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The Birth and Death of Affixes and Other Morphological Processes in English Derivation

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Abstract: Linguistic change in morphology is usually discussed mainly in relation to change in inflectional morphology. In this paper, the focus is shifted to derivational morphology, where the issues are not entirely the same. In particular, the origins (or birth) of affixes and the loss (death) of affixes are central to the present discussion, with formal, semantic and pragmatic factors all having a role to play. The question is also raised as to whether it is, in principle, possible to tell that any affix is completely dead.

He's dead, but he won't lie down. (Gracie Fields)

The report of my death was an exaggeration. (Mark Twain)

1. Introduction

The birth and death of inflectional affixes and changes to inflectional systems are widely canvassed in textbooks that cover historical linguistics. Processes such as analogy and phonetic erosion are typically exemplified with the fate of inflectional affixes. Because the factors that influence derivational affixes are not always the same as those that influence inflectional ones, the aim of this paper is to consider examples from English illustrating the birth and death of derivational morphological processes (mainly affixation but occasional other patterns as well), which tend to be overlooked in textbook treatments, in order to give a fuller picture of the diachrony of morphological processes.

2. The Birth of Derivational Processes

Three main ways of giving rise to new derivational morphological processes will be considered here: borrowing, words changing into affixes and reanalysis.

2.1. Borrowing

Derivational affixes in English are borrowed in large numbers, most obviously from French, Greek and Latin, but consider also the suffix *-i* in words like *Bangladeshi*, *Israeli*, *Pakistani* (a suffix found in various languages) and the *-scape* (from Dutch) in *landscape*, *seascape*, *moonscape* and so on. The typical mechanism of borrowing seems to be that a number of words with the relevant affix are borrowed and that the affix then becomes recognized as an affix or as a splinter (a non-morphological part of a word, which may in time become an affix) (Anderson 2015, p. 265). It is often not clear whether any given word containing the affix is borrowed as a unit or whether the affix is added in English. With some Latin prefixes (such as *re-*), there may be phonological differences between the two (*resit* with /riː/, *refer* with /rɪ/), but this is not a general principle. Compare also the phonology of *courage* (suffix /ɪdʒ/) and *camouflage* (suffix /ɑːʒ/ or /ɑːdʒ/).

Some scholars (e.g., Beard 1982) claim that inflectional affixes are not borrowed. In light of the last paragraph, we have to ask what this means: has the affix in the plural *alumni* been borrowed or just the whole word? The affix certainly seems to have borrowed

in *Lexi* as the plural of *Lexus* (the brand of car). But even the third-person singular *-s* in southern (later, standard) English was borrowed from northern dialects (and ultimately from Scandinavian—though see Miller 2010, pp. 103–8 for a discussion) (Lass 2006).

2.2. Affixes Derive from Words

The slogan here is "Today's morphology is yesterday's syntax" (Givón 1971, p. 413), although where derivational morphology is concerned, many derivatives seem to have arisen from compounds or nominal modification of nouns. The standard examples here are *-ly* (both adverbial and adjectival) deriving from the word *lic* meaning 'body' (still found in *lychgate*) and *-hood* deriving from the Old English word *hād* meaning 'condition, quality, rank'. Kastovsky (1992, p. 386) suggests that the forms came to be seen as suffixes after the Old English period. The fact that similar affixes have arisen in Dutch and German (Hüning 2019) suggests that the origins of these changes pre-date the break-up of West Germanic.

Where compounds are concerned, these sometimes originate from syntactic structures. Anderson (2015, pp. 265–66) (citing Booij) gives the Dutch example of *herenhuis* 'mansion' from *heren* 'lord's' *huis* 'house'. In English, we might illustrate with *beeswax*, *coltsfoot*, *hogshead*, which, despite the lack of apostrophe in the spelling, seem to derive from possessive forms. Givón's slogan still applies.

2.3. Reanalysis

The classical examples of reanalysis are things like *-burger* in *fish-burger* and *-gate* in *Dianagate*. In neither case is the structure of the original word perceived. In *hamburger*, the *ham* in *Hamburg* is perceived as being related to the lexeme *ham*, and *burger* is then left unexplained; it is reinterpreted as a new lexeme. In *Watergate*, the name of the hotel is reanalyzed as being the name of a public scandal (the relationship between *water* and *gates* having been lost in time) and *gate* is then interpreted as a word or suffix, which, according to the right-hand head rule (the hypothesis that the right-hand element in a compound is a hypernym of the compound), denotes that scandal. In both instances, a part of the word is perceived as having a semantic (and perhaps morphological) status that was never in the original formation, but the reanalysis allows it to go forward. We cannot guess how many instances of reanalysis fail to spark new morphological series; we can only say that sometimes this does happen.

