Chapter 1

Singular *-st* syncretism and featural pied-piping

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An often discussed fact about Icelandic dative-nominative constructions is that nominative objects cannot trigger 1st or 2nd person agreement on the finite verb; but when the agreement form is morphologically syncretic with 3rd person, the example is judged to improve. What is not often discussed is that the ameliorative effect of syncretism is stronger when the verb ends in the 'middle' *-st* morpheme. In this article, I propose that this effect is related to another morphological fact about *-st* verbs, namely, that they are always syncretic across all persons in the singular, but not in the plural. I present a syntactic account of this syncretism which captures its morphological properties and predicts a difference between ameliorative syncreticism when *-st* is present and when it is not.

1 Introduction

The Icelandic *-st* morpheme is often known as a 'middle' or 'medio-passive' suffix, though it is acknowledged that *-st* verbs do not comprise a unified class of a certain 'voice'. That is, *-st* verbs are a class of verbs bearing a formal resemblance, the *-st* morpheme, but from a syntactic perspective, the *-st*/non-*st* distinction is not analogous to the passive/non-passive distinction. However, there are aspects of the morphosyntax of *-st* verbs which which cut across all classes of them, and it is (a subset of) these aspects that are the focus of this paper. More specifically, for all *-st* verbs in all tenses and moods, person distinctions are lost in the singular but not the plural. This syncretism, which will henceforth be referred to as *-st syncretism*, correlates with a higher acceptability of 1st/2nd person object agreement in dative-nominative (DAT-NOM) constructions than that found with non-*st* syncretism.

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I will present an overview of the syntax of *-st* proposed in Wood (2014; 2015) and propose that singular *-st* syncretism is derived in the syntax. I then show how the syntactic account of *-st* syncretism presented here predicts the kind of improvement seen with 1st and 2nd person singular nominative objects. Crucial to the analysis is the observation that the size of the feature bundle realized as *-st* affects the availability of syntactic Agree relations that underlie the syncretism and nominative object agreement.

1.1 Syntax and syncretism

In a number of reported cases, syntactic constructions can vary in acceptability depending on the availability of syncretic forms. For example, across-the-board (ATB) movement in Polish is normally only possible when the wh-word would get the same morphological case from both conjuncts; but if the different cases happen to be realized with the same morphological form, the result is acceptable (Citko 2005; Hein & Murphy 2020; see also Ximenes 2007: fn2). Citko (2005) proposes that the syntax underlying ATB movement with verbs that assign different cases is fine, but that it fails when the grammar attempts to insert the appropriate case morpheme—unless the different case forms are morphologically syncretic.

Many accounts of ameliorative effects of syncretism involve an explanation like this (Pullum & Zwicky 1986; Béjar & Massam 1999; Kratzer 2009; Ussery 2009; Bjorkman 2016): Syncretic forms allow the grammar to realize a syntactic configuration which would otherwise make contradictory demands on the morphology.[1] Without denying the validity of this kind of explanation (in fact, I will adopt it for certain cases), I will take a different approach to the person syncretism in the singular paradigm of Icelandic *-st* verbs. The *-st* morpheme, commonly known as the 'middle' voice, induces a complete collapse of person distinctions in the singular. An example of this is illustrated in (1).

(1) *mylja* 'pulverize' – Present

	Active		Middle	
	Sg	**Pl**	**Sg**	**Pl**
1	myl	mylj-um		mylj-um-st
2	myl-ur	mylj-ið	myl-st	mylj-i-st
3	myl-ur	mylj-a		mylj-a-st

[1] Săvescu Cuicivara (2009) has a syntactic account of syncretism effects on Romanian clitic order which, like the present one, involves the intrinsic features of elements in the derivation.

Interestingly, along with this syncretism comes an improvement in acceptability of certain dative-nominative constructions, to be discussed below. I will propose that in this case, both the syncretism itself and the improvement in acceptability is underlain by the syntax, specifically with respect to the size of the feature bundle that is realized as *-st*.

1.2 Dative-Nominative Constructions

Icelandic dative-nominative (DAT-NOM) constructions exhibit number agreement with 3rd person nominative objects, but cannot agree in person with 1st or 2nd person objects. This holds for verbs which take dative subjects in the active, as in (3), as well as for DAT-NOM constructions which are derived by passivization of a ditransitive, as in (2). The significance of the latter is that the properties of DAT-NOM constructions cannot easily be reduced to a special, 'quirky' little v selecting for an oblique subject.

(2) a. Maríu **voru** gefnir báðir drengirnir.
Mary.DAT were.3PL given.3PL.M both boys.the.NOM
'Mary was given both the boys.'

b. * Maríu **vorum** gefnir við.
Mary.DAT were.1PL given.3PL.M we.NOM
Sigurðsson (1992: 71)

(3) a. Henni **höfðu** líkað þeir.
her.DAT had.3PL liked they.NOM
'She had liked them.'

b. * Henni **höfðum** líkað við.
her.DAT had.1PL liked we.NOM
Sigurðsson (1996: 38)

In several approaches to person restrictions on nominative objects, the verb must in some sense agree with both the dative subject and the nominative object (Boeckx 2000; Schütze 2003; Koopman 2006; Sigurðsson & Holmberg 2008; Ussery 2009). Agreement with the dative yields default 3rd person singular agreement (regardless of the actual person/number of the dative), as can be independently verifed by constructions with non-nominative subjects and no nominative object.

(4) a. **Hafði** þér ekki leiðst?
had.3SG you.DAT not bored
'Were you not bored?' Sigurðsson (1989: 225)

b. **Var** þér boðið í veisluna?
was.3SG you.DAT invited to party.the.ACC
'Were you invited to the party?' Sigurðsson (1989: 309)

If the verb agrees with both a dative subject and a non-3rd person object, then, there is a feature clash—the verb must simultaneously be 3rd and 1st/2nd person. However, if the paradigm of a given verb happens to exhibit syncretism for the two forms, the sentence is judged to be improved. The agreement paradigm for *líka* 'like' in the past tense has syncretism between the 1st and 3rd person singular forms, but a distinct form for 2nd person singular.[2]

(5)

	***líka* 'like'**	
1	**likaði**	líkuðum
2	líkaðir	líkuðuð
3	**líkaði**	líkuðu

Thus, when a nominative object is 1st person singular, the result is better than when it is 2nd person singular, as shown by the following judgments from Sigurðsson (1996).

