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DERIVATIONALLY RELATED DEVERBAL SYNONYMS IN MIDDLE ENGLISH

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ABSTRACT

This paper is an attempt to show how the *OED* earliest quotations of verbs and deverbal coinages from the period of Middle English can lay the foundation for a study of the expansion of loosely synonymous deverbal word-forming families over time. Two areas open for diachronic modelling are suggested: comparison of the constituents' ordinal positions in the strings of varied categorial affiliation and assessment of the extent of similarity of these processes. The description is supplemented with references to the developed interactive electronic framework.

1. Introduction

Diachronic onomasiology is concerned with two issues: the availability of lexical resources at specific moments of history and complementation of these resources over time. Recovering lists of synonymous words available to the previous generations of speakers allows us to look into the minds of those who spoke the language in the process of its evolution.

The usual avenue for reconstructing relations of lexical synonymy lies in combining our knowledge about the earliest uses of words from the dating of their textual prototypes (first quotations) in the *Oxford English dictionary* and the lexical composition of the semantic fields (Kay – Wotherspoon 2002). The inventory of the latter is heterogeneous in terms of the constituents' age.

The subject matter of my analysis is the diachronic formation of strings of synonymous verbs and the sequence of the appearance of coinages of specific categorial affiliations derived from the constituents of these strings in Middle English. A study of the diachronic positioning of constituents in synonymous strings of parent verbs and their common-root derivatives lies at the cross-roads of synonymic and derivational potentials of the lexicon.

2. Sources of evidence

This study is based on the earliest quotations of verbs and deverbatives according to the *Oxford English dictionary*, of which the second electronic CD-ROM edition, version 3, was used. A derivative is taken as documented when it is attested in the *OED*. Only those coinages with the respective dating that are clearly related to the common-root verb were taken into account. For the sake of simplicity I disregard historical spelling and adopt the spelling of the *OED* lemmas in presenting the historical material.

In most cases the date of the earliest attestation of a lexeme is given clearly. However, there are several peculiarities. Dating approximation marked in the *OED* by *a* (*ante*) and *c* (*circa*), as in *lisp a1100* and *weeder c1440*, is neglected, hence such dates are accepted as precise. Century dating, e.g. *13*.. as in *display 13*.. , is replaced by the next *OED* attestation of the word in question, *display 1320*, or, failing that, it is referred to the last year of the century, e.g. *staking 13*.. , *1399*. In the rare cases of period dating, e.g. *procession 1103-23*, the earlier date is accepted.

For a start we proceed from the entire list of strings of synonymous verbs from *Webster's new world thesaurus* (Laird 1985). In this way we try to avoid the semantic field limitations common in historical lexicology and address the issue of macrosemantic diachronic expansion. I reformulate the sequential structuring of the string into that according to the age of its constituents.

3. Construing an historical thesaurus of ME verbal strings

The entire corpus of the *OED* verbs registered before the year 1500 amounts to 5,248 lexemes. Of these, 969 were attested before 1150. They are the OE resource in the lexicon of ME verbs. The proportions of EME and LME *OED* registered verbs amount to 1016 and 2592 new entries, respectively. Another 671 fall on the fifty years after 1450 slightly exceeding the mean value for EME and falling somewhat short for that of LME. The respective three lists are fully recoverable from the queries to the developed electronic paradigmatic lattice for one-root verbs and deverbatives.

A string of synonyms (symbolically marked as "… $\subset$ ….") is an ordered list of lexemes initiated by the head-word (string dominant). A verbal string has at least two constituents. There are 4,245 verbal strings the constituents of which, according to the *OED* quotations, were attested for the first time in ME. Of these in 1,581 there are two constituents only. The number of attested strings tends to decrease with the growth of their length. Longer strings are seldom of an entirely ME composition, a part of their composition going back to OE textual prototypes. There are also 1,415 ME verbs with not a single of their present-day synonyms attested in ME.

Two types of strings emerge when their contemporary sequence is restructured according to the constituents' age. In the former type, the oldest constituent of the string coincides with its contemporary dominant. In the latter type, the contemporary string head-word is not its oldest constituent. These peculiarities will be marked by the bracketed foot indices after the respective string's constituents.

In a half of the two-member strings attested in ME the historical dominant is the same verb as the present-day dominant: ***abridge*** (*contemporary dominant*) *1303* ⊂ *compress 1398* [N_{total} = 799 strings] vs. ***accurse*** (*revile*) *1175* ⊂ *revile* (*contemporary dominant*) *1303* [N_{total}= 782]. The coincidence of the oldest string constituent with its present-day dominant diminishes with the growth of the length of the string. In three-member strings every third string has the same verb in these functions: ***accord*** (*contemporary dominant*) *1123* ⊂ *allow 1300, accede 1432* [N_{total} = 62] vs. ***abound*** (*bristle*) *1374* ⊂ *exuberate 1471, bristle* (*contemporary dominant*) *1480* [N_{total} = 651]. In four-member strings this quota falls to about one forth (cf. ***beguile*** (*contemporary dominant*) *1225* ⊂ *delight 1225, divert 1430, amuse 1480* [N_{total} = 97] vs. ***admonish*** (*inveigh*) *1325* ⊂ *scold 1377, inveigh* (*contemporary dominant*) *1486, reproach 1489* [N_{total} = 295]. The disproportion appears to be on the increase. For instance, in seven-member strings there are 21 cases where the historical dominant is the same as the present-day dominant (e.g. ***flatter*** (*contemporary dominant*) *1225* ⊂ *grace 1225, embellish 1340, adorn 1374, enhance 1374, enrich 1382, suit 1450* and 121 strings where the two do not coincide (e.g. ***pitch*** (*dart*) *1205* ⊂ *hurtle 1225, fling 1300, dart* (*contemporary dominant*) *1374, plunge 1380, launch 1386, skim 1420*.

