Reflecting the past
The development of SE across languages

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1 Introduction

It is often noted that many Indo-European languages possess a morpheme beginning with an *s* (French *se*, Italian *si*, German *sich*, Icelandic *sig*, Serbo-Croatian *se*), which has traditionally been classified as a reflexive pronoun (cf. Puddu 2003). Throughout the paper the term SE will be used to refer to this morpheme cross-linguistically: *se* is the French SE-form*, si* is the Italian SE-form, etc. A French example of this reflexive use of SE - Reflexive SE - can be found in (1).

(1)   Jean se rase   ce   soir
        John SE shave this evening
        "John shaves tonight"

Furthermore, it has been noted by scholars (Wehrli 1986, Hulk and Cornips 1996, Steinbach 1998, Dobrovie-Sorin 1998, and Reinhart and Siloni 2005, among others) that marking reflexivity is not the only function that SE has. Some other functions of SE that are quite common, are Middle SE (2a), Ergative SE (2b), Inherent SE (2c), Reciprocal SE (2d) and Passive SE (2e).

(2)   a. le   grec   se traduit   facilement
          the Greek SE translates easily
          "Greek translates easily"

        b. la   branche se   casse
          the branch   SE breaks
          "The branch breaks"

        c. George s' évanouit
          George SE faints
          "George faints"

        d. Jean et   Max se détestent
          John and Max SE hate
           "John and Max hate each other"

        e. les pommes se mangent en hiver
          the apples   SE eat   in winter
          "Apples are eaten during winter"

Middle SE, like in (2a), is a construction used in some languages to express the middle voice (also known as facilitative, medium, mediopassive or middle-passive). Characteristic of the middle voice is the property-relation that seems to hold between subject and predicate: the predicate functions as an adjective of some sort in relation to the subject. For example, (2a) could also be paraphrased as "Greek is easy to translate", or "Greek is easily translatable".
        Ergative SE, like in (2b), is used by various languages to mark some cases of the ergative construction (also known as unaccusative, neutral, inchoative or anticausative). The ergative construction is a construction in which the grammatical subject is semantically a Theme, so in (2b) *la branche* is a Theme. Typical of Ergative SE is that all verbs that allow Ergative SE also have a transitive configuration. So for example, the transitive counterpart of (2b) is (3).

(3) Jean casse la   branche
     Jean breaks the branch

Note that in (3) *la branche* has the same thematic role as in (2b), the Theme role.
    Inherent SE (also known as inherent reflexive, endoreflexive or idiomatic
pronominal) is the name given to those predicates with SE in which the combination
predicate and SE has become a fixed expression. The meaning of this combination
can not be derived from the meaning of the predicate without SE. A clear example of
such a predicate is the verb *tromper* in (4). When *tromper* acts as a normal transitive
verb with a DP direct object, its meaning is "to deceive", see (23a). But, when
tromper co-occurs with SE, as in (4b), it can have two different meanings. One
meaning is the reflexive meaning, which is expected in a language like French,
yielding the meaning "to deceive oneself". The other meaning, being the more
frequent one, is "to make a mistake", which is the Inherent SE reading. This Inherent
SE reading is a fixed, idiomatic expression, because it is not a derivation of the
transitive counterpart: (4a) cannot mean "Max mistakes John" or something similar.
The Reflexive SE reading in (4b) on the other hand is clearly derived from (4a). And
although *deceiving oneself* and *making a mistake* are somewhat semantically
related, it cannot be said that *making a mistake* is virtually the same as *deceiving
oneself*. This makes Inherent SE-*tromper* a very special case of *tromper*, which is
typical of Inherent SE-readings.

(4)   a. Max trompe   Jean
         Max deceives John

      b. Max se trompe
         Max SE deceives
          "Max deceives himself"   [Reflexive SE]
          "Max makes a mistake"   [Inherent SE]

Another example of Inherent SE is (2c). In (2c) the meaning of the combined
expression *s' evanouir* is "to faint". This meaning is in no way clear from the simple,
transitive predicate *evanouir*, simply because there is no such predicate: SE is
obligatory when using *evanouir*.
    Reciprocal SE (2d) is a marker of reciprocity. Reciprocity means approximately
that in a situation person A does something to person B and person B does the
same thing to person A. For more information on reciprocity see Kemmer 1993 and
Gast and Haas 2005.
The last SE-type discussed here is Passive SE (2e). In Passive SE-constructions,
just like in Ergative and Middle SE-constructions, the Theme is in subject position.
However, only with Passive SE the presence of an Agent is implied. So (2e) can
also be translated as "People eat apples during winter", but (2a) cannot be
translated as "People translate Greek easily", nor can (2b) be translated as
"Somebody breaks a branch".
    We have seen by now that there are differences between the six SE-types.
However the similarities are also apparent. For example, in many languages the SE-
morpheme used for one SE-type is identical to the one used for another type. The
question is now: "How do these six basic SE-types relate to one another?" There
have been attempts to answer this question (e.g. Wehrli 1986, Steinbach 1998,
Dobrovie-Sorin 1998). But, as we will see, none of these attempts are consistent
with the cross-linguistic data on the four SE-types. In section 2, the next section, I
will describe these previous accounts and the problems they face. Then, in section

3, I will propose a framework that is able to account for the cross-linguistic SE data. In section 4, finally, I will conclude with the main points that are brought forward in this paper. In this section I will also give an overview of some further issues not covered in this paper. Future research will hopefully shed some light on these issues.