The status of the new element *-gate* may not be clear (Hüning 2019 calls it an affix), but *burger* becomes a new word. In other instances, however, affixes are created by this route. The English word *landscape* is originally borrowed from the Dutch *landschaap*, where, as it happens, *-schaap* is a suffix. This is irrelevant to its subsequent development in English. It is the transparency in English of the Dutch element *land* that allows an extension to a form such as *seascape*. And it is the fact that the element *-scape* only ever occurs on the righthand edge of a word and never in isolation that allows it to be perceived as a suffix in English.

On some occasions, an English affix is reanalyzed in subsequent use. Based on *personality*, we can ask whether other animals besides people have similar traits. I have heard *cowanality* and *catanality* in this context where the *-an-* /ən/ extender comes from *personality*, where it is not part of the suffix. The New Zealand business names *Souvlakilicious* and *Thailicious*, like the more general *bootilicious*, gain the *-lic-* from *delicious*, where it is not part of the suffix. These are usually taken as splinters rather than suffixes, but some suffixes do arise from splinters. These are sometimes then called secreted affixes. *Euro-* is a potential example (Mattiello 2018). Just when the status of affix is reached may not be clear (Mattiello cites some examples that seem to me not to have reached that status), but the diachronic transition is clearly possible. In some cases, a new affix may arise from such reanalysis. Kastovsky (1992, p. 392) cites the example of the Old English suffix *-nian* in words like *Þreatnian* 'threaten', which arises from assuming that the medial <n> in *openian* 'open' is part of the suffix rather than part of the base. It seems that this suffix was never particularly productive, and later merged with *-en*.

2.4. A Generalization

Some of these methods of innovation create meanings that have not previously existed, e.g., by deriving new affixes from words or by borrowing new affixes. Inflectional affixes, conversely, always interpret grammatical information that is present in the language system. One of the differences between the two is, thus, that at least some derivational processes are semantically innovative and extend the range of meaningful types that can be created morphologically.

2.5. Lack of New Pattern

In some cases, patterns that might be expected to give rise to new morphology fail to do so. Consider, for example, the pattern of apophony found in the brief paradigm in (1).

(1)	bleed	blood
	breed	brood
	feed	food
	meet	moot
	(The lack of rhyme in *blood*, *brood*, *food* arrives much later)

Despite such a paradigm, there does not seem to be any extension to it beyond what is inherited. This is not because there were not possibilities: if we look at verbs with <ee>, at least *greet* ('weep') and *need* would seem to be potential extensions, and if we consider nominal bases containing <oo>, in line with the etymological direction of derivation in this pattern with new derivatives in <ee>, *mood*, *rood* and *root* would seem like potential candidates for new bases. The lack of semantic coherence may be a reason for the lack of extension, but it may also be that unmotivated apophony was not seen as a relevant pattern of word formation in English at the relevant period. The point is, simply, that an existing pattern does not always give rise to extensions of the pattern and that productivity need not arise.

3. The Death of Derivational Processes

3.1. Introduction

When Wentworth (1941) wrote about the English suffix *-dom*, the paper was a refutation of the commonly asserted notion (including one strong statement from Baugh 1935, p. 225—apparently removed from the second edition Baugh 1951, p. 365) that the suffix was "dead". Wentworth provides plenty of evidence that it was still alive and kicking. Bauer et al. (2013, p. 250) show that it is still alive into the twenty-first century. At the same time, Bauer et al. (2013, p. 31) say of the suffix *-th* producing nouns that "it probably is" dead. So we have a situation where we know that even language professionals can be confused as to the status of suffixes with regard to their availability, but it seems that some do become unavailable, or at least moribund.

There seem to be a limited number of situations that give rise to the loss of productivity of morphological processes. Although the situations are treated individually below, they often operate in tandem, making the death of a process more likely when they do. Even when a given process ceases to be unavailable, words created by the process may last for hundreds of years, so a line must be drawn between established vocabulary (item-familiar words that might be analyzable at some level) and morphological productivity (the possibility of using the process in the creation of new vocabulary items). This distinction, though, is not new and will be familiar to readers.

