1 Introduction

This paper argues that the fronting operation known since Maling (1980, 1990) as Stylistic Inversion or Stylistic Fronting (henceforth, SF) should be uniformly analyzed as phrasal movement. The focus will be on Icelandic, although SF has been claimed to exist in Faroese and perhaps other languages as well (for a recent survey, see Holmberg 2006).

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:

\begin{align*}
\text{(1) a. Þetta } & \text{ is an offer that is not possible to reject} \\
\text{er } & \text{ this} \\
\text{tilboð } & \text{ an offer} \\
\text{er } & \text{ that} \\
\text{ekki } & \text{ not} \\
\text{hægt } & \text{ possible} \\
\text{að } & \text{ to} \\
\text{hafna } & \text{ reject}
\end{align*}

\begin{align*}
\text{(1) b. Þetta } & \text{ is an offer that not is possible to reject} \\
\text{er } & \text{ this} \\
\text{tilboð } & \text{ an offer} \\
\text{ern } & \text{ that} \\
\text{ekki } & \text{ not} \\
\text{hægt } & \text{ possible} \\
\text{að } & \text{ to} \\
\text{hafna } & \text{ reject}
\end{align*}

\begin{align*}
\text{‘This is an offer which it is not possible to reject.’}
\end{align*}

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).

1 I'm indebted to Cedric Boeckx and Dianne Jonas for helpful comments and suggestions, as well as support and encouragement more generally. Thanks also to Peter Jenks, Anders Holmberg and participants in a fall 2008 syntax seminar at Harvard University for raising questions and providing helpful suggestions. I also wish to thank Halldór Ármann Sigurðsson, Gunnar Hrafn Hrafnbjargarson, Kjartan Olafsson, Árni Heimir Ingólfsson and Ingunn Anna Ragnarsdóttir for help with the data. Needless to say, none of the aforementioned necessarily agree with anything in this paper, and all errors and misrepresentations are my own.

2 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. These languages will not play a role in what follows.

3 I should mention right away two caveats to this largely undisputed claim.

First, it has been observed (see, e.g., Holmberg 2006: 554) that the output of SF is often deviant when a strongly nonspecific/indefinite NP is fronted:

\begin{align*}
\text{(2) hundurinn } & \text{ the dog:nom that the mink/minks:acc killed} \\
\text{sem } & \text{ mink/minka} \\
\text{drap } & \text{ killed}
\end{align*}

One might be led by such facts to conclude that SF is sensitive to (or “driven by”) semantic properties of the
One of the key characteristics of SF identified already by Maling is (what is now known as) the “subject-gap condition”. The descriptive generalization is that SF can only apply if there is no overt subject present in the canonical subject position (examples from Holmberg 2006: 535):

(3) a. Hveri heldur þú að t1 hafi stolið hjólinu
who think you that has stolen the bike
b. Hver heldur þú að stoliði hafi t1 hjólinu

(4) a. Hvaða hjóli; heldur þu að hann hafi stolið t1
which bike think you that he has stolen
b. * Hvaða hjóli heldur þu að stoliði hann hafi t1

Thus, SF is possible in embedded clauses with a subject gap (extracted, clefted or relativized subject), with a lexically impersonal predicate, or in clauses with a “late” indefinite subject (cf. Maling 1990: 77, 79f.).

Impressionistically speaking, SF comes in two basic varieties: The fronted element is either an XP or a $X^0$-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):

(5) a. Hann sýndi mér flöskurnar sem inni hafði verið smýgrað $\text{PP}_i$ Oslo segja að...
he showed me the bottles that in had been smuggled
b. Hann sýndi mér flöskurnar sem smýgraði hafði verið $\text{PP}_i$ inn
he showed me the bottles that smuggled had been

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):

(6) a. Þeir sem hafa búið $\text{PP}_i$ Óslo segja að ...
those that have lived in Oslo say that
b. Þeir sem $\text{PP}_i$ Óslo| hafa búið t1| segja að ...

(7) 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 $t_1$

The existence of this kind of SF casts serious doubt on any account that uniformly analyzes SF as head movement (e.g. Jónsson 1991). The facts leave room, however, for moved element. But the conclusion is not warranted: we can freely allow the operation itself to target (i.a.) NPs in general, being entirely blind to the outcome. The fact that some outcomes are more degraded must then be blamed on mismatches between the interpretations allowed by the moved element and the range of interpretations compatible with the target position (Spec-T, in this case; see below). This is essentially the conclusion reached by Chomsky (2001: 32f.) in his discussion of object shift, where similar constraints are observed. I will set these matters aside in this paper, noting, however, that this is by no means a trivial idealization.

Second, in many cases SF has a formal or archaic flavor (Holmberg 2004: 560f.). There is, however, considerable speaker variation with regard to the perceived “register” associated with SF. Since I see no reason to assume that such stylistic choices reflect any interesting properties of the grammar, I will set these matters aside here.

3 For reasons why these are different from embedded topicalization, see below.
theories allowing for SF to apply as either head or phrasal movement (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 (XP) category.

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 Thiersch 1985, Webelhuth and den Besten 1987, Müller 1998), i.e. fronting of an “incomplete” category containing traces. The analysis will be refined in §§5 and 6 dealing with locality conditions on SF and the EPP as a trigger for movement, respectively. Some residual issues are addressed in §7. Finally, §8 concludes the paper.

2 Key properties of SF

SF is an operation that fronts some element to a position immediately preceding the finite verb. As mentioned in the previous section, this fronting is dependent on the absence of an overt subject in the canonical subject position, leading to the impression that the fronted element “moves into” the vacant subject position. From the subject-gap condition it follows that there are essentially three types of environments in which SF is licensed: embedded clauses with a relativized or extracted subject, clauses with “late” indefinite subjects, and impersonal clauses that are subject-less. The following examples illustrate (see Holmberg 2006: 535; Thráinsson 2007: 353; Jónsson 1991: 24):

(10) SF in embedded clauses with subject gap:
   a. Hver heldur þú [CP að stolið I] who think you that stolen has the bike
   b. Þetta er máli [CP sem rætt t] this is an issue that discussed has been

4I will set aside here the various problems and questions that remnant movement raises for syntactic theory; see Müller (1998) and Abels (2007) for some pertinent discussion.

5Non-subject gaps are not sufficient to license SF. Compare the following to (10):

(8) a. Hvaða hjóli heldur þu að hann hafi stolið t
   which bike think you that he has stolen
   b. *Hvaða hjóli heldur þu að stolið hann hafi t

It is possible, however, to create a subject gap by extraction of a logical object in the derived subject position, as in passives (example from Rögnvaldsson and Thráinsson 1990: 27):

(9) a. Ég held að þessi bök hafi verið notuð t á namskeiðinu
   I think that this book has been used on the course
   b. þessi bök hald ég að ’t hafi verið notuð t á namskeiðinu
   this book think I that has been used on the course
   c. þessi bök hald ég að notuð hafi verið t á namskeiðinu
   this book think I that used has been on the course

6For now, I’m omitting the subject trace in the examples with SF; I will return to this problem in 45 below.
(11) SF in clauses with “late” subject:
   a. Ég hélt að kysst; hefðu t; hana margir stúdentar
       I thought that kissed had her many students
   b. Keypú, hafa t; þessa bók margir stúdentar
       bought have this book many students

(12) SF in impersonal clauses:
   a. Keypti bought hefur verið been t; tölva fyrir starfsfólkið
       ‘A computer has been bought for the staff.’
   b. Verðbólgan inflation varð was verri worse en við hafð verið [VP búist t;]

In (10a), the subject has undergone long \(wh\)-movement into the matrix clause, hence SF is licensed in the lower clause. Relativization of the subject (10b) has the same effect of allowing SF to apply optionally. Likewise, when the subject is indefinite and does not raise to Spec-T (11), or when a subject is not licensed by the predicate (12), SF can apply.

As (11) shows, to meet the subject-gap requirement it suffices for the subject to stay in a low position. That is, the condition does not require complete absence of a subject; rather, it requires that the derived subject position (Spec-T) must be empty for SF to apply. 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 to Spec-T. Witness the following contrast (from Maling 1990: 80):

(13) a. *bæinn þar sem byrjað höfðu t; trésmiðirnir
       the town where that begun had the carpenters
   b. bæinn þar sem byrjað höfðu t; nokkrir trésmiðir
       the town where that begun had some carpenters

(13a) 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 (13b). 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.

I will follow Holmberg (2006) in assuming that SF can target adverbs and the negation, adjectives, NP and PP objects, nonfinite (participial) verbs and particles (for examples and discussion, see §4 below). In all cases, the fronting is optional and without any inherent semantic or discourse-related effect (see Jónsson 1991, Sigurðsson 1997, Holmberg 2000, 2006, among others).

Given that SF targets a position to the left of the finite verb, SF of phrasal categories such as NPs and PPs (as witnessed in (6-7) 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):

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7 Although in main clauses it is only optional in the sense of there being an alternative “EPP strategy” available; see §5 below.
8 But see Hrafnbjargarson (2003, 2004) for a dissenting view, which I will not take into account here, however.
Recall also that topicalization typically facilitates an emphasis/focus reading of the fronted constituent, whereas SF is information-structurally vacuous.

In addition to this, it can be shown that the phrasal-fronting operations in question require a subject gap. This is illustrated transparently by the following examples from Holmberg (2000: 449) ((6–7) are repeated here for convenience):

\[(14) \]

a. SF of PP without subject gap:
   i. * vinnan sem hann [pp i Ōsló ] hefur haft ti
      the job that he in Oslo has had
   ii. * vinnan sem [pp i Ōsló ]; hann hefur haft ti
   iii. * vinnan sem [pp i Ōsló ]; hefur hann haft ti

b. SF of PP with subject gap (optional):
   i. Peir sem hafa búið [pp i Ōsló ] segja að ...
      those that have lived in Oslo say that
   ii. Peir sem [pp i Ōsló ]; hafa búið ti segja að ...

(15) a. SF of NP without subject gap:
   i. * þegar hann [NP þessa erfiðu ákvörðun ]; hafði tekið ti
      when he this difficult decision had taken
   ii. * þegar [NP þessa erfiðu ákvörðun ]; hafði tekið ti
   iii. * þegar [NP þessa erfiðu ákvörðun ]; hafði hann tekið ti

b. SF of NP with subject gap (optional):
   i. Hver heldur þú að verði að taka [NP þessa erfiðu ákvörðun ]
      who think you that has to take this difficult decision
   ii. Hver heldur þú að [NP þessa erfiðu ákvörðun ] verði að taka ti

As already discussed, there are further strong indications that the difference between the two movement types is real. Perhaps the most striking asymmetry can be observed in connection with extraction. Extraction from a clause in which topicalization has applied is generally unacceptable (16a), while extraction across an element that has undergone SF is possible (16b) (cf. Maling 1990, Rögnvaldsson and Thráinsson 1990, Jónsson 1991, Holmberg 2006):

(16) a. * Maríu veit [að þessum hringk lofaði Ólafur ti tk]
   María know [that this ring promised Olaf] ti
   ‘I know that Olaf promised Maria this ring.’

   b. þennan mann, hélt [að fariðk hefði verið med tki á sjúkrahús]
   this man think I that gone has to hospital
   ‘This man I thought had been taken to hospital.’

A standard account for the deviance of (16a) is that the topicalized phrase occupies Spec-C of the embedded clause, which can therefore not function as an “escape hatch” (intermediate landing site) for further elements to be extracted. Taking this explanation to

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\(^9\)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 1993: 71f.); notice that the latter are the two most natural environments for SF.
be on the right track, it suggests in turn that the escape hatch is available in (16b), i.e. that the fronted element in this case does not occupy Spec-C.

Holmberg (2006: 546) notes that the same extraction asymmetry can be found with fronting of NP/PP “into” a subject gap and cases of embedded topicalization (without subject gap), supporting his claim that the former is SF while the latter is standard topicalization to Spec-

\[ \text{Spec-C} \]

(17) a. Hversu lengi heldur þú \([CP \ að [pp \ í \ Ösló] \ hafi \ verið \ búið \ t_i] \] how long think you that in Oslo has been lived ‘How long do you think that people have lived in Oslo?’

b. *Hversu lengi heldur þú \([CP \ að [pp \ í \ Ösló] \ hafi \ hann \ búið \ t_i] \] how long think you that in Oslo has he lived ‘How long do you think he has lived in Oslo?’

Since extraction is possible, \((17b)\) must be an instance of SF not embedded topicalization. I will therefore follow Holmberg in assuming that SF of NP/PP objects and embedded topicalization are distinct grammatical operations.

As a final key property distinguishing topicalization and other A′-movements on the one hand and SF on the other, SF is strictly clause-bound (Thráinsson 2007: 373; cf. also Jónsson 1991: 15):

(18) *Bókin \([CP \ sem \ stolið, \ var \ sagt \ [CP \ að \ þú \ hefðir \ t_i]] \] the book that stolen was said that you had

The hallmark of A′-movement is its unboundedness; hence, SF is not only distinct from topicalization, it is also unlikely to be an A′-movement type (see further §7).

The differences between topicalization and SF are summarized in table 1 (based on Maling 1990: 76).

