

# CROSS-LINGUISTIC EVIDENCE FOR UNDERSPECIFICATION IN REFLEXIVE MORPHOSYNTAX\*

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We propose that, in both French and Icelandic, what is often called “reflexive” morphology can realize unergative syntax, which is not reflexive, as well as unaccusative syntax—and, in the case of French, also reflexive syntax. This morphology is underspecified, and thus can realize distinct structures that are independently built and interpreted by the syntax.

The examples below, from French, show a reflexive clause in (1a), an unaccusative clause in (1b), and what we will argue is an unergative clause in (1c).

- (1) a. Elle s’est offert-e pour mener le combat.  
she SE-is offered-F for lead.INF the fight  
‘She offered herself to lead the fight.’ (based on Labelle 2008)
- b. Ils se sont réuni-s.  
they.M SE are gotten.together.M-pl  
‘They got together.’ (Sportiche 1990)
- c. Ils se sont rasé-s.  
they.M SE are shaved.M-pl  
‘They shaved.’ (Sportiche 1990)

An example of reflexive underspecification in Icelandic is shown in (2). In (2a), the reflexive morpheme *-st* occurs in an unaccusative clause. In (2b), *-st* occurs in an unergative clause.

- (2) a. Hurðin opnaði-st.  
door.the.NOM opened-ST  
‘The door opened.’ (Wood 2014)
- b. Það er bari-st.  
EXPL is fought-ST  
‘Someone is fighting.’ (Anderson 1990)

In section 1 below, we present our *underspecification* analysis of reflexive morphology, and contrast it with what we will refer to as a *unification* analysis. We will then present evidence for our analysis from Icelandic in section 2, and from French in section 3. Section 4 concludes.

## 1. Underspecification versus unification

We adopt the view that true reflexive clitic/affix constructions have a passive-like syntax with a derived subject that moves from below VoiceP, and binds a Caseless anaphoric external argument at the LF interface (Marantz 1984, Sportiche 1990, McGinnis 2004). We propose that syncretism between reflexive-marked unaccusatives and unergatives in Icelandic and French—and syncretism between these and reflexives in French—arises from underspecification of the morphology that realizes the Voice head. This underspecification makes it possible for the same morphology to realize nodes with different features. In both Icelandic and French, this morphology occurs with a small semantic natural class of unergative verbs, though with different classes in the two different languages. We postulate that a post-syntactic Impoverishment rule targets these semantic classes, so that default “reflexive” morphology surfaces.

This approach contrasts with others in the literature; for example, Labelle (2008) analyzes French reflexive/reciprocal *se* as an unergative Voice head, which introduces the external argument, and asserts that the reference of the object theta-role depends on that external argument. On Labelle’s analysis, the argument with dependent reference is not syntactically projected. The external argument (here *elles* ‘they (fem.)’) moves to subject from the position of  $t_1$  in (3), and the Voice head (*se*) undergoes movement from the position of  $t_2$ .

- (3) Elles <sub>$t_1$</sub>  se <sub>$t_2$</sub>  sont [VoiceP  $t_1$   $t_2$  [VP lavées]].  
 they.F SE are washed.F.pl  
 ‘They washed (themselves).’

In a similar way, Wood (2014, 2015) analyzes a class of *-st* clauses in Icelandic as reflexive, namely what he refers to as *figure reflexives*. In (4a), the AGENT (*hann*) and the FIGURE<sup>1</sup> of the embedded prepositional phrase (*henni*) are separate entities. In the figure reflexive (4b), *hann* is both the AGENT and the FIGURE.