The relevant situations that will be discussed here are as follows:

- Affixes die when their potential bases are exhausted;
- Affixes die when it is not clear how to form the base;
- Affixes die when their bases become unrecognizable;
- Affixes die when the meaning of the affix becomes unpredictable;
- Processes die when they are not supported by sufficient examples;
- Processed die when they go out of fashion;

- Affixes die when their form is lost because of phonological change;
- Affixes die when alternative affixes take over their role.

3.2. Exhausted Bases

There is a set of words in English which, at some time in history, must have been analyzable into morphs, but which today are mostly viewed as unanalyzable. The set is set out in (2).

(2) here   there   where
     hence   thence   whence
     hither   thither   whither

The reason that the set is now viewed as unanalyzable is that some of the words have fallen out of common use, are associated with high or religious style, or with historical usage. Even when the words remain, the pattern is sometimes not clear because, for instance, *hence* is used for reasoning rather than for location, while *whence* is used for location. It seems likely, however, that underlying this loss of paradigmatic information is the loss of productivity, and the lack of productivity is because there are simply no other bases to add the prefixes to or to observe the patterns in. If there are no plausible bases, the affixation cannot be productive.

Another example is the suffix *-ern* on the words *northern*, *southern*, *eastern* and *western* (I assume that *south-western*, etc., do not show extra uses of the same suffix, though that may be controversial). There are no more than four basic words in the set that can be used as a base for this suffix. It has nowhere to expand to.

A less clear example is provided by the prefix *step-*. The basic meaning of *step-* is that it is added to the name of a family relationship to indicate that the relationship does not arise from birth but as a result of one parent marrying for a second or subsequent time. A *step-brother* is not a sibling born of the same parents but the son of someone who has married one's parent as a second or subsequent spouse. Although Johnson (1755) thought the prefix was used only in the term *stepmother*, there is a set of central family relationships to which *step-* can be easily applied: *brother*, *sister*, *father*, *mother* (and synonyms). There has been some intervening productivity. The further one goes from these central relationships, the more awkward the label becomes. *Step-cousin* and *step-uncle* may be possible, but they are not central; *step-grandmother* sounds odd, as does *step-father-in-law*. Forms like *step-family* and *step-relationship* can be derived from these.

However, *step-* has not become entirely unavailable because it has changed its meaning. Its new meaning is 'inherited as a result of marriage' (not yet covered in the *Oxford English Dictionary*, henceforth OED 2023). Thus according to the Urban Dictionary, a *step-car* is a car owned by one's spouse before the marriage (http://www.urbandictionary.com/define.php?term=stepcar, accessed on 1 July 2023). This allows terms like *stepdog*, *stepfriend* (Bauer et al. 2013, p. 244).

It seems that *step-* used up the possible bases for its original meaning, gained a few more bases by extending its range to some extent, but then was able to continue only by a change of meaning that made more bases available.

Something similar may be happening with *-ment*. Bauer (1983, p. 49) comments on the apparent non-productivity of *-ment*, but Bauer et al. (2013, pp. 199–200) find a number of rare but apparently new coinages, including *alertment*, *ceasement*, *conjoinment*, *worriment*. The preferred pattern for established *-ment* nominalizations is for a disyllabic verbal base stressed on the second syllable (*adjustment*, *appointment*, *refreshment*), or a trisyllable with a base formed with the prefix *en-* (*embezzlement*, *endorsement*, *ennoblement*). Other forms are found but are relatively rare (Bauer et al. 2013, p. 198). It may be that relevant verbs with no competing nominalization marker were getting too hard to find, and that where such potential bases did exist, the nominalization was not frequently needed (*jugglement*, *regardment* are both attested but do not appear to be established). One reason for the lack of new *-ment* nominalizations, therefore, may be the lack of suitable bases.

3.3. Unpredictable Bases

One of the English suffixes that is perhaps most frequently cited as being dead is the noun-forming suffix -*th* (as in *warmth*, *mowth*). Those who object to such a characterization most usually cite *coolth* as an example of productive use, but it seems that *coolth* has been used, with humorous connotations, since at least 1547 (OED 2023). Part of the difficulty with this suffix is that speakers are no longer secure about which words form part of the paradigm. If we look at those most likely to be accepted, separating out those with an adjectival base from those with a verbal base, we find the examples given in (3) and (4).

