

From *engl-isc* to *whatever-ish*: a corpus-based investigation of *-ish* derivation in the history of English¹

MATTHIAS EITELMANN
Johannes Gutenberg University Mainz

KARIE HAUGLAND
University of Bergen

and

DAGMAR HAUMANN
University of Bergen

(Received 30 November 2018; revised 8 August 2019)

Drawing on a wide array of historical and contemporary corpora, this article provides one of the first empirical analyses of the intricately related functional changes that *-ish* underwent in the course of English language history. By investigating the distribution of *-ish* formations, the analysis sheds light on the productivity of the suffix, which does not only become evident in the numerous hapax legomena, but also in the trajectory of change itself in which *-ish* occurs with ever new base categories and new functions. Moreover, the article revisits theoretical claims made in the literature about the diachronic development and synchronic properties of *-ish* and reassesses them in the light of the corpus-based observations.

Keywords: morphology, derivation, productivity, diachrony, corpus-based

1 Introduction

The derivational suffix *-ish* has undergone a remarkable development in the history of English, compared to both other English derivational affixes, as well as affixes from other European languages. As the title of this article indicates, *-ish* is characterized by a trajectory of change that leads from its original, nationality-denoting usage (as in *englisc*) to coexisting but semantically diverse usages in Present-day English (PDE) involving a wide array of bases (basically, *whatever-ish*). While the historical development of *-ish* derivation has been dealt with in various previous publications, a large-scale corpus-based investigation of data from all the main historical periods of English is still pending, particularly as regards an analysis of the suffix's changing productivity.

Previous empirical studies investigating *-ish* derivation at earlier stages of English are not genuinely diachronic in nature in that they focus on one language period only, rather than the large-scale development. For example, Mateo Mendaza (2015) compares Old

¹ We thank the anonymous reviewers for valuable feedback.

English (OE) *-isc* to two other adjective-deriving suffixes, namely *-ful* and *-cund*, and shows that *-isc* is the most productive in terms of productivity scores such as Narrow Productivity and Global Productivity, which eventually led to the ousting of *-cund*, an otherwise functionally equivalent rival. Dalton-Puffer (1996) investigates the impact of French on Middle English (ME) morphology and contrasts newly added Romance affixes to the Germanic ones inherited from Old English. Based on the comparatively small ME sections of the *Helsinki Corpus*, she concludes that *-isc* declined in frequency after it had lost its original function of deriving ethnonymic adjectives, which led to *-ish* being ‘free to look around for other jobs in the derivational system and thus [beginning] to attach to more common nouns and to adjectives’ (Dalton-Puffer 1996: 173), an idea that she admits has to remain ‘speculative’ for lack of conclusive data. Following up on Dalton-Puffer (1996), Ciszek (2012) seeks to shed further light on the alleged decline in frequency and productivity of ME *-ish* by comparing OE to ME. She underscores empirically that the nationality-denoting function of *-ish* derivation declined dramatically in ME as it came into serious competition not only with the Romance affixes *-ian*, *-an*, *-ine* and *-ite*, but also with periphrastic *of* NPs. Apart from these studies, those accounts that attempt at a diachronic sketch of the *-ish* suffix across the ages are not empirically validated (see, for example, Marchand 1969: 305f.). Our corpus study seeks to fill this research gap by empirically tracing *-ish*’s path of development over the timespan of more than ten centuries. What is more, the corpus findings are discussed against the backdrop of the theoretical literature on *-ish*, thus contributing to a reconciliation of empiricism and morphological theorizing.

The article is structured as follows: section 2 provides a brief outline of the characteristic features of the derivational affix *-ish*, as well as the more exceptional properties *-ish* displays vis-à-vis well-established morphological principles and constraints. In order to shed light on the out-of-limits behavior of *-ish*, we conducted an in-depth corpus-based analysis, the data and methodology of which is sketched in section 3. Section 4 presents the results of this analysis, with a thorough description of the spread of *-ish* derivatives from OE to twentieth-century English, while section 5 discusses the observable spread of *-ish* derivatives across time in terms of productivity. Against the backdrop of our corpus findings, section 6 then reassesses various theoretical accounts. Section 7 concludes with a brief summary and outlook.

2 On the crosscategoriality and multifunctionality of *-ish*

The fact that *-ish* is versatile in nature and relatively unrestrained is widely acknowledged in handbooks on English word formation (see, e.g., Marchand 1969: 305f.; Plag 2003: 96; Bauer *et al.* 2013: 311, *passim*). Not only can *-ish* attach to a wide array of different word categories, the bases may also differ in degrees of complexity; albeit originally a Germanic suffix, it also readily combines with non-Germanic elements. Admittedly, such promiscuous behavior is not something exclusive to *-ish* derivation; on the contrary, it seems to be characteristic of quite a number of English affixes that they do

not obey formal or etymological restrictions. Nevertheless, as the overview of adjective-deriving suffixes in [table 1](#) below (adapted from Bauer *et al.* 2013: 290) illustrates, *-ish* is extraordinary in that it comes with the full package, so to speak, displaying all properties that are typical of Germanic suffixes across the board.

Like its Germanic ‘siblings’ *-ful*, *-some* and *-y*, *-ish* attaches to nominal (1), adjectival (2) and verbal bases (3) (though only infrequently so in the latter case). Furthermore, as Bauer *et al.* (2013: 290) specify in a footnote to their table, *-ish* may also ‘occasionally’ take pronominal (4) and numeral bases (5) – yet this acknowledgement still does not give full merit to the wealth of base categories that *-ish* can combine with, for what is missing from the full picture as attested in PDE data are proper nouns (6), adverbs (7) and quantifiers (8):²

- (1) nominal bases: *apish, clownish, feverish, hellish, liverish, popish, whorish*
- (2) adjectival bases: *awkwardish, baddish, earlyish, pale-ish, quickish, warmish*
- (3) verbal bases: *garish, snappish, ticklish,*
- (4) pronominal bases: *selfish*
- (5) numeral bases: *7.30-ish, elevenish, forty-fiveish, one-ish*
- (6) proper noun bases: *Al Caponish, James Deanish, Haydnish, Rossinish*
- (7) adverb bases: *forever-ish, offish, uppish*
- (8) quantifier bases: *more-ish*

What is more, the base may differ in degrees of complexity: apart from simplex nominal bases (1), Bauer *et al.* (2013: 290) identify compounds (9) as complex nominal bases. Nominal derivatives (10) complete the list.³ Moreover, *-ish* may attach to even more complex bases, viz. phrases (11), thereby surpassing its close rival *-y* (even though *-y* might not be too close behind in that respect⁴):

- (9) compound noun bases: *eyebrowish, scout-masterish, nightmarish, tomboyish*
- (10) derived noun bases: *lawyerish, bit-playerish, game-keeperish*
- (11) phrasal bases: *no-howish* ‘know-howish’, *first-nightish, old-maidish, out-of-the-wayish, other-worldish*

The versatility of *-ish*, as illustrated in (1) to (11), goes along with a conspicuous incapacity to combine with bound bases or to induce base modification by means of

² All examples in this section are taken from the *Nineteenth-Century Fiction* corpus (NCF) and the *British National Corpus* (BNC).

³ Derived nominal bases are explicitly pointed out in Plag *et al.* (1999: 222). As Bauer *et al.* (2013: 591ff.) illustrate, *-ish* is a suffix that can readily attach to both non-native suffixes (*normalish, cinematic-ish, administratorish*) and native suffixes (*woolyish*); similarly, it can serve as the derived base for the attachment of further native (*Englishy*) and non-native (*foolishment*) suffixes.

⁴ Dixon (2014: 240) shows that in general, *-ish* and *-y* are close competitors, with a great number of both nouns and adjectives taking either suffix. He claims that there is ‘a subtle but significant difference in meaning’, even though the example provided is rather inconclusive: ‘*yellowish* “showing a tinge of yellow”, *yellow-y* “not quite yellow but similar to it”’. The empirical investigation of the rivalry between these two suffixes, from both a synchronic and diachronic perspective, is still pending.

Table 1. *Formal characteristics of adjective-forming suffixes*

		Base category			Complexity of the base			Origin of the base		Modification of the base	
		N	A	V	Bound base	Compound base	Phrasal base	Native base	Non-native base	Stress shift	Base allomorphy
Germanic suffixes	<i>-ful</i>	✓	✓	✓				✓	✓		
	<i>-ing</i>			✓				✓	✓		
	<i>-ish</i>	✓	✓	(✓)		✓	✓	✓	✓		
	<i>-like</i>	✓	(✓)			✓	✓	✓	✓		
	<i>-ly</i>	✓						✓	✓		
	<i>-some</i>	✓	✓	✓	(✓)			✓	✓		
	<i>-y</i>	✓	(✓)	✓		✓		✓	✓		
Romance suffixes	<i>-able</i>	(✓)		✓	✓	(✓)		✓	✓	✓	(S)
	<i>-al</i>	✓	(✓)	(✓)	✓			*	✓	✓	(S)
	<i>-ant</i>	✓		✓	✓			*	✓		
	<i>-ary</i>	✓	(✓)	(✓)	✓				✓	✓	(S)
	<i>-esque</i>	✓	(✓)		*	(✓)		✓	✓		
	<i>-(i)an</i>	✓	(✓)		✓				✓	✓	(S)
	<i>-ible</i>			✓	✓				✓		✓
	<i>-ic</i>	✓	*	(✓)	✓	*		*	✓	✓	✓
	<i>-ical</i>	✓			✓	*		*	✓	✓	✓
	<i>-ine</i>	✓			✓				✓		
	<i>-ive</i>		(✓)	✓	✓			*	✓		✓
	<i>-oid</i>	✓	(✓)		✓			✓	✓		
	<i>-ory</i>			✓	✓				✓		
	<i>-ous</i>	✓	(✓)	(✓)	✓			*	✓	✓	

✓ well-attested (✓) infrequently attested * isolated examples

stress shift or base allomorphy.⁵ At the same time, the fact that *-ish* does not combine with bound bases at all is exactly what makes it readily available for an extraordinary variety of bases, ranging from the monomorphemic kind via more complex word formations to the phrasal level. Moreover, the resulting abundance of *-ish* derivatives seems to have facilitated the development of clitic *-ish* in the nineteenth century.

