Semantically Subtractive Morphology

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Abstract

Morphologically complex forms are related to their bases in two ways: some alteration (perhaps vacuous) of form is correlated with some alteration (also possibly vacuous) of meaning. In a sort of ideal case, this is representable by the addition of a morpheme bearing both phonological and semantic content, comparable to a Saussurean (minimal) sign. Criticism of the claim that this is indeed the general case has focused on formal relations that cannot be seen as strictly additive: Ablaut, Umlaut, consonant shifts, metathesis, truncation and other markers that apparently change the shape of the base rather than simply adding material to it. The present paper brings into the discussion the opposite side of this coin, instances in which it is the semantics, rather than the phonology of the base form that is altered in a non-additive way in a morphologically derived form. The specific cases involve the removal of a component of meaning associated with one argument of the base, correlated with the addition of a component of form. These examples constitute a challenge for morpheme based views of morphology comparable to that posed by non-concatenative formal markers, and a challenge to the claim that morphology is always semantically monotonic.

The structure of complex words has been viewed through two quite different lenses throughout the history of modern linguistics. On one of these perspectives, words are connected to one another through their participation in a system of relations, expressed as analogies in earlier views and as rules of word formation more recently. On the other approach, complex words are formed by the (quasi-)syntactic combination of individually simplex meaningful elements or morphemes. In this picture, relations among words are represented by shared morphemes. The tension between these two views of word structure has been present since the early years of the twentieth century: Ferdinand de Saussure, widely seen as the originator of the field as we know it, held a relational view grounded in the notion of analogy, while his younger brother René, better known for his contributions to the development of Esperanto, advocated a rather strict version of a theory based on morphemes (without using that term).1

It is a pleasure to dedicate this paper to [XX XX], who may well not agree with my conclusions, but who I am convinced will be interested in the path by which I arrive at them.

Portions of this material have been presented to several generations of students at Yale, as well as to the 9th Mediterranean Morphology Meeting, Dubrovnik, 16 September, 2013; the MorphologyFest at Indiana University, 18 June, 2014; the VariaForMea winter school in Macolin, Switzerland, 1 December, 2014, and in a Master Class at the University of Queensland, 28 March, 2015. Comments and suggestions from the audiences at those events, as well as assistance with the present version from an anonymous reviewer and from Höskuldur Thráinsson and Julia Horvath, are gratefully acknowledged.

1See Anderson & de Saussure 2018 for René’s theory and commentary on the differences between his and Ferdinand’s views.
Mid-20th-century Structuralist thought about word structure centered on the theory of the morpheme, and this approach was inherited (largely without examination) by the theory of Transformational Grammar (Anderson 2016a). The idea that words are structured concatenations of minimal signs (morphemes) remains prominent, especially in introductory textbooks (such as Bauer 1988), but alternative views (‘inferential-realizational’ models in Stump’s (2001) terms) have argued against this since at least the 1960s (Anderson 2017).

The argument against morphemes is grounded in the logic of their concatenation. A morpheme, as generally understood, is an irreducible association of some (morpho-)phonological material of form with some material of semantic content. If words are formed by concatenating these elements, the operations creating words from others ought to be strictly additive, or monotonic (non-decreasing) in mathematical terms. That is, the addition of a morpheme ought to have no effect other than to add further material to the form and content of the base (perhaps allowing for empty addition in the case of “zero morphs” and “empty morphs” respectively). On the formal side, however, as already noted by e.g. Hockett (1947), many morphological operations consist in altering the base in non-monotonic ways, such as by vowel, consonant or tonal change (various sorts of apophony) or by subtraction or re-ordering (metathesis), structural relations which are straightforward on the realizational approach but problematic for the notion of words as structured combinations of morphemes (Anderson 2015).

The present paper extends this argument by considering cases in which the violations of simple additive structure associated with morphological relations occur not in the domain of form but rather that of content. I consider examples in which the apparent addition of some formal marker of a morphological category is associated not with the addition of semantic content, but rather with the deletion of content: the analog of formally subtractive morphology. For various reasons, such as the less overt and patent nature of semantic as opposed to phonological representations, the possibility of semantically non-concatenative morphology has not been widely discussed. At least one author (Koontz-Garboden 2007, 2009), however, has explicitly denied this possibility and proposed that morphology is always semantically monotonic, on the basis of consideration of examples similar to those discussed in section 1 below. We discuss Koontz-Garboden’s position critically in section 2, and conclude in section 3 that the existence of semantically non-concatenative morphology bolsters the argument against a morpheme-based view of word structure provided by its formal counterpart.

