Don't feed your movements: Object shift in Icelandic
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Until recently, it has been standardly assumed that constructions like (1) involve A-movement of the wh-phrase from the object position to the subject position, followed by wh-movement to SpecCP.[1]

(1) Who was arrested?

However, Chomsky (in press) suggests a new treatment of such constructions (see also Hiraiwa 2005). According to Chomsky, instead of A-movement feeding wh-movement, (1) involves two separate movements from the deep object position. Roughly, *who* moves to SpecTP from the object position, and it also moves to SpecCP from the object position, with the two movements proceeding in parallel and with only the highest copy pronounced. On this view, there is no A-A' movement feeding in examples like (1). In this paper I provide additional evidence for the no feeding analysis and show that the analysis provides a tool for teasing apart different analyses of object shift in Icelandic. I will show this in section 2 of the paper. In section 1 I go over several arguments for the no feeding analysis, showing that the analysis has considerable empirical motivation.

1. Don't feed your movements

McCloskey (2000) shows that, in contrast to standard English, West Ulster English (WUE) allows quantifier float (Q-float) under wh-movement based on examples like (2).[2]

(2) What do you think $[_{CP}$ (all) that he'll say $[_{CP}$ (all) that we should buy (all)]]?

Consider now the following examples from McCloskey (2000).

(3) Who$_i$ was arrested all t$_i$ in Duke Street?
(4) *They$_i$ were arrested all t$_i$ last night.

Although WUE allows (3) it behaves like Standard English in that it disallows (4). Notice first that the contrast between (3) and (4) provides evidence that local subject questions do involve wh-movement: if *who* in (3) were to remain in SpecTP, we could not make a distinction between this example and (4). However, this cannot be the end of the story. If *who* were to move to SpecTP prior to moving to SpecCP in (3) it seems that it would still be impossible to account for the grammaticality of the construction, given that (4) is unacceptable. When it comes to the floating of *all*, (3) and (4) would be identical: *all* would be stranded by movement from the object position to SpecTP in both examples. To make a difference between the two examples, McCloskey (2000) (see also Bošković 2004a) therefore suggests that the wh-phrase in

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[1]The last step has been somewhat controversial. However, recent literature (see An in press, Boeckx 2003, and Pesetsky and Torrego 2001) provides very strong evidence for the existence of vacuous wh-movement in local subject questions (see the discussion below for another argument to this effect). At any rate, what is important for our purposes is that the example is standardly assumed to involve movement to SpecTP.

[2]In what follows, I will be assuming Sportiche's (1988) stranding analysis of Q-float. The reader should bear this in mind.

(3) moves directly to SpecCP, the underlying assumption being that wh-movement, but not movement to SpecTP, can float *all* in the position in question (see Bošković 2004a and Fitzpatrick in press for different accounts of why this is the case, an issue that goes beyond the scope of this paper). A question that arises under this analysis is how the standard requirement that the SpecTP position be filled in English is satisfied in (3) if *who* moves directly to SpecCP. Before discussing McCloskey's answer to the question (for an alternative analysis see Bošković 2004a), let us see how he prevents *who* from moving to SpecTP in (3). McCloskey suggests that Q-float involves a step in which the NP the Q modifies moves to SpecDP, the Q being located in D. The movement yields the order NP Q within the DP. When the NP in SpecDP is a wh-phrase, D acquires the +wh-feature from it so that SpecDP counts as an A'-position. The wh-phrase (*who* in (3)) then cannot move to SpecTP, since this would involve improper movement. Rather, it moves directly to SpecCP. How is the requirement that forces overt movement to SpecTP satisfied in (3)? McCloskey suggests that overt movement is preferable to Agree, the mechanism which allows feature-checking at a distance without actual movement. However, when a requirement cannot be satisfied without a violation through movement, satisfying it through Agree, i.e. without movement, becomes possible. In the case in question, features of T cannot be satisfied through movement since this would result in improper movement. Therefore, features of T can be satisfied without movement via Agree. (It is implied either that the EPP is a featural requirement or that there is no EPP. The analysis is inconsistent with Chomsky's 2001 filled Spec requirement view of the EPP.)

It seems that under this analysis we should always be able to get around a violation caused by overt movement by doing Agree. E.g., we should be able to get around the Left Branch Condition effect and the *that*-trace effect by doing feature checking via Agree, i.e. without movement, which is impossible.

(5) a. *Whose$_i$ did you see t$_i$ books?
    b. *Who$_i$ do you think that t$_i$ left?
(6) a. *You saw whose books?
    b. *You think that who left?

As noted in Hiraiwa (2005), the parallel movement hypothesis allows us to preserve McCloskey's direct movement to SpecCP analysis of (3), which is necessary to make a distinction between (3) and (4), and at the same time easily answers the question of how the standard filled SpecTP requirement is satisfied in (3) (which we saw above ended up raising a problem for McCloskey's analysis). Under the parallel movement analysis, *who* in (3) moves directly to SpecCP, as desired, but it also moves to SpecTP, so that the filled SpecTP requirement is satisfied. Most importantly, since there is no feeding relation between the A and the A' movements in question, *all* in (3) is not floated under movement to SpecTP, which must be disallowed given the ungrammaticality of (4). The major accomplishment of the parallel movement analysis is that it enables us to fill the lower A-position in spite of the absence of a feeding relation between the movement of the NP that fills this position, and the movement of this NP to a higher A'-position.