(6) a. ?? Henni líkaði ég.
her.DAT liked.1/3SG I.NOM

b. * Henni líkaðir þú.
her.DAT liked.2SG you.SG.NOM Sigurðsson (1996: 33)

The claim, then, is that the availability of a form which can express both sets of features allows a way to get around the feature clash.

However, it turns out that not all syncretisms are equally ameliorative: if syncretism occurs with the clitic (*-st*), in the singular, the ameliorative effect of syncretism is stronger than other cases of syncretism, and this is not predicted by the above analyses. The data in Table 1 from Sigurðsson (1992) shows the number of speakers who judged each sentence as 'OK' or '?' on the one hand, and '??' or '*' on the other.

[2]Since *líka* 'like' is an asymmetric dative-nominative verb, where the dative is always the subject, unambiguous 1st/2nd person agreement is generally ungrammatical, so these forms (other than 1/3SG *líkaði* and 3PL) *líkuðu* are quite rare; the forms shown are what the agreeing forms would be, based on the general rules of inflection in Icelandic. Einar Freyr Sigurðsson points out to me that these forms are, however, used by many speakers with a more recent, agentive sense of the word *líka*, with a nominative subject, which refers to clicking the 'like' button on Facebook.

Table 1: Data from Sigurðsson 1992: 74-76

				OK/?	??/*
a.	Henni her.DAT	**líkaðir** liked.2.SG	þú. you.NOM	0	9
b.	Henni her.DAT	**líkaði** liked.1/3.SG	ég. I.NOM	5	4
c.	Henni her.DAT	**leiddust** bored.2/3.PL	þið. you.PL.NOM	5	4
d.	Henni her.DAT	**leiddist** bored.1/2/3.SG	ég. I.NOM	8	1

With *líka* 'like', the agreeing form of 2nd person singular is rejected by all speakers, while the syncretic 1st and 3rd person form leads to a split among speakers. The same split is witnessed for the syncretic 2nd and 3rd person plural of the *-st* verb *leiðast* 'bore'. However, the singular form *leiddist*, which is syncretic across all persons in the singular, is even more improved: only one speaker rejected it outright.

I will claim that the stronger ameliorative effect of singular *-st* syncretism is related to a more general aspect of *-st* morphology: the *-st* suffix collapses all person distinctions in the singular, and this holds across all inflectional classes, in all tenses and moods, and cannot be due to phonology. In the proposed analysis, the presence of *-st* prevents the building the 'contradictory' feature bundles which are typically assumed to cause problems in non-syncretic cases.

Table 2: Past tense forms of *líka* 'like' and *leiðast* 'bore'

	***líka* 'like'**		***leiðast* 'bore'**	
	Sg	**Pl**	**Sg**	**Pl**
1	**likaði**	líkuðum	**leiddist**	leiddumst
2	líkaðir	líkuðuð	**leiddist**	**leiddust**
3	**líkaði**	líkuðu	**leiddist**	**leiddust**

1.3 Proposal

The analysis developed here is basically as follows. Independent of DAT-NOM constructions, the *-st* suffix has a Person feature, which I will suggest to be [−PARTICIPANT], but no number feature. This allows it to be merged in an argument position under various conditions. It moves to a clitic position in the inflectional domain lower than the Number (Nm) head (which is lower than Person (Pn)), but higher than verb-phrase-internal arguments.

The singular syncretism can be understood if we adopt Kratzer's (2009) proposal that Agree involves ϕ-feature union, with the auxiliary assumption that singular number agreement is non-number-agreement (see Nevins 2011). When Nm establishes an Agree relation with a plural object, Nm takes not only the number features but its other ϕ-features as well—including person. When Pn probes, it has access to these person features only because they have been 'pied-piped' past *-st* by feature union. They are present on the next inflectional head down, Nm, in line with Baker & Willie (2010). When the object is singular, there is no such pied-piping and Pn can only Agree with *-st*.

The account can then be extended to account for object agreement restrictions in DAT-NOM constructions in a manner very similar to previous analyses (e.g. D'Alessandro 2003; Holmberg & Hróarsdóttir 2004; Schütze 2003; Sigurðsson & Holmberg 2008; Ussery 2009). Specifically, feature union builds up 'contradictory' ϕ-feature bundles, which are highly unacceptable when they correspond to different morphological exponents, but improve somewhat when all the features in this bundle are realized by identical exponents. The present account, however, can also explain why *-st* can help ameliorate such restrictions more than ordinary syncretism: when there is no featural pied-piping, it allows the syntax to proceed without building up the contrary feature bundles to begin with. The question on the present account is why such forms are not completely perfect, a question which I will address but not answer. Importantly, the present proposal allows us to understand the three-way distinction between non-syncretic forms, morphologically syncretic forms, and 'syntactically' syncretic forms.

2 *-st* syncretism

2.1 *-st* syncretism is meta-paradigmatic and not phonological

An occasionally noted fact about *-st* verbs is that they are syncretic for person in the singular, but not the plural (Einarsson 1949: 100; Thomson 1987: 434-440; Anderson 1990: 242; Taraldsen 1995: fn2; Sigurðsson & Holmberg 2008: 270). This

is odd because usually, when distinctions are collapsed like this, it is in "marked" categories like plural, rather than "unmarked" categories like singular (cf. Ottósson 2008: 334).[3] This syncretism is thus meta-paradigmatic in Harley's (2008) terms: it occurs with every verb no matter what the morphological shapes of the non-*st* variant.[4] In the following tables, I illustrate with examples across various verb classes, in both strong and weak paradigms. In Table 3, I show this for the present tense paradigm for weak *i*-verbs and weak *a*-verbs.

Table 3: Weak verbs

Weak *-i*-verb
gera 'do' – Present

	Sg	Pl	Sg	Pl
1	ger-i	ger-um		ger-um-st
2	ger-ir	ger-ið	ger-i-st	ger-i-st
3	ger-ir	ger-a		ger-a-st

Weak *-a*-verb
hagga 'budge' – Present

	Sg	Pl	Sg	Pl
1	hagg-a	högg-um		högg-um-st
2	hagg-ar	hagg-ið	hagg-a-st	hagg-i-st
3	hagg-ar	hagg-a		hagg-a-st

In Table 4, I show a full paradigm in past and present tense, indicative and subjunctive mood, for a particularly irregular strong verb *þvo* 'wash'. In both tenses and both moods, the same syncretism occurs. In the present indicative, the 2nd singular *-rð* and the 3rd singular *-r* disappear with *-st*, collapsing all person distinctions. In the singular present subjunctive, past subjunctive, and past indicative, the 2nd singular *-r* is lost with *-st*. In Table 5, we see that when the 2nd singular past tense suffix is itself *-st*, as with *bera* 'carry', distinctions are still lost and there is no sign of two *-st* morphemes.