1 Semantically Subtractive Morphology

The most blatant contradiction of the claim that morphological operations are uniformly additive with respect to content would come from cases where some motivated component of the meaning of the base is deleted in the derived form. On the face of it, the conversion of a basic transitive verb to an intransitive could supply such an instance if either the agent or the patient of the base verb is suppressed in the derived intransitive. We supply an instance of each here.

1.1 Agent Suppression in Icelandic Middle Verbs

Icelandic has a large class of “middle” verbs formed by the addition of the ending –st to the stem of a basic transitive. There are a number of distinct types of these verbs in terms of their derived argument structure (Anderson 1990; Ottósson 1992; Thráinsson 2007), but an important subset consists of simple intransitives whose sole argument corresponds to the patient of the basic transitive, as in the examples in 1:

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We could represent the semantics of the bases here as something like (cause x, (become (P y))) (e.g., ‘SBJ causes OBJ to become joyful, miserable, tired, lost, etc.). The addition of the ending /–st/ evidently has the effect of deleting the highest predicate (cause x, y) from this structure (and also deleting the corresponding argument position and/or θ-role from the syntax).

Alternatively, we might propose that the –st ending actually introduces a logical operator that binds the agent of the base verb, rather than removing that argument: the analysis would look something like (2), where the argument y in the semantics of the derived verb corresponds to its subject and the generic or other argument x is not overt:

(2)

\[
\begin{align*}
\text{[gleðjast/} & \quad \exists x \ (\text{cause } x, P) \\
\text{(NP)} & \quad \text{(become glad, y)} \end{align*}
\] 

\Rightarrow 

\[
\begin{align*}
\text{[gleðjast/} & \quad \exists x \ (\text{cause } x, P) \\
\text{(NP)} & \quad \text{(become glad, y)} \end{align*}
\]

\[
\Rightarrow 

\begin{align*}
\text{gladden/} & \quad \text{‘-st’} \\
\text{NP} & \quad \Rightarrow \\
\text{rejoice/} & \quad \text{‘-st’} \\
\end{align*}

But that analysis cannot be correct. It predicts that in the interpretation of the derived –st verb, there is an implied generic or other agent responsible for the patient’s state, which is simply false: in Icelandic, there is no agent present in the interpretation of the derived verb in –st. We can see that when we compare this Icelandic construction with the English passive: in sentences like (3) in English, an agent is implied, even if none is overtly present, and can be introduced as the object of a by-phrase.

(3) At night Fred is tormented in his sleep (by thoughts of things left undone).

Icelandic also has a passive construction which allows for the expression of an object as illustrated in (4):

(4) a. Lögreglan drap hundinn \\
\text{policeman.THE killed dog.THE} \\
\text{The policeman killed the dog}

b. Hundurinn var drepinn (af lögreglunni) \\
\text{dog.THE was killed (by policeman.THE)} \\
\text{The dog was killed (by the policeman)}

The corresponding structure with a verb in the –st form, however, does not allow the expression of an agent as illustrated in (5) (Sigurðsson 1989: 268):

(5) Hundurinn drap-st (*af lögreglunni) \\
dog.THE killed-st (*by policeman.THE) \\
The dog got killed (*by the policeman)
Similarly, while Icelandic passives admit adverbs expressing agentivity, similar sentences with –st verbs do not, as illustrated in (6) (Jónsson 1995):

(6)  

a. Stóllinn var eyðilagður (af Jóni)  
    chair.the was ruined (by John)  
    The chair was ruined (by John)

b. Stóllinn eyðilagðist (*af Jóni)  
    chair-the got.ruined (*by John)  
    The chair got ruined (*by John)

c. *Stóllinn eyðilagðist viljandi  
    chair-the got.ruined purposely  
    *The chair got ruined on purpose

d. *Stóllinn eyðilagðist af ásettu ráði  
    chair-the got.ruined intentionally  
    *The chair got ruined intentionally

Passives, on the other hand, while they can occur with agent-oriented manner adverbs, cannot occur with the patient-oriented Icelandic equivalent of ‘by itself’, while the opposite is true of middles, which can occur with ‘by itself’. Notice also that the idiosyncratic dative marking on the patient — the transitive object — is preserved in the passive, but not in the middle as shown in (7) (Wood 2015):

(7)  

a. Rúðunni var splundrað (viljandi) (*af sjálfu sér)  
    window.def.dat was shattered (intentionally) (*by itself)  
    The window was shattered (intentionally) (*by itself)

b. Rúðan splundraðist (*viljandi) (af sjálfu sér)  
    window.def.nom shattered.st (*intentionally) (by itself)  
    The window shattered (*intentionally) (by itself)

c. Stóllinn var eyðilagður til þess að mótmæla stóriðju  
    chair.the was destroyed in order to protest large-scale.industry  
    The chair was destroyed to protest large-scale industry

d. *Stóllinn eyðilagðist til þess að mótmæla stóriðju  
    chair.the got.destroyed in order to protest industry  
    *The chair got destroyed to protest large-scale industry

Similarly, syntactic passives like this are consistent with the presence of purpose clauses expressing the intention of the presumed (and possibly expressed) agent. However, just as the middle voice forms are not consistent with the introduction of an agent phrase, they are also inconsistent with such a purpose clause, as shown in (8).

