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Exaptation and degrammaticalization within an acquisition-based model of abductive reanalysis

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Abstract

This article considers the relationship between exaptation and certain cases of degrammaticalization. Both involve obsolescent material, which may be lost, or may be put to re-use, either coming to express an existing grammatical category or giving expression to a category not previously encoded. The processes by which such reuse occurs are familiar ones: reanalysis triggering category reassignment. In both cases, change is caused by failure to acquire a grammatical category. Faced with material that expresses that category, acquirers either interpret it as an instance of some existing category or else abduce the existence of some new category. Exaptation and degrammaticalization can thus be understood as special cases of familiar processes of reanalysis within an acquisition-based framework of change. The concept of exaptation in historical linguistics is therefore useful but not foundational: useful in that it highlights the prevalence of unexpected pathways of development during ongoing obsolescence or opacity, but explicable in terms of other familiar processes, and hence not foundational. I demonstrate this approach using two case studies: (i) degrammaticalization of indefinite pronouns as nouns in South Slavic and Goidelic Celtic; (ii) exaptive reinterpretation of the *was–were* distinction as expressing polarity in various English dialects.

1 Introduction

There is now an increasing body of research evidence to show that degrammaticalization changes, defined as diachronic developments where an item goes against the prevailing direction of change in that it "gains in autonomy or substance on one or more linguistic levels" (Norde 2010: 131), are sufficiently frequent to warrant systematic investigation and explanation. Many, although by no means all, proposed instances of degrammaticalization involve reanalysis of obsolescent morphemes as instances of some other existing lexical category. Obsolescent morphological material is also crucial in exaptation, where "grammatical forms which have lost most or all of their semantic content ... are put to new uses as semantically distinctive grammatical forms" (Heine 2003: 168). The related notion of 'system disruption' (*Systemstörung*) has been invoked as a condition for both degrammaticalization (Norde 2001a: 239, 2002: 49, Plank 1995) and exaptation (Traugott 2004).

This paper considers the relationship between exaptation and degrammaticalization (of the relevant type), suggesting that both are instances of the development of morphological material under difficult conditions of acquisition, including obsolescence. When evidence for the status of an item or category is degraded, it poses an increased challenge during language acquisition. The most familiar fate of such items is that they fail to be acquired and are simply lost from the language. However, there are other scenarios in which the material is retained diachronically. For this to happen, acquirers must either interpret the obsolescent material as an instance of some category whose existence they have already posited, or else posit (abduce) the existence of some new grammatical category. It is scenarios of this type

that are considered here. In both variants of it, change is caused by failure of children to acquire a particular grammatical category or feature; the processes by which re-use occurs are thus familiar: reanalysis with concomitant reassignment to some other category or feature.

Reassignment of an unidentified item by children to a category or function that they have already posited is particularly attractive to them, since it amounts to a kind of least-effort strategy in which children limit the number of items in the inventory of grammatical categories for their language, cf. other least-effort approaches to language change (Roberts 1993: 228–229, Roberts & Roussou 2003: 202–205). The only difference is that it is not structure, but rather the inventory of functional items or features that is minimized.

Two cases will be analysed within this general overall framework, one exploring a recurrent type of degrammaticalization, the other a case of exaptation. The first concerns the degrammaticalization of indefinite pronouns ('someone') as nouns ('thing'), which has occurred independently in South Slavic (Bulgarian and Macedonian) and in Goidelic Celtic (Irish, Scottish Gaelic and Manx). It will be argued that, in both cases, the change results from failure to identify membership in a class of indefinite pronouns due to paradigm irregularity, acquisition being obscured by morphological irregularity and the availability of alternative analyses.

The second concerns the exaptive reinterpretation of the *was–were* distinction as expressing polarity in various English dialects (affirmative *was* vs. negative *weren't*). This results from difficulty in acquiring the category of number in the verb and the availability of polarity-sensitive morphology in other auxiliaries (cf. affirmative *will* vs. negative *won't*).

In the light of this interpretation, exaptation and degrammaticalization can be understood as special cases of familiar processes of reanalysis (Narrog 2007) within an acquisition-based framework of change (Andersen 1973, Harris & Campbell 1995), a view shared with the approaches of a number of other contributors to this volume (notably Jensen, Narrog, and von Mengden). This naturally leads us to question the usefulness of these two concepts within historical linguistics. If they are not fundamental processes of change, then their interest derives not from the mechanisms involved, which are entirely familiar, but from the fact that poor evidence for acquisition, as witnessed both in obsolescence and paradigm irregularity, makes items particularly susceptible to radical reanalysis.[1] When a morphosyntactic subsystem is being acquired under such conditions, acquirers are presented with no analysis at all, leading to extreme reanalyses whose consequences may be far-reaching. The new system does not emerge gradually from properties of the old system. It is not the case that the old system is partially acquired and then adapted. Rather, a system is created anew. Poor evidence leads to particularly creative hypotheses during acquisition (abduction) which can be compared to the accelerated pace of change observed during creolization: in short, obsolescence and opacity are catalysts to change.