As concerns the etymological origin of the base, we find Germanic roots (12) – which of course befits the Germanic origin of *-ish* – but also Romance roots from Latin or French (13), as well as roots ultimately originating in Greek or other languages (14), resulting in hybrid formations (which, however, is not too unusual for affixes of Germanic origin in general):

(12) Germanic roots: *darkish, fattish, goodish, smartish, tightish, wildish, youngish*

(13) Romance roots: *amateurish, coquettish, vapourish, vinegarish, vulgarish*

(14) Greek (via Latin and Germanic) *devilish*, Greek (via Latin) *popish*, Arabic *ghoulish*, Irish *streelish*

What clearly distinguishes *-ish* from its Germanic adjective-deriving siblings is the fact that it has come to serve several functions in the course of time, thus resulting in an overall more colorful career than, e.g., Dutch and German *-isch* or Scandinavian *-(i)sk*.⁶ The original function of *-ish* is to derive ethnonymic adjectives, thus denoting nationalities such as *English, British* or *Spanish*, a characteristic feature that English *-ish* shares with its cognates in related Germanic languages. Today, the original nationality-denoting sense goes hand in hand with, to use Kuzmak's (2007: 1) labels, the associative sense 'of the character of X, like X', as in *summerish, monsterish* or *James-Deanish*.⁷ While this sense, too, is evidenced in the other Germanic languages, the approximative sense 'somewhat X, vaguely X' is clearly exclusive to English *-ish*; this sense is most prevalently instantiated when attached to adjectival bases as in *freeish* or *greenish*, in which cases *-ish* does not have a word class-changing effect, but '[i]nstead moderates or attenuates the reference of the adjective' (Dixon 2014: 119). The same semantic effect can also be observed with numeral bases as in *fourteenish* or *1977-ish*. It is important to emphasize that, in such cases, *-ish* does not serve to denote an unequivocal relatedness as with the associative sense, but on the contrary an ultimate dissimilarity. To spell this out, *freeish* is just kind of free (but actually implies that someone is still captivated), and something that is characterized as *1984-ish* is vaguely reminiscent of Orwell's novel but definitely not something that is actually part of it.⁸

⁵ Huddleston & Pullum (2002: 1670) too portray *-ish* as a 'stress-neutral suffix', giving the example of *No'vember* → *No'vemberish*.

⁶ For a contrastive study of German *-isch* vs English *-ish* see Kempf & Eitelmann (2018).

⁷ As has been claimed by, among others, Marchand (1969: 305), Katamba (2005: 62) and Dixon (2014: 236), *-ish* derivatives from nominal bases usually have a derogative or pejorative meaning. See also *OED*, s.v. *ish* suffix₁.

⁸ Assuming a genre effect, some researchers claim that the approximative sense predominantly occurs in more informal genres. See Biber *et al.* (1999: 111f.), on approximative *-ish* with numeral bases in 'primarily conversation and fiction' or Plag *et al.* (1999: 220) for the qualification that *-ish* is 'used significantly more extensively in every-day conversations than in context-governed speech'.

Lastly, a further route of development that only English *-ish* has taken is the evolution of *ish* as a free lexical item, functioning as an epistemic marker (Traugott & Trousdale 2013: 236f.):⁹

- (15) Frank asked if they were linked, romantically [...] Then he said yeah, he supposed they were, that was one way to put it, in a way. He paused. ‘Ish,’ he admitted. ‘Vaguely.’ (J. O’Connor, *Cowboys & Indians*, 1992 [OED])

Against the backdrop of the apparent crosscategoriality and multifunctionality of *-ish*, it will now be interesting to see how exactly these properties evolved in the course of English language history.

3 Data and methodology

Our study is based on data from a number of electronic corpora of prose texts covering the historical stages of English from Old English to the twentieth century (see table 2).

For Old English, we used the 3 million-word *Dictionary of Old English Corpus* (DOE, c. 600–1150). As the ME period is not as well represented in electronic corpora as the other historical stages, data from this period were drawn from the electronic *Middle English Dictionary* (MED, ^m1175–1500).¹⁰ For Early Modern English (EME) and the seventeenth century, we used the *Early English Prose Fiction* corpus (EPEF, *1460–1682) and Part 1 of the *Eighteenth-Century Fiction* corpus (ECF1, *1660–99) with a cumulative 15 million words. The data for the eighteenth century are extracted from part 2 of the *Eighteenth-Century Fiction* corpus (ECF2, *1700–52) and part 1 of the *Nineteenth-Century Fiction* corpus (NCF1, *1728–99), with a cumulative total of 17 million words. For the nineteenth century, we used part 2 of *Nineteenth-Century Fiction* (NCF2, *1800–69) with a total of 27 million words. Finally, the twentieth-century data are extracted from the written domain of the *British National Corpus* (wridom1, ^p1960–93). In this way, we were able to keep the factor genre constant at least from EME onwards, which allows for a higher degree of comparability:

From these corpora, we extracted all word-final occurrences of *-ish* (with variant spellings and inflectional endings for OE and ME). Hyphenated instances occur as of the seventeenth century and remain extremely scarce until the twentieth century; even the BNC contains only 33 instances.

In OE, the suffix generally appears as *-isc* [ɪʃ], occasionally *-esc* with a lowered vowel and no palatalization when followed by a back vowel (Campbell 1959: 155; Hogg 1992: 238), as in *þa denescan* ‘the Danes’, *se mennesca* ‘the human being’.¹¹ There are also a

⁹ Huddleston & Pullum (2002: 1624) hold that such instances should be interpreted as ‘jocular ellipses’.

¹⁰ This is problematic not only because the more than 900,000 quotations of various length found in the MED are drawn from both prose and verse texts, but also because the actual size of the corpus is not known. The procedure used for extracting data is described below.

¹¹ Unless specific reference is made to attested spellings, OE and ME *-ish* derivations are given in the standardized entry form as used in the main dictionaries: Bosworth & Toller (2010–) for OE, the electronic *Middle English Dictionary* (2018) for ME.

Table 2. Overview of the electronic corpora of texts used (* authors' birth dates, ^m manuscript dates, ^p publication dates)

	Corpora	Period	Million words
OE	<i>Dictionary of Old English Corpus</i>	c.600–1150	3
ME	<i>Middle English Dictionary</i> (2018)	^m c.1175–1500	
EME &	<i>Early English Prose Fiction</i>	*1460–1682	10
17th c.	<i>Eighteenth-Century Fiction</i> Part 1	*1660–99	5
18th c.	<i>Eighteenth-Century Fiction</i> Part 2	*1700–52	5
	<i>Nineteenth-Century Fiction</i> Part 1	*1728–99	12
19th c.	<i>Nineteenth-Century Fiction</i> Part 2	*1800–69	27
20th c.	<i>British National Corpus</i> (wridom1)	^p 1960–93	19

number of other spelling variants (*-esh*, *-issc*, *-is*, *-iss*, *-sc*, *-ysc*, *-ysc*), and we took meticulous care in searching the corpus to take all of these, with and without inflectional endings, into account.¹²

Data from the *MED*, on the other hand, were retrieved by searching for entry forms ('head words') containing the string *ish*, and then looking up all the quotations provided under each relevant entry.¹³

The output of the corpus searches was subsequently manually purged to exclude non-affixal *-ish*, as in the bases of nouns (e.g. OE *fisc* 'fish', ME *blish* 'glimpse', *bishop*) and the many ME and later verbs in *-ish(en)* from Old French *-ir*/Anglo-Norman *-isse* (*cherishen*, *finish*). While the inflectional variants of *-ish* formations, typical of the early periods, are included in our data (e.g. OE *godspellesca*, genitive plural of *godspellisc* 'evangelical'), further derivations with overt affixes are not, such as OE *menniscness* 'humanity', ME *whitished(e)* 'whitishness', *lumpishli* 'awkwardly' or EME *assishness*.

The relevant occurrences of *-ish* were analyzed and annotated for both the origin and the category of the base *-ish* attaches to (e.g. Germanic, Romance and N, A, VP, DP, respectively), the morphological makeup of the base (e.g. derivative, compound, phrasal), and the resultant category of the *-ish* form (if not adjectival).¹⁴

¹² It needs to be pointed out that for reasons of feasibility, forms with *-is*, *-iss* and their inflectional variants have not been systematically examined.

¹³ In addition, we have included a number of *-ish* derivations that do not appear under a separate entry form, but which were chanced upon in quotations provided under other entries.

¹⁴ For reasons of feasibility, we did not code for the semantic function(s) of the *-ish* derivative. While for some base categories, the semantic function is unequivocal (e.g. deadjectival formations are approximative), for others, particularly denominal bases that occur in large numbers, it would have been too time-consuming to take the context of each and every derivative into account (consider, for instance, *waterish*, which may either denote something that has the quality of water in the associative sense or something that only resembles water in the approximative sense). For this reason, comments made about the semantics of the respective *-ish* derivatives are based on generalizations.

A classification along these lines, in tandem with the quantification of all *-ish* formations in terms of type and token frequencies differentiated for the various base categories, allows us to gain an understanding of the diachronic development and productivity of *-ish*. The following section presents the results of our empirical study.

4 The diachronic development of *-ish* derivation in English language history

4.1 Old English

In our OE data, *-ish* derivatives amount to a total of 3,076 tokens, which constitute all in all 194 types. As [figure 1](#) shows, all bases are nominal. They include both proper names and common nouns, and the latter can be simplex as well as compound. The proper names primarily denote geographical areas or ethnic groups (demonyms and ethnonyms, respectively).

The lion's share of types (i.e. 74 percent) is represented by ethnonymic and demonymic formations, based on the names of countries, areas, cities and the like, and in some cases, persons (*englisc* 'English', *lundenisc* 'from London', *madianitisc* 'Midianite; descendant of Midian'). This indeed is the well-known kind of *-ish* derivation, widespread in the Germanic languages, representing the original use of the affix.