(8)  

a. Rúðunni var splundrað til þess að gera hann reiðan  
    window.def.dat was shattered in order to make him mad  
    The window was shattered to make him mad

b. Rúðan splundraðist (*til þess að gera hann reiðan)  
    window.def.nom shattered.st (*in order to make him mad)  
    The window shattered (*to make him mad)

c. Stóllinn var eyðilagður til þess að mótmæla stóriðju  
    chair.the was destroyed in order to protest large-scale.industry  
    The chair was destroyed to protest large-scale industry

d. *Stóllinn eyðilagðist til þess að mótmæla stóriðju  
    chair.the got.destroyed in order to protest industry  
    *The chair got destroyed to protest large-scale industry
The semantic content of these \(-st\) verbs, then, is systematically related to that of the corresponding basic transitive by the deletion of some material — the causal predicate with its agent theta role — although on the formal side, the middle voice verb involves the addition of an explicit affix. The conclusion is that unlike true passives, Icelandic ‘middle’ verbs in \(-st\) have no representation of the Agent (or corresponding causative predicate) found in the corresponding transitive verb, and thus that the operation suffixing \(-st\) in the verbs under consideration is not semantically monotonic.

The history of this construction is well established (Ottósson 1992). The affix \(-st\) is the reflex of Old Norse \(mik\!/pik\!\!/sik\), a reflexive pronoun that came to be cliticized onto the verb. After reanalysis of this element as an affix and subsequent phonological reduction, person distinctions were lost, becoming \(-mk\!/\!sk\) and subsequently just \(-st\) in all persons. The original source of the ending thus represented an operator binding the subject and object arguments. But that history is not synchronically determinative: a great many individual verbs have been reanalyzed over time, shifting from an interpretation with bound object to passive to completely impersonal passive to the loss of any causal content at all, as in examples just considered. This relation is somewhat productive in the modern language, although other classes of \(-st\) verbs are related to their bases in other ways.

It is interesting to note that in the related language Faroese, \(-st\) verbs with passive-like meanings display the same characteristics, failing to allow agent phrases in contrast with true passives (Thráinsson et al. 2004: 71) as illustrated in (9):

\[(9)\]
\[\begin{align*}
\text{a.} & \quad \text{Fólk noyddu hann av landinum}\n\text{people forced him off country.the} \\
\text{People forced him to leave the country}.
\end{align*}\]
\[\begin{align*}
\text{b.} & \quad \text{Hann varð noyddur av landinum (av myndugleikunum)} \\
\text{he was forced off country.the (by authorities.the)} \\
\text{He was forced to leave the country (by the authorities)}.
\end{align*}\]
\[\begin{align*}
\text{c.} & \quad \text{Hann noyddist av landinum (*av myndugleikunum)} \\
\text{he forced.st off country.the (*by authorities.the)} \\
\text{He was forced to leave the country (*by the authorities)}.
\end{align*}\]

Similarly, as in Icelandic, the \(-st\) verb form is incompatible with manner adverbs referring to an agent or purpose clauses, while the true passive can be accompanied by these, as shown in (10):

\[(10)\]
\[\begin{align*}
\text{a.} & \quad \text{Dyrnar opnaðust (knappliga) (*vandaliga) (*av onkrum)} \\
\text{door.the was.opened.st (suddenly) (*carefully) (by somebody)} \\
\text{The door was opened (suddenly) (*carefully) (*by somebody)}.
\end{align*}\]
\[\begin{align*}
\text{b.} & \quad \text{Dyrnar blivu (knappliga) (vandaliga) opnaðar av onkrum} \\
\text{door.the was (suddenly) (carefully) opened by somebody} \\
\text{The door was (suddenly/carefully) opened by somebody}.
\end{align*}\]
\[\begin{align*}
\text{c.} & \quad \text{Jóhanna brendist (*av óvinum sínun) (*fyrir at straffa hana)} \\
\text{Jóhanna burned.st (by enemies her.refl.) (*in order to punish her)} \\
\text{Jóhanna was burned (by her enemies) (*to punish her)}.
\end{align*}\]
\[\begin{align*}
\text{d.} & \quad \text{Jóhanna varð brend av óvinum sínun (fyrir at straffa hana)} \\
\text{Jóhanna was burned by enemies her (refl.) (in order to punish her)} \\
\text{Jóhanna was burned by her enemies (to punish her)}.
\end{align*}\]

