

The Grammar of Icelandic Verbs in *-st*

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Among the unusual structural features of Modern Icelandic is a category of verbs usually referred to in the literature as ‘middle voice’ or ‘medio-passive’ forms.¹ Such verbs are formally similar to others in the language, with the addition of an ending *-st* following all other material in the word:

- (1) a. Keisarinn klæddist nýjum fötum
king-the he-dressed-*st* new-dat-pl clothes-dat-pl
The emperor (was) dressed in new clothes
- b. Bókin fékkst í gær í Bóksölu stúdentna
book-the got-*st* yesterday in bookstore student-gen-pl
The book was available yesterday in the Students’ Bookstore

As is apparent from these examples, the verbs in question often have a passive or middle meaning (in a descriptive or pretheoretical sense of these grammatical terms). They can usually be compared with other verbs in the language having the same form but without the final *-st*: thus *klæða* ‘to dress (someone)’, *klæðast* ‘to be, get dressed’; *fá* (past *fekk*) ‘to get’, *fást* (past *fekkst*) ‘to be gotten’. In the traditional (and recent) literature, these verbs are commonly referred to as ‘middle’ or ‘mediopassive’ verbs, a description based on their presumed typical syntactic and/or semantic properties. As we will see in section 3 below, however, the formal class is by no means coextensive with this functional definition, and we refer to them here simply ‘*-st* verbs’.

The Icelandic *-st* verbs have certainly not gone unnoticed in the linguistic literature. In addition to traditional grammatical works dealing with this category, the more recent literature includes Valfells 1970, and Ottósson 1986. While these studies have contributed importantly to our understanding of the status of the *-st* verbs, a number of issues remain. The present study attempts an overall treatment of the position of these forms in the grammar of Modern Icelandic, with attention where warranted to the earlier literature. Such a description can be organized around a number of questions:

¹This work was supported in part by NSF grant number BNS 84-18277 to UCLA. I am grateful to the participants in the Summer School in Icelandic Syntax at Flúðir, Iceland, in June, 1986, especially Höskuldur Þráinsson, Kjartan Ottósson, and Joan Maling, for comments and crucial data relevant to this paper. In some examples below, the assignment of inflectional case to nominal arguments is indicated by abbreviations standard in the literature on Icelandic grammar: *e-ð* ‘eitthvað, nom. or acc.’; *e-m* ‘einhverjum, dat.’; *e-n* ‘einvern, acc.’; *e-s* ‘einvers, gen.’; *e-u* ‘einhverju, dat.’

- How did this verbal category arise in Icelandic (and the other Scandinavian languages), given that it does not exist in other languages of the Germanic family?²
- What is the formal nature of these verbs? In particular, do verbs in *-st* show the same range of inflectional forms as other verbs? Does the *-st* marker represent a derivation of verbs from other verbs, or is it an inflectional marker indicating the operation of some syntactic operation?
- Do the verbs in *-st* represent a unitary category? Is there a ‘meaning’ that can be associated with a morpheme {*st*}? If not, what is the range of uses of *-st* forms, and how are they related to non-*st* verbs?

These issues will be addressed in turn in the sections below.

1 The historical source of the *-st* verbs

The descriptive and historical sources on Icelandic (including Einarsson 1945, Gordon 1957, Noreen 1923, Nygård 1966 and others) are agreed that modern Icelandic *-st* is ultimately derived from the OIcel. reflexive pronoun *sik* (modern *sig*). When this pronominal element appeared in immediately postverbal position in early Old Icelandic, it could become a clitic, in which case its vowel was lost and it was reduced to *-sk*. The subsequent phonological development of the language further changed this to *-st*, probably as a consequence of the fact that the cluster *-sk* did not otherwise occur at the end of final unstressed syllables (the position in which the clitic reflexive would usually be found). This phonological reduction, then, is presumably evidence for a reanalysis in which the originally independent pronoun *sik*, in cliticized and syncopated form was interpreted as part of a single phonological word with the preceding verb.

This is not the end of the story, however. In Old Icelandic, *-sk* is not the only ending found in the paradigms of what we call here “*-st* verbs”: first person forms may show the ending *-mk* instead. This obviously represents a cliticized and syncopated form of the pronoun *mik*, the first person singular correlate of third person *sik*. The origin of this ending in a cliticized pronoun is evident not only from its form, but also from the existence of occasional examples³ in which it appears to substitute even for non-reflexive uses of *mik*:

- (2) a. hnekðumk heiðnar rekkar
 they-threw-out me heathen-pl rogue-pl
 The heathen rogues threw me out
- b. hvat er þat manna er verpumk orði á?
 what is the man who throws me word at
 Who is it that casts words on (i.e., addresses) me?

²Similar categories exist in some other families of Indo-European: Russian has a class of verbs in *-s*, for example, which have many of the same properties within that language as the Icelandic *-st* verbs; and there is a distinct set of middle endings in Indic. There is no reason to believe that these or any other categories in non-Scandinavian languages are cognate with the Icelandic forms, however, despite the functional parallel.

³The Old Norse examples below are taken from Nygård 1966, where a more extensive discussion of *-sk* and *-mk* forms in the earlier stages of the language will be found than is possible here.

It is notable, however, that other postverbal pronouns do not appear in this construction. Thus, one might expect to find parallel reduced forms of *þik* ‘you (sg.), acc.’, *oss* ‘us, acc.’, etc.; or of the dative forms *mér* ‘me’, *þér* ‘thee’, *sér* ‘3rd. person’, etc. Noreen 1923 suggests that reduced forms of these pronouns do indeed occur in the earliest attestations from some dialects (especially Old Swedish), but if so, they disappeared at a very early point. Second person forms, where we might expect something like *-þk*, are replaced by *-sk* in reflexive uses:

- (3) þá skaltu spyrjask um vandliga, hverir þeir menn eru
 then shall-you ask-*sk* about carefully who those men are
 Then you will try cautiously to find out who those men are

It might be argued that the replacement of *-þk* by *-sk* was a purely phonological phenomenon, motivated by the general absence of *-þk* clusters in the language, but this is obviously insufficiently general to account for the other replacements we find. There is no plausible phonological process by which the hypothetical reduced form of *oss* ‘us’ could be replaced by *-mk*, but we nonetheless find this form with first person plural as well as singular antecedents from an early point:

- (4) ef vér samþykkjumk líf vart við hátíðir
 if we consent-*mk* life our to festivals
 If we pass our lives in accord with festivals

With regard to the case of the pronoun that serves as the source of the ending, the suffixes *-sk* and *-mk* appear to represent reduced forms of the accusative pronouns *sik* and *mik*; but many verbs in Icelandic (Old as well as Modern) require an argument which appears in some case other than the accusative. When a verb would normally take a dative form of the pronoun, we would expect a reduced form of *sér* in the third person, but instead the ending is *-sk*:

- (5) þeir hétusk reka Hákon ór landi
 they promise-*sk* to-expel Hákon out-of land
 They vowed to drive Hákon from the country

We do not attempt here to provide a comprehensive account of the historical development of the construction, but its outlines are clear. The initial impetus was presumably a purely phonological effect: the reduction of post-verbal pronominals to the status of simple clitics with concomitant syncope of their vowel in at least some cases. By the time of early Old Icelandic, however, these original clitic pronouns had been re-interpreted as part of the verb word itself, and thus as verbal affixes. For a time, the ending *-mk* represented first person (singular and plural), and the ending *-sk* other persons. These forms were independent of the case normally taken on arguments of the affected verb. Subsequently, *-sk* generalized to all persons, and was later reduced phonologically to *-st*.

As for the syntax of the resulting verbal forms, we can trace this back to the status of *sik* as a reflexive pronoun. It appears that the *-mk/sk/st* ending, as soon as it was interpreted as a verbal element rather than a simple clitic pronoun, was seen as replacing or absorbing a reflexive argument of the verb. The earliest uses are clearly reflexive in character, but this usage quickly spreads to other cases as well. The domain to which the *-st* endings are extended is more or less what one

would expect on cross-linguistic grounds: reciprocals, passives, inchoatives, etc.⁴. Eventually, a number of these forms developed lexical idiosyncrasies of meaning, leading to a separation from the basic verb with which they were originally associated. In section 3 below we will survey the range of meanings associated with *-st* verbs in Modern Icelandic.

2 Formal properties of *-st* Verbs

Formally, the replacement of *-mk* by *-sk* in the first person took place fairly early in Old Icelandic, and the replacement of *-sk* by *-st* not long afterward. In the modern language, the ending *-st* is the only one to consider. The inflectional forms of these verbs can quite generally be obtained by adding *-st* to any of the tense forms of the finite verb (present or preterite, indicative or subjunctive); the infinitive; the imperative; or the supine. The last of these categories, formally identical with the neuter nominative singular form of the (agreeing) past participle, is used together with the auxiliary verb *hafa* ‘have’ to build a series of compound tenses where agreement in gender and case with a subject NP is not required, as opposed to other, agreeing, uses of the true participle. Because of this identity in shape, the literature does not always recognize the status of the supine within the paradigm. We will see below however that it occupies a distinct place in the grammar of Icelandic verbs.

While their formal structure in relation to that of other verbs thus appears to be completely trivial, the forms of *-st* verbs nonetheless raise certain interesting questions about the nature of morphology and about its interaction with syntax.

2.1 The morphological structure of *-st* Verbs

The description just offered presents an immediate formal problem. At minimum, some relations between *-st* verbs and the basic verbs to which they are related are of the sort any analysis would treat as purely lexical, derivational connections rather than inflection. Examples will appear below in various places in section 3; an obvious instance would be *farast* ‘perish’ whose relation to *fara* ‘go’ is completely opaque, except that both verbs display the same ablaut class and other formal conjugational behavior. Now in fact it is widely agreed that in the general case, at least, material of an inflectional nature appears in a position where it is formally “outside of” derivational material. In Anderson 1988a, indeed, it is proposed that this formal characteristic of complex morphological structures can be derived as a theorem from the basic principles of morphological theory. In a form like *förumst* ‘we perish’, however, it appears that the subject agreement marker *-um* (which is surely inflectional, if this distinction has any substance at all) appears **inside** the derivational ending *-st*. I will argue below that the formation of *-st* verbs is quite generally derivational (rather than inflectional) in character, but since all *-st* verbs make their inflected forms in exactly the same way, the existence of even one such verb poses a problem.