[3] See also Aalberse & Don (2010) (and the references on page 3 there), where it is argued that neutralization is usually induced in marked categories, the plural being their primary example.
[4] Harley (2008) cites Williams (1994) as being the first to identify the "meta-paradigm" as a phenomenon.

Table 4: Strong *-rð*-verb: Full Paradigm

þvo 'wash' – Present

	Sg	Pl	Sg	Pl
1	þvæ	þvo-um		þvo-um-st
2	þvæ-rð	þvo-ið	þvæ-st	þvo-i-st
3	þvæ-r	þvo		þvo-st

þvo 'wash' – Past

	Sg	Pl	Sg	Pl
1	þvo-ð-i	þvo-ð-um		þvo-ð-um-st
2	þvo-ð-ir	þvo-ð-uð	þvo-ð-i-st	þvo-ð-u-st
3	þvo-ð-i	þvo-ð-u		þvo-ð-u-st

þvo 'wash' – Present Subjunctive

	Sg	Pl	Sg	Pl
1	þvo-i	þvo-um		þvo-um-st
2	þvo-ir	þvo-ið	þvo-i-st	þvo-i-st
3	þvo-i	þvo-i		þvo-i-st

þvo 'wash' – Past Subjunctive

	Sg	Pl	Sg	Pl
1	þvæg-i	þvægj-um		þvægj-um-st
2	þvæg-ir	þvægj-uð	þvæ-i-st	þvægj-u-st
3	þvæg-i	þvægj-u		þvægj-u-st

Table 5: Past tense of *bera* 'carry'

bera 'carry' – Past

	Sg	Pl	Sg	Pl
1	bar	bár-um		bár-um-st
2	bar-st	bár-uð	bar-st	bár-u-st
3	bar	bár-u		bár-u-st

Anderson (1990) observed that this cannot be a (solely) phonological effect. It is true that there are morphophonological effects with the *-st* suffix. For example,

dentals (*s, st, t, tt, d*) are often lost from the stem, as illustrated in Table 6. In one case, [ð] is lost from the stem in the present tense: *bregð* + *st* → *bregst*. Usually, it is retained in the present tense, as exemplified by *býðst* 'offer' in Table 7. This could be (partly) phonotactic, since *býð* and *bregð* have different coda structures. However, [ð] is usually dropped in supine forms, unless it is preceded by /*á*/ (IPA=[au]) in the supine stem form (Thomson 1987: 380), so it is also at least partly *morpho*phonological.

Table 6: Dental deletion with *-st* (data from Thomson 1987: 380)

Dental	*-st* verb	non-*st* stem				output	
-s-	kjósast	kýs	+	st	→	kýst	PRESENT
-t-	látast	læt	+	st	→	læst	PRESENT
-d-	haldast	held	+	st	→	helst	PRESENT
-st-	brestast	brast	+	st	→	brast	PAST
-tt-	hitta	hitt	+	st	→	hist	SUPINE

Table 7: Dental deletion with *-st* (data from Thomson 1987: 380)

-st verb	non-*st* stem				output	
bjóðast	býð	+	st	→	býðst	PRESENT
bregða	bregð	+	st	→	bregst	PRESENT
sjá	séð	+	st	→	sést	SUPINE
dá	dáð	+	st	→	dáðst	SUPINE

Given these facts, the question becomes whether these rules are to blame for the meta-syncretism of person in the singular. It turns out that they cannot be (Anderson 1990). One main reason is that [r] is often the form lost when *-st* is added (cf. Table 4), but the sequence [rst] is allowed, even with *-st* verbs:

(7)

Attested form	**No reason to rule out…**	**Actual Form**
færst 'move' (supine)	*þvær* + *-st* → **þværst*	*þvæst* 'wash'
berst 'carry' (SG, pres, *-st* form)	*sér* + *-st* → **sérst*	*sést* 'see'

Anderson (1990: 241) points out another near-minimal pair with **sérst*: the superlative form of 'bad' *verst* 'worst'. This shows that the loss of the inflectional *-r* suffix is not due to an incompatibility of the [r] phone with the *-st* suffix.

Another indication that phonology is not to blame for *-st* syncretism come from the form of strong *-ur* verbs, and example of which is given in Table 8. If

-st syncretism were due to phonology, we would expect the /u/ (IPA = [ʏ]) to be retained; for example, we would expect *mylur* + *-st* → **mylust*, contrary to fact. Instead, we get *mylur* + *-st* → *mylst*, and the same person syncretism in the singular as with all other verbs.[5]

Table 8: Strong verbs

	Strong *-rð*-verb *sjá* 'see' – Present				**Strong *-ð*-verb** *bera* 'carry' – Present			
	Sg	**Pl**	**Sg**	**Pl**	**Sg**	**Pl**	**Sg**	**Pl**
1	sé	sjá-um		sjá-um-st	ber	ber-um		ber-um-st
2	sé-rð	sjá-ið	sé-st	sjá-i-st	ber-ð	ber-ið	ber-st	ber-i-st
3	sé-r	sjá		sjá-st	ber	ber-a		ber-a-st

	Strong *-ur*-verb *mylja* 'pulverize' – Present			
	Sg	**Pl**	**Sg**	**Pl**
1	myl	mylj-um		mylj-um-st
2	myl-ur	mylj-ið	myl-st	mylj-i-st
3	myl-ur	mylj-a		mylj-a-st

For these reasons, the meta-paradigmatic collapse of person distinctions in the singular with all *-st* verbs cannot be due to phonology. The fact that such a heterogeneous class of suffixes fail to appear (including *-ur, -r, -rð, -ð, -st*) further suggests that it is not due to any simple kind of morphophonology either. I will discuss the particular morphological forms further in section 2.3, after presenting my syntactic account of this syncretism.