The diachronic strings initiated by the oldest constituent that is the dominant in one or more (owing to polysemy) contemporary strings and a constituent in one (or more) other strings make up a cluster of strings. For example, the verb *acclaim* is the oldest constituent within the string of its own. The ME part of that string is ***acclaim*** (*contemporary dominant*) *1320* ⊂ *commend 1325, laud 1377*. Yet the verb acclaim also occurs as the oldest constituent within the present day synonymic strings to the verb *approve*: *acclaim 1320* (*approve*) ⊂ *approve 1340* (*contemporary dominant*), *recommend 1377*. The present-day dominant of the diachronically restructured string may be a string constituent attested after ME: e.g. *wink* [*to twinkle*] *897* ⊂ *sparkle 1200, gleam 1225, blink 1300*; *wink* [*to close one's eye*] *897* ⊂ *blink 1300*; ***wink*** *897* (*hint 1648*) ⊂ *whisper 950, signify 1250, acquaint 1297, advise 1297, inform 1320, broach 1330, prompt 1340, imply 1374, impart 1471*.

4. Construing an historical thesaurus of ME deverbatives

The derivative, like its parent verb, concatenates lexemes of the same categorial

affiliation on condition that there were no constraints imposed on the respective parent verbs. In the developed electronic lattice a separate position is allotted to each of the agreed categories of primary derivatives: action nouns (N_{action}); action nouns admitting of factitive lexicalisation ($N_{action/...}$), factitive nouns ($N_{.../factitive}$), agent nouns (N_{agent}), lexicalized present participles ($P_{present}$), lexicalized past participles (P_{past}), adjectives (A_{active}) and passive modal adjectives ($A_{passive\ modal}$). There is too little ME evidence on secondary deverbal coinages in the *OED*. The basis for referring a deverbative into a category is its paraphrase.

The sufficient and necessary condition for the chronological sequence of deverbatives occurs when at least two verbs from the parent string are involved in the coining of their common-root deverbatives. The issue of temporal succession of derivatives also holds for the cases when the historical dominant itself does not produce a coinage, at least in ME, but two other string constituents do.

The assigning of the attested derivatives to their common-root chronologically ordinal string of verbs produces a historical thesaurus of deverbal word-forming families. Such a thesaurus is macrosemantic and encompasses over 4,900 verbs with the *OED* first quotations dated before 1500. In the random exemplification that follows we use three symbols – " …. ⊂ …" to denote the string, "→" to signal a derivational recategorization of the verbal string into that of one of the specified categorial affiliations and " -" to show a gap resulting from a derivational constraint in respect towards the ME material, which may be dropped later on: e.g. ***admonish*** (*scold*) *1325* ⊂ *scold* (*contemporary dominant*) *1377* → (N_{action}) *admonishment 1300, scolding 1486*; ***achieve*** (*contemporary dominant*) *1325* ⊂ *enforce 1325, discharge 1330, rehearse 1340, finish 1350, administer 1374, accomplish 1386, execute 1386* → ($N_{action/...}$) *achievement 1475, enforcing 1389, -, -, -, -, accomplishment 1460, execution 1374*; (P_{past}) *achieved 1474, -, discharged 1398, -, -, -, accomplished 1475, -*; ($N_{.../factitive}$) *-, enforcing 1389, -, rehearsing 1300, finishment 1340,-, accomplishment 1460, execution 1374*; ***reckon*** (*account*) *1000* ⊂ *judge 1225, account* (*contemporary dominant*) *1303, value 1482* → (N_{agent}) *reckoner1225, judger1449, accounter 1303, -* ; ***pursue*** (*persevere*) *1290* ⊂ *persevere* (*contemporary dominant*) *1374, remain 1375* → *pursuand 1350, perseverant 1413, remainant 1438*; ***treat*** (*host*) *1297* ⊂ *receive 1300, host* (*contemporary dominant*) *1450* → ($A_{passive\ modal}$) *treatable 1303, receivable 1382, -*; ***rock*** (*totter*) *1100* ⊂ *totter* (*contemporary dominant*) *1200, stumble 1303, waver 1315, falter 1340, roll 1374* → ($P_{present}$) *rocking 1398, -, stumbling 1425, wavering1375, -* .

5. Looking for a formalised framework

I introduce the notion of *chronotropism* of the derived string. Like similar coinages with the component *-tropism*, chronotropism implies a twist in the structure under the influence of one or more external factors, which in our case is the

succession of constituents in the parent string.

In order to estimate the similarity or dissimilarity of two strings of lexemes characterised by re-categorisation I examine relative chronological location of the constituents that have a common root in these strings.

The succession of the appearance of constituents in the compared strings is presented in a matrix. The squares in the matrix are marked with pluses when there is similarity in the strings' constituents succession. It occurs when the ordinal number of the *i-th* constituent from the column is larger than the ordinal numbers of the row constituents located leftwards of its common-root counterpart and, conversely, when it is smaller than the ordinal numbers of the constituents located to the right of its common-root counterpart in the row string. If these prerequisites are not present, there is dissimilarity in the strings constituents' succession and the respective matrix squares are marked with a minus (Figure 1).

