s is clearly more satisfying than earlier accounts, it faces some non-trivial challenges (cf. the discussion in Thráinsson 2007: 386). First of all, once we allow phonological features of elements to be dissociated from semantic/formal features by means of movement, the question of how to constrain this feature-splitting capacity thorough discussion of their proposals is beyond the scope of the present work. See Bošković (2004: 58 fn. 1) for a brief discussion of (and decisive arguments against) Poole’s analysis. I will also not discuss Poole 1996 specifically, since it is a variation of the head-movement approach of Jónsson (1991) and Holmberg and Platzack (1995). The hybrid theory developed in Hrafnhjargarson (2003, 2004) appears to be on thin ice empirically (see Sigurbjörnsson 2008: 24, fn. 37, Thráinsson 2007: 389) and will also not be considered here (see Poole 2007 for some discussion).
of movement operations arises immediately. Another problem that Holmberg addresses insufficiently is that of heads moving to Spec-T. He indicates (p. 461) that his theory allows for this, and adds that there is no phrase-structural reason to ban substitution of non-projecting heads into specifiers. Whether or not this assumption is problematic is a matter of theoretical choice; I think that it sacrifices too many crucial generalizations and explanations by effectively abandoning the X\textsuperscript{0}/XP-distinction. If restrictiveness of the theory is to be maintained, Holmberg’s account is untenable.

Returning to head-movement analyses, Jónsson (1991) proposes to analyze SF as movement of heads (see also Holmberg and Platzack 1995, Poole 1996) – that is, as adjunction of the fronted X\textsuperscript{0}-category to Infl (T, in my terms).\(^8\) I have already noted the most obvious problem for this approach: As shown in §2, there are clear cases of SF that involve maximal categories and hence cannot possibly be analyzed as head movement.\(^9\)

Jónsson (1991) proposes to account for the subject-gap requirement by a stipulation to the effect that head-adjunction/cliticization of the fronted element to T renders the latter incapable of assigning nominative case to the subject position.\(^10\) A problem for this analysis (which Jónsson himself notes) is that SF does not seem to generally lead to a suppression of nominative case, in particular in cases where an indefinite subject stays low, or where nominative is assigned to a passive object (cf. Ottósson 1994: 114):

\begin{footnotesize}
\begin{itemize}
  \item[(16)]
  \begin{enumerate}
    \item a. Ég veit \([CP að til_t \text{ eru } t_i [NP önnur lönd]]\)
    \hspace{1em} I know that \text{ PR \ T are other countries.}\text{NOM}
    \item b. … hvort drukkið\text{t} hafi einhverjir Danir \(t_i\) björ
    \hspace{1em} if drunk have some \text{ Danes.}\text{NOM beer}
    \item c. Kvept\text{t} hefur varið\text{t} tölva fyrir starfsfólkið
    \hspace{1em} bought has been \text{ for the staff}
  \end{enumerate}
\end{itemize}
\end{footnotesize}

A further problem (noted by Sigurðsson 1997: 5) is that the subject-gap restriction does not only require absence of nominative subjects; oblique subjects are likewise impossible (cf. also Maling 1990: 83).\(^11\) Clearly, then, even if it is granted that adjunction to T somehow renders that head incapable of assigning nominative case, this cannot properly derive the subject-gap requirement of SF.\(^12\)

\(^8\) According to Holmberg and Platzack (1995: 116), a similar analysis was proposed independently by Platzack (1991).

\(^9\) Although Jónsson mentions leftward movement of negative objects and indicates that he takes it to be an instance of SF, he does not discuss SF of XPs any further.

\(^10\) Thus, Jónsson in effect treats SF as a case of clitic movement. But, as noted by Holmberg (2000: 455), the fronted elements (even those that are head-like) are in no way defective, syntactically or prosodically. As will be shown below, modified heads can undergo SF. Moreover, the elements that undergo SF can do so even when conjoined (Sigurðsson 1997: 8). Hence, it is unclear why these elements should have to undergo cliticization at all, and why only in the context of SF. In addition, it can be objected that while clitics normally never occur sentence-initially, SF targets the initial position when it applies in impersonal main clauses.

\(^11\) The problem is also noted by Holmberg and Platzack (1995: 119), who propose an amendment to the effect that if SF to Infl applies, Spec-T is not licensed as an A-position. I will not discuss this equally stipulative account here.

\(^12\) The arguments given here apply equally to Platzack (1987), where it is argued that nominative case is absorbed by C, assumed to be pronominal in Icelandic.
A head-movement approach is also developed by Bošković (2004), who argues that SF targets a null head F above T. At PF, affixal F and the T-head must undergo morphological merger, which requires both heads to be adjacent – this accounts for the subject-gap requirement. The most obvious problem for the analysis is, of course, that it has no way of accounting for SF of XPs, i.e. NPs and PPs, since all SF is necessarily taken to be head-movement to F. It is clearly not feasible to assume that some XP raised to Spec-F could undergo PF-merger with T. Moreover, Bošković’s account relies entirely on the existence of the affixal head F, to which the fronted element adjoins, but no empirical justification for the existence of this head is given.

Overall, we have good reasons to dismiss a theory that tries to account for all cases of SF in terms of head movement. The two virtues that such a theory has (by assuming head movement, it explains the clause-boundedness and semantic vacuity of SF) will receive an alternative explanation in the approach to be developed below: SF is clause-bound because it is A-movement, and it reconstructs because there is no case-assignment involved.

None of the accounts briefly surveyed here can explain why SF can move seemingly diverse categories into the derived subject position, and why SF should be constrained by the subject-gap requirement. My own theory, developed in what follows, relies on a significantly smaller set of assumptions than the approaches discussed in this section but can account for the observed peculiarities without inelegant stipulations.

4 SF as (remnant-)XP fronting

In this section, I will discuss the various manifestations of SF, arguing in each case that the fronted category moves as a phrase, not as a head. Importantly, in order to achieve this unification it is necessary to show that the apparent cases of head movement are actually remnant-XP movements.

4.1 NPs and PPs

In this section, I want to discuss cases of SF in which the fronted category is an object NP or PP. For now I will confine the discussion to a description of the facts, while my theoretical analysis of NP/PP-fronting will be stated in §§4.4 and 4.5, in order to avoid redundancy.

Consider the following examples, which Sigurðsson (1997: 6) attributes to Rögnvaldsson (1982, 1984a):

(17) a. sem [\textit{NP} þessa erfiðu ákvörðun ]i verða að taka \textit{t}_i
who this difficult decision have to take

b. sem [\textit{PP} um þetta ]i hafa rætt \textit{t}_i
who about this have discussed
Since topicalization is not an option in relative clauses, (17) must be instances of SF. Further examples are given in Jónsson (1998), Hrafnbjargarson (2004), and Holmberg (2000, 2006):\textsuperscript{13}

(18) a. Peir sem [NP bestum áragri \_]i hafa náð t\_i
   those who the best result have got
b. Peir sem [PP til hans \_]i myndu hafa verið sendir t\_i
   those who to him might have been sent
c. Allir sem [PP í bókinni \_]i höfðu lesið t\_i voru hrifnir
   all that in the book had read were impressed
d. Peir sem [PP í Óslo \_]i hafa búað t\_i segja að ...
   those who in Oslo have lived say that

Clearly, none of these examples could be analyzed as movement of an X\textsuperscript{0}-category. Holmberg (2006: 545ff.) argues at length that these cases of NP/PP-fronting exhibit all relevant properties of SF and can be shown to be distinct from topicalization, relying on the asymmetries discussed in §2.

Some details with regard to SF of PPs require clarification. As noted by Jónsson (1991: 14) and Sigurðsson (1997: 6), SF cannot remove bare prepositions from their complements:

(19) a. *að um yrðí rætt [PP t\_i tillögurnar ]
   that about would-be talked the proposals
b. *hegar um hafði verið rætt [PP t\_i petta ]
   when about had been talked this

As noted by Holmberg (2006: 555), however, fronting of (what looks like) a bare preposition is possible if the PP contains the trace of a null operator (or of the head noun, depending on one’s theory of relative clauses):

(20) maðurína\_k [CP Op\_k/t\_k sem [PP um t\_k ] var rætt t\_i ]
   the man that about was talked

A comparison between (19) and (20) strongly suggests that what is going on in (20) cannot be fronting of a bare preposition (which is bad, as (19) shows), but rather of a PP.