On the other hand, (11) shows that the \(-st\) verb can appear with the patient-oriented equivalent of “by itself” while the true passive cannot.
The formation of –st verbs with passive interpretations in Faroese, then, must involve deletion of an agent argument and its associated predicate from the semantics, just as in Icelandic.

The continental Scandinavian languages Swedish, Norwegian, and Danish have a verbal form with suffixed -s (or -st in Nynorsk Norwegian) which is cognate with the –st of Icelandic and Faroese and has the same diachronic origin, but which behaves quite differently with respect to the properties examined above. In all three languages, sentences with s-passive verbs can have an overtly expressed agent, as illustrated in (12):

(12) **Swedish:** Guldringen hittades av ett par småpojkars
    the gold ring was found by a couple of small boys

**Norwegian:** Billetter til konserten selges av et lavprisselskap
    tickets to concert are sold by a low price vendor

**Danish:** Hvis folk bliver syge, vil de gerne behandles af en ekspert
    if people get sick will they rather care for an expert

The s-passive forms in all three languages also display features discussed above that are characteristic of verbs whose semantic representations contain an agent position. We do not illustrate this in detail, but some examples are provided in (13):

(13) **Swedish:** Flyktingar tas inte gärne emot (sedan bidragen sänktes)
    refugees are not gladly received (since subsidies reduced
    (The councils) don’t want to receive refugees (since the subsidies were reduced)

    [agent-oriented manner adverb gärne]

**Norwegian:** Steinen rulles ut på vegen for å stoppe trafikken
    the stone is rolled onto the road to stop the traffic (Åfarli 1992: 16)

    [agent-oriented purpose clause]

**Danish:** Hvis man handler med mennesker, bør man straffes
    if one traffics in humans must one punish

    hårdt og ufortøvet
    hard and without tolerance

    Those who traffic in human beings must be punished severely and without tolerance

    [agent-oriented adverbs]

Engdahl (1999) (from which paper some of the examples above are drawn) describes differences in sense and usage between the s-passive and the periphrastic passive with auxiliary ‘be, become’ plus past participle, but these pertain exclusively to matters such as tense, mood, the generic quality of an utterance (e.g. Danish Græsset må ikke betrædes “The grass is not to be walked on; do not walk
on the grass’) etc. In all of these languages, however, both passive formations preserve a semantic agent role (which is often left unexpressed, when the agent is unknown, irrelevant, etc.).

We see a clear contrast, then between the continental Scandinavian languages and the insular languages (Icelandic and Faroese). Both groups inherit a ’middle’ form with passive sense from an original construction with cliticized reflexive, but they differ in the way this has been reanalyzed. In the continental languages, the semantic (though not syntactic) argument structure has been preserved, while in the insular languages an agent role and associated predicate are deleted from the representation when –st verbs are formed. The contrast between the two brings out more clearly the non-monotonic nature of the formation in Icelandic and Faroese.

1.2 Patient Suppression in Navajo

In the formation of the Icelandic and Faroese –st verbs considered in section 1.1, the Agent argument of a basic transitive verb, together with a causative predicate of which it is the subject, are eliminated in the derived form. The other side of this coin would be a formation in which it is the Patient argument of the transitive that is deleted. This situation is apparently somewhat less common than what we find in Icelandic, but Navajo does appear to present such a case.

The facts at issue are provided by a Navajo construction studied by Fernald et al. (2000). Navajo has a morphological marker that is traditionally called an “indefinite” marker, marked by a glottal stop in a specific structural position in the verb. The first of the two examples in (14) below is a straightforward transitive sentence, related to the second example in which an ‘indefinite’ object is indicated by the underlined glottal stop.

\[
\text{(14)} \quad \begin{align*}
\text{a. Ashkii dibé neinikaad} & \quad \text{The boy is herding sheep} \\
\text{boy} & \quad \text{he.herds.it} \\
\text{b. Ashkii lei na'nilkaad} & \quad \text{A boy is herding (something)} \\
\text{boy} & \quad \text{he.herds.INDEF}
\end{align*}
\]