Most forms with more than a few attestations are found both as adjectives and in nominalized uses representing either a person or persons of a certain nationality or origin, or their language (*se denisca flota* 'the Danish fleet', *se denisca* 'the Dane', *on denisc* 'in Danish'). The fact that 55 of such forms identified in the corpus are hapax

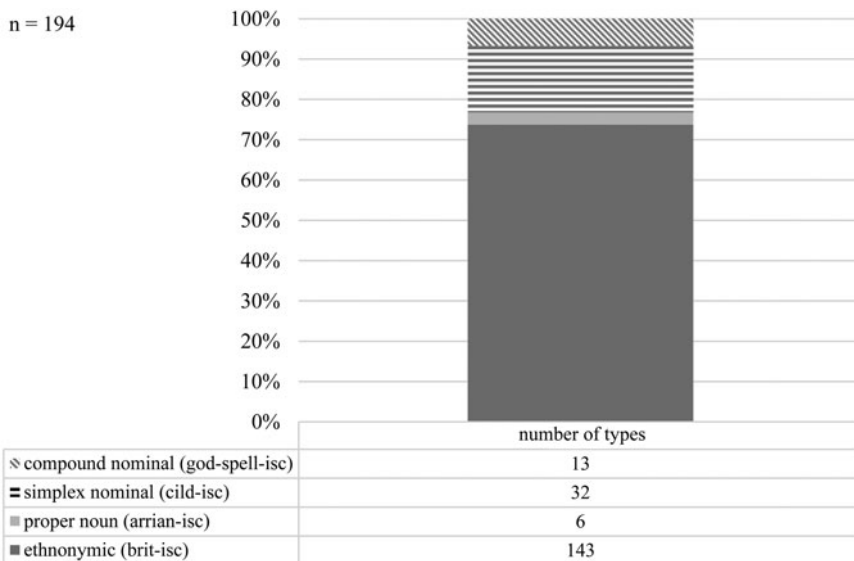


Figure 1. Distribution of OE *-isc* derivatives across types

legomena should not be overinterpreted in the earliest period: it is hardly surprising that *englisc* ‘English’, *denisc* ‘Danish’, *grecisc* ‘Greek’, *iudesic* ‘Jewish’ and *Nazarenisc* ‘of Nazareth’ are highly frequent, whereas e.g. *amalechitisc* ‘Amalecite’, *ethiopisc* ‘Ethiopian’ and *nyceanisc* ‘of Nycene’ are each recorded only once. This merely reflects the topics dealt with in the preserved records and has little to do with any characteristics of the language at a stage when *-ish* had little competition as a marker of geographical or ethnic origin.

Closely related to this kind of *-ish* derivation is the one based on proper nouns, which amounts to six types in total and which results in adjectives denoting either a family relation (*herodiasc* ‘Herodian, [daughter] of Herodias’, *pontisc* ‘Pontian, of the Pontius family’) or an origin relating to the person in question (*arrianisc* ‘Arian, adhering to the doctrine of Arius of Alexandria’, *dauidisc* ‘by David’).

The category of greatest interest, in view of *-ish* uses at later stages of the language, are the forms derived from nominal bases. In our data, these represent 32 types/641 tokens. With 462 tokens, *mennisc* ‘human’ is by far the most frequent type. As shown by the consistently mutated form of the base (spelt *menn-*, occasionally *mænn-*), this is a prehistoric formation, and richly attested also in nominalized uses (‘man’, ‘people’). Interestingly enough, *i*-mutation can still be found in a wide array of *-ish* derivatives, and also with bases of Latin origin; see, e.g., *milisc* ‘honeyed, sweetened with honey’, derived from Latin *mel(l)* ‘honey’. As can be expected, the members of the nominal category are primarily based on simplex common nouns (e.g. *ceorlisc* ‘churlisc’ < *ceorl* ‘churl’, *eotenisc* ‘made by a giant’ < *eoten* ‘giant’), though compounds are also attested (e.g. *dun-lendisc* ‘hilly’ < *dun-land* ‘hilly country’, *god-spellisc* ‘evangelical’ < *god-spell* ‘gospel’).

As for the etymological origin of the base, we find that the suffix *-ish*, as expected, primarily attaches to Germanic roots, but also to roots of Latin origin (e.g. *puerisc* ‘boyish’ < Latin *puer*), or Graeco-Latin bases (e.g. *deóflíc* ‘devilish’ < Greek *διάβολος* via Latin *diabolus* and early Germanic). Several of the base forms from Latin appear to be relatively well-established loans in OE, such as *gimm* ‘jewel’ (the base for *gimmisc* ‘jewelled, set with gems’) from Lat. *gemma*, *laur* ‘laurel’ (> *laurisc* ‘of laurel’) from Lat. *laurus*, and possibly also *cristalla* (> *cristallisc* ‘of crystal’) from Lat. *crystallum*.

All in all, then, there is evidence that already at this stage, English *-ish* was less particular in its choice of partners than many of the current adjective-forming suffixes, which, as noted above, more faithfully select bases of either English (i.e. Germanic) or Romance origin. In this respect, as Campbell (1959: 219) points out, *-isc*, along with the agentive suffix *-ere* and the infinitival ending *-ian*, is more prone than other affixes to attach to foreign bases.

In a nutshell, although the attested OE ‘inventory’ of *-ish* derivatives is dominated by ethnonymic bases (74 percent), the remaining 26 percent foreshadow the variance of *-ish* derivatives as witnessed by hybrid formations and *-ish* suffixation to morphologically complex bases.

4.2 Middle English

How did the word-formation pattern of *-ish* derivation change after OE times? Figure 2 offers various insights: adjectives established themselves as a fully fledged new word category available for *-ish* derivation, verbs also appeared on the scene, and concomitantly, the overall distributions changed considerably. It needs to be emphasized, though, that the statistics are to be taken with a pinch of salt: due to the nature of the database, the numbers are admittedly neither directly comparable to nor as reliable as the frequencies reported for OE or the post-ME eras. Therefore, in the following section on ME *-ish* derivatives, we will restrict our discussion to type frequencies as evidenced in the data at hand, which nonetheless allows us to draw conclusions as for the further development of *-ish* derivation.

The data extraction revealed a total of 191 types, distributed over five different base categories: for nominal bases, we again differentiated between simplex and compound nouns, and as it is commonly argued that color adjectives are the entry route for adjectival bases in general (Marchand 1969: 305), we distinguished between color and common adjectives. As can be seen at first glance, the share of *-ish* types across word categories has changed enormously in the transition from OE to ME, with nominal bases now having overtaken the group of ethnonyms. From clear winner downgraded to runner-up, ethnymic formations take second place in ME with 37 extracted types

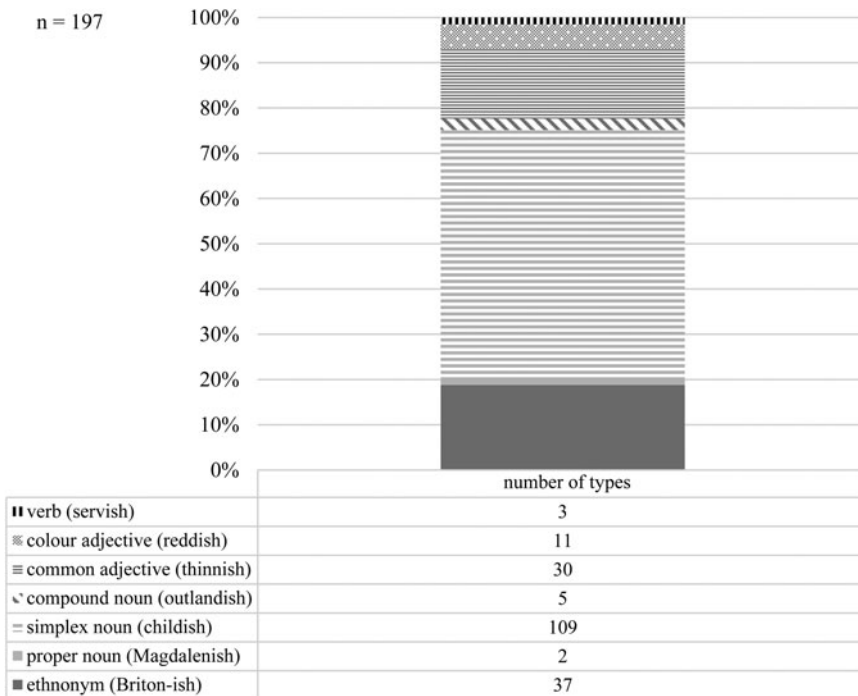


Figure 2. Distribution of ME *-ish* derivatives across types

(19 percent), not too far ahead of the newcomer, i.e. the deadjectival type. The data for ethnonymic formations corroborate Dalton-Puffer's (1996) and Ciszek's (2012) observation that *-ish* loses ground in this domain as the nationality-denoting function is nowadays largely expressed by other suffixes that were added to the derivational system in ME, primarily *-ian*, *-an* and *-ite*. Nationality-denoting *-ish*, the only Germanic suffix used with ethnonyms (cf. Dixon 2014: 268), is by and large only used with those formations that have existed since OE but has ceased to be available for creating new ethnonymic adjectives.¹⁵

Similarly, proper noun bases decline drastically in ME, with just two types attested in our data, namely *Magdalenish* and *Pilatus Pontiuisce*. These formations, which are probably remnants from OE Bible translations, bear a locational/relational sense ('from Magdala', 'belonging to the Pontius family') that would nowadays be absent with *-ish* forms derived from proper nouns. As shown below, proper noun bases disappeared completely for some time before they experienced a comeback in the nineteenth century.

A closer look at the 109 simplex noun bases reveals that this type of denominal *-ish* forms did indeed thrive in ME. In this respect, the data at hand do not confirm Dalton-Puffer's (1996: 173) intuition that with 'common noun derivatives being rare in Old English ... our data would indicate that the same was the case in Middle English.' While a great deal of the OE ethnonymic formations did not survive into the ME period (e.g. *affricanisc*, *bulgarisc* and *grecisc* became obsolete), the vast majority of denominal ones did – and apart from that, a great number of new coinages can be found, with an observable extension of the nominal class. Whereas most OE formations denoted animate beings, ME formations go beyond persons (e.g. *foolish*, *knavish*, *thievish*) and animals (e.g. *doggish*, *foxish*, *swinish*) in that they also comprise a wide array of inanimate entities denoting substances, materials or shapes/appearances:

(16) When [blood] is o þe vesy it is mare lumpryssh & clumpryssh & cruddyssh & spottyssh ... (a.1425) (MED)

'When blood is in the urinary bladder, it is more lumprish & clumprish & cruddish & spottish ...'