Finally, it should be mentioned that not any NP or PP can undergo SF. The notoriously ill-understood notion of heaviness clearly plays a role here: In general, “heavy” constituents resist SF more strongly than “lighter” constituents (Gunnar Hrafn Hrafnbjargarson, p.c.). For instance, NPs or PPs that contain a further NP complement or a relative clause cannot undergo SF; likewise, clausal complements resist fronting:

(21) a. *Allir sem [NP eyðileggingu borgarinnar Hiroshima ]\_i fengu að
   all that the destruction.DAT the city.GEN Hiroshima got to
   fylgja með t\_i fylltust hryllingi
   follow with were-filled fear

\textsuperscript{13} See Holmberg and Platzack (1995: 115) for similar examples from Faroese, attributed to Barnes 1987; Falk (1993: §6.4) discusses cases of phrasal SF in Old Swedish.
b. * Allir sem [PP um maninn sem drukknaði höfðu ]i heyr t₁ voru all that about the man that drowned had heard were sorgmæðdir sad

c. * Allir sem [CP að Jón hafði sagt að konan hans væri í all who that John had said that wife his was in Kaupmannahöfn ]i vissu t₁ urðu hissa þegar þau komu saman Copenhagen knew became surprised when they came together í veisluna to the party

d. * sá sem [ að lyfta steininum ]i reyndi t₁ he that to lift the stone tried

Presumably for the same reason (heaviness), SF of complete VPs is impossible (see, e.g., Holmberg 2000: 470):

(22) a. * þeir sem [vP búið í Ósló ] hafa t₁ segja að ... those that lived in Oslo have say that

b. * Hann segir að [vP komið betra veður ] sé t₁vp he says that come better weather is

c. * [vP Fallið margir hermenn ] hafa t₁vp í þessu striði died many soldiers have in this war

Notice that what SF does is moving a non-subject constituent to the subject position – in many cases, a constituent that is of a type (nonfinite verb, particle, adverb) that is incompatible with subjecthood at all. It is therefore not surprising to find that the complexity of the fronted category is more tightly constrained than in the case of canonical subjects, given the potentially heavy burden this fronting puts on processing (Cedric Boeckx, p.c.).

The data I presented in this section show unambiguously that SF can not be uniformly analyzed as head movement (pace Jónsson 1991, Holmberg and Platzack 1995, Poole 1996, Bošković 2004). This leaves us with two theoretical options: Either we conclude that both XPs and X₀s can undergo SF (and hence that SF can target different positions in the tree); or else we conclude that all SF is phrasal. A uniform analysis of all types of SF – which I will take to be more desirable from a theoretical point of view – must take the latter route.

4.2 Adverbs and negation

Let us now turn to SF of adverbs, illustrated in the following example (from Holmberg 2006: 539):

(23) sem sennilega, er t₁ hægt að gera við that probably is possible to fix PRT
Given that the fronted element in (23) is a single “word” (terminal), it is tempting to conclude (with Jónsson 1991, Holmberg and Platzack 1995 and others) that SF targets an X⁰-category in such cases. However, according to Kayne (1994), Alexiadou (1997), Cinque (1999) and others, adverbs are specifiers of dedicated functional projections (termed the “functional specifier approach” by Cinque 2004: 684). Schematically, this can be represented as follows:14

(24) \[ T' \]
    \[ T \quad \alpha P \]
    \[ \quad \alpha' \]
    \[ \quad \alpha^0 \quad \nu P \]
    \[ \quad \text{(so) well} \]
    \[ \quad \text{SUBJ VP} \]

Assuming the Cinquean theory of adverbs to be on the right track (cf. Thráinsson 2007: 370), it follows straightforwardly that adverbs are actually phrasal categories, hence that SF of adverbs should be seen as XP-movement. That this is the case is also shown by the fact that adverbs can be modified, in which case the entire AdvP undergoes SF (the example is originally from Rögnvaldsson 1982):

(25) \[ \text{sem } [_{\text{AdvP}} \text{svona vel }] \text{; hafa talað í um þig} \]
    \[ \text{who so well have talked about you} \]

I will assume a parallel analysis for the negation, which I take to be an AdvP in the specifier of a dedicated negation phrase (as argued in Jónsson 1996: 95–100):15

(27) \[ \text{þegar } [_{\text{AdvP}} \text{ekki }] \text{ var } [_{\text{NegP}} \text{tɪ } [_{\text{Neg'}} \text{∅-Neg}^0] ]_{\nu P} \text{búið að borða }} \]
    \[ \text{when not was finished to eat} \]

Like αPs hosting adverbs, the phrase hosting the negation is hierarchically ordered above the thematic (νP) domain. This makes a prediction about locality conditions relevant to SF. If, in an SF environment, T simply attracts the closest XP it can (Attract

14 “α” here is shorthand for the various categories encoded in Cinque’s hierarchy, i.e. \( \alpha \in \{ \text{Mod, Asp, Pol, …} \} \).

15 There are independent reasons to take the negation in Icelandic to be phrasal (cf. Ouhalla 1990). Negation (and adverbs) can be topicalized in this language (see Holmberg and Platzack 1995: 17). Moreover, and more directly relevant to our purposes here, negation can be modified, in which case the entire phrase undergoes SF (examples from Sigurðsson 1997: 8 and Thráinsson 2007: 82):

(26) \[ \text{a. sem } [_{\text{AdvP}} \text{alls ekki ]; hefur } [_{\text{NegP}} \text{tɪ } \text{∅-Neg}^0] ]_{\text{skrifað þessar bækur}} \text{ who at all not has written these books} \]

\[ \text{b. sem } [_{\text{AdvP}} \text{alls ekki ]; geta } [_{\text{NegP}} \text{tɪ } \text{∅-Neg}^0] ]_{\text{uminið saman}} \text{ that at all not can work together} \]

The examples in (26) are cases of phrasal movement; hence, cases in which negation appears to be moving as a head must be cases of phrasal fronting, too. We have thus more direct support for the hypothesis that SF is generally phrasal movement.
Closest, Chomsky 1995: 311), then adverbs and the negation will always block SF of any vP-internal material. This prediction is borne out. According to Maling (1980, 1990), SF is governed by the following “accessibility hierarchy”:

(28) Accessibility hierarchy (based on Maling 1990: 81)

\[
\begin{align*}
\{ \text{negation, adverbs} \} & \gg \{ \text{past participle, verb particle} \} & \gg \text{predicative adjectives}
\end{align*}
\]

Maling supports the hierarchy in (28) by showing that adverbs and the negation uniformly block SF of lower material. A nonfinite verb cannot undergo SF when the negation is present:

(29) þegar búiði var tí að borða
when finished was to eat

(30) a. þegar ekki í var tí búið að borða
when not was finished to eat
b. * þegar búiði var ekki tí að borða
when finished was not to eat

Transparently, AdvP in Spec-Neg is the closest XP for T’s EPP-feature to attract.

SF of adverbs/negation allows us to empirically distinguish between head-movement theories of SF and a phrasal-movement analysis of the kind developed here. For Jónsson (1991) and Boškovič (2004), SF is head movement, hence governed by the Head-movement Constraint (HMC, Travis 1984). On the theory developed here (as well as for Holmberg 2000), SF is governed by Attract Closest. Consider now the following data from Thráinsson (2007: 381) (cf. also Holmberg 2000: 454f.):

(31) a. Peir sem hafa ekki verið í Danmörku
those that have not been in Denmark
b. Peir sem ekki hafa tí verið í Danmörku
those that have not been in Denmark
c. * Peir sem í Danmörku hafa ekki verið tí
those that in Denmark have not been

(32) Peir sem í Danmörku hafa verið tí
those that in Denmark have been

The contrast between (31b) and (31c) demonstrates that presence of a negation blocks SF of a lower PP. When the negation is removed, PP-fronting is possible (32). This shows that the HMC cannot be the relevant locality condition on SF; the PP, being a maximal projection, cannot be governed by this constraint. The interaction (blocking) between the negation and the PP shows, then, that fronting of the negation cannot be governed by the

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16 I will remain agnostic about the precise formalization of the relevant locality constraint. As an alternative to Attract Closest, one could invoke, for instance, the Minimal Link Condition (Chomsky 1995: 355f.) or some formulation of Shortest Move.

17 Adverbs were not included in Maling’s original formulation of the hierarchy.
HMC, either. An Attract Closest-based account, however, can easily explain the facts, since both the negation and the PP are XPs. The head-movement account of SF must be rejected. See §4.4 below for further evidence from SF that the negation moves as an XP.

It is necessary at this point to rule out a further option to satisfy EPP on T, namely raising of the entire complement of T (NegP/AdvP). What we want to say, intuitively, is that T attracts the closest specifier, but in the light of what I will have to say in §§4.4 and 4.5 below, I will instead assume the following natural principle:

\[(33) \textit{Anti-locality constraint} \ (\text{cf. Abels 2003: 12}) \]

\[ *[XP \; YP \; [X' \; \text{X}^0 \; t_{YP}]] \]

It follows from (33) that in a configuration [T XP], attraction of XP to Spec-T in order to satisfy an EPP-requirement on T is impossible. This captures the standard (though standardly implicit) assumption that EPP on T cannot be satisfied by raising of T’s complement (for related discussion in a broader context, see Abels 2003, and Boeckx 2008: ch. 3 for an attempt to derive anti-locality from deeper principles). Movement must be sufficiently non-local, hence in the cases relevant here, T must attract the AdvP in Spec-NegP/Spec-\( \alpha \)P.