The matrix is symmetric. The row and column coming together at the matrix diagonal reveal an identical distribution of plusses and minuses. The upper and lower triangles of the matrix coincide.

The described procedure is based on the comparison of the constituents' ordinal positions in the string that is put at the matrix column with the ordinal positions of the constituents written in the matrix row. The column was attributed to derivatives and the row to verbs. However, it is possible to exchange the location of the respective strings in the matrix (Figure 2). In that case, we compare the expansion in the string of verbs (right-hand side list) with that in the string of their derivatives (left-hand side list). Thus the string of coinages in the matrix row is written in the chronological order of its constituents. The string of verbs in the matrix column is written in the order of their common-root deverbatives, i.e. non-chronologically.

Example APPROVE

PRAISE	**1225**	**PRAISER**	**x--- - -**	**1491**
UPHOLD	**1225**	**UPHOLDER**	**-x-+ + +**	**1333**
CONFIRM	**1290**	**CONFIRMATOR**	**--x+ + +**	**1485**
APPROVE	**1340**	**APPROVER**	**-++x - -**	**1400**
RATIFY	**1357**			
RECOMMEND (recommend)	**1377**		**-++- x +**	
SUPPORT	**1382**	**SUPPORTER**		**1432**
UNDERWRITE (write below sth)	**1430**		**-++- + x**	

Figure 1. Temporal similarity of the expansion of two strings in diachrony: Matrix row – verbs; matrix column – agent nouns

Example RECEIVE				
RECEIVABLE	1382	RECEIVE	x++--+	1300
ACCEPTABLE	1386	ACCEPT	+x+--+	1360
ADMITTABLE	1420	ADMIT	++x---	1413
TAKEABLE	1449	TAKE	---x++	1100
SEIZABLE	1461	SEIZE	---+x+	1290
			++-++x	

Figure 2. Temporal similarity of the expansion of two strings in diachrony: Matrix row – passive modal adjectives; matrix column – verbs

The length of the string in the column of the matrix determines the matrix volume. When we compare strings of verbs and their common-root deverbatives it is more handy to place the verbs in the position of the matrix column. In this way we avoid empty positions in the matrix on condition that there are no attested deverbal coinages with unattested common-root verbs by a given moment in diachrony, which, however, is too strong an assumption. The placement of the verbal string in the matrix row shortens its composition as only those verbs that give rise to the deverbatives of a specified class are represented in the matrix.

When both the compared strings are deverbal (see below) the above arguments will become irrelevant. Generally the placement of the strings in the matrix row and column is exchangeable. When this is the case the quotas of pluses and minuses remain intact but their location in the matrix changes.

The necessary condition for the formation of the matrix is that the string in the column should be of the same length or smaller than the string in the row. The minimal condition for its formation amounts to the length of the column string of two constituents.

6. Software

I started work on this framework as a part of a wider study of verbs and deverbatives in the late eighties. The electronic implementation began in 1995. All verbs and deverbatives as well as strings of synonymous verbs were keyed into the two input lattices manually. The database contains no scanned material nor any fragments of downloaded material from electronic lexicographical resources.

The software was designed using FoxPro RDBMS. It consists of three pieces. The first piece construes strings of coinages from synonymous verbs in each class of deverbalisation and puts them together in the alphabetic historical thesaurus format. The *Historical thesaurus of verbs and deverbatives* contains

entries with the typical structure of one parent and several derived strings. There can be a single derivative in place of the string of a given onomasiological category. Derivational gaps within the strings and strings that are missing altogether owing to derivational constraints on all verbal constituents are marked as empty positions. This allows one to visualise the unrealised proportion of the onomasiological potential in different sections of the stringed word-forming families. The *Historical thesaurus of verbs and deverbatives* exists in a book format and also as a database. It is possible to partition the latter according to the age of the strings' constituents to obtain a period thesaurus of verbs and deverbatives for Middle English with the Old English component or without it or for any subsequent period.

The second piece of the software juxtaposes the historical sequences of verbs and deverbatives and makes a comparison of the ordinal positions of their constituents. Historical strings are construed from the present-day strings. They can be recovered from the database by their contemporary dominants. Each string of verbs is put into a matrix with a string of deverbatives of a chosen categorial affiliation. The compared strings as well as their chronotropism matrix are downloadable.

The third piece of the software is aimed at construing, storing and analysing matrices for categorial pairs of strings. Length limitations on either string or both of them can be imposed. The location of the strings in the matrix is reversible as each of the compared strings can be put either into the matrix row or its column. A corpus of matrices for a specific categorial comparison is subjected to a ten-partite division by the degree of the column string sequential similarity to the row string. The numeric power for each section of this division is established with the possibility of downloading individual strings illustrations, complete sets of examples as well as their matrices of chronotropism. The software also includes a program for establishing mean values of temporal similarity for strings of specified lengths.

7. Presenting a corpus of matrices and mean chronotropic similarity values.

As the ME lexicon was just in the process of its formation two-member correlations of derivatives were very common. In ME such strings correlated either with two-member or longer verbal strings. Nounal and adjectival/participial strings reveal a significant proportion of the breach in the paternal sequencing. This tendency is stronger in the adjectival branch of deverbalization (cf. Figures 3 and 4).