- (4) a. Hann tróð henni inn með hópnun.  
 he squeezed her.DAT in with the.group  
 ‘He squeezed her in with the group.’ (Wood 2014)
- b. Hann tróð-st inn með hópnun.  
 he squeezed-ST in with the.group  
 ‘He squeezed in with the group.’ (Wood 2014)

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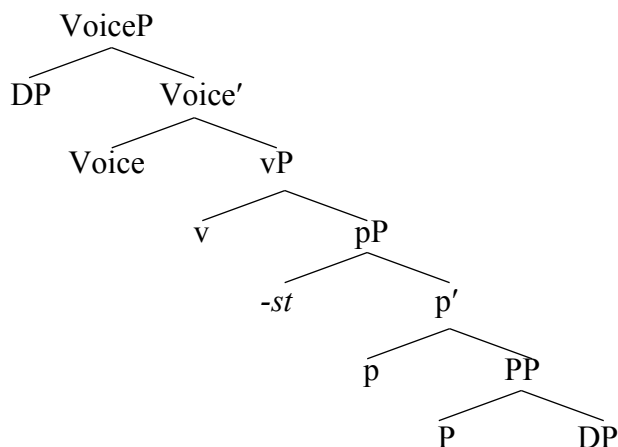
<sup>1</sup> This term is taken from the FIGURE/GROUND terminology of Talmy (1975). For example, in *I squeezed the toothpaste out of the tube*, *the toothpaste* would be the FIGURE and *the tube* would be the GROUND.

Much like Labelle (2008), Wood (2015) offers an unergative-like analysis of these reflexives. Taking it one step further, Wood unifies this analysis with his analysis of *-st* unaccusatives. In (5a), the basic transitive does not have an *-st* morpheme present. In (5b), the *-st* morpheme is present and the clause is an anticausative unaccusative.

- (5) a. Þær opnuðu dyrnar.  
 they opened the.door  
 ‘They opened the door.’ (Wood 2014)
- b. Dyrnar opnuðu-st.  
 door.the opened-ST  
 ‘The door opened.’ (Wood 2014)

Specifically, Wood proposes that both figure reflexive and anticausative uses of *-st* involve an expletive DP argument (*-st*) that can merge in a theta-position but cannot receive a theta-role. Wood’s proposed structure for figure reflexives is provided in (6). Here, *-st* merges in Spec-*pP*, which is the position associated with the FIGURE theta-role.

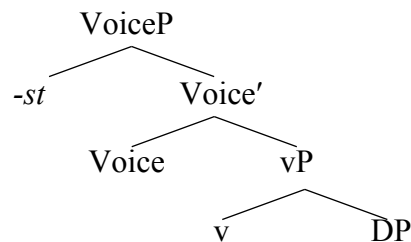
- (6) Structure of a figure reflexive (Wood 2015)



Since *-st* is expletive and thus cannot receive a theta-role, the FIGURE role introduced by *p* is passed up the tree by semantic composition and assigned to the next DP, which is the external argument. The external argument then has two theta-roles, as it is also receiving the AGENT theta-role introduced by Voice.

Parallel to his analysis of figure reflexives, Wood’s (2015) analysis of anticausatives is provided in (7). Here, *-st* merges in specifier of the VoiceP, which is usually associated with the AGENT theta-role. As *-st* cannot bear the AGENT theta-role and there is no higher DP in the VoiceP to receive the AGENT role, *-st* must merge instead with expletive Voice (and non-causative *v*). This yields an anticausative reading.

## (7) Structure of an anticausative (Wood 2015)



As the structures in (6) and (7) demonstrate, Wood’s analysis treats “figure reflexives” as syntactically similar to unergatives, with a referential subject originating in the specifier of the VoiceP, though it also has an expletive DP in the specifier of the embedded *vP*.

By contrast, we argue here that both Icelandic and French have (*-st/se*) unergatives that show syncretism with unaccusatives, but that these are *non-reflexive*. We also argue that true reflexive clitic/affix derivations have a derived subject.

## 2. Evidence from Icelandic

Evidence for our analysis comes from Icelandic, in the form of impersonal passives of unergatives, and cases where unergatives can occur without prepositional phrases.