2.2 A Syntactic Account of Singular *-st* Syncretism

My syntactic account of singular *-st* syncretism relies on the following assumptions. First, Person and Number are separate probes (Sigurðsson & Holmberg

[5]The lost of certain phones, such as [ð] on *berð* + *-st* → *berst*, however, could be derived by phonological deletion. Note that in the case of *bregð* + *-st* → *bregst*, it is a non-inflectional stem [ð] that is deleted, whereas with *berð* + *-st* → *berst*, it is an inflectional suffix *-ð*; since this is the only distinguishing suffix in this subparadigm, it is not possible to tell if this is phonological deletion or not. Similarly, it may be that [ð] deletion in the 2nd person plural, illustrated for example by *þvo-ið* + *-st* → *þvo-i-st* 'wash', is similarly phonological.

2008; Béjar 2008), and more specifically are separate functional heads in the inflectional domain.[6]

(8) [Pn^0 [Nm^0 [T^0 [...]]]]

Second, ϕ-Agree is ϕ-feature union/unification, (Kratzer 2009; Harbour 2011).[7] The following definitions are taken from Kratzer (2009).

(9) a. **Agree**: The ϕ-feature set of an unindexed head α that is in need of ϕ-features (the probe) unifies with that of an item β (the goal) if β is the closest element in α's c-command domain that has the needed features. Kratzer (2009: 197)

b. **Phi-feature unification**: [Unification] applies to expressions $\alpha_1, \ldots, \alpha_n$ with associated feature sets $A_1, \ldots, A_n$ and assigns to each $\alpha_1, \ldots, \alpha_n$ the new feature set $\bigcup\{A_1, \ldots, A_n\}$. Kratzer (2009: 195)

Third, *-st* is an argument clitic which occupies a low clitic position, higher than VoiceP/vP, but lower than Pn/Nm/T, as argued extensively in Wood (2015: ch.2) (see also Eythórsson 1995; Kissock 1997; Sigurðsson 2012; Svenonius 2005; 2006). Thus, *-st* can in principle be an intervener for ϕ-Agree.

(10) [Pn^0 [Nm^0 [T^0 [... *-st* ... [(DP) $Voice^0$]]]]]

Fourth, *-st* has a person feature but no number feature. This is plausibly an independently necessary assumption if *-st* merges in an argument position (see Wood 2015), and is supported empirically by the fact that *-st* developed diachronically from a 3rd person reflexive which was itself invariant for number, and by the fact that it has no other forms—it is insensitive to person/number.[8] The specific proposal that it is [−PARTICIPANT] captures the intuition that non-1st/2nd person

[6] It is not strictly necessary in the present account that they be separate heads, as I assume, as long as Person and Number probe separately, and Number probes first.

[7] The mechansim I adopt is from Kratzer (2009), but Harbour (2011) has a similar approach. Specifically, he argues that a probe can pick up two sets of features, even if they conflict in feature values, and proposes that there are morphemes in Kiowa which are specifically sensitive to conflicting feature values; see also Oxford (2019). A reviewer points out the present proposal is conceptually similar to Kotek's (2014) notion of parasitic agreement and van Urk's (2015) notion of "Best Match", although the details of these proposals are different enough that they cannot be imported without modification into the present analysis.

[8] In addition, there is some precedent in the literature. D'Alessandro (2003) argues that Icelandic *-st* and Italian impersonal *si* have a person feature which is not 1st or 2nd person, but does not say more about exactly what kind of person feature this is. Taraldsen (1995) also claims that Italian *si* is 3rd person, and has no number feature.

features are involved that are not quite 3rd person (since there is no specification for [±AUTHOR]).

Finally, morphological singular agreement is 'non-number agreement'. Nevins (2011) has argued for something along these lines, on a number of empirical grounds, the strongest being the typological absence of 'number-case constraints' analogous to 'person-case' constraints.[9] He proposes that while Person features consist of two binary features [±AUTHOR, ±PARTICIPANT], number features are privative, and involve either the presence or absence of (for example) [PLURAL]; there is no 'singular' feature in the syntax. For the present proposal, all that is necessary is that singular DPs do not establish an Agree relation with Nm; Nevins's stronger claim entails this. However, in the derivations below I will still represent DPs as though they contain 'singular' features, for expositional purposes, since only the absence of singular agreement is important.

First, I will show how this works for a 1st person singular example without *-st* (and thus without the syncretism in question).

(11) Ég græt.
I.NOM cry.1SG
'I cry.'

(12) No-*st* — No Person syncretism in the singular

a.		Pn	Nm	DP[1SG]	→	Nm probes
b.		Pn	**Nm[DFLT(SG)]**	DP[1SG]	→	Pn probes
c.		**Pn[1SG]**	Nm[DFLT(SG)]	**DP[1SG]**	→	DP moves for EPP
d.	**DP[1SG]**	Pn[1SG]	Nm[DFLT(SG)]	⟪~~**DP[1SG]**~~⟫	→	

In step (b), Nm probes for the nearest 'plural' feature, on the assumption above, that singular agreement is 'non-number' agreement. It finds no plural feature, and so takes on the default 'singular' feature. In step (c), Pn probes for the nearest Person feature, and finds on one on the subject DP. It establishes an Agree relation (Chomsky 2001), and given the assumption that phi-Agree is phi-feature

[9] He also cites, among other things, agreement phenomena in languages like Georgian, the absence of 'inverse' constructions based on number (as opposed to person, where inverse constructions are common), and agreement attraction, which is always for number and not person.

(i) The key to the cabinets are missing.

(ii) * The story about you are interesting.

In (i), the plural *cabinets* is able to trigger number agreement on the verb, while in (ii), the embedded *you* is not able to trigger person agreement.

union, Pn takes the DP's number as well as person. Finally, in step (d), the nearest DP, which happens to be the subject, moves to the left of Pn.

Now consider what happens when *-st* is present, and intervenes between Pn and the potential DP goal.

(13) Ég meiddi-st.
I.NOM hurt.1/2/3SG-ST
'I got hurt.'

