

The emergence of English reflexive verbs: an analysis based on the *Oxford English Dictionary*¹

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Present-Day English is generally assumed to possess only a handful of lexicalized reflexive verbs (*absent oneself from*, *pride oneself on*, etc.) and to use reflexive pronouns neither for the marking of motion middles nor the derivation of anticausative (decausative) verbs. Such middle uses of reflexive markers (non-argument reflexives) are widespread in other European languages. Based on corpus evidence, Geniušienė (1987), Peitsara (1997) and Siemund (2010) demonstrate that English reflexive pronouns do occur in these functions and offer extensive lists of the verbs involved. I here follow up the historical development of these verbs from Middle English to Present-Day English. My analysis is based on a survey of the relevant verb entries in the *Oxford English Dictionary* (222 verbs), complemented by an examination of the *OED* quotation base. My study shows that the number of reflexive verbs in English has gradually, but steadily, increased since the emergence of complex reflexives (*myself*, *yourself*, etc.) in Middle English. They often result from lexicalization processes, but the data also show more regular patterns indicative of grammatical processes. The *Oxford English Dictionary* proves to be a rich and highly valuable data source for carrying out serious grammatical analyses.

1 Introduction

If we are to believe standard grammatical descriptions, English possesses very few reflexive verbs, i.e. verbs that obligatorily occur with the reflexive marker *myself*, *yourself*, *himself*, etc. Quirk *et al.* (1985: 357–8), for example, treat the verbs *pride*, *absent*, *avail*, *demean*, *ingratiate*, *perjure* as ‘reflexive verbs’, as these obligatorily take the reflexive pronoun. Besides these, they distinguish ‘semi-reflexive verbs’ (e.g. *behave*, *feel*, *adjust*, *prepare*) ‘where the reflexive pronoun may be omitted with little or no change of meaning’ (Quirk *et al.* 1985: 358). A similar list of ‘verbs that select mandatory reflexives’ is discussed in Huddleston & Pullum *et al.* (2002: 1487–8). Both grammars suggest that the list of obligatorily reflexive verbs in English is not very extensive.

English reflexive verbs are treated in detail in Geniušienė (1987), Peitsara (1997) and Siemund (2010). These are the only studies known to me that approach these verbs systematically based on empirical data. Geniušienė (1987) embeds her analysis in a

¹ I would like to thank Charlotte Brewer, Hans-Olav Enger, Volker Gast, Ekkehard König and John Simpson for very helpful feedback on an earlier version of this paper. Moreover, I am extremely grateful to Maike Berger and Hanne Brandt for their help in retrieving the data. Last but not least, I would like to acknowledge the constructive and challenging criticism of two anonymous *ELL* referees and the excellent editorial support. All remaining errors are my own.

wider typological discussion of reflexive verbs focusing on Balto-Slavic languages. Peitsara (1997) is a corpus-based diachronic study of reflexive marking exploring the change from simple pronouns to complex *self*-forms as reflexive markers. In Siemund (2010), I examine English reflexive pronouns in relation to grammaticalization and lexicalization processes in the middle domain. Starting from the widespread assumption that English reflexive pronouns are not used as markers of middle situation types (Kemmer 1993; König & Siemund 2000a) and have produced only a few lexicalizations in the verbal domain, I show that the marking of motion middles and anticausatives with reflexive pronouns is considerably more common than previously assumed and that English reflexive pronouns take part in numerous lexicalization processes.

Geniušienė (1987) and Siemund (2010) offer extensive lists of verbs (motion middles, anticausatives, lexicalizations) that occur together with reflexive pronouns. Nevertheless, these studies are purely synchronic, analysing a sample of fictional texts and a sample drawn from the *British National Corpus* (BNC) respectively. Peitsara (1997) also offers verb lists, though not differentiating between reflexive and middle uses of the verbs in these lists, as her focus lies on strategies of reflexive marking.

The main aim of the present contribution is to add a diachronic dimension to these studies that traces the history of reflexive-marked verbs in middle functions through time. To that end, the history of the verbs that partake in the aforementioned processes will be scrutinized using the *Oxford English Dictionary* (*OED*; Simpson & Weiner 1989) as a database. I here explore if and when the relevant verbs begin to occur with reflexive pronouns in essentially non-reflexive functions. The result is a fine-grained survey of the history of reflexive verbs in English that can inform and correct current assumptions, as reflected in grammar books and dictionaries, about grammaticalization and lexicalization processes in this domain, perhaps even in general. Moreover, my study adds a puzzle piece to the numerous changes that have occurred in the English lexicon.

In view of the fact that the *OED* has not been used extensively in diachronic linguistics beyond the realm of lexical semantics, my study can also be seen as an attempt to explore if the *OED* can be used for such purposes and what the limitations are. As all dictionary entries are massively illustrated by authentic examples, the *OED* represents a huge database of historical English and it appears reasonable to use it. Moreover, the collection of authentic examples can be tapped into directly and used as a corpus (quotation base). Following Mair (2004) and Iyeiri (2010), I argue that the *OED* represents a fascinating data source, if used with caution.

The present study is organized as follows. As we are here interested in non-reflexive uses of reflexive pronouns, this distinction first needs to be substantiated and operationalized (section 2). The central hypotheses will be laid out in section 3. In a subsequent step, I will introduce some background information on the *OED*, as this dictionary serves as the primary data source (section 4). The methodology developed and used will be laid out in section 5, followed by the data analysis in section 6. The results will be discussed in section 7. Some conclusions and ideas for future work will be developed in section 8.

2 Reflexivity and reflexive marking

2.1 *Some fundamental observations and definitions*

Situations with two participants, i.e. transitive events, where the two participants are referentially identical are called ‘reflexive’. Grammatical exponents that are dedicated to the expression of referential identity in such situations are referred to as ‘reflexive markers’.

The levels of form and meaning need to be distinguished carefully, as two-participant events can be understood reflexively without explicit marking. In English, this can be observed with verbs of grooming, as is well known. On the semantic level, the verbs in (1) mean that ‘John washed/shaved/dressed himself’.

(1) John washed/shaved/dressed.

Moreover, reflexive situations can be expressed by items whose main function does not consist in the marking of referential identity, such as full NPs or simple pronouns (2), even though, admittedly, the use of full NPs as in (2a) is highly unusual.

(2) (a) John talked about John.
(b) John noticed a snake near him. (him = John)

English has a complete paradigm of expressions, the so-called ‘*self*-forms’, that are dedicated to the expression of referential identity of two participants in a situation or event. We find different forms for all persons and numbers, and, in addition, three gender distinctions in the third person singular. English reflexive markers are complex expressions consisting of a pronominal form followed by *self*. We can distinguish two series depending on the pronoun involved (possessive/object case):

(3) (a) myself, yourself, ourselves, yourselves
(b) himself, herself, itself, themselves²

Using these reflexive pronouns for the encoding of reflexive situations results in reflexive-marked clauses, as shown in (4). In such transitive clauses, an agent acts on a patient with the reflexive expressing that agent and patient are identical.

(4) (a) Mary cut herself with a knife. (x cut y & x = y)
(b) John criticized himself. (x criticize y & x = y)

Reflexive pronouns typically occur in direct object positions, but can also be used as indirect objects or obliques. Reflexives mark referential identity within the confines of a minimal clause and cannot signal referential identity across clause boundaries.³ Apart from a few exceptional cases (e.g. *John talked to Mary about herself*), reflexive

² The status of *herself*, of course, is ambiguous. The pronoun contained in it is here analysed as object case, but this is irrelevant for the present study.