So far, we have seen that at least part of Maling’s accessibility hierarchy follows from Attract Closest, once SF is analyzed as phrasal movement (attraction by T): NegP and phrases hosting adverbs block SF of lower material. In the following section, we will see that the same holds when the predicate is adjectival. For the remaining cases the theory outlined in §§4.4 and 4.5 makes the right predictions, once properties of the \( vP \) phase are taken into account. I conclude that adverbs and the negation, being specifiers of functional heads above \( vP \) (as in Cinque 1999), move as full maximal projections; no further manipulation is necessary for these categories to undergo SF. A minimal view of locality (Attract Closest), supplemented with the anti-locality requirement (33), straightforwardly accounts for the facts.

### 4.3 Predicative adjectives

A further category that can undergo SF is that of predicative adjectives. The following examples (from Holmberg 2006: 535 and Jónsson 1991: 2) illustrate:

\[(34) \begin{align*}
\text{a. } & \text{hún sem var fyrst til að lýsa stíflærslu} \quad \text{she that was first to investigate Stylistic Fronting} \\
\text{b. } & \text{hún sem fyrst} \text{t} \text{i til að lýsa stíflærslu} \quad \text{she that first was to investigate Stylistic Fronting}
\end{align*} \]

\[(35) \begin{align*}
\text{a. } & \text{nokkuð sem er hægt að gera við} \quad \text{something that is possible to fix} \\
\text{b. } & \text{nokkuð sem hægt} \text{t} \text{i er t} \text{i að gera við} \quad \text{something that possible is to fix}
\end{align*} \]

---

\footnote{The notion of anti-locality used here is different from that in Grohmann 2003 and related work.}
(36) Þeir sem ánægðir eru \([_{AP} t_i \text{ með kaupið }]\) kvarta ekki
those who content are with the pay complain not

Notice that the fronted adjective in (34b) and (36) has left behind its complement. By contrast, modifiers generally cannot be stranded by SF of the adjective in this way (Jónsson 1991: 13):

(37) \(* \) Petta er maður \([_{CP} \text{ sem skyldur; er mjög } t_i \text{ Mariú }]\)
this is a man that related is very much Maria.DAT

Similarly, modifiers cannot undergo SF by themselves, stranding an adjective (example from Sigurðsson 1997: 6):\(^{19}\)

(39) \(* \) sem svakalega var \(t_i\) klár
who terribly was bright

Such cases generally improve significantly when the entire AP moves:\(^{20}\)

I propose to account for the data in the following way. Roughly following Bowers (1993), Baker (2003: ch. 4) and others, I assume that a copula (relative) clause with an AP predicate as in (34a) has the following structure:

(41) \([_{CP} \text{ OP } [_{C'} C\text{-that } [_{TP} \text{ T- was } [_{PredP} t_{OP} [_{Pred'} \text{ Pred- } t_i \text{ [_{AP} \text{ first [_{CP} \text{ PRO to investigate SF ]}']}]}]]]])

Thus, I take a predicative adjective in this context to be the head of an AP which is dominated by some kind of predicate phrase PredP (perhaps a bare VP), which is in turn selected by T; the copular verb raises from Pred/V to T, unless an auxiliary is chosen. Now, given that PredP cannot raise to Spec-T by anti-locality (33), T attracts the remnant AP containing the trace of the extraposed complement (the dashed arrow indicates application of a transformation at an earlier step in the derivation, not meant to imply countercyclic application):

\(^{19}\) By contrast, topicalization of these modifiers appears to be generally possible; compare (39) to the following:

(38) Svakalega held ég að hann hafi verið \(t_i\) klár
terribly think I that he has been bright

In fact, Thráinnsson (2007: 347) claims that topicalization of the whole AP in such cases is strongly degraded.

\(^{20}\) Some speakers find these cases marked (whence the question mark), but it is sufficiently clear that they are much better than the counterparts with stranded modifiers.
Since the entire AP is too heavy to undergo SF (recall the discussion in §4.1), I assume that the CP complement must extrapose (right-adjoin to PredP) for SF to yield a licit result.\textsuperscript{21} Given the option of extraposition of CPs and PPs, fronting of AP is predicted to strand complements while always pied-piping modifiers (located in Spec-A), as shown in (40).\textsuperscript{22}

It is natural to assume that adverbs and the negation are ordered hierarchically above PredP (just like they are ordered above vP). Recall that in the preceding section it was shown how presence of an adverb or a negation blocks SF of lower material; under the Attract Closest account developed here, we expect the same blocking effect with predicative APs. This prediction is again borne out. As already shown by Maling (1980), negation blocks SF of AP:

\begin{align*}
\text{(43)} & \quad \text{nokkuð sem hægt}_i \quad \text{er } t_i \text{ að gera við} \\
& \quad \text{something that possible is to fix PRT}
\end{align*}

\begin{align*}
\text{(44) a. } & \quad \text{nokkuð sem ekki}_i \text{ er } t_i \text{ hægt að gera við} \\
& \quad \text{something that not is possible to fix PRT} \\
\text{b. } & \quad \text{*nokkuð sem hægt}_i \text{ er ekki } t_i \text{ að gera við} \\
& \quad \text{something that possible is not to fix PRT}
\end{align*}

Although Maling’s original hierarchy did not mention adverbs, it is clear that these block SF of other categories in just the same way (as already indicated in the revised hierarchy in (28)). Consider the following examples (from Holmberg 2006: 539), which show the same contrast as the pair in (44):

\textsuperscript{21} Notice that evacuation-qua-extraposition from AP is not a case of “look-ahead” if it is assumed that CP and PP objects extrapose either optionally (in which case a non-extraposition derivation will be filtered) or obligatorily.

\textsuperscript{22} Notice that for a case like (40a), it is necessary for me to assume that the dative complement is actually a covert PP, hence an extraposable category.
All of these facts follow directly from the assumption that adverbs are hierarchically higher than the predicate (AP or vP, as shown in §4.4), hence Spec-Neg/Spec-α is the closest goal for T whenever a negation or an adverb is present. Consequently, SF of lower material is blocked in these environments.

Notice that this analysis proposed above easily handles the case in (36), in which the fronted adjective (phrase) leaves behind a PP. The derivation is exactly parallel: PP extrapoloses, and the remnant AP is fronted to Spec-T. I conclude that predicative adjectives uniformly undergo SF as phrases, potentially containing the trace of an extraposed complement. Pied-piping of AP-internal modifiers follows straightforwardly, since the entire AP raises. No recourse to head movement is necessary.

Let us now turn to the two remaining cases: participial verbs and particles. These are the instances of SF that, prima facie at least, strongly militate against a phrasal-movement account of SF.

4.4 Nonfinite verbs

Having established that SF in Icelandic is phrasal (remnant) movement in the cases of NPs/PPs, adverbs/negation and predicative adjectives, let us now consider the case of nonfinite verbs undergoing SF. I will argue that SF of participles is actually movement of a remnant verb phrase (vP).

Unlike NP and PP, a verb phrase can never be fronted as a whole, i.e. containing a nonfinite main verb and its complement (recall the cases in (22)); only fronting of either the participle or its complement is allowed:

(46) a. Peir sem [pp í Ösló], hafa búið ti, those that in Oslo have lived
b. Peir sem búiði, hafa tì [pp í Ösló], those that lived have in Oslo

That is, complements must either be stranded or else undergo SF themselves (see also the examples in Holmberg 2006: 540 and Jónsson 1991: 2). SF is still optional in either case, of course.
looks as if búid and í Ósló are in some sense equidistant for purposes of SF. The account I will propose presently will derive both this optionality and the phrasal nature of the movement in (46b).

I will assume, as is standard, that búid and í Ósló start out as sisters in VP. Furthermore, I will assume that merger of v results in (optional) movement of the PP to the outer edge of vP (as well as V-to-v movement). In this I am building on proposals in Chomsky 2000, 2001, where it is argued that v can be optionally endowed with an EPP-property that triggers this movement to its edge. In the framework of “phase theory”, this kind of movement is the only way for a complement XP to be available for further operations at the next phase (CP). For instance, Chomsky assumes that an additional rule (which he calls “Disl”) yields Scandinavian-type object shift (cf. Chomsky 2001: 30), raising the XP at the edge to a higher position above adverbs; other languages allow only A’-movement to proceed from the edge. In the present context, my proposal is that SF of complements of V (like object shift or A’-movement of an object) is parasitic on this edge-driven movement.

Hence, I will follow Chomsky in attributing movement of a complement XP to the edge of vP to a special edge property of that phrase, following from its status as a “phase” (cf. Chomsky 2001: 33):

\[
\begin{array}{c}
PP_k \\
\text{in Oslo}
\end{array}
\begin{array}{c}
vP \\
\text{Op}
\end{array}
\begin{array}{c}
v' \\
\text{v}
\end{array}
\begin{array}{c}
\text{vP} \\
\text{VP}
\end{array}
\begin{array}{c}
lived_{i} \\
\text{V}
\end{array}
\begin{array}{c}
l_{k} \\
\text{t}_{i}
\end{array}
\]

On the CP level, C attracts the operator, while T’s EPP-feature scans the tree for a phrase to be attracted. Notice that PP and vP are equidistant from T (in the sense of Chomsky 2001: 27), since both are sisters and neither asymmetrically c-commands the other. I claim that this is what yields the optionality illustrated in (46).