<table>
<thead>
<tr>
<th>TOPICALIZATION</th>
<th>STYLISTIC FRONTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applies to NPs, PPs, etc.</td>
<td>Applies to NPs, PPs, participial verbs, adjectives, adverbs/negation, particles</td>
</tr>
<tr>
<td>Emphasis or focus on fronted constituent</td>
<td>No semantic/(pragmatic) effect</td>
</tr>
<tr>
<td>Restricted in embedded clauses</td>
<td>Common in embedded clauses</td>
</tr>
<tr>
<td>Unbounded</td>
<td>Clause-bound</td>
</tr>
<tr>
<td>No subject-gap requirement</td>
<td>Requires subject gap</td>
</tr>
<tr>
<td>Extraction from the same clause impossible</td>
<td>Extraction “across” fronted element possible</td>
</tr>
</tbody>
</table>

Table 1: Topicalization vs. SF

To summarize briefly, I have argued in this section that SF and topicalization are distinct syntactic operations, and that important asymmetries (such as the subject-gap requirement and extraction differences) allow us to tease the two apart. This is in line with Maling’s

\[ \text{Maling} \]

In addition, Holmberg (2006: 545) argues that the fact that presence of a negation blocks fronting of NP/PP (see §6 below) is evidence for the latter being SF, not topicalization.
original observations. I have also argued, following Holmberg (2006), that SF can target phrasal categories and hence that a uniform head-movement account is untenable. The remainder of the paper is devoted to an analysis of all cases of SF in terms of phrasal movement. Before turning to my own analysis, however, let me briefly summarize some previous attempts and point out their weaknesses, which I shall try to overcome.

3 Previous approaches to SF

In this section, I will briefly discuss some previous approaches to SF. The following list is a rough summary of the theories to be discussed:

- Movement to subject position
  - Movement following trace deletion: Platzack (1987)
  - Movement of phonological features: Holmberg (2000)
- Movement to some other position
  - Subcase of topicalization: Rögnvaldsson and Thráinsson (1990)
  - Adjunction to I\(_0\): Jónsson (1991), Holmberg and Platzack (1995)
- Landing site depends on fronted element (XP or X\(_0\)): Hrafnbjargarson (2003, 2004)

Platzack (1987), relying in part on Maling (1980, 1990), assumes 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 categories that can undergo SF are X\(_0\)-elements (heads), e.g. participles and particles. It is left open by his theory why these 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.

In response to problems faced by Platzack’s account, Rögnvaldsson and Thráinsson (1990) (building on Rögnvaldsson 1982) propose an analysis that amounts to the 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. But again, this analysis is highly problematic, as we’ve seen that topicalization and SF are very different in several (crucial) regards, and it seems like none of the asymmetries summarized in table 1 (p. 6) could be easily made to follow from their account. In particular, the extraction asymmetry mentioned in §2 is entirely unexpected; likewise, the analysis predicts SF and topicalization to be on a par with regard to semantic effect and unboundedness, contrary to fact. Finally, notice that

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11 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 thorough discussion of their proposals is beyond the scope of the present work. Sells assumes a “nontransformational” framework. See Bošković (2004, 58 fn. 1) for a brief discussion of (and decisive arguments against) Poole’s analysis. I will also not discuss Poole (1994) specifically, since it is a variation of the head-movement approach of Jónsson (1993) and Holmberg and Platzack (1995).

12 The question is not addressed by Maling (1980, 1990) either, although (while being less explicit about the details of her analysis than Platzack), the problem applies with equal force.
standard cases of SF involve nonfinite verbs and verb particles, but both categories cannot be topicalized in Icelandic (Thráinsson 2007: 343). This asymmetry is obviously highly problematic for a theory that unifies both movement types.

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, basically, 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. The fronted element, then, is effectively an expletive in its derived position, 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 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 X0/XP-distinction.

Like Jónsson’s head-movement account (to be discussed shortly), Holmberg’s account crucially ties the availability of SF to V-to-T movement (the verb checks T’s [D]-feature whenever there is no subject to do so). But Faroese data seems to contradict this assumption: In this language, SF applies in contexts (in particular, relative clauses and embedded interrogatives) where there is no verb movement (see further §7 and Holmberg 2006).

Moreover, Holmberg cannot account for some of the crucial cases. As he notes himself, he has no principled answer to the question why auxiliaries do not move (see §5 below): Since these do have a phonological matrix, they should be capable of moving to Spec-T, satisfying T’s EPP. Moreover, I do not see how the head-complement optionality to be described in §§4.4 and 4.5 could be made to follow from his theory without at least one major additional stipulation, namely that verb phrases lack a phonological matrix in the relevant sense (see note 36).

Despite the problems mentioned, I think that Holmberg’s proposal is the most convincing there is, and its influence on my own analysis will be evident. I will, however, try to overcome its weaknesses.

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 X0-category to Infl(T, in my terms). I have already noted the most obvious

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13 According to Holmberg and Platzack (1995: 116), a similar analysis was proposed independently by Platzack (1991).
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. However, as I also noted above, this still leaves room for a theory that analyzes some cases of SF as head movement; hence, Jónsson’s proposal merits some further discussion.

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. 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 those cases where the subject stays low, or where nominative is assigned to a passive object (cf. Ottósson 1994: 114):

(20) a. Ég veit [CP að til, eru t₁ [NP önnur lónd]]
   I know that PRT are other countries.NOM
   ‘I know that there exist other countries.’

b. ... hvort drukkið, hafi einhverjir Danir t₁ björ
   ... if drunk have some Danes.NOM beer
   ‘... if any Danes have drunk beer.’

c. Keypt, hefur varið t₁ tölva fyrir starfsfólkð
   bought has been a computer.NOM for the staff

The existential construction (20a) uses an unaccusative verb (vera til ’exist’), and since the subject is indefinite, it can stay low within the verb phrase; a low indefinite subject is also compatible with unergative verbs, as (20b) shows (cf. Rögnvaldsson 1984b, Thráinsson 1986, Sigurðsson 1991, Bobaljik and Jonas 1996). Crucially, the low subject is assigned nominative case in both cases, presumably under Agree with T (as in Chomsky 2000). The same is true for the passive case (20c), where tölva fyrir is assigned nominative case in object position. Jónsson has to resort an ad hoc solution, according to which the case assigned to the nominative NP is not actually assigned by T.

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).

14 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.
15 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):

(19) eins [og unnt og vert ] varí t₁
   as and possible and desirable were

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.
16 But notice that Jónsson’s claim (that SF leads to a suppression of nominative case) cannot be correct even in the other examples we’ve seen: If the subject is extracted, its trace must presumably still be case-marked (Chomsky 1981, 1986).
17 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.
Clearly, 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.\footnote{The arguments given here apply equally to \cite{Platzack87}, where it is argued that nominative case is absorbed by C, assumed to be pronominal in Icelandic.}

One prediction of Jónsson’s account is that SF should be parasitic on V-to-T movement. To some extent, this prediction seems to be borne out: SF occurs in Icelandic (which has V-to-T in both matrix and embedded clauses), but not in any of the Mainland Scandinavian languages (which lack V-to-T in embedded clauses). However, as noted by Holmberg and Platzack (1993: 117), V-to-T movement cannot be a sufficient condition for SF-licensing: V-to-T applies in Icelandic infinitival clauses, but SF is only acceptable in finite clauses (cf. §5).\footnote{In addition, Faroese suggests that V-to-T is not even a necessary condition; see §7 below.}

A variation of Jónsson’s head-movement account is presented in \cite{Boskovic01,Boskovic04}. Boskovic assumes that SF targets a null head (labeled “F”) above T. At PF, affixal F and the T-head must undergo morphological merger, which requires both heads to be adjacent. This derives the subject-gap requirement, since an overt specifier of T would block PF-merger of F and T. Thus, on this account it is a phonological requirement that is violated when SF applies in the presence of a subject in Spec-T. 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, Boskovic’s account suffers from a major conceptual problem: It depends entirely on the existence of the affixal head F, to which the fronted element adjoins. The only justification for this empty (and specifierless) head is the role it plays in the analysis of the phenomenon that Boskovic seeks to explain.\footnote{Notice that on Boskovic’s account, SF can only take place if F is inserted into the structure (hence, is not optional). The analysis thus has an air of circularity.}

We thus 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 (see §§5 and 7 below).

A somewhat weaker position is taken by Hrafnbjargarson (2003, 2004), who analyzes different cases of SF as either head or phrasal movement, depending on the moved category. In contrast to all other theories, Hrafnbjargarson maintains that SF is movement into the extended CP domain and hence dissociated from the derived subject position. In particular, Hrafnbjargarson assumes that SF targets a FocP (either Foc or Spec-Foc, depending on the moved category), where the moved element checks some uninterpretable focus feature. Since (definite) subjects have an “inherent focus feature”, they always move to FocP and...
hence block SF of other categories; Spec-T is occupied by an intermediate trace in the relevant cases, hence is not a potential landing site. (Notice, however, that this cannot cover impersonal constructions, in which SF is possible.)

Evidently, Hrafnbjargarson's theory is based on the assumption that SF has a semantic “function”, namely focus. To the best of my knowledge, all other authors deny this effect as an inherent property of SF, and some have made their sharp disagreement with Hrafnbjargarson's judgments explicit (see Sigurðsson 2008: 24, fn. 37, Thráinsson 2007: 389); Hrafnbjargarson himself admits in footnotes that his informants disagreed with him on many of the examples he claims to illustrate the semantic effect of SF. Since its empirical base is unclear at best, I will set aside Hrafnbjargarson's theory for the remainder of this paper.

The main purpose of this brief discussion of previous approaches to SF was to point out their weaknesses, which I will try to overcome with my own analysis. In particular, none of the previous accounts can fully explain why SF can seemingly move elements of diverse types into the derived subject position, and why SF should be constrained by the subject-gap requirement. My own theory, developed below, relies on a significantly smaller set of assumptions than the approaches discussed in this section; nevertheless, I will show how it can account for the observed peculiarities without inelegant stipulations.

4 SF as (remnant-)XP fronting

As mentioned above, SF seems to target both phrasal and head-like categories. 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. Having established the plausibility of the remnant-movement analysis of SF, I will turn to locality conditions on SF and the nature of the subject-gap requirement in later sections.

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 in order to avoid redundancy.

Jónsson (1996: 69) discusses leftward movement of negative objects, which bears some similarity to SF (and hence presents a problem for the head-movement analysis developed in Jónsson 1991):

\[(22) \text{þeir sem } [\text{engan mat }]_{i} \text{hafa borðað } t_{i} \text{ eru í hættu those that no food have eaten are in danger}\]

That this is indeed a case of SF is suggested by the fact that instead of the negative object, we can alternatively front the participle (cf. Hrafnbjargarson 2004: 107):

---

21 See also Poole (2007) for discussion.
22 In Icelandic, negative objects are generally shifted leftwards, to a position that is to the right of the finite verb/auxiliary. The operation freely violates Holmberg’s Generalization, hence must be distinct from object shift; this view is supported by the fact that negative PPs can undergo this leftward movement (but not OS) (cf. Thráinsson 2007: 35).
This verb-complement optionality is typical for SF and will be more thoroughly discussed in §4.4 below. I will leave open the question of whether (22) is a genuine case of SF and turn to clearer cases of phrasal SF.

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

(24) a. sem [NP þessa ákvörðun], verða að taka ti
   who this difficult decision have to take
   ‘those who have got the best result’

b. sem [PP um þetta], hafa rætt ti
   who about this have discussed
   ‘those who might have been sent to him’

c. Allir sem [PP í bókinni], höfðu leisið ti voru hriðnir
   all that in the book had read were impressed
   ‘Everyone that had read in the book was impressed.’

d. Þeir sem [PP í Óslo], hafa búið ti segja að ...
   those who in Oslo have lived say that
   ‘Those who have lived in Oslo say that …’

Clearly, none of these examples could be analyzed as movement of an X0-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. First, all cases in (22) are bad when an overt subject is present; second, embedded topicalization in this kind of context (relative clause) is generally unacceptable to almost all speakers. Moreover, Holmberg notes that in embedded impersonal clauses fronting of a PP as in (26d) is obligatory (although alternatively, expletive-insertion can apply; see §5), that extraction across the fronted NP/PP is possible (recall (16), and that preposing of an NP/PP

The following examples from Faroese are given by Barnes (1987), quoted in Holmberg and Platzack (1995: 115):

(25) a. Fá eru tey, sum [NP bøkur], hava keypt ti
   few are they who books have bought

b. Hetta er nakag sum [NP røttum monnum], er andstýggilgti ti
   this is something which proper men.naut is abominable

c. Tey, sum [PP í Danmark], hava verið ti siga ...
   they who in Denmark have been say...

Holmberg and Platzack note further that Falk (1993 §6.4) discusses cases of phrasal SF in Old Swedish.
can be blocked by presence of a negation (see §6). These and other tests show quite clearly that SF can target NPs and PPs.

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:

(27) a. *að um yrði rætt [pp t₁ tillögurnar] that about would-be talked the proposals
b. *þegar um hafði verið rætt [pp t₁ þetta] when about had been talked this

Since SF in (27) targets PP (so I assume), the NPs left behind must have been postposed (right-adjoined to vP) prior to PP-fronting. While postposing of NPs is possible in Icelandic, it cannot apply in (27) for (at least) two reasons: It only applies to indefinite NPs (see Rögnvaldsson 1984b and text below); and it cannot apply to an NP that is embedded within a PP (perhaps due to the fact that P-stranding in Icelandic is only acceptable under A’-movement). Hence, SF clearly moves the entire PP, which moreover must move as a whole.