2 Previous accounts

As I made clear in the introduction, the question that I will address in this paper is: "How are the different SE-types related?" This relational question can be split into sub-questions. One such question that has received a lot of attention in the literature is the locus question: "In which language module does the SE-form get its appropriate SE-type?" There have been three kinds of approaches to this question: pre-syntactic, syntactic and post-syntactic approaches. Pre-syntactic approaches argue that the SE-type gets appointed in the lexicon. Syntactic approaches rather think that it happens in the syntax itself. Post-syntactic approaches, finally, say that sentence semantics determine the SE-type of the SE-morpheme.

  Each approach has its own weak points regarding the locus problem (see Dobrovie-Sorin 1998, Steinbach 1998, and Reinhart and Siloni 2005 for critical analyses). Part of the problem is the issue of productivity: the six SE-types are not equally productive. A SE-type is said to be productive if its use is not restricted to a small groups of verbs, but can be extended to new verb forms in the language. Cross-linguistically the types that are never productive are Ergative- and Inherent-SE. Middle SE and Passive SE are the types that are productive in all the SE-languages. Reflexive and Reciprocal SE, finally, are not that extreme: their productivity differs from language to language. In (5) a summary of this observation on the productivity of the SE-types is presented.

(5) Productivity of SE-types cross-linguistically

Inherent SE	-
Ergative SE	-
Reflexive SE	+-
Reciprocal SE	+-
Middle SE	+
Passive SE	+

What makes productivity a problem is that in neither of the approaches it is expected that the SE-types are not equally productive. A pre-syntactic approach would expect that all SE-types are not productive, because operations in the lexicon usually deal with idiosyncratic properties of individual words. Syntactic and post-syntactic approaches, on the other hand, would expect that all SE-types are productive, because syntactic and post-syntactic operations are typically not restricted to a limited number of verbs. So it seems that none of the approaches can be entirely right. To cover all the facts, one could propose a hybrid approach in the sense of Reinhart and Siloni 2005. In such a hybrid approach it is possible for each language to have some SE-types located in the lexicon, and the other types outside the lexicon. In this fashion differences in productivity between the types can be accounted for.

Yet, although the locus problem is interesting in itself, its solution is not a sufficient answer to the relational question posed at the beginning of this section. Information on the locus of the SE-types does not reveal much about the relationship between the SE-types. A better question to ask is the unification question: "What is the underlying characteristic all the SE-types have in common?" Every approach assumes such a characteristic, because of the striking similarities between the types. An answer to this question should also shed light on the question why these types are expressed by one linguistic element.

Another useful question is the classification question: "How can the SE-types be grouped together?" As we will see later, there can be patterns among the SE-types in a language. This means that one or more SE-types have one characteristic that the other ones do not have. From these patterns one can derive the internal groupings that exist among the SE-types. Such groupings will be insightful with respect to the relational question above.

In the remainder of this section I will describe four approaches that dealt with the question of unifying SE and the question of classifying SE. I will describe each approach briefly below. With each approach I will point out the problems it faces.

2.1 Reinhart and Siloni 2005

According to Reinhart and Siloni (2005) the unifying characteristic of all SE-types is that the SE-form signals the reduction of an argument. Now this may explain Ergative, Middle and Passive SE, but for Reflexive SE the case is more complex. For Reflexive SE Reinhart and Siloni propose an operation they call *bundling*. Bundling involves adjusting the verb in such a way, that it can give two theta-roles to its subject DP. Note that bundling is a stipulation: verbs do not normally give two theta-roles to one DP. Furthermore, if bundling applies to Reflexive SE, it has the problematic consequence that the SE-form itself is left without a theta-role. In German, for example, reflexive SE behaves just like a normal referential DP with a theta role. Coordination is a typical example of this:

(6) er hat mich und sich belogen
     he has me   and SE lied.to
     "He lied to me and himself"

In (6) *mich*, a coordinated DP, clearly has a theta-role. But if this is so, it is hard to see how *sich*, the other coordinated DP, is without a theta-role.
Another problem with analyzing SE as a marker of argument reduction is the existence of the long distance use of SE-forms:

(7) Jón   sag∂i a∂ ég hef∂i sviki∂   sig
     John said that I   had betrayed SE
     "John said that I betrayed him"

In (7) the Icelandic SE-form *sig* refers to DP *John* although the SE-form is in a different predicate than the DP. Now clearly, *sig* has a thematic role: it is the Theme of the 'betray'-verb. This role cannot be bundled by the 'betray'-verb, because *John* is not an argument of this verb. Neither can this role be bundled by the 'said'-verb, because it is not a role that belongs to this verb. In sum, the claim that SE is a marker of argument reduction runs into quite some problems.