³ There are also intensifying uses of *self*-forms, as in *the director himself*. These do not interest us here. Some occurrences of *self*-forms straddle the line of reflexive markers and intensifying *self*-forms, as in *He [Zapp] sat down at the desk and opened the drawers. In the top right-hand one was an envelope addressed to himself*

pronouns enforce referential identity with the subject. The literature concerning the properties of reflexive markers is extensive, and the interested reader is referred to the relevant contributions (e.g. Faltz 1985; Geniušienė 1987; Reinhart & Reuland 1993; Huang 2000; van Gelderen 2000; Buring 2005).

2.2 *Non-reflexive uses of reflexive pronouns*

Reflexive pronouns may also be used without expressing the referential identity of two participants, or, without coindexing the structural positions of subject and object, to use a slightly different terminology.⁴ In English, this is most obvious with so-called ‘obligatorily reflexive verbs’, i.e. verbs that cannot occur without the reflexive pronoun, as in (5). With such verbs, the reflexive pronoun cannot be omitted, cannot be coordinated with a full NP, nor can another NP replace it (see (6)). Evidently, these combinations of verb and reflexive pronoun are lexicalizations, and, more precisely, cases of idiomatization in the sense of Himmelmann (2004: 27).⁵

(5) absent oneself, content oneself, ingratiate oneself, perjure oneself, pride oneself, etc.

- (6) (a) John absented *(himself) from the meeting.
 (b) John absented himself / *himself and his colleague / *his colleague from the meeting.

Another group of verbs, which also represent lexicalizations, require the reflexive pronoun when they express a particular meaning, though they may occur without the reflexive pronoun in other meanings (this is approximately the group of semi-reflexive verbs distinguished in Quirk *et al.* 1985 above). The sentences in (7) provide some examples. The situations described by the relevant verbs do not involve two participants, but only one. Hence, the reflexive pronouns do not encode the referential identity of two participants and can typically not be coordinated with or replaced by full NPs.

- (7) (a) They **committed themselves** to donating a large sum. = ‘pledge’
 (b) The children **enjoyed themselves**. = ‘have fun’
 (c) The problem began to **manifest itself** clearly. = ‘appear’

Dictionaries typically list these reflexive lexicalizations as separate entries.⁶ In addition to these, reflexive pronouns in non-reflexive uses may appear with a wide range of other verbs that broadly fall into two classes (see Geniušienė 1987; Siemund 2010). The first class contains transitive verbs that come to be used intransitively in combination with reflexive pronouns. We will refer to these as ‘anticausatives’ in what

(David Lodge, *Changing Places*, p. 62, quoted in Baker 1995). For further discussion, see Zribi-Hertz (1989), Baker (1995) and König & Siemund (2000c). Moreover, my study excludes resultative constructions of the type *He drank himself into a stupor*, as these belong to a different syntactic class.

⁴ The two uses of reflexives are also referred to as ‘argument’ versus ‘non-argument reflexives’.

⁵ Himmelmann (2004: 27) defines idiomatization as the creation of ‘a new lexeme out of two or more existing ones, which may continue to exist independently’.

⁶ For example, the *Oxford Advanced Learner’s Dictionary* (6th edition) and the *Longman Dictionary of Contemporary English* (3rd edition) list the verbs in (7) as reflexive verbs.

follows. A diagnostic property of anticausatives is that the object of the transitive variant appears as the subject in the intransitive variant, as shown in (8). Moreover, the subject is typically low in agentivity and often inanimate.⁷

- (8) (a) The problem **solved itself** quickly. (cf. Somebody solved the problem.)
 (b) This question **answers itself**. (cf. Somebody answered the question.)

Being semantically intransitive, such anticausative verbs describe situations with one participant only (one-participant events). The event described is construed as happening spontaneously. Hence, the use of the reflexive pronoun is unexpected, as it does not express the referential identity of two participants. We may say that the reflexive pronoun is used to derive anticausatives from otherwise transitive verbs. Reflexive pronouns in such contexts are used non-reflexively.

The second class involves verbs of motion and positional change, as in (9). Such sentences do not correspond to the transitive agent-patient-scheme illustrated in (4) above. Examples like (9) express self-movement, i.e. movement of a body instigated through forces inherent in the body. The reflexive pronoun is unexpected, since there are no distinct semantic roles available in these situations.⁸

- (9) (a) John **positioned himself** in the middle of the room.
 (b) They **separated themselves** from the crowd.

As Geniušienė (1987: 199) points out, reflexives found with motion verbs induce zeugmatic effects when coordinated with full NPs. Such observations show that the status of these reflexives is different from those found in the agent-patient-scheme in (4) above.

- (10) (a) ?The horse dragged itself and its foal to the water.
 (b) ?John heaved himself and his son on the truck.

With the exception of obligatorily reflexive verbs, non-reflexive uses of reflexive pronouns have received little attention in English, even though they are recognized as a theoretical problem (Fellbaum 1989; Levin 1993; Chung 2003). Geniušienė (1987), Peitsara (1997) and Siemund (2010) offer reasonably comprehensive treatments based on corpus data. For the class of anticausatives, Siemund (2010: 812) offers the examples shown in (11) drawn from the *British National Corpus*.

- (11) (a) A groove of concern **chiseled itself** down the middle of Lancaster's forehead.
 (b) It [the heap of mail] **sorted itself** naturally into three piles: junk mail, bills and Ya-Ya letters of condolence.
 (c) Agnes peered inside the shapeless felt bag covered in black jet that **styled itself** a purse.

⁷ Anticausatives, thus, fall into the broad area of diathesis, which also includes the passive.

⁸ Geniušienė (1987: 196) refers to these cases as 'autocausative'. She ascribes the semantic role of an actor to the relevant subjects, in contrast to cases like (4), where she sees the subject as having the role of an agent.

The examples in (12) provide some illustration of motion verb reflexives from the BNC, again taken from Siemund (2010: 812, 819).

- (12) (a) Sometimes she'd turn on her heel, snarling, and lunge at a dog that had gradually edged over and **positioned itself** expectantly behind her.
 (b) The creature **flings itself** on the nearest character, crazed with pain and the desire to escape.

3 Central hypotheses

Typologies of reflexives distinguish between morphologically simplex (light) and complex (heavy) reflexive markers (Faltz 1985; Geniušienė 1987; Kemmer 1993; Reinhart & Reuland 1993; Huang 2000; König & Siemund 2000a, 2005). Chinese *ziji*, Dutch *zichzelf*, English *self*-reflexives and Finnish *itse* belong to the complex type, while German *sich*, Russian *-sja*, Spanish *se* and Swedish *sig* illustrate the simplex type.

According to a widely accepted generalization (König & Siemund 2000a: 59, 2005: 195; Steinbach 2002: 307; Kaufmann 2004: 191), morphologically complex reflexives do not possess (or develop) the non-reflexive uses introduced in section 2.2 above. In other words, they are not used as markers of middle situation types, whereas simplex reflexives often are. By means of illustration, note that the simplex reflexive markers in examples (13)–(16), which are used in anticausative contexts, do not have translational equivalents in English, as English possesses complex reflexives.

- (13) German

Die Tür schloss sich hinter ihr.
 the door closed REFL behind her
 'The door closed behind her.'

- (14) Russian

Dver' za nej zakryla-s.
 door behind her closed-REFL
 'The door closed behind her.'