(3)   breadth, dearth, depth, length, strength, truth (~ troth), warmth, width
(4)   birth, health, mowth (~ math), ruth, stealth

For those words in (3), there are many examples where the base is formed by changing the vowel to /e/ (not always from the same vowel in the adjective) but there are also instances where no vowel change is made or where a different vowel change is made. In (4), there are two examples where /iː/ becomes /e/, but otherwise there is no pattern, and *mowth* is problematic, not only because it has an alternative form but also because few urban people use either, cutting hay being a rural occupation, but urban speakers forming a majority of language users. Overall, this leads to a situation where the speaker cannot form a new word because it is not clear what vowel should appear in the derivative.

3.4. Unrecognizable Bases

Not only do the bases for -*th* affixation become unpredictable in form, so that it is no longer obvious how to add the suffix to new forms, but also their form becomes, in some cases, unrecognizable, so that speakers cannot see them as part of a relevant paradigm. For example, few speakers link *bear* with *birth*, *heal* with *health*, *dear* with *dearth*, *foul* with *filth* or *math* (now, almost exclusively in *aftermath*) with *mow*. While there is a semantic factor involved here, some of this is simply a matter of form: /aʊ/ and /ɪ/ are not frequently alternating vowels, for example, and the orthography in *bear* and *birth* hide a link.

As a wider example, consider the now moribund (if not dead) suffix -*le*, creating frequentative verbs. The meaning can still be seen in a few verbs like *crackle* and *sparkle*, where the base can be analyzed, but *babble*, *giggle*, *grumble*, *mumble*, *prattle*, *rattle*, *sniffle*, *whistle* and a host of others that Marchand (1969, p. 323) identifies as being part of the same paradigm no longer have (and in some cases never had) a recognizable base from which a meaning can be deduced.

3.5. Unpredictable Affix Meaning

If the meaning of the base has to be transparent for affixation to work, the same is true of the meaning of the affix. The observation is well-established: Aronoff (1976, p. 39), citing parallel comments from Zimmer (1964, p. 32), notes that "the surer one is of what a word means, the more likely one is to use it". To illustrate, we can return to the -*le* suffix. Where we have the relevant suffix (as listed by Marchand) and an apparently transparent base, we are not necessarily able to assign a meaning to the affix. Consider, for example, *crackle*, *footle*, *rattle*, *scuffle*, *suckle*, *tootle*, and the same remains true if we add bases that have undergone phonological modification, such as *dazzle* (< *daze*), *nuzzle* (< *nose*), *waddle* (< *wade*) and *snuffle* (ultimately related to *sniff*). *Suckle* and *sniffle* might appropriately be glossed as 'to suck/sniff repeatedly', but such a gloss does not work with *dazzle* or *tootle*, for instance.

3.6. Insufficient Support

In some cases, it seems that processes die when they are not supported by a sufficient range of examples. Remnants may be left behind, but productivity vanishes.

We can begin with ablaut. Ablaut is probably still available in English but in restricted constructions. For example, the pattern of reduplication with fixed vocalism illustrated by *fiddle-faddle*, *jimjams*, *mishmash*, *shilly-shally* is of limited productivity in that there are not

many such formations in widespread use, with the result that evidence of its productivity is hard to come by. However, a recent advertising campaign in Australia and New Zealand to prevent skin cancer that advised the public to *slip*, *slap*, *slop* (*sc.* slip on loose clothing, slap on a hat and slop on sunscreen) suggests that it can still be used occasionally. Other uses of ablaut, and ablaut with other vowels, do not appear to be productive. This includes the ablaut found accompanying *-th* suffixation, mentioned above, but also includes instances where ablaut alone links words. Some examples are given in (5).

(5)	a.	(causative)	fall/fell, lay/lie, rise/raise, sit/set
	b.	(plural)	foot/feet, goose/geese, tooth/teeth
	c.	(verb and noun)	abide/abode, bleed/blood, breed/brood, shoot/shot, sing/song

In none of these cases is the number of cases sufficient to allow speakers to see an overall pattern: plural-marking as in (5b) is usually treated as exceptional, and the other instances are ignored (implicitly treated as unrelated).