As shown by Anderson (1990) and given in (8), *-st* often indicates an unaccusative verb, which usually alternates with a causative counterpart. It is not always the case that the counterpart is causative, as seen in (8j) where *eldast* ‘get older’ alternates with the adjective *eldri* ‘older’.

(8)	a.	gleðja-st	‘rejoice’	gleðja	‘gladden X’
	b.	kvelja-st	‘suffer’	kvelja	‘torture X’
	c.	lýja-st	‘get tired, worn out’	lýja	‘tire X out’
	d.	hefja-st	‘begin <sub>intr</sub> ’	hefja	‘begin <sub>tr</sub> ’
	e.	opna-st	‘open <sub>intr</sub> ’	opna	‘open <sub>tr</sub> ’
	f.	finna-st	‘exist, be found’	finna	‘find’
	g.	heyra-st	‘be audible’	heyra	‘hear’
	h.	týna-st	‘be/get lost’	týna	‘lose’
	i.	ágogga-st	‘be hooked (fish)’	gogga	‘catch with a hook’
	j.	elda-st	‘get older’	eldri	‘older’

The same *-st* morphology can also be used with unergatives. This is supported by the fact that impersonal passives in Icelandic are possible with unergatives as in the grammatical (9a), but are not possible unaccusatives, as in the ungrammatical (9b) (Zaenen and Maling 1990, Sigurðsson and Egerland 2009).

- (9) a. Það var synt.  
EXPL was swum  
'There was swimming.'
- b. \*Það var sokkið.  
EXPL was sunk  
( 'There was sinking.')

Icelandic figure-reflexives allow impersonal passives (Wood 2014, 2015). This supports the analysis that active figure reflexives have an unergative structure, in which the subject is the external argument. An active figure reflexive is presented in (10a), and the grammatical impersonal passive of the figure reflexive is presented in (10b).

- (10) a. Bjartur tróð-st gegnum mannþröngina.  
Bjartur.NOM squeezed-ST through the.crowd  
'Bjartur squeezed (himself) through the crowd.'
- b. \*Það var troði-st gegnum mannþröngina.  
EXPL was squeezed-ST through the.crowd  
'There was squeezing through the crowd.'

Wood's analysis predicts that figure reflexives involve two theta-roles. However, some *-st* clauses lack a second theta-role. In (11a), there is no implication that *hann* 'he' is directed *að mér* 'at me', but the structure is still unergative as it allows an impersonal passive as in (11b).

- (11) a. Nú hæði-st hann að mér.  
now mocks-ST he at me  
'Now he mocks me.'
- b. \*Oft var hæð-st að mér fyrir sérviskuna.  
often was mocked-ST at me for peculiarity.the  
'I was often mocked for my peculiarity.'
- (Wood 2015)

In order to account for examples like (11), Wood (2015) postulates an expletive *p* head. This expletive *p* is comparable to expletive Voice and *v*, in that it does not introduce a FIGURE role.

Not only are there unergative *-st* clauses that can occur without a figure role, Anderson (1990) shows that there are other roots that take *-st* without a prepositional phrase at all. This is seen in (12), as well as in each of the cases in the arbitrary class of verbs given in (13).

- (12) Það er bari-st.  
EXPL is fought-ST  
'Someone is fighting.' = (2b)

- (13) a. drauga-st ‘walk slowly, like a ghost’ (cf. *draugur* ‘ghost’)  
 b. bjálfa-st ‘behave like an idiot’ (cf. *bjálfi* ‘fool’)  
 c. ferða-st ‘travel’ (cf. *ferð* ‘journey’)  
 d. dylja-st ‘hide<sub>intr</sub>’ (cf. *djylja* ‘hide X’)  
 e. fela-st ‘hide<sub>intr</sub>’ (cf. *fela* ‘hide X’)  
 f. klæma-st ‘use obscene language’ (cf. *klæma* ‘speak badly of X’)  
 g. svelgja-st ‘swallow down the wrong throat’ (DAT subject)

The existence of such verbs supports our proposal that unergative reflexives in Icelandic are simply intransitives, as they do not involve an additional theta-role or a *pP*. Icelandic may lack true reflexives; as it seems to lack ECM reflexives (Andrews 1990, Wood 2014, 2015). An example of this is provided in (14), where *sterkur* ‘strong’ bears nominative case in agreement with the subject. It is not possible for this construction to have a reflexive reading, only the non-reflexive interpretation is allowed.