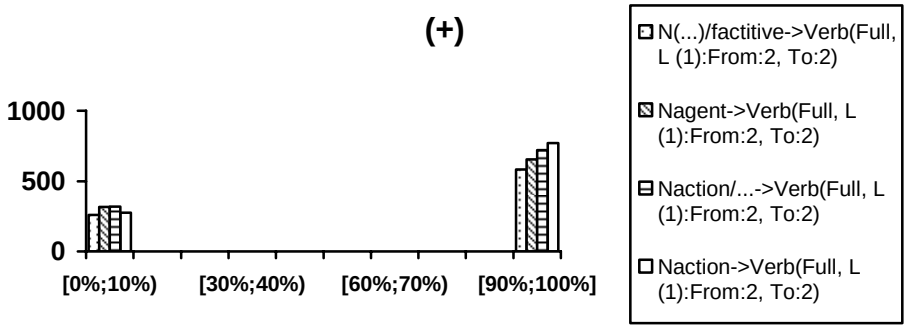

Figure 3. Repetition of the common-root verbs sequence in two-member strings of ME nouns: horizontal plane – number of matrices, vertical plane – extent of chronotropism. The table gives the compared strings with the indication of *L*(*1*) that stands for the length of the string in the matrix row (to be repeated in subsequent charts)

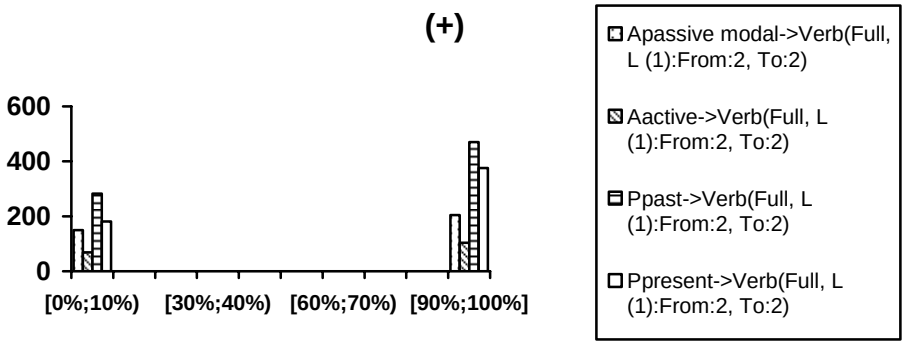

Figure 4. Repetition of the common-root verbs sequence in two-member strings of ME participles and adjectives

Deverbal strings exceeding two synonyms correlate with the verbal strings of identical or larger numeric power although cases of temporarily "headless" coinages somewhat distort the picture. It appears that nounal strings are more resembling of the parent verbs sequences than adjectival strings. The upper half of diagram 5 is denser than that in diagram 6 (cf. Figures 5 and 6). Yet within either class there were distinctions of its own. Agent nouns are in a weaker position by way of resembling the verbal sequential logic than action nouns. Nouns admitting factitive lexicalization are less chronotropic to the respective strings of verbs than action nouns with no factitive lexicalization. Factitive nouns and

their one-word action nouns are very close as regards this feature.

Among the adjectival classes passive modal adjectives are less capable of reflecting the sequences of parent verbs than strings of adjectives. Likewise, present participles are more imitative of the sequential logic of parent verbs than past participles. It is possible that such differences are caused by the transformational distance from the respective derivational categories to the verb.

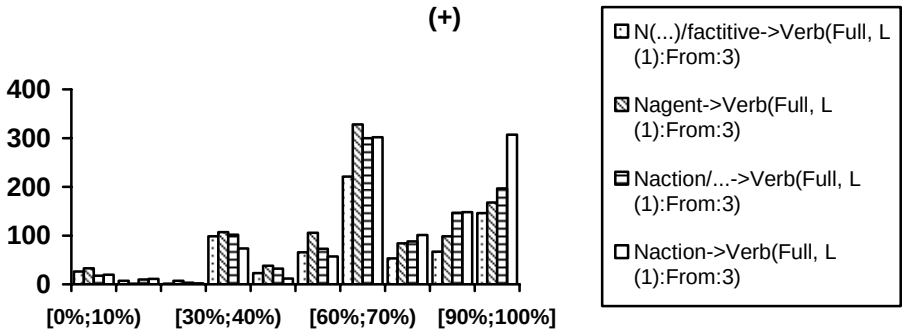

Figure 5. Repetition of the common-root verbs sequence in strings of ME nouns exceeding two constituents

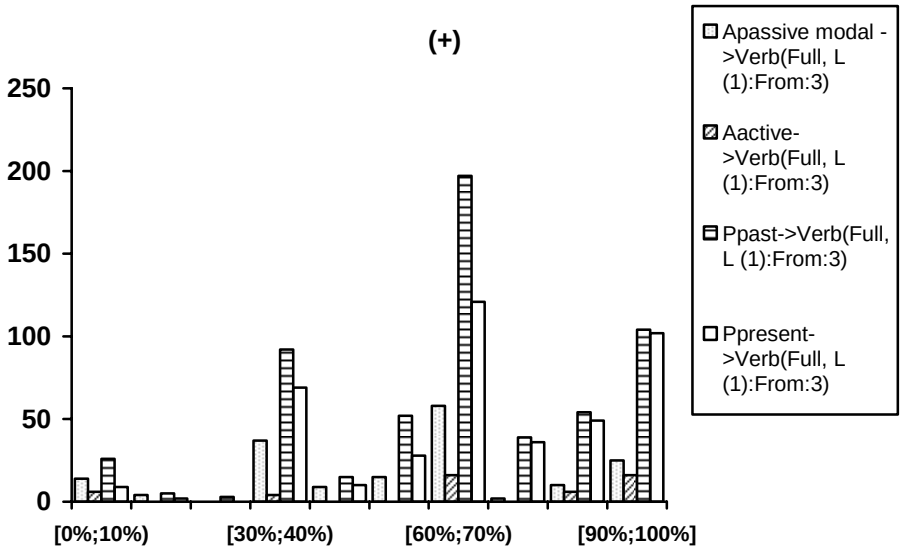

Figure 6. Repetition of the common-root verbs sequence in strings of ME participles and adjectives exceeding two constituents