The classification aspect of Reinhart and Siloni's approach also has its problems. In their approach they do not assume any grouping among the SE-types:

all the SE-types are rather autonomous types. However, if their point of view is correct then all kinds of patterns among the SE-types should be expected. This is not a correct prediction: there are for example no languages where only Reflexive and Passive SE pattern together in some way, nor are there languages where only Reciprocal and Middle SE pattern together in some way. So clearly, assuming there is no internal grouping among is not restrictive enough in the light of the data. All in all, it seems that Reinhart and Siloni's approach does not have the right answers as to how the SE-types are related.

2.2 Dobrovie-Sorin 1998

The similarities between the different SE-types led Dobrovie-Sorin (1998) to believe that there is just really one SE lexically, a subject-oriented pronoun. This SE can occur in different syntactic configurations. Furthermore, in her view, the different meanings associated with the different SE-types are derived by the syntactic structure the SE-morpheme is in. This would mean that every SE-type has its own structural configuration with which it corresponds, and that the meaning of each SE-type is epiphenomenal to its syntactic structure.

Regarding SE as a subject-oriented pronoun solves some of the problems Reinhart and Siloni's account had. If Reflexive SE is a subject-oriented pronoun, an anaphor, then the reflexive meaning is indeed epiphenomenal to the structure. With a subject oriented SE as its Theme a predicate will have both its Agent-role and its Theme-role directed at the same referent. From this fact the reflexive meaning follows automatically. The long-distance reading of the SE-form from (7) can be accounted for in a similar fashion. In (7) *sig* is very much like a regular pronoun that happens to pick out the same referent as the subject of the matrix sentence, which is exactly what a subject-oriented pronoun is supposed to do.

With the other SE-types, however, the situation is more complex, especially with Ergative, Middle and Passive SE. To avoid a reflexive reading there, Dobrovie-Sorin assumes that in those cases SE moves to a non-theta position, because of which it can no longer be an argument of the verb. But how does a SE in non-theta position trigger the argument reduction present in Ergative, Middle and Passive SE? Old English also had subject-oriented pronouns in non-theta positions:

(8) ond hig   lyfedon hym   þa   samod   on clænnysse
      and they lived   them then together on cleanness
      "and they lived then together in purity"

However, In Old-Engish using a pronoun this way did not trigger an ergative, middle or passive reading. So it is unlikely that SE can trigger ergative, middle and passive readings, while other pronouns cannot. Furthermore, the question arises why SE occurs with those readings if it does not trigger them.

Dobrovie-Sorin's approach also has problems with the classification of SE-types. First of all, she groups Ergative and Inherent SE together saying that both types lack an Agent. Indeed, this may be true for Ergative SE. In (9a-c) it is not known who initiates the described events. The subject of the Ergative SE-verbs corresponds to a Theme argument, and the Agent is unknown in each case.

(9) a. der Stock biegt sich
       the sticks bows SE
       "The stick bends"

b. die Tür öffnet sich
the door opens SE
"The door opens"

c. der Himmel verdunkelt sich
the heaven darkens SE
"The sky gets dark"

With many Inherent SE-verbs, on the other hand, it is clear who initiates the described event: the subject itself. Examples of this can be found in (10).

(10) a. Max irrt sich
Max errs SE
"Max makes a mistake"

b. Max setzt sich
Max sets SE
"Max sits down"

c. Max beeilt sich
Max hurry SE
"Max hurries"

Dobrovie-Sorin would predict that the subject of Inherent SE-verbs corresponds to a Theme argument only, just like in Ergative SE-constructions, but this cannot be true in the cases in (10). Instead it looks like the subject is both the one initiating, and the one undergoing the action, which is more reminiscent of Reflexive SE. And indeed, it is often stated that Inherent SE-verbs are derived from Reflexive SE-verbs diachronically. However, the subject in an Inherent SE-construction does not have to be Agent-like. *George* in (2c) is an example of an Inherent SE-subject that is not agent-like. So it looks like subjects of inherent SE can have either both the Agent- and the Theme-role (10a-c), or just the Theme-role (2c). The exact nature of this depends on the fixed meaning of the Inherent SE-expression. Yet, the important point here is that Inherent SE is not to be grouped together with Ergative SE. Another problem for Dobrovie-Sorin's account is Reciprocal SE. Dobrovie-Sorin treats Reciprocal Se as a special case of Reflexive SE: both SE-types belong to one unified category, reflexive/reciprocal SE. But this cannot be correct, as cross-linguistic evidence shows. In Danish, for example, Reflexive SE and Reciprocal SE belong to distinct categories. The Danish language has two SE-morphemes, which are used in different settings (see Bergeton 2004). The weak (unstressable) pronoun *sig* is used as Reflexive SE, Inherent SE and Ergative SE. An example of the reflexive use of *sig* can be found in (11a). The affix –*s*, on the other hand, is used as Reciprocal SE, Inherent SE, Ergative SE, and Passive SE. The Reciprocal SE-type of the –*s*-morpheme is illustrated in (11b).

(11) a. Peter og   Marie barberer sig
        Peter and Mary   shaves   SE
        "Peter and Mary shave themselves"   [Reflexive SE]
        NOT: "Peter and Mary shave each other"   [Reciprocal SE]

     b. Peter og   Marie kisses
        Peter and Mary kiss.SE
        "Peter and Mary kiss each other"   [Reciprocal SE]
        NOT: "Peter and Mary kiss themselves"   [Reflexive SE]

It can be seen in (11) that *sig* cannot function as Reciprocal SE, and *–s* cannot
function as Reflexive SE. So it seems that Reflexive SE and Reciprocal SE do not
automatically pattern together in a language.
    In German there is also a difference between Reciprocal and Reflexive SE, as
noted by Gast and Haas 2005. As (12) shows only Reflexive SE can be fronted in
order to get a topic-reading.