Assume now that the multiple-specifier configuration in (47) must be reduced at the next cycle by means of movement: one of the symmetrically aligned phrases has to raise.\(^{26}\) One reason for this might be that (47) is an ‘unstable’ structure in the sense of Moro (2000, 2007), and that subsequent movement of one of the equidistant XPs has to occur in order to allow for linearization. Alternatively, we might speculate that a structure like that in (47) does not permit proper identification of a label (Chomsky, p.c.), assuming that a labeling algorithm that relies on minimal search (‘pick simplex object as label’; cf. Chomsky 2008, 2007) yields no output for XP-YP structures. In this case,

\(^{26}\)Or, alternatively, the subject: see §5 below.
again, something has to move from (47). For the purposes of this paper, I will stick to the more traditional formulation in terms of “EPP”, noting that this stipulative notion may well turn out to be a shorthand for other, primitive mechanisms. I will, however, follow proposals by Hornstein and Nunes (2008) and represent the output of movement to the phase edge as label-less, if only to make the resulting symmetry transparent.

The crucial point here is that the symmetry shown in (47) renders PP and vP in (47) equally accessible for attraction by T, yielding two derivational options:

\[(48) \quad \text{a. } [\text{PP in Oslo }] [\text{vP } \text{Op } [\text{v v-lived tPP }]] \Rightarrow \text{merge C, T} \]
\[\quad \text{b. } [\text{TP T-have } [\text{PP in Oslo }] [\text{vP } \text{Op } [\text{v v-lived tPP }]]] \Rightarrow \ldots \]

i. **Option 1**: raise PP (= (46a))

\[\text{Op that } [\text{TP PP in Oslo } ] [\text{T T-have } [\text{t'PP vP tOP v v-lived tPP }]]] \]

ii. **Option 2**: raise vP (= (46b))

\[\text{Op that } [\text{TP vP tOP v v-lived tPP } ] [\text{T T-have } [\text{PP in Oslo } ] \text{tOP }]] \]

Relying on the special edge property of vP (attraction of complements to its left edge), the account predicts the optionality illustrated in (46a) vs. (46b): Both phrases are equidistant from T, hence either one may raise. Notice that neither option violates the anti-locality constraint (33): Since movement to the edge has created an additional node, movement of PP or vP will count as sufficiently non-local (PP/vP do not move from complement position).

My proposal, then, is that SF of nonfinite verbs can be re-analyzed as fronting of (reduced) verb phrases, with evacuation movement of the object triggered by vP’s edge property. I have illustrated how the account makes empirically correct predictions, in particular concerning head-complement optionality. Notice also that Attract Closest directly predicts SF of participles (vP, on my terms) to be blocked by higher material, such as the negation. That this is borne out was shown by cases like (30), repeated here:

\[(49) \quad \text{a. } \ddagger \text{egar ekki } i \text{ var } t \text{ t búið } \text{ að borða } \text{ when not was finished to eat } \]
\[\quad \text{b. } \ddagger \text{egar búiði } \text{ var ekki } t \text{ t að borða } \text{ when finished was not to eat } \]

If SF of participles verbs were head movement (as argued by Jónsson 1991, Bošković 2004), the negation (being an XP; Ouhalla 1990, Jónsson 1996) should not block SF in such cases, just like it does not block regular V-to-T movement:

\[(50) \quad \text{Jón las ekki } t \text{ t bókina } \text{ John read not the book } \]

---

27 This analysis might provide an explanation for other cases of optionality, such as “A-scrambling” in Japanese, discussed by Miyagawa (2001, 2003). Miyagawa argues that SOV and OSV orders are possible in Japanese because T’s EPP can attract either the subject or the object.

28 I am setting aside here the possibility of “defective intervention” by an edge element; see Broekhuis 2007 for discussion.

29 To the best of my knowledge, my account is the first to provide a structurally grounded rationale for this effect, although Holmberg (2000, 2006) clearly recognizes the role of sisterhood of V and the object.
The remnant-vP fronting account developed here is thus clearly superior to head-movement theories in its empirical predictions concerning locality. But the discussion so far leaves open the question of why this kind of remnant-vP movement disallows further overt material within vP to be pied-piped. Hence, I will now address this important issue.

Recall from §2 that SF is possible in the presence of low subjects. There are two relevant cases to consider: unaccusative/passive verbs with indefinite subjects (51) and indefinite subjects of unergative verbs (52) (Rögnvaldsson and Thráinsson 1990: 27):\(^{30}\)

(51) a. Hann segir að komiði séð tí betra veður
he says that come is better weather
b. Fallið hafa tí margir hermenn í þessu striði
died have many soldiers in this war

(52) a. Ég hélt að kysstí hefðu tí hana margir stúdentar
I thought that kissed had her many students
b. Keyptí hafa tí þessa bók margir stúdentar
bought have this book many students

In these cases, the indefinite subject can raise to Spec-T, but SF is equally possible (as shown above), with the subject surfacing to the right. That is, T’s EPP-feature has three different options in these cases, there being three equidistant XPs.

Consider first unaccusatives/passives (51), where the surface subject starts out as a complement of V. I follow Legate (2003) and Centeno and Vicente (2008) in that I take unaccusative/passive vPs to be phases, at least in the sense relevant here: They have a designated edge to which complements of the lexical verb can raise, in virtue of an optional extended EPP of v (see the discussion above). The difference is simply that v in this case does not select an external argument and does not bear agreement features. In a case like (51a), this yields the following:

(53) 

The logical object raises to the phase edge, where it and vP are equidistant from T, hence either one can raise further to Spec-T. This makes exactly the right prediction:

\(^{30}\) Recall from §2 that definite subjects must always move to Spec-T and thus generally preclude SF (Thráinsson 2007: 364).
(54) a. Option 1: attraction of NP:
\[ að [TP [NP betra veður ] sé [ t′_{NP} [vP komið t_{NP} ] ] ] that better weather is come \]

b. Option 2: attraction of vP:
\[ að [TP [vP komið t_{NP} ] sé [ [NP betra veður ] t_{vP} ] ] that come is better weather \]

We also correctly predict vP as a whole to be immobile in case NP does not move to its edge: in this case, no additional node above vP is created, hence SF of vP is ruled out by anti-locality (33) (recall the cases in (22)). There seems to be no case where SF of an internal argument is possible while SF of the participle (vP) is impossible, a fact that shows that NP has to raise to the vP edge in order to be visible at the next cycle. If subjects of unaccusatives optionally move to the phase edge, they are automatically evacuated from vP in the relevant cases, so that vP-fronting to Spec-T is possible without any look-ahead. Alternatively, the raised object can move further to Spec-T, in virtue of it and vP being equidistant from T.

Next, consider a case like (52b), where the predicate is transitive. Since indefinite agentive subjects do not have to raise to Spec-T, SF is possible, as before. The internal argument raises to the vP edge, as proposed above. But notice now that if nothing else is said, we incorrectly predict vP (including the indefinite subject and the nonfinite verb) to be able to raise to Spec-T. This is not an option:

(55) a. * að [vP margir stúdentar kysst ] hefiðu ti hana
that many students kissed had her

b. * [vP Margir stúdentar keypt ] hafa ti þessa bók
many students bought have this book

I suggest that cases like those in (55) are bad for reasons of heaviness, as discussed in §§4.1 and §4.3: vP cannot raise to Spec-T when it contains a full subject NP. Whatever the precise reason for this constraint, it is shown independently by the data that subjects must be postposed (rightward moved) in order for vP to be able to raise. Consider the following paradigm from Holmberg (2000: 465):

(56) a. Margir stúdentar hafa lesið þessa bók
many students have read this book

b. * Lesiði hafa margir stúdentar ti þessa bók

(57) a. það hafa lesið þessa bók margir stúdentar
there have read this book many students

b. ? Lesið hafa þessa bók margir stúdentar

The fact that SF is possible in (57b), where the subject appears postposed to the right of the direct object, but not in (56b), where it appears to be in situ, suggests that subjects must be shifted to the right in order to allow for SF of vP, by creating a remnant that can occupy Spec-T. I submit that in the latter case, the subject NP leaves vP when SF of that phrase applies, via the rule of “indefinite-NP postposing” (INPP) (see, e.g.,

With this in mind, consider the derivation for (52a):

(58) a. [vP many students kissed her ] ⇒ raise object to edge
b. [ her [vP many students kissed t_{OBJ} ]] ⇒ INPP of subject
c. [ [ [ her [vP t_{SUBJ} kissed t_{OBJ} ]) many students ]] ⇒ INPP of subject
d. [ C-that [TP T-had [[ [ her [vP t_{SUBJ} kissed t_{OBJ} ]] many students ]]]] ⇒ merge C, T
e. [ C-that [TP [vP t_{SUBJ} kissed t_{OBJ} ][T′ T-had [[ [ her t_{vP} ]] many students ]]]] ⇒ SF of vP