Verbs like the one in (14b) cannot have an overt direct object; there has been some discussion in the literature as to whether this marker really introduces an indefinite object, as the gloss provided would suggest, or whether on the other hand it simply de-transitivizes the verb. Fernald et al. explored this question, and showed that the purely detransitivizing analysis is correct. If an “indefinite object” verb really introduced an object referent, perhaps by existential binding of that position in the semantics (analogous to the operator in the hypothetical structure (2) above), it ought to be possible to refer to that referent later. This is not the case, however: a sentence like (15) cannot felicitously follow (14b) in discourse, since it shows agreement with an object which has not been introduced.

\[
\text{(15)} \quad \begin{align*}
\text{%Éí táididoogish} & \quad \text{he will shear it/them} \\
\text{he} & \quad \text{he.will.shear.it/Them}
\end{align*}
\]

Sentence (15) can of course follow (14a), which does introduce the required object (dibé ’sheep’). Example (14b) can only be followed by something like (16), which merely describes an activity without referring to or agreeing with an object.
1.3 ‘De-transitivization’ in Other Languages

Many languages have productive processes by which transitive verbs become intransitive, with one of the arguments (and associated semantics) simply deleted from the semantics of the result. These are often given a gloss such as ‘de-trans’ or the like, which makes it look as if the addition of the relevant morphological material has added something to the base, but it is important to recognize that what actually happens is that an operation adding an affix (or otherwise signaling a derivational category) results in subtraction from the semantic content of the base. Some examples are provided in (17): notice that it is sometimes the agent, and sometimes the patient that is eliminated in such “detransitivization.”

(17) Panare (Carib; Payne 1990): ėwachíka ‘make sneeze’, s ėwachíka ‘sneeze’; uka ‘kill’, s uka ‘die’; éka ‘fatten’, s éka ‘be fat’ etc.


San Ildefonso Tultepec Otomi (Palancar 2006): di-peng-a-ma pahińi ‘I’m washing my shirt’, di-m-pen-i ‘I’m doing my wash’ [transitive verbs such as pe ‘weave’, pē ‘steal’, koki ‘sweep’, etc. are converted to intransitive activity verbs by the nasal prefix]

Raga (Vanuatu; Vari-Bogari 2019): vasogsog ‘read (something)’, vas-vasogsog ‘be reading’; ligo ‘sew (something)’, ligo- ligo ‘be sewing’; salil ‘spill (something)’, ma-salil ‘spill (INTR)’; hera ‘tear (something)’, ma-hera ‘be torn’

Not all instances of intransitives derived from transitive bases in all languages necessarily involve subtractive semantics: in some cases, the analysis involving binding of an argument by a logical operator (existential, generic) or its identification with another argument (yielding reflexive or reciprocal interpretations) may be appropriate. We consider this possibility in section 2 below. What is important to note is that in some instances such subtractive semantics is indeed motivated, thus establishing that morphological derivation is not always monotonic (non-decreasing) in the domain of meaning.

A different sort of subtractive morphology is represented by the Vanuatu language Neverver (Barbour 2012). This language displays a detransitivizing formation which appears to be semantically subtractive in some cases. Here one function of reduplication is to eliminate the subcategorization of a direct object with a base transitive verb. There are several semantic sub-types, some of which are illustrated in (18): detransitivization can occur because the object is incorporated, or because the object is coreferential with the subject, or because the object is not mentioned or implicit in the verb’s semantics, and the verb simply expresses an action. The description in the last case suggests
that a generic object is introduced in the semantic representation, but at least some examples suggest simple detransitivization in favor of a reading restricted to the action, parallel to the Navajo formation just considered. Semantic reduction of the “patient suppression” variety is thus probably one of the possible concomitants of this formation, despite the fact that Barbour (2012: 241) says that “In each case, a particular object is implied, although it is ungrammatical to encode it explicitly.”

(18) **Incorporation:** sil ‘roast, burn’; sil-sil-kha ‘burn trees’ (na-kha ‘tree, wood’)

  **Reflexives, reciprocals:** khur ‘scratch’, ni-khur-khur ‘(I) scratched myself’; te ‘fight’, at-te-te ‘(they) fought each other’

  **‘Inherent’ objects:** min ‘drink’, min-min ‘drink (alcohol)’; rakh ‘clear (garden area)’, rakh-rakh ‘do the weeding’

Regardless of the semantic specifics, note that the addition of the reduplication element is associated with subtraction in another domain: the syntax, where a subcategorized argument is suppressed. The variable semantics simply represents various ways in which the interpretation of the verb can be adjusted in light of this lack of an argument. Detransitivization in Neverver is additive in its form, and even if generally neutral or additive in its semantics, it remains non-monotonic in another way, in that it eliminates (or restructures, depending on your view of sub-categorization requirements) a component of the base verb’s syntactic characterization.