Obviously, there are several ways in which we might respond to these facts. On the one hand, we might claim that the generalization about inflectional material appearing ‘outside of’ derivation is simply a tendency rather than a theoretically motivated principle.⁵ Alternatively, we might claim

⁴For a recent attempt to explain the relatedness of this set of syntactic categories which tend to cluster around reflexive forms in many languages, see Perlmutter 1987

⁵A variant of this move would be to deny the significance of the distinction between inflection and derivation altogether, from which it would follow *a fortiori* that the proposed theorem could not be correct. We will not

that the *-st* ending is actually attached to the relevant verbs early (within the lexicon, in fact), and that the inflectional markers of tense, mood, and agreement are inserted into the form in such a way that they precede the ending *-st* in surface linear order though not in derivational sequence. As argued in Anderson 1988a, it is the formal sequence of application of morphological rules, not the linear order of formatives, that is relevant to this issue. In simplest terms, the question is whether the form *förumst* should be regarded as derived from *förum* by suffixation of *-st* (thus apparently violating the natural relation between derivational and inflectional rules), or rather as derived from $[_v [_v \text{far-}]st]$ by suffixation of /um/ to the head (or stem) $[_v \text{far-}]$ of this internally complex word.

The existence of such **head-operations**, attaching morphologically motivated material not to an entire word but only to its head stem, has been argued for in a number of places. Hoeksema 1985, in particular, argues that this notion provides a solution to a number of cases of ‘bracketing paradoxes’; Aronoff 1988 argues that it solves some long standing problems in the interaction of reduplication processes with phonological rules; and Anderson 1988a argues that it allows a generalization of word internal morphology to the theory of special clitics (which can then be treated as the phrase-level analog of affixation). On these bases, we consider the distinction between word operations and head operations in morphology to be well motivated; in the present instance, construing verbal inflection in Icelandic as operating on heads (and treating *-st* verbs as internally complex forms like $[_v [_v \text{far-}]st]$) allows us to maintain the generalization that inflectional operations are formally ‘outside of’ derivational ones.

We might still ask whether there is any independent reason within Icelandic to assume that forms like *förumst* are derived by head suffixation of /-um/ to $[_v [_v \text{far-}]st]$ rather than by suffixation of /-st/ to $[_v \text{förum}]$. The practical difference between the two possible derivations is that on the first analysis, head suffixation rules adding inflectional endings to the head of a complex verb might (in principle) have access to the presence of the non-head material *-st* in the form. If we derive *förumst* from *förum*, however, the inflectional rules could not depend in any way on the fact that *-st* would later be added (without allowing rules to look ahead to later stages of a derivation, surely an undesirable move).

To address this issue, we need to identify ways in which verbs in *-st* differ inflectionally from the corresponding ‘basic’ verbs; and then ask to what influences such differences should be attributed. Summarizing from the surveys in Einarsson 1945 and Kress 1982, there are several such differences which might be relevant.

The most prominent differences between actual inflected *-st* forms and what we might predict if these were made simply by adding *-st* to the corresponding form of a basic verb concern the reduction of consonant clusters that would be expected in this case. In general, most coronal obstruents (/t, tt, d, s/) are deleted before /-st/; in addition, /ð/ is deleted before /-st/ unless immediately preceded by a stressed vowel. We do not attempt to illustrate each of these cases here (see the references cited above for examples). The result, however, is that stems ending in such consonants are reduced when adjacent to the *-st* ending; and some endings (e.g. /-ið/ ‘second person plural present’, /-uð/ ‘second person plural preterite’, /-að/ ‘past participle or supine stem’) lose their final consonant or in one case (/st/ ‘second person preterite indicative’) disappear altogether.

The resulting difference in surface form between *-st* verbs and others, however, provides no evidence distinguishing between the two possible derivations of the former that are under consid-

consider this possibility separately here.

eration here. The coronal obstruents that delete are apparently affected by purely phonological rules, and all that is necessary is to ensure that these rules apply to a representation in which both inflection⁶ and final *-st* are present. This will be the case equally on either account of the morphology of these forms.

A somewhat more problematic case concerns the formation of the supine of some *-st* verbs whose stems end in a stressed vowel followed by *ð*. The verb *breiða* ‘to spread’ forms its supine by adding */-t/* to the stem */breið/*; the resulting */-ðt/* cluster undergoes a process of assimilation to yield */-tt/*,⁷ resulting in the surface form [brei^ht]. We might, therefore, expect that the corresponding *-st* verb *breiðast* ‘to spread oneself’ would have a supine with the form **breist* (by suffixing *-st* to the supine of the base verb, and then applying the process of coronal obstruent deletion referred to above). In fact, however, the supine of this verb is *breiðst*, with */ð/* preserved.⁸

Note that the form *breiðst* is easily derived from an underlying form like */breið+t+st/*. The coronal obstruent deletion rule(s) referred to above will delete the first */t/* in this form before */st/*, yielding */breið+st/*; although the */ð/* in this form precedes */st/*, it is itself preceded by the main stressed vowel of the form, and thus not subject to deletion (cf. *ég gleðst* ‘I rejoice’, from the verb *gleðjast*, etc.). In order to achieve this result, however, it is necessary to avoid applying the assimilatory processes that would change the cluster */ð+t/* to */tt/* before coronal obstruent deletion. Now if the *-st* form is derived by adding */st/* to the corresponding non-*st* form, this is not what we would expect.

We assume here a picture of the interaction of phonology and morphology along the lines of Lexical Phonology (cf. Kiparsky 1982, Kaisse & Shaw 1985), according to which the outputs of morphological operations are immediately subject to appropriate phonological rules. On that view, once */breið+t/* has been formed, the rule assimilating the */ð+t/* cluster to */tt/* ought to be applicable. The rule in question must be a lexical rule, and not one which applies postlexically, since */ð+t/* clusters formed by prefixation or compounding are not subject to it: cf. *auðtrúa* ‘credulous’, *blóðtjörn* ‘pool of blood’. As a result, by the time the suffix */-st/* is added, resulting in the deletion of the */t/* following the */ð/*, it should be too late to save the */ð/* from assimilation. On the other hand, if the form is built by head suffixation of */-t/* in [_v [_v breið]-*st*], we can allow the rule of coronal obstruent deletion to bleed the assimilation of */ð+t/* to */tt/*, since the conditions for both rules are met at the same point in the lexical phonology.

Further, and perhaps more significant, evidence that inflected forms of *-st* verbs are built on a complex stem including the *-st* ending is provided by another peculiarity of their formation in comparison with that of basic verbs. Endings containing final */-r/* appear in several places in the conjugation of Icelandic verbs, including the second and third person present indicative, and the second person present and preterite subjunctive and weak preterite indicative. In all of these cases, however, the */-r/* does not appear in the formation of *-st* verbs. This cannot be due to a purely phonological deletion of */r/* before */st/*, since the cluster [rst] is perfectly acceptable in Icelandic: indeed, we can find nearly minimal pairs such as *verst* ‘worst’ vs. (*það*) *sést* ‘(it) can be seen’, a third person singular present form of *sjást*. If this latter were formed simply by adding *-st* to the

⁶Including phonologically null inflection, when the stem-final consonant is itself deleted in the environment of following *-st*.

⁷Geminate voiceless stops in Icelandic are phonetically realized as preaspirated voiceless stops: e.g., [h^ht]. See Thráinsson 1978 for discussion.

⁸This */ð/* may optionally be deleted in fluent speech, but need not be; the cluster reduction rule responsible for this deletion is clearly distinct from the other, non-optional, deletion rules under consideration here.

corresponding form of the verb *sjá* ‘see’, we would expect **sérst*. Compare the basic and *-st* forms in (6) below:

- (6) a. það sést ekki loft frá láði
 it be visible (3sg) not sky from ground
 The sky and the land cannot be distinguished
- b. það sér ekki út úr augunum
 it sees (3sg) not out from the eyes (dat.pl.)
 One cannot see out of one’s eyes

It might be proposed that the ending */-r/* is actually present in these forms, but deleted by a morphologically conditioned rule. This cannot be correct either, though, since if */-r/* were added to the stem of *-st* verbs we would expect it to trigger the rule of *u*-epenthesis when the stem ends in a consonant. This rule (cf. Anderson 1974, Orešnik 1972 inserts the vowel */u/* before otherwise unsyllabifiable */r/* (i.e., in C — r at the end of a word or before another consonant). Consider the form (*hann*) *bregst* ‘(he) deceives, fails (someone)’, for example, from the verb *bregðast*. The third person singular present indicative of the corresponding non-*st* verb *bregða* is *bregður*, which results from adding the ending */-r/* to the stem */bregð/* with consequent epenthesis of */u/*. If the *-st* form were built by adding */-st/* to this, we would expect a form like **bregðurst* (or **bregðust*, assuming a rule deleting */r/* before the ending *-st*). The deletion of the final */ð/* of the stem shows that the stem must be immediately adjacent to the */-st/* ending at the time coronal obstruent deletion occurs; thus the */r/*, if inserted, must be immediately deleted. But Kiparsky 1984 has shown that the rule of *u*-epenthesis must apply lexically, and so even if the */r/* were deleted when it came to be followed by the */-st/* ending, it should already have triggered epenthesis at that point. The deletion rule, if there is one, cannot also delete a preceding unstressed vowel, since when this vowel is the */i/* of the subjunctive, it is preserved: cf. second person singular subjunctive *bregðist* in comparison with the form *bregðir* from the non-*st* verb *bregða*.

We thus conclude that the */r/* ending could not have been deleted in these forms under either phonological or morphological conditions. The only alternative is that it was never inserted; but that in turn implies that the rule adding the suffix */-r/* must be able to distinguish *-st* forms from others. If this (like other inflectional affixation in Icelandic verbs) is a head-marking rule applying to $[\underset{v}{\quad} [\underset{v}{\quad} \text{bregð}]\text{-st}]$, it is quite straightforward for it to distinguish the two cases, but if the ending *-st* is not added until after the inflectional material, the solution is not readily apparent.

We do not wish to imply that there is no way a theory deriving e.g. *förumst* from *förum* by suffixing */-st/* rather than from $[\underset{v}{\quad} [\underset{v}{\quad} \text{far}]\text{-st}]$ by head-suffixation of */-um/* could be made to work. The latter derivation, however, seems indicated by the phonology. We are thus in a position to maintain that the *-st* verbs are created derivationally, without being forced to abandon the theorem that inflectional operations apply ‘outside of’ derivational ones and not the reverse.