When vP is constructed, the subject shifts to the right by INPP (this requires the assumption that right-adjunction does not obey anti-locality, but notice that (33) is not defined for adjuncts or rightward movement in general). This freely available movement thus evacuates vP, which then fronts as a remnant XP, reduced to its head. INPP serves as an instance of “repair-driven movement”, since vP is too heavy to occur in Spec-T unless evacuated. As discussed in §4.3, no look-ahead is implied, since INPP applies freely.\footnote{It might be objected that INPP of the subject creates a larger vP, which should then, by minimality, undergo SF. This means that we have to ensure that the postposed subject, which I have argued to be right-adjointed to vP prior to SF (INPP) – does not interfere with SF. But this “invisibility” of the evacuated subject for SF need not be stipulated, since it is a property of right-adjointed material in general (cf. Holmberg 2006: 540):

(59) a. Péir sem hitt hafa t₁ konuna sina í Óslo
   those that met have wife their in Oslo
b. * Péir sem [PP í Óslo ]; hafa hitt konuna sina t₁
   those that in Oslo have met wife their

Recall from §4.1 that PP-complements can undergo SF. However, in (59) í Óslo is a PP-adjunct, not a complement. As (59b) shows, a right-adjointed PP of this kind cannot undergo SF, despite being seemingly closer to T.}

I propose, then, that the reason why subjects cannot be pied-piped in a fronted vP is that these must be evacuated first – either by movement to the phase edge in the case of V-complements (the passive/unaccusative case) and by rightward INPP in the case of agentive subjects (the unergative case), for otherwise SF moves a phrase to Spec-T that is too heavy to occur in that position (notice that a non-subject constituent is moved to the canonical subject position). Other possible derivations are ruled out by anti-locality (33).

Notice that my line of reasoning makes a potential prediction:\footnote{The prediction is “potential” insofar as there might be other factors that force subjects to leave vP in general, as argued by Bobaljik and Jonas (1996). For reasons of space, I cannot thoroughly discuss this question here.} Very light subjects could be pied-piped when vP is fronted to Spec-T. According to Hrafnbjargarson (2003, 2004), SF is marginally possible in the presence of a weak pronominal subject, which
appears to be pied-piped under SF (not Hrafnbjargarson’s analysis). The result is considerably worse when the pronoun is stressed, i.e. made more “heavy”: 33

(60) a. Allt sem ‘ann hafði lesið í bókinni var rétt
    all that he.WEAK had read in the book was correct
b. ? Allt sem ‘ann lesiði hafði ti í bókinni var rétt
    all that he.WEAK read had in the book was correct
c. *? Allt sem hann lesiði hafði ti í bókinni var rétt
    all that he read had in the book was correct

A case like (60b) can plausibly be argued to involve SF of a vP that contains a very light in situ subject. 34 Overall then, it seems likely that some kind of heaviness constraint is indeed what prohibits vPs with heavier subjects to be fronted as a whole. The precise formulation of the relevant threshold for heaviness must be left for future work.

I conclude that bare verbs never undergo SF. I have argued in this section that SF instead targets vP, while potentially present indefinite subjects and objects are evacuated. 35 I have argued that evacuation of the object XP follows naturally from v (a phase head) triggering movement to its edge, at the same time yielding the alternative derivational option of fronting XP itself (due to equidistance/symmetry of XP and vP). There is no reason, then, to assume that SF of nonfinite verbs is head movement. As I have shown, analyzing the relevant cases as remnant-vP fronting allows us to derive head-complement optionality and avoid the undesirable conclusion that heads can move to Spec-T. I will now turn to the second problematic case, SF of particles, and argue that here, too, SF is best analyzed as XP-movement.

4.5 Particles

A further case that seems to lend support to a head-movement analysis of SF is the case of particles, these being X0 categories. In the following, I will argue that SF of particles is actually movement of a reduced Part(icle)P (a possibility hinted at in Holmberg 2006: 555). Once this is established, the unification of all cases of SF is achieved, simplifying its theoretical analysis considerably while suggesting solutions to some long-standing problems posed by SF (see §5 below).

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33 Apparently these cases are not accepted by all speakers and marginal even to those who accept them.
34 Platzack (1988: 227f.) mentions a similar case in Old Swedish (which had SF); see also Falk (1993: 165). But, as mentioned by Platzack, it is conceivable that the weak pronoun has shifted to some Wackernagel-like position and/or is cliticized onto the complementizer.
35 To address an obvious objection against the analysis outlined in this section, it is of course the case that vP/VP appears to be otherwise rather immobile in Icelandic. In particular, in this language topicalization of verb phrases is generally impossible (Thráinsson 2007: 349), while my analysis obviously implies that A-movement of vP is possible (as in Wiklund et al. 2007). While I do not know what exactly the source of this discrepancy is, it should be noted that it seems to be more general – in particular, particles (which, on my analysis, move as PartPs; see below) can undergo SF but cannot be topicalized (Thráinsson 2007: 343f., 370). While I cannot provide a full explanation here, I ascribe the discrepancies mentioned above to language-specific options as to which kind of constituent can undergo which kind of movement (A or A′). While A′-movement of vP is not part of Icelandic grammar, A-movement of vP is, if my proposal is on the right track.
Recall from §4.4 that if a nonfinite verb occurs with a complement XP, either one may undergo SF. A similar optionality is found with verbs and particles, as shown by Holmberg (2006: 538) (cf. also Jónsson 1991: 6). Here, too, SF can target either the verb or the particle (61), and presence of negation blocks both options (62):

(61) a. fundurinn sem fram\(_i\) hefur farið \(t_i\)  
the meeting that forth has gone  
b. fundurinn sem farið\(_i\) hefur \(t_i\) fram

(62) a. * fundurinn sem farið\(_i\) hefur ekki farið \(t_i\)  
the meeting that forth has not gone  
b. * fundurinn sem farið\(_i\) hefur ekki \(t_i\) fram

The pattern follows straightforwardly from the analysis outlined above. Optionality as shown in (61) arises due to movement to the edge (see below), and blocking as in (62) follows from Attract Closest (as shown in §4.2), since the negation is higher in hierarchical structure (closer to T) than verb or particle.

As with nonfinite verbs and their complements, verb and particle cannot be fronted together (Jónsson 1991: 12):

(63) * nýjustu tölur sem [ komið fram ]\(_i\) hafa \(t_i\)  
the newest figures that come forth have

This indicates that the same head-complement symmetry discussed in §4.4 for verbs and objects accounts for the behavior of verbs and particles. That is, once vP is built, PartP (being the complement of V) raises to the edge, in order to be accessible to operations at the next phase level:

(64)

\[
\begin{tikzpicture}
  \node (VP) at (0,0) {vP};
  \node (vPvP) at (-1,-1) {vP};
  \node (VPvP) at (0,-1) {vP};
  \node (PartP) at (0,-2) {PartP};
  \node (Op) at (-1,-2) {Op forth};
  \draw[->] (VP) -- (vPvP);
  \draw[->] (vPvP) -- (VPvP);
  \draw[->] (PartP) -- (Op);
  \draw[->] (Op) -- (VPvP);
  \draw[->] (VPvP) -- (VPvP);
  \draw[->] (VPvP) -- (VPvP);
\end{tikzpicture}
\]

Now, at the CP level, T’s EPP will trigger raising of either vP or PartP, since both are equidistant:

(65) a. * Option 1: raise PartP (= (61a))  
\[Op \text{ that } [TP [PartP t_{Op \text{ forth}}] [T' \text{ T-has } [t'_{PartP} [vP v\text{-gone } t_{PartP} ]]]]\]

b. * Option 2: raise vP (= (61b))  
\[Op \text{ that } [TP [vP v\text{-gone } t_{PartP} ] [T' \text{T-has } [t_{PartP} t_{Op \text{ forth}} ] t_{vP} ]]]\]

So far, SF of particles is completely parallel to fronting of object NPs/PPs: The complement of the lexical verb (in this case, PartP) is raised to the vP edge, from where it can
undergo further fronting. The parallel structure correctly predicts the same optionality in both cases.

There is, in fact, direct evidence for particle fronting being phrasal movement. Holmberg (2006: 555) notes an important restriction: Particles can undergo SF only if they do not have an overt complement, as in impersonal passives and when the object is extraposed:

(66) a. Verðbólgan varð verri en víðr hafð verið [VP búist t₁] inflation was worse than PRT had been expected
   b. Frami hefur [VP komi t₁ t₂] [CP að fiskað hefur verið í leyfisleysi á forth has come that fished has been illegally in chílenksku fiskisvæði ]ₖ the Chilean fishing zone

By contrast, SF of a particle is strongly degraded with transitive verbs.³⁶

(67) * Stelpan sem út t₁ hefur [VP slept t₁ kettinum] the girl that out has let the cat

Holmberg hints at the possibility of this being evidence for movement of a particle phrase “consisting of just the particle and in some cases the trace of an extracted or extraposed object” (2006: 555), but (as he notes) it is unclear why the particle phrase is unable to move as a whole, i.e. without previous evacuation of the object (on this, see below). We have already seen on independent grounds that heaviness of the fronted phrase influences acceptability of SF (recall (55) and the cases in §4.1), and I will assume that the same is true in this case.