Another pattern that has virtually died out, but not quite, is the pattern with preposition + verb that was in use in Old English. Some examples of the pattern are given in (6), but a few examples are still in general use today such as those with *over* (*overlook*, *oversee*) and those with the preposition *with* (as in *withdraw*, *withhold*), though even then, the semantics of the combination is not transparent (for these and other examples see OED 2023).

(6)   athold ('keep back, detain'), forhold ('keep too long'), intake ('capture'), ofhold ('retain'), ondraw ('draw on' e.g., of night), outsee ('see beyond a limit'), todraw ('belittle'), overseek ('search through')

The loss of the availability of this pattern may be related to the rise of the phrasal verb, which often seems to be more or less equivalent, the entire change possibly driven by the loss of verb-final syntax in Middle English. The construction type was still marginally productive in the nineteenth century but seems to have died out since then. Derivatives such as *onlooker* are probably by-products of the original construction.

Another example of a disappearing suffix is provided by Marchand (1969, p. 350), who cites the suffix *-ton* meaning 'fool'. This is found today only in the word *simpleton* (and possibly in some surnames where it is not analyzable). Marchand has very few examples, even in older usage, and most of them are dialectal.

Just what constitutes a sufficient number of forms to allow for the extension of the pattern by means of productivity is an open question. It seems likely to me that Yang's (2016) Tolerance Principle, that too much irregularity prevents a rule from being discerned, will be involved in some form, and Yang sets out parameters for what 'too much' might mean in such a context.

3.7. Going out of Fashion

Bauer (1983) traces the rise of the use of *-nik* in English from the 1960s to the 1970s in words like *sputnik*, *beatnik*, *folknik*, *nogoodnik*, etc. Because the relevant chapter was written at about the time when *-nik* was just starting to go out of fashion, its subsequent decline is not registered in Bauer's treatment, but Bauer et al. (2013, p. 226) comment that "we find very few more recent formations". The meaning of 'anti-establishment person' remained relevant and the patterns remained transparent, but the formations died away rapidly. There seems to be no particular reason for the lack of use of this suffix beyond changing fashion.

3.8. Phonological Erosion

The loss of affixes due to phonological erosion is more clearly seen in inflection rather than derivation. The loss of final *-n* in the infinitive during the Middle English period, for instance (Lass 1992, p. 146), is parallel to the much later loss of final *-n* in Dutch (where the infinitival <n> is still in the spelling). The final adverbial *-e* vanished when final <e> was no longer pronounced in Middle English, with the result that adjectival *-ly* and adverbial

-ly fell together (OED 2023). Note that typically, it is suffixes that are removed in this way because of the initial or near-initial stress that is common throughout Germanic. Because derivational affixes tend, in general terms, to be more word-like in their phonology (Bauer 2003), they resist deletion more easily.

3.9. Alternatives Take over the Role

Joseph (1998, pp. 352–53) gives the example of the loss of *-(e)n* as a plural marker in English as *-s* (in its various phonological shapes) became the default. Only *oxen* and perhaps *children/brethren* remain with the *-n*. The use of an *-s* form on forms that otherwise have umlaut plurals in figurative uses (Bauer 2009) is an illustration of the ongoing weight of this process. The question is whether there is any derivational counterpart. One candidate is the suffix *-ment*, where *-ation* and conversion may have become default ways of making nominalizations as they are the only clearly productive ways of forming such words.

4. Arising from the Dead

4.1. Reactivating

The prefix *step-*, discussed above, seems to have a long history in Germanic, but, if Johnson was right, had more or less vanished by the mid-eighteenth century (OED 2023). This judgment seems a little harsh since OED (2023) gives citations for words denoting other relationships, but they may not have been common, and gives no citations for *stepbrother* and *stepsister* between 1530 and 1828. Since then, it has recovered, first by spreading from *step-mother* (presumably maintained in that word thanks to so many fairy tales) to *step-father*, *step-brother*, *step-sister*, *step-son*, *step-daughter* (for all of which, OED 2023 has regular citations). Words using near-synonyms of these bases also occur, though not commonly: *step-dame*, *step-sire*, *step-child* and so on. Words denoting other familial relationships are rare and more recent (*step-uncle* 1811, *step-grandmother* 1839, *step-niece* 1852, *step-granddaughter* 1898, *step-aunt* 1904), as are words like *step-family* (1873), *step-relationship* (1870). What we appear to see is a prefix becoming unavailable, having exhausted its possible bases, and then regaining productivity. For Johnson (1755), *step-* was unavailable, but later it became available again.