- (14) Hann tel-st [ \_\_ vera sterkur].  
 He.NOM believes-ST to be strong.NOM  
 \* ‘He believes himself to be strong.’  
 ‘He is believed to be strong.’

If the existence of such verbs supports our proposal that *-st* verbs with external arguments are unergative rather than reflexive, this raises the question of why an apparently reflexive interpretation arises in figure reflexives as in (15).

- (15) Bjartur trúð-st [PP gegnum mannþröngina].  
 Bjartur.NOM squeezed-ST through the.crowd  
 ‘Bjartur squeezed (himself) through the crowd.’

An additional question arises as to whether figure reflexives do, in fact, require a PP. This matter is under current investigation and we aim to address it in future work. If they do, as Wood’s analysis predicts, then this is arguably connected to the observations below. As we see in (16), the *way*-construction (Marantz 1992) can combine with an activity verb like *joke* or *squeeze* (meaning, for example, ‘squeeze a stress ball’), to create a predicate of directed motion. This predicate can in turn felicitously combine with a PP that describes the path of motion.

- (16) a. Morris joked his way through the crowd.  
 b. Morris squeezed his way through the crowd.

On the other hand, if only the path-PP is present, without the *way*-construction, it seems that the verb must be understood as expressing directed motion. Such a context is therefore impossible for an activity verb like *joke* (17a). It is possible for *squeeze*, but not if the verb is interpreted as describing an activity, like squeezing a stress ball. It is only possible if the verb has a directed-motion reading—moving along by squeezing (17b). Likewise, a directed-motion verb like *walk* is acceptable in this context. The path-PP

seems to be more or less optional with *walk*, but it seems necessary in order for the directed-motion reading of *squeeze* to be felicitous.

- (17) a. \*Morris joked through the crowd.  
 b. Morris squeezed through the crowd. (*\*squeezing a stress ball*)  
 c. Morris walked through the crowd.

We postulate that, as the agent of an unergative predicate of directed motion, the external argument (here, *Morris*) is interpreted as the “figure” of the “ground” described by the path-PP—not as a separate, syntactically introduced theta-role, but just by virtue of the meaning of the predicate.

### 3. Evidence from French

We have seen that Icelandic *-st* can appear on unaccusative verbs. The same is true of French *se*. In French, some of these verbs have a corresponding causative counterpart, as in (18a), while others do not, as in (18b).

- (18) a. Ils se sont réunis.  
 they.M SE are gather.M.pl  
 ‘They got together.’  
 b. Il s’est évanoui.  
 he SE-is passed.out.M.sg  
 ‘He passed out.’ (Sportiche 1990)

We propose that *se* can also occur with unergatives. French disallows impersonal passives, so these cannot be used to identify unergatives. However, impersonal clauses, which have an expletive subject and a postverbal associate, allow unaccusatives (19a) but are marginal with unergatives (19b).

- (19) a. Il s’est évanoui trois touristes.  
 EXPL SE-is passed.out.M.sg three tourists  
 ‘Three tourists passed out.’  
 b. ?Il a dormi plusieurs enfants.  
 EXPL have slept several children  
 ‘There slept several children.’ (Sportiche 1990)

An even stronger contrast emerges with the partitive clitic *en*. In unaccusatives, the postverbal associate can be associated with *en* (20a), but in unergatives this is completely ruled out (20b).