(12) a. die Spieler konnten sich nicht leiden, aber sie   mochten den Trainer
        the player   could   SE not   bear   but they liked   the coach
        "The players couldn't bear themselves, but they liked the coach"
        "The players couldn't bear each other, but they liked the coach"

     b. sich konnten die Spieler nicht leiden, aber sie   mochten den Trainer
        SE   could   the players not bear   but they liked   the coach
        "The players couldn't bear themselves, but they liked the coach."
        NOT: "The players couldn't bear each other, but they liked the coach."

It looks like Reciprocal SE rather patterns with Inherent, Ergative and Middle SE in
German, because these three SE-types cannot be fronted either:

(13) a. *sich schämt   Max
         SE   schames Max

      b. *sich schliest die Tür
          SE closes   the door

      c. *sich liest   dieses Buch leicht
          SE reads this   book easily

So, cross-linguistic data suggest that Reciprocal and Reflexive SE do not form one
distinct category separated from other SE-types, because that would mean that
Reflexive and Reciprocal are always more similar to each other than to other SE-
types. This is not the case, which is yet another problem for Dobrovie-Sorin's
account. In sum, Dobrovie-Sorin's approach is not sufficient to cover all of SE's
peculiarities.

2.3 Steinbach 1998

Steinbach (1998) describes a unifying approach of *sich*, the German SE-form. He
labels his approach a post-syntactic approach. In his approach he only takes
Reflexive, Inherent, Ergative and Middle SE into account. According to him each SE-
type has its own semantic mechanism that brings forth the associated meaning. A

first distinction regarding SE-types is the distinction between Reflexive SE and the other non-reflexive SE-types (Inherent, Ergative and Middle SE). This distinction involves thematic roles: only in Reflexive SE-constructions a second thematic role is present.

Steinbach further describes a two-way split regarding Non-reflexive SE. What separates Non-reflexive SE, according to him, is the way the implicit argument is dealt with in the SE-construction. The implicit argument is the DP that is available in the SE-less transitive construction, but not in the corresponding SE-construction. In (2b), for example, the implicit argument corresponds with *Jean* in (3). According to Steinbach, the way this implicit argument is dealt with separates Middle SE from Ergative (anticausative) SE and Inherent SE. In Middle SE-constructions this implicit argument is only reduced, which means more or less that it is present in the background. In Ergative and Inherent SE-constructions, on the other hand, the implicit argument is fully reduced, meaning that it is not present in any way (see Steinbach 1998 and Dobrovie-Sorin 1998, amongst others, for details on the status of the implicit argument).

Finally, Steinbach argues that there is a difference between Ergative and Inherent SE, which is that in Ergative SE-constructions the reduction of the implicit argument is optional, while in Inherent SE-constructions the reduction is obligatory. He bases this on the fact that Ergative SE-constructions always have a transitive counterpart, so the verb itself does not force the reduction - as with Inherent SE-verbs - although the reduction is allowed. When taken together his observations yield the following matrix:

(14)

interpretation of the reflexive pronoun	interpretation of the implicit argument	resulting interpretation
argument reflexive ->		a. reflexive interpretation
non-argument reflexive ->	saturation ->	b. middle interpretation
	reduction (optional) ->	c. anticausative interpr.
	reduction (obligatory) ->	d. inherent refl. interpr.

The first problem for Steinbach's approach is a problem concerning unification that has also been noted for Dobrovie-Sorin's (1998) approach. Steinbach too assumes that the unifying characteristic of SE is that SE is an anaphor. See above for a critical analysis of this point of view.

Steinbach's approach also runs into difficulties in the classificational area. Like Dobrovie-Sorin, Steinbach assumes that Inherent SE is a subclass of Ergative SE. See above for the view that this is not correct. Another problem for Steinbach is Reciprocal SE. According to Steinbach, Reciprocal SE is a subclass of Inherent SE. I do not share this view. Reciprocal *sich* in German is actually quite productive, which sets it apart from Inherent *sich*, which is by definition non-productive. Furthermore, an important characteristic of Inherent SE is the difference in the meaning of the verb with its transitive counterpart. With reciprocal SE there is usually no such difference. In (12a), for example, it can be seen that the German verb *leiden* ("to bear") does not have a different meaning in a reciprocal setting. To sum up, it seems that Steinbach's account is also not sufficient to model the behaviour of SE.