- (15) Spanish

Aquí se venden coches usados.
 here REFL sell cars used
 'Used cars are sold here.'

- (16) Swedish

Dörren stäng-s klockan sju.
 door.the close-REFL clock seven
 'The door is closed at seven o'clock. / The door closes at seven o'clock.'

However, Geniušienė (1987), Peitsara (1997) and Siemund (2010) present comprehensive corpus evidence, showing that English *self*-forms do occur in various non-reflexive functions (i.e. as a marker of middle situation types). Siemund (2010)

concludes that any simple generalization that excludes complex reflexives from entering the middle domain falls short of empirical reality and needs to be corrected.

In view of the overwhelming empirical evidence provided in Geniušienė (1987), Peitsara (1997) and Siemund (2010), I consider it an established fact that English complex reflexives have non-reflexive uses, even though I wish to remain agnostic about the situation in other languages with complex reflexives. The aim of the present study lies in a diachronic investigation of verbs with non-argument reflexives in English. Building on the results of the previous studies mentioned above, I introduce the hypotheses below to guide the subsequent investigation.

- Hypothesis 1: The number of verb types found with non-reflexive (middle-like) uses of reflexive pronouns gradually increases over time.
- Hypothesis 2: In view of the attested lexicalized reflexive verbs, I expect the creation of new reflexive verbs to be mainly driven by lexicalization processes.
- Hypothesis 3: The categories of lexicalizations, motion verbs, and anticausatives show different quantitative profiles.

Kemmer (1993) as well as Hopper & Traugott (2006: 159–60) treat middle reflexives as a clear case of grammaticalization. Enger (2002) is more cautious, recognizing lexicalization processes in this domain. I do not expect to see an (abrupt) grammaticalization process in the historical data.

4 The *Oxford English Dictionary* as a data source⁹

Modern dictionaries usually rest on robust empirical foundations. For example, compilers of modern reference works such as the *Oxford Advanced Learner's Dictionary* or the *Longman Dictionary of Contemporary English* maintain large corpora of English that reflect current usage. In a similar way, the *OED* is based on current and especially historical (increasingly digitalized) sources, as it aims to provide a comprehensive history of all English words.

As the *OED* is a highly dynamic dictionary that is constantly growing, expanding the sources it is based on, and that is also revised and updated at relatively short intervals (at least four times a year), it is difficult to give precise information as to its size or the number of sources it is based on. Moreover, since the *OED* is maintained and published in electronic form, revisions and updates proceed quickly. According to John Simpson, Chief Editor of the *OED* (personal communication), the *OED* used to be based on considerably more than 100,000 sources – but that was before online corpora such as *Early English Books Online* (EEBO), *Google Books* or *Eighteenth Century Collections Online* (ECCO) became available. Given the availability of these online sources, it is now practically impossible to provide even rough figures on the number of sources, the number of words contained in these sources, or their distribution across genres.

⁹ The *Oxford English Dictionary* can be accessed at www.oed.com.

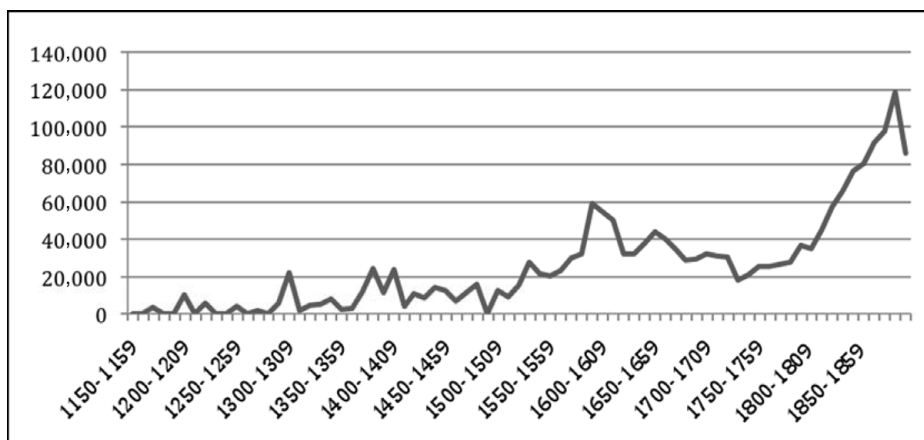


Figure 1. *OED* quotations per decade 1150–1899 (taken from Charlotte Brewer’s project website at <http://oed.hertford.ox.ac.uk/main/content/view/43/125/>; reproduced with permission)

Brewer (2007, ongoing¹⁰) offers a very detailed analysis of the *OED*, especially the basis of quotations – taken from the aforementioned sources – on which it rests. She shows that the distribution of quotations varies greatly over the centuries and that there are strong preferences for some prominent authors (e.g. Shakespeare).¹¹ As one would expect in view of the few documents available, Middle English – especially Early Middle English – is underrepresented, whereas more recent sources are highly overrepresented (see figure 1).¹² These differences have to be borne in mind in the interpretation of the *OED* data.

The decision to use the *OED* as the data source for the present study is based on the results of previous studies, such as Geniušienė (1987) and Siemund (2010). These studies supply extensive verb lists based on synchronic corpus data, and the *OED* represents a practical data source for tracing the relevant verbs back in time. In addition, it is one of the explicit aims of the present study to evaluate the *OED* as a data source for diachronic grammatical studies.¹³

¹⁰ Charlotte Brewer’s ongoing project *Examining the OED* offers fascinating insights into the structure of the *OED* and the compilation practice behind it. The project pages can be accessed through the following website: <http://oed.hertford.ox.ac.uk/main>.

¹¹ John Simpson (personal communication) points out to me that 33,000 Shakespeare quotations in relation to an aggregate of 3 million quotations in *OED3* (2.4 million in *OED2*) may not be such a big problem after all. Moreover, Shakespeare is an exception as other heavily cited authors contribute far fewer quotations, and there is a ‘massive tail of singleton quotations’.

¹² Similar observations can be found in Hoffmann (2004: 24–5), Mair (2004: 124) and Iyeiri (2010: 20).

¹³ It goes without saying that the emergence of reflexive verbs could also be investigated using diachronic corpora. The author is presently working on a follow-up study based on the *Penn Corpora of Historical English*.

Table 1. *Categories of reflexive verbs distinguished in Siemund (2010)*

Verbal category	BNC verb types
Obligatorily reflexive verbs	18
Lexicalized combinations of verb and reflexive	39
Motion middles	81
Anticausatives	84
Total	222

5 Methodology

For the present study, I relied on the verb lists culled from the BNC by Siemund (2010). The verbs in these lists are shown to co-occur with non-reflexive uses of reflexive pronouns.¹⁴ In this study, I distinguish the verbal categories summarized in table 1. In addition, table 1 gives the number of verb types found in each category in the BNC. To be sure, the relevant token counts are much higher and vary considerably across these categories.

The present study provides a snapshot of the *OED* in 2012, when the data for it were collected. Using the *OED* online interface, I looked up each of the 222 verbs individually. The *OED* online interface returns a complete entry of the verb, which was saved as an individual text file in a subsequent step. I used the entries of the second edition, and, where available, of the third edition.¹⁵

In total, I analysed 222 entries of the *OED*, i.e. all entries of the verbs identified in Siemund (2010), but of course, not all of them returned positive results, as not all of the verbs are recorded in reflexive uses in the *OED*. These results necessarily reflect the perspective of the *OED* editors and the sources available to them, and not necessarily actual usage – whatever that means in historical terms. For 131 of the 222 verbs, a reflexive usage could be confirmed by the *OED* entries. These were subjected to further analysis.