- (20) a. Il s'en est évanoui trois.  
EXPL SE-of.them is passed.out.M.sg three  
'There cooked many of them.'
- b. \*Il en a dormi plusieurs.  
EXPL of.them have slept several  
'There slept several of them.'
- (Sportiche 1990)

With *se*-unergatives, the impersonal construction is marginal (21a), and it disallows *en* (21b), as predicted by the unergative analysis for these examples. Both examples are grammatical on a middle reading, which has a derived subject.

- (21) a. Il se rasait beaucoup de soldats.  
EXPL SE shaved many of soldiers  
? 'There shaved many soldiers.'  
'There were shaved many soldiers.'
- b. Il s'en rasait beaucoup, de soldats.  
EXPL SE-of.them shaved many of soldiers  
\* 'Soldiers, many of them shaved.'  
'Soldiers, many of them were being shaved.'

Sportiche discusses the facts in (21), but analyzes them as reflexive, not unergative. For Sportiche, reflexives have an unaccusative-like derivation, in which the external argument is an anaphor bound by a derived subject. He argues that the examples in (21) are ruled out because the derived subject needs to raise overtly to bind the external argument. This analysis entails that Binding Principle A is an S-structure condition, not an LF interface condition. Such a view is at odds with the contention of the Minimalist Program (Chomsky 1995) that there is no S-structure level, and thus no possibility of S-structure conditions on well-formedness.

Labelle offers a similar example, shown in (22). Unlike Sportiche, she argues that French *se*-reflexives are unergatives, and that *en* is impossible with reflexives because they lack an internal argument.

- (22) Il s'en est lavé beaucoup dans ces douches publiques récemment.  
there SE-of.them are washed many in these showers public recently  
\* 'Many of them washed in these public showers recently.'  
'Many of them were washed in these public showers recently.'

However, Labelle (2008: 870, fn. 27) does note that there are parallel examples, reflexive, which are grammatical (23). These cases are not predicted by Labelle's unergative analysis of reflexives, nor are they predicted by Sportiche's binding-theoretic analysis of *se*-impersonals.



- (23) a. Il s'en est offert une pour mener le combat.  
 EXPL SE-of.them are offered one to lead the fight  
 'One of them offered herself to lead the fight.'
- b. Il s'en est présenté beaucoup pour cet emploi.  
 EXPL SE-of.them are presented many for this job  
 'Many of them presented themselves for this job.'

We postulate that the contrasting examples involve two different verb classes, associated with distinct syntactic structures. The well-formed examples in (23) involve true reflexives, in which the external argument is an anaphor, as Sportiche proposes—but, contra Sportiche, successfully bound at LF by the derived subject. Note that this analysis is compatible with the Minimalist claim that binding theory applies at LF.

By contrast, we postulate that the ill-formed cases—like the reflexive reading of (22)—are syntactically unergative (Labelle 2008). These cases involve a different class of verbs, which in other languages are often described as inherent reflexives. We propose that these inherent reflexive constructions are not syntactically reflexive; instead, the semantics of the verb root allows a self-directed reading in an unergative syntactic context.

There is further evidence that true reflexives in French are not unergative—namely, that French allows raising clauses based on ECM reflexives (Reinhart and Siloni 2005). For example, (24a) shows an ECM context, with the embedded subject appearing as an accusative clitic in the main clause. Meanwhile, (24b) shows a raising clause, in which the embedded subject *Jean* raises into the matrix clause and binds the anaphoric external argument *se*. In this case, the referential dependency involves arguments of distinct predicates. This follows if *se*-reflexives involve a derived subject, but it would be difficult to account for on an unergative analysis like Labelle's, in which the internal argument of the verb is interpreted as referentially dependent on the external argument.

- (24) a. Jean la considère [ \_\_ intelligente].  
 Jean her considers intelligent.F  
 'Jean considers her intelligent.'
- b. Jean se considère [ \_\_ intelligent].  
 Jean SE considers intelligent  
 'Jean considers himself intelligent.'