2.2 Gaps in the paradigm of *-st* Verbs

In enumerating the inflectional forms of *-st* verbs in the preceding subsection, we listed all of the categories for which the corresponding non-*st* verbs are inflected except two: the present participle in */-andi/* and the inflected past participle (as opposed to the supine, formally identical with the neuter nominative singular of the participle). It is an interesting fact about Icelandic

morphology that these forms are systematically lacking precisely for *-st* verbs. With respect to the present participle, such a form existed in the older language, and is still found occasionally today “facetiously in imitation of the old learned style” (Einarsson 1945, p.101). We assume its absence is a stylistic matter rather than a grammatical one. The absence of the inflected past participles has quite a different status, however.

The interest of the fact that *-st* verbs do not have inflected past participles lies in part in the consequences this gap has for the syntax. There are two constructions in Icelandic in which such participles are used: the periphrastic passive, formed with the verb *vera* ‘to be’ or *verða* ‘to become’ plus the inflected participle; and the compound conjugation of verbs of motion, built on an inflected form of *vera* plus the inflected participle of the affected verb. In both of these structures, the participle is inflected to agree in gender, number and case with the S-structure NP which is its subject. Examples are given in (7) below:

- (7) a. Vegirnir voru gerðir fyrir hestvagna
roads-the were made (nom.masc.pl.) for horsecarts
The roads were made for horsecarts
- b. Í fylgsni sínu urðu þjófarnir ekki séðir
in hiding place their became (3pl) thieves-the not seen (nom.masc.pl.)
In their hideout, the thieves could not be seen
- c. Þá var báturinn þegar lentur
the was boat-the already landed (nom.masc.sg.)
The boat had already landed (by) then
- d. Hann mun hafa verið kominn
he will have been (supine) come (P.Part., nom.masc.sg.)
He had probably come (before I left)

Since some *-st* verbs (such as *ferðast* ‘to travel’) are in fact intransitive verbs of motion, we might expect to find them in a construction parallel to (7c–d). In fact, however, sentences such as (8) are not grammatical:

- (8)*Ég er ferðast(ur) til Reykjavíkur
I am traveled (nom.masc.sg.) to Reykjavík
I have traveled to Reykjavík (and am there now)

The apparent explanation for the absence of sentences like (8) is the fact that there is no masculine singular agreeing form of the participle *ferðast*: there is only a supine, formally identical with what we would expect as a neuter (nominative or accusative) singular form.

There are two ways in which we might account for the absence of sentences like (8). On the one hand, we might suggest that the morphological form (the agreeing participle) which is required for this construction does not exist for *-st* verbs, and they are thus blocked from appearing in it. On the other hand, the apparent ‘gap’ might be more limited: if the supine form *ferðast* were obligatorily neuter nominative singular, as its shape (and that of other supines) suggests, we might expect that sentences parallel to (8) would be possible exactly if their subjects were themselves neuter singular. This expectation appears to be confirmed by the existence of sentences such as (9) below:

- (9) a. það var skreiðst upp á þak
 it was crept up on roof
 Someone crept up on the roof
- b. það er barist
 it is fought
 Someone is fighting

In these cases, the apparent S-structure subject is *það* which is grammatically neuter singular, and the ‘be + participle’ constructions are acceptable even with *-st* verbs as in (9). A question remains about these examples, however: they are impersonal, and the element *það* with which the participle appears to agree is an expletive rather than a true pronominal.⁹ At least two analyses of these sentences are possible: either they show agreement between the participle and neuter singular *það*, or else they show no agreement at all with the expletive, the participle appearing in the supine form by default. To distinguish these two analyses, we need a case in which a genuinely referential neuter singular NP appears in subject position, as in (10):

- (10)*Barnið er ferðast til Bandaríkjanna
 Child(neut.)-the is traveled to USA-the
 The child has traveled to the USA

In fact, such sentences as (10) are just as bad as those like (8), with non-neuter subjects. This suggests that although the supine in (9) is formally identical with a neuter singular form, it is not actually able to ‘agree’ with a subject NP. Where it appears to agree with expletive *það*, this reflects a **lack** of agreement in expletive constructions rather than the superficial neuter singular character of this element.¹⁰

One might suggest that the explanation proposed here for the absence of sentences like (8) and (10), namely the absence of a particular form in the paradigm of *-st* verbs, is unlikely, and one that should only be accepted as a last resort. It might be proposed that the real explanation lies elsewhere: perhaps the syntactic properties of *-st* verbs, for instance, is somehow systematically incompatible with the properties of the *vera/verða* + inflected participle structure. That this is not the case, however, is shown by the following fact. While Icelandic *-st* verbs do not, in general, have inflected past participles in their paradigms, two isolated verbs, as an idiosyncratic lexical property, do indeed have such forms. These are the verbs *leggjast* ‘to lie down, go to bed (especially with sickness)’, and *setjast* ‘to sit down’, whose participles are *lagstur* and *settur* respectively (in masculine singular nominative form). These participles can perfectly well appear in constructions with the auxiliary *vera*; and when they do, they agree with the S-structure subject:

- (11) a. Hann er lagstur.
 he is lain down (masc.sg.)
 He has lain down, taken to bed

⁹See Rögnvaldsson 1984 for discussion of the syntax of expletive *það* in modern Icelandic.

¹⁰The account given here of the status of the supine within the paradigm of Icelandic verbs, and in particular its independence from the neuter singular agreeing participle, is essentially the same as that in Andrews 1976, reprinted in this volume. Andrews argues for this position on much the same grounds as those appealed to here.

- b. Gesturinn hefði verið sestur, enn stóð upp, þegar ég kom.
 guest-the had been sat (masc.sg.) but stood up when I came
 The guest had been seated, but stood up when I came

Why *leggjast* and *setjast*, to the exclusion of all other *-st* verbs in Icelandic, should have inflected past participles, is far from clear. All verbs form a supine, and the shape of an inflected participle might be projected from this. We can note, however, that in *lagstur* and *sestur* the inflectional marker of agreement (here the ending /r/ ‘masc. nom. sg.’, with preceding epenthetic /u/) is not where we would expect it: given the fact (established in subsection 2.1 above) that inflectional operations on verbs in Icelandic are head affixations, we would expect that the agreement marker would precede the ending /-st/, but instead it follows this material.¹¹ That fact suggests that these two forms are genuinely isolated within the lexicon of Icelandic — comparable, in their idiosyncrasy, to the fact that two and only two infinitives in Icelandic have past tense forms: *mundu* and *skyldu*, the past tenses of *munu* ‘may, will’ and *skulu* ‘shall’, respectively. The lexicon of Icelandic seems simply to make no provision for the (systematic) formation of inflected participles of *-st* verbs (or for past tense infinitives), but where a specific item is overtly listed (*lagstur*, *sestur*; or *mundu*, *skyldu*), it is available where required. Where no such item is available, a syntactic structure requiring it is simply ill formed because it cannot be lexically interpreted.¹²

We conclude, then, that the absence of the *vera*+participle construction with *-st* verbs is not due to syntactic restrictions, but rather to the absence of an appropriate morphological form (the inflected past participle) to interpret a lexical position in such structures. In this connection, we should also consider passive constructions corresponding to actives with *-st* verbs.

At first glance, we might not expect to find any passives with *-st* verbs, since the majority of these are intransitives (as we would expect from the fact that the *-st* ending represents at least historically the ‘absorption’ of a reflexive direct object argument). But in fact, Icelandic also allows impersonal passives, with expletive *það* as subject.¹³

- (12) það var komið snemma morguns
 it was come early in the morning
 (Someone) came early in the morning

In parallel sentence types with *-st* verbs, corresponding impersonal passives also occur:

¹¹It might be suggested that the absence of inflected participles of *-st* verbs follows from the fact that head-suffixation of /r/ is blocked before *-st*, as shown above. If we took the masculine singular nominative form of adjectives and participles as the lexically listed base, for example, we might say that the unavailability of such forms somehow follows from the blocking of the /r/-suffixation rule that would create them. The fact that other normally /r/-suffixated forms of *-st* verbs (such as the second and third person singular forms discussed in the text above) are possible (though they do not show /r/) would then be due to the fact that these forms are not the lexical bases of their paradigms, while the masculine singular nominative forms **are** the bases of adjectival and inflected participial forms. This proposal obviously involves much theoretical speculation as well as assumptions that have not been (and cannot be) justified here. For a somewhat more conservative explanation that follows from the analysis being developed here, see section 2.3 below.

¹²A similar argument is offered by Maling 1984 and Anderson 1986b in connection with ‘long distance’ or ‘non clause bounded’ reflexivization in Icelandic. In circumstances where a reflexive pronoun of this sort would be expected in embedded subject position, it is possible if and only if the embedded verb is one that assigns a case other than nominative to its subject. This appears to be due not to any syntactic restriction on the occurrence of reflexives, but simply to the absence of a nominative form of the pronoun *sig/sín/sér*.

¹³Several of the examples below are taken from Ottósson 1986.

- (13) a. það var sest í mjúka stóla
 it was sat (supine) in soft chairs
 (People) were seated in soft chairs
- b. það var glannast á tryllitækjunum
 it was acted like daredevil (supine) on hot-rods-the
 There was daredevil behavior going on in the hot-rods
- c. það var fylgst með börnunum
 it was watched (supine) with children-the
 The children were watched
- d. það var óttast að margir hefðu farist
 it was feared (supine) that many had perished
 It was feared that many had perished

Examples (13a) and (13b) here involve simple intransitive verbs, (13c) involves an intransitive with an associated prepositional phrase, and (13d) involves an intransitive with an extraposed clausal argument. In all of these cases, the verb itself appears in the supine. Accepting the analysis of (9) proposed above, an agreeing form of the participle is not required because there is no agreement in impersonal sentences with expletive *það* as S-structure subject.

The impersonal passives above are not the only place to look for passives of *-st* verbs, however. Despite the historical origins of this class of verbs (which as we noted would lead us to expect them to be uniformly intransitive), a number of them (exemplified more fully in section 3 below) govern direct objects. In these cases, we might expect personal passives with the NP occupying direct object position in the active serving as (derived) subject in the corresponding passive. In fact, however, this construction is generally ungrammatical:

- (14) a.*Maðurinn er óttast(ur)
 man-the is feared (supine/masc.sg.)
 The man is feared
- b.*Hættan var forðust
 danger-the was avoided
 The danger was avoided

The ungrammaticality of sentences such as (14) is explained by the fact that they would require an agreeing form of the participle — masculine singular to agree with *maðurinn* ‘(the) man’ in (14a), and feminine singular to agree with *hættan* ‘(the) danger’ in (14b). Since the *-st* verbs do not have an agreeing participle form, and despite the fact that the feminine singular form called for in (14b) would actually be formally identical with the existing supine, the construction is excluded.