Chomsky (in press) observes that there is a difference in the grammaticality status between extraction out of subjects that are generated as external arguments and subjects that are generated in object position, and shows that the difference can be accounted for under the parallel movement analysis of such examples. Under this analysis, wh-movement takes place directly from the θ-position of the relevant arguments. Chomsky then capitalizes on the fact that (7b), but not (7a), involves wh-movement from object position, which we independently know is allowed (7c).

(7) a. *It was the car (not the truck) of which the driver caused a scandal.
    b. It was the car (not the truck) of which the driver was found.
    c. It was the car (not the truck) of which they found the driver.   (Chomsky in press)

Chomsky (in press) observes that certain Icelandic data discussed by Holmberg and Hróarsdóttir (2003) (see also Hiraiwa 2005) also provide evidence for the parallel movement analysis. Consider (8).

(8) a. Það   virðist/*virðast einhverjum manni   [hestarnir   vera seinir]
       EXPL seems/seem   some   man.DAT the-horses.NOM be   slow
       'It seems to some man that the horses are slow.'
    b. Mér   virðast t$_{NP}$ [hestarnir   vera seinir]
       me.DAT seem.PL   the-horses.NOM be   slow
    c. Hvaða manni   veist þú að virðist/*virðast t$_{wh}$ [hestarnir   vera seinir]
       which man.DAT know you that seems/seem   the-horses be   slow
       'To which man do you know that the horses seem to be slow?' (Holmberg and Hróarsdóttir 2003)
    d. Hverjum mundi/??mundu   hafa virst   t$_{wh}$ [hestarnir   vera seinir]
       who.DAT would.3SG/would.3PL have seemed   the-horses.NOM be   slow
       'To whom would it have seemed that the horses are slow?'   (Nomura 2005)

(8a) shows that lexical experiencers block agreement with a lower nominative NP (the verb must have the default 3sg. form). An NP-trace does not induce a blocking effect, as shown by (8b). Holmberg and Hróarsdóttir (2003) interpret examples like (8c-d) as indicating that a wh-trace does induce a blocking effect. Notice, however, that if the experiencer in (8c-d) were to move to SpecTP before undergoing wh-movement, the intervening element would be an NP-trace. (8c-d) should then pattern with (8b). To account for (8c-d), Holmberg and Hróarsdóttir (2003) suggests that the wh-phrase does not, in fact, cannot undergo movement to SpecTP in (8c-d). Rather, it must move directly to SpecCP, hence the blocking effect. (The intervening trace is then a wh-trace.) As noted in Chomsky (in press), the parallel movement hypothesis can be straighforwardly applied to the Icelandic data under consideration.[3] The wh-phrase moves to both SpecTP (satisfying the EPP) and SpecCP from its base position in (8c-d). As a result, the trace left in the base position must count as a wh- as well as an A-trace. It's A'-property apparently suffices to induce a blocking effect.

2. Icelandic object shift

I now turn to object shift in Icelandic. Consider the following data involving Q-float.

(9) a. Ég las   bækurnar ekki allar.
        I   read the-books not   all
     b. *bækurnar sem Jón keypti ekki allar
        the-books that Jon bought not   all
        'the books which Jon didn't buy all of'   (Déprez 1989)

(9a) is an example involving object shift, which shows Q-float is possible under object shift. On the other hand, (9b) shows that, in contrast to WUE, Icelandic does not allow Q-float under movement to SpecCP (more precisely relativization in the case at hand. Note that WUE allows Q-float under relativization, see Fitzpatrick in press.)

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[3]The following discussion slightly modifies Chomsky's analysis. What matters for Chomsky is that only a part of the experiencer A-chain intervenes between T and the nominative NP in (8b), while the complete (trivial) experiencer A-chain intervenes in (8c-d).

Consider now (9b) more closely. Nomura (2005) observes that examples like (9b)involve an object shift context. We would then expect the relevant NP to be able to undergo object shift prior to undergoing relativization. Given that object shift licenses Q-float, Q-float should then be licensed in (9b). In other words, under the standard analysis the ungrammaticality of (9b) is surprising since the quantifier is floated under the object shift movement (which then feeds relativization), just as in (9a). The data under consideration seem to be an obvious candidate for a parallel movement analysis. Under this analysis, wh-movement and object shift in (9b) take place from the same position, in particular, the position in which *all* is floated – there is no feeding relation between the two. If object shift does not feed wh-movement, the above problem can be resolved since the relevant trace is a trace of both wh-movement and the object shift movement. We can then easily account for (9b) if a floating quantifier in Icelandic cannot modify a trace that even ambiguously counts as a wh-trace. (In other words, if a trace is created by movement to SpecCP, it cannot be modified by a floating quantifier.)[4]

Notice also that under neutral intonation, topicalization patterns with relativization in disallowing Q-float, so that the point made above with respect to (9b) can be extended to (10).