Interestingly enough, for many of the *-ish* derivatives we also find variant forms in *-y/-i*, e.g. *cruddi* vs *cruddyssh* in (16) or *cloudi* vs *clowdyssh*, which is indicative of a system in flux, with functionally equivalent suffixes competing. In this regard, it is also no surprise that very many attested ME *-ish* forms have later on been replaced by *-ly* derivatives, e.g. *lifish* vs *lively*, *daiish* vs *daily*, *hevenish* vs *heavenly*.

¹⁵ Admittedly, there are some late additions to the paradigm of nationality-denoting *-ish* derivatives such as *Finnish* (first attestation in the *OED*: 1789) or *Swedish* (1605), which are probably formed in analogy to well-entrenched ethnonymic adjectives such as *English* or *Danish*. Nevertheless, in PDE, *-ish* can be assumed to be completely non-productive in its function of deriving ethnonymic adjectives, which might be due to the firm establishment of the approximative function not only with adjectival bases but also with proper noun bases (see section 4.3).

At the same time, we can observe lexicalization processes setting in, with *-ish* derivatives gaining an idiosyncratic meaning in some cases. A prime example is *childish*, which used to be perfectly interpretable as ‘childlike’ in the associative sense and which has now come to be negatively connotated as ‘not befitting maturity’ (*OED*); the pejorative sense has been attested since 1405. As for the claim that most denominal *-ish* formations are pejorative, which according to Marchand (1969: 305) originates from OE nouns such as *ceorlisc* ‘churlish’ and *hæþenisc* ‘heathen’, there is indeed a conspicuous number of inherently negative bases (cf. *fool*, *thief*, *knave*). It remains doubtful, however, whether this suffices to claim that this ‘derogatory shade of meaning’ (Marchand 1969: 305) carries over to any person-denoting *-ish* derivatives (even though this might be appropriate for animal-denoting formations, as Malkiel (1977) claims in his investigation of the competition between *-ish* and *-y* with respect to zoonyms).

Moving on to deadjectival *-ish* formations, which make up the third largest group of base categories at 13 percent, we see an innovation that paves the way for the approximative sense ‘nearing, but not exactly X’ (Marchand 1969: 306), commonly associated with *-ish* formations derived from adjectives. The path of development that leads to the rise of this novel function is closely tied to the by then well-established associative sense of similitude; as Bauer *et al.* (2013: 313) put it,

the first meaning is derived by inference from the second. If we say something is similar to *dull*, *baptismal*, *lunar*, or *modern*, the inference is drawn that we cannot mean exactly *dull*, *baptismal*, *lunar*, or *modern* but rather must mean something not exactly the same as those qualities, that is, approximating those qualities.

It is often assumed that color adjectives are the forerunners in this development, dragging along all other kinds of adjectives (i.e. those that we subsumed under the label ‘common adjectives’) only later with a considerable delay. The claim is tentatively made in the *OED* entry for the suffix *-ish*, and reiterated in more concrete terms by Marchand (1969), who specifies that ‘from its use with adjectives denoting color the suffix was extended to other adjectives with the same nuance of approximation (chiefly 16th century and later)’ (1969: 306). This claim is definitely not corroborated by our data, which show that *-ish* formations derived from color adjectives (amounting to 11 types) were used at approximately the same time as others derived from common adjectives (26 types). The earliest formations based on a color adjective are *whitish* (1379), *yelwish* (1379) and *reddish* (1392), for those based on common adjectives, the earliest attestations are *fattish* (1369), *palish* (a.1398) and *sourish* (a.1398).

We might still object that the approximative sense is not as firmly established with common adjectives as it is with color adjectives. Indeed, there are some attestations where *-ish* seems to be pleonastic. For instance, *sorwefullish* is simply given as a variant for *sorweful* in the respective *MED* entry, and for adjectives such as *palish* and *swolnish* it might be argued that *-ish* rather serves to mark weakly entrenched adjectives more unequivocally as such, the first one being a new French loan, the

second being an adjectivally used past participle. However, the following medical guideline from *Liber uricrisiarum* (a.1425) (Jasin 1983) can be taken as an early metalinguistic comment and evidence for the prevalence of the approximative sense with at least some adjectives such as *thin* or *thick*:

- (17) For to wys how þis terme “thynnyssh” sall be takyn, undyrstand þat þere is difference between “thyn” and “thynnyssh”: “Thyn” [...] is when þe uryne is fullyk thynne [...] “thynnyssh”, when it is a party thyn or ellys menely thyn. (*MED*)
 ‘In order to know how this term “thinnish” shall be used, understand that there is a difference between “thin” and “thinnish”: “thin” is when the urine is fully thin [...] “thinnish”, when it is partially thin or else slightly thin.’

Interestingly, nowadays such deadjectival formations are assumed to predominantly occur in journalistic prose and fiction (because they are perceived to be somewhat jocular); some of the first attestations, however, are found in medical texts.

Apart from deadjectival formations, deverbal ones emerge as another newcomer – albeit, with merely three attested types, a feeble one (and also one not destined to prosper in later periods). As Dixon (2014: 293) remarks, *-ish* is nowadays represented ‘with a small number of Germanic verbs’ (e.g. *snappish*, *ticklish*); the earliest attestations of this type, however, are with Romance verbs, namely *errish* (< *err*), *servish* (< *serve*) and *boudish* (< from Old French *bouder* ‘sulk’ or ‘swell or protrude the lip’ (Godefroy 1881: 349, s.v. *bouder*)). All of these early deverbal derivatives became obsolete and are not even recorded in the *OED*. The fact that *-ish* never quite succeeded in establishing itself with verbal bases is probably related to its competition with *-y*, which did indeed successfully conquer this domain (see Bauer *et al.* 2013: 306).

To wrap up the ME state of affairs, *-ish* combines with an extended inventory of bases, now comprising ethnonymic bases, proper, simplex and compound nouns, common adjectives and color adjectives, as well as verbs. The share of *-ish* derivatives from ethnonymic bases and simplex nouns has changed dramatically, with the former receding and the latter booming. Also, the diversification and spread of *-ish* derivatives from adjectival bases is considerable, with color adjectives and common adjectives both well represented. It does indeed seem as if *-ish* found ‘a new purpose in life’, as Dalton-Puffer (1996: 198) puts it, on its way to turning into ‘a popular Similitudinal suffix in Modern English times’.

4.3 Post-Middle English: from Early Modern English to Present-day English

This section outlines the development after the ME era, i.e. from the sixteenth century to PDE. Figure 3 displays the distribution of *-ish* derivatives over various base categories. We see that the picture becomes increasingly more varied as we approach the twentieth century, indicating that the pattern of *-ish* derivation is in full bloom. It needs to be noted that, at this point, we decided to eliminate any nationality-denoting *-ish* derivatives from the tally. The reason for this is basically twofold: on the one

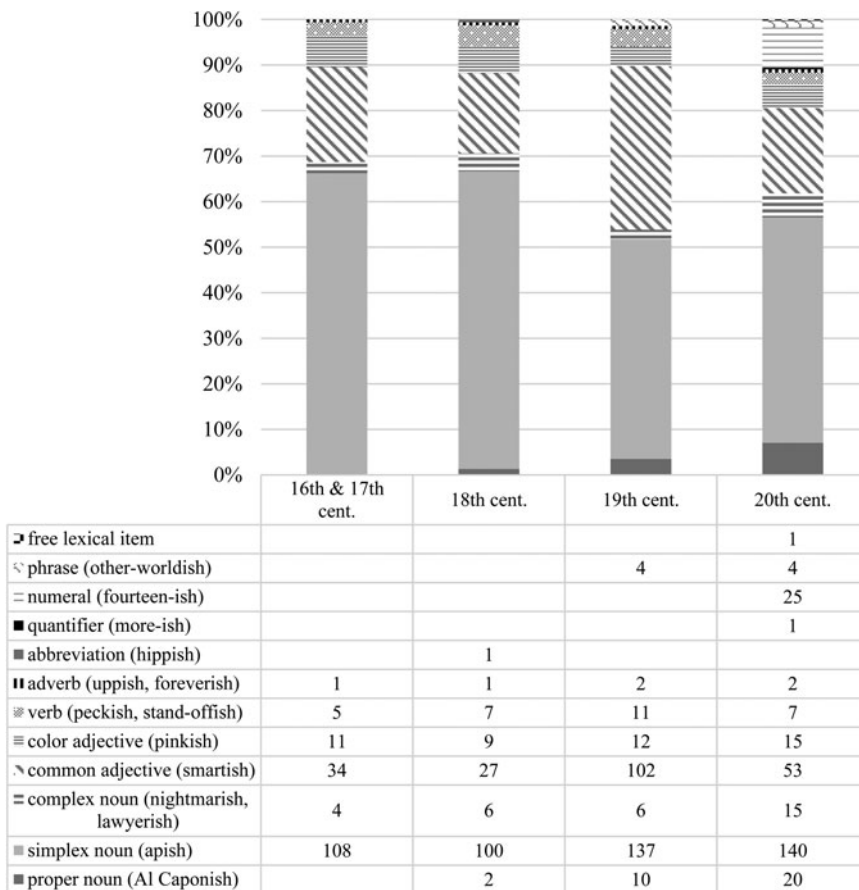


Figure 3. Distribution of *-ish* derivatives across types from the sixteenth to the twentieth century

hand, the type–token ratios reported on in section 5 would not have been a meaningful rate if we had kept the large numbers of ethnonymic adjectives in; and on the other hand, these large numbers would not have indicated productivity in any way because, as elaborated in section 4.2, *-ish* ceased to be available for creating ethnonymic adjectives once it had lost out to its Romance rivals.