2.4 Wehrli 1986

Wehrli (1986) presents a unifying account of French *se*. He introduces two features that underlie the different types of *se*. The first feature is "the choice of the argument absorbed by *se*, that is, whether it is an internal argument or the external argument". Wehrli assumes that every SE-construction corresponds to a SE-less transitive construction with both an external and an internal argument. This correspondence is illustrated by (2b), an ergative SE-construction which corresponds to (3), a transitive construction with an internal and external object. According to Wehrli, in a SE-construction either the internal or the external argument that is present in the SE-less construction is absorbed by SE. The second feature is "whether or not this process has been lexicalized". Wehrli assumes that some SE-types are licensed in the syntax (which makes them productive: these SE-types can be formed from virtually every transitive verb), whereas others are licensed in the lexicon (which makes them non-productive: only a limited number of verbs allow these SE-types). From the combination of those two features four functions are possible. According to Wehrli these four functions correspond to the six SE types introduced above (Middle *se* also includes Passive *se*):

(15)

	Internal Argument	External Argument
Lexicalized	Inherent *se*	Ergative *se*
Nonlexicalized	Reflexive/reciprocal *se*	Middle *se*

A first problem for Wehrli concerns the issue of the unifying characteristic of SE. Like Reinhart and Siloni (2005), Wehrli assumes that SE is a marker of argument reduction. See the subsection on Reinhart and Siloni for a critical analysis of this assumption.

Another problem for Wehrli is the classification in (15). Lexicalization cannot be the crucial difference between Inherent and Reflexive SE. In Dutch, for example, both Inherent SE and Reflexive SE are lexicalized. Reflexive SE is possible with verbs like *wassen* ("to wash"), but not with verbs like *haten* ("to hate"):

(16) a. Max wast   zich
          Max washes SE
          "Max washes"

     b. *Max haat   zich
          Max hates SE

Because Reflexive SE is only allowed with a small group of verbs, it can be assumed that Reflexive SE is lexicalized in Dutch. Inherent SE is also possible in Dutch:

(17) a. Max schaamt zich
          Max shames SE
          "Max is ashamed"

Because Inherent SE corresponds to fixed expressions, as explained in the introduction, Inherent SE is always lexicalized, and Dutch is no exception. Now because both Reflexive and Inherent SE are lexicalized in Dutch, Wehrli's matrix would predict these two SE-types to behave alike. Obviously this is not the case.

Therefore it would seem lexicalization is not what really separates Reflexive and Inherent SE.

Another thing seems to be more crucial regarding the difference between the two SE-types: as noted in the introduction, Inherent SE-constructions are always fixed expressions, while Reflexive SE-constructions are semantically similar to their transitive counterpart. This leads to the prediction that Reflexive SE-verbs allow objects other than SE, but Inherent SE does not. This is because a Reflexive SE-verb with an object other than SE equals the transitive counterpart of this verb. Inherent SE-verbs, on the other hand, do not have such a counterpart, and therefore these verbs cannot combine with objects other than SE. The following two sentences illustrate this:

(18) a. Jean le   rase
         John him shaves
         "John shaves him"

     b. *George l'   évanouit
         George him faints

The verb *évanouir* "to faint" does not allow a personal pronoun like *le* as object: one cannot faint somebody else. The verb *raser* "to shave" on the other hand allows such a pronoun. This difference in behavior is not some side-effect from the difference in lexicalization. In Dutch, both Inherent SE and Reflexive SE are lexicalized – as was noted above – and Reflexive SE allows objects other than SE, which is disallowed in Inherent SE-constructions:

(19) a. Max wast   hem
         Max washes him
         "Max washes him"

     b. *Max schaamt hem
         Max shames   him

So it seems that SE is comparable to a normal direct object in Reflexive SE-constructions, but not in Inherent SE-constructions. And indeed, in some languages Reflexive SE behaves likes a normal DP object, while Inherent SE shows no such behavior, resembling Ergative and Middle SE in this respect. For example, as stated earlier, in German only Reflexive SE can be fronted in a sentence (12b) in order to get a topic-reading, but not Inherent SE, Ergative SE, or Middle SE (13a-c). However, according to Reinhart and Siloni (2005) this cannot be taken to mean that Reflexive SE is a direct object in every SE-language. In French, for example, Reflexive SE is probably not a direct object. Reinhart and Siloni argue convincingly that while (18a) is a transitive sentence, (1) is not. Nevertheless the crucial thing is that not lexicalization but meaning separates Reflexive SE from Inherent SE across languages.

Another problem for Wehrli's account is Reciprocal SE. As can be seen in (15), Wehrli treats Reciprocal Se as a special case of Reflexive SE: both SE-types belong to one unified category, Reflexive/reciprocal SE. This cannot be correct, as stated in the subsection on Dobrovie-Sorin 1998 above. In sum, Wehrli's approach has quite a few problems, just like the other approaches.

2.5 Conclusion

When looking at the four approaches presented here, it can be concluded that unifying and classifying SE is a difficult and complex task. Unifying SE is difficult, because of the dual status of SE. For Long Distance SE and Reflexive SE it seems that SE is best described as an anaphor, but for Ergative, Middle and Passive SE SE is best described as a marker of argument reduction. However, if this dual status is correct, then what is the unifying characteristic of SE? And if there is no such characteristic, how can we maintain the view that there is really only one SE? Classifying SE proved to be equally difficult. Take for example Inherent SE. It does not automatically pattern with Reflexive SE, because, for example, Inherent SE cannot be fronted in German. Also, because Inherent SE is not always as Agent-less as Ergative SE, there is no automatic grouping of Ergative and Inherent SE either. Finally, also between Inherent SE and Reciprocal SE there is no such grouping: Reciprocal SE may be a productive type, but Inherent SE never is.