The recent renewed burst of forms (whose scope is not yet clear and which is not yet registered by OED 2023) arises from a slight re-definition of the meaning of the prefix, one which could apply to the established forms as well as to the new forms like *step-car*.

Whatever the precise history of the prefix, it appears to have become moribund twice, and then come back to life. The implication of this is that we cannot be completely sure that any morphological process is completely dead. In the process of dying, a morphological process may reduce the number of recognizable forms to a small enough number that a new pattern of analogy is possible on that new basis. We know that the basis for a new analogical extension need not be large—a single form will do. The extension of *burger* from *hamburger* to *beef-burger*, *cheese-burger*, *chicken-burger*, *fish-burger*, *steak-burger* and so on started from the single form *hamburger* (probably after the hamburger sandwich was renamed simply a hamburger—see Battistella 2018).

According to Bauer et al. (2013, p. 268), the latest verb formed with the prefix *be-* (*beglamour*) was first observed in 1926. However, the form continues to be used only where there is a simultaneous use of the suffix *-ed*. We find examples like those in (7).

(7)   a.   A multiplicity of chins rested on his befairisled chest. The bepatched elbows of his shirt rested upon the bepatched knees of his corduroy trews. (Rankin, Robert, *Raiders of the lost car park*, London: Corgi, 1994, pp. 36–37);

       b.   How's the be-wheeled suitcase? (Fielding, Helen, Bridget *Jones's diary*. London: Picador, 1996, p. 12);

       c.   Bedenimed [can be found in various places online, and is mentioned in Bauer et al. 2013, p. 268].

These words often seem to be used humorously and are not particularly common although OED (2023) cites *becloaked* from 1611 and says of the construction in general terms "This is now the most frequent use of *be-*, and the formations of this kind are endless". To the extent that this new adjective-forming use exists, it provides a limited life for an otherwise dead prefix.

4.2. The Distinction between Individual Productivity and Societal Productivity

Bauer (2001, pp. 56–58) draws a distinction between individual productivity and societal productivity. The fundamental question here is the status of an observed neologism: does it count as an example of productivity, or does it not (or perhaps better, how can we tell when it counts as an example of productivity?)? If an individual coins a word (or, indeed, several) on a particular pattern, does this prove that the pattern is available in the community, or is it simply a quirk of the individual speaker/writer? Drawing the distinction is not easy. And to the extent that any community is made up of individuals, it may not be all that important. But we have sufficient examples of formations being coined by an individual (sometimes known, sometimes not) and not becoming more widely accepted in the community for the question to be of some interest.

Consider words with the allegedly dead suffix *-th*. OED (2023) lists the words *blueth*, *greenth and gloomth* from the work of H. Walpole (ca. 1753). Some more recent formations are presented in (8), one of them, probably by accident, reprising one of Walpole's coinages. These examples are rare because the suffix *-th* is not freely productive, but (8a) shows how restrictively the suffix has to be used when it is.

(8)   a.   The Hitler Youth turn into the Hitler Oldth (McDermott, Andy, *Kingdom of darkness*. London: Headline, 2014, p. 257);

        b.   A milky gloomth descended on the farm (Nolan, Dominic, *After dark*. London: Headline, 2020, p. 305–6).

Should *oldth* and *gloomth* (the latter of which, incidentally, fits neither the pattern of adjective + *th* nor of verb + *th*) be taken to show that the suffix *-th* is still available, or can we say that *-th* is dead despite such examples? Whatever is decided, the fact that new forms can be found in the community must imply that one or several of these forms could form the basis of a new set of analogies and a new round of productivity for the suffix. However much we think that *-th* is dead, it holds within it the possibility of future life under pragmatic conditions that we probably cannot imagine.

4.3. An Unconscionable Time A-Dying (Charles II)

Related to this is the time taken for a process to cease to be productive. There is no sudden cessation of productive use; rather, the construction fades from use over a period, sometimes lasting centuries. This can be illustrated by the use of what I will here call adverbial/adjectival *a-*. Adverbial/adjectival *a-* (derived historically from the preposition *on*) has a long history in English giving rise to many forms such as *ablaze, abroad, afloat, agape, ahead, akin, alike, aside* and so on. A range of examples can be found from the latter half of the twentieth century, none of them apparently becoming institutionalized (in line with typical productive use). Such examples are listed in (9).