### 2 The Nature of ‘Anti-causatives’

Koontz-Garboden (2007, 2009) considers a class of de-transitivized constructions, anti-causatives similar to the Icelandic and Faroese cases discussed above in section 1.1, in terms of the requirement that derivational morphology must be semantically monotonic, and concludes that a constraint to that effect can be maintained. He proposes an analysis on which rather than deleting the causal predicate present in the lexical semantics of the transitive verb, the operation of anticausativization simply identifies that two arguments of the verb (causer and theme), similar to the effect of reflexivization. The data for this discussion come primarily from Spanish, where in fact the anticausative form is marked precisely by the presence of a reflexive pronoun as in (19):

(19) a. Juan rompió el vaso
    Juan broke the cup
    Juan broke the cup

    b. El vaso se rompió
    the cup broke
    The cup broke

The plausibility of this analysis of anticausative formation as reflexivization can be examined in Icelandic, where (as opposed to Spanish) the two are distinct. In fact, while the anticausative in –st of a verb like splundra ‘shatter’ is fine, the corresponding syntactic reflexive is ungrammatical:

(20) a. Rúðan splundradíst
    window.the shattered.st
    The window shattered

    b. *Rúðan splundraði sér
    window.the shattered Refl
    *The window shattered itself
Similarly, the \(--st\) form of a verb like drepa ‘kill’ simply asserts that the subject died, without attributing this to the action of any agent (as seen in example (5) above). The corresponding reflexive version of the basic transitive, in contrast, does implicate causality on the part of its subject. Thus, sentence (21a) below would appear to describe some sort of animal suicide, although the agency involved need not be strictly intentional, as (21b) shows.

(21) a. Hundurinn drap sig
    The dog killed itself
    dog.the killed Refl

b. Hundurinn drap sig á því að éta of mikið af súkkulaði
    The dog killed itself by eating too much chocolate
    dog.the killed Refl on it to eat too much of chocolate

In general, the semantic interpretation of the Icelandic anticausative in \(--st\) differs from that of the corresponding reflexive of a transitive verb in not including a predicate identifying the theme as the causative source of the event, as implied by Koontz-Garboden’s analysis.

The identification of the two arguments of the transitive base in the anticausative through a reflexivization operation means that in such a sentence it is asserted that some property or state of the cup was responsible for its breaking. In Icelandic, at least, it would seem that this analysis is inconsistent with the fact that some independent cause can be explicitly provided in an adjunct PP in association with the \(--st\) verb: (Wood 2014: 1407):

(22) Rúðan splundraðist af/við þrýstingnum
    The window shattered from/at pressure.the
    window.the shattered Refl from/at pressure.the

In contrast, a similar independent cause is odd in association with the corresponding transitive verb when the source of causation is already provided by a non-agentive subject:

(23) *Stormurinn splundraði rúðunni af þrýstingnum
    *The storm shattered the window from the pressure
    storm.the shattered window.the from pressure.the

Although of course an instrument phrase can be added to the transitive sentence with an agentive subject:

(24) Jón splundraði rúðunni með hamri
    John shattered window.the with hammer
    John shattered the window with a hammer

As stressed in later discussion by Beavers & Koontz-Garboden (2013: 201), there are three principal advantages claimed for the reflexivization analysis of anti-causatives over the deletion analysis suggested in section 1.1 above. The first of these is the fact that, as observed by Haspelmath (1990), the formal marker of anticausatives with respect to a basic transitive verb is very often closely related to a reflexive marker, or even identical with it as in Spanish.

It is quite uncontroversial that the \(--st\) marker in the Icelandic and Faroese verbs discussed above in section 1.1 derives historically from a cliticized reflexive. However, that historical origin does not in itself entail a synchronic analysis of the relevant verbs as reflexive forms. Rather, it illustrates the fact that a frequent historical path of development is from syntactic reflexives to lexicalized forms of various sorts with one fewer argument. A reflexive form of a transitive verb has only a single syntactically expressed argument apart from the reflexive element, and this corresponds to
the patient or theme of the basic verb as well as to the agent. Subsequent generations of speakers may reinterpret the structure as that of a simple intransitive, as seems to be the case in the Icelandic and Faroese verbs discussed above, or as a passive, as in the continental Scandinavian languages. Indeed, many Icelandic –st verbs have a reflexive or reciprocal interpretation, as shown in (25):