The data so far thus suggest the following analysis. SF of PartP can apply if PartP is either sufficiently light (as in (66a)), or else if it is evacuated by some independently available movement rule, such as extraposition in (66b). A potential prediction of this account is that objects which can be evacuated should then allow for fronting of the remnant PartP. In particular, we might expect that indefinite objects can be postposed, and that heavy NPs can undergo heavy-NP shift, allowing PartP to be fronted.³⁷ Some evidence that this is indeed the case (at least for indefinite objects) is provided by Thráinsson (2007: 331); compare (68b) to (67):

(68) a. * þá sem út t₁ voru [NP einhverjir kettir ] reknir t₁ then that out were some cats driven
   b. þá sem út t₁ voru reknir t₁ [NP einhverjir kettir] then that out were driven some cats

With a definite object, (68b) is much worse:

(69) ?* þá sem út t₁ voru reknir t₁ [NP allir kettir] then that out were driven all cats

³⁶ As expected, pied-piping of the object is not an option either (Holmberg 2006: 556).
³⁷ See Rögnvaldsson (1984b) for a discussion of INPP of subject and object NPs, and Thráinsson (2007: 361) on heavy-NP shift in Icelandic.
The contrast with (68a) shows that INPP of the object (i.e., evacuation of PartP in the syntax) is necessary for SF.\textsuperscript{38} Thus, I take these data to indicate that SF is possible only in case the indefinite object is postposed by means of INPP. In the system developed above, the derivation runs as follows:

\begin{enumerate}
\begin{align*}
(71) & \quad \text{a. } [vP \text{ driven } [\text{PartP out } [NP \text{ some cats }]]] \Rightarrow \text{INPP of object, raising-to-edge of PartP remnant} \\
& \quad \text{b. } [[\text{PartP out } t_{NP}] [vP \text{ driven } t_{\text{PartP}}] [NP \text{ some cats }]] \Rightarrow \text{SF of PartP to Spec-T} \\
& \quad \text{c. } [CP \text{ that } [TP \text{ PartP out } t_{NP}] T\text{-were } [t_{\text{PartP}} [vP \text{ driven } t_{\text{PartP}}] [NP \text{ some cats }]]] \\
\end{align*}
\end{enumerate}

Consider also the following paradigm, the judgments representing relative acceptability as perceived by some informants:

\begin{enumerate}
\begin{align*}
(72) & \quad \text{a. } ?^* \text{ stelpan sem út hefur sleppt kettinum} \\
& \quad \text{the girl that out has let the cat} \\
& \quad \text{b. } ?? \text{ stelpan sem út hefur sleppt kettinum sem venjulega veiðir margar} \\
& \quad \text{the girl that out has let the cat that usually catches many mýs mice} \\
& \quad \text{c. } ? \text{ stelpan sem út hefur sleppt fjórtán köttum} \\
& \quad \text{the girl that out has let some fourteen cats}
\end{align*}
\end{enumerate}

It seems like a regular definite-NP object as in (72a) (= (67)) cannot be easily evacuated from PartP. By contrast, evacuation is more readily available with a heavy definite-NP object (72b) or an indefinite/nonspecific NP (72c).\textsuperscript{39} Heavy-NP shift and INPP can (marginally; cf. note 39) evacuate the PartP in (72b) and (72c), respectively; but no standard rule allows for evacuation of the definite NP in (72a).

There is, then, some evidence that PartP can be evacuated by means of general rightward-movement operations applying to indefinite and heavy NPs prior to PartP undergoing SF. If this is indeed the case, then it strongly supports a remnant-movement account, since it is otherwise mysterious why properties of the particle phrase should affect the acceptability of particle fronting. It seems that if evacuation cannot apply, SF cannot apply either.

\textsuperscript{38} Thráinsson notes that both positions of the indefinite object in (68a) and (68b) are possible if SF does not apply:

\begin{enumerate}
\begin{align*}
(70) & \quad \text{a. } þá \text{ sem það voru } [NP \text{ einhverjir kettir }] \text{ reknir út} \\
& \quad \text{then that EXPL were some cats driven out} \\
& \quad \text{b. } þá \text{ sem það voru reknir út } [NP \text{ einhverjir kettir }] \\
& \quad \text{then that EXPL were driven out some cats}
\end{align*}
\end{enumerate}

\textsuperscript{39} But notice that evacuation of PartP is still more marked than one might expect, given the general availability of heavy-NP shift/INPP. This may be due to the fact that the NP to be evacuated is a specifier (Ramchand and Svenonius 2002), i.e. a left branch, and also farther away from its eventual adjunction site (vP) than a direct object.
This concludes our discussion of the various cases of SF. In all cases, I have argued that the moved element is a phrase, hence obviating the need for a head-movement account of SF. In addition to the advantages of this approach that were already mentioned throughout the preceding discussion, I will now turn to further empirical evidence supports the account developed here over the approaches sketched in §3.

5 The subject-gap requirement, the EPP, and optionality

In this section, I will refine my analysis by making explicit some of the underlying assumptions of the discussion in the previous sections. In particular, I will address two closely related questions:

1. What is the nature of the subject-gap requirement?
2. What is the syntactic trigger for SF, and why is it optional?

The answers to both questions will turn out to be closely intertwined.

Recall from §2 that SF can only apply if the canonical subject position, which I take to be Spec-T, is not lexically filled. When a definite subject is present, SF can never apply, since (for some reason) definite subjects must raise to Spec-T. If we extract or relativize the subject, SF becomes possible. In main clauses, SF can only apply if the construction is impersonal, i.e. subject-less, either by passivization (Icelandic allows impersonal passives of the It was danced-type) or by an inherent lexical property of the predicate. An impersonal construction in which SF has applied is shown in (73a); an example for the third possibility, namely a main clause with a low subject, is given in (73b). SF with low subjects is also possible in embedded clauses, as (74) shows (cf. Holmberg and Platzack 1995: 119):

(73) a. Keypt₈ hefur varið t₈ tölva fyrir starfsfólkið
    bought has been a computer for the staff

b. Keypt₈ hafa t₈ þessa bók margir stúdentar
    bought have this book many students

(74) Ég hét að keypt₈ hefðu t₈ þessa bók margir stúdentar
    I thought that bought had this book many students

These facts led Maling (1980) to propose that SF requires a subject gap, which it then (optionally) fills. One problem for this view is that (according to standard assumptions) Spec-T is occupied by the trace of the extracted subject in embedded clauses, hence it should not be possible to move an additional constituent to this position. While not addressing this particular problem, Maling noted that presence of a trace in Spec-T appears to preclude another “EPP strategy” that is in principle available in the absence of a definite subject, namely insertion of an a subject expletive pronoun (það). In the words of Maling (1990: 85), “það can never be used to fill a subject gap created by an extraction
rule.” That is, when the subject is extracted or relativized, SF applies optionally, while insertion of the expletive pronoun (það) is impossible (75c) (Holmberg 2006: 541):

\[(75)\]
\[
a. \text{Hver} t_1 \text{heldur lögreglan að } t_1 \text{hafi framind} glæpinn who think the police that has committed the crime} \\
b. \text{Hver heldur lögreglan að } t_1 \text{hafi } t_1 \text{glæpinn} \\
c. * \text{Hver heldur lögreglan að } það \text{hafi framind} glæpinn who think the police that has committed the crime}
\]

By contrast, impersonal constructions require either SF or það-insertion, showing clearly that both are alternative strategies to fulfill T’s EPP requirement (cf. Holmberg 2006: 540):

\[(76)\]
\[
a. \text{Keypti } t_1 \text{hefur varið } t_1 \text{tölva fyrir starfsfólkið bought has been a computer for the staff} \\
b. \text{það} \text{hefur varið keypt } tölva fyrir starfsfólkið EXPL has been bought a computer for the staff} \\
c. * \text{Hefur varið keypt } tölva fyrir starfsfólkið has been bought a computer for the staff}
\]

The same holds for embedded impersonal clauses (cf. Thráinsson 2007: 355), which also require either SF or expletive-insertion, but are degraded when the subject gap is not filled:40

\[(77)\]
\[
a. \text{Peir segja } [CP að keypti } t_1 \text{hefur varið } t_1 \text{tölva fyrir starfsfólkið they say that bought has been a computer for the staff} \\
b. \text{Peir segja } [CP að það } \text{hefur varið keypt } tölva fyrir starfsfólkið they say that EXPL has been bought a computer for the staff} \\
c. ?? \text{Peir segja } [CP að } \text{hefur varið keypt } tölva fyrir starfsfólkið they say that has been bought a computer for the staff}
\]

I argued above that all SF is EPP-driven phrasal movement to Spec-T, obeying Attract Closest and anti-locality. Thus, I claim that SF is on a par with regular subject movement, as in the case of definite subjects. With some additional, independently motivated assumptions, the optionality of SF in embedded clauses and the observed interaction of SF and expletive-insertion follow immediately from this account.