Many of the verbs listed in Siemund (2010) that are attested with a reflexive pronoun in a non-reflexive function in the BNC are also recognized to co-occur with reflexive pronouns in special senses in the *OED*. For example, Siemund (2010) analyses the verb *commit* in combination with a reflexive pronoun as a highly frequent lexicalization. The corresponding entry in the *OED* explicitly records this verb as ‘reflexive’ in two different senses besides several non-reflexive uses. The first sense of *commit oneself* means ‘entrust oneself’ (sense 1c in the *OED*); the second meaning can be paraphrased

¹⁴ For this study, I searched the BNC for combinations of verbs followed by *itself*, manually filtering out reflexive and non-reflexive uses.

¹⁵ Charlotte Brewer (personal communication) points out to me that the status of the *OED* entries differs considerably, as some entries have not been revised since their original publication, while others have been substantially rewritten, especially in the 3rd edition of the *OED*. Even though the situation is complicated, we may note that the *OED* online interface allows us to trace the history of an entry.

as ‘enter a commitment’ (sense 10e in the *OED*). The two senses are illustrated in (17) below, which contains the chronologically first example of each sense in the *OED*.¹⁶

- (17) (a) a1538 T. Starkey *Dial. Pole & Lupset* (1989) 15 To them, wych in grete tempest wyl **commyt themselfe** to the daungerys of the see.
 (b) 1950 B. Frechtman tr. J.-P. Sartre *What is Lit.?* p. vii, ‘If you want to **commit yourself**,’ writes a young imbecile, ‘what are you waiting for? Join the Communist Party.’

In other cases, the *OED* adds the remark ‘also refl.’ to an entry or a sense distinguished within an entry. In these cases the reflexive use is usually supported by examples, as illustrated in (18) for the verb *define*.

- (18) 1859 ‘G. Eliot’ *Lifted Veil* ii, in *Blackwood’s Edinb. Mag.* July 41/2, I..saw the light floating vanities of the girl **defining themselves** into the systematic coquetry, the scheming selfishness, of the woman.

Even though many of the verbs listed as reflexive in Siemund (2010) are not recognized as such in the *OED*, i.e. not explicitly described as reflexive, the relevant entries may contain examples of these verbs co-occurring with reflexive pronouns in non-reflexive interpretations, i.e. as an illustration of other properties of the relevant verbs. For instance, Siemund (2010) analyses *demonstrate itself* as belonging to the category of anticausatives. The verb is attested in this usage in the *OED*, but is not explicitly recognized as a reflexive verb. The example in (19) occurs as a general illustration in this entry, but is not meant to illustrate the reflexive usage.

- (19) 1599 A. M. tr. O. Gaebelkhover *Bk. Physicke* 312/1 If..it be the Canker, it will after the third time **demonstrate it selfe** with a little knobbe or tumor.

During the analysis of the *OED* entries, I noted down if and when the relevant verbs first occur with a reflexive pronoun in a non-reflexive interpretation. In addition, I recorded whether the *OED* explicitly mentions the reflexive usage of a verb, or if it merely occurs in the examples illustrating other uses.

In a subsequent step, I tapped directly into the *OED* quotation base searching for middle-like reflexive uses of all 222 verbs. This procedure added 48 reflexive verbs to my database that are not mentioned in the relevant *OED* entries. It also allowed me to predate 49 examples of reflexive-marked verbs contained in the *OED* entries. My search of the quotation base did not distinguish spelling variants or morphosyntactic variants. In my analysis, I keep results from the verb entries and the quotation base as a whole apart. Contrasting the two data sets reveals how closely the *OED* entries match the quotation base.¹⁷

¹⁶ I quote examples from the *OED* exactly as given there.

¹⁷ One of the referees correctly points out that reflexive verbs in the *OED* may also be accessed searching for the keyword ‘refl’ in the advanced search senses section. Such a search reveals a considerably higher number of reflexive verbs than the 222 verbs investigated here. In defence of my approach one may note, though, that this search procedure does not find reflexive verbs in the quotation base itself. Moreover, the 222 verbs are attested in current usage, while many of the verbs marked as reflexive in the entries have gone out of use (see note 22

In the present study, I analyse the full paradigm of reflexive pronouns, i.e. I include reflexives in all persons, numbers and genders (*myself, yourself, himself, herself, itself, ourselves, yourselves, themselves*).¹⁸ This approach contrasts with Siemund's (2010) study, where the analysis is restricted to *itself*, as the third-person inanimate reflexive triggers many non-reflexive uses.

6 Data analysis

In this section, I provide a summary of the results of my *OED* survey, starting with a bird's eye view of the data followed by a closer examination of the verbal categories distinguished (lexicalizations, motion middles, anticausatives).

The second column of table 2 shows again the number of verb types in the categories distinguished in Siemund's (2010) study of the BNC – a total of 222 verb types. For the ensuing analysis, I collapse the two lexicalization categories distinguished in table 1 into one, since the frequencies for the subcategories in the *OED* are too low to draw meaningful conclusions from. My exploration of the aforementioned verbs in the *OED* entries was successful in 131 cases, i.e. these verbs are attested with reflexive pronouns in a non-reflexive function. The precise figures for each category are shown in column 3 of table 2. Column 4 gives the number of verbs that could be predated using the quotation base. Column 5 contains the reflexive verbs that only appear in the quotation base. Column 6 shows the aggregate of columns 3 and 5, i.e. the number of hits returned from the entries and the quotation base (a total of 179 verb types). Here, we can make a first observation that is of interest, as the lexicalizations show a much higher success rate than the two remaining categories of motion middles and anticausatives, especially for the *OED* entries. With 23 out of 84 cases, the latter category in particular returned comparatively few hits from the *OED* entries. Even though this figure rises to 52 when including the quotation base, anticausatives remain the least represented category in the *OED*. It is obvious that the quotation base substantially increases the number of hits for motion middles and anticausatives. Moreover, it returns earlier attestations for several reflexive verbs.

These initial results make a lot of sense since the *OED* editors, as dictionary compilers, focus on lexemes, and hence look for lexicalizations. Consequently, it is to be expected that the lexicalizations, i.e. those verbs followed by reflexive pronouns that have acquired a special meaning in this combination, are listed in the *OED*. Reflexive pronouns in combination with motion middles and anticausatives have fewer properties of lexicalizations (e.g. different type/token ratios; see Siemund 2010: 826). Hence, they

below). Following up the route suggested by the referee would yield a study with a different focus, but it is clear that the *OED* offers material for additional studies of reflexive verbs.

¹⁸ I do not consider the form *oneself* here, since it arises much later than the other forms, namely only in the 16th century. Moreover, in Old and Middle English we also find simple pronouns in middle functions: c.1386 Chaucer Pars. T. 385 *For to pride hym in his strengthe of body it is an heigh folye*. These are discussed in Peitsara (1997: 278) and Siemund (2002: 260–2). Although this is an interesting phenomenon, I set it aside here, since my focus is on complex reflexives.