(9)	aclutter	1965		Barnhart et al. (1990)
	aglaze	1967		Barnhart et al. (1990)
	asquish	1969		Barnhart et al. (1990)
	awhir	1970		Barnhart et al. (1990)
	aswivel	1971		Barnhart et al. (1973)
	awash	1983		Butler (1990)
	afly	1996	a long mane of brunette hair afly	Bauer et al. (2013, p. 331)
	acrawl	1997	Before long, he was acrawl with baby turtles.	Hiaasen, Carl, *Lucky you*. New York: Knopf, 1997, p. 153
	asmirk	1999		OED (2023)
	aslosh	1999	an aluminum tube aslosh with jet fuel	Stephenson, Neal, *Cryptonomicon*. London: Arrow, 1999, p. 23

OED (2023) adds a long line of nonce-formations, dating back to the 17th century, though the fundamental pattern goes back to Old English. Marchand (1969, p. 140) makes the point that this formation type seems to have been used a great deal in the 19th century. Since then, however, it appears to have faded considerably, leaving behind a tail of occasional formations. It might appear that the prefix is still available but is seldom used (not helped by the fact that it now feels literary (OED 2023 sv, a- prefix3). This long tail makes it difficult to say for certain whether the prefix is still available or not because we have to ask what level of usage a morphological process has to show for us to call it available. While it shows even minimal usage, it has the possibility of apparently returning from the dead.

The suffix -*ster* was originally used to mark a female agent, possibly an agent of either sex, although as Marchand (1969, p. 348) comments, "neither view can be exactly proved or disproved" (for more modern scholarship on the subject, see Peterson 2013). According to Marchand, the suffix was not used in the 17th century, but returned in the 18th and 19th with "[t]he characteristic nuance . . . of 'shadiness'". Bauer et al. (2013, pp. 225, 236) find a tail of examples here, but also a new type of formation, in American English, where -*ster* is added to a clipped form of a proper name, always with the definite article, to give a humorous form that seems to imply approval: relevant forms include *the Newtster*, *the Chuckster*. Again, an affix seems to be able to gain a new lease on life.

5. Semantic Change

In the examples already covered, we have seen examples of processes that vanish in the sense that while the form persists, it gains a new meaning (the use of a prefix *step-* in *step-dog* is just one example). While the example of *step-* shows that a new meaning for the process can arise (albeit a related one), the typical case is that the affix becomes specialized, either to one formal environment or to one polyseme of the affix. Aronoff (2023) talks of specialization in a particular niche, and sees this as one way of resolving competition between word-formation processes.

Because such processes of change leave behind old words, formed by the same process but without the specialization, change in this way can be extraordinarily slow. We can think of the process whereby English -*ity* becomes specialized to technical terms as one such instance. We see such specialization in the use of, for instance, *productivity*, as a term in the study of economics or morphology, while *productiveness* is used in relation to the way in which a person works or a piece of land produces crops (OED 2023). *Productivity* can be used in the same way but we tend to see this as a technical explanation rather than a general comment. Formally, -*ity* finds a niche on the end of adjectives in -*able*/-*ible*. An example where an affix has created a new niche by creating a new meaning is in the series of words based on *racism* and including *colourism*, *fattism*, *heightism*, *sexism*, *sizism* (all from OED 2023). The creation of a niche can eventually lead to other uses of the affix ceasing to be productive, though that is not apparent in the instances listed here.

6. Conclusions

Some of the patterns that give rise to new affixes or cause them to vanish resemble those found for inflectional morphology. For example, suffixes may vanish due to phonetic erosion. However, the main factors in the birth and death of derivational affixes are not the same as those influencing inflection. The birth of derivational affixes can be the result of the requirement to name new things, and the death of derivational affixes is largely due to semantic reasons. This means that further research into the historical development of derivational affixes (and patterns of compounding) deserves further consideration, consideration that may be independent of the study of inflection. This paper has brought together a number of the processes involved and raised questions regarding the extent to which the analyst can be sure that any affix is dead, that is, has no possible further innovative use in the language. This should provide a starting point for a discussion of the factors to be considered in the diachronic development of derivational morphology.

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