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):

(28) maðurinn [CP Opk/tk sem [pp um t₁ t₂] var rætt t₁] the man that about was talked

In Holmberg’s words, it is “very likely that we are dealing with PP-movement” even in these cases: A comparison between (27) and (28) shows that what is going on in (28) cannot be fronting of a bare preposition (which is bad, as (27) 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:

(29) a. *Allir sem [NP eyðileggingu borgarinnar Hiroshima]i; fengu að fylgjast all that the destruction.dat the city.gen Hiroshima got to follow með t₁ fylltust hryllingi with were-filled fear
b. *Allir sem [pp um manninn sem drukknaði höfðu]i; heyrt t₁ voru all that about the man that drowned had heard were sorgmæddir sad

Essentially for the same reason, I assume, clausal complements cannot undergo SF:

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

Such cases are crashingly bad for all speakers, suggesting that the categories that can undergo SF must be below some threshold of heaviness. 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 shape of the fronted category is more tightly constrained than in the case of canonical subjects, given the potentially heavy burden that this fronting puts on processing.

I will thus resort to the notion of heaviness at various points in the discussion below, although I will employ it in the purely intuitive sense in which it has figured in the literature and will not have anything insightful to say about its precise definition.

This concludes my summary of the empirical landscape concerning SF of NPs and PPs; the analysis of these facts will be taken up again in §§4.4 and 4.5 in connection with SF of nonfinite verbs and particles. The data I presented in this section show unambiguously that SF cannot 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. The reason is that there is no theoretically feasible way of reanalyzing the data presented above as head movement; by contrast, the availability of remnant movement makes it possible to reanalyze apparent cases of X0-fronting as phrasal movement. This reanalysis will be the topic of the following sections.

4.2 Adverbs and negation

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

(32) sem sennilega; er t; hegt að gera við
    that probably is possible to fix

Given that the fronted element in (32) is a single “word” in an intuitive sense, 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 (with only a single [modified] adverb depicted):

24 As Cedric Boeckx (p.c.) has pointed out to me, it is known that a very heavy or clausal constituent in Spec-T can cause significant problems for processing, for essentially the same reason that renders the output of embedded topicalization in English bad in many cases:

(31) * I think that [if John won the race], would be great

These cases inevitably have a garden-path flavor to them and complicate processing significantly. Notice that although I have argued that SF and topicalization are distinct, this surface effect will be the same in an SF-construction; in this case, too, the fronted constituent precedes the finite verb.

25 In particular, I will leave open whether the kind of heaviness relevant here is defined in terms of phonological material or internal structural complexity, although the data mentioned in the following sections seem to favor the latter view. For a rare attempt to come to grips with various heaviness-related phenomena, see Wasow (2002).

26 But see Nilsen (2003), among others, for critical discussion of this approach.

27 “α” here is shorthand for the various categories encoded in Cinque’s hierarchy, i.e. α ∈ {Mod, Asp, Pol, …}. 
As mentioned by Thráinsson (2007: 370), a phrase-structural description of adverbs along the lines of (33) is as plausible for Icelandic as it is for any other language. Assuming it to be on the right track, it follows straightforwardly that adverbs are actually phrasal categories, hence that SF of adverbs should be seen as XP-movement. Plainly, that this is the case is also shown by the fact that adverbs can be modified, in which case the entire phrase (modifier + adverb) undergoes SF (the example is originally from Rögnvaldsson 1982):

(34) sem [AdvP svona vel ]i hafa talad t um pig
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):

(35) þegar [AdvP ekki ]i var [NegP t i [Neg Neg ] [vP búið að borða ]]
when not was finished to eat

Crucially, NegP – if present – is hierarchically ordered above all αPs hosting other adverbs (this will play a role in §6 below):

(36)

From the structure in (36) it follows that negation, being a specifier, is actually a phrase. In addition to the theory-internal argument from SF, there are straightforward empirical

28Holmberg and Platzack (1995: 17) use a slightly different structure, in which NegP is adjoined to VP. But they provide no reason not to assume the structure in (36). As far as I can see, nothing in my analysis hinges on the difference between the two formalizations.
reasons to take the negation in Icelandic to be phrasal (cf. Ouhalla 1990). First, negation and adverbs in general can be topicalized in this language (Holmberg and Platzack 1995: 17):

(37) \[ \text{AdvP Ekki } i \text{ veit } t \text{ í hver hún byr not know I where she lives} \]

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) (41):

a. sem \[ \text{AdvP alls ekki } ]; \text{ hefur } [\text{NegP } t_i \text{ } \emptyset - \text{Neg}^0 ] \text{ skrifað } þessar bækur who at all not has written these books

b. sem \[ \text{AdvP alls ekki } ]; \text{ geta } [\text{NegP } t_i \text{ } \emptyset - \text{Neg}^0 ] \text{ unnið saman that at all not can work together}

The examples in (41) are cases of phrasal movement, directly predicted by the structure in (36). 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 my thesis that SF is generally phrasal movement.

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:

(42) Anti-locality constraint (cf. Abels 2003: 12)

\[
* [X_P Y_P [X' X^0_{YP}]]
\]

29 A case that might be analyzed in the same way is given by Hrafnbjargarson (2004: 121):

(38) Hann henti öllu sem áreiðanlega ekki hafði t verið tæmt

He threw away all that undoubtedly not had been emptied

‘He threw away everything that had undoubtedly not been emptied.’

Hrafnbjargarson takes the example to show that more than one element can undergo SF, i.e. he claims that both the adverb áreiðanlega and the negation (ekki) have fronted independently. I suggest instead that áreiðanlega modifies the negation, so that the following element has undergone phrasal SF:

(39)

\[
\begin{array}{c}
\text{AdvP} \\
/ \quad / \quad / \\
\text{Adv'} \\
/ \quad / \\
\text{Adv} \\
/ \\
\text{not}
\end{array}
\]

A further case mentioned by Hrafnbjargarson (p. 128) may be more problematic:

(40) Nemendur sem ádur lokið hafa t sambærið lagum námsaföngum

students that before finished have similar courses

‘students that have finished similar courses before’

While I will not attempt to argue for this analysis here, I think that this case, too, can be analyzed as phrasing of a modified particle verb, i.e. that ádur is in some vP-internal position. Hrafnbjargarson notes (p. 129) that the example becomes unacceptable when the order of adverb and participle is reversed.
It follows from (42) that in a configuration \([T \text{XP}]\), attraction of XP to Spec-T in order to satisfy an EPP-requirement on T is too local. This captures the standard (though standardly implicit) assumption that EPP on T cannot be satisfied by raising of (e.g.) the verb phrase (for related discussion in a broader context, see Grohmann 2003, 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-aP.

Finally, notice that in embedded clauses with only a finite main verb and no auxiliary, SF of an adverb across the finite verb essentially restores the pre-V-to-T order. In such cases (not shown here) one could in principle argue that the word order is the result of absence of both V-to-T and SF: If a negation or an adverb precedes the finite verb, this may be either the result of V-to-T and subsequent SF across the finite verb, or simply the base order of these elements. For reasons of simplicity and plausibility I will assume here that V-to-T applies universally in Icelandic (cf. e.g. Holmberg and Platzack 1995: 76f.; Vikner 1995: 139), and that SF can apply optionally, restoring pre-V-to-T order in the cases mentioned. The alternative analysis sacrifices essential generalizations and correlations, such as the fact that Icelandic (but not the Mainland Scandinavian languages, which have no V-to-T) has object shift in embedded clauses (Vikner 2006: 395).

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 natural anti-locality requirement (42) ensures that T’s EPP will not be satisfied by raising its complement.

### 4.3 Predicative adjectives

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

\[
\begin{align*}
\text{(43a)} & & \text{hún sem var fyrst til að lýsa stilfærslu} \\
& & \quad \text{she that was first to investigate Stylistic Fronting} \\
\text{(43b)} & & \text{hún sem fyrst, var t, til að lýsa stilfærslu}
\end{align*}
\]

\[
\begin{align*}
\text{(44a)} & & \text{nokkuð sem er hægt að gera við} \\
& & \quad \text{something that is possible to fix} \\
\text{(44b)} & & \text{nokkuð sem hægt, er t, að gera við}
\end{align*}
\]

Notice that the fronted adjective in (43b) has left behind its complement (the infinitival clause). A similar case of stranding of an NP-complement is provided by Jónsson (1991: 2):

\[
\begin{align*}
\text{(45)} & & \text{þeir sem ánægðir, eru [CP TV E mð kaupið ] kvarta ekki} \\
& & \quad \text{those who content are with the pay complain not}
\end{align*}
\]

By contrast, modifiers generally cannot be stranded by SF of the adjective in this way (Jónsson 1991: 13):

\[
\begin{align*}
\text{(46)} & & \text{* þetta er maður [CP sem skyldur, er mjögg t, Mariu ]} \\
& & \quad \text{this is a man that related is very much Maria.DAT}
\end{align*}
\]

Notice that for this reason, structures that are string-identical to the hypothetical case at hand exist even in languages that have no V-to-T, e.g. Mainland Scandinavian.
Similarly, modifiers cannot undergo SF by themselves, stranding an adjective (example from Sigurðsson 1997: 6)\(^{31}\)

(48) * sem svakalega i var t; klár who terribly was bright

Such cases generally improve significantly when the entire AP moves\(^{32}\)

(49) a. ? sem [\(AP\) mjög skyldur ]; er t; Mariu that very much related is Maria.dat
   b. ? sem [\(AP\) einstaklega klár ]; var t; that extraordinarily bright was
   c. ? sem [\(AP\) afskaplega erfið ]; hafa verið t; viðureignar that very hard have been dealing-with

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 (43b) has the following pre-SF structure:

(50) \[
\text{CP} \\
\text{Spec} \\
(\text{Op} \quad \text{C'} \\
\quad \text{C} \quad \text{TP} \\
\quad \text{that} \quad \emptyset \quad \text{T'} \\
\quad \text{T} \quad \text{PredP} \\
\quad \text{is}_i \\
\quad \text{Spec} \quad \text{PredP'} \\
\quad \text{t}_\text{Op} \\
\quad \text{Pred} \quad \text{AP} \quad \text{A} \\
\quad \text{t}_i \\
\quad \text{first} \\
\quad \text{PRO to investigate ...}
\]

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

\(^{31}\)By contrast, topicalization of these modifiers appears to be generally possible; compare (48) to the following:

(47) Svakalega, held ég að hann hafi verið t; klár terribly think I that he has been bright

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

\(^{32}\)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.
selected by T; the copular verb raises from Pred/V to T, unless an auxiliary is chosen. Now, T’s EPP feature should target AP, since PredP cannot raise by anti-locality (42). Since the entire AP is too heavy to undergo SF (recall the discussion in §4.1), I assume that the CP complement must extrapose (evacuate) for SF to yield a licit result.

There are various ways of formalizing this; for concreteness, I will assume that CP extraposes when PredP is constructed, by right-adjoining to PredP. Since this will create an additional PredP node, we need to ensure that the original PredP remains immobile under anti-locality (42), which presumably follows from the identity of labels (i.e., the original PredP and the PredP created by adjunction are identical from T’s point of view).33

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.

Thus, I propose that T attracts a remnant AP containing the trace of the extraposed complement (the dashed arrow indicates application of a transformation at an earlier step in the derivation, shown for expository reasons):

\[
\text{(51)}
\]

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 (49).34

---

33 Alternatively, we could assume that SF raises the entire AP, but that CP subsequently right-adojins to TP. In recent work of Chomsky’s (Chomsky 2008, 2007), it was suggested that all operations triggered by C or T are computed simultaneously, i.e. that there is no logical order between them. In this case, extraposition of CP/PP and fronting of AP could take place simultaneously at the same derivational step. As far as I can see, at least for the purposes of this paper nothing hinges on the precise implementation.

34 Notice that for a case like (49a), it is necessary for me to assume that the dative complement is actually a covert PP, hence an extraposable category.
Notice that this analysis easily handles the case in (45), in which the fronted adjective (phrase) leaves behind a PP. The derivation is exactly parallel: PP extraposes, and the remnant AP is fronted to Spec-T. Again, any derivation in which extraposition of the PP does not apply will be ruled out for reasons of heaviness, hence extraposition is, in effect, obligatory:

(45) Þeir sem ánægðir eru [AP t₁ með kaupið ] kvarta ekki those who content are with the pay complain not
  a. [PredP Op [Pred' are [AP content [PP with the pay ]]]] \( \xrightarrow{\text{extrapose PP}} \)
  b. [PredP [PredP Op [Pred' are [AP content tPP ]] [PP with the pay ]]] \( \xrightarrow{\text{raise AP}} \)
  c. [CP Op [TP [AP content tPP ] are ;T [PredP [PredP tOp [Pred' t₁ tAP ] [PP with the pay ]]]]]

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: participle verbs and particles. These are the instances of SF that, 

*prima facie* at least, most strongly militate against a phrasal-movement account of SF (cf. Holmberg 2006: 556). The conclusion of the discussion so far has been that NPs, PPs, AdvPs and (potentially remnant) APs undergo SF. With bare verbs and particles, we will see that the availability of remnant movement again allows for a uniform treatment in terms of XP-movement, but that some further (independently motivated) technology will be necessary for full coverage of the facts.

4.4 Nonfinite verbs

Having established that SF in Icelandic is phrasal movement in the cases of NPs/PPs, adverbs/negation and predicative adjectives, let us now consider the case of nonfinite (participial) main verbs undergoing SF. 

*Prima facie*, the data suggest that at least SF of nonfinite verbs should be analyzed in terms of head movement. As pointed out before, it is in principle not necessary to treat all instances of SF in a uniform fashion. However, a non-uniform analysis of SF in terms of two very different movement operations (phrasal movement in some cases, head movement in others) will not easily account for the fact that both kinds of SF are governed by exactly the same restrictions – in particular, that both kinds of SF are dependent on a subject gap, are clause-bound and semantically neutral, and obey the same locality constraints (as shown in §6). By contrast, all of this is predicted by an approach that analyzes all instances of SF in terms of the same operation, namely phrasal A movement to Spec-T (see §§4 and 6 for elaboration). I will therefore argue that SF of main verbs is actually movement of a remnant verb phrase (vP)\(^{35}\).