On the other hand, we do find another class of sentences which appear to be personal passives of transitive *-st* verbs:

- (15) Nafnskírteina er krafist
 ID-cards (gen.) is demanded (supine)
 ID-cards are required

Why should (15) be acceptable, while the examples in (14) are not? The difference appears to reside in the properties of the individual verbs. The verbs in (14) are syntactically like other transitives, in that they take an object in the accusative which would be expected to become nominative when moved to subject position in the corresponding passive. The verb *krefjast* ‘to require, demand’, in contrast, takes an object in the genitive. Now in fact, when verbs that take non-accusative objects appear in the passive, the case of their object is preserved even though the NP in question appears in subject position, and the verb appears in a non-agreeing third person singular form (cf. Zaenen, Maling & Thráinsson 1985):

- (16) a. Jón beið mín
 John awaited me (gen.sg.)
 John awaited me
- b. Mín var beðið (af Jóni)
 me (gen. sg.) was (3sg.) awaited (supine) (by John)
 I was awaited (by John)

It appears, therefore, that no gender/number agreement takes place between the participle and its surface subject when a non-nominative NP occupies the S-structure subject position in passives. This is quite natural, in fact, since as (16) shows, person/number agreement on the Verb is also absent in this construction, and the finite Verb appears uniformly in the default third person singular form regardless of the properties of the NP occupying S-structure subject position.

As a result, it is the (non-agreeing) supine form rather than the inflected participle which is called for in passives like (15), in contrast with (14) where the agreeing form is required. Again, it is the fact that *-st* verbs lack such an agreeing, inflected past participle that results in the impossibility of constructions such as (14) where this form would be required.

In this section, we have seen that the defective paradigm of *-st* verbs (and in particular, the fact that with only the two exceptions of *setjast* and *leggjast* they do not form an inflected past participle capable of showing agreement with a NP) has significant consequences. Structures which would require lexicalization by a non-occurring form are blocked, not by constraints operating within the syntax, but by the very fact that the required morphological forms are unavailable. This result is thoroughly in conformity with current ‘modular’ approaches to language. It allows us to simplify the description of one component of the grammar (by not blocking the bad constructions involving *-st* verbs in the syntax) as a result of that component’s interaction with the rest of the grammar.

2.3 The Word Formation Rule for *-st* Verbs

On the basis of the preceding discussion, we can now address the question of how a rule might be formulated to account for the relation between *-st* Verbs and their bases in Modern Icelandic. First of all, we have seen in section 2.1 that the structural change produced by such a rule should consist not simply of affixation, but should include also the creation of an internally complex (headed) structure. We might formulate such a change as in (17) below:

- (17) $[_V X] \Rightarrow [_V [_V X] st]$

While this rule describes the formal relation between a verb stem $[_V X]$ and the corresponding *-st* Verb, it does not by itself provide a complete account. For one thing, it will not suffice to map

some one form of a Verb onto a corresponding *-st* verb form, since the paradigm of an *-st* Verb will in general reproduce all of the formal peculiarities that appear in the paradigm of the basic Verb. We do not provide a comprehensive survey here of the facts that demonstrate this, but it appears to be a valid generalization that whatever inflectional class a basic Verb belongs to (from among a number of different ablauting or ‘strong’ conjugational classes, as well as several ‘weak’ classes that use a dental suffix rather than ablaut to form their non-present forms), the corresponding *-st* Verb will belong to the same class. Indeed, whatever additional irregularities may be shown by an individual Verb, the same irregularities will also appear in a related *-st* Verb.

We might represent all of the diverse conjugational types of the Icelandic Verb by some system of diacritic features such as [\pm Strong], [\pm Class IIa], etc. In this case, we could simply allow rule (17) to preserve the entire set of such features, resulting in a cognate *-st* Verb with the same inflectional peculiarities as its base. When we examine the range of formations in reference sources such as Einarsson 1945, Kress 1982, etc., however, it is far from obvious that a coherent set of such features can be provided.

The alternative is to assume that the basic forms of an Icelandic Verb which are at least partially unpredictable (its ‘principal parts’ in traditional terms) are all listed in the lexicon as paradigmatic forms (with appropriate morphosyntactic features). The rules describing the traditional Verb classes, to the extent they can be formulated, function as redundancy rules over paradigms, describing intra-paradigmatic relations that are more or less regular within the language. Since the same formal stem may appear in more than one paradigmatic class, the application of these regularities is not simply mechanical; but they describe the range of possible (or at least regular) variation within any particular set of forms that underlie the paradigm of a single lexical item.

If we take the line that exactly the unpredictable forms of a given lexical item are all listed in the lexicon (the view presented in Anderson 1986a, Anderson 1988a, and a number of other places where the general picture of morphology assumed here has been discussed), then we must assume that rule (17) applies not just to one base form of a paradigm, but indeed to all of the listed stems within a given lexical entry. Each of these can be assumed to retain its associated morphosyntactic properties (such as [\pm Tense], [\pm Preterite], etc.), which characterize the sub-part of the paradigm it underlies, together with its formal shape, when it is mapped onto a corresponding form with final *-st*. The point of this claim is that a rule like (17) should be seen as mapping not just individual forms onto other individual forms, but entire sets of paradigmatically related lexical forms onto new paradigms.

But we have also seen in section 2.2 above that this characterization is not quite accurate. Virtually all of the forms in the paradigm of the basic Verb can be assumed to map onto corresponding *-st* forms, but we noted the existence of one significant exception to this generalization: the agreeing past participle.¹⁴ We must ask ourselves just how this form differs from others within the paradigm, and how its absence from the paradigms of middle Verbs might follow from such a difference.

In fact, there is an obvious basis for distinguishing the agreeing past participle from the verbal forms that do appear in the paradigm of an *-st* Verb: this one form, alone among those within a paradigm, shows agreement with some NP in terms of the nominal features of gender, number and case rather than in terms of person and number. Its inflection, then, is entirely comparable

¹⁴And one less significant exception: the present participle, whose absence with *-st* Verbs in the Modern language we take to be a matter of style rather than of grammar. However, the account offered here would seem to extend naturally to this form as well, depending on what major class features we choose to assign to it.

to (and indeed formally a subcase of) that of Adjectives, rather than of Verbs. We might suggest, then, that this is literally true: let us treat the agreeing participle as an Adjective derived from a Verb, rather than an inflectional form **of** a Verb. Of course, the ‘derivation’ involved is rather straightforward and productive (just as, for example, the creation of nominal gerunds in *-ing* in English is completely transparent and productive), but it still appears to involve a change in major word class from [Verb] to [Adjective].

If this is the correct account of the agreeing past participle, however, it provides an immediate explanation for the absence of this form in the paradigms of *-st* Verbs. If such paradigms are projected from a non-*st* Verb base by the operation of rule (17), we can observe that this rule as it is formulated above will only project the [+Verb] forms within a paradigm, and would not apply to an Adjectival form such as the agreeing past participle. This observation, in turn, makes clear the essential difference between the supine form used to make compound tenses with *hafa* and the agreeing participle: despite the formal identity of the supine with the neuter nominative singular of the participle, the former is a Verbal form, while the latter is an Adjectival one. The supine is thus available for *-st* Verbs, but the agreeing participle is not. The only exception to this is provided as an arbitrary lexical fact: if a new agreeing participle is created *ad hoc* for a given *-st* Verb, it may be treated as related to the Verb’s paradigm in the same way as with other Verbs. When this happens (as with the two forms *sestur* and *lagstur* for *setjast* and *leggjast*, as noted above), the corresponding Verb will be able to appear under syntactic circumstances from which it might otherwise be blocked.

We conclude, then, that the formal side of the operation relating *-st* Verbs to others is specified by rule (17). This rule maps all of the Verbal forms in the paradigm of a lexical Verb onto parallel forms of the related *-st* Verb. Each of these forms will consist of the corresponding stem serving as head of an internally complex word together with the ending /st/.

We must now consider the functional side of this mapping: the relation between the semantic and syntactic properties of particular Verbs of the formal *-st* class and those of their associated non-*st* Verbs.

3 Types of *-st* Verbs

The previous sections have described the history and the formal characteristics of the class of *-st* verbs in Modern Icelandic. We turn now to a survey of the grammatical properties of these verbs. Though the generative literature has concentrated on a few obviously productive cases, there is actually a considerable amount of diversity among these verbs, and a range of degrees of apparent productivity from class to class. It is our contention that the Icelandic *-st* verbs constitute a coherent class in formal morphological terms, defined in essence as the range of the operation described in rule (17). The domain of this operation is not as coherent, however, since the class of bases from which *-st* verbs can be formed is not a simple class — in particular, it is not the class of transitive Verbs in the language. Furthermore, the semantic relation between forms that may be formally related by rule (17) is by no means as simple a one as might be predicted (say) by a view on which /-st/ is a classical ‘morpheme’ or minimal sign. Instead, the formal relation between *-st* verbs and the stems (if any) to which they are related subsumes a considerable variety of semantic connections.

The examples below are taken from a number of sources; most of the verbs cited are (also) found in Blöndal 1924. Though this is in principle a dictionary of the modern language, it is now

more than sixty years old, and some Icelandic speakers find many of its entries rather archaic. As a result, the picture presented below of the range of *-st* verbs will not be completely accurate in detail as a description of contemporary usage; but discussion with a number of speakers suggests that it is nonetheless generally correct. A useful survey of a wide range of *-st* verbs from a somewhat different, but complementary perspective is provided by Ottósson 1986.

3.1 The types *klæðast* ‘dress oneself’ and *mætast* ‘meet each other’

By far the most commonly cited class of *-st* Verbs are those that represent a reflexive or reciprocal relationship, usually (though not always) by relation to another non-reflexive Verb.

(18)	klæðast	‘dress oneself’	klæða	‘dress someone’
	setjast	‘sit down’	setja	‘seat someone’
	dirfast (að gera e-ð)	‘dare (to do something)’	dirfa	‘make someone bold’
	baðast	‘take a bath’	baða	‘bathe someone’
	mætast	‘meet each other’	mæta	‘meet someone’
	bítast	‘bite each other’	bíta	‘bite’
	drekkast á	‘drink to each other’	drekka	‘drink’
	agnúast	‘(gears) mesh with each other’		

In terms of their syntactic subcategorization, the Verbs of this class show a relation between a syntactically transitive base and a syntactically intransitive *-st* Verb. Semantically, the θ -role assigned to an internal (Direct or Indirect Object) argument of the base Verb is bound instead by the Subject argument, in the same way an anaphor (a reflexive or reciprocal expression) would be. We take no position here on how such binding relations are to be represented formally.