Overall, there is a sharp increase in *-ish* types already as of EME, with a true explosion in types as of the twentieth century. Still, the base categories that have been well established since ME continue to play a significant role, with denominal formations constituting the most dominant class across the board, and deadjectival formations defending their second place. The nineteenth century is particularly interesting in that deadjectival formations are almost as well represented type-wise as denominal ones, when, for the first time, their shares differ from each other by a mere 12 percent. Denominal formations from complex nouns continue to be comparatively sparse, even though there is some new input from derived nouns as of the eighteenth century (*lawyerish* [ECF2]). Deverbal derivatives,

which made but a feeble entrance in ME, never gained a strong footing, with just a small number of them becoming well established, such as *ticklish* (EETF), *snappish* (ECF2) or *peckish* (BNC), whereas other novel deverbal formations such as *severish* < *sever* (NCF1) or *stiffish* < *stifle* (NCF2) did not survive the nineteenth century:

Apart from the well-established base categories, additional word classes start to allow for *-ish* suffixation, i.e. adverbs (*uppish* [EETF], *offish* [NCF2], *forever-ish* [BNC]), quantifiers (*more-ish* [BNC])¹⁶ and most conspicuously, numerals (*fortyfivish* [BNC]), which constitute an innovation of the twentieth century that serves to consolidate the approximative sense of *-ish*.

A word category that experiences a comeback as of the eighteenth century is proper nouns. After they ceased to be frequently used in ME, they completely disappear from the picture in EME, until they resurface in Late Modern English, first with just two occurrences in our corpora (*Quakerish* [NCF1], *tartufish* [ECF2]). Crucially, though, their usage is entirely different to the one in OE and ME, i.e. *-ish* derivatives from proper nouns are no longer relational or ethnonymic (cf. *dauidisc* ‘by David’, *Magdalenish* ‘from Magdala’), but now exclusively express the associative sense of similitude. This can nicely be illustrated by means of *Quakerish*, an *-ish* form derived from the name of a religious group:

- (18) The consequence of this was, that at a very early hour, [...] all who considered themselves as belonging to that class, were seen arriving in their very becoming sad-coloured suits, with their smooth braided tresses, and *Quakerish* bonnets and caps. (1837, F. Trollope, *The Vicar of Wrexhill* [NCF2])

The group of people arriving in the small hours, however, do not belong to the Quakers, which becomes clear from an earlier passage; indeed, the word *Quaker* is not used elsewhere in the entire novel. In other words, the bonnets and caps only resemble those worn by members of the Quaker community, but they do not indicate a direct relation. After the first reappearances in the eighteenth century, proper noun bases become more frequent in the next two centuries, with the associative similarity sense firmly taking hold as the following examples from the twentieth century demonstrate:

- (19) (a) a handsome chap in a sinister sort of way, *Al Caponish* with a dash of *Dracula*
 (b) a huge Swansea-style computer keeping a *Big Brotherish* eye on every car

Apart from the extension of base categories, there is also a new degree of complexity added to the picture, when *-ish* starts to attach to the first phrasal bases from the eighteenth century onwards ((20) is taken from the NCF2, (21) from the BNC):

- (20) (a) Hale’s was some temporary or fanciful [[fine-lady]_{NP} *ish*]_A indisposition ...
 (b) for Miss Coe answered questions with an [[old-maid]_{NP} *ish*]_A scream

¹⁶ It needs to be pointed out that in our data, a quantifier base materializes only in the twentieth century; however, according to the *OED*, *more-ish* is first attested from as early as 1691 in the sense of ‘tasting in a way that makes one want to have more’. This sense is also the one prevalent in the example from the BNC: ‘This stuff is very *more-ish*.’

- (21) (a) Aware that the dress had a fey, [[other-world]_{NP} *ish*]_A air ...
 (b) It was still dark, [[middle-of-the-night]_{NP} *ish*]_A, but I'd scribble something ...

In all of these cases, the scope of *-ish* extends over the entire phrase: in *fine-ladyish*, the host of the affix is not just the noun *lady* but the whole noun phrase *fine lady*. While *-ish* in (20)–(21) displays clitic-like characteristics, such as attaching to phrases, it still derives adjectives. A further step in the development of *-ish* is the clitic stage at which *-ish* combines with any kind of phrasal base without inducing category change ((22a) from the BNC, (22b) from Kuzmack 2007: 5f):

- (22) (a) and the [[forever]_{AdvP} *-ish*]_{AdvP} trickly sound of her high giggle
 (b) So, yeah, we're [[friends]_{NP} *-ish*]_{NP}

For the purpose of compatibility with the literature discussed in section 6, we refer to both *-ish* in (20)–(21) and (22) as clitic. Cliticization may have paved the way for the development of *ish* as a free lexical item in the twentieth century:

- (23) You must try to remember that some people are normal. *Ish*. (BNC)

One characteristic trademark of free lexical *ish*, which seems to abound especially in spoken registers, is that it may modify a previous conversational contribution, thus functioning like an epistemic marker or hedging device (see, for example, Traugott & Trousdale 2013: 236f.). We return to this in section 6.

All in all, the developments during the five centuries after the ME period contribute essentially to *-ish* obtaining the extraordinary characteristics commonly attributed to this suffix in PDE, due to a concomitant gain of new base categories and a semantic bifurcation of the associative sense vis-à-vis the approximative sense.

5 Assessing the productivity of *-ish* diachronically

The developments in *-ish* derivatives as surveyed in the previous section suggest an increase in productivity, in the sense of both availability and profitability (Kastovsky 1986: 586; Bauer *et al.* 2013: 32ff., *passim*). On the one hand, the licensing of ever more base categories expanded the scope of the word-formation rule, thus enhancing the availability of *-ish* as an adjective-deriving element, and on the other hand, the actual implementation of this rule is reflected in ever new coinages, thus underscoring the high profitability of this affix.

In order to assess the productivity of *-ish* diachronically, we zoom in on the eras after ME, as the corpus material of these periods can shed light on this question more reliably, with the factor genre (i.e. prose fiction) kept in check.

For the timespan from the sixteenth to the twentieth century, table 3 summarizes the numbers of types and tokens for each base category available for *-ish* suffixation, with the type frequencies giving a first impression of the realized productivity or 'extent of use' (Baayen 1993). Additionally, the table contains the number of hapax legomena for the various base categories; these one-time attestations are of particular interest as they

Table 3. *Summary of -ish derivatives*

	EME and 17th century			18th century			19th century			20th century		
	types	tokens	hapaxes	types	tokens	hapaxes	types	tokens	hapaxes	types	tokens	hapaxes
proper noun (<i>Al Caponish</i>)	0	0	0	2	2	2	10	24	7	20	37	15
simplex noun (<i>apish</i>)	108	3,093	35	100	2,774	31	137	5,831	58	140	2,430	58
complex noun (<i>lawyerish</i>)	4	51	1	6	22	5	6	56	5	15	81	10
common adjective (<i>smartish</i>)	34	75	22	27	64	15	102	332	44	53	300	19
color adjective (<i>pinkish</i>)	11	50	3	9	58	1	12	263	0	15	400	10
verb (<i>snappish</i>)	5	56	0	7	36	4	11	123	5	7	116	1
adverb (<i>foreverish</i>)	1	1	1	1	3	0	2	7	1	2	3	1
abbreviation (<i>hippish</i>)	0	0	0	1	5	0	0	0	0	0	0	0
quantifier (<i>more-ish</i>)	0	0	0	0	0	0	0	0	0	1	1	1
numeral (<i>fourteen-ish</i>)	0	0	0	0	0	0	0	0	0	25	43	20
phrase (<i>other-worldish</i>)	0	0	0	0	0	0	4	8	3	4	4	4
free lexical item	0	0	0	0	0	0	0	0	0	1	1	0
TOTAL	163	3,326	62	153	2,964	58	284	6,644	123	283	3,416	139
Type–token ratio		0.0490			0.0516			0.0427			0.0828	
Hapax–type ratio		0.3804			0.3791			0.4331			0.4912	
P-value		0.0186			0.0196			0.0185			0.0407	

are indicative of the availability of a given suffix for coining novel words – even though hapax legomena are not fully identical to neologisms (see Plag 1999: 26ff.; Plag *et al.* 1999: 215f.; Baayen & Renouf 1996: 74). The last three rows provide the statistics for type–token and hapax–type ratios as well as narrow productivity scores (so-called P-scores) for each era.

While the type–token ratio per se is not a direct measurement of productivity, it offers tentative insight into how diverse the pattern of *-ish* derivation is, weighing the number of derivatives (from high-frequency ones to low-frequency ones) against the overall number of types. In contrast, the hapax–type ratio provides information on the share of hapaxes within the overall number of types; while in EME, 38 percent of all types are attested only once, this share has risen to almost 50 percent in the BNC data, thus suggesting a surge in productivity for the twentieth century, which also shows in the considerably higher P-score. This hapax-based productivity value, which is computed by dividing the number of hapaxes by the total number of tokens, measures ‘the probability of coming across new, unobserved types’ (Plag *et al.* 1999: 215; see also Plag 2003: 56–57; Hilpert 2013: 128–129); in the case of the twentieth-century data, this means that the likelihood of encountering a novel *-ish* derivative is 4 percent, or, put differently, every twenty-fifth *-ish* formation is a hapax.¹⁷

However, as P-scores are highly susceptible to corpus size, a comparison of the different values across time proves to be problematic if taken at face value; after all, the underlying corpus sizes vary considerably, with the nineteenth-century corpus being one-and-a-half times larger than the ones from the century before and after. Nonetheless, the narrow productivity score for the twentieth-century data is markedly higher than those for the other periods, which points to a massive increase in productivity; indeed, it is more than twice as high in the twentieth century as for the period 1500–1700. Actually, a direct comparison of the contemporary data to the EME data is permissible insofar as they display roughly the same number of tokens, thus rendering an almost identical value in the denominator for the calculation of the respective P-score.¹⁸ Also, it is remarkable that the twentieth century displays such a high P-score, despite of the comparatively smaller corpus size; and undoubtedly, the overall hapax–type ratio for the twentieth century as against the nineteenth century points to quite an impressive growth in contemporary novel *-ish* formations, a statistically sound conclusion due to practically the same number of types in both periods considered.

Zooming in on hapaxes in more detail, figure 4 tracks the diachronic trajectory of the hapax–type ratio, by displaying the share of hapaxes within the total number of types per

¹⁷ Another productivity score that would be of great interest is expanding productivity P* (Baayen 1993: 193), a score that contrasts the number of hapaxes derived by the word-formation process under consideration to the total number of hapaxes attested in a corpus. Unfortunately, at present, it is not possible to compute this score as it requires a thorough investigation of all adjective-deriving affixes over time, which is still a desideratum.