(14) *-st* — Person syncretism in the singular

a.		Pn	Nm	-st[3]	DP[1SG]	→	Nm probes
b.		Pn	**Nm[DFLT(SG)]**	-st[3]	DP[1SG]	→	Pn probes
c.		**Pn[3]**	Nm[DFLT(SG)]	**-st[3]**	DP[1SG]	→	DP moves for EPP
d.	**DP[1SG]**	Pn[3]	Nm[DFLT(SG)]	-st[3]	⟪~~**DP[1SG]**~~⟫	→	

Step (b) is the same as above. However, in step (c), *-st* intervenes between Pn and the DP—the would-be goal. Since *-st* has a Pn feature, an Agree relation is established between Pn and *-st*. Finally, the DP moves to the left of Pn to satisfy the EPP. Note that EPP, in this case, is dissociated from agreement. This is a necessary assumption about movement anyway, to account for DAT-NOM constructions, where EPP-driven movement of a dative is dissociated from agreement with nominative objects. Here, I take this dissociation to be even more general, so that Pn can Agree with *-st*, but the subject can move to satisfy the EPP (see also Baker & Willie (2010: 118), where non-finite T has an EPP feature which triggers movement, though it is not a probe for agreement).

Now consider how number agreement along with feature union can avoid syncretism.

(15) Við gef-um-st upp.
we.NOM give-1PL-ST up
'We surrender.' Kissock (1997: 3)

(16) *-st* — no Person syncretism in the plural

a.		Pn	Nm	-st[3]	DP[1PL]	→	Nm probes
b.		Pn	**Nm[1PL]**	-st[3]	**DP[1PL]**	→	Pn probes
c.		**Pn[1PL]**	**Nm[1PL]**	-st[3]	DP[1PL]	→	DP moves for EPP
d.	**DP[1PL]**	Pn[1PL]	Nm[1PL]	-st[3]	⟪~~**DP[1PL]**~~⟫	→	

When Nm probes for a plural feature, it finds one on the DP and establishes an Agree relation. Since Agree is feature union, Nm takes on the Person features of the goal as well. When Pn probes, it finds the Person features on the Nm head and

establishes an Agree relation. It picks up both the Person and Number features of the Nm head. Thus, establishing an Agree relation with the plural DP allows the Person-features to be 'pied-piped' across *-st*, preventing intervention of the latter.

2.3 The Morphology of *-st* Syncretism

So far, I have argued that *-st* has a 3rd person feature, [−PARTICIPANT], so that person agreement past *-st* is not possible. It is worth considering how the specific choice of feature leads to the morphological forms we see. It cannot be an ordinary 3rd person feature bundle (e.g. [−PARTICIPANT,−AUTHOR], because that would lead us to expect the syncretic form to look more like the non-*st* 3rd person form than it does. Consider Table 9. If it were an ordinary 3rd person feature bundle, we would expect the singular form of *myljast* to be *myl-ur-st*, when in fact it is *myl-st*.

Table 9: Strong *-ur*-verb

mylja 'pulverize' – Present

	Sg	Pl	Sg	Pl
1	myl	mylj-um		mylj-um-st
2	myl-ur	mylj-ið	myl-st	mylj-i-st
3	myl-ur	mylj-a		mylj-a-st

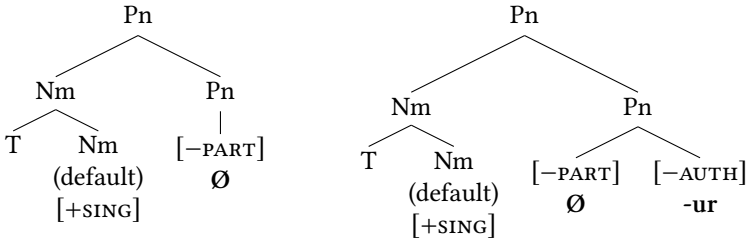
This issue is resolved if we assume that that the *-ur* ending reflects the feature [−AUTHOR]. Where there is a distinction between 2nd and 3rd person, the 2nd person morpheme is [−AUTHOR,+PARTICIPANT].

(17) a. [−AUTHOR,+PARTICIPANT] ↔ [rð], [ð], ...
b. [−AUTHOR] ↔ [r], [ur], ...
c. elsewhere ↔ Ø, [a], ...

Given this much, the intuition that *-st* is 3rd person but not fully 3rd person can be captured by saying that it is [−PARTICIPANT]. Since there are no forms to realize just this feature, it thus gets the 'elsewhere' zero agreement allomorph.[10]

[10] Another possibility, pointed out to me by Neil Myler (p.c.), is that *-st* itself is a person agreement morpheme, and that what appears to be plural person agreement is actually just number agreement with allomophs determined by person. While I find this idea appealing, it is challenged by the fact that *-st* appears on infinitive forms and supine forms, neither of which show agreement inflection of any other kind.

(18) **Singular agreement with *-st*** **'True' third-person singular agreement**



3 Ameliorative effect of *-st* syncretism

Recall from earlier that a range of analyses in the literature cited above argue that both the 1st/2nd-person agreement restrictions and the improvement in the context of syncretic forms stem from the verb agreeing in person with both the dative and the nominative. When verbal inflectional heads successfully agree with a an applied dative, they may continue to probe and, when possible, enter into a Multiple Agree relation with a nominative as well (Schütze 2003; Sigurðsson & Holmberg 2008; Ussery 2009; Atlamaz & Baker 2018; Coon & Keine to appear).[11] The Agree relation with the nominative, however, is only licit if the dative subsequently moves to the left of the probe (Holmberg & Hróarsdóttir 2004; Kučerová 2007; 2016; Sigurðsson & Holmberg 2008; see also Chomsky 2008). In this situation, the probe gets default 3rd person features from the dative (regardless of whether the dative is actually 3rd person), and whatever features the nominative bears. I adopt this analysis as well, but only for a subset of cases, namely person sycretism in the plural and non-*st* cases.

Without the analysis of *-st* given above, these accounts predict two situations: either there exists a syncretic form, and the example improves, or there exists no syncretic form, and the example is out. These predictions are summarized in (20) for the forms in (19).

(19)

	***líka* 'like'**		***leiðast* 'bore'**	
	SG	PL	SG	PL
1	**likaði**	líkuðum	**leiddist**	leiddumst
2	líkaðir	líkuðuð	**leiddist**	**leiddust**
3	**líkaði**	líkuðu	**leiddist**	**leiddust**

(20) **Predictions of 'multiple-agree' accounts**

[11] I assume that applied datives is special in this regard, and that Multiple Agree does not occur when Pn agrees with a nominative subject, the *-st* clitic, etc.