The differences between deverbal classes as regards their imitation of the sequential logic in the strings of synonymous verbs allows to put forward a hypothesis that there could be category bound discrepancies between classes of derived strings themselves. It also seems plausible to suggest that strings of varied lengths should be characterised by fluctuating quotas of chronotropism that may be averaged for each length (cf. Figures 7 and 8).

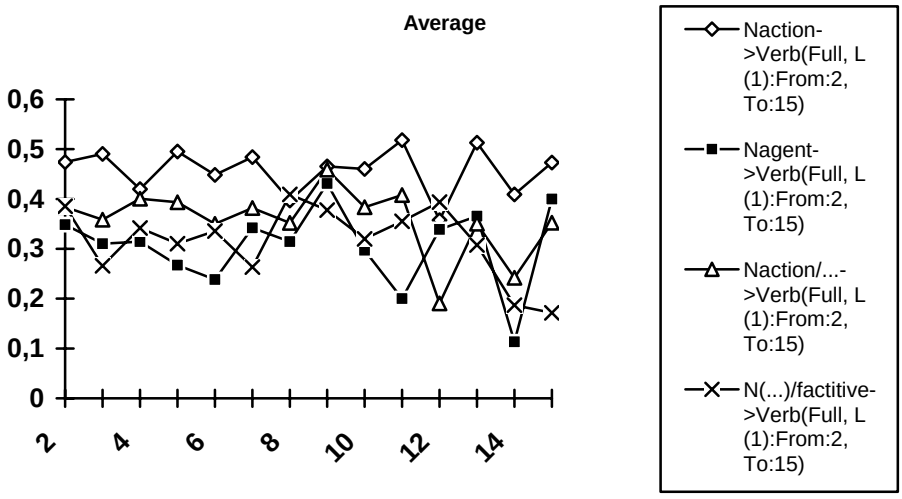

Figure 7. Mean imitative power of the sequential logic of verbs in strings of ME nouns: horizontal axis – lengths of strings of the left-hand side category from the table (up to 15 constituents); vertical axis – mean value of pluses from the chronotropic matrices by the scale from - 1 to +1 (to be repeated in subsequent charts)

The established mean imitative power reflects the number of positive outcomes from comparing the sequential positions of common-root constituents in the juxtaposed springs of words of specified lengths. The curves in the nounal step of deverbalization are more congruent than in the adjectival/participial step. At some lengths, however, the difference between categorial classes within each step appears to be minimal. This observation holds true for point 8 of all curves on Figure 7 as well as points 6-9 of curves 1-2 on Figure 8.

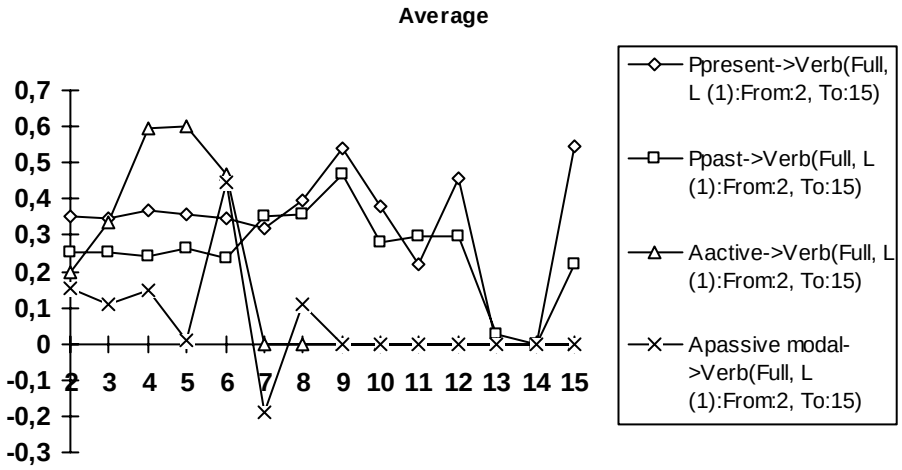

Figure 8. Mean imitative power of the sequential logic of verbs in strings of ME participles and adjectives

The parts-of-speech status of deverbal coinages is also of consequence for mutual imitative logic in the synonymic strings. In nouns the rate of the preservation of the compared string sequence in that of the other string is generally higher than in adjectives and/or participles. This is seen from the extent of chronotropism in the respective corpora of matrices (cf. Figures 9 and 10) as well as from the fact that in nouns the mean values of imitative power of the sequential logic (vertical axis on Figures 11 and 12) are almost two times higher than in adjectives.