¹⁸ A reviewer suggested using vocabulary growth curves as provided by the ZipfR package in order to make more statements about the alleged massive increase of *-ish* in light of the varying corpus sizes. While a discussion of the technicalities of ZipfR would have gone beyond the scope of this article, a first trial run did indeed confirm that the twentieth century displays a surge in productivity. Many thanks to Ulrike Schneider for help in this matter.

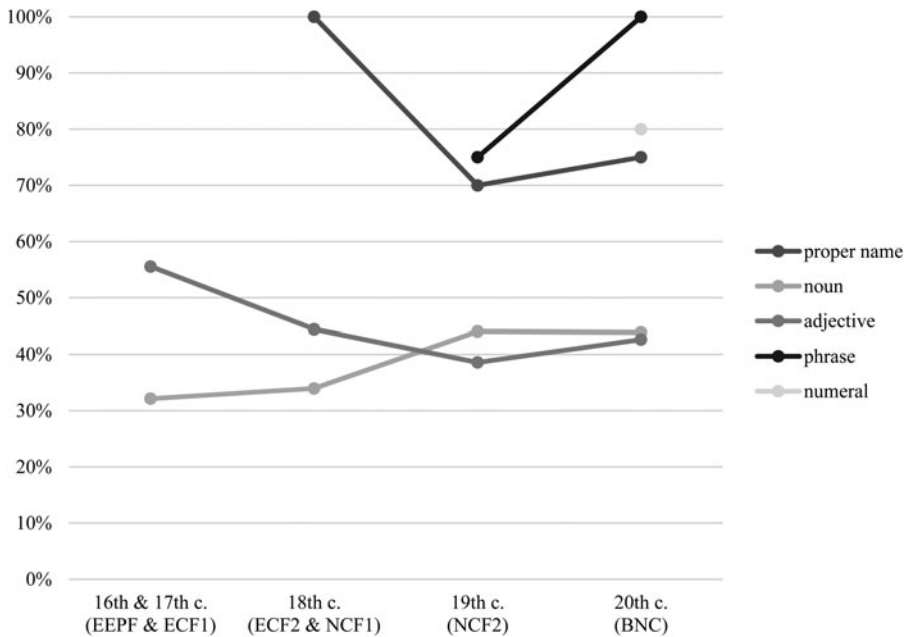


Figure 4. Hapax-type ratios from the sixteenth to the twentieth century according to base type

base category. Note that for the following discussion we only considered those base categories for which a minimum of three hapaxes are attested at some point, thus excluding minor size categories such as verbs, adverbs or quantifiers. To provide a clearer overview of developing tendencies, the nominal type has not been differentiated for degrees of complexity and thus comprises both simplex and complex noun derivatives. Common adjectives and color adjectives have also been lumped together.

Across the board, denominal *-ish* formations prove to be continuously productive in that over a third of all denominal types are hapax formations, with an observable increase towards the twentieth century. Deadjectival types witness a remarkable hapax-type ratio in the initial period with over 50 percent of all types being hapaxes, yet the share decreases over time, until the score for the deadjectival type is on a par with that of the denominal type. As it seems, once adjectival bases became available from ME onwards, deadjectival and denominal *-ish* formations are equally productive, which manifests itself in stable hapax-type ratios. Apart from these base categories, which witness a fair degree of productivity across all centuries, the pattern of *-ish* derivation displays considerable innovations in the eighteenth- and nineteenth-century data, with the re-emergence of proper noun bases and the addition of new types, i.e. phrasal bases in the nineteenth century and eventually numeral bases in the twentieth century. Indeed, in the twentieth-century data, more than two-thirds of all types of numeral and proper noun bases are hapaxes, and all of the four attested *-ish*-derived phrases are nonce-formations. It might not come as a surprise that all of these score quite highly in terms of hapax-type ratios; after all, the number of proper names, phrases and

numerals is unlimited, which allows for an unrestricted possibility to come up with ad hoc formations.

To conclude, what our data show is an increase in variability, productivity and creativity, as witnessed by ad hoc formations which, by definition, are less rule-governed and thus less predictable: *-ish* types gain in variability as more and more base categories combine with the suffix, starting with nominal bases and then gradually spreading to all kinds of bases in differing complexity. In this respect, *-ish* is a fine illustration of the assumption that ‘the closer an affix is to being fully productive on non-compounds and phrases, the more likely it is to accept compounds and phrases as well’ (Bauer *et al.* 2013: 515). Nominal and adjectival bases prove to be the most productive candidates, while later additions to the *-ish* paradigm such as phrases, numerals and revived proper nouns may be overall less frequent type-wise but display a high degree of creativity as witnessed in ad hoc formations hapax-wise.

Against this backdrop, it will now be interesting to see to what extent the empirically investigated development of *-ish* derivatives correlates with morphological and morphosyntactic theorizing.

6 (Re)Assessing theory through empirical evidence

In recent years, the diachronic trajectory of *-ish* formations has received ample attention from researchers in inverse grammaticalization theory and constructionalization theory. Also, from a synchronic perspective, the inventory of *-ish* formations has caught the attention of generative linguists. Employing *-ish* as a touchstone for theoretical claims and considerations, the various approaches differ not only in their aims and theoretical orientation, but also in coverage and focus. While inverse grammaticalization theory focuses on the development of *-ish* along a directed trajectory and thus, tendentially, more on the endpoint of the process, constructionalization theory focuses on the various shifts and changes that constitute diachronic change. Conversely, generative accounts of *-ish* formations focus on snapshots in the trajectory without (necessarily) taking the overall trajectory into consideration. In the following, we are going to revisit three main strands of theorizing and reassess the claims made in the literature in light of our empirical data. Thus, our empirical study not only serves as a Litmus test for the theoretical claims put forward in inverse grammaticalization theory (section 6.1), constructionalization theory (section 6.2) and Distributed Morphology (section 6.3). It also contributes to a more fine-grained and hence more varied picture of the diachrony of *-ish*.

6.1 Inverse grammaticalization theory

In the first strand, the diachronic journey of *-ish* from derivational suffix to clitic and ultimately to free lexical item is taken to be indicative of an inverse grammaticalization process. Both Kuzmack (2007) and Norde (2009) focus on the inverse grammaticalization cline that *-ish* has been moving along since OE, with Kuzmack (2007) referring to the

process as *antigrammaticalization* and Norde (2009) as *degrammaticalization*.¹⁹ Labels aside, both Kuzmack (2007) and Norde (2009) argue that the development of *-ish* from a derivational suffix to ultimately a free lexical item is accompanied by resemanticization, i.e. an increase in semantic content, with the suffix developing from a purely formal adjectivizer with a nationality/ethnicity/origin-denoting sense (OE *egiptisc* ‘Egyptian’, *crystallisce* ‘made of crystal’) into a derivational suffix expressing association/comparison (OE *hæðenisc* ‘heathen’, ME *shepishse* ‘sheep-like’) and later also approximation/qualification (*easyish* ‘somewhat easy’, *nowish* ‘vaguely now’). The three main types may be labeled *ish*₁, *ish*₂, and *ish*₃ ((24) adapted from Kuzmack 2007: 1):

- (24) *ish*₁ expressing nationality/ethnicity/origin, i.e. ‘of X origin, made of X’
*ish*₂ expressing association/comparison, i.e. ‘of the character of X, like X’
*ish*₃ expressing approximation/qualification, i.e. ‘somewhat X, vaguely X’

Our data corroborate Kuzmack’s (2007) claim that the three senses of *-ish* both overlap historically and persist into PDE, with *ish*₁ and *ish*₂ being attested since OE, the comparative sense of *ish*₂ developing in ME, and *ish*₃ being a later addition. The development of *ish*₂ and *ish*₃ coincides with a loosening of selectional restrictions. While *ish*₁ is restricted to selecting nominal bases (25), *ish*₂ and *ish*₃ gradually allow for a categorially varied array of bases. According to Kuzmack (2007: 4f.), *ish*₂ derives adjectives from nouns and, as our data show, also from verbs (26), and *ish*₃ derives adjectives from adjectives and adverbs (27). These observations are borne out with the reservation that the few de-adverbial *-ish* derivatives in our data, notably *offish*, *uppish* and *foreverish*, all instantiate *ish*₃ (see (27)):

- (25) OE *flemisc* ‘Flemish’, *wincesterisc* ‘from Winchester’, *cedrisc* ‘of cedar’
 ME *grickisch* ‘Greek’, *Scottyshe* ‘Scottish’, *clayish* ‘made of clay’
 as of EME occasional analogical formations (cf. *Finnish*, *Swedish*, which are late additions to the paradigm) but overall these *-ish* formations have ceased to be productive; what is more, later stages seem to have given up on the ‘material’ origin reading – partially taken over by *-en* (*wooden*, *earthen*)
- (26) OE *ceorlisc* ‘churlish’, *cildisc* ‘of a child’, *mennisc* ‘human’
 ME *swinisshe* ‘swinish’, *devyllisshe* ‘develish’, *mannyssh* ‘human’
 EME and
 seventeenth c. *clownish*, *devilish*, *ticklish*, *froppish*
 eighteenth c. *apish*, *dumpish*, *brutish*, *decentish*, *severish*, *snappish*
 nineteenth c. *womanish*, *dowdyish*, *peckish*, *raspish*
 twentieth c. *babyish*, *feverish*, *snappish*

¹⁹ The general term for potential inverse grammaticalization processes is *degrammaticalization*. The term *antigrammaticalization* was coined by Haspelmath (2004) to refer to morphosyntactic changes that gradually lead ‘from the endpoint to the starting point of a potential grammaticalization and also [show] the same intermediate stages’ (Haspelmath 2004: 27f.).