As we saw in §4.4 and §4.5, movement of an XP-complement of V to the phase edge leads to a situation of equidistance, in that either the XP at the edge of VP or vP itself can raise to Spec-T. Assume that in cases where a low indefinite subject is present, there is a third option: T can raise the phrase it agrees with, i.e. the subject (starting out in Spec-v).

This follows from the relevant XPs being equidistant from T:

---

40 Thráinsson assigns only one question mark to examples like (77c), but other authors deem similar cases strongly degraded. There is some idiolectal variation with regard to expletive-insertion.
Terms of the edge of [a phase] HP are equidistant from probe P. (Chomsky 2001: 27)

Based on this principle, Chomsky argues (ibid) that in a configuration where an object raises to the phase edge, “the shifted object and the in-situ subject . . . are equidistant from the probe T”. Furthermore, assume that – as proposed by Chomsky (2008, 2007) – A-chains (triggered by attraction by T) and A′-chains (triggered by attraction by C) are formed simultaneously when both heads enter the derivation. That is, C and T are “parallel probes”, attracting XPs to their specifier positions at the same derivational step. This view entails that C raises A′-moved subjects directly from their base position (Spec-v), since the A-chain formed by T raising the subject to its specifier is invisible to C. In English, when the subject is a wh-phrase, it will be attracted by both C and T, leading to two occurrences, the lower one of which is deleted under identity (Chomsky 2007: 25):

\[(79) \ [CP \text{wh} \ C [TP \text{wh} T [vP t \ldots]]] \]

This view of chain formation provides a straightforward answer to the question why movement into subject position by means of SF is possible: C extracts subjects directly from their base position; there is no intermediate trace in Spec-T. Any A-chain that terminates in Spec-T is formed independently at the same derivational step. In a language like English, T always raises the phrase it agrees with (the subject); if the subject is also A′-moved by C, the situation in (79) arises. In Icelandic, however, C and T can target different XPs in this case: While C attracts the subject (wh-phrase or operator) to its specifier, T merely agrees with this subject in its base position and assigns nominative, but is free to attract some other XP to its specifier. I claim that this is responsible for the phenomenon of SF in this language (see §6).

But notice that this system also provides a simple solution to the problem of optionality. If SF applies in an embedded clause with extracted or relativized subject, this is because C has raised the subject while T has raised some other (closest) XP to its specifier. But if in addition T always has the option of raising the phrase it agrees with (the subject, equidistant by (78)), then the situation shown in (79) will always be available as an alternative to SF in embedded clauses with extracted/relativized subject. In other words, if C and T raise the subject, this will result in both Spec-C and Spec-T hosting copies of the subject, one of them deleted under identity, yielding what looks like a subject gap (81a).\(^{41}\) By contrast, if C and T raise different XPs, this will yield SF (81b):

\[^{41}\text{Notice that when the subject raises to Spec-T, the object is linearized in its base position, not in the edge position:}\]

\[(80) \text{Ég hélt að margir stúdentar hefðu kysst hana I thought that many students had kissed her} \]

This follows straightforwardly from the effect-on-output condition postulated by Chomsky (2001: 34, his (60)): Movement to the edge can only apply if it has an effect on outcome. This is the case when either the element in the edge undergoes further movement or its complement raises; but when the subject moves, movement to the edge is superfluous and hence does not apply. See Chomsky (2001: 34f.) for reasons why this is not a case of look-ahead, if properly formulated.
(81) Options with subject extraction (= (75)):
   a. Subject attracted by both probes ("subject gap"):
      \[ CP \text{ who} \text{ that} \{ TP \text{ who} \text{ has} \{ vP t_i \text{ committed the crime} \} \} \]
   b. Subject attracted by C, SF triggered by T:
      \[ CP \text{ who} \text{ that} \{ TP \{ vP t_i \text{ committed} t_k \} \text{ has} \{ [NP \text{ the crime} ]_k t_{vP} \} \} \]

The question remains, however, why expletive-insertion cannot apply in the situation in (81b) as an alternative to SF, while this is possible in impersonal constructions.

To solve this remaining problem, I assume that \( p\alpha \delta \) is merged in Spec-T (cf. Ottósson 1989, Rögnvaldsson and Thráinsson 1990, Hornstein 1991, Thráinsson 1996, Holmberg 2000), but that it has to raise to Spec-C. It is well-known that there is a strong preference for \( p\alpha \delta \) to be the leftmost element in a clause (Thráinsson 1979: 187), hence that Spec-C must be available when \( p\alpha \delta \) is merged, as argued by Cardinaletti (1990) (see also Vikner 1995: 186). I take this requirement to be evaluated at each CP (phase) level:

\[
(82) * [CP XP [TP p\alpha \delta [T, \ldots ]]]
\]

This constraint on \( p\alpha \delta \)-insertion suffices to derive the pattern described above. In impersonal constructions, T can attract some postverbal element (yielding SF) or the object, if present. Similarly, in clauses with late indefinite subjects, T can either attract the subject (by (78)) or else some other phrase (SF), as outlined above. In either case, expletive-insertion in Spec-T is possible as an alternative strategy, since nothing is raised to Spec-C; the situation in (82) cannot arise in principle.

By contrast, in embedded clauses with extracted or relativized subjects, the situation in (82) always arises if expletive-insertion applies, since the subject must raise successively-cyclically through Spec-C. Hence, at the CP-level, some XP occupy Spec-C, preventing movement of \( p\alpha \delta \). In a nutshell, the natural constraint in (82) rules out A'-movement of some XP to Spec-C in the same clause in which expletive-insertion takes place. The underlying reason for this constraint might be that the expletive itself must raise to Spec-C, as argued by Cardinaletti, Vikner, and others.

In this section, I have argued for two claims. Adhering to my general assumption that SF is EPP-driven movement to Spec-T, I have shown that the optionality of SF in embedded clauses is only apparent. Following recent proposals concerning chain formation, it is much more natural to assume, as I have argued, that in the "subject-gap" case it is actually the subject itself that is in Spec-T, but deleted under identity with an occurrence in Spec-C. Secondly, I have argued that the interaction of SF and expletive-insertion follows from a simple leftmost-constraint (82) on the latter operation: Within a given CP, \( p\alpha \delta \) can only be merged in Spec-T if C has not attracted anything to its specifier. No further assumptions are necessary.

Notice that the account allows for an elegant reformulation of Maling’s original idea, according to which SF fills an empty subject position. Most of the later accounts reviewed in §3 abandoned this view in favor of head movement, providing no satisfactory account
for the subject-gap requirement. On my account, there is no subject-gap requirement either, strictly speaking; rather, T has the option of attracting some constituent other than the subject (unless independent principles force the subject to raise, as is the case with definite subjects). The (remnant-)XP-movement account of SF developed above allows for a coherent formulation of this traditional view of SF.

6 The parametric perspective

In this final section, I will address the parameters underlying SF. Why is it that Icelandic and some other languages have SF, but others do not?

It has been claimed (e.g., Jónsson 1991, Holmberg 2000) that SF is contingent on V-to-T movement, since the otherwise closely related Mainland Scandinavian languages lack SF. It must be noted, however, that Faroese is a likely counterexample to the purported correlation: For many speakers, the finite verb in this language follows the negation and adverbs in relative clauses and embedded interrogatives, but nevertheless SF is attested in these environments (see Hrafnbjargarson 2004: 89, Thráinsson 2007: 377f., 385). Likewise, a recent survey finds that “there is no direct connection between V-to-I movement and SF” (Angantýsson 2009).

Although I cannot resolve the issue conclusively here, I tentatively propose that not V-to-T, but rather the dissociation of φ-features of T and its EPP-property are the underlying reason for SF, and perhaps also responsible for morphological subject-verb agreement (active in Icelandic, but not in the Mainland Scandinavian languages; Platzack 1987). In non-SF languages, the EPP-property of T must be directly connected to (abstract) agreement: T universally raises the phrase it agrees with, i.e. it is invariably the subject that gets attracted to Spec-T. By contrast, in Icelandic agreement (valuation of φ-features) does not imply movement; subject case is assigned under Agree at a distance, but some other category can be raised (pace Rizzi 2006: 121).