Finally, I addressed this problem with respect to strings belonging to different parts of speech but the parent verbs. The behaviour of adjectives and participles here varies. It appears that adjectives are more imitative of the nounal string' succession than participles (cf. Figures 13 and 15 for strips' lengths as well as figures 14 and 16 for vertical axis values). One of the factors at work here is the fact that participial strings are generally longer than adjectival ones (cf. horizontal axis values on figures 14 and 16). Besides, strings of participles could be as old as strings of nouns whereas strings of adjectives contained only lexical innovations.

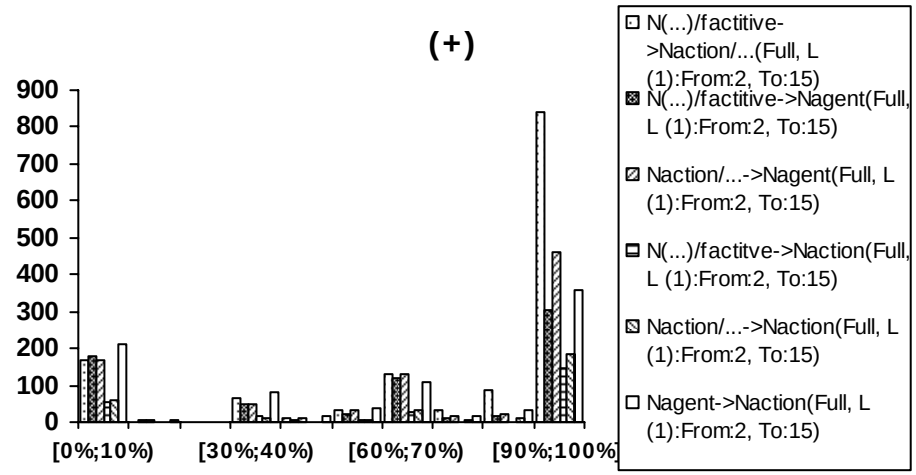

Figure 9. Repetition of the common-root constituents' sequence in strings of ME nouns

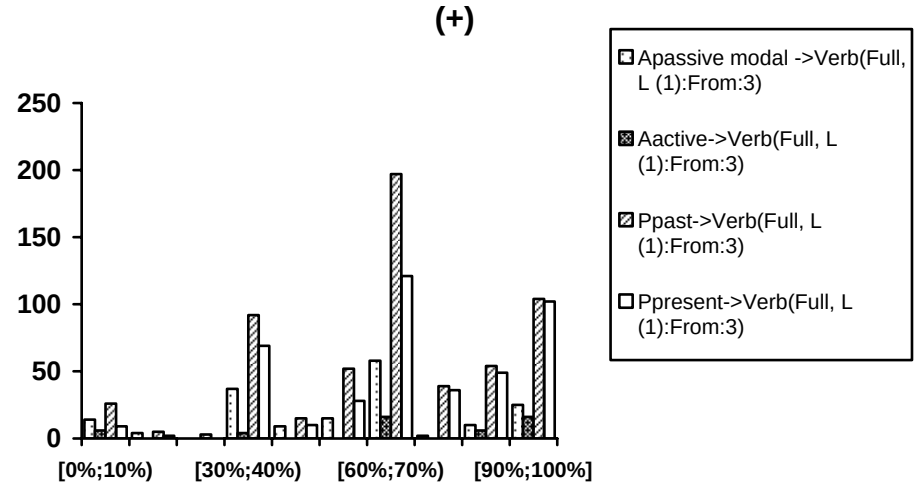

Figure 10. Repetition of the common-root constituents' sequence in strings of ME participles and adjectives

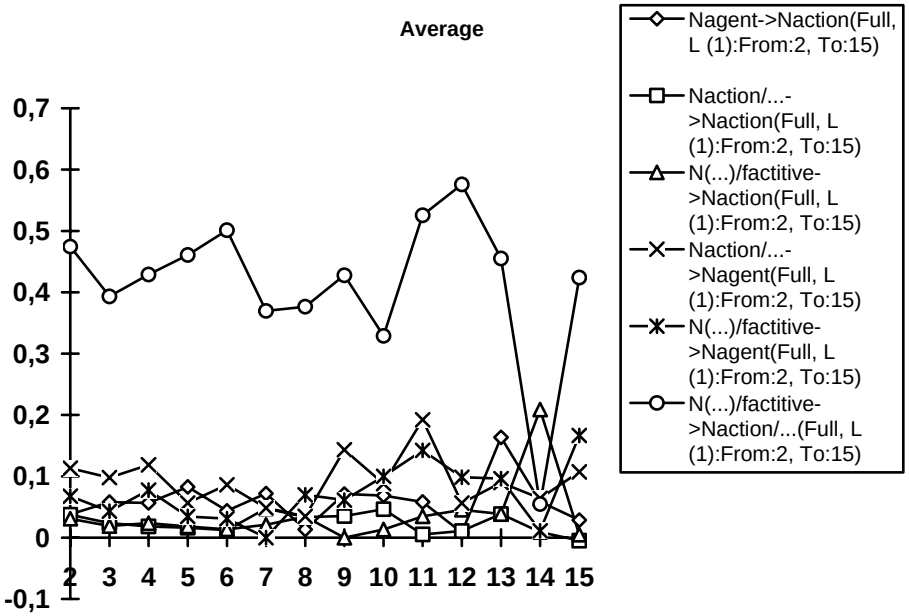

Figure 11. Mean imitative power of the common-root constituents' sequence in strings of ME nouns