(10) *Bækurnar keypti Jón ekki allar.
     the-books bought Jon not all
     'All the books, Jon didn't buy.'   (Halldór Sigurðsson, p.c.)

Now, there is a controversy regarding the landing site of Icelandic object shift. The majority of the literature assumes that the final landing site of Icelandic object shift is the accusative Case position, namely SpecvP (SpecAgroP in a framework that assumes Agr Phrases). Under this analysis, the relevant part of (9a) has the structure in (11), with the quantifier floated in the θ-position of the object, and *ekki* adjoined to VP.

(11) $[_{vP}$ bækurnar $[_{VP}$ ekki $[_{VP}[_{V'}$ allar]]]

On the other hand, Bošković (1997, 2004a,b), Chomsky (1999), and Hiraiwa (2001), among others, argue that Icelandic object shift involves movement to a position above SpecvP/SpecAgroP. I will assume here Bošković's (2004a,b) implementation of this analysis, where it is argued that the floating quantifier in (9) is located in SpecvP (position through which the relevant NP passes), with *ekki* adjoined to vP (see

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[4]I leave open here what is responsible for the apparent crosslinguistic variation with respect to the possibility of a floating quantifier modifying a trace left behind by wh-movement (i.e. movement to SpecCP).

Notice that one could try to account for (9b) under the object shift-feeding-relativization analysis (i.e. without parallel movement) by assuming that in languages like Icelandic and Standard English, which do not allow floating quantifiers to modify a trace left by wh-movement, a floating quantifier cannot be c-commanded by an A'-trace of the host DP (the A'-trace would be the trace left by relativization from the object shift position). However, this would not work because of constructions like (i), where under the feeding movement analysis the wh-trace in SpecTP c-commands *all*.

(i) Which books must have all been bought?

Notice that under the no feeding analysis, both wh-movement and movement to SpecTP would take place from the deep object position in (i), with movement to SpecTP proceeding successive cyclically, stranding the quantifier in an intermediate position. (Following Bošković 2002, 2005, Boeckx 2003, and Chomsky in press, I assume that there is no feature checking in intermediate positions. Anticipating the discussion below, notice that there are no phases between the deep object position and SpecCP.)

Bošković 2004a,b for relevant discussion). The relevant part of (9a) then has the structure in (12).

(12) bækurnar [$_{vP}$ ekki [$_{vP}$ allar [$_{v'}$]]]

I will now consider how the structures in (11) and (12) fare with respect to the parallel movement analysis, on which wh-movement and object shift both take place from the position in which *allar* is located. Before comparing the two accounts, let me emphasize that I take the data in (9)-(10) to provide evidence for the parallel movement analysis of object shift/wh-movement "interaction". This means that even acceptable examples involving such interaction should be treated in terms of parallel movement. This, for example, holds for (13), given Diesing's (1996) arguments (see also Bobaljik 1995) that object shift is obligatory in object shift contexts (i.e. with definite NPs).

(13) a. bækurnar sem Jón keypti ekki

b. Bækurnar keypti Jón ekki

Let us now try to tease apart the structures (11)-(12) by using the parallel movement analysis of object shift/wh-movement "interaction". (Recall that *allar* merely indicates the launching site of parallel movement, which, as discussed above, takes place in (9b)-(10) as well as (13).) It turns out that the analysis cannot be applied to the structure in (11). If we were to apply the analysis to this structure, the relevant NP would simultaneously undergo object shift and wh-movement from the deep object position. However, the problem is that wh-movement from the complement position of the verb is blocked by Chomsky's (2000, 2001) Phase-Impenetrability Condition (PIC), which says that only the edge of a phase is accessible for movement outside of a phase. Since vP is a phase, C cannot target an object within the VP complement of the vP phase head.

Turning now to the structure in (12), the parallel movement hypothesis can be easily applied to this structure. Here, the object first moves to the Spec of the vP phase. The relevant NP then simultaneously undergoes object shift and wh-movement from this position. Since the position is located at the edge of the vP phase, wh-movement does not violate the PIC on this derivation.[5]

I conclude, therefore, that if parallel movement is the right way to handle the data discussed in this paper, we have here an argument that the analysis on which the final landing site of Icelandic object shift is higher than vP/AgroP is superior to the analysis on which Icelandic object shift lands in SpecvP/SpecAgroP.

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[5]Since, given the PIC, it is not possible to move out of vP without moving to SpecvP, parallel movement for wh-movement and object shift would take place only from the phasal edge position, SpecvP. Strictly speaking, it is then not quite true that there is never any feeding relation between movements–movement to the phasal edge, SpecvP, feeds both object shift and wh-movement. Making the relevant distinction (when there is a feeding relation, and when there isn't) is rather straightforward, given the relevance of the phases/phasal edge for the feeding movement case.

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