On the analysis we've outlined, unergative reflexives require an inherently reflexive verb root. This is because these verb roots condition the context that license reflexive morphology for unergative Voice. True reflexives are not unergative; they involve a derived subject, as Sportiche argues. In French, reflexive and reflexive-marked unergative and unaccusative Voice is inflected for person and number (*me* '1sg', *te* '2sg', *nous* '1pl', *vous* '2pl', *se* '3sg/pl'), using first- and second-person forms that syncretize with pronominal clitics. We postulate that these forms reflect agreement between Voice and the derived subject. Since they are underspecified vocabulary items, they can spell

out not only a variety of different Voice heads, but also pronominal clitics, which are presumably D heads.

#### 4. Distributed Morphology analysis

We sketch here a brief analysis in the theoretical framework of Distributed Morphology (Halle and Marantz 1993). We postulate the following Voice features: [EXTARG.R] introduces an external argument with independent reference; [EXTARG.A] introduces a Caseless anaphoric external argument; and [CASE] checks structural Case, for example on the direct object. In (26) we see how these features would be distributed across transitive, unergative, reflexive and unaccusative Voice.

(25) a. <i>transitive</i>	b. <i>unergative</i>	c. <i>reflexive</i>	d. <i>unaccusative</i>
Voice [EXTARG.R] [CASE]	Voice [EXTARG.R]	Voice [EXTARG.A]	Voice

The fact that reflexive-marking shows up only in a small natural class of unergatives in both Icelandic and French suggests that it is normally blocked by a more highly specified vocabulary item associated with Voice heads that assign an external argument role. We postulate that in the context of certain verb roots, the feature is deleted from unergatives by a post-syntactic Impoverishment rule (26). The conditioning class of roots are different for the two languages. In Icelandic it would include alternating directed-motion roots, as well as a possibly idiosyncratic set of roots, such as those listed in (13) above. In French, the conditioning class would include inherent reflexive roots.

#### (26) Impoverishment rule

$$[\text{EXTARG.R}] \rightarrow \emptyset \text{ in env. } [-\text{Case}] \{\sqrt{X}\}$$

We assume that both Icelandic and French have a highly-ranked zero allomorph for transitives and unergatives that are zero-marked, as well as a zero allomorph for unaccusatives that are zero-marked, and reflexive morphology elsewhere. In Icelandic, this elsewhere class includes reflexive-marked unaccusatives and Impoverished unergatives; we postulate that true reflexives are absent from Icelandic. In French, the elsewhere class includes true reflexives, reflexive-marked unaccusatives, and Impoverished unergatives. These are realized using person- and number-marking forms that can also be used for pronominal clitics.

#### (27) Vocabulary items: Icelandic

a. Voice [EXTARG.R]	↔	∅
b. Voice	↔	∅ in env. $\{\sqrt{Y}\}$ (zero-marked unaccusatives)
c. Voice	↔	-st

## (28) Vocabulary items: French

a.	Voice [EXTARG.R]	↔	∅
b.	Voice	↔	∅ in env. {√Y} (zero-marked unaccusatives)
c.	[SPKR, PL]	↔	<i>nous</i>
d.	[PART, PL]	↔	<i>vous</i>
e.	[SPKR]	↔	<i>me</i>
f.	[PART]	↔	<i>te</i>
g.	[ ]	↔	<i>se</i>

**5. Conclusions**

We have argued that both Icelandic and French have non-reflexive unergatives, whose Voice morphology shows syncretism with unaccusative clauses. These unergatives may imply reflexivity semantically, but we see no evidence that they express it syntactically. In French, this Voice morphology shows syncretism with true reflexives as well. These are not unergative, but involve a derived subject that binds a Caseless anaphoric external argument at LF. The underspecification-driven syncretism in Voice morphology obscures the differences among unergatives, unaccusatives and reflexives, but the syntactic evidence shows that they are distinct.

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