Unlike NP and PP, a verb phrase can never be fronted as a whole, i.e. containing a nonfinite main verb and its complement (examples from Holmberg 2000: 470):\(^{36}\)

\(^{35}\)It is noteworthy at this point that Wiklund et al. (2007) – building on Nilsen (2003) and Müller (2004) – have proposed to analyze verb movement in Icelandic (and Norwegian) as remnant-vP fronting. Since their analysis relies on various ad-hoc assumptions and is in general not very explicit about theoretical details (in particular, evacuation movements), I will not attempt in this paper to relate their approach and the one proposed here.

\(^{36}\)Holmberg has no way of accounting for these facts and resorts to a stipulation that verb phrases lack the relevant phonological features ("p-features") of their subconstituents. In his system, one would expect verb
(52) *þeir sem [vP búið i Ósló] hafa t₁ segja að ... those that lived in Oslo have say that

Only fronting of either the participle or its complement is allowed:

(53) a. Þeir sem [PP i Ósló], hafa búið t₁; those that in Oslo have lived
b. Þeir sem búið, hafa t₁ [PP i Ósló]; 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]). (53a) and (53b) are equally possible, and both are clear cases of SF (recall the discussion in §2). It thus looks as if búið and i 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 (53b).

I will assume, as is standard, that búið and i 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 permits this movement to the edge. In the framework of “phase theory”, movement to the edge is the only way for a complement XP to escape the phase, i.e. 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. Thus, raising to the edge as assumed here is taken by Chomsky to be universally available, although it applies optionally. 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, perhaps following from its status as a “phase” (cf. Chomsky 2001: 33):

(54)

On the CP level, C attracts the operator, while T’s EPP-feature scans the tree for a phrase to be attracted (this will be spelled out in more detail in §§6 and 5 below). Taking minimality into account and assuming that attraction of vP₁ is ruled out by anti-locality (42), phrases to undergo SF freely since they have both phonological and semantic content (recall the discussion of his approach in 43).
we would expect it to attract the PP at the vP-edge – which, however, is only one of two possibilities, as noted. We therefore need an additional condition, proposed by Chomsky (2001: 27):

(55) Terms of the edge of [a phase] HP are equidistant from probe P.

Based on this principle, Chomsky argues (ibid) that in a configuration like (54), “the shifted object [= the PP] and the in-situ subject … are equidistant from the probe T”. But notice that PP and vP₂ are likewise equidistant from T, since both are sisters; I claim that this is what yields the optionality illustrated in (53).

For expository reasons, I adopt the general reasoning in Chomsky (2001) but in addition follow Hornstein and Nunes (2008) in assuming that adjectives (at least those created by the edge property of a phase) are label-less. A phrase XP that is adjoined to vP will thus be represented in the following way:

(56) \[
Y' \\
\_\_\_
\]

Consequently, for a higher probe (Y), XP and vP are equidistant (in the sense of Chomsky 2001: 27); i.e., XP and vP are equally close to the probe, since neither element dominates the other. Consequently, an EPP-property of Y can raise either one, and neither movement will violate minimality.

In our case, what this means is that raising of PP to the outer edge of vP will not result in a new vP-node being created, and hence that both PP and vP will be equally available for SF. At the TP level, we thus have the following representation:

37 Nothing really hinges on this formalization, which I choose mainly to make the proposal more transparent. Alternatively, one could assume that movement to the phase edge is movement to an outer specifier, as shown in (54). This requires the additional assumption that the higher vP (dominating the raised XP) and the original vP (hosting the subject in its specifier) are distinct for purposes of attraction (otherwise, both should be immobile under (42)). A further alternative is that movement to the edge is adjunction, and that adjunction yields an ambiguous label (e.g., PP/vP), assuming that an ambiguous label likewise results in equidistance of the two phrases from a higher probe. As far as I can see, the choice of formalization is immaterial to the proposal itself.

38 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.

39 Notice that (as indicated above) movement to the vP edge as assumed here must be distinct from object shift (OS). First, OS never targets non-NPs (Vikner 1994). Second, OS shifts NPs to the left of (i.e., to a position above) negation and adverbs. But adverbs (including negation) block SF of an NP/PP-complement (see §6 below), hence movement to the phase edge must target a position below these blocking categories. It is likely that movement to the phase edge feeds OS, but there clearly has to be a further movement step involved (cf. the discussion in Chomsky 2001: 30).
From T’s point of view, PP and vP are equidistant sisters, hence either one can be attracted:

(58)  Option 1: attraction of PP
Relying on the special edge property of vP (attraction of complements to its left edge), the account predicts the optionality illustrated in \(53a\) vs. \(53b\): Both phrases are equidistant from T, hence either one may raise. Notice that neither option violates the anti-locality constraint \(42\). Since movement to the edge has created an additional node, movement of PP or vP will count as sufficiently non-local.

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 in the sense of Chomsky (2001). I have illustrated how the account makes empirically correct predictions, in particular concerning the head-complement optionality. 40 41 But

\[\text{(59) Option 2: attraction of vP}  \\
\text{CP} \quad \text{Op} \quad \text{C'} \quad \text{C} \quad \text{TP} \quad \text{vP} \quad \text{tOp} \quad \text{v'} \quad \text{TP} \quad \text{v} \quad \text{VP} \quad \text{tPP} \quad \text{t_vP} \quad \text{PP} \quad \text{in Oslo} \quad \text{T'} \]

40 To the best of my knowledge, my account is the first to provide a structurally grounded rationale for this effect, although Holmberg (2000, 2004) clearly recognizes the role of sisterhood of V and the object.

41 Notice that the account makes a potential prediction concerning object shift. According to Holmberg’s Generalization, OS is possible only if the main verb leaves the VP (cf. Holmberg 1986, 1999), i.e. if head-movement of V\(^0\) takes place. In this case, both full NPs and pronouns can undergo OS in Icelandic (Vikner 2006).

Unfortunately, it is virtually impossible to test whether or not SF of the nonfinite main verb licenses OS. The reason is that SF obeys minimality (see \(40\) below), so that adverbs or negation, when present, block SF of other categories that start out lower in the tree (Maling 1990); in particular, they block SF of a nonfinite verb. But adverbs/negation are necessary to render OS “visible”, by giving an indication of the vP edge.

The only way of testing for OS-licensing, then, is to construct an example that violates minimality. According to Poole (1996: 213), example \(60b\) was judged unacceptable by a speaker who nevertheless accepted \(60a\), in which no OS has taken place:

\[\text{(60) a. Þetta er maðurinn [CP sem ljúka, vildi aldrei} \text{t}_1 \text{ bökinni }] \quad \text{this is the man that finish wanted never the book} \]
\[\text{‘This is the man who wanted to never finish the book.’} \]
\[\text{b. * Þetta er maðurinn [CP sem ljúka, vildi bökinni aldrei} \text{t}_1 \text{ t}_k ] \quad \text{this is the man that finish wanted the book never} \]

Notice that by minimality, it is the adverb (aldrei) that has to front, so neither case should be entirely acceptable. Hence, it is hard to tell precisely for which reason \(60b\) is bad: Is it because it violates minimality or because
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 “late” indefinite subjects. The question is: Why can SF of nonfinite verbs, which I have argued to undergo SF as (remnant) \(vP\)s, never pied-pipe a low subject? Notice that the question does not arise for definite agentive subjects, which must move to Spec-T and thus preclude SF (Thráinsson [2007: 364], as was shown in §2).

There are two relevant cases to consider: unaccusative/passive verbs with indefinite subjects (61) and indefinite subjects of unergative verbs (62) (Rögnvaldsson and Thráinsson [1990: 27]):

(61) a. Hann segir að komið sé t; betra veður
he says that come is better weather

b. Fallið hafa t; margir hermenn í þessu striði
died have many soldiers in this war

(62) a. Ég hélt að kysst; hefðu t; hana margir stúdentar
I thought that kissed had her many students

b. Keypt, hafa t; þessa bók margir stúdentar
bought have this book many students

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

Consider first unaccusatives/passives (61), where the surface subject starts out as a complement of V. I follow Legate (2003) in that I take unaccusative/passive \(vP\)s 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. In a case like (61a), this yields the following:

(63) T’
    /\    
   T     NP
     /\    vP
    better weather  VP
      /\    \  
     v  come  t_{NP}  t_V

OS has taken place without being licensed? Given that Poole’s informant accepted (60a) but not (60b), we can tentatively conclude that it does not seem particularly likely that SF of a nonfinite main verb licenses OS, which in turn suggests that SF is not head movement. Clearly, no firm conclusions can be drawn from this quasi-evidence, but given the impossibility of constructing fully appropriate examples I deem it fair to say that there is no evidence for SF licensing OS. Under a head-movement account, this is unexpected; under my remnant-movement account, it is not surprising, since the main verb does not raise to T.
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:

\[(64)\]

a. **Option 1**: attraction of NP:
\[
\text{að} \quad \text{NP} \quad \text{betra} \quad \text{veður} \quad \text{t}_{NP} \quad \text{t}_{vP} \quad \text{is} \quad \text{come}
\]

b. **Option 2**: attraction of vP:
\[
\text{að} \quad \text{vP} \quad \text{komið} \quad \text{t}_{NP} \quad \text{t}_{NP} \quad \text{betra} \quad \text{veður} \quad \text{t}_{vP} \quad \text{is} \quad \text{better weather}
\]

Notice that in case the NP does not raise to the vP edge, no additional node is created, and hence the full vP is immobile for reasons of anti-locality (42):

\[(65)\]

a. * Hann segir að \text{vP} \quad \text{komið} \quad \text{betra} \quad \text{veður} \quad \text{t}_{vP} \quad \text{h} \quad \text{is}

b. * \text{vP} \quad \text{Fallið} \quad \text{margir} \quad \text{hermenn} \quad \text{hafa} \quad \text{t}_{vP} \quad \text{i} \quad \text{þessu striði} \quad \text{died} \quad \text{many} \quad \text{soldiers} \quad \text{have} \quad \text{in this} \quad \text{war}

Thus, the system makes exactly the right predictions and allows us to treat fronting of nonfinite verbs in a straightforward manner, as remnant-vP fronting. 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 (62b), where the predicate is transitive. Since indefinite agentive subjects do not have to raise to Spec-T, SF is possible, as before. The complement of V raises to the edge of vP:

\[(66)\]

a. bæinn \text{þar} \quad \text{sam} \quad \text{byrjað} \quad \text{höfðu} \quad \text{t} \quad \text{nokkrir} \quad \text{trésmiðir}

b. bæinn \text{þar} \quad \text{sem} \quad \text{byrjað} \quad \text{höfðu} \quad \text{t} \quad \text{nokkrir} \quad \text{trésmiðir}

[Note: The case of (unergative) intransitives is less clear, since for my system to work there must be some XP that raises to the edge before SF can take place. Consider the following example (Maling 1990):

\[(66)\]

bæinn \text{þar} \quad \text{sam} \quad \text{byrjað} \quad \text{höfðu} \quad \text{t} \quad \text{nokkrir} \quad \text{trésmiðir}

Following Hale and Keyser (1993, 2002), I take all unergatives to be transitives (cf. also Chomsky 1995: 248), but (pace Hale and Keyser) I take that complement (a cognate object in the case of intransitives) to be present in the syntax, as an abstract NP. This NP raises to the edge, and the derivation proceeds as outlined below. However, since the abstract NP is inherently phonologically null, it presumably cannot raise to Spec-T, hence in this case only raising of vP is permitted.]

\[\text{(42)}\]
I suggest that cases like those in (68) 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 is, 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):

(69) a. Margir many students have this book
    b. *Lesið hafa þessa bók margir stúdentar

The fact that SF is possible in (70b), where the subject is clearly postposed to the right of the direct object, but not in (69b), 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 (sufficiently “light”) 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., Rögnvaldsson 1984b, and Maling 1990: 79 in the context of SF). Following Platzack (1987: 378), I assume that INPP is implemented as right-adjunction to the verb phrase (vP, in my terms).

As discussed by Rögnvaldsson (1984b), Icelandic allows various rightward movements of indefinite subject NPs. While I will take some of the cases discussed by Rögnvaldsson

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43 Rightward movement of definite subjects is possible in Icelandic, too, but only when the NP is sufficiently heavy (“heavy-NP shift”); cf. Rögnvaldsson 1984b, 363f.). I will leave the question of interaction between SF and heavy-NP shift for future work, but see 4.3 below for a tentative suggestion.
to involve *in-situ* subject. Other cases show clear rightward movement of the subject, since it ends up at the outer right edge:

(71)  a. það hefur komið í dag [NP gamall maður ]
     there has come here today old man

     b. það máluðu sennilega tNP húsið vandlega [NP margir stúdentar ]
     there painted probably the house carefully many students

INPP, then, can freely remove indefinite subjects from *vP*. I propose that this rule enters into the derivation of participle fronting, yielding the illusion of head movement, since *vP* is reduced to a single head.

With this in mind, consider the derivation for (62a) [45]

(73) a.

\[
\begin{array}{c}
\text{NP} \\
\text{her} \\
\text{many students} \\
\text{v} \\
\text{kissed} \\
\text{VP} \\
\end{array}
\]

[44] Rögnvaldsson did not assume the predicate-internal subject hypothesis in his work. But see Bobaljik and Jonas (1996) for arguments that overt subject always leave *vP* in Icelandic.