Table 2. *Number of BNC verb types and corresponding OED hits*

Verbal category	BNC	OED entries	QB predates	QB new	Total
Lexicalizations	57	52	23	2	54
Motion middles	81	56	23	17	73
Anticausatives	84	23	3	29	52
Total	222	131	49	48	179

are less likely to be listed in the *OED*. In fact, they are less likely to be listed in other dictionaries either.¹⁹

In what follows, I will deal with the categories distinguished in table 2 one after another, presenting the detailed results of my analysis of the *OED*.

6.1 *Lexicalized combinations of verb and reflexive pronoun (LEX)*

We now turn to an analysis of lexicalizations of verb and reflexive marker. This class contains obligatorily reflexive verbs and verbs that have one meaning when they occur with the reflexive marker, but a (slightly) different meaning when they occur without it. The list below identifies the verbs in this category, as returned from the *OED* entries (52 verb types). Some illustration is provided in (20).²⁰

abandon, absent, accommodate, ally, apply, assert, associate, behave, brace, burn out, busy, commend, commit, concern, conduct, confine, content, dedicate, detach, devote, distance, divest, enjoy, express, find, gorge, indulge, ingratiate, insinuate, lay open, lend, manifest, overreach, pass off, pledge, preen, present, pride, pull together, reassert, redeem, relieve, repeat, resign, resolve, reveal, satisfy, see, seed, show, steel, suggest

- (20) (a) a1275 (1200) *Prov. Alfred* (Trin. Cambr.) 133 Bute he mote **himseluen pruden**, he wole maken fule luden. 'Unless he can pride himself (on sth.), he will make unhappy noises [= be discontent].'
 (b) 1660 R. Boyle *New Exper. Physico-mechanicall* Digress. 352 The inspired Air..does there **associate it self** with the Exhalations of the circulating Blood.
 (c) 1840 J. S. Mill in *London & Westm. Rev.* 33 272 The natural tendency.**reasserted itself**.

In the *OED* entries, 45 verbs appear in separate reflexive sections, while seven verbs appear with a reflexive pronoun at some other point of the verb entry (*dedicate*, *detach*, *distance*, *gorge*, *lay open*, *resign*, *steel*). The first attestation in this category may be dated as early as AD 1000 (*busy*).

¹⁹ This claim can be confirmed by consulting standard dictionaries (*Oxford Advanced Learner's Dictionary*, *Longman Dictionary of Contemporary English*).

²⁰ Of course, projecting current decisions on lexicalizations back into time is problematic, as historical attestations of a verb in combination with a reflexive need not have functioned as lexicalizations at that time. If the *OED* gives a verb in reflexive usage in, for example, 1386, this does not mean that the verb was a conventionalized lexicalization in 1386. As far as I can see, we have to accept this imprecision. Corpus evidence may help to illuminate the status of lexicalizations in historical terms, but this would be a topic for a separate study.

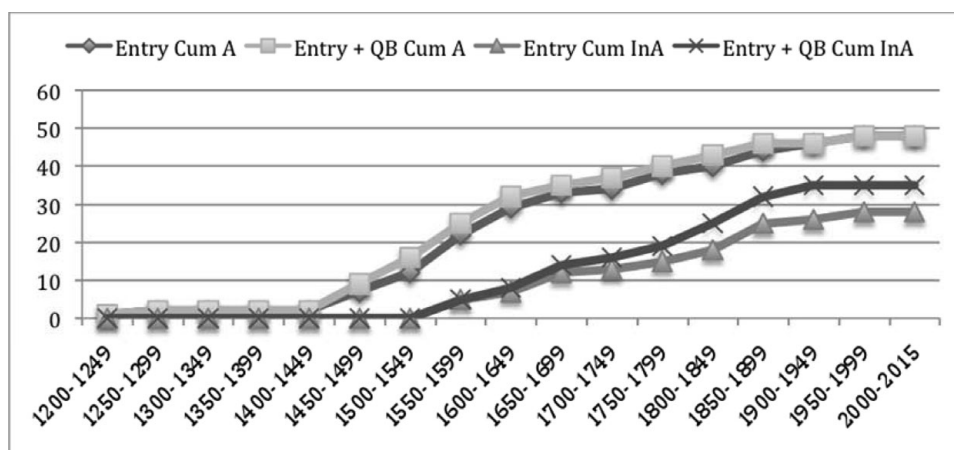


Figure 2. Reflexive verbs (lexicalizations)

When we add the quotation base, the number of reflexive verbs in the *OED* rises to 54. Moreover, 23 verbs found in the entries can be predated using the quotation base, on average by approximately 24 years (measured across all verbs that could in principle be predated).

Figure 2 depicts the development of these verbs through time in fifty-year intervals, starting in 1200 and ending in 2015. It shows the accumulation of new types over time. The graph labelled ‘Entry Cum’ represents the cumulative frequency of the verbs taken from the *OED* entries. The graph ‘Entry + QB Cum’ gives the cumulative frequency of the verbs found in entries and quotation base.²¹

I distinguish animate (A) and inanimate (InA) subjects. The numbers add up to more than the 54 verb types contained in this class, as some verbs are attested with both animate and inanimate subjects. Moreover, the difference between entries and quotation base portrayed in figure 2 exceeds that given in table 2, as the figures in table 2 count the verbs types irrespective of subject type.

6.2 Motion middles (MM)

In the category that is here referred to as ‘motion middles’, my exploration of the *OED* returned 56 verb entries that contain a motion verb followed by a non-reflexively used reflexive pronoun. Despite the fact that this number is considerably lower than the 81 reflexive-marked motion verbs discussed in Siemund (2010), it still is the category with the highest absolute number of verbs. The first entry in the *OED*, here given in (21), is from around 1387 (*throw + himself*).

²¹ In the case of double occurrence in both *OED* entry and quotation base (predates), verbs are only counted in the quotation base, as we find the earlier attestation there. As the examples in the *OED* entries come from the quotation base, the graph ‘Entry + QB cum’ represents the results across the entire quotation base.

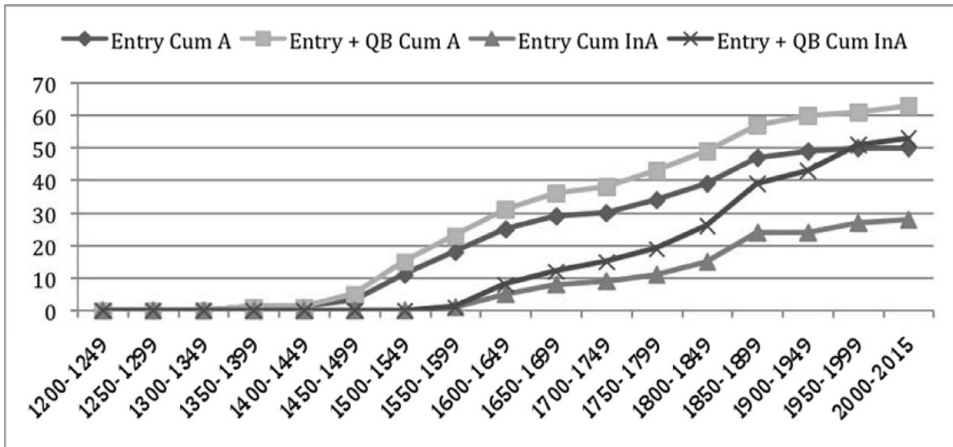


Figure 3. Reflexive-marked motion verbs (motion middles)

- (21) a1387 J. Trevisa tr. R. Higden *Polychron.* (St. John's Cambr.) (1871) III. 411
Alisaundre..prewe hym self into a water þat renneþ þere.