	Verb	Feature Bundle	Syncretic Form?		
a.	*leiðast* 'bore'	1/2sg+3	Yes	→	Improved
b.	*leiðast* 'bore'	2pl+3	Yes	→	Improved
c.	*leiðast* 'bore'	1pl+3	No	→	Bad
d.	*líka* 'like'	1sg+3	Yes	→	Improved
e.	*líka* 'like'	2sg+3	No	→	Bad
f.	*líka* 'like'	1pl+3	No	→	Bad
g.	*líka* 'like'	2pl+3	No	→	Bad

However, as shown in (21), there seem to be three classes of acceptability, rather than two. Most speakers found the 1st and 2nd person singular nominative objects in with the *-st* verb *leiðast* 'bore' either OK or '?'. The plural syncretism of *leiðast* in the 2nd/3rd person fared on par with the syncretism of the 1st/3rd person syncretism of the non-*st* verb *líka* 'like', where the judgments split.

(21)

	Improvement due to syncreticism			**OK/?**	**??/***
a.	Henni her.DAT	**líkaði** liked.1/3.SG	ég. I.NOM	5	4
	Henni her.DAT	**leiddust** bored.2/3.PL	þið. you.PL.NOM	5	4
	Improvement due to singular *-st* syncreticism			**OK/?**	**??/***
b.	Henni her.DAT	**leiddist** bored.1/2/3.SG	ég. I.NOM	8	1
	Henni her.DAT	**leiddist** bored.1/2/3.SG	þú. you.NOM	8	1
	No syncretism—no improvement			**OK/?**	**??/***
c.	Henni her.DAT	**líkaðir** liked.2.SG	þú. you.NOM	0	9
	Henni her.DAT	**líkuðum** liked.1.PL	við. we.NOM	0	9
	Henni her.DAT	**líkuðuð** liked.2.PL	þið. you.PL.NOM	0	9
	Henni her.DAT	**leiddumst** bored.1.PL	við. we.NOM	2	7

(Data from Sigurðsson 1992: 74-76)

I now show how the account of *-st* syncretism provided above captures these

data. Specifically, while my account admittedly predicts the singular *-st* cases to be fully grammatical (contrary to fact), it makes the cut in the right direction: it predicts a difference between (21a) and (21b). There are arguably further constraints on 1st/2nd person nominative objects which account for the fact that the examples in (21b) are not perfect (see discussion below).

First, consider improvement due solely to syncretism (Sigurðsson 1996: 33).

(22) a. ?? Henni líkaði ég.
her.DAT liked.1/3SG I

b. * Henni líkaðir þú.
her.DAT liked.2SG you.SG

(23) DAT-NOM singular non-agreement (2nd person nom)

a.		Pn	Nm	DAT[3]	NOM[2SG]	→	Nm probes
b.		Pn	**Nm[DFLT(SG)]**	DAT[3]	**NOM[2SG]**	→	Pn probes DAT/NOM
c.		**Pn[2SG,3]**	Nm[DFLT(SG)]	**DAT[3]**	**NOM[2SG]**	→	DP moves for EPP
d.	**DAT[3]**	Pn[2SG,3]	Nm[DFLT(SG)]	~~DAT[3]~~	NOM[2SG]	→	

The Nm head does not pied-pipe any Person features since NOM is singular. The Pn head agrees with both DAT and NOM, and thus has the feature bundle [2SG,3]. This is ungrammatical since there is no form syncretic for both 2nd and 3rd person singular. However, if NOM had been 1st person, there is a syncretic form, so the example improves slightly. Note that even in the syncretic form, the syntax still contains a phi-feature bundle with contradictory values.[12]

Now consider what happens when *-st* is involved.

(24) a. ? Henni leiddist ég.
her.DAT bored.1/2/3SG I

b. ? Henni leiddist þú.
her.DAT bored.1/2/3SG you.SG
Sigurðsson (1996: 33)

c. Mér leiddist hún.
me.DAT bored.1/2/3SG she.SG
'I found her boring.'
Sigurðsson (2010b: 16)

[12] I assume, following Bjorkman (2016), that when one head has two feature sets of the same type, Vocabulary Insertion must apply twice, once for each feature set, and the result is only grammatical if those two separate competitions result in the same form. For other proposals in the same spirit (but with different details), see Citko (2005), Kratzer (2009), Bhatt & Walkow (2013), Asarina (2013) and Coon & Keine (to appear), among others. Coon & Keine (to appear) develop an insightful account of ameliorative syncretism in Icelandic DAT-NOM constructions very much in the spirit of the present paper. Their analysis does not account for the special effects of singular *-st* syncretism, and something different from the present account would have to be said about why *-st*, despite being third person, intervenes for person agreement.

(25) DAT-NOM singular -st non-agreement (2nd person nom)

a.		Pn	Nm	-st[3]	DAT[3]	NOM[2SG]	→	Nm probes
b.		Pn	**Nm[DFLT(SG)]**	-st[3]	DAT[3]	NOM[2SG]	→	Pn probes *-st*
c.		**Pn[3]**	Nm[DFLT(SG)]	**-st[3]**	DAT[3]	NOM[2SG]	→	DP moves for EPP
d.	**DAT[3]**	Pn[3]	Nm[DFLT(SG)]	-st[3]	~~DAT[3]~~	NOM[2SG]	→	

This time, when Pn probes, it agrees with *-st* rather than NOM. Thus, when *-st* is present, there is no conflict. The question that arises on my approach is why these examples are marked at all. Unlike above, the syntax here never builds a contradictory feature bundle in the first place. The difference in acceptability judgments is linked to the different elements present in the syntax.