These forms are essentially compositional, at least in origin, though in some instances their interpretation has become semantically specialized. It is apparently the case that an *-st* Verb with such an interpretation is available for most base transitive Verbs insofar as a reflexive or reciprocal Object would be semantically coherent. Such Verbs are often not listed in dictionaries, but are rather assumed implicitly to be available. Of course, there are subtle differences between an *-st* Verb and its corresponding base with an actual reflexive or reciprocal Object. Grossly, the form with overt reflexive or reciprocal presents the two arguments as at least logically separable components of the event (though in fact identical in reference), while the *-st* verb presents the event as one in which a single participant (or set of participants) is involved in a logically complex way. In (19) below, for example, the first sentence might be used to suggest that John’s action had unfortunate consequences for him; or that the one John hurt was himself (as opposed to someone else). The second sentence, in contrast, has a meaning of the classical ‘middle’ type, and might be more accurately glossed as ‘John got hurt’.

- (19) a. Jón meiddi sig.
 John hurt self
 John hurt himself
- b. Jón meiddast.
 John hurt-self
 John hurt himself

The semantic differences between overt reflexives/reciprocals and their *-st* correspondents are plausibly a consequence of independent principles that interpret overt NP's in s-structure as having a certain functional (if not referential) autonomy. We have nothing further to say about these, the least problematic of the *-st* Verbal types.

3.2 The types *heyrast* 'be audible' and *eldast* 'get older'

A comparatively straightforward extension of the class of Verbs discussed in the previous section is the set of *-st* Verbs with roughly 'passive' or 'inchoative' interpretation.

(20)	gleðjast	'rejoice'	gleðja	'gladden (tr.)'
	kveljast	'suffer'	kvelja	'torture (tr.)'
	lýjast	'get tired, worn out'	lýja	'tire (someone) out'
	hefjast	'begin (intrans.)'	hefja	'begin (tr.)'
	opnast	'open (intrans.)'	opna	'open' (tr.)'
	finnast	'exist, be to be found'	finna	'find'
	heyrast	'be audible'	heyra	'hear'
	týnast	'be, get lost'	týna	'lose'
	ágoggast	'(of a fish) be hooked'	gogga	'catch with a hook'
	eldast	'get older'	eldri	'older (comp. of <i>gamall</i> 'old')'

In a great many languages, originally reflexive forms come to have a passive or intransitive-inchoative sense. The semantic connection is clear: the result of 'making oneself glad' is that one is glad, and the act of doing so is an event of rejoicing. Though such a connection can surely be seen transparently in some cases, the connection with a genuine reflexive is tenuous at best in others. To be audible, for example, is surely not in general an instance of hearing oneself (cf. *heyrast*). What evidently characterizes these examples is a reanalysis of several inter-related meanings as a single connection. If one 'VERBs' oneself (reflexive), that is, one is as a result 'VERBed' (passive); and such an act results in one's 'becoming VERBed' (inchoative). On the model of simple chains as 'tire oneself' → 'be tired' → 'become, get tired', that is, the language has evidently established the possibility of interpreting the (originally reflexive) morphology of *-st* verbs as denoting an event which is the passive or the intransitive inchoative that corresponds to a basic transitive verb. In modern Icelandic, therefore, many verbs of the *st*-class are related to basic, non-*-st* verbs directly as a passive or inchoative to a transitive. In semantic terms, this can be viewed as a sort of 'rule-telescoping' (cf. Wang 1968): rules by which $A \rightarrow B$ and $B \rightarrow C$ are replaced by a single relation $A \rightarrow C$. We will see further instances of such phenomena in other sections below.

We may note that some verbs of the *st*-class belong to this lexical category despite the fact that they are not related to a corresponding non-*-st* verb. The verb *eldast* is semantically appropriate to the *st*-class, since it is an inchoative; but it is not based on a transitive **elda* 'to age'.¹⁵ This is an instance of a phenomenon quite commonly associated with rules of derivational morphology. Such a rule may well describe a systematic connection in form and meaning between two classes of lexical items. As such, it describes not only the relation, but also (implicitly) the two related classes. Some individual lexical items may thus be described appropriately as members of one or the other class, despite the fact that they are not related to items in the other class. One would

¹⁵The verb *elda* 'catch fire' does exist, but is obviously unrelated.

certainly want to describe English adjectives such as *legible*, *audible*, *potable*, etc. as members of the same lexical category as *inflatable*, *touchable*, *computable*, etc., despite the fact they are not related (synchronically) to transitive verbs.

While the members of the reflexive and reciprocal subclasses of *-st* verbs are undoubtedly more transparently related to their diachronic sources than is the case for the passive and inchoative forms, there is no reason to doubt that all of these semantic relations are common and comparatively ‘productive’ in modern Icelandic. While not semantically identical, the relations between these verbs and their related non-*st* counterparts (where such exist) show a clear family resemblance. Together, they constitute the nucleus of the category considered from the point of view of its meaning.

3.3 The type *bjálfast* ‘act like an idiot’

The class of inchoative *-st* verbs considered in the previous section provides an explanation for another subclass, in which *-st* verbs are related not to transitive Verbs but rather to Nouns or Adjectives:

(21)	draugast	‘walk slowly, like a ghost’	draugur	‘ghost’
	bjálfast	‘behave like an idiot’	bjálfi	‘fool’
	agðast	‘be disorderly’	agði	‘disorderly person’
	daprast	‘become sad, dreary’	dapur	‘downcast, sad’

This formation is actually quite productive in the modern language, with new forms of the same type appearing constantly. On the face of it, it would seem quite unrelated to the other classes of *-st* verbs, since there is no related non-*st* verb in such cases. What is involved here, however, is evidently another instance of ‘rule telescoping’. We can note first that many Adjectives and Nouns have related transitive, causative Verbs formed by transparent derivational processes. From *gláður* ‘happy’ we can form *gleðja* ‘make (someone) happy’. In at least some cases, these transitive Verbs have related *-st* verbs with inchoative sense: cf. *gleðjast*, discussed in the preceding section. It appears that the relation exemplified by the Verbs of this section is one that telescopes the relation {Noun, Adjective} → Verb_{causative} and the relation Verb_{tr} → *-st* verb_{inchoative} into a single rule making inchoative *-st* verbs from Noun or Adjective stems. The presumed historical reanalysis implicit in this account makes clear the synchronic importance of the class of *-st* verbs in itself, and not only in relation to a specific class of other Verbs lacking this formative.

3.4 The types *farast* ‘perish’ and *amstrast* (*i*) ‘be busy with’

In the preceding sections, we have surveyed a number of distinguishable subclasses of the relation between *-st* verbs and their associated non-*st*-verb bases. Quite a few Verbs, however, belong to the *-st* class in formal terms although their relation to another base does not seem to be a regular one:

(22)	blessast	‘succeed’	blessa	‘bless’
	böglast	‘bungle’	böгла	‘shrivel, crumble’
	fyrnast	‘grow old, antiquated’	fyrna	‘lay up stocks (of something)’
	fljúgast (á)	‘join in a fight’	fljúga	‘fly’
	standast	‘resist, withstand’	standa	‘stand’
	þrífast	‘thrive’	þrífa	‘snatch’
	eygjast	‘become porous’	eygja	‘see from afar, discern’
	farast	‘perish’	fara	‘go’

The connections between these *-st* verbs and their related bases may once have been mediated by some regularity, but now are surely lost and thus isolated in the language. As a result, the *-st* verbs in (22) and others like them are presumably independent lexical items in the modern language. The logical extension of this situation is a set of Verbs that do not appear to have even a formal (let alone a semantic) connection with other, non-*-st*-verbs in modern Icelandic:

(23)	ferðast	‘travel’ (cf. ferð [N.] ‘journey’)
	streitast (við)	‘exert oneself (to do something)’
	amstrast (í)	‘be busy (with something)’
	(e-m) auðnast (að gera e-ð)	‘(someone [dat.]) succeeds (in doing something)’

The lexical autonomy of Verbs like those in (22) and (23) is evidently complete. Nonetheless, they conform completely to the properties of the class of *-st* verbs, and behave exactly as if they were the output of an application of rule (17). As such, they again show that the lexical category of *-st* verbs has a status in the grammar that is not simply reducible to the operation of that rule.

3.5 The type *skjátlast* ‘be mistaken’

From the bulk of the forms considered thus far, and from the historical origins of the category of *-st* verbs, it would seem most reasonable to imagine that this class has a certain amount of coherence in its meaning and in its syntactic properties. Since the ending /-st/ itself originates from a reflexive pronoun in object position (as discussed in section 1 above), we would expect Verbs bearing it to have ‘absorbed’ this argument. As a result, they should be primarily intransitive, and basically ‘passive’ or the like in sense (following the semantic developments we have seen in earlier sections). This may well have been true for the original pairs of *-st* and non-*-st* Verbs related by the earliest form of rule (17), but in the modern language there are large number of exceptions to these characterizations both of the semantics and of the syntax of *-st* verbs. The reduction in syntactic valence associated with the absorption of an argument thus is not sufficient to predict either the meaning or the subcategorization requirements of a Verb of the *-st* class from those of a related lexical item.

One class of such exceptions consists of *-st* verbs which are indeed related to other Verbs not of this class, but where the difference in sense between the two related Verbs is either negligible or unrelated to anything that would be predicted from the absorption of an argument:

(24)	(e-m) skjátlast	‘(someone [dat.]) is mistaken’	(e-m) skjátla	‘idem.’
	áfellast	‘lay blame on (someone)’	áfella (fyrir)	‘blame (someone) for (something)’
	(e-m) förlast	‘(someone [dat.]) weakens’	(e-m) förla	‘(someone’s) mind weakens’
	andast	‘breathe one’s last’	anda	‘breathe’

The semantic properties of these *-st* verbs are evidently autonomous aspects of their lexical entries, rather than following from their relation to another Verb through a rule absorbing one of its arguments.

3.6 The type *dyljast* ‘hide’

As we have seen, many of the Icelandic *-st* verbs have a sense which is grossly ‘passive’ in relation to a corresponding Verb not in this class. We might in fact anticipate that the rule forming *-st* verbs characterizes them in this way. In terms of current G/B theory, for instance, this could have the effect of making them ‘unaccusative’: i.e., characterizing them as Verbs that do not assign an agent θ -role to their subject, and do not assign Case to their object (thus forcing it to move to subject position to satisfy the Case filter). In fact, however, this prediction is not borne out. At least some Verbs of the *-st* class clearly assign an agent role to their subjects:

(25)	dyljast	‘hide (intrans.)’	dylja	‘hide (trans.)’
	felast	‘hide (intrans.)’	fela	‘hide (trans.)’
	biðjast (fyrir)	‘say one’s prayers’	biðja (fyrir e-m)	‘pray for (someone)’
	klæmast	‘use obscene language’	klæma	‘speak badly (of someone)’

Furthermore, a great many *-st* verbs clearly assign case to their objects. As we will see in section 3.10 below, the cases associated with the complements of *-st* verbs include lexically idiosyncratic (or ‘quirky’) case as well as default or configurationally assigned (object) case. We cannot, therefore, include a characterization of *-st* verbs as necessarily ‘unaccusative’ in the lexical rule(s) relating them to other Verbs.