[45] My account predicts that the accusative-object pronoun can raise to Spec-1. While some speakers accept this, others do not. For the latter group, there seems to be a prohibition on non-nominative arguments surfacing in canonical subject position in the presence of a nominative subject.

Notice also that when the subject raises to Spec-I, the object is linearized in its base position, not in the edge position:

(72) 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.
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 (42) 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 thus 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.

It might be objected that INPP of the subject creates a larger vP, which should then, by minimality, undergo SF. This is essentially the problem that was noted in §4.3 with regard to CP-extraposition. I assume that evacuated constituents are, in effect, invisible for purposes of SF (cf. Müller 2004, Wiklund et al. 2007); while INPP of a subject creates a larger vP, only the original vP is visible for T’s EPP. But this seems to be true for adjuncts in general, as pointed out by Holmberg (2006: 540):

(74) a. Þeir sem hitt; hafa t; konuna sina i Óslo
    those that met have wife their in Oslo

b. *Þeir sem [pp i Óslo ]; hafa hitt konuna sina t;
    those that in Oslo have met wife their

Recall from §4.1 that PP-complements can undergo SE. However, in (74) i Óslo is a PP-adjunct, not a complement. As (74b) shows, a right-adjointed PP of this kind cannot undergo SE, despite being 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 (42).

As before, alternative formalizations are available: Either we assume that the subject is postposed prior to SF, yielding a larger vP node which however is invisible to SF (as argued in the text below); or else, we assume that the subject is right-adjointed to TP, i.e. postposed after SF has applied. Again, nothing in my proposal hinges on the details.
This is further evidence that heaviness imposes a strong, perhaps extra-syntactic (processing-related) constraint on SF. Recall from the discussion in §4.1 that clausal complements of verbs do not undergo SF, while NP/PP objects do:

(75) a. Þeir sem [pp i Óslo ] hafa búið ti
   those that in Oslo have lived
b. *sá sem [ að lyfta steinum i], reyndi ti
   he that to lift the stone tried

Even in the NP/PP case, it was noted in §4.1 that “heavy NPs” are unable to undergo SF. The same is true for heavy vPs, which can however be evacuated by means of INPP or standard edge-driven movement. Rightward movement of indefinite subjects (INPP) is available in principle, and while it applies optionally, it is required for SF of vP to be acceptable.

Notice that my line of reasoning makes a potential prediction. Very light or structure-less subjects should be able to remain inside a vP that is fronted to Spec-T by SF. It seems like there is indeed some evidence that this possibility does exist, at least for some speakers. Hrafnbjargarson (2003, 2004) argues that SF is marginally possible in the presence of an overt weak subject pronoun. The result is considerably worse when the pronoun is stressed, i.e. made more “heavy”:

(76) 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 lesið; hafði ti í bókinni var rétt
    all that he.weak read had in the book was correct
c. *?Allt sem hann lesið; hafði ti í bókinni var rétt
    all that he read had in the book was correct

A case like (76b) can plausibly be argued to involve SF of a vP that contains a weak pronoun in its specifier. 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. Notice that this movement to the edge of vP is not at all surprising if vP is a phase in the sense

\[\text{The prediction is "potential" since there might be other factors that force subjects to leave vP in general, as argued by Bobaljik and Jonas (1998).}\]

\[\text{It should be noted that Sigurðsson (2008: 20, fn. 24) and Thráinsson (2007: 389, fn. 23) disagree sharply with Hrafnbjargarson’s judgments of the relevant cases. That there is variation among speakers in connection with heaviness effects is presumably not surprising. See also note 47.}\]

\[\text{Platzack (1988: 227–228) mentions a similar case in Old Swedish (which had SF); see also Falk (1993: 165). But, as mentioned by Platzack, it is conceivable that the weak pronoun has shifted to some Wackernagel-like position and/or is cliticized onto the complementizer.}\]

\[\text{To address an obvious objection against the analysis outlined in this section, it is of course the case that vP/VP appears to be otherwise rather immobile in Icelandic. In particular, in this language topicalization of verb phrases is generally impossible (Thráinsson 2007: 349), while my analysis obviously implies that A-movement of vP is possible (as in Wiklund et al. 2007). While I do not know what exactly the source of this discrepancy is, it should be noted that it seems to be more general – in particular, particles (which, on my analysis, move as PartPs; see below) can undergo SF but cannot be topicalized (Thráinsson 2007: 343f., 370). It should also be noted that the ban on verb-phrase topicalization in Icelandic may not be as robust as is often claimed. Thráinsson (2007: 344, fn. 2) provides the following example (attributed to Sigurðsson), involving a nonfinite verb:}\]
of Chomsky (2000, 2001): Since objects are generally transparent for extraction, we expect them to undergo movement to the vP edge, as proposed by Chomsky. In such cases, then, SF targets either the extended projection of the (lexical) verb or the (equidistant) object XP. The same reasoning applies to subjects (logical objects) of passive/unaccusative verbs. For the case of unergatives I have argued that a further evacuation option is available, namely that indefinite subjects can be postposed (the independently attested rule of INPP), and that SF of vP would otherwise result in a non-subject constituent occupying Spec-T that is too heavy for this position.

There is no reason, then, to assume that SF of nonfinite verbs is head movement. 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 strong support to a head-movement analysis of SF is the case of particles. The reason is obvious: Particles are – impressionistically speaking – “as nonphrasal as it gets”. In the following, I will argue nevertheless 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 (to be addressed in §§5–7 below).

Recall from §4.4 that if a participle verb occurs with a direct-object NP, 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 (78), and presence of negation blocks both options (79) (see §6 for further discussion):

(78) a. fundurinn sem fram; hefur farið ti, the meeting that forth has gone
    b. fundurinn sem farið, hefur ti; fram

(79) a. *fundurinn sem fram; hefur ekki farið ti,
    the meeting that forth has not gone
    b. *fundurinn sem farið; hefur ekki ti; fram

Like nonfinite verbs and their complements, the nonfinite verb and the particle are equally available for SF. Notice that verb and particle can never be fronted together (Jónsson 1991: 12):

(80) *nýustu tölur sem [ komið fram]; hafa ti, the newest figures that come forth have

It is not at all clear how such cases should be analyzed, but it seems plausible to assume that the fronted constituent in (77) is an XP; hence presumably a verb phrase, containing a trace of the extraposed CP complement. (Notice that since a nonfinite verb is fronted in (77), this cannot be a case of narrative inversion.)

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 may or may not be possible, A-movement of vP must be possible if my proposal is on the right track.

51Notice that there is always a third option if an indefinite subject is present. Hence, either the subject is likewise equidistant from T (which is plausible, since it is in the edge of vP), or else T always has the option of attracting the phrase it agrees with, which is for this reason exempt from minimality. See further §5 below.
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:[53]

\[(81)\]

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

\[(82)\] Option 1 (= (78a)):

---

52I will assume that objects of particle verbs are generally specifiers of PartP, capturing the intuition that the particle is predicated of that subject (cf. Ramchand and Svenonius 2002). But nothing hinges on the precise structure of PartP for present purposes.
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:

(84) a. Verðbólgan varð verri en við; hafð verið [vP búist t₁] inflation was worse than had been expected
   b. Fram, hefur [vP [vP komið t₁ t₉] [CP að fiskað hefur verið í leyfisleyi á forth has come that fished has been illegally in chilensku fiskisvæði [k]] the Chilean fishing zone

By contrast, SF of a particle is strongly degraded with transitive verbs. 53

(85) ??/* Stelpan sem út; hefur [vP sleppt t₁ kettinum]
    the girl that out has let the cat

Holmberg (2006: 555) 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”, 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 (68)), 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 (84a)), or else if it is evacuated by extraposition, as in (84b).

53 While Holmberg assigns the example an asterisk, my informants generally found it somewhat acceptable, albeit very marginally.
Otherwise, PartP is too heavy to be fronted to Spec-T (recall (68)). Notice that fronting of the entire PartP including a definite object is bad (Holmberg 2006: 556):

(86) a. *stelpan sem út kettinum hefur sleppt the girl that out the cat has let
   b. *stelpan sem kettinum út hefur sleppt the girl that the cat out has let

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/nonspecific objects can be postposed, and that heavy NPs can undergo heavy-NP shift.

Some evidence that this is indeed the case (at least for indefinite objects) is provided by Thráinsson (2007: 331); compare (88b) to (85):

(88) a. *þá sem út voru [NP einherjir kettir ] reknir tþ then that out were some cats driven
   b. þá sem út voru reknir tþ [NP einherjir kettir ] then that out were driven some cats

With a definite object, (88b) is much worse:

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

The indefinite object in (88a) appears to be leftward moved by the phonological rule Th/Ex (Chomsky 2001). The contrast with (88a) shows that INPP of the object (i.e., evacuation of PartP in the syntax) is necessary for SF. Thráinsson notes that both positions of the indefinite object in (88a) and (88b) are possible if SF does not apply:

(90) a. þá sem það voru [NP einherjir kettir ] reknir út then that EXPL were some cats driven out
   b. þá sem það voru reknir út [NP einherjir kettir ] then that EXPL were driven out some cats

I take these data to indicate that SF is possible only in case the indefinite object is postposed by means of INPP (see note 54). In the system developed above, the derivation would run as follows:

(91) that out were driven some cats (= (88b))
   a. [vP driven [PartP out [NP some cats ]]] \( \Rightarrow \) INPP of some cats, raising-to-edge of PartP remnant

Rögnvaldsson notes that INPP can also apply to object NPs, as long as they are indefinite:

(87) a. Ég sá þarna á gær [NP einherv Mann ]; I saw there yesterday some man
   b. *Ég sá þarna á gær [NP Jón ]

Heavy-NP shift (of essentially the English type) is also independently attested in Icelandic (Thráinsson 2007: 361).

On the interaction of SF and expletive-insertion, see §5 below.
b. \[ ([\text{PartP out t}_{NP}] [v_P [v_P \text{ driven t}_{PartP}] [NP \text{ some cats}]]) \Rightarrow \text{EPP-driven movement of PartP to Spec-T} \]

c. \[
[CP \text{ that } [TP [\text{PartP out t}_{NP}] \text{ T-were } [t_{PartP} [v_P [v_P \text{ driven t}_{PartP}] [NP \text{ some cats}]])]]
\]

Consider also the following paradigm, including the judgments given by two of my (non-linguist) informants:

\[(92)\]

a. ?* stelpan sem út hefur sleppt kittenum
   the girl that out has let the cat
b. ?? stelpan sem út hefur sleppt kittenum sem venjulega veiðir margar mýs
   the girl that out has let the cat that usually catches many mice
c. ? stelpan sem út hefur sleppt [ketti / köttum / fjórtán köttum]
   the girl that out has let some cat many cats some fourteen cats

Although there is considerable individual variation with data of this kind, I think we can draw some tentative conclusions. It seems like a regular definite-NP object as in \[(92a)\] (= \[(85)\]) cannot be easily evacuated from PartP. By contrast, evacuation is more readily available with a very heavy definite-NP object \[(92b)\] or an indefinite/nonspecific NP \[(92c)\] \[56\]

But this is not too surprising, since it is independently known that Icelandic has heavy-NP shift and INPP, which evacuate the PartP in \[(92b)\] and \[(92c)\], respectively. But no standard rule allows for evacuation of the definite NP in \[(92a)\].

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. Further research is necessary, and judgments are generally less sharp than one might hope for.

Let me take stock. In the system I have developed, complement-XPs of V raise to the edge of vP. In the standard case, discussed in \[\S 4.4\] this XP is the direct object. Raising to the edge then yields two equidistant goals for T’s EPP: the raised XP and vP itself. If vP raises, it has to be vacated by the subject NP, by means of INPP.

In this section, I have proposed a parallel treatment for particle verbs. In this case, the complement of V is PartP, containing the particle and the object. As before, PartP can raise to the edge, creating two alternatives for SF: Either vP or PartP can raise \[57\]. In the

---

\[56\] 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 (cf. note \[52\] and farther away from its eventual adjunction site (vP) than a direct object, since it is located within PartP.

\[57\] In this connection, notice that SF of particles is somewhat reminiscent of the pattern discussed in \[\S 4.1\] for prepositions/PPs (cf. Holmberg 2006: 555). In both cases, SF can target the phrase (PP or PartP) in principle, but the head of that phrase (P\(_0\) or Part\(_0\)) cannot be stranded:

\[(93)\]

a. * að umi yrði [pp tₙ tilögurnar] that about would-be talked the proposals
b. * Stelpan sem kittenum hefur sleppt [partP út tₙ] the girl that the cat has let out

In both cases, the complement-NPs cannot undergo SF; notice that this differs from what we observed for past participles in \[\S 4.4\] where it was noted that generally either the verb or its complement can undergo SF:

\[(94)\]

a. þeir sem búða hafa [vP tₙ [pp i Óslo]] those that lived have in Oslo
latter case, heaviness constraints force evacuation of PartP. As we have seen, this is possible with CP-complements (which extrapose), and presumably also with indefinite objects, although the latter option seems more limited (cf. note [57]). Clearly, however, definite objects cannot leave vP in this way, hence the particle cannot front. Notice that the observed restrictions strongly support the remnant-movement analysis proposed here: If fronting of particles were really just movement of a Part-head, why should the nature of the complement influence the acceptability of the resulting structure in any way? On the other hand, the restrictions receive a natural explanation once it is recognized that the entire PartP is fronted, and that this fronting requires evacuation.