- (27) EME and seventeenth c. *bluntish, flattish, uppish*
 eighteenth c. *queerish, shabbyish, uppish*
 nineteenth c. *blindish, vulgarish, offish, uppish*
 twentieth c. *baddish, wettish, uppish, foreverish*

While *ish*₁ ceases to be productive, *ish*₂ and *ish*₃ see an increase in productivity, with *ish*₂ being more productive than *ish*₃ (cf. Kuzmack 2007: 2; Traugott & Trousdale 2013: 235ff.; see below for discussion). Not only are their selectional restrictions loosened with respect to the category of the base, they are also loosened with respect to the format of the base: in addition to combining with X⁰ elements, *ish*₂ and *ish*₃, as of the nineteenth and twentieth centuries, respectively, also combine with phrasal elements. Kuzmack (2007) analyzes occurrences of *ish*₂ as in (28) and *ish*₃ as in (29) as clitics:

- (28) nineteenth c. *no-howish* ‘know-howish’, *old-maidish, fine-ladyish*
 twentieth c. *other-worldish, out-of-the-wayish, middle-of-the-nightish,*
first-nightishish
 (29) twentieth c. *forever-ish, 7-ish*

Note, however, that *ish*₂ in (30), despite taking scope over the phrases it combines with, shares with the derivational *-ish* the property of deriving adjectives, whereas *ish*₃ in (31) does not affect the category of its host ((31a, b) from the BNC, (31c, d) from Kuzmack 2007: 5f.). Note also that, while the scope of *-ish* in (31a) is restricted to the adverb *forever*, the scope of *-ish* in (31b–d) could be either the Num(eral)P (7),²⁰ the NP (*friends*) or the PP (*on their way*), respectively, or the containing constituent:

- (30) (a) for Miss Coe answered questions with an *old-maidish* scream (NCF2)
 (b) The programme had some good *out-of-the-wayish* music: (BNC)
- (31) (a) her back slender and white, and the forever-*ish* trickly sound of her high giggle
 (b) Probably arrive about 7-*ish*, if that’s OK.
 (c) So, yeah, we’re friends-*ish*.
 (d) Happier still, Jessica, Brian and Erik are [on their way]...*ish*...

According to Kuzmack (2007), the low degree of selection of *ish*₃ (in tandem with phonological strengthening) may have facilitated the later development of the clitic variant of *ish*₃ as in (31) and ultimately the development of the free lexical item *ish*₃ in (32) (adapted from Kuzmack 2007: 6; see also (23) above):

- (32) (a) Can you swim well? *Ish*.
 (b) Is everyone excited? I am – *ish*.

All instances of the clitic variant of *ish*₃ in our data involve adverbs and numerals as host categories (31a, b); the free lexical item *ish*₃ occurs only once (see (23) above).

²⁰ Numerals become available as hosts for clitic *ish*₃ only as of the twentieth century; our BNC data boasts 43 occurrences (see table 3).

The scarcity of these elements in our data may be due to the relatively early completion date of the BNC, 1993, rather than to accidental gaps. In other words, the development of both the clitic variant and the free lexical item may still only be incipient in the early 1990s. The variety examined, British English, may be a contributing factor, as may the fact that our investigation is limited to the written domain of the BNC, while *ish*₃ is still primarily a feature of informal, spoken language (see also Plag *et al.* 1999: 220) and, of course, written representations of such style.

All in all, the trajectory of change depicted in inverse grammaticalization theory is corroborated by our empirical study.

6.2 Constructionalization theory

A second strand of theorizing concerned with the diachronic trajectory of *-ish* formations involves proponents of constructionalization theory. In this framework, diachronic processes of constructionalization are conceived of as resulting in new form–meaning pairings, with the rise of new meanings being concomitant with changes in syntax or morphology and ‘accompanied by changes in degree of schematicity, productivity, and compositionality’ (Traugott & Trousdale 2013: 22).²¹ Taking the typology of historically overlapping and persisting senses of *-ish* in (24) as a point of departure, Traugott & Trousdale (2013: 234) suggest subsuming semantically similar *ish*₁ and *ish*₂ under the general OE word-formation schema in (33), with two specific subschemas covering *ish*₁ (33a) and *ish*₂ (33b).

(33) is a descriptive formalization of both the selectional properties of affixal *ish*₁ and *ish*₂ and the interpretation of the derived adjective: both *ish*₁ and *ish*₂ select nouns with the noun denoting either an ethnic group or some kind of entity; the property the derived adjective expresses depends on the denotational properties of the noun selected:

(33) OE *ish* schema: $[[N_i.\text{isc}]A_j] \leftrightarrow [\text{having character of SEM}_i] \text{ PROPERTY}_j]$

(a) Ethnic *ish* (*ish*₁):

$[[N_i.\text{isc}]A_j] \leftrightarrow [\text{having character of ethnic group}_i] \text{ PROPERTY}_j]$

(b) Associative *ish* (*ish*₂):

$[[N_i.\text{isc}]A_j] \leftrightarrow [\text{having character of entity}_i] \text{ PROPERTY}_j]$

According to Traugott & Trousdale (2013: 234), the Ethnic *ish* subschema (33a) became recessive in late ME,²² until it ultimately ceased to be productive. Our data corroborate the stipulated development of *ish*₁, both for the narrow origin interpretation, i.e. ethnic group, as well as for the wider interpretation including provenance in general, e.g. OE *aquinensisc* ‘from the town Aquino’, and material origin/substance, e.g. OE *cedrisc* ‘of cedar’ or ME *clayish* ‘made of clay’. Surviving

²¹ In other words, constructionalization ultimately leads to the manifestation of a new mental schema, which makes this large-scale process of change distinct from formal changes alone, which Traugott & Trousdale (2013: 26) define as ‘constructional change’.

²² Traugott & Trousdale (2013: 234) take this type of change to be indicative of schema reorganization.

*ish*₁-derivatives, e.g. *English*, *Jewish*, *outlandish*, are lexicalized with individual items displaying varying degrees of transparency, e.g. *British* (related to Britain) vs *Cornish* (related to Cornwall). Productive formations, such as *Londonish* (34), typically instantiate the Associative *ish* subschema (33b), which, after having laid somewhat dormant in OE and ME, gained ground and proliferated in EME.²³

- (34) He was strolling down the steep narrow street towards the sea, his hands deep in his pockets and his shirt open at the throat, very pale and *Londonish*, looking about him with the fond, proprietorial air of an Englishman returning to a favourite spot abroad. (BNC)

Following Marchand (1969: 305), Traugott & Trousdale (2013: 234) point out that many of the surviving early *-ish* derivatives of the type in (33b) have undergone pejoration. The semantic shift from ‘typical of N’ to ‘typical of and with the negative characteristics of N’, e.g. *childish* ‘childlike’ > ‘childish’, indicates constructional change, i.e. a change within an existing construction rather than the emergence of a new construction. For Traugott & Trousdale (2013: 235) both the loosening of the selectional restrictions of Associative *ish*₂ (33b) as well as the change from suffix to clitic, as in *old-maidish* (30), are instances of constructional change. Conversely, the development of approximative *ish*, as in *7-ish* (31), gives rise to the formation of a new construction (35) and thus is an instance of constructionalization (see Traugott & Trousdale 2013: 234f.):

- (35) Approximative *ish* schema

[[A_i/N_i.isc]A_j ↔ [having character like SEM_i] PROPERTY]_j]

Since Approximative *ish* sees a loosening of its selectional restrictions as well as the rise of the clitic variants in (30) and (31), the Approximative *ish* schema (35), like the Associative *ish* subschema (33b), is subject to constructional change. Our data support Traugott & Trousdale’s (2013: 237) claim that both schemata have seen an increase in productivity (see section 5).

Traugott & Trousdale (2013: 236f.) see the rise of the free lexical item *ish* (32) as the result of a partially grammatical constructionalization process, with neoanalysis affecting both the formal properties of *ish*₃ (from clitic to free lexical item) and its meaning (from approximator to epistemic marker). Note that they postulate that the detachment of clitic *ish*₃ and thus the rise of the free lexical item *ish* is accompanied by a semantic shift from

²³ Compare *Londonish* in (34) with OE *lundenisc* in (i), which has spatial denotation and clearly instantiates the Ethnic *ish* schema:

(i) Se halga wer Ceadda erest wes gehadad in biscopdome fram Alwine se
the holy man Chad first was ordained to rank-of-bishop by Wine who
wes biscop in pere *lundeniscan* cestre.
was bishop in the *Londonish* town
‘The holy man Chad was first ordained as bishop by Wine, who was bishop in
the *Londonish* town [= town of London].’

approximator to epistemic marker is irreconcilable with Kuzmack's (2007: 1, 8) claim that both *ish*₂ and *ish*₃ preserve their respective identities as 'comparer' and 'qualifier' across construction types. Despite relevant data being extremely scarce in the BNC, free lexical *ish* clearly has an epistemic flavor as it codes the speaker's epistemic stance towards 'veracity of the item as a member of a particular set' (Traugott & Trousdale 2013: 236; see also Oltra-Massuet 2016).

Even though expressing epistemic stances brings free lexical *ish* in the vicinity of evaluative adverbs, *ish* is not a representative of adverbial categories (*pace* Kuzmack 2007: 2, 8; see also below). Traugott & Trousdale (2013: 236) argue that free lexical *ish* does not hold membership in any lexical category (see also Norde 2009: 225), but rather is a functional item in the vicinity of scaling degree elements.

As with the first strand of theorizing, our empirical study again provides substantial support for the descriptive formalization of the diachronic trajectory of *-ish*, as outlined in constructionalization theory.

6.3 Distributed Morphology

While Traugott & Trousdale (2013: 236) consider free lexical *ish* a degree element syntactically, Oltra-Massuet's (2017) morphosyntactic account, the third strand of theorizing, rests on the assumption that all instances of affixal *-ish*²⁴ represent degree operators semantically (see also Bochnak & Csipak 2014). The theoretical background for Oltra-Massuet's (2017) analysis is Distributed Morphology (see Marantz 1997, 2007), a syntactic model of morphology where roots are not specified for category until they are inserted into exoskeletal syntactic structures, so-called categorization structures, where an uncategorized root merges with a categorizing head. Essentially, in her analysis, *ish*₁, *ish*₂ and *ish*₃ are spell-outs of one and the same underspecified root *-ish* that result from *-ish* being inserted into different category-defining functional head positions in clause structure, so-called phase heads, which are selected by a higher functional head endowed with the feature [APPROX(IMATOR)].