3.7 The type *lofast (til)* ‘promise reluctantly’

For quite a few Verbs, the relation between a member of the *-st* class and a corresponding non-*st* Verb serves to ‘demote’ an object from a case-marked Direct Object position to that of the object of a Preposition. The semantic relation attendant on this syntactic relation is a sort of ‘de-thematization’ of the object NP, with a reading on which this NP is less directly, or completely, or integrally affected. The sort of relation involved can be illustrated with English pairs such as those in (26) below:

- (26) a. i. Jones read *War and Peace* before going to sleep.
 ii. Jones read from *War and Peace* before going to sleep.
- b. i. Jones spread the red paint on the canvas.
 ii. Jones spread the canvas with the red paint.

In the first pair in (26), the sentence with *read from* implies (or at least strongly suggests) an action involving *War and Peace* much less comprehensively than the sentence with *read*: perhaps in the *read from* case Jones only read a few pages, while the *read* sentence suggests (improbably enough) that he read the whole book before falling asleep. The second pair illustrates a well known contrast between two different treatments of the arguments of a ditransitive Verb. Whichever argument is syntactically the Direct Object is interpreted as completely or ‘holistically’ involved, with the other argument less completely or ‘partitively’ interpreted. Thus, the first of these sentences

implies that the red paint was all used, but only part of the canvas may actually have been covered; while the second, in contrast, suggests that the entire canvas was painted, though it may be that only some of the paint was necessary for this. Contrasts like this have been discussed by a number of authors; some discussion and further exemplification from English will be found in Anderson 1988b. The overall generalization seems to be that the ‘thematic’ or ‘holistic’ interpretation is associated particularly with a NP in Direct Object position, and the demotion of such a NP to a PP is associated with a less thematic, or ‘partitive’ reading. Such a relation occurs with greater or lesser productivity in a wide range of languages, with a range of semantic distinctions that show at least a family resemblance.

Some Icelandic pairs seem to instantiate this sort of relation. The verb *fala e-ð* for example, with Direct Object, means ‘ask to buy (something)’, while its *-st* verb counterpart *falast eftir e-u* means ‘inquire about the availability (of something)’. *Dá e-n* is a Verb meaning ‘adore’, while its *-st* verb counterpart *dást við e-m* means ‘admire (for some particular quality)’. Pairs such as *efa e-ð* ‘doubt (something)’ vs. *efast um e-ð* ‘harbor doubts (about something)’ and *lofa e-u* ‘promise’ vs. *lofast til e-s* ‘promise (reluctantly or indirectly)’ are difficult to gloss accurately, but in all of these cases the *-st* verb takes an object which, by virtue of being demoted to PP status, is less thematic than the Direct Object of the corresponding simple Verb. Without going into the etymologies of all of the individual Verbs, it would appear that the mechanism involved here is the following: since the *-st* morphology originally represents a reflexive Direct Object NP, remaining arguments must of necessity have the status of indirect or prepositional objects. If it is indeed the case that such NP’s are interpreted partitively (as opposed to holistically), it is plausible that in a certain number of cases, a formation which absorbs the Direct Object position could take on a life of its own as the basis of a ‘de-thematized’ object construction.

3.8 The type *missýnast* ‘mis-see’

For a substantial number of Icelandic Verbs, a subject in the Dative is associated with the sort of semantic role usually called ‘experiencer’. Some of these are intransitive, and some transitive.¹⁶

- (27) a. Mér er kalt.
me(dat.) is cold
I am cold
- b. Mér byður við setningafræði
me(dat.) be disgusted at syntax
I loathe syntax
- c. Barninu batnaði veikin
child(dat.) got-better disease(nom.)
The child recovered from the disease
- d. Mér er engin huggun í því
me(dat.) is no comfort in that
I find no comfort in that

¹⁶With Objects in the Nominative: Accusative marking for Objects is not found with Dative or Genitive subjects. See Zaenen et al. 1985 for further discussion of these patterns. These examples are taken from Joan Maling’s lecture notes at the 1986 Flúðir Summer School.

Many Verbs in *-st* with experiencer subjects also follow this pattern:

- (28) (e-m) *mælast* (vel, illa) ‘(someone) is a (good, bad) speaker’
 (e-m) *búnast* (vel, illa) ‘(someone) has (good, bad) luck at farming’
 (e-m) *missýnast* (e-ð) ‘mis-see, see mistakenly’
 (e-m) *svelgjast* ‘(someone) swallows down the wrong throat’
 (e-m) *geðjast* (e-ð) ‘someone) enjoys, is pleased by (something)’
 (e-m) *heyrast* (e-ð) ‘(someone) thinks s/he hears (something)’
 (e-m) *áskotnast, fénast* (e-ð) ‘(someone) gets possession of (something) by luck’

The behavior of these *-st* verbs is just like that of other dative experiencer verbs. That the dative NP's in question are syntactically subjects at every level of syntactic structure where this question can be investigated empirically is not in doubt: see Andrews 1976, Maling 1980, Thráinsson 1979 for extensive demonstration of this point. The pattern of identifying (some, though by no means all) subject NP's that bear an experiencer θ -role with dative case is evidently one that has established itself in the Icelandic lexicon in a way that disregards the difference between *-st* verbs and others.

3.9 Complement-taking *-st* verbs

The range of sentential complement types in Icelandic is roughly comparable to that found in English. The syntax of complementation has been described in a number of places, and we do not attempt to go over all of this ground here. For a comprehensive survey in the classical transformational terms of the ‘Standard Theory’, see Thráinsson 1979. For a treatment of some of the same constructions in terms of Lexical Functional Grammar, see Andrews 1982 and Andrews 1990.

The most basic type of complement sentence is a full finite clause with the complementizer *að*. These clauses have essentially the same form as main clauses; they are sometimes introduced by an expletive pronoun *það*. This pronoun takes the case marking appropriate to the argument position it represents, and thus appears as *þess* or *því* when this position is marked genitive or dative.

- (29) a. *Ólafur veit að jörðin er hnöttott*
 Olaf knows that the earth is round
 Olaf knows that the earth is round.
- b. *Þeir öskruðu að maturinn væri kaldur*
 they grumbled that the food was (subjunctive) cold
 They grumbled that the food was cold.
- c. *Það er augljóst að Jón hefur étið hákarlinn*
 it is obvious that John has eaten the shark
 It is obvious that John has eaten the shark
- d. *Ég harma það að Jón skuli hafa barið María*
 I regret it that John should have hit Mary
 I regret (it) that John has hit Mary.
- e. *Ég fagna því að þú skulir vera kominn*
 I rejoice it(dat.) that you should be come (part.)
 I rejoice (in it) that you have arrived.

Verbs of the *-st* class take the same structure as other verbs:

- (30) a. Mér skilst að hann muni heldur vera prestur
 I(dat.) think that he would rather be priest
 í Reykjavík en profastur eystra
 in Reykjavík than provost in the east
 I have the impression that he would rather be a priest in Reykjavík
 than a provost in the East.
- b. Það rifjaðist upp fyrir mér að Jón hefði
 it came to mind up for me that John had
 lengi dvalist í útlöndum
 long dwelled in foreign lands
 It occurred to me that John had long lived abroad.
- c. Ég minnst þess að ég hef heyrt þetta áður
 I remember it(gen.) that I have heard this before
 I remember that I have heard this before.

There are three other complementation structures that are relatively uncontroversial. We identify them here in the terms of classical transformational grammar, without implying anything about their analysis:

Subject-to-Subject Raising: The surface subject of the matrix verb is the underlying, semantic, or functional subject of the complement. This NP has no semantic role in the matrix sentence. The remainder of the complement appears in the form of a bare infinitive (i.e., without any separate complementizer like *að*). In English, this is the type associated with verbs like *seem*. In Icelandic, the verbs of this sort are members of the *-st* class such as *virðast*, which will be discussed below. The same structure is appropriate to assign to certain passives however:

- (31) Ekkert skip sést enn þá vera komið inn fyrir Oddeyri
 no ship is seen yet be come this side of Oddeyri
 There is still no ship to be seen between here and Oddeyri.

Subject-to-Object Raising: The NP which is underlying, semantic, or functional subject of the complement appears in the position and morphological form appropriate to an object of the matrix verb. Classically, this construction was derived by movement from embedded subject to matrix object position, but more recent transformational theories (such as Government/Binding theory) instead assume the NP remains *in situ* and receives case there from the matrix verb. Such theories refer to this as the ‘exceptional case marking’ construction. In Icelandic, the remainder of the complement again shows up in the form of a bare infinitive:

- (32) Mér heyrðist einhver koma
 I(dat.) [thought I] heard someone come
 I thought I heard someone coming.

Okkur finnst hún (vera) viðkunnanlegur nágrenni
 We (dat.) find her (to be) pleasant neighbor
 We find her (to be) a pleasant neighbor.

EQUI complements: The underlying, semantic, or functional subject of the complement is not represented by a distinct phonologically expressed surface NP, but is rather interpreted as identical with some argument (subject or object) of the matrix verb. Classically this construction was derived by deleting an overt equivalent NP; recent transformational theories instead generate a phonologically null PRO in embedded subject position, and specify its interpretation in the theory of control. Lexical Functional Grammar makes essentially the same move, though the PRO-like element appears in the f-structure of the sentence and does not correspond to any part of its c-structure. In Icelandic, the remainder of the complement appears in the form of an infinitive preceded by *að*:¹⁷

- (33) a. Hann þreytist aldrei á að dást að landinu
 he tired never out that admired at the country
 He never tired of admiring the country.
 b. þú verður að venjast því að vinna fyrir þínu daglega brauði
 you will that get used it(dat.) that work for your daily bread
 You will have to get accustomed to working for your daily bread.