Given all this, it is tempting to ascribe the difference between Icelandic and Mainland Scandinavian to a difference in the feature-inheritance relation between C and T, in the sense of Chomsky (2007). As suggested by Christer Platzack (p.c.), one might conclude that T in Icelandic optionally inherits an indiscriminate edge feature (in the sense of Chomsky 2008) from C. This idea supports the parallelism between SF and

42 The assumption that V-to-T alone licenses SF falsely predicts SF to be available in Romance (and many other languages). But even if we restrict our attention to Icelandic, that V-to-T movement cannot be sufficient for SF is clear from the fact that SF is acceptable only in finite clauses (as observed by Holmberg and Platzack 1995: 117), despite the fact that Icelandic has V-to-T even in infinitival clauses:

(83) a. * María lofaði [ að ekki læsa ti bókina ] Maria promised to not read the book
   b. * María lofaði [ að tekið haða ti út peninga úr bankanum í morgum ] Maria promised to taken have out money from the bank tomorrow

43 This is a possibility in principle in frameworks like that of Chomsky (2000), where agreement relations are not established in Spec-head relations, and all movement is triggered by EPP-features.
Japanese-style “A-scrambling” (movement of a non-subject NP to Spec-T) noted in fn. 27, although I cannot pursue this idea here. The following figures illustrate schematically:

(84) a. Icelandic/Faroese:

```
(84) a. Icelandic/Faroese:
T' 
  /   \
 T   [ +fin ] ...
    \  \   
   uqα  EPP  YP ...
     \       \  ...
      \     iqα XP  ...
```

b. English et al.:

```
(84) b. English et al.:
T' 
  /   \
 T   \ ...
    /  
   uqα  EPP  YP ...
     /       \  ...
      \     iqα XP  ...
```

While in English, Mainland Scandinavian, etc. the EPP on T is a ‘feature of a feature’ (cf. Pesetsky and Torrego 2001), it is an independent probe in Icelandic. Therefore, in Icelandic but not in Mainland Scandinavian, any phrase can move to the derived subject position (provided that no definite subject is present), as long as the movement complies with locality (Attract Closest). Notice that in this respect, quirky subjects, found only in Icelandic and Faroese among the Scandinavian languages, bear some resemblance to (the output of) SF: In this case, too, a non-agreeing category can occupy Spec-T. Like SF, quirky subjects are not found in Mainland Scandinavian.

This view of SF gives us a handle on another property of SF which as not been discussed so far, namely its semantic neutrality. There is a consensus in the literature that SF does not alter scopal relations (Jónsson 1991: 35, fn. 1) and is generally neutral with regard to emphasis/foc on the fronted constituent (Holmberg 2006). While the account developed above sharply distinguishes SF and topicalization, it can easily account for the different information-structural implications (none in the case of SF) of both movement types. But we also predict that SF fully reconstructs (despite being A-movement to Spec-T), at least if we follow Boeckx (2001), who argues that A-moved elements are interpreted only in the position where their Case-feature is deleted. According to this theory, A-movement does not reconstruct whenever case is assigned in the derived position; but if no case is assigned there, reconstruction takes place. The semantic neutrality of SF then simply follows this movement type never being driven by a Case-assigner. The clearest indication of this asymmetry is the fact that SF standardly targets categories which do not require Case.\(^{44}\) Moreover, I have argued that SF is driven by an EPP-property of T

\(^{44}\) Other than, say, object shift, which only targets NPs (Vikner 1994) and is known to alter scopal
that probes independently of T’s ϕ-features, the latter I take to be responsible for Case assignment to a goal (Chomsky 2000).

Finally, let me mention that the claim made in this section (SF is the result of a parametrically variable composition of the features in T) dovetails neatly with existing proposals about the general nature of parametric variation. Biberauer and Roberts (2005) propose that the nature of the EPP is of central importance to crosslinguistic variation (see also Biberauer 2003, Biberauer and Richards 2006). In particular, they propose that a language can choose to attract vP to Spec-T in order to satisfy T’s EPP-requirement; this happens either because the [D]-feature that EPP looks for is on the finite verb in v (German), or because EPP-driven movement pied-pipes the larger XP containing the goal NP (Old English). In other languages, EPP on T attracts the NP in Spec-v (the subject, bearing [D]).45 An example of the former type (attraction of vP to Spec-T) is German46, while English and many other languages choose the second option (subject raising). Crucially, for Biberauer and Roberts, EPP on T in both instances attracts an element bearing a [D]-feature, located on the finite verb (German) or on the subject NP (English). In this theory, then, “German differs [from Modern English] only in respect of the D and EPP features assumed to be (obligatorily) associated with v, and, secondly, in respect of the mechanism by means of which the EPP feature on T is satisfied (i.e., pied piping rather than … subject raising)” (Biberauer and Roberts 2005: 13). Old English, finally, allows vP to be pied-piped to Spec-T, EPP on T attracting an NP contained in it.

Icelandic can be neatly integrated into this system.47 The obvious conclusion is that the existence of SF in this language is the result of two parameters: First, the [D]-feature is present on definite NPs in Spec-v only; and second, the Icelandic EPP on finite T is maximally underspecified, allowing for attraction of any closest XP in the absence of a [D]-feature. Presence of a [D]-feature (= presence of a definite subject) overrides all other options, yielding the “English way” (subject raising). By contrast, absence of a [D]-feature issues a carte blanche to T’s EPP-property (not an option in German, Mainland Scandinavian, etc.), without further qualifications except general locality constraints.48 I take it to be a virtue of the theory of SF developed in the preceding sections that it conforms to – and supports on independent grounds – Biberauer and Roberts’s general hypothesis that “the only [crosslinguistic] variation lies in the mode of satisfaction of [EPP features]” (2005: 20).49

relations (Vikner 2006, Diesing 1996).

45 Needless to say, Biberauer and Roberts’s model is more complex than presented here; they assume that further “modes of EPP satisfaction” exist. See Biberauer and Roberts (2005: 8f.).

46 Biberauer and Roberts assume a Kaynean universal-base framework, in which German is underlyingly SVO.

47 In fact, Biberauer and Roberts (2005: 26) briefly discuss instances of SF in Old English, arguing (without presenting a detailed analysis) that it represents “a further perfectly regular case of vP-fronting to SpecTP”.

48 Likewise, EPP on v (which also plays a role in Biberauer and Roberts’s theory) cannot be specified for [D], since – as we saw above – it uniformly attracts the complement of V. This dissociation of EPP and agreement features in v may be the reason for defective (unaccusative/passive) v being phasal in Icelandic but not in English, as argued in §4.4.

49 EPP-related variation is, of course, also a point of variation in the diachronic dimension. Thus, Biberau-
7 Conclusion

As Holmberg (2006: 554) observes, “The hypothesis that SF moves heads is primarily based on the case of the non-finite verbs.” In this paper, I have argued against this hypothesis. I have shown that all cases of SF in Icelandic can be analyzed as phrasal A-movement to Spec-T, with the fronted phrase often being a remnant. Supplemented with a small number of independently motivated assumptions (such as Attract Closest, antilocality, and movement to the phase edge), this rather simple theory of SF was shown to allow for an elegant treatment of various properties of SF, such as the head-complementality, the interaction with expletive-insertion, and locality/blocking. In effect, this theory vindicates the null hypothesis about SF – stated but not explicited in any theoretical detail in Maling (1980, 1990) – that SF moves a category into an empty subject position.

To summarize the main findings of the paper, let me revisit the crucial properties of stylistic fronting in Icelandic and recap how the theory proposed here accounts for each in turn.

**SF is phrasal movement to subject position.** My account takes this claim to be literally true, and can do so in connection with the assumptions that a) all SF is XP-movement and b) subject extraction proceeds from the base position. From a) it follows that SF of adjectives, nonfinite verbs and particles is remnant fronting if these strand complements; assumption b) allows Spec-T to be the landing site of the fronted nonsubject-XP since it does not contain a trace in the relevant contexts.

**SF requires a subject gap.** While definite subjects must move to Spec-T, indefinite or extracted/relativized subjects need not do so, “freeing up” Spec-T for the closest nonsubject XP. Where the subject is extracted or relativized, hence attracted by C, there are several options for T: Either it also attracts the subject, which does however not get pronounced in this derived position, yielding the impression of a subject gap; or else T attracts some other phrase, yielding SF. In impersonal constructions, expletive-insertion is available as an alternative to fronting of a nonsubject, since nothing is raised to Spec-C. Hence, on this view, it is somewhat misleading to say that “SF requires a subject gap”; rather, it is one of several options in a derivation where there is no definite subject. Notice that this way of deriving the subject-gap requirement of SF is fully compliant with strict cyclicity of operations.

**SF is EPP-driven and obeys Attract Closest.** EPP on T in Icelandic is disconnected from agreement: T can agree with some XP while raising YP to its Spec. This is impossible and Roberts argue at length that English had vP-raising to Spec-T at earlier stages, but has now lost this option, replacing it with the more specific EPP-requirement that Spec-T be filled with a nominal element (Biberauer and Roberts 2005: 40). Icelandic may be undergoing a similar change right now; notice that SF sounds rather formal and/or archaic to most younger speakers (Angantýsson 2008).
in a language like English, where agreement of T with XP (= the subject) always leads to raising of that XP to Spec-T. I have shown that this general idea, combined with standard assumptions about clause-structure, allows for the reduction of (a revised version of) Maling’s hierarchy to a natural locality condition of the Attract Closest-type. Since SF is never case-driven (but, on the contrary, in principle dissociated from agreement with the attracting head), it is semantically vacuous A-movement.

References


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