Finally, consider *-st* with a plural nominative object (Sigurðsson 1996: 33).[13]

(26) a. * Henni leiddumst við.
her.DAT bored.1PL we

b. ??Henni leiddust þið.
her.DAT bored.2/3PL you.PL

(27) DAT-NOM plural -st non-agreement (2nd person nom)

a.		Pn		Nm	-st[3]	DAT[3]	NOM[2PL]	→	Nm probes
b.		Pn		**Nm[2PL]**	-st[3]	DAT[3]	**NOM[2PL]**	→	DAT moves
c.		Pn	**DAT[3]**	**Nm[2PL]**	-st[3]	~~DAT[3]~~	NOM[2PL]	→	Pn probes DAT/Nm
d.		**Pn[2PL,3]**	**DAT[3]**	**Nm[2PL]**	-st[3]	~~DAT[3]~~	NOM[2PL]	→	DP moves for EPP
e.	**DAT[3]**	Pn[2PL,3]	~~DAT[3]~~	Nm[2PL]	-st[3]	~~DAT[3]~~	NOM[2PL]	→	

Here, featural pied-piping allows the contradictory feature bundles to be built. Nm enters into an Agree relation with the nominative, and thus gets 2nd person plural features. The dative is thus required to move to its left, as discussed above. Pn agrees with the dative and the Nm head, picking up 3rd person and 2nd person plural features. Thus, plural forms of *leiðast* 'bore' pattern like all forms of *líka* 'like': they are ungrammatical unless syncretism improves things slightly. The fact that *leiðast* 'bore' behaves in the 2nd person plural like the non-*st* verb *líka* 'like' shows that it is not the *-st* morpheme plus syncretism which improves the example per se; *-st* only improves it (beyond the non-*st* cases) when its presence prevents the syntax from building up the contradictory feature bundle which needs a syncretic form to survive. The syntactic approach to *-st* syncretism proposed for here predicts this to be the case.

As a final remark, note that nothing in the present account predicts singular 1st/2nd person objects of *leiðast* 'bore' to be less than perfect. Possibly, 1st/2nd

[13] Sigurðsson marks both examples as ungrammatical, but recall from (21a) that the improvement of (26b) over (26a) is comparable to the improvement of (22a) over (22b).

person nominatives are subject to special constraints. Cartographic work often posits particular positions for 1st/2nd person (Săvescu Cuicivara 2009). Note that even in infinitive contexts, where agreement should not be an issue, such objects are slightly degraded (Sigurðsson & Holmberg 2008: 271).

(28) ? Hún vonaðist auðvitað til að leiðast við/þið/þeir ekki mikið.
she hoped of.course for to bore.INF we/you/they.NOM not much
'She of course hoped not to find us/you/them very boring.'

Sigurðsson & Holmberg (2008: 271) suggest that this is due to the difficulty of controlling non-agentive predicates. However, it is suggestive that when agreement is not at issue, 1st/2nd person objects objects are only slightly degraded. Why they are degraded at all is a question I must set aside for now.[14]

4 Conclusion

In this paper I have proposed that syncretism can tell us about the size of feature bundles involved in Agree relations and the nature of those relations. At a general level, ϕ-features are individually active in Agree relations and in syntactic primitives, but since Agree works as unification, collections of ϕ-features are quickly assembled into bundles in the course of the derivation. But they are not always assembled in the same way. The *-st* clitic has a person feature (proposed to be [−PARTICIPANT]) which induces person syncretism in the singular for all *-st* verbs, but which also "shields" the grammar from building contradictory feature bundles in the presence of 1st and 2nd person nominative objects—again, though, only in the singular. The special status of plural in this collection of facts stems from what I have called "featural pied-piping": the presence of a plural feature leads to the establishment of an Agree relation with the consequence that person features are "pied-piped" to the Nm head—past *-st*, which now can neither induce syncretism nor shield the grammar from the person features of 1st/2nd person nominative objects. Why plural features are like this remains to be established, but if singular is really the absence of a privative number feature, then perhaps "singular agreement" *must be* the absence of number agreement. The broad implication is that the larger a feature bundle is, the harder it will be for the grammar to stop that bundle from being a goal in an Agree relation.

[14] Einar Freyr Sigurðsson points out to me that in principle, this should hold for all dative-nominative verbs, whether *-st* is present or not. However, independent factors may vary, and as far as I know there has not been any thorough study of the matter. See Sigurðsson (2010a) for a proposal that may bear on the question.

Bibliography

Aalberse, Suzanne & Jan Don. 2010. Person and number syncretisms in Dutch. *Morphology*. 1–24. http://dx.doi.org/10.1007/s11525-010-9164-3.

Anderson, Stephen R. 1990. The grammar of Icelandic verbs in *-st*. In Joan Maling & Annie Zaenen (eds.), *Modern Icelandic Syntax*, 235–273. New York: Academic Press.

Asarina, Alevtina Alya. 2013. Neutrality vs. Ambiguity in Resolution by Syncretism: Experimental Evidence and Consequences. In Yelena Fainleib, Nicholas LaCara & Yangsook Park (eds.), *Proceedings of the 41st Annual Meeting of the North East Linguistic Society*, 43–56. Amherst, MA: GLSA Publications.

Atlamaz, Ümit & Mark Baker. 2018. On partial agreement and oblique case. *Syntax* 21(3). 195–237.

Baker, Mark & Willie Udo Willie. 2010. Agreement in Ibibio: From Every Head to Every Head. *Syntax* 13(2). 99–132.

Béjar, Susana. 2008. Conditions on Phi-Agree. In Daniel Harbour, David Adger & Susana Béjar (eds.), *Phi Theory: Phi-Features across Modules and Interfaces*, 130–154. Oxford: Oxford University Press.

Béjar, Susana & Diane Massam. 1999. Multiple case checking. *Syntax* 2(2). 65–79.

Bhatt, Rajesh & Martin Walkow. 2013. Locating agreement in grammar: An argument from agreement in conjunctions. *Natural Language & Linguistic Theory* 31(4). 951–1013.

Bjorkman, Bronwyn Moore. 2016. Go get, come see: Motion verbs, morphological restrictions, and syncretism. *Natural Language and Linguistic Theory* 34(53–91).

Boeckx, Cedric. 2000. Quirky agreement. *Studia Linguistica* 54(3). 354–380.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos P. Otero & Maria Luisa Zubizarreta (eds.), *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, 133–166. Cambridge, MA: MIT Press.

Citko, Barbara. 2005. On the nature of merge: External merge, internal merge, and parallel merge. *Linguistic Inquiry* 36(4). 475–496.