Formally, the differences among these three types of non-finite complements are two-fold. Both the Subject-to-Subject and Subject-to-Object Raising types involve a surface NP which is assigned a single semantic role by virtue of its function as subject of the complement, and display the complement VP in the form of a bare infinitive. We will refer to these two types collectively as ‘raising’ structures; they correspond to case of ‘functional control’ in LFG. *-st* verbs of this type are treated in section 3.9.1. The EQUI structures, in contrast, involve a single surface NP corresponding to two semantic roles (one in the matrix and one as subject of the complement), and display complements consisting of an infinitival VP preceded by *að*. This is the case of ‘anaphoric control’ in LFG; *-st* verbs of this type will be treated in section 3.9.2. There are other differences between the ‘raising’ and the ‘EQUI’ cases which will be discussed below. In addition, there is another non-finite complement type which is found only with verbs of the *-st* class, and which appears to combine some properties of both constructions. This construction has been the basis of discussion of the *-st* verbs by some writers, and several rather different analyses have been proposed for it. We treat this structure in section 3.9.3 below.

3.9.1 The type *virðast* ‘seem’

The class of ‘raising’ verbs in Icelandic includes a number of *-st* verbs, and as noted above, most of the standard Subject-to-Subject raising cases are verbs of this type:

- (34) Jón virðast hafa farið heim
 John seems have gone home
 John seems to have gone home.

¹⁷Under some circumstances, this element may optionally be deleted in surface structure.

Other verbs whose syntax is similar to *virðast* ‘seem’ include *sýnast* ‘seem’, *teljast* ‘be believed to’, *sjást* ‘be seen to’, and others.

Apart from the formal characteristics already considered above, there is another property of the ‘raising’ construction which is important to note. When the embedded complement is one across which agreement normally takes place, the predicate shows agreement with the surface case form of NP representing its subject. This is true even if that NP has in fact been assigned some case other than nominative, by virtue of having been raised further (or appearing in an ‘exceptional case marking’ structure). The facts are presented in detail by Andrews 1990; they are illustrated here first for a non-*st*-verb and then for *virðast*:

- (35) a. drengirnir eru taldir hafa verið kysstir/*kyssta
the boys(nom.) are believed(nom.) have been kissed(nom./*acc.)
The boys are believed to have been kissed.
- b. Hann segir drengina vera talda hafa verið kyssta/*kysstir
he says the boys(acc.) be believed(acc.) have been kissed(acc./*nom)
He says the boys to be believed to have been kissed.
- c. María virðist hafa verið rannsökuð/*rannsakaða (af Jóni)
Mary(nom.) seems have been examined(nom./*acc.) (by John)
Mary seems to have been examined (by John)
- d. Ég tel Maríu virðast hafa verið rannsakaða/*rannsökuð
I believe Mary(acc.) have been examined(acc./*nom.)
I believe Mary to seem to have been examined.
- e. María er talin virðast hafa verið rannsökuð/*rannsakaða
Mary is believed(nom.) seem have been examined(nom./*acc.)
Mary is believed to seem to have been examined.

At first glance, these facts would appear to motivate a principle by which predicates can agree with a NP which is potentially arbitrarily far away. A constrained theory of agreement, however, should ideally subsume this relation under principles of the binding theory for NP’s — principles which would appear to require a much more local antecedent.¹⁸ Assuming that (at least) Subject-to-Subject ‘raising’ does indeed involve movement, and that this movement leaves a trace, we have such a potential local binder available for the cases of apparent long-distance agreement: the trace of the complement subject NP. In order to have this trace fill the required function, however, we must allow the overt NP to transmit its (surface) case to its trace.

Note that the sense of ‘case’ here is precisely the morphological category of nominal case, and not the somewhat more abstract notion usually referred to as ‘Case’ in the Government/Binding literature. This latter notion is actually closer to a concept of ‘s-Structure subcategorization’ than to a morphological category, and it is perhaps unfortunate that the analogy between ‘Case’ (the property of a phonologically realized NP whose presence in a given position is sanctioned in s-Structure) and ‘case’ (the property which results in a choice of inflectional form if a NP is realized) has been drawn as closely as it has. In any event, we assume that in a language like Icelandic, with a rich and pervasive system of nominal inflection, all NP positions can be assigned (inflectional)

¹⁸See Anderson 1988a for some discussion of the context of this proposal.

‘case’ even if only some are assigned (abstract) ‘Case’. On this view, we can see that the proposed principle by which case is transmitted to a trace from the (overt) NP that binds it is the only way for these traces to receive case in raising structures.¹⁹

The analysis of a ‘raising’ verb like *virðast* ‘seem’ on a Government/Binding account is thus clear. It assigns no semantic role to its subject, and is subcategorized to take a non-finite complement consisting of a subject plus bare infinitival VP. Since no (abstract) Case is assigned to the complement subject, this NP moves to matrix subject position. It transmits its s-Structure (inflectional) case to its trace, allowing the embedded predicate to agree with this position in a purely local fashion. These properties are not especially associated with a verb of the *-st* class: they apply equally to a non-*st* raising verb such as *þykja* ‘seem, be considered’.

3.9.2 The type *vonast* (*eftir*) ‘hope for’

Recall that the properties of ‘EQUI’ verbs (including *-st* verbs such as *vonast* ‘expect’, *bjóðast* ‘offer’, *böglast* ‘bungle’, *endast* ‘hold out (to)’, etc. as well as many non-*st* verbs) involve independent assignment of semantic roles in the complement and matrix clauses, and an infinitival complement preceded by *að*. These formal differences from ‘raising’ structures are also associated with a difference in agreement behavior in the complement. As we have just seen, agreement in the complement of a ‘raising’ verb is with the s-Structure case of its (moved) subject NP. In EQUI structures, however, the facts are more complex. To simplify the picture presented by Andrews 1990, the embedded predicate may *either* agree with the case of the s-Structure NP that controls the embedded subject position *or* appear in the nominative. We illustrate this first with the complements of non-*st* verbs:

- (36) a. *Ég bað hann að vera góðan/góður*
 I asked him(acc.) that be good(acc./nom.)
 I asked him to be good.
- b. *Hún skipaði honum að vera góðum/góður/*góðan*
 She asked him(dat.) be good(dat./nom./*acc.)
 She asked him to be good.
- c. *Hana langar til að vera vinsæl/vinsæla*
 She(acc.) longs to that be popular(nom./acc.)
 She longs to be popular.
- d. *Ég lofaði honum að vera góður/*góðum/*góðan*
 I(nom.) promised him(dat.) that be good(nom./*dat./*acc.)
 I promised him to be good.

The facts with *-st* verbs that appear in EQUI structures are just the same:

- (37) a. *Sigga vonast til að verða kosin/*kosna*
 Sigga hopes that become chosen(nom./*acc.)
 Sigga hopes to be elected.

¹⁹A NP could also receive case from its verb, if it were governed by the Verb; or in subject position in d-Structure, if the Verb required an oblique or ‘quirky’ subject; or it could receive nominative case in the position of subject of a finite clause. The subject position of an infinitival raising complement satisfies none of these conditions; and thus the only way it can receive case is by transmission from its antecedent.

- b. Jón telur Siggu vónast til að verða kosin/kosna
 John believes Sigga(acc) hope that become chosen(nom./acc.)
 John believes Sigga to hope to be elected.

What is it that accounts for the fact that in EQUI complements, agreement can be either with the controller or with nominative case? Agreement with the controller could be treated in a way analogous to what was said above about ‘raising’ structures, by allowing an overt NP to transmit it (inflectional) case to an empty category (in this case, PRO) that it binds, but we must still provide for (a) the possibility of nominative agreement; and (b) the optional choice between the two.

Suppose we say that some element in EQUI (but not ‘raising’) structures is optionally able to assign nominative case to the PRO subject of the complement. Then we could say that when this assignment does not take place, the only way for the NP to receive (inflectional) case is through transmission from its controller. Such transmission must then be optional as well; but this is not problematic, since the structures in which transmission is apparently optional (the ‘raising’ cases) are exactly those in which there is no other source of case for the subject trace position. Assuming that all NP’s (overt as well as empty) in argument positions must be assigned (inflectional) case in Icelandic would thus predict obligatory transmission (and hence the appearance of ‘long-distance agreement’) in ‘raising’ structures, but a choice between case transmission from the controller and locally assigned nominative in EQUI structures.

We have still not accounted for the element in EQUI structures which is responsible for the optional assignment of nominative case. In fact, we propose, it is the complementizer element *að* which fills this function. Recall that this *að* is present in EQUI structures but not in ‘raising’ ones. There is some question in the literature as to whether the *að* that appears with infinitives is or is not to be identified with the *að* that appears with full finite embeddings. Most authors agree that this is counterintuitive; but few if any empirical arguments exist one way or the other. We have glossed *að* as ‘that’ in examples above, though it might be appropriate to gloss it as ‘to’ when it appears before an infinitive.

An analysis which suggests itself is to treat *að* as a complementizer element in all occurrences, both with finite and with non-finite clauses. As a complementizer, it occurs as sister to S within \bar{S} . We could then describe ‘raising’ verbs (whose complements do not include *að*) as subcategorized for non-finite S-complements, and EQUI verbs as subcategorized for non-finite \bar{S} -complements. This is certainly not the only possibility, but it accounts for the facts and there does not appear to be any obvious evidence against it. Any alternative which preserved the claim that the *að* which appears in EQUI complements can optionally assign nominative case to the following subject NP would be sufficient for our present purposes.

Again, as with the discussion in section 3.9.1 above, the principle point of relevance to the major concern of this paper is the lack of significant differences between EQUI verbs of the *-st* class and other EQUI verbs. The syntax of both types is the same, and not based on the presence or absence of the formative *-st*.

3.9.3 The type *segjast* ‘say of oneself that S’

The final class of verbs to be considered here is typified by *segjast* ‘say (of oneself)’ in examples such as the following:

- (38) Jón segist vera fullur/*fullan
 John says (himself) be drunk(nom./*acc.)
 John says he is drunk.

A small class of *-st* verbs of description have an interpretation like that of *segjast*. These include *þykjast* ‘believe (of oneself)’, *kveðast* ‘say (of oneself)’, *látast* ‘pretend’, and a few others.²⁰ As is apparent, the properties of this construction are a mixture of the two other non-finite complement types just considered. On the one hand, like ‘raising’ structures, the complement VP is not preceded by *að*; but on the other, like EQUI structures, there are apparently two semantic roles assigned to the referent of the single s-Structure NP: one by the matrix verb of saying, and one by the complement verb. It is self-evident that a semantic role is assigned within the complement; the assignment of an agent role in the matrix is supported by the contrast between these verbs and genuine Subject-to-Subject raising verbs like *virðast* ‘seem’ with respect to the Icelandic equivalent of the English *do so* construction:

- (39) a. Jón segist vera ríkur og Ólafur gerir það líka
 John says himself be rich and Olaf does it too
 John says he is rich, and Olaf does so too.
- b? Jón virðist vera ríkur og Ólafur gerir það líka
 John seems be rich and Olaf does it too
 ?*John seems to be rich, and Olaf does so too.