From these three observations it can be concluded that Inherent SE is rather an autonomous category. Furthermore, the same can be said about all SE-types: every SE-type is a category on its own. Any two SE-types differ from each other in quite a number of ways. And, what is more, putting two types together in one group would be unsatisfactory because there are usually many similarities between any of these two types and some other SE-type. This would suggest that each individual SE-types are actually better perceived as an autonomous category, which is roughly Reinhart and Siloni's (2005) view on the matter. However, this view also has its downsides. This view would predict that there are no patterns among the SE-types at all, or, at least, that those patterns are distributed randomly. Yet, as we will see below, there really are principles that regulate the patterns that exist among the SE-types. However, these principles are not as clear-cut as some approaches say they are.

3. A different look at SE

The previous section ended with some important questions on the unifying and classifying aspect of SE. One question was how a unifying approach to SE can be maintained if there is no unifying characteristic of SE-types. But perhaps the question should be why we want such an approach in the first place. The answer to this lies in the history of SE-types.

3.1 The history of SE-types

It is a well-known fact that all SE-forms go back to one Indo-European SE-morpheme. This suggests that SE has existed for a long time. Therefore it might be interesting to look at the history of the SE-types as well. Have all SE-types been present from the start, or has there been a gradual increase in SE-types? The answer to this may provide us information on the nature of the SE-types.
In (20) data on the presence of SE in some Indo-European languages old and new are presented. Indeed, there seems to be some kind of gradual increase in SE-types: all languages developed Reflexive SE, but types like Passive SE did not develop everywhere. The data on the Romance the languages suggest that this increase is indeed a historical process. Latin only had Reflexive SE, Old French developed an Inherent SE-type, and Modern French has all six types. Research on
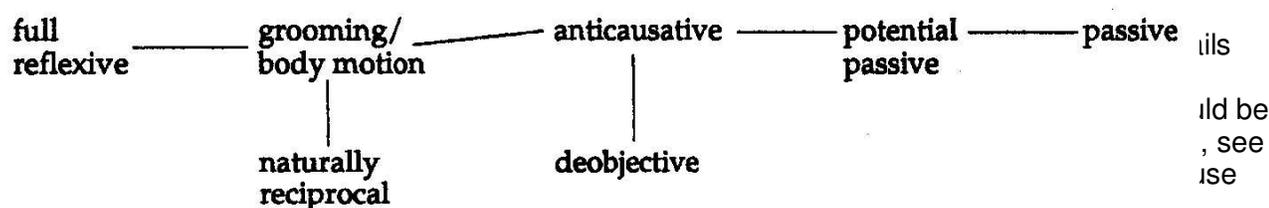
older stages of the Germanic languages suggests that probably a similar process happened there (cf. Kemmer 1993).

(20)

	Reflexive	Inherent	Reciprocal	Ergative	Middle	Passive
Latin	+					
Old French	+	+				
Dutch	+	+		+		
German	+	+	+	+	+	
Danish	+	+	+	+		+
French	+	+	+	+	+	+

A way of representing the data in (20) is a semantic map, since the six SE-types can be seen as different uses of one linguistic unit SE. A semantic map representation has the advantage of showing what types are closely related. In Haspelmath 2003 a semantic map for SE's types is presented, see (21). It should be noted, however, that this map also covers elements comparable to SE in all the languages of the world.

(21)

full
reflexive ———— grooming/ ———— anticausative ——— potential ——— passive ₁ils
            body motion   passive

            | | ₁ld be
                                                                      , see
            naturally   deobjective   ₁se
            reciprocal

(22) a. Jan beschilderde zichzelf
         John painted   SE.self
         "John bodypainted himself"
     b. *Jan   beschilderde zich
         John painted   SE

(23) a. Jan waste   zichzelf
         John washed SE.self
         "John washed himself"
     b. Jan   waste   zich
         John washed SE
          "John washed"

However, in my perspective, there is no significant semantic difference regarding the Theme role of *washing oneself* and *body-painting oneself*. The fact that *wassen* does not need the SELF-form for a reflexive interpretation is better explained by a statistical approach. It is fairly common to wash oneself, so the SELF-form is not needed for emphasis with *washing*. Body-painting oneself, on the other hand, is not all that common, and here a SELF-form is needed, just like in English, to emphasis the special nature of the situation.

   Because of this I argue that both predicates are instances of Reflexive SE. This leaves us with body motion SE. In my view body motion SE is just a case of

Inherent SE, because of the semantic difference with the transitive SE-less counterpart of such a predicate. Doing something with your own body is significantly different from doing something to somebody else:

(24) a. Jean m' arrête.
     John me stops
     "John stops me"

   b. Jean s' arrête
     John SE stops
     "John stops"

Another problematic case for Haspelmath is his natural reciprocal category. Haspelmath predicts that Reciprocal SE can only be used for a limited set of verbs for which a reciprocity reading is not unexpected. This is not correct: in both French and German Reciprocal SE is quite productive. Therefore, it looks like SE is not limited to natural reciprocal predicates.
    A final problem for Haspelmath is Passive SE. According to Haspelmath Passive SE is closely related only to Middle SE (Haspelmath's 'potential passive'). From this assumption the prediction follows that a language that has Ergative SE (Haspelmath's 'anticausative') and Passive SE should also have Middle SE. Yet, a clear counterexample to this prediction is Danish. Danish does not have Middle SE, see Bergeton. This means that Passive SE and Middle SE cannot be formed into one medio-passive SE, which is often done in the literature. Because of the Danish data, which are shown in (20), I predict that Passive SE developed directly out of Ergative SE.
    With the above modification, I present my version of the semantic map of SE-types, which can be seen in (25).