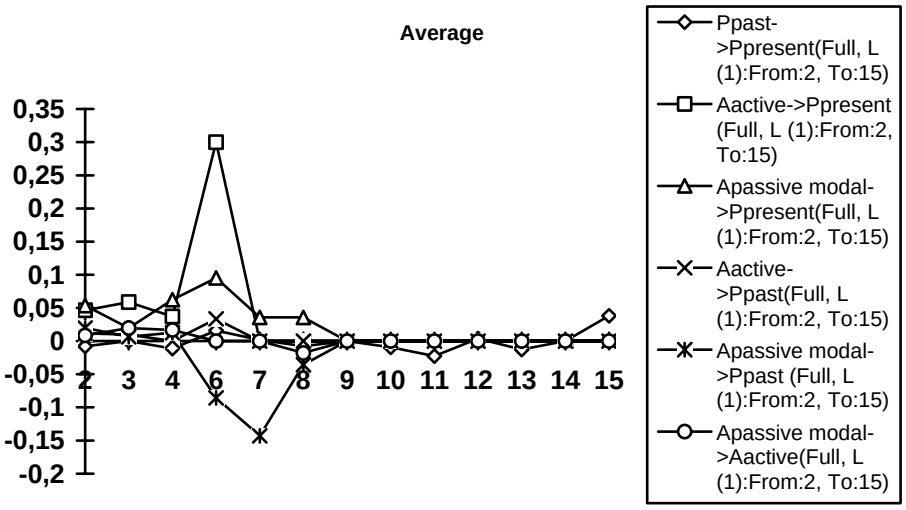

Figure 12. Mean imitative power of the common-root constituents' sequence in strings of ME participles/adjectives

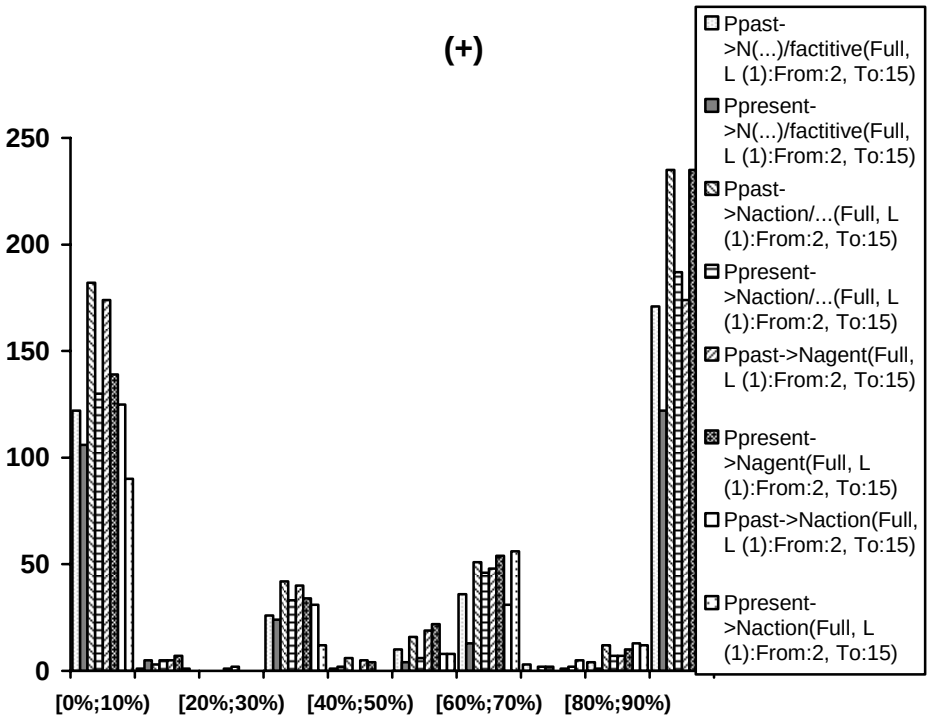

Figure 13. Repetition of the constituents' sequence of nounal strings in strings of ME participles

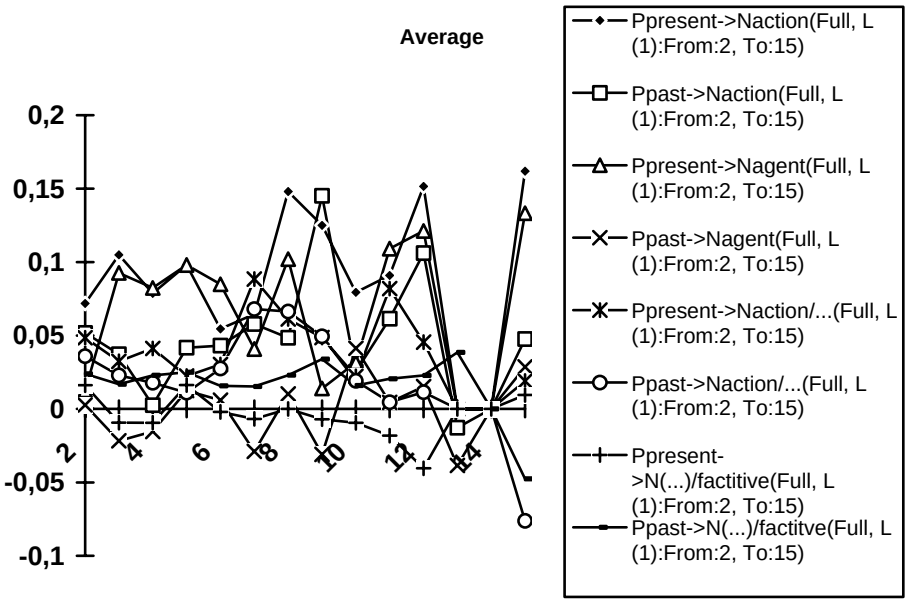

Figure 14. Mean imitative power of the common-root constituents' sequence of nouns in strings of ME participles