(25) a. Kannski myndi hún mata mig
    perhaps will she feed me
    Maybe she will feed me

b. Liðið hefur matast og er lagst til svefn
    troop.the has feed.st and is lain.down to sleep
    The troop is fed and bedded down for the night

c. Þau tala hvort við annað
    they speak each to other
    They speak to each other

d. Þau talast við
    they speak.st to
    They speak to each other

In some instances verbs can have a reflexive or passive interpretation as well as a purely intransitive one. Thus, the –st form of the transitive verb in (26a) is ambiguous between the two distinct readings in (26b):

(26) a. Ég klæddi mig í buxurnar
    I dressed Refl in trousers.the
    I dressed myself in the trousers, I put on my trousers

b. Keisarinn klæddist nýjum fótum
    king.the dressed.st new.dat.pl clothes.dat.pl
    The emperor was dressed in new clothes
    or The emperor wore new clothes

In other cases, the reflexive interpretation of the –st verb is no longer to be seen:

(27) a. Eins og þú sért að berja frá þér hákarl
    as if you were at beat from you shark
    [It’s] as if you were fighting off a shark

b. Við höfum ákveðið að berjast til enda
    we have decided to fight to the end
    We have decided to fight to the end

This verbal form may be reflexive in origin, but as a consequence of restructuring now has a variety of non-reflexive senses (Anderson 1990). As in a variety of instances (Anderson 2016b), a synchronic generalization (e.g. in many languages, anticausatives have morphology similar to that of reflexives) does not necessarily represent a constraint imposed by the nature of grammar, but may simply reflect the paths of historical change by which a construction may arise.

The second supposed argument in favor of the reflexive analysis of anticausatives comes from the fact that in general, transitive verbs whose subjects have a strongly agentive interpretation do not enter into this construction. Thus, Spanish verbs like asesinar ‘assassinate’ do not have anticausative forms:
Wood (2015), among others, observes that Icelandic is generally subject to the same limitation: strongly agentive verbs like myrða ‘to murder’ do not usually have productively formed anticausatives. The explanation offered by Koontz-Garboden (2009) for this is that on the reflexivization analysis, the subject of the anticausative would be identified with the θ-roles of both the subject and the object of the basic transitive, yielding an anomaly where the subject bears the agent θ-role. This would appear to pose difficulties for anticausatives in general, if the θ-role corresponding to the first argument of the semantic predicate (CAUSE x, y) is that of agent, but Koontz-Garboden argues that this is not the case. Most basically causative verbs, he suggests, allow for causation by inanimates, natural forces, abstractions, etc. as well as human agents, and so he proposes that the relevant θ-role is actually something more general, designated as “effector” and not “agent”. Verbs such as murder (and its Icelandic equivalent myrða) are more restrictive in that they involve some agentive activity apart from simple causation, and so assign the agent role — thus blocking the formation of an anticausative by reflexivizing identification of the two arguments of the causal predicate.

Whether some property of the thematic subject of an –st verb is responsible (even if only in the sense of “effector”) for the event reported in a given sentence is often difficult to determine. In sentence (29) below, however, it is difficult to imagine that some property of the book itself is responsible for the fact that it can be bought in the place described:

(29) Bókin fæst í Bóksölu stúdenta
the book the gets.st in bookstore student.Gpl.
The book is available in the student bookstore

It should be noted that Icelandic has a certain number of –st verbs that do support an agentive interpretation of their subject. These are not typically formed productively from a corresponding transitive, however: either they are based on a non-verbal base (e.g. djövlast ‘work like crazy’, from the noun djöfull ‘devil’, or ólmast ‘act wildly’ from the adjective ólmur ‘savage, wild’) or they have separated sufficiently from their transitive base to constitute independent lexical items, rather than derived forms (e.g. berjast ‘fight’, originally from berja ‘beat’).

The absence of productively formed anticausatives from verbs with agentive subjects apppears to support the reflexivization analysis, as opposed to the kind of deletion of a causative semantic predicate that we support here. There is, however, a straightforward account of this fact that is quite consistent with the deletion analysis. As observed above, when the causal effect in a transitive verb is necessarily agentive, that implies that some particular action is involved in addition to the mere fact of a causal (or “effector”) relation between the subject and the resulting state. That fact in turn implies that the lexical semantic representation of the basic verb involves some additional predicate describing that action, and it is this predicate with which the θ-role of agent is associated. If the morphological formation of the anticausative (linked in Icelandic to the element –st) deletes the underspecified “effector” predicate CAUSE but does not affect the independent agentive predicate, the fact that this latter predicate remains unsaturated when the syntactic argument structure is reduced will result in exactly the semantic anomaly described by Koontz-Garboden.