The list below shows the verbs recovered from the *OED* entries (56 verb types).
Example (22) contains some illustration of the verbs in this list.

abstract from, align, anchor, arrange, assemble, attach, bed, bury, cast, convey, dash, discharge, disentangle, drag, draw, embed, entrench, fasten, fling, force, free, get, glue, guide, hunch, hurl, insert, launch, lever, lift, locate, maintain, mould, orientate, pitch, place, plant, position, precipitate, project, propagate, raise, rearrange, relieve, remove, reorient, right, rouse, secrete, separate, steady, strand, throw, thrust, wrap, wreathe

- (22) (a) 1865 T. Carlyle *Hist. Friedrich II of Prussia* V. xviii. vii. 178 Friedrich..hastens to **arrange himself** for the new contingencies.
(b) 1861 R. T. Hulme tr. C. H. Moquin-Tandon *Elem. Med. Zool.* ii. iii. iv. 147 Leeches..**embed themselves** in the earth.
(c) 1528 Tyndale *Obed. Christen Man* f. xlij, They..have **separated them selves** from the laye men, countinge them viler then dogges.

For most verbs in this category, the *OED* has a special reflexive section, but for 14 verbs it does not, even though the verb appears in the relevant use at some point in the entry. The inclusion of the quotation base allows us to predate 23 verbs by an average of approximately 33 years. In addition, it yields 17 verbs not identified by the *OED* entries. Adopting the conventions specified in the previous section, figure 3 presents the cumulative frequency of reflexive verbs that occur with animate and inanimate subjects in my database.

Again, it is understood that verbs with animate and inanimate subjects overlap, thus, the total outnumbers the 73 verb types found in this category. Due to the distinction between animate and inanimate subjects, the difference between entries and quotation base is greater than in table 2.

6.3 Anticausatives (ANTIC)

As explained in section 2, the category of anticausatives here refers to verbs followed by a reflexive pronoun where the reflexive achieves a change in the argument structure of the verb such that the notional object constituent appears in subject position. In consequence, the verb is detransitivized. Example (23) illustrates the assumed argument structure operation, with the reflexive-marked verb essentially behaving like an intransitive verb.

(23) Somebody solved the problem. -> The problem **solved itself**.

Defining the class of anticausative verbs in this way essentially restricts the sample to inanimate subjects. Siemund (2010: 821) found 84 verbs showing this pattern in the BNC; 23 of these are also found in the *OED* entries. Hence, anticausatives represent the least recognized category in the *OED* entries. Searching the quotation base yields another 29 verbs expanding the sample to 52 verbs. Moreover, the quotation base produces three predates to the *OED* entries, though only by one or two years. The list below contains the anticausative verbs recognized by the *OED* entries (23 verb types). Some examples can be found in (24).

betray, define, demonstrate, found, identify, impress, imprint, link, offer, perpetuate, re-enact, re-establish, recommend, regulate, renew, repay, reproduce, resolve, restore, sell, shape, solve, sort

- (24) (a) 1867 H. Macmillan *Bible Teachings* (1870) xiii. 254 A beautiful character **impresses itself** upon the very features of the body.
 (b) 1576 A. Fleming tr. Cicero in *Panoplie Epist.* 44 Sundrie circumstances which **offered them selves** to my judgement.
 (c) 1766 *Compl. Farmer* at Drill-rake 3 A 3/2 Yet even this small work of supererogation **repays itself**.

The *OED* has special reflexive sections for all verbs except *betray*, *demonstrate*, *imprint*, *perpetuate*, *re-enact* and *re-establish*. Figure 4 depicts the appearance of verbs with animate and inanimate subjects over the centuries in the same way as in the previous sections.

Again, it is understood that verbs with animate and inanimate subjects overlap. In the category of anticausatives, the number of verbs with inanimate subjects is much higher than the number of verbs with animate subjects.

6.4 Summary of major findings

My analysis of 222 verb entries in the *OED* returned 131 cases of verbs that occur together with the reflexive pronoun in one of the three categories distinguished here, i.e. lexicalizations in the sense described in section 6.1, motion middles and anticausatives. Table 3 gives a summary of the absolute numbers. As already mentioned, the number of successful lookups strongly varies across these categories, with the first category (LEX) showing near identity to the cases reported from the BNC in Siemund (2010).

Table 3. OED reflexive verbs across categories

Category	LEX	MM	ANTIC	Total
<i>OED</i> entries	52	56	23	131
<i>OED</i> QB	2	17	29	48
Total	54	73	52	179

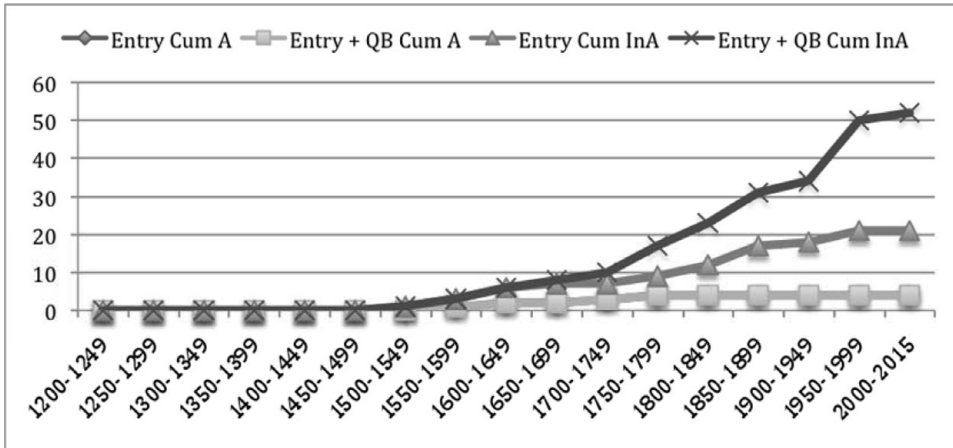


Figure 4. Reflexive-marked anticausative verbs

The category of anticausatives (ANTIC) contains the fewest members both in absolute terms and in relation to the cases listed in Siemund (2010). Motion middles (MM) range in between. Consulting the quotation base adds reflexive verbs in all categories, though only two in that of lexicalizations.

All categories explored demonstrate gradual increases over time. Apart from anticausatives, we find the first attestations in (Early) Middle English. The categories fill up more clearly starting with Early Modern English. The quotation base allowed us to predate 49 entries of the *OED*.

Verbs with animate subjects appear before verbs with inanimate subjects, except for anticausatives. Table 4 gives the first occurrences of the verbs in each category with an animate and an inanimate subject. For lexicalizations, there are approximately 350 years between the first attestation with animate and inanimate subject. The corresponding time span is 200 years for motion middles, and 50 years for anticausatives.

On the whole, the *OED* lists the verbs investigated here more with animate subjects than with inanimate subjects, apart from anticausatives. Table 5 provides an overview of the relevant figures and also gives the ratios of animate to inanimate subjects as percentages.

Table 4. *First occurrences of verbs with animate (A) and inanimate (InA) subjects*

	1200-1249	1250-1299	1300-1349	1350-1399	1400-1449	1450-1499	1500-1549	1550-1599	1600-1649	...	2000-2015
LEX	A	—	—	—	—	—	—	InA			
MM				A	—	—	—	InA			
ANTIC							InA	A			

Table 5. *Verbal categories in relation to animate and inanimate subjects*

Category	LEX	%	MM	%	ANTIC	%
Animate	48	57.8	63	54.3	4	7.1
Inanimate	35	42.2	53	45.7	52	92.9

7 Discussion of results

We will now turn to an interpretation of the findings presented in the preceding sections. Our discussion will address the increase in reflexive verbs through time, quantitative differences between the categories LEX, MM and ANTIC, the occurrence of complex (heavy) reflexives in middle-like functions, the relationship of lexicalization and grammaticalization, and the adequacy of using *OED* data for a study of this kind.