Since there are two semantic roles to be assigned, most theories would require there to be two NP’s (two positions in f-structure in LFG, two θ -marked NP positions in Government/Binding accounts) to receive them. That would suggest treating *segjast* as an EQUI verb, whose complement has PRO as its subject; but these verbs do not behave exactly like EQUI verbs, since the complement predicate shows obligatory agreement with the controller of its subject, and does not display a nominative option when the controller is non-nominative:

- (40) Ég tel Jón segjast vera ríkan/*ríkur
 I believe John(acc.) say himself be rich(acc./*nom.)
 I believe John to say he is rich.

One possibility is that verbs like *segjast* are really a sort of auxiliary, which composes its interpretation with that of a following verb to make a single complex semantic role which it assigns to its subject. On that picture (suggested for the verbs *munu* ‘will, may’ and *skulu* ‘shall, should’ by Thráinsson 1983), sentences with *segjast* and other verbs of this type would contain only a single clause, rather than an embedded complement. But this is unlikely, given that *segjast* (unlike true auxiliary verbs, according to Þráinsson) can precede *munu/skulu*:

- (41) Ólafur segist skulu fara
 Olaf says himself should go
 Olaf says he should go.

²⁰The productivity of this construction has sometimes been exaggerated in the literature. The examples quoted by Marantz 1984 from Andrews 1982 with the verb *teljast* ‘be believed’ (not *‘believe oneself’) do not in fact have this interpretation, as noted by Andrews 1990.

Another alternative is suggested by Marantz 1984. He proposes that a verb of the *segjast* class is really a ‘raising’ verb, and the single NP in s-Structure originates in the position of the complement subject. Such a verb is internally complex, however, and contains the element *-st* which is itself capable of being assigned a semantic role — in particular, the agent role associated with the verb of saying. This role is thus assigned to the verb-internal *-st*, which itself acquires a reference only in s-Structure after NP movement has raised the complement subject to matrix subject position. This analysis nominally satisfies the requirements of describing the construction: the complement type and agreement properties are taken care of by treating it as a case of ‘raising’, while the two semantic roles are assigned to distinct entities (the complement subject NP and the verb-internal element *-st*). There is a considerable cost involved, however: notably the fact that an element internal to a lexical word acquires independent referential properties in the syntax. This is a direct violation of the long established claim that words are ‘anaphoric islands’, and also of a strong version of the lexicalist hypothesis that would prohibit the syntax from manipulating or having access to internal parts of words. In addition, it would appear to overstate the facts, since the supposedly ‘referential’ nature of the ending *-st* is limited to this structure and this one small class of verbs.

No such radical conclusion is required on the present account, however. In fact, what is required is to treat *segjast* as an EQUI verb that takes a non-finite S-complement (rather than an \bar{S} -complement, like other EQUI verbs). If it assigns its own semantic role to its subject, this fact will force the complement subject to be PRO (as opposed to the trace that appears in this position in ‘raising’ structures). Since the complement is an S rather than an \bar{S} , however, it cannot contain *að*. As a result, there is no local assigner of nominative case to the complement subject position, and the only way for this position to be assigned (inflectional) case is through transmission from its controller. Since obligatory agreement with an antecedent, on this theory, is a consequence of the absence of an alternative case-assigner rather than directly derivative from the difference between EQUI and ‘raising’ derivations, the properties of *segjast* class verbs can be accommodated directly in terms of independently necessary lexical specifications.²¹

The complement type illustrated by *segjast*, on the present analysis, is indeed limited to verbs of the *-st* class, but not for systematic reasons associated with the nature of this element. These verbs have a syntactic and semantic structure comparable to English *claim* (as in *John claims to be a werewolf*), and are described lexically as assigning an agent role to their subjects and taking a non-finite complement without *að*. Neither of these facts is at all related to the nature of *-st*: it is only a historical fact that the verbs which now show this combination of syntactic and semantic properties arose through the reanalysis of an original clitic which is the antecedent of the modern *-st* ending.

²¹ Andrews 1990 notes that one potential argument against an EQUI treatment of verbs like *segjast* is the fact that their complements cannot be extraposed or clefted. On the present view this might follow from the absence of *að* in such complements if it could be shown that case transmission is blocked into extraposed complement subject position. Sentences like *það sem Jón telur Siggu vonast til er að verða kosin/*kosna* ‘What John believes Sigga to hope for is to be elected’ should then only show nominative, and not accusative agreement, which would confirm the claim that only local nominative assignment by *að* is available as a source of case in extraposed position. The preliminary data not presently available to us seem to support this suggestion, but further investigation is clearly called for.

3.10 The syntactic frames of *-st* verbs

From the survey of *-st* verbs in the preceding sections, it should be clear that their syntactic characteristics are simply instances of the independently exemplified verbal types of modern Icelandic. All of the classes of *-st* verbs have parallels among the non-*-st* verbs with the single exception of the *segjast* class, whose properties were shown not to depend essentially on the fact that these verbs happen to contain *-st*. On the other hand, most properties of non-*-st* verbs are also exemplified by *-st* verbs. For instance, Icelandic verbs can in general require that their objects be dative or genitive, rather than accusative, or that they be governed by a particular preposition. The possibilities are also illustrated in the *-st* class:

(42)	<i>ásælast e-n</i>	‘covet the rights or possessions of someone’
	<i>eignast e-ð</i>	‘get possession of something’
	<i>nálgast e-ð</i>	‘approach something’
	<i>fyllast e-u</i>	‘fill up with something’
	<i>minnast e-s</i>	‘remember something’
	<i>þarfnast e-s</i>	‘need something’
	<i>vandræðast um e-ð</i>	‘be perplexed about something’
	<i>vingast við e-n</i>	‘make friends with someone’
	<i>böglast við að gera e-ð</i>	‘bungle at doing something’
	<i>beinast að e-m</i>	‘attack someone’
	<i>ábatast á e-u</i>	‘make money from someone’
	<i>fíkjast til e-s</i>	‘desire something eagerly’

We might expect that, since *-st* verbs originate historically through the ‘absorption’ of one argument into the *-st* ending, they should always have one argument fewer than a corresponding non-*-st* verb. This ought, in principle, to preclude the appearance of ditransitive verbs in the *-st* class, and it is certainly true that most of these verbs take at most one case-marked object. There is at least one ditransitive verb in the *-st* class, however (*ábyrggjast e-m e-ð* ‘guarantee (someone) (something)’), so even this generalization is not completely valid.

In the relation between an *-st* verb and a corresponding verb not of this class, it is usually the case that the case assigned to the *-st* verb’s object is the same as that assigned to the ‘corresponding’ argument of the other verb. Thus, *krefjast e-s af e-m* ‘demand (something) (of someone)’ marks its object with genitive case, parallel to the genitive marking in *krefja e-n e-s* ‘demand (of someone) (something)’; *fyllast e-u* ‘fill up (with something)’ marks its object as dative, just as the corresponding *fylla e-ð e-u* ‘fill (something) (with something)’, etc. This might be related to the general tendency in Icelandic to preserve oblique case under movement (cf. Zaenen et al. 1985 for discussion) if one imagined that some sort of (evidently pre-lexical) movement was involved in creating these verbs. On the other hand, while oblique case is preserved under passivization in Icelandic, an oblique case assigned to the object of a verb is not preserved as the case of the subject of a corresponding *-st* verb. Thus, *týna* ‘lose’ and *koma* ‘bring’ both mark their objects with dative case, but the subjects of *týnast* ‘get lost’ and *komast* ‘arrive, be brought’ are nominative. That suggests that whatever is going on in the formation of *-st* verbs, even those of the ‘passive/unaccusative’ class, it should not be identified with the NP-movement involved in passive. In fact, it appears that the only instances of *-st* verbs with oblique subjects are those with dative experiencer subjects, where the case marking is due to a principle that cross-cuts the division between *-st* verbs and others.

4 Conclusions

It should be apparent from the survey of *-st* verbs above that this category is not at all a unitary one from the point of view of its syntax or semantics. Based on the historical origins of the formation reviewed in section 1 we might expect that the absorption of a reflexive argument should run through the class, but even a rather abstract version of that position does not seem particularly attractive in light of the fact that some *-st* verbs can take overt reflexive objects:

- (43) a. Hann skammast sín fyrir fjölskyldu sína
he is ashamed self(gen.) from family his
He is ashamed of himself on account of his family.
- b. Honum fannst sér (vera) ofaukið í þessum félagsskap
he(dat.) found self (be) superfluous in this company
He felt himself superfluous in this company.
- c. Unglingunum fannst sig skorta verkefni og starf
the youths(dat.) found self lack exercise and work
The young people found that they missed exercise and work.

It seems, then, that the class of *-st* verbs is a purely formal one: the set of verbal forms with the shape $[_v \text{ [STEM]-st}]$, formed by the operation formulated above as rule 17. There are indeed a number of subregularities among the functions which are served by mapping particular stems onto *-st* verbs by means of this rule: these include the categories of passives, reflexives, and reciprocals, as well as a number of others that are not even always deverbal in character. There are also a number of forms that belong formally to the set of *-st* verbs in this sense, though they are not derived from any otherwise attested stem, and may not share the syntactic or semantic properties of other verbs of the class.

This seems to us to be the case quite commonly in the derivational morphology of natural languages. Among the lexical items of a language can be isolated a number of semantically, syntactically, or functionally defined classes. Sometimes systematic relations exist between these classes (or at least subclasses of them). On the other hand, a language makes available certain characteristic formal mechanisms for indicating the relatedness of words: typically affixations of various sorts, but in some cases more arcane devices like Ablaut, metathesis, subtraction, or the vocalic pattern modifications typical of the Semitic languages. In the case which has been taken to be optimal from the point of view of the signaling or iconic function of language, a single formal device (e.g., a single affix) is associated with one and only one functional relation. This is the case which has been taken to motivate the notion of morphology as based on the ‘morpheme’, or minimal sign composed of an indissoluble unity of form and meaning. But in a vast number of cases, this picture is not met: a single formal device (such as the Icelandic *-st* formative as introduced by rule 17) is associated with a somewhat heterogeneous collection of functions (or ‘meanings’), or else a single function is associated with a heterogeneous collection of formal indicators (e.g., the range of formations of the syntactically unitary class of derived nominals with a process interpretation in English). Morphology is a much more a-morphous business than it would be if words were uniformly composed of morphemes.

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