The semantic separability of agentive action and the effect of that action on a theme is brought out in “object demotion” contrasts such as that in (30):
a. Fred shot at a rabbit (but missed it entirely).
b. Fred shot a rabbit (‘but missed it entirely).

This distinction is expressed systematically by productive constructions in a number of languages (Anderson 1988).

The significance of this account can also be seen in its ability to accommodate the distinct sort of detransitivization operation seen in Navajo in section 1.2 above, where it is the patient argument and not the agent that is suppressed. If we assume that the lexical representation of the transitive verb ‘herd’ in Navajo involves both a predicate describing the herding action of the subject (the shepherd) and another predicate representing the fact that this action results in the herded state of the object (the sheep), we can describe the effect of the “indefinite object” verbal formation as deleting the latter while retaining the former (which is semantically saturated by linking to the remaining subject argument without anomaly). This is opposed to the anticausative, in which only the causal relation between the subject argument of the basic verb and the resulting “effected” state is deleted.

We can conclude that the incompatibility of anticausativization with strongly agentive transitive verbs does not in fact argue for the reflexivization analysis. The third principal argument cited by Koontz-Garboden (2009) (and Beavers & Koontz-Garboden 2013) for this account is the fact that it, but not the deletion analysis, is consistent with the Monotonicity Hypothesis. But since the validity of such a principle is precisely the point at issue, this cannot be taken as an argument.

Koontz-Garboden (2009) offers additional arguments for his analysis of anticausatives as involving a reflexivization-like identification of the arguments of a basic causal predicate, rather than its deletion, from Spanish and Greek data. These derive principally from the properties of the “by itself” construction in these languages and from the possibilities of negation. Horvath & Siloni (2011a) respond to these claims, suggesting that the facts in Spanish and Greek are unclear and there is actually variation with respect to the relevant points; they also offer arguments from those languages, Hebrew, and Hungarian suggesting that indeed there is no causal predicate present in anticausatives. Beavers & Koontz-Garboden (2013) attempt to rebut Horvath & Siloni, arguing that the data offered are problematic in various ways and re-affirming the reflexivization analysis. Horvath & Siloni (2013), in turn, defend their analysis and point to problems with Beavers & Koontz-Garboden’s data.

It is not possible to analyze the details of this exchange here, but it is reasonably clear that the additional supporting arguments offered in support of the reflexivization analysis are weak and compromised by unexplained variation in speakers’ judgments. It is also clear that there are strong arguments in support of the proposition that there is no causal predicate in the interpretation of derived anticausatives. That the issue is not simply one of disagreement on unclear judgments is made clear by further arguments in favor of an account like the one argued for here, and against the reflexivization analysis of anticausatives, that are provided by Horvath & Siloni (2011b: §6) and by Schäfer & Vivanco (2016).

In fact, it is not surprising that some tendency to an interpretation similar to that of reflexivization should be found in anticausatives in Spanish: in this language, as in Italian, French and some others the anticausative construction is formally the same as the syntactic reflexive, with a pronominal element that varies in person and number with its referent. In Icelandic, in contrast, although the diachronic origin of the construction is a syntactic reflexive, the \(-st\) formation is a component of the language’s derivational morphology and not its syntax.\(^2\) We have seen above that the seman-

\(^2\)In frameworks that posit very abstract underlying syntactic structures and derive complex words in the syntax rather than lexically, some analysts (e.g. Wood 2014, 2015) treat \(-st\) as a syntactically autonomous element behaving like a clitic. Discussion of the relation between such an analysis and that assumed here would take us farther afield than
tics of the –st form differs in a corresponding way from that of the syntactic reflexive. Even if it should turn out that the reflexivization analysis were motivated for a language like Spanish, then, that would not entail a similar conclusion for languages like the insular Scandinavian ones.

3 Conclusion

We have surveyed a number of “detransitivizing” constructions in the derivational morphology of various languages, and in particular the class of anticausative verbs in –st in Icelandic and Faroese. The conclusion from these facts is apparently that the most natural analysis of their semantics involves the deletion, in conjunction with the addition of a phonological affix, of semantic material (in Icelandic, some form of (CAUSE x,y)) which is present in the lexical semantic representation of the transitive verb that is the base of the formation. Such a deletion of semantic material constitutes a violation of the requirement that derivational morphology be monotonically non-decreasing in the content domain (as well as in the domain of formal expression), and thus provides an argument against the classical notion of morphemes as purely additive elements whose assemblage into larger structures constitutes the basis of complex words.

References


seems warranted.