7.1 Increase over time

The quantitative data show a clear increase over time in all the categories distinguished, i.e. lexicalizations, motion middles and anticausatives. This increase is real and independent of the skewing of the *OED* data towards the second half of the period investigated here. The reason is that English complex reflexive pronouns only developed in Middle English (see Peitsara 1997: 289). Hence, we can assume that the categories were more or less empty in the initial time periods explored here, i.e. 1200–1300. Complex reflexives developed in reflexive functions, and also in intensifying functions (e.g. *the king himself*), but not in non-reflexive functions (König & Siemund 2000b). As a consequence, all non-reflexive functions, including all lexicalizations, cannot have emerged before (Early) Middle English. This conclusion is compatible with Peitsara's (1997) findings, who reports reflexive-marked motion (posture) verbs as well as reflexive-marked verbs of psychological states and social behaviour (approximately corresponding to my lexicalizations) from late Middle English onwards (i.e. marked by complex reflexives).

Compared with the *OED* entries, the quotation base attests a steeper increase over time. For motion middles and anticausatives, and especially for verbs with inanimate subjects, we can witness a relatively sharp rise in the nineteenth and twentieth centuries. It appears safe to conclude that the quotation base mirrors actual usage more closely than the entry data. Nevertheless, the sharp rise in the nineteenth and twentieth centuries coincides with a major expansion of the quotation base and may thus – to a certain extent at least – be an artifact of the data skewing.

In view of these considerations, I conclude that the number of verb types occurring together with reflexive pronouns in a non-reflexive function has increased and is probably still increasing. There are differences between the categories, though, to which we will turn in the following.²²

7.2 *Differences between categories*

In addition to the gradual increase in verb types in all categories, we also find a few noteworthy differences between these categories that are in need of explanation. To begin with, the categories show different overlap rates with synchronic studies such as Siemund (2010) (see table 2 and section 6.4). As already pointed out at the beginning of section 6, we can expect the category LEX to show a higher overlap rate, as it represents lexicalizations, and dictionary editors can be expected to look for such items very carefully. Motion middles and anticausatives are less easily viewed as lexicalizations since the meaning of the verb is not (very) different in reflexive and non-reflexive uses. The quotation base corrects the entry data and consistently finds additional reflexive verbs, especially for motion middles and anticausatives.

The upward trend of the LEX curve is levelling off in the more recent periods, while motion middles and anticausatives continue to show ascending curves. It is difficult to tell if there are significant (in the non-technical sense) differences between the latter categories. Considering, for example, the development of reflexive verbs with inanimate subjects over the past 300 years, we find 38 additions for motion middles, and 42 for anticausatives (calculated over both entry data and quotation base). Motion middles with animate subjects show 25 additions in this period. These appear to be comparable increase levels. Anticausatives show a steep rise between 1950 and 1999 with 16 additions in this period alone.

The verbs in the three categories differ furthermore as to the number of animate and inanimate subjects they occur with (see table 5 above). Anticausatives contain the highest ratio of inanimate to animate subjects, which is a consequence of defining them in terms of an argument structure change. Motion middles by definition possess agentive

²² As the verb lists that I used for my *OED* study result from a synchronic analysis of Present-Day English, I cannot capture reflexive verbs that lexicalized at some point in time and became obsolete again at a later point (as, for example, *depester oneself* ‘rid oneself of’, *mien oneself* ‘conduct oneself’, *prelate oneself* ‘exalt oneself’). Only a large diachronic corpus study could achieve this.

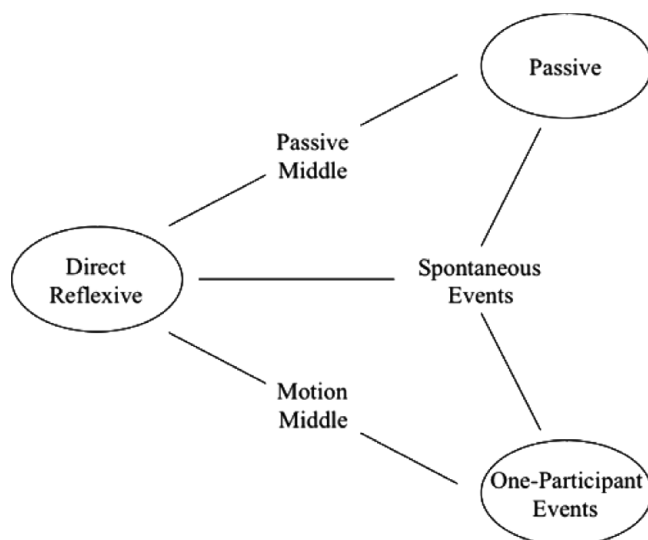


Figure 5. Middle situation types according to Kemmer (1993: 202)

subjects and hence the higher ratio of animate subjects is expected. Lexicalizations show the highest percentage of animate subjects, though it is very similar to motion middles.

Anticausatives is the last category to develop, which may be an artifact of defining it in terms of inanimate subjects. Peitsara (1997: 335) reports similar findings for this verb type (her ‘pseudo-reflexive verbs’).

7.3 *Heavy reflexives in non-reflexive functions*

The occurrence of reflexive pronouns as markers of middle situation types is well established (Faltz 1985; Geniušienė 1987; Haspelmath 1990; Kemmer 1993; Enger & Nessel 1999; Enger 2002). Moreover, it is widely assumed that such middle uses of reflexive pronouns are the result of grammaticalization processes starting on reflexive pronouns in semantically reflexive uses, i.e. expressing the referential identity of subject and object constituent in simple transitive clauses (see section 2). Kemmer (1993) captures the frequent extension of reflexive pronouns into non-reflexive domains of use in terms of the semantic map shown in figure 5, assuming that grammaticalization processes drive reflexive pronouns into new usage domains. Figure 5 explicitly mentions motion middles, a category also distinguished here. The category of anticausatives found in the present study roughly covers Kemmer’s ‘one-participant events’, ‘spontaneous events’ and partially even ‘passives’.

Most of the studies mentioned above implicitly assume that only simplex or weak reflexive pronouns can be found as markers of middle situation types and partake in the requisite grammaticalization processes. As for English complex reflexives, Kemmer

(1993: 184), Steinbach (2002: 307) and Kaufmann (2004: 191) explicitly deny that they have middle uses. König & Siemund (2000a: 59, 2005: 195) claim that reflexive pronouns do not have middle uses if they possess concomitant intensifying uses, as e.g. in English shown in (25). As intensifying uses are typically found with complex reflexives (and not simplex reflexives), König & Siemund's claim amounts to saying that complex reflexives do not have middle uses.²³

- (25) (a) The professor **himself** criticized the student. (intensive)
 (b) The professor criticized **himself**. (reflexive)

The data presented in the current study contradict such assumptions, as English complex reflexives began to appear as markers of middle situation types immediately after complex reflexives had emerged in Middle English and had stabilized. Subsequently, such uses gradually increase over time, as shown in section 7.1 above. Our results here, thus, confirm the findings and conclusions arrived at in Geniušienė (1987) and Siemund (2010) based on synchronic data.