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. Given what I have said so far, I think this system is at least as plausible as earlier accounts in terms of head movement (clearly so for the cases in which the fronted element is visibly phrasal). I will now show that my remnant-movement account is superior to the proposals discussed in §3. To this end, I will argue in the following sections that my account is not only theoretically more attractive, but also makes a number of desirable empirical predictions. Before moving on, let me summarize the analysis as outlined so far:

**SF is phrasal movement.** Focus on cases of SF of “small” categories (in particular, main verbs and particles) has motivated claims to the contrary. Given that SF can target NPs and PPs, a head-movement analysis is untenable. Since a uniform theoretical account is more attractive than a mixed account, all SF must be phrasal.

**Adverbs and negation.** Essentially, I have simply argued that these categories are phrasal, and shown that they move as “visible” phrases when modified. SF of adverbs and the negation is fronting of AdvP.

**Predicative adjectives.** Copula sentences were taken to consist of a PredP embedded under T. While PredP is immobile for reasons of anti-locality, the embedded AP predicate can raise to Spec-T. If AP contains a PP/CP complement, it extraposes when AP moves, for reasons of heaviness. SF of adjectives is fronting of (remnant) AP.

**Verbs and their complements.** Verb phrases are phases (in the sense of Chomsky 2000, 2001, Legate 2003), hence embedded XPs (objects) raise to the edge. This yields a symmetric [XP vP] structure, in which both XP and vP are equidistant from T. Consequently, either one can raise to satisfy T’s EPP. In case vP raises, INPP postposes the subject to a right-adjoined position, creating an appropriately reduced verb phrase. SF of past participles is fronting of remnant vP.

**Particles.** PartP (containing the object) is the complement of V, hence movement to the phase edge yields [PartP vP]. Either one can raise, as before. An indefinite vP-internal subject can also raise, or else must be postposed by INPP if vP-raising is to yield an acceptable result; likewise, PartP must be sufficiently light to raise to Spec-T, which

Why is it the case the nonfinite verbs, but not prepositions and particles can be stranded under SF? The answer follows directly from the system developed above. The complement of V raises to the edge, “stranding” the verb (phrase). For prepositions and particles, the ban on stranding the complement will simply follow from minimality: PP/PartP dominates the complement of its head, hence PP/PartP will be closer to T. Notice, in addition, that Icelandic generally allows for preposition stranding only under A-bar movement (Maling and Zaenen 1985).
can be achieved by evacuation (extraposition or INPP). SF of particles is fronting of a (remnant) PartP.

**Heaviness and evacuation.** For concreteness’s sake I have been assuming that evacuation movements apply prior to raising of AP/vP/PartP. For postposing, this requires rightward adjuncts to be invisible to SF, which is however independently shown by the case of adverbial XP-modifiers.\(^{58}\) That such rightward evacuation movements can feed remnant movement is independently known to be the case in languages like German and English (cf. Collins and Sabel 2007: 20ff.). The notion of “heaviness” employed in the course of the discussion is admittedly intuitive, but the attempt of a precise definition is beyond the scope of the present paper. Moreover, the fact that heaviness constrains SF was shown to be true independently (cf. (68)).

5 The subject-gap requirement, the EPP, and the problem of 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 that SF can only apply if the canonical subject position, which I take to be Spec-T, is not lexically filled (cf. e.g. Jónsson 1991: 2):

(95) *Ég held að Jón sêð, hafi þessa mynd
I think that John seen has this film

When a definite subject is present, SF can never apply, since (for some reason) definite subjects must raise to Spec-T. If we extract the subject into the matrix clause, say by means of wh-movement, SF in the embedded clause becomes acceptable:

(96) a. Hver heldur þú að stolið hjólinu who think you that has stolen the bike
b. Hver heldur þú að stolið hjólinu

In main clauses, SF can only apply if the clause 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 (97a); an example for the third possibility, namely a main clause with a low subject, is given in (97b):

\(^{58}\)Evacuation movements are a perennial problem for remnant-movement analyses, most of which simply ignore the problem (e.g. Wiklund et al. 2007). Hinterhölzl (2006) makes use of an articulate structure of “licensing positions” above VP, forcing obligatory evacuation of the A-domain (see also Nilsen 2005). I have not taken this route here, although one could certainly envisage an alternative along the lines suggested by Hinterhölzl’s work. In such an approach, vP would always be evacuated by both subjects and objects, and remnant fronting would be the most natural option for any kind of verb movement.
(97) a. Keypt, hefur varið t1, tölva fyrir starfsfólkið
    bought has been a computer for the staff
b. Keypt, hafa t1 þessa bók margir stúdentar
    bought have this book many students

As mentioned in §2, low subjects must be indefinite (cf. Jónsson 1991: 26); by contrast, a definite subject is not allowed to stay low and SF cannot apply in this cases. SF with low subjects is also possible in embedded clauses; consider the following example (from Holmberg and Platzack 1995: 119):

(98) Ég hélt að keypt, hefðu t1 þessa bók margir stúdentar
    I thought that bought had this book many students

The facts just reviewed led Maling (1980) to propose that SF requires a subject gap, which it then “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 like (96a), 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 (it seems), while insertion of the expletive pronoun (það) is impossible (Holmberg 2006: 541):

(99) a. Hver, heldur lögreglan að t1 hafi framidið glæpinn
    who think the police that has committed the crime
b. Hver heldur lögreglan að framið; hafi t1 glæpinn
   * Hver heldur lögreglan að það hafi framið 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):

(100) a. Keypt, hefur varið t1, tölva fyrir starfsfólkið
    bought has been a computer for the staff
b. það hefur varið keypt tölva fyrir starfsfólkið
   expl has been bought a computer for the staff
   * Hefur varið keyp 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:

(101) a. þeir segja [CP að keypt, hefur varið t1, tölva fyrir starfsfólkið ]
    they say that bought has been a computer for the staff

39 Thráinsson assigns only one question mark to examples like (101c), but other authors deem similar cases strongly degraded. There is considerable idiolectal variation with regard to expletive-insertion.
b. Þeir segja [CP að það hefur varið keypt tölvu fyrir starfsfólkioð ]
   they say that has been bought a computer for the staff

c. ??Þeir segja [CP að það hefur varið keypt tölvu fyrir starfsfólkioð ]
   they say that has been bought a computer for the staff

I assumed above that all SF is EPP-driven phrasal movement to Spec-T. Thus, I claim that SF is on a par with regular subject raising, as witnessed with 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 will be shown in more detail in §6, T’s EPP triggers raising of the closest XP, obeying Attract Closest and anti-locality. As we saw, 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); cf. note 51. This follows since all terms in the edge of a phase are equidistant (Chomsky 2001: 27); cf. (55) above.

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” in Chomsky’s terminology, 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):

(102) [CP wh C [TP wh T [vP t ... ]]]

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 (102) 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.

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 targeted 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 equidistant subject), then the situation depicted in (102) 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 same XP (the subject), this will result in both Spec-C and Spec-T hosting copies of the same XP, one of them deleted under identity – yielding what looks like a subject gap (103a). By contrast, if C and T raise different XPs, this will yield SF (103b):

(103) Options with subject extraction (= (99)): 

a. Subject attracted by both probes (“subject gap”):

\[ CP \text{ who}_i \text{ that [TP } \text{ who}_k \text{ has [vP } t_i \text{ committed the crime ]]} \]

b. Subject attracted by C, SF triggered by T:

\[ CP \text{ who}_i \text{ that [TP [vP } t_i \text{ committed } t_k ] has [[NP } t_k \text{ vP } ]]] \]

The question remains, however, why expletive-insertion cannot apply in the situation in (103b) as an alternative to SF, while this is possible in impersonal constructions.

To solve this remaining problem, I assume that \( \text{það} \) is merged in Spec-T (cf. Ottósson 1989, Rögnvaldsson and Thráinsson 1992, Hornstein 1991, Thráinsson 1996, Holmgren 2000), but that it can only occupy this position if there is no phrase in Spec-C. It is well-known that there is a strong preference for \( \text{það} \) to be the leftmost element in a clause (Thráinsson 1979: 187), and I take this requirement to be evaluated at each CP (phase) level:

\[(104) * [CP \text{ XP [TP } \text{ það [T} \ldots]] \]

This constraint on \( \text{það} \)-insertion suffices to derive the pattern described above. In impersonal constructions, T can attract some postverbal element (= SF) or the object, if present. Similarly, in clauses with late indefinite subjects, T can either attract the subject or else some other phrase, as outlined above. In both of these cases, expletive-insertion in Spec-T is possible as an alternative strategy, since nothing gets raised to Spec-C; the situation in (104) cannot arise in principle.

By contrast, in embedded clauses with extracted or relativized subjects, the situation in (104) *always* arises if expletive-insertion applies, since the subject raises successively through Spec-C. Hence, at the CP-level, some XP will be above (to the left of) \( \text{það} \), incurring deviance. In a nutshell, the natural constraint in (104) 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 (1990) (see also Vikner 1995: 186).

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 (which then moves on into the matrix clause). The dissociation of C and T in Icelandic (both heads can attract different XPs in this language) straightforwardly predicts this pattern. Secondly, I have argued that the interaction of SF and expletive-insertion follows from a simple leftmost-constraint (104) on the latter operation: Within a given CP, \( \text{það} \) 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 literally 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 novel remnant-XP movement account of SF developed above allows for a coherent formulation of this traditional take on SF.
6 Locality conditions on SF

In this section, I will discuss the locality conditions that govern SF in Icelandic, first discussed by Maling (1980). I will demonstrate that the locality effects observed in the literature strongly support a generalized phrasal-movement account of SF, as developed above. To this end, I will show that the goal for T’s EPP requirement is always the closest phrase, while X0-categories (in particular, auxiliaries) do not intervene. The overall picture that emerges is incompatible with the assumption that SF is head movement (Jónsson 1991, Holmberg and Platzack 1995), or that it can be either head or phrasal movement (Hrafnbjargarson 2003, 2004).

Implicit in the discussion so far was my assumption that Icelandic clause structure looks roughly as follows:

\[
\text{(105) CP} \\
\text{Spec} \quad \text{C}' \\
\text{Spec} \quad \text{C} \quad \text{TP} \\
\text{Spec} \quad \text{T}' \\
\text{T} \quad \text{NegP} \\
\text{AdvP} \quad \text{Neg'} \\
\text{Neg} \quad \alpha P \\
\text{AdvP} \quad \alpha' \\
\text{α} \quad \text{vP} \\
\text{SUBJ} \quad \text{v'} \\
\text{v} \quad \text{VP} \\
\text{V} \quad \text{OBJ}
\]

The core functional heads are C, T, and v, while Neg and α (which is a placeholder for potentially several heads that host adverbs in their specifiers, cf. Cinque 1999) are optional. In §4.3 I assumed that in copula clauses T selects PredP, which hosts subject and predicate (AP); in this case, too, PredP is ordered below NegP/αP.

This rather parsimonious clause structure is sufficient to account for all locality constraints on SF.\(^{60}\)

\(^{60}\) I am sweeping under the rug here a host of complicating factors. To mention just one, it has been argued (Jónsson 1994) that different kinds of adverbs in Icelandic adjoin at different nodes in the tree. If this is the case, then my structure in (105) entails that adverbs are mobile (as argued by Alexiadou 1997). Some other complications, such as the apparent availability of three subject positions in Icelandic (Bobaljik and Jonas 1996), can be reformulated in a simpler structure like (105). These complications are beyond the scope of the present paper, and I believe that my proposal can be evaluated without these inevitable gaps being filled at this point.
The relevant question at this point is what exactly happens when more than one candidate category for SF is present (recall from §2 that adverbs, participles, particles, and NPs/PPs can undergo SF). According to Maling (1980, 1990), SF is governed by the following “accessibility hierarchy”:

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

\[
\{ \text{negation} \} \gg \{ \text{adverbs} \} \gg \{ \text{past participle, verb particle} \} \gg \text{predicative adjectives}
\]

Maling supports her claim by showing that adverbs and the negation uniformly block SF of lower material. A nonfinite verb cannot undergo SF when the negation is present:

(107) þegar búiði var ti að borða
when finished was to eat
‘... when we had finished eating’

(108) a. þegar ekki var ti búði að borða
when not was finished to eat
b. *þegar búiði var ekki ti að borða

Likewise, the negation blocks SF of a predicative adjective:

(109) nokkuð sem hægti er ti að gera við
something that possible is to fix prt
(110) a. nokkuð sem ekki er ti hægt að gera við
something that not is possible to fix prt
b. *nokkuð sem hægti er ekki ti að gera við

Recall from §4.5 that particle-verb constructions allow for optionality: Either the particle (111a) or the nonfinite verb (111b) may move:

(111) a. fundurinn sem fram, hefur farið ti
the meeting that forth has gone
b. fundurinn sem farið, hefur ti fram

But as soon as a negation is present, it blocks SF of both particle (113a) and participle (113b):

(112) fundurinn sem ekki, hefur ti farið fram
the meeting that not has gone forth
(113) a. *fundurinn sem fram, hefur ekki farið ti
b. *fundurinn sem farið, hefur ekki ti fram

Recall now that Jónsson (1991) and others have argued that SF is head movement in all cases. For instance, the negation in (112) would be taken to adjoin to T (head adjunction). By contrast, according to my own analysis the negation is a phrase in the specifier of a functional projection above vP that is attracted by T to Spec-T. A natural assumption to make within the Jónsson-style head-movement analysis (and in fact defended in Jónsson 1991)

61 Adverbs were not included in Maling’s original formulation of the hierarchy.
is that SF is governed by the Head Movement Constraint (HMC, Travis 1984), deriving the effects of Maling's hierarchy. By contrast, on my own analysis SF is governed by Shortest Move/Attract Closest (essentially, Relativized Minimality): Only the phrase that is closest to T (but sufficiently non-local in the sense of (42)) can undergo SF.