Coon, Jessica & Stefan Keine. to appear. Feature gluttony. *Linguistic Inquiry*.
D'Alessandro, Roberta. 2003. On quirky subjects and the person restriction in Icelandic and Italian. In Marjo van Koppen, Joanna Sio & Mark de Vos (eds.), *Proceedings of ConSOLE XI*. http://www.hum.leiden.edu/lucl/research/sole/proceedings/console11.html.
Einarsson, Stefán. 1949. *Icelandic: Grammar, Texts, Glossary*. Baltimore: The John Hopkins Press.
Eythórsson, Thórhallur. 1995. *Verbal Syntax in the Early Germanic Languages*. Cornell University. (Doctoral Dissertation).
Harbour, Daniel. 2011. Valence and atomic number. *Linguistic Inquiry* 42(4). 561–594.
Harley, Heidi. 2008. When is a syncretism more than a syncretism? Impoverishment, metasyncretism, and underspecification. In Daniel Harbour, David Adger & Susana Béjar (eds.), *Phi theory: phi features across modules and interfaces*, 251–294. Oxford: Oxford University Press.
Hein, Johannes & Andrew Murphy. 2020. Case matching and syncretism in ATB-dependencies. *Studia Linguistica* 74(2). 254–302.
Holmberg, Anders & Thorbjörg Hróarsdóttir. 2004. Agreement and movement in Icelandic raising constructions. *Lingua* 114. 651–673.
Kissock, Madelyn. 1997. Middle verbs in Icelandic. *American Journal of Germanic Linguistics* 9(1). 1–22.
Koopman, Hilda. 2006. Agreement configurations: In defense of "Spec head". In Cedric Boeckx (ed.), *Agreement Systems*, 159–199. Philadelphia: John Benjamins.
Kotek, Hadas. 2014. Wh-fronting in a two-probe system. *Natural Language & Linguistic Theory* 32(4). 1105–1143.
Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40(2). 187–237.
Kučerová, Ivona. 2007. Agreement in Icelandic: An argument for derivational theory of intervention effects. In Erin Bainbridge & Brian Agbayani (eds.), *Proceedings of the 34th Western Conference on Linguistics*, 272–284. University of California: Fresno.
Kučerová, Ivona. 2016. Long-distance agreement in Icelandic: locality restored. *The Journal of Comparative Germanic Linguistics* 19(1). 49–74.
Nevins, Andrew. 2011. Multiple agree with clitics: person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29. 939–971.
Ottósson, Kjartan. 2008. The diffusion of systemic changes through the inflectional system: Evidence from person-number inflection in the Nordic languages

and German. In Thórhallur Eythórsson (ed.), *Grammatical Change and Linguistic Theory: The Rosendal Papers*, 329–356. Philadelphia: John Benjamins.

Oxford, Will. 2019. Inverse marking and Multiple Agree in Algonquin. *Natural Language & Linguistic Theory* 37(3). 955–996.

Pullum, Geoffrey K & Arnold M Zwicky. 1986. Phonological resolution of syntactic feature conflict. *Language* 62(4). 751–773.

Săvescu Cuicivara, Oana. 2009. *A Syntactic Analysis of Pronominal Clitic Clusters in Romance: The View from Romanian*. New York University. (Doctoral Dissertation).

Schütze, Carson T. 2003. Syncretism and double agreement with Icelandic nominative objects. In Lars-Olof Delsing, Cecilia Falk, Gunlög Josefsson & Halldór Ármann Sigurðsson (eds.), *Grammatik i fokus/Grammar in focus. Festschrift for Christer Platzack 18 November 2003*, vol. II, 295–303. Lund: Department of Scandinavian Languages.

Sigurðsson, Halldór Ármann. 1989. *Verbal syntax and case in Icelandic*. Lund University. (Doctoral Dissertation).

Sigurðsson, Halldór Ármann. 1992. Um beygingarsamræmi og málkunnáttu [On Agreement and Language Knowledge]. *Íslenskt mál og almenn málfræði* 14. 63–87.

Sigurðsson, Halldór Ármann. 1996. Icelandic finite verb agreement. *Working Papers in Scandinavian Syntax* 57. 1–46.

Sigurðsson, Halldór Ármann. 2010a. On EPP effects. *Studia Linguistica* 64(2). 159–189.

Sigurðsson, Halldór Ármann. 2010b. On the New Passive (to appear). *Syntax*.

Sigurðsson, Halldór Ármann. 2012. Minimalist C/case. *Linguistic Inquiry* 43(2). 191–227.

Sigurðsson, Halldór Ármann & Anders Holmberg. 2008. Icelandic dative intervention: person and number are separate probes. In Roberta D'Alessandro, Susan Fischer & Gunnar Hrafn Hrafnbjargarson (eds.), *Agreement Restrictions*, 251–280. Berlin: Mouton de Gruyter.

Svenonius, Peter. 2005. The Nanosyntax of the Icelandic Passive. Paper presented at the Lund Grammar Colloquium. http://goo.gl/vvmeHo.

Svenonius, Peter. 2006. Case alternations and the Icelandic passive and middle. In Satu Manninen, Diane Nelson, Katrin Hiietam, Elsi Kaiser & Virve Vihman (eds.), *Passives and Impersonals in European Languages*. Amsterdam: John Benjamins. http://goo.gl/Ihgh4S.

Taraldsen, Knut Tarald. 1995. On agreement and nominative objects in Icelandic. In Hubert Haider, Susan Olsen & Sten Vikner (eds.), *Studies in Comparative Ger-*

manic Syntax, 307–327. Papers presented at the 7th Workshop on Comparative Germanic Syntax: held at the University of Stuttgart in Nov. 1991. Dordrecht: Kluwer.

Thomson, Colin D. 1987. *Icelandic Inflections*. Hamburg: Buske.

Ussery, Cherlon. 2009. *Optionality and Variability: Syntactic Licensing Meets Morphological Spell-Out*. University of Massachusetts, Amherst. (Doctoral Dissertation).

van Urk, Coppe. 2015. *A uniform syntax for phrasal movement: A case study of Dinka Bor*. MIT. (Doctoral Dissertation).

Williams, Edwin. 1994. Remarks on lexical knowledge. *Lingua* 92. 7–34.

Wood, Jim. 2014. Reflexive *-st* verbs in Icelandic. *Natural Language & Linguistic Theory* 32(4). 1387–1425.

Wood, Jim. 2015. *Icelandic Morphosyntax and Argument Structure*. Dordrecht: Springer.

Ximenes, Cristina. 2007. Object Gap in Icelandic and Short Object Movement. Manuscript, MIT. Available on lingbuzz http://ling.auf.net/lingBuzz/000458.