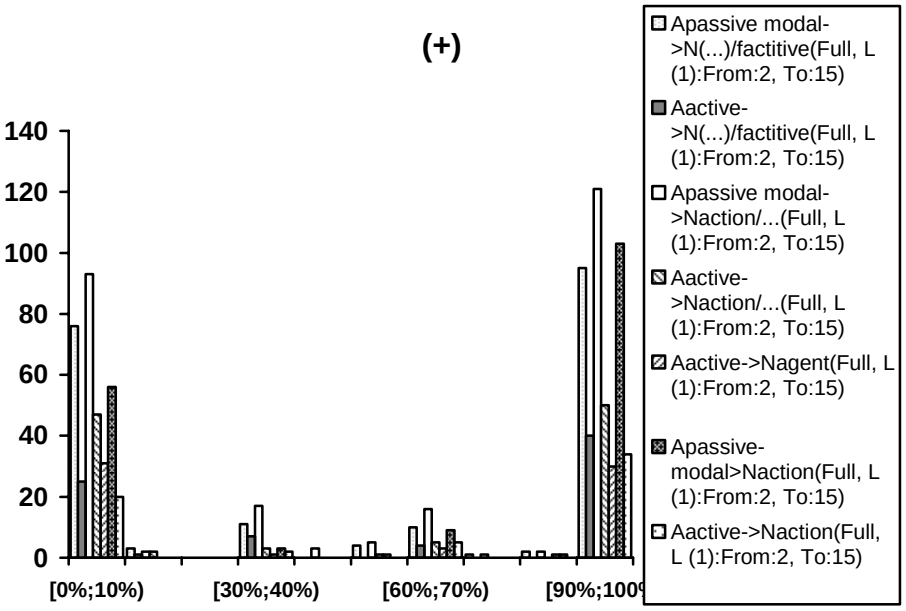

Figure 15. Repetition of the constituents' sequence of nounal strings in strings of ME adjectives

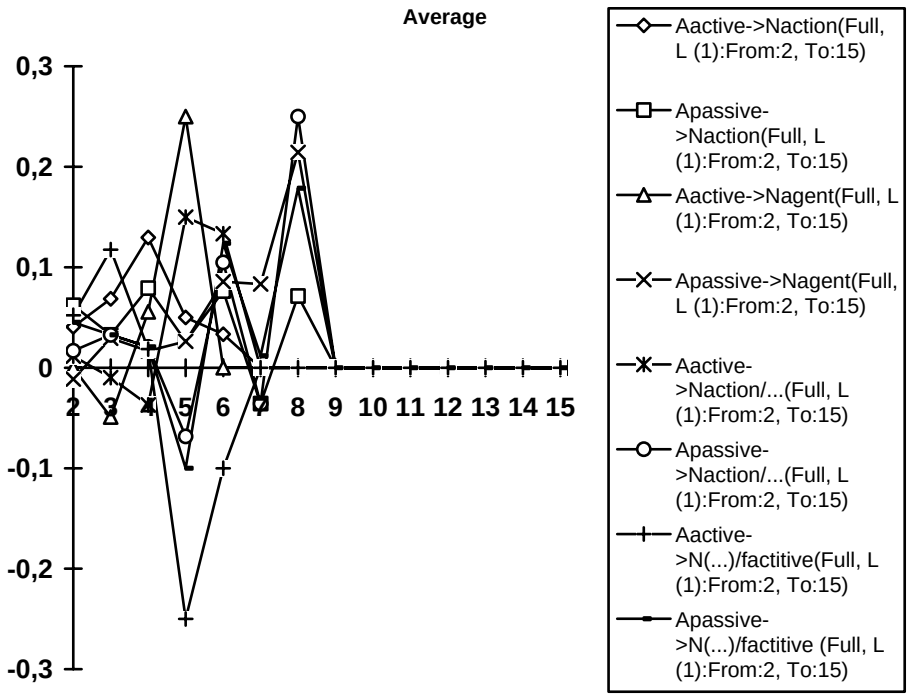

Figure 16. Mean imitative power of the common-root constituents' sequence of nouns in strings of ME adjectives

8. Concluding remarks

The rise of strings of synonyms in the history of lexicon has so far never involved the issue of their derivational recategorization. Ordinal positioning of strings' constituents of varied categorial affiliation is capable of a diachronic reconstructio revealing the ME contribution to the present-day verbal and/or deverbal thesauri of English in terms of the age of respective constituents and their succession. The suggested approach enables us to understand the dynamics of the expanding synonymous word-forming families arising from the *OED* documentation. The obtained findings may be extrapolated on a study based of the *MED* evidence as well. It might also be worthwhile to trace this kind of dynamism for the time after Middle English. The heuristics of the processing of factual data is dependent on the tools of modern electronic lexicography. It will be also possible to reshape the obtained curves of synonymic strings chronotropism into those representing mean values on the basis of the *OED* diachronic textual prototypes' age difference.

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