The data presented above are in principle compatible with both theories. On Jónsson's account, the categories undergoing SF are heads, and only the highest head (the negation, on his account) can move. On my account, the categories are phrases, either by themselves (negation/adverbs) or because they are actually remnants (verbs, particles, adjectives), and only the highest phrase (the AdvP in Spec-Neg) can move. Thus, the following fixed clause structure accounts directly for the contrast in (110):

\[(114)\]
\[
T' \\
| \\
T \\
| \\
\text{NegP} \\
| \\
is_i \\
| \\
\text{AdP} \\
| \\
\text{Neg'} \\
| \\
\text{PredP} \\
| \\
\text{Spec} \\
| \text{Pred'} \\
| \\
\text{Op} \\
| \text{Pred} \\
| t_i \\
| \text{AP} \\
| \text{CP} \\
| \text{PRO to fix}
\]

Transparently, AdvP in Spec-Neg is the closest XP for T's EPP-feature to attract in compliance with anti-locality (42). The data presented above follow straightforwardly.

In order to evaluate both approaches, it is necessary to consider cases for which they make different empirical predictions: Can a clearly phrasal category (e.g., a PP) undergo SF when a negation or an adverb is present? Consider the following data from Thráinsson (2007: 381) (cf. also Holmberg 2000: 454f.):

\[(115)\]  
\[
a. \text{Peir sem hafa ekki verið í Danmörku} \\
   \text{those that have not been in Denmark}
\]
\[
b. \text{Peir sem ekki, hafa t_i verið í Danmörku} \\
   \text{that have not been in Denmark, that have t_i been}
\]
\[
c. * \text{Peir sem í Danmörku, hafa ekki verið t_i} \\
   \text{in Denmark that have not been t_i that have been in Denmark}
\]

\[(116)\]
\[
\text{The contrast between (115b) and (115c) demonstrates that presence of a negation blocks SF of a lower PP. When the negation is removed, PP-fronting is possible (116). This shows that the HMC cannot be the relevant locality condition on SF; the PP, being a maximal}
\]

\[62\]I will remain agnostic here about the precise formalization of this constraint. One could invoke, for instance, the \textit{Minimal Link Condition} (Chomsky 1995: 355f.), relativized to phrases since attraction is to a specifier. 

43
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 HMC, either. A Shortest Move/Attract Closest-based account, however, can easily account for the facts: Both the negation and the PP are XPs, hence both fall under the same locality condition (Attract Closest).

Data like (115) demonstrate straightforwardly that the head-movement theory of SF is wrong. By contrast, the phrasal-movement theory of SF makes exactly the right prediction.

Although Maling’s original hierarchy does not mention adverbs, it is clear that these (when in preverbal position, at least) block SF of other categories just like the negation does. Consider the following example (from Holmberg 2006: 539), which is on a par with (110):

(117) a. nokkuð sem sennilega, er t; hægt að gera við something that probably is possible to fix

b. *nokkuð sem hægt; er sennilega t; að gera við

All of these facts follow directly from the clause structure shown in (105). NegP/αP are structurally located above vP and predicative APs (the latter embedded under a PredP selected by T [cf. §4.3], as in (114)), hence Spec-Neg/Spec-α is always the closest goal for T whenever a negation or an adverb is present.

Notice that for my analysis it is crucial that the negation (ekki) is a phrasal element located in Spec-Neg. Although this is not uncontroversial, I think there is good evidence for the negation element being phrasal. Jónsson (1991: 9) notes that while negation does (of course) not block V-to-T movement, it does block SF of a participle verb, as we’ve seen already:

(119) Jón las ekki t; bókina

Recall from §5, however, that it must always be possible for T to chose the “English option”, i.e. attract the phrase it agrees with. This assumption is necessary to allow for an indefinite subject to raise to Spec-T instead of application of SF, in which case it crosses NegP/αP and to derive the optionality effect, as argued in §5.

A potential problem for the Attract Closest/Relativized Minimality-based approach suggested here is that there appears to be optionality involved in clauses that contain both a negation and an adverb. According to Hrafnbjargarson (2004: 93) either one is allowed to be fronted:

(118) a. Hann henti öllu sem ekki; hafði t; áreiðanlega verið tämt
he threw away all that not had undoubtedly been emptied

b. Hann henti öllu sem áreiðanlega; hafði t; ekki verið tämt
he threw away all that undoubtedly had not been emptied

It could be argued that the optionality observed here contradicts my proposal that the locality conditions on SF follow directly from the structure in (105). According to that structure, the negation is higher than adverbs, hence it should count as closest XP. But notice that Hrafnbjargarson translates both examples somewhat differently: In the negation scopes over the adverb, while the opposite appears to be the case in (118). Given that SF generally is claimed not to have any semantic effects, this is surprising. Hrafnbjargarson disagrees with this consensus; see note 72.

But we can easily overcome this apparent problem once we allow some flexibility in the hierarchy, as seems necessary anyway (Cinque 2003). That is, I claim that the difference in meaning (for those speakers who share Hrafnbjargarson’s intuitions on these cases) follows from different possible base orders: Either the negation merges above the adverb, in which case it has scope over it and prevents it from fronting (118a), or else the adverb merges in a higher position, scopes over the negation and counts as the closest XP for purposes of SF (118b).
I take this to be rather strong evidence in support of my claim that the negation is a phrasal element (in the Spec of NegP), and that nonfinite verbs move as remnant vP (for purposes of SF), as outlined in §4.4. While V-to-T in (119) is head movement, hence not affected by the presence of a phrasal negation, the latter does affect availability of (phrasal) SF. Finally, notice that Icelandic allows for topicalization of the negation (Jónsson [1991]: 38, fn. 13), a further indication of its phrasal nature. See Jónsson (1996: 95–100) for a summary of arguments for the phrasal nature of negation in Icelandic.

As stated in (106), Maling also claims that predicative adjectives block SF of nonfinite verbs. She provides the following pair to support this claim:

(121) a. hvað hægti; hefði verið t\textsubscript{i}  
what possible had been  

b. *hvað verið t\textsubscript{i} hægt  

But as observed by Holmberg (2006: 539), the difference between the two cases is not due to a blocking effect of the adjective; rather, the copula vera 'be' (here in its participial form) does not undergo SF in general. This follows directly from my account (as I will show presently) but is in fact a major problem for both Jónsson’s head-movement analysis and the theory developed by Holmberg (2000). Consider the base structure of (121):

(122) \[
\begin{array}{c}
\text{CP} \\
\text{Spec} \\
\text{what} \\
\text{C'} \\
\text{C} \\
\text{TP} \\
\text{Spec} \\
\text{T'} \\
\text{T} \\
\text{[EPP]} \\
\text{had} \\
\text{PredP} \\
\text{t\textsubscript{wh}} \\
\text{Pred'} \\
\text{Pred} \\
\text{been} \\
\text{AP} \\
\text{possible}
\end{array}
\]

The head-movement analysis, according to which SF is governed by the HMC, predicts Pred to be able to raise to T, contrary to fact (121b). But the same unwanted movement is predicted by Holmberg (2000), since the copular verb is the closest element with a phonological matrix. In fact, cases like (121b) are the reason why Holmberg refrains from ascribing SF to the PF-component, since this allows him to add the stipulation that semantic

\footnote{In order to analyze SF as head movement, Jónsson (1991) is forced to relativize Relativized Minimality such that only “relevant heads” count for minimality purposes, i.e. while negation is an intervener for SF, it is not an intervener for V-to-T. Clearly, however, this line of reasoning has an air of circularity and is not independently motivated in any way.}
content is also necessary for an element to undergo SF. Apart from the questionable assumption that copular verbs lack semantic content, this is clearly an ad-hoc solution. By contrast, notice that the theory developed above directly predicts both the possibility of (121a) and the impossibility of (121b). The only phrases that T's EPP could target are PredP and AP (setting aside the wh-phrase for the moment, attraction of which would yield a "subject gap" [§5]). But PredP cannot raise because this movement is too local (by (42)). Hence, only AP can raise, as in (121a).

Likewise, we have a straightforward explanation for why the auxiliary hafa ‘be’ is inaccessible for SF:

(124) a. *Verði hefur tekin erfði ákvörðun
   been has taken difficult decision
   b. *þeir sem hafa munu skrifað verkefnið á morgun
      those that have written the assignment tomorrow

In Holmberg’s words, auxiliaries are “not candidate[s] for SF” (p. 539). This follows since hafa is the head of some phrase (perhaps Asp[ect]P) above vP, selected by T:

(125) T′
    /          /
   T -- AspP
         /
      has -- Asp vP
            /
       hafa ...

It (hafa) cannot move as a head, since Spec-T is a phrasal position; and it cannot move as a phrase, since the phrase it heads will be selected by T, hence movement would be too local (42). Thus, in contrast to all other theories that I am aware of, my account directly predicts the pattern that is found. It thus predicts correctly that SF generally “skips” auxiliaries (cf. Jónsson 1991: 5):

(126) Þetta er versta bók sem skrifuði hefur verið ti;
    this is the worst book that written has been

66The motivation given by Holmberg (2000: 468f.) is that semantic content is required for SF because it is an “A′-type of movement”. But I do not see how this could be the case, given the fact that SF never targets the operator position (Spec-C); in fact, it seems to be incompatible with Holmberg’s theory, where SF is movement to Spec-T.

67Jónsson (1991) notes exceptional cases in which vera appears to undergo SF, as an exception to the rule:

(123) Jón var í burtu meðan verið var að mála
    Jon was away while been was to paint
    ‘Jon was away while the painting was done’

I assume that in these cases, vera can be analyzed as a main verb, projecting vP. The derivation then proceeds as outlined in 44.4 with remnant vP raising to Spec-T. There appears to be considerable variation among speakers concerning these exceptional cases.

68Since the copular verb in (121a) is perfective, we might also assume that there is an Asp[ect]P above PredP to which the head of PredP raises (Pred-to-Asp head movement). AspP would then be immobile under anti-locality, while PredP would be rendered immobile under Takano’s constraint on remnant movement, according to which “headless” phrases cannot move (see Takano 2000).
Here, *skrifð* raises across both *hefur* and *verið*. If this were head movement, the HMC should prevent *skrifð* from moving across other heads. On my account, however, this follows naturally, since T attracts vP in (126), which moves across the head of AspP, which itself is selected by T, hence unable to raise for reasons of anti-locality:

\[(127)\]

\[
\begin{array}{c}
\text{CP} \\
\text{Spec} \quad \text{Op} \\
\quad \text{C'} \\
\quad \downarrow \text{that} \\
\quad \text{C} \\
\quad \text{TP} \\
\quad \text{vP} \\
\quad \downarrow \text{written} \\
\quad \text{VP} \\
\quad \downarrow \text{V} \\
\quad \text{T} \\
\quad \text{AspP} \\
\quad \text{Asp'} \\
\quad \downarrow \text{been} \\
\quad \text{t'}_{vP} \\
\quad \text{t'}_{Op} \\
\quad \text{t}_{vP} \\
\end{array}
\]

Notice that once we insert a negation, located in Spec of NegP above AspP as seen in the base structure (128a), my theory correctly predicts the negation to undergo fronting (128b) (cf. Thráinsson 2007: 353), assuming that AspP, being part of the (extended) verbal domain, must be right above vP:

\[(128)\]

\[
\begin{array}{c}
\text{a. þetta er mál } \quad \text{sem hefur ekki } \quad \text{verið rætt} \\
\quad \text{this is an issue that has not been discussed} \\
\text{b. þetta er mál sem ekki } \quad \text{hefur } \quad \text{t; } \quad \text{verið rætt} \\
\end{array}
\]

\[(129)\]

\[
\begin{array}{c}
\text{T'} \\
\text{NegP} \\
\text{has} \\
\text{AdvP} \\
\text{Neg'} \\
\text{not} \\
\text{Neg} \\
\text{AspP} \\
\text{Asp} \\
\text{been} \\
\text{vP} \\
\text{...} \\
\end{array}
\]

I take this to be rather strong evidence for my claim that the fronting in (126) is phrasal, i.e. that *skrifð* is actually a remnant vP, moving across the phrase headed by *verið* (that

\[69\text{For concreteness’s sake, I assume that vP moves through Spec-Asp on its way to Spec-T.}\]
phrase itself being immobile due to anti-locality (42). Only on this approach can it be correctly predicted that the auxiliaries (located in T and Asp, as I have assumed) are skipped by the movement without any further stipulations.

It seems, then, that we can derive Maling’s accessibility hierarchy once we adopt the clause structure in (105) and the theory of phrasal SF developed above. The important point is that the locality conditions of SF need not be stipulated as a descriptive hierarchy; rather, they follow naturally from the clause structure in (105), in connection with standard assumptions about Attract Closest. NegP and phrases hosting adverbs in their specifiers are ordered above the predicate (PredP/vP), and presumably ordered among each other (but see note 64). For the remaining cases the theory outlined in §§4.4 and 4.5 makes the right predictions, once it is assumed that complements of V raise to the edge to create a symmetrical [XP vP] structure, where XP and vP are equidistant from T.

Given the locality theory outlined in this section, it seems unlikely that SF is movement in the phonological component (cf. Holmberg 2006: 552), unless it is granted that the hierarchical structure of the clause is fully accessible to that component. Recall, furthermore, that auxiliaries never undergo SF; showing clearly that SF is not simply movement of the closest phonological matrix to the gap position. If SF were “PF-movement”, it would be necessary to ascribe articulate syntactic structures and sensitivity to syntactic notions like head vs. phrase to that component, a move that blurs the line between PF and narrow syntax to a significant extent. The only motivation left for ascribing SF to the phonology is its semantic vacuity; but as I will show (inter alia) in the next section, there is a rather straightforward syntactic explanation for this fact. Thus, the theory of SF outlined here can be taken as evidence for the EPP – at least in Icelandic – being syntactic rather than a linearization requirement.