(25)
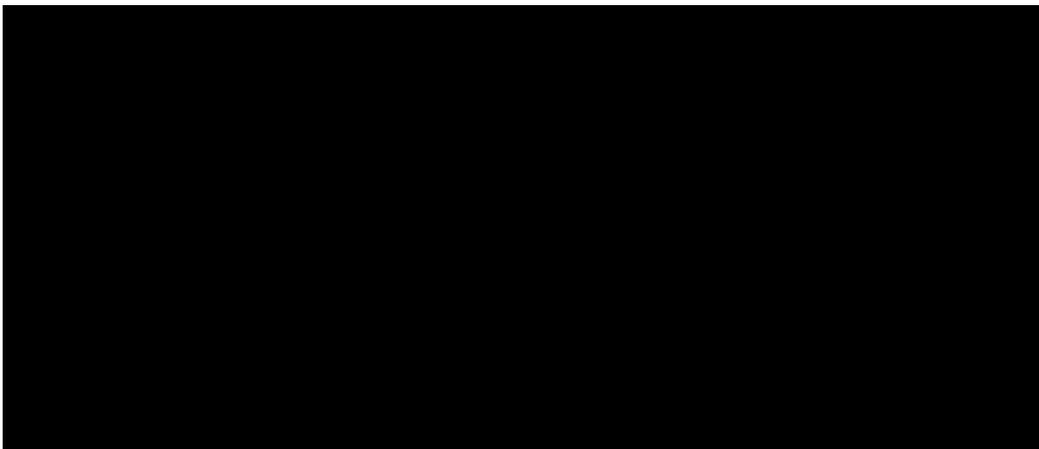
In this version of the map, the diachronic development of the SE-types is clearly visible. In the first stage a language only has Reflexive SE. The second type it can develop is Inherent SE. After this development it can develop Ergative and/or Reciprocal SE. Finally, if the language developed Ergative SE, it can also develop Middle and/or Passive SE.

The map in (25) is not only useful for describing SE's diachronic development it also solves the problem of unifying SE. In the first stage of SE's development, when its only type was the reflexive type, SE was probably really an anaphor, like Dobrovie-Sorin and Steinbach claim. Then, when SE developed other types it became a marker of argument in reduction in those types. So, presumably, the only thing all SE-types have in common is a shared ancestor. On the other hand, each SE-type has some characteristics in common with the types to which it is closely related.

Note that the map also solves the problem of classifying SE. The map in (25) predicts that the only patterns possible for the SE-types are patterns that occupy contingent areas of the semantic map. And indeed, when looking at the patterns in the different languages, it looks like this prediction is a workable hypothesis.

3.2 Morphological categories

In the previous subsection it was argued that the SE-types are best related diachronically. But it is not only SE's type that can be ordered that way. SE's forms can also be ordered in a diachronic way. A SE-morpheme can have any of the following morphological forms: strong pronoun, weak pronoun, clitic or affix. From the research on the grammaticalization of pronouns it is known that these four forms can be placed in grammaticalization hierarchy (cf. Bresnan 1998):

(26) strong pronoun > weak pronoun > clitic > affix

So if pronouns undergo grammaticalization, they tend to do it in the order described in (30). Therefore I argue that SE's forms are also ordered in a diachronic way, as stages in a process of grammaticalization.

The first stage in such a process is the strong pronoun-stage. A strong pronoun can do anything a normal DP can do as well. So, for example, a strong pronoun can be fronted. Reflexive *sich* in German is a clear example of a strong pronoun. What is interesting is that in German none of the other available SE-types can be a strong pronoun. And indeed, the other languages also show that, if a language has a strong pronoun SE-form, this form is always limited to Reflexive SE. So it seems that, somehow, strong pronouns are restricted to Reflexive SE.

A weak pronoun cannot be stressed, which sets it apart from strong pronouns. Because of this, weak pronouns cannot be fronted, among other things that require stress. Dutch *zich* is an example of a weak pronoun. German Non-reflexive *sich* is also a weak pronoun. Among the SE-languages it can be observed that Passive SE is never pronominal. Danish and Russian illustrate this: both languages have a pronominal SE as well as an affix SE and in both languages only the affix SE can have a passive meaning. Apparently it is impossible to express a passive meaning with a pronominal SE-form. That is why German does not have Passive SE: German only has pronominal SE-forms.