Details aside, depending on the phase head that affixal *-ish* is inserted into, *-ish* derivatives from nominal and verbal bases receive one of three interpretations (see Oltra-Massuet 2017: 65ff.):

- (36) (a) manner → *like N/similar or close to a (proto)typical N*
 (b) central coincidence → *have/with N*
 (c) undefined → idiosyncratic interpretation

The interpretation in (36a) is typically found with root nouns denoting humans or animals (37a,b), proper names (37c) and nationality-denoting bases (37d) (data from BNC).²⁵

²⁴ Note that Oltra-Massuet (2017) classifies *ish*₂ and *ish*₃ deriving adjectives from phrasal bases as in (30) and (31) above as an affix, not as a clitic as Kuzmack (2007) does.

²⁵ Note that Oltra-Massuet (2017) does not distinguish between *ish*₁- and *ish*₂-derivatives. See Oltra-Massuet (2017: 67) for discussion.

- (37) (a) He pursed his big mouth into such a *babyish* pout ...
 (b) This, she thought with a *sheepish* giggle to herself, was ridiculous.
 (c) He was a handsome chap in a sinister sort of way, Al Caponish with a dash of Dracula and a smidgen of Rambo thrown in ...
 (d) Later in the year, when we visit the area again, we heard that the *Swedish* Lapps had fenced off an area of the Dividal National Park, with over five kilometres of wire.

Roots that are mass nouns typically trigger the interpretation in (36b):

- (38) (a) I rose, broke my fast and slipped the landlord some pieces of silver which made his *vinegarish* face look more congenial and subservient. (BNC)
 (b) His temperature was high, almost *feverish*. (BNC)

The idiosyncratic interpretation (36c) is typically found with verbal roots (39), and the derivation process is synchronically unproductive (data from BNC):

- (39) (a) He's the nearest I've ever seen him to *snappish* ...
 (b) I don't want to know you're bound to feel a bit *peckish* when you wake up.

A property that is shared by all derivatives in (37)–(39) is that they are gradable adjectives and as such support degree modifiers, e.g. *too*, *enough*, *slightly*, *a bit* (data from BNC):

- (40) (a) For one thing it was *too* *babyish* – Moses Arkwright would never do anything with so little risk attached to it ...
 (b) she found her *slightly* *feverish* and put her to bed.
 (c) you're bound to feel *a bit* *peckish* when you wake up.

However, Ultra-Massuet (2017: 63ff.), essentially following Morris (1998), claims that *-ish* derivatives from adjectival bases, such as *tallish*, are non-gradable adjectives, and as such resist gradation and degree modification ((41) from Ultra-Massuet 2017: 63):

- (41) (a) *more tall-*ish*, *tall-*ish*-er
 (b) *very tall-*ish*, *extremely tall-*ish*
 (c) *John is too tall-*ish* to become a miner.
 (d) *I don't know how tall-*ish* Sue is.

Under her analysis, the strings in (41) are ruled out since the phase head that affixal *-ish* is inserted into is quantificational and categorizes *ish* as a degree operator on a par with degree expressions, such as comparative and superlative markers or *very*, *too* and *how* in (41) which Ultra-Massuet (2017: 63) takes to spell out the same head.

In her 'descriptive typology of *-ish*', Ultra-Massuet (2017: 57) lumps together *-ish* derivatives from adjectival bases with *-ish* derivatives from adverbial, numeral and phrasal bases, all incarnating *ish*₃ and all claimed to be non-gradable adjectives. Unfortunately, she does not provide any data in support of this claim. In fact, the assertion – perpetuated from Morris (1998) – that deadjectival *-ish* forms 'refuse most

attempts at intensification' (Morris 1998: 210) defies the empirical evidence. Instances of degree modifiers with *-ish* derivatives from adjectives (42), and to a lesser extent also adverbs (43), quantifiers (44) and phrases (45) are well-attested across our corpora as of (Early) Modern English:

- (42) (a) they thought that tasted a little Bitterish to the Palat (EPPF)
 (b) She had an Angelical Countenance, onely somewhat brownish by the Suns frequent kissing of it; (EPPF)
 (c) This has been rather smartish, Mr. Simple. (NCF1)
 (d) 'Perhaps it was too prudish,' she said repentantly. (NCF2)
- (43) But then I was more uppish than I had ever been. (EPPF/ECF1)
- (44) This stuff is very more-ish. (BNC)
- (45) (a) Lord, child, don't be so precise and [old maid]ish. (ECF2/NCF1)
 (b) but Doleful, a very [cock-a-hoop]ish caller on his own account (NCF2)

Like Traugott & Trousdale (2013: 236), Oltra-Massuet (2016) assumes that free lexical *ish*, which she refers to as propositional *ish*, is speaker-oriented (see also Bochnak & Csipak 2014: 435). Specifically, she argues that free lexical *ish* expresses the speaker's 'lack of full commitment to the illocutionary force of the [assertive] speech act and [her] lack of full commitment to the proposition expressed' (Oltra-Massuet 2016: 312), which brings it into the vicinity of speaker-oriented adverbs, notably evaluative adverbs, such as *fortunately* or *surprisingly*, which she takes to be located in the specifier position of Sentient/Eval(uative)P (cf. Speas & Tenny 2003: 331ff.). The derivation of free lexical *ish* involves the insertion of the underspecified root into the head position of Sentient/EvalP, which is the complement of the head of SpeechActP ((46) adapted from Oltra-Massuet 2016: 311):

- (46) [_{SpeechActP} SpeechAct⁰ [_{APPROX}] [_{Sentient/EvalP} Sentient/Eval⁰ [...]]]

In Sentient/Eval⁰, *ish* establishes a relation between the propositional complement and 'some sentient mind that evaluates it' (Oltra-Massuet 2016: 311). Since *ish* is in the immediate scope of SpeechAct⁰_[APPROX], the propositional complement is evaluated as a weak assertion. Thus, free lexical *ish* as in (23) above, repeated for convenience in (47), reflects the speaker's lack of full commitment to the assertion that some people are normal:

- (47) You must try to remember that some people are normal. *Ish*. (BNC)

Oltra-Massuet (2016, 2017) aims at developing a unified morphosyntactic approach to both the affixal variants of *ish* and free lexical *ish*. Her analysis does not take into consideration the diachronic trajectory of *ish*, but rather presents synchronic (morpho-) syntactic snapshots of *ish*₂ and *ish*₃. By and large, her analysis is compatible with our empirical findings. Not tenable empirically, however, is Oltra-Massuet's (2017) claim that *-ish* derivatives from adjectives, adverbs, numerals and phrasal bases are non-gradable adjectives and thus incompatible with degree modifiers.

To conclude our empirically based reassessment of the theoretical accounts of *-ish* in sections 6.1 to 6.3, different theoretical credos and different emphases aside, both the diachronic trajectory of *-ish* from derivational suffix to free lexical item and the partial arcs that constitute the trajectory are surprisingly accurate and faithful to our empirical data. ‘Surprisingly accurate’ because none of the theoretical accounts discussed seems to have based their description and analysis on a large-scale empirical study.

7 Conclusion and outlook

This article has explored the path of development that *-ish* underwent in the diachrony of English, evolving from an originally nationality-denoting suffix with relational semantics to a suffix that came to take a wide array of different bases and extend the relational sense to an associative as well as approximative sense. The crosscategoriality and multifunctionality of *-ish* resulted in the evolution of more or less fully clitic uses, thus transgressing the borders between morphology and syntax. Against this backdrop, our analysis contributed to the research on the diachrony of *-ish* derivation in three respects. First, it provided a thorough empirical investigation of how *-ish* extended its range of application from OE to PDE (section 4). Second, the fine-grained analysis of the word-formation pattern of *-ish* differentiated for base categories allowed for the assessment of the increasing productivity of *-ish* (section 5), revealing which base categories are clear productivity winners (i.e. nouns as well as adjectives) and which contribute to the creativity of *-ish* (i.e. the more marginal base categories that comprise a considerable number of hapax legomena). Third, the present analysis made an attempt at triangulating empirical data with theoretical accounts of the diachrony of *-ish*, thereby providing support for most of the previous claims made in the literature and refuting others (section 6).

For future research, it would be of high interest to explore the diachronies of the full set of Germanic adjective-deriving suffixes, especially *-y*, which seems to be a close competitor to *-ish*. Surely, *-ish* displays some characteristic traits that its Germanic siblings are lacking, such as the attachment to adverbial and numeral bases since the eighteenth and twentieth centuries respectively or the ability to combine with phrasal bases since the nineteenth century, but the diachronic investigation of all Germanic adjective-deriving affixes might point out why *-ish* is so peculiar in this regard or to what extent, for example, *-y* is likely to catch up in the long run. Also, the competition between *-ish* and Romance *-ic* lends itself to a follow-up study in that the two suffixes are functionally equivalent but turn out to be distinctive in terms of the frequency of their bases; as Bauer *et al.* (2013: 496) observe, ‘*-ish* has many derivatives with low frequencies (such as *housewifish*, *out-of-the-way-ish*, or *soupyish*) whereas *-ic* has few low-frequency words but many derivatives with higher frequencies (e.g. *democratic*, *fantastic*, *terrific*) so that *-ish* tends to be more separable than *-ic*’, a fact that awaits empirical validation in order to shed light on the impact that frequency has on the separability, cliticization and eventual severing/debonding of an affix.

Also, it will be interesting to keep track of *-ish* in PDE and further explore to what extent *-ish* continues to be used innovatively and creatively – and to what extent it displays a behavior as a word-forming element that is both rule-bending and theory-challenging. Particularly the approximative sense that *-ish* has developed over the course of time seems to lead to an ever increasing number of innovative word creations – maybe because, as reflected in a children’s book, ‘[t]hinking ish-ly allow[s] ideas to flow freely’ (Reynolds 2005: 20).

Authors’ addresses:

*Department of English and Linguistics
Johannes Gutenberg University Mainz
Jakob-Welder-Weg 18
55128 Mainz
Germany
eitelman@uni-mainz.de*

*Department of Foreign Languages
University of Bergen
Sydnesplassen 7
5007 Bergen
Norway
kari.haugland@uib.no*

*Department of Foreign Languages
University of Bergen
Sydnesplassen 7
5007 Bergen
Norway
dagmar.haumann@uib.no*

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