7 Some further issues

Having outlined my general theory of SF in Icelandic, I will now address some remaining issues. In particular, I will attempt to show how answers to the following questions fall out quite naturally under the present analysis:

1. Why does SF never have any semantic or information-structural effect?

2. Why does SF only occur almost exclusively in Icelandic, not in, say, Mainland Scandinavian?

I will address each of these important questions in turn.

7.1 Semantic neutrality

I take it to be a fact that SF in Icelandic in and of itself does not have any semantic or pragmatic effect, although it may be compatible with, e.g., a focus reading of the fronted

70 As Holmberg (2006: 553) notes, ascribing SF to the phonological component would presumably entail ascribing the EPP as such to that component, given the evident parallelism between SF and expletive-insertion discussed in 44.

71 Notice in this connection that the natural account of SF in EPP-terms outlined in 45 relies on XPs raising to Spec-T that can never be phonetically realized there. This, too, can be seen as evidence for a syntactic (rather than purely phonological) EPP.
The strongest case for the semantic neutrality of SF can be made on the basis of scope facts, as reported by Jónsson (1991: 35, fn. 1). Consider the following pair:

(130) a. Þetta er maður sem hefur ekki spilað fótbolta í mörg ár
   this is a man that has not played soccer for many years

   b. Þetta er maður sem ekki, hefur t, spilað fótbolta í mörg ár
   this is a man that not has played soccer for many years

Given the surface order, one might expect that SF of the negation in (130b) extends its scope. However, Jónsson notes that the natural interpretation of both variants in (130) is that in which the temporal adjunct í mörg ár has scope over the negation (for many years ≫ not). One simple solution to this particular problem would be to assume that both base position and landing site (Spec-T) of the negation are below the adjunct. But since a wide-scope reading of the negation appears also to be possible (according to Jónsson), albeit more marginally, I take it that the negation does indeed move across the attachment site of the adjunct when it undergoes SF. Thus, in this case and those discussed above, we want SF to reconstruct at LF to account for its general semantic vacuity.

But prima facie, it is not clear why SF should reconstruct. It is a rather traditional (though ill-understood) assumption that A′-movement, but not A-movement, shows reconstruction effects at LF (Chomsky 1993, Lasnik 1999). Although cases of reconstruction with A-movement are occasionally reported in the literature (see, e.g., Sauerland 2003), it is clearly not desirable to abandon the idea that A-movement in Icelandic can in principle affect scopal relations. In particular, it has been claimed by Diesing (1996, 1997) that object shift can have this effect:

(131) a. Hann les sjaldan lengstu bókina
    he reads rarely longest the book

    b. Hann les lengstú bókina, sjaldan t_i
    he reads longest the book rarely

Diesing (1996: 79) (see also Diesing 1997: 418) claims that the relative scope of the adverb (sjaldan) and the definite NP (bókina) is read off the surface order in both cases, i.e. it is rarely ≫ the longest book in (131a) but the longest book ≫ rarely in (131b). Thus, OS appears to feed semantic interpretation in a way that SF does not.

Since it is usually assumed that OS is A-movement (Déprez 1994, Vikner 1994) and I have argued above that SF is A-movement (to Spec-T), this asymmetry is unexpected. It follows, however, once we adjust the traditional assumption about A-movement and reconstruction along the lines suggested by Boeckx (2001). Roughly, Boeckx argues that whether or not A-movement reconstructs depends on where Case is assigned (checked): A-moved elements can only be interpreted in the position where their Case-feature is deleted. Boeckx adduces various kinds of evidence to support his proposal that Case position correlates with scope-taking. According to this theory, A-movement does not reconstruct whenever

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72 The only work on SF in Icelandic that rejects this general consensus is that of Hrafnbjargarson, who claims SF can have truth-conditional, focus-related effects (Hrafnbjargarson 2003, 2004). Sigurðsson (2008: 24, fn. 37) sharply disagrees with Hrafnbjargarson's intuition (as does Thráinsson 2007: 389). I cannot resolve the issue here and will adopt the consensus position, according to which SF is semantically neutral.

73 It is actually not quite clear where exactly the adjunct attaches, given that NegP is above vP; I will set the issue aside, and likewise abstract away from problems having to do with “c-command out of phrases”.

49
case is assigned in the derived position; but if no case is assigned there, reconstruction takes place.

With this in mind, let us now reconsider the aforementioned contrast between SF and OS. It is a fairly common assumption that OS is case-driven movement, i.e. movement to a case position. In the first generative study of OS, it was argued that OS results from case-assignment by verb traces being optionally suppressed (Holmberg 1986: 176): If the main verb raises and OS applies, case is optionally assigned (not by the trace of V but) by V in its derived position.

Vikner (1994: §4) provides two arguments for the view that OS is movement to a case position. First, he notes that PPs may never undergo OS. This is rather surprising, given that they can participate in many other movement operations (e.g. German-type scrambling) alongside NPs. But it follows once we assume that PPs must not be case-marked, presumably since P itself is a case-assigner. Second, Vikner provides evidence that case is assigned to a shifted object by T (which hosts the raised verb). He shows that an immediate prediction of this claim is borne out: Since case-assigner and case-marked category must be adjacent, a shifted object and T must be adjacent, too. Consider the following Icelandic data (from Vikner 1994: 494):

(132) a. I gær las Pétur bókina ef laust ekki t_i yesterday read Peter the book doubtlessly not

b. *I gær las Pétur e f laust bókina ekki t_i ef laust yesterday read Peter doubtlessly the book not

From this contrast, Vikner concludes that a shifted object must always end up in a position that is adjacent to the case assigner (Infl/T); the same contrast can be observed with pronouns, which shift obligatorily in Icelandic (Vikner 1994: 494). To support this argument, Vikner (1994: 496) notes that floated quantifiers cannot appear in positions non-adjacent to T, suggesting that the shifted object has indeed directly moved to the putative case position. Vikner concludes from these facts that OS targets a case position adjacent to the case-assigner raised to T. I will assume – with Boeckx (2001) – that it is precisely this movement to a case position that results in the interpretation of the shifted object in its surface position, resulting in the scope alternations discussed by Diesing and others. The case-feature of the shifted NP is deleted in its derived position, hence it is interpreted in that position.74

I submit that the semantic neutrality of SF follows from SF never being “Case-driven”: The fronted element is never case-marked in the derived position (Spec-T). The clearest indication of this asymmetry is the fact that the categorial scope of SF is much broader than that of OS. As observed by Vikner, only elements in need of case-marking (i.e., NPs) can undergo OS; by contrast, SF targets NPs, PPs, adjectives, adverbs, participles, and particles. That is, SF standardly fronts categories that can not – and, presumably, must not – be case-marked. Hence, SF must be in principle dissociated from case-assignment.

Assuming that Boeckx’s proposal concerning A-movement and reconstruction is on the right track, the facts follow immediately. OS is movement into a case position, while SF is purely EPP-driven movement to an A-position that is dissociated from case assignment; hence, SE but not OS, exhibits total reconstruction of the moved element. Both movement

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74 It is not quite clear how to reformulate Holmberg’s proposal in current terminology, but I will set this question aside here. It should also be noted that there are by now various alternatives to his claim; see Vikner (2006) for a survey.
types, however, are directly predicted to be clause-bound (recall (18)), this being a general property of A-movement.

### 7.2 Beyond Icelandic

Finally, I want to address the question of crosslinguistic availability of SF. It has been claimed (e.g., Holmberg 2000) that SF is contingent on the existence of V-to-T movement in a language, since the Mainland Scandinavian languages (which do not have V-to-T) lack SF. It must be noted, however, that Faroese is a potential 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 clearly attested in these environments (see Hrafnbjargarson 2004: 89, Thráinsson 2007: 377f., 385).

Although I cannot resolve the issue conclusively here, I tentatively propose that not V-to-T, but rather particularly “strong” agreement features on T, disconnected from its EPP-property, are crucial for SF and perhaps also responsible for morphological subject-verb agreement (found in Icelandic, but not in the Mainland Scandinavian languages; Platzack 1987). Rather than V-to-T movement being a cause for SF, I take it to be another consequence of strong features on T, alongside SF.

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 does not imply movement; subject case is assigned under Agree at a distance, but some other category can be fronted in order to extend the tree past T. In other words, in Icelandic the ϕ-probe on T and T’s EPP-property are dissociated, presumably because of the particular strength of Icelandic ϕ on T. I suspect that the Icelandic-style EPP is in fact related (not to agreement-features but) to finiteness, i.e. to tense/agreement-properties of T. Notice that SF is acceptable only in finite clauses, as observed by Holmberg and Platzack (1995: 117):

(133) a. * María lófaði [að ekki; lesa t₁ bókina ]
   María promised to not read the book

   b. * María lófaði [að tekið hafa t₁ út peninga úr bankanum í morgum ]
   María promised to taken have out money from the bank tomorrow

This fact casts serious doubt on the assumption that V-to-T is a prerequisite for SF; at the very least, it cannot be a sufficient condition for SF since Icelandic has V-to-T even in infinitival clauses (Holmberg and Platzack 1993: 117). Moreover, the assumption that V-to-T alone licenses SF falsely predicts SF to be available in Romance (and many other languages). Thus, I suggest that instead of V-to-T, it is dissociation of ϕ-features and EPP that is crucial for SF; the latter perhaps being related to tense/agreement instead. This idea supports the parallelism between SF and Japanese-style “A-scrambling” (movement of a non-subject NP to Spec-T) noted in fn. albeit although I will not pursue this suggestion here. The following figures illustrate schematically:

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75 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.

76 Recall from that a strong causal relation between V-to-T and SF is crucial for Jónsson (1991) and Holmberg (2000), in particular.

77 Given all this, it is tempting to trace 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). I will leave this question for future work, however.
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; see below). Notice that in this respect, quirky (non-nominative) 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 preliminary explanation entails that the traditional view, according to which SF is dependent on V-to-T movement, is mistaken; rather, SF is the result of certain “strong” \( \phi \)-properties of T, which are dissociated from the EPP-requirement of that head. As a result, the Icelandic EPP is maximally “liberal”, while T’s EPP in Japanese retains the requirement that the attracted element be nominal. Such considerations suggest that the EPP is much more fine-grained than standardly assumed, and perhaps not a unitary feature or property at all (cf. Sigurðsson 2008).

Biberauer and Roberts (2005) propose that the nature of the EPP is an important dimension of variation across languages (see also Biberauer 2003; Biberauer and Richards 2006). In particular, they propose that a language can choose to attract \( v \)-P 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 \([D]\)].\(^79\)

An example of the former type (attraction of \( v \)-P to Spec-T) is German, while English and many other languages choose the second option (subject raising). Crucially, for Biberauer and Roberts, EPP on T in both instances

\[^{78}\] 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.).

\[^{79}\] Biberauer and Roberts assume a Kaynian universal-base framework, in which German is underlyingly SVO. The derivation of a standard German subordinate clause proceeds as follows, according to their theory:
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. 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 (§6).

81 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.

82 EPP-related variation is, of course, also a point of variation in the diachronic dimension. Thus, Biberauer 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.

80 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” (in the sense illustrated in fn. 79).

82 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” (in the sense illustrated in fn. 79).

81 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.
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 in this paper 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 (§4) and b) subject extraction proceeds from the base position (as in Chomsky 2008, 2007), not leaving a trace in Spec-T (§5). From a) it follows that SF of adjectives, nonfinite verbs and particles is remnant fronting if these strand complements (§§4.3, 4.4, 4.5), 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 (§5).

**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 non-subject XP (§5). 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 impersonals, where there is no subject, expletive-insertion is available as an alternative to fronting of a nonsubject, because nothing is raised to Spec-C (ibid). 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.

**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 in a language like English, where agreement of T with XP (= the subject) always leads to raising of XP to Spec-T (§7.2). 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 – essentially, Relativized Minimality. A particular advantage my account was shown to have over all previous accounts is that it derives the immobility of auxiliaries and copular verbs, while correctly predicting the competition between PPs/NPs and other (seemingly head-like) categories (§6).

**SF reconstructs fully.** While A-movement is typically assumed not to reconstruct for interpretive purposes, SF appears to be semantically vacuous. I argued that this follows once we take into account that SF is never case-driven (but, on the contrary, in principle dissociated from agreement with the attracting head), and that A-moved elements get interpreted in their case-checking position (Boecks 2001). Once visibility for interpretation is linked to Case assignment in this way, the semantic vacuity of SF follows immediately, allowing nevertheless for a classification of SF as A-movement, accounting for its clause-boundedness (§7.1). The semantic difference between SF and object shift, which affects scopal relations, derives from precisely this difference (object shift targets a case position and moves only NPs, i.e. the category that requires Case).

Throughout this paper, I have been assuming a rather simple clause structure, essentially limited to the core functional categories (C, T, v). More elaborate structures have,
of course, been proposed in the literature (see, e.g., Jonas 1995, Bobaljik and Jonas 1996, Collins and Thráinsson 1996, Wiklund et al. 2007) to handle certain facts of Icelandic syntax. While I think that many of the facts can be recast in the more minimal framework I have been assuming here, an attempt to demonstrate this is obviously beyond the scope of this paper; I will leave it to the reader to decide whether its reliance on a “bare-bones” theory of clausal structure is strength or weakness of the present proposal.
References


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