A clitic is a morpheme that has to be attached to a verb – a restriction that does not hold for weak pronouns. French *se* is an example of a SE-clitic. An affix, finally, is a morpheme that is part of the inflectional paradigm of the verb. This separates them from clitics, which are autonomous words. There are no restrictions on the SE-types that clitics and affixes can be associated with. To sum up, these four morphological categories – strong pronouns, weak pronouns, clitics affixes – correlate with the six SE-types in the following way:

(27)

	Reflexive	Inherent	Reciprocal	Ergative	Middle	Passive
Strong pronoun	+	-	-	-	-	-
Weak pronoun	+	+	+	+	+	-
Clitic	+	+	+	+	+	+
Affix	+	+	+	+	+	+

Now because SE-types seem to correlate with morphological form, and because both SE-type and morphological form express a diachronic dimension, (27) can be used to say things about the development of SE and how formal and functional aspects tie into this development. In the next subsection an example of such an application for the matrix in (27) is given.

3.3 Simulating SE's first development

An interesting stage in the development of SE to investigate would be the initial stage, because this stage is the furthest away from a modern perspective. It was already mentioned that SE's first type was Reflexive SE. Furthermore, (27) suggests that this Reflexive SE is a strong pronoun. So presumably, SE started out as a strong pronoun Reflexive SE-form in the Indo-European languages. The reflexive meaning of such a construction arises because of its anaphoric nature: the pronoun refers to the same person as the subject DP.

Then, in a later stage (i.e. when the Romance languages developed from Latin) the other SE-types developed from this Reflexive SE. Inherent SE probably developed directly from Reflexive SE, as noted earlier. However, the emerging Inherent SE-verbs could no longer be considered transitive verbs, because these verbs cannot take other objects than SE, and because the original two thematic roles effectively collapsed into one single role. As a consequence of this, SE could no longer be considered a strong pronoun, and was instead reanalyzed as a grammatical marker of some sort. This is how the SE-forms associated with Inherent SE lost their ability to be stressed.

But now the language has a problem: in the case of Reflexive SE the SE-form is associated with the transitive – let us call it transitive SE - and in the case of Inherent SE the SE-form is rather associated with the intransitive. These two forms behave differently, for example with respect to the ability to be stressed. So the language has to choose. The first option is to split its SE-form into two SE-forms, a transitive and an intransitive one. The downside to this is that the language now has two nearly identical SE-forms instead of one, which obviously presents all sorts of difficulties. The second option is to appoint the intransitive weak pronoun SE-form to both SE-types, in order to keep one single SE-form. But then, as a consequence, the language has to come up with a way to deal with situations that require a transitive SE-form. The German language chose the first option, while Dutch and Danish chose for the second option.

Another development introduced by Inherent SE is a change in the thematic role of the subject of an Inherent SE-verb, which was noted earlier. In some cases, see (10a-c), the subject is both the one initiating and undergoing the action. However, with other instances of Inherent SE-verbs the case is more like the one in (28).

(28) a. George endort   Jean
        George in.sleeps Jean
        "George puts John to sleep"

      b. Jean s' endort
         John SE in.sleeps
         "Jean puts himself to sleep"   [Reflexive SE]
         "John falls asleep"   [Inherent SE]

What does this example show? As (28a) indicates the verb *endormir* means originally "to put someone to sleep". When combined with SE the verb obtains the predictable reflexive meaning "putting oneself to sleep", see (28b). However putting oneself to sleep usually does not take that much effort: in most cases people just fall asleep without any effort. So because of this natural tendency, the focus of the predicate is on the "falling asleep" part, rather than on how it is caused. So it is not unexpected that from the Reflexive SE-type an Inherent SE-type develops with just a "falling asleep" meaning. But, interestingly, the subject of this Inherent SE-verb can not be considered an Agent, while with the subject of the Reflexive SE-verb this is possible. The Inherent SE-subject of *s'endormir* is really just a Theme.

      So once this development illustrated by (28b) is begun, the possibility for SE-verbs to be combined with a Theme subject comes into existence. From here it is only a small step to the appearance of Ergative SE, the distinctive features of Ergative SE being a Theme subject and an absent Agent. To sum up the story, we now have a direct path from Reflexive SE via Inherent SE towards Ergative SE. As the examples above show, the matrix in (27) can be applied to specific cases in the development of SE. It is up to future research to show how helpful the matrix is in simulating SE's development

4 Concluding remarks

In this paper I have dealt with some problems concerning SE, in particular the problem of unifying SE-types, and the problem of classifying SE-types. I showed that synchronic approaches are not sufficient for dealing with these problems. Therefore I presented a diachronic semantic map approach, see (25), that was based on Haspelmath 2003. This approach is quite successful in dealing with the two above problems. Moreover, I also showed that combining the semantic map with a diachronic take on SE's formal appearances can help us in simulating the historical development of the SE-morpheme.

      This has only been a preliminary paper, so there are many aspects of SE that have not been addressed. Some of the aspects that future research may shed some more light on are the following. First of all there are SE-types that the six that are dealt with here, that need to be integrated in the theory, for example logohoric/long distance SE and middle distance/ECM SE, the slavic object arbitrarization SE, nominative and impersonal SE, and psych verb/subject experiencer verb SE. Secondly, it may be interesting to look at the phenomena behind the SE-types, to see if they can be expressed without SE, and look at the differences between these two modes of expression. Finally it might be useful to look at the actual development of SE in languages in order to test the approach presented here.

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