I conclude that complex or heavy reflexive markers can develop middle-like (i.e. non-reflexive) functions. Moreover, I hypothesize that such developments can also be found in other languages with heavy reflexive markers (Arabic, Chinese, Finnish), but this would have to be confirmed by independent studies.

7.4 *Lexicalization and grammaticalization*

As mentioned in the previous section, the development of reflexives as markers of middle situation types is typically interpreted as a grammaticalization process. In view of the obvious lexicalizations in our data and also in other languages with middle reflexives (Geniušienė 1987; Kunze 1996; Enger 2002; Siemund 2010), the question arises whether an analysis in terms of grammaticalization alone can account for the historical developments.

Our data analysis has shown that the number of English reflexive verbs increases over time and that reflexive pronoun and preceding verb fuse syntactically and semantically. Technically speaking, we can witness the coalescence (univerbation) of the two expressions (Brinton & Traugott 2005: 110). This coalescence is also visible in synchronic data, as middle-like reflexives cannot be separated from their syntactic host, as shown in (26) and (27).

- (26) (a) John does not really like himself. (argument reflexive)
 (b) Himself, John does not really like.
- (27) (a) The problem began to manifest itself. (middle-like reflexive)
 (b) *Itself, the problem began to manifest.

Coalescence on its own, however, is not a sufficient diagnostic of grammaticalization or lexicalization, as it can be found with either process. In other words, we need

²³ Intensifying *self*-forms are discussed, *inter alia*, in Siemund (2000) and Gast (2006).

additional criteria to decide this question. Contrastive treatments of lexicalization and grammaticalization, such as Lehmann (2002) or Himmelmann (2004), argue that the term ‘lexicalization’ should be reserved for additions to the (mental) lexicon carrying idiosyncratic meanings. In the case of multi-word lexicalizations, their overall meaning is not compositionally relatable to the interacting parts. Lexicalization processes produce lexical rather than grammatical elements. The category LEX of the present study represents such lexicalizations (idiomaticization), as the string of verb and juxtaposed reflexive assumes a special meaning (for example, *manifest itself* means ‘appear’).

The meaning of the term ‘grammaticalization’ is less clear, as we find competing definitions. Again, following Lehmann (2000) and Himmelmann (2004), grammaticalization may be conceived of as a process yielding grammatical elements, a process leading to greater grammaticity of grammatical elements, or the regular occurrence of an element with an increasingly larger set of other elements (host-class expansion; see also Trousdale & Traugott 2010: 2–3). In addition, it is often assumed that grammaticalization processes are accompanied by a rapid increase in type and token frequencies (see the overview in Hoffmann 2005: 144–8).

On the assumption that middle-like reflexives possess a greater degree of grammaticity than argument reflexives, we could argue that English reflexives are undergoing a grammaticalization process in the relevant constructions. Moreover, the criterion of host-class expansion is fulfilled, as middle-like reflexives can be found with a growing number of verbs over time. At the same time, however, new verb types are entering this construction only relatively slowly. The current diachronic study found 179 new types over a period of approximately one thousand years. This would appear to be a process with limited productivity in comparison to, say, combinations of article and noun. Moreover, synchronic studies find high token frequencies with relatively few verbs, and these are typically lexicalizations (Siemund 2010: 826–8).

On the whole, the development of reflexive verbs in English is somewhat similar to processes of derivational morphology. It is productive, though yielding only a few new types over time. It is regular, but new types tend to develop idiosyncratic meanings (i.e. they lexicalize). Depending on whether we view derivational morphology as part of the lexicon or grammar, which is a controversial issue (Himmelmann 2004: 22), the development of English reflexive verbs can thus be said to fall into the domain of either lexicalization or grammaticalization.

On this view, English complex reflexives have two functions in post-verbal position (besides the intensifying function). On the one hand, there is the clearly grammatical use as a reflexive marker. On the other hand, it is used as derivational morpheme producing lexicalizations. Such a division of labour is not completely unheard of. DeLancey (2008: 1597), for example, discusses the dialectal use of the *a*-prefix as a marker of present participles (*I’m a-wanting to go*) and as a now defunct derivational morpheme producing the well-known class of *a*-adjectives (*awake, asleep, alone, etc.*) They have the same source lexeme, reconstructable as a preposition.

7.5 Using the OED as a data source

As for the general adequacy of using the *OED* as a data source for historical linguistic studies, my overall assessment is a positive one, even though dictionaries remain a special data source.

For the present study, I used both the *OED* entries and the quotation base. As for the main point of concern, namely the use of complex reflexives for the expression of middle situation types and the concomitant increase in reflexive verbs, we can draw confirmation from both data sources. Strictly speaking, the *OED* entries would have been sufficient to prove this point, though the quotation base qualifies the entry data by adding more precision. Especially for the more recent periods, the quotation base more adequately reflects usage, as it contains many reflexive verbs not listed in the entries. The farther we go back in time, the more strongly the entries and the quotation base converge. These findings make a lot of sense, as the *OED* editors can be expected to have sifted older sources more intensely than more recent ones.

The *OED* entries on the whole correctly identify lexicalizations, i.e. the category LEX in the present study, and given that it is a dictionary, this is precisely what we would expect. Apparently, the *OED* editors look for recurring uses of lexemes and lexeme combinations in the sources. The *OED* entries are less suitable for identifying systematic processes that operate across larger sets of different lexemes. They fail to recognize many instances of the more grammatical processes yielding motion middles and anticausatives. To identify these, the quotation base is a more adequate data source, as it can be used as a corpus.

There may be further patterns in the *OED* data. For example, one of the referees suggests that semantically related verbs may have acquired a reflexive usage at about the same time. This may indeed be the case, as the following pairs illustrate: *lift/raise* (1450/1513), *hurl/flip* (1613/1689), *perpetuate/reproduce* (1711/1842), *imprint/impress* (1867/1840), *expose/display* (1813/1750), *present/show* (1490/1539). Moreover, there seems to be a dominance of Romance verbs in the anticausative group. These points deserve attention, but I will leave them for future studies.

8 Summary and conclusions

My study has demonstrated that middle-like uses of English complex reflexive pronouns have steadily increased since Middle English times, and that they are probably still increasing. It confirms synchronic studies such as Geniušienė (1987) and Siemund (2010), who amply document English complex reflexive pronouns in these functions. The widespread assumption that only simplex reflexive markers can acquire these functions needs to be corrected, even though it is probably the case that simplex reflexives are more common in them, i.e. occur with more verb types.

I have by and large been able to confirm the hypotheses formulated at the outset of this investigation. In English, non-reflexive (middle-like) uses of reflexive pronouns have been gradually increasing since the time of their first recording. Their development

is driven by processes of coalescence and context expansion, frequently leading to the coinage of new dictionary entries. Motion middles and anticausatives are the more productive categories. The diachronic data that my examination of the *Oxford English Dictionary* furnishes strongly suggests concurrent, and perhaps consecutive, grammaticalization and lexicalization processes in the domain investigated here. A comparison with derivational morphology suggests itself.

As far as the use of the *Oxford English Dictionary* as a data source for diachronic linguistic studies is concerned, we need to be aware that the *OED* presents the historical data through the eyes of the dictionary editors. As enormous manpower has gone into the compilation of this dictionary, the main challenge is to find a way to use it as efficiently as possible.

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