2 Definitional issues

2.1 Definitions of and motivations for degrammaticalization

Grammaticalization involves characteristic changes in form, in grammatical function and categorial status, and in semantics, all repeatedly in the same direction. Conversely, an instance of degrammaticalization can be defined as any historical change that involves (at least) one shift against the prevailing direction of grammaticalization, for instance, a shift in the status of a linguistic item from right to left on the classic grammaticalization hierarchy (Hopper & Traugott 2003 [1993]: 7):

[1] Jensen (this volume) comes essentially to the same conclusion, but prefers the term 'functional renewal' over 'exaptation' to describe the scenario.

(1) content item > grammatical word > clitic > inflectional affix

Since this hierarchy merges grammatical function (lexical/contentful vs. grammatical) with form (word vs. clitic vs. affix) and can thus be split into two distinct hierarchies, one formal and one functional, any shift from right to left on these hierarchies would amount to degrammaticalization too:

(2) Formal hierarchy of grammaticalization
free morpheme > clitic > affix
(3) Functional hierarchy of grammaticalization
lexical category (noun, verb etc.) > functional / grammatical (determiner, tense, aspect etc.)

Finally, related to the functional hierarchy is a semantic one, recognizing the semantic shift from concrete to abstract typically encountered during grammaticalization:

(4) Semantic hierarchy of grammaticalization
concrete > abstract

Degrammaticalization involves movement to the left on these hierarchies. While historical change on each is overwhelmingly from left to right, as found in grammaticalization, for each hierarchy, we find some instances of the reverse development (Norde 2009: 66–90).

A second definitional question involves the relationship of degrammaticalization and lexicalization. A narrow definition of degrammaticalization is assumed here: in order to be regarded as a reversal of one of the hierarchies discussed above, degrammaticalizations must in some sense reverse a possible grammaticalization process; hence lexicalizations (*down a beer, isms and ologies*) are excluded. The logic behind this approach is that the motivations for lexicalizations are patently different from those involved in the case at hand: lexicalizations are either consciously creative, and often metalinguistic, status shifts instigated by adults (as in the case of *isms*, *ologies*, *ifs*, *buts* etc.) or are the result of extension of existing morphological rules (as with *down a beer*, which results from the extension of a rule deriving verbs by zero affixation in English).

Even adopting these relatively narrow definitions, we can identify enough instances of degrammaticalization to be able to make generalizations across them, and to establish the scenarios in which degrammaticalization can be expected to occur.

Norde (2009: 133) distinguishes three types of degrammaticalization:

(i) content-level degrammaticalizations involve a shift from grammatical to lexical content, 'degrammation', e.g. reanalyses P > V Welsh *nôl* 'after' > 'fetch' (Willis 2007), D > N Bulgarian *nešto* 'something' > 'thing' (Willis 2007), Aux > V Pennsylvania German *wotte* (Burridge 1998);
(ii) content-syntactic degrammaticalizations involve a shift from 'more grammatical' to 'less grammatical' or movement out of a paradigm, 'deinflectionalization' e.g. English/Swedish possessive *-s* (Allen 2003, 2008, Börjars 2003, Delsing 1999, 2001, Norde 1998, 2001b, 2006);
(iii) morphosyntactic degrammaticalizations involve a shift from bound to free morpheme, 'debonding' e.g. English *to*-infinitive, Irish *muid* 'we' (Doyle 2002).

Crosscutting Norde's categories (which focus on the relationship between the input and output system rather than the process by which the former turned into the latter) is another observation: many (although by no means all) involve obsolescent morphological categories or other items that are isolated from their paradigms, or simply paradigms that are themselves opaque and difficult to acquire. Obsolescent and opaque items are linked because obsolescent items are inherently difficult to acquire because they no longer fit into wider regularities. Norde (2009: 233–237) suggests that major structural shifts may be the trigger for deinflectionalization, and hints that such changes may be at the root of some instances of debonding too (but see section 5 below). This basic observation is correct. However, it is worth emphasizing in addition that examples of degrammaticalization that can be viewed as the response to difficulty in acquiring a given morphosyntactic subsystem, whether due to obsolescence or to low or decreasing morphological transparency, are in fact found within all three of Norde's categories:

(i) degrammation: Bulgarian *nešto* is reanalysed from a pronoun 'something' to a noun 'thing' because the non-transparent nature of its paradigm inhibits successful acquisition of its category feature;
(ii) deinflectionalization: English/Swedish possessive *-s* is reanalysed as a possessive phrasal affix rather than a genitive suffix because the case system of which it once formed a part becomes obsolescent;[2]
(iii) debonding: Irish *muid* 'we' once formed part of a fully articulated system of person–number inflection on verbs in all tenses, but was reanalysed as an independent pronoun as the remainder of its paradigm was being lost (Doyle 2002), with sporadic reanalyses of the same kind occurring independently in various person–number combinations in different dialects (see also Greene 1958, 1973, Mahon 1993, Nilsen 1974, Ó Buachalla 1970, Roma 2000, Williams 1968).[3]

This suggests acquisition failure as a motivating factor in many of these cases, a fact that links this scenario for degrammaticalization with another type of change, namely exaptation. Building on this observation, can we therefore adduce a single motivating factor in a significant subset of both cases?

2.2 Definitions of exaptation

Lass (1990) originally defined linguistic exaptation as the reuse of 'junk', linguistic material with no function. More recently, the relevance of 'junk' has been questioned (Vincent 1995: 435–436, Willis 2010: 170–171, and various contributors to this volume). It is doubtful that an item that has no function is acquirable: an earlier function must be retained until such time as speakers have innovated a new function, or else the linguistic item disappears. At the very least, speakers need some rationale for an item's distribution, and any such rationale amounts to a function.

[2] Abstract Case is often treated as universal and thus there is a sense in which a language cannot 'lose' (abstract) Case. Nevertheless, it is also clear that English and Swedish did lose morphological inflection for case as expressed on nouns (although not pronouns). It is from this perspective that obsolescence needs to be understood, that is, in terms of morphology rather than syntax.
[3] I follow Norde (2009: 204, 236) in treating Irish *muid* for the moment as an example of debonding. However, the process of change does not resemble other cases of debonding (see section 5 below), and it may in fact be better treated as an instance of deinflectionalization.

There is one scenario where the previous linguistic state was indeed form without any corresponding function. This is where speakers create a morphological pattern where there was none previously. Narrog (2007: 11, this volume) mentions the resegmentation of Old Japanese verbs such as *apase* 'meet' (morphologically opaque by the time of reanalysis) as *ap-ase* to form the basis for positing a new transitivizing suffix -(*s*)*ase*, and includes this development under the heading exaptation. Jespersen (1922: 384–386) calls such cases 'secretion'. His example is the reinterpretation of English *mine* as containing a first-person morpheme /maɪ/ + a new pronoun-marking morpheme /n/. Another example is the new Welsh third-person singular future suffix *-iff*, created from the present tense of the verb 'get' *caiff* /kaɪf/ (originally root /kaf/ + vowel alternation indicating third-person singular, but reanalysed as root /ka/ + new third-person singular future suffix /ɪf/, Willis 2009: 139). All these examples appear to have been subconscious and may well have been mediated through first-language acquisition. It is probable that unconscious secretion of this type, involving the creation of morphological structure from nothing, is more common than generally acknowledged. There are also similar-looking innovations which probably arose as conscious resegmentations by adults. For instance, the English derivational suffix *-athon* 'charity event (involving the activity denoted by the root)' as in *walkathon* arose via resegmentation of originally monomorphemic *marathon* as bimorphemic *mar-athon;* likewise, *-aholic* 'one addicted (to the activity or substance denoted by the root)' as in *workaholic* arose via reanalysis of the structure of *alcohol-ic* as *alc-oholic*. This really is creation of a linguistic item (morpheme) out of nothing, given that *-athon* and *-aholic* were sequences of meaningless phonemes until this point. The conscious cases are best excluded from discussion here, since the mechanisms by which they arose are radically different from core cases of exaptation. The unconscious ones may well involve reanalysis during acquisition, but are not triggered or catalysed by obsolescence, so will also not be discussed further here (for further discussion of the relationship between secretion and exaptation, see Wischer 2010: 34–36).

Exaptation is thus frequently the re-use of obsolescent material, rather than 'junk'. Exaptation is when "grammatical forms which have lost most or all of their semantic content … are put to new uses as semantically distinctive grammatical forms" (Heine 2003: 168). What is special about obsolescent material? If a linguistic form (morph) is isolated, its function cannot be established by reference to other parts of the linguistic system: if a language has only one case suffix, its function cannot be established by observing the other case suffixes, acquiring the easiest one and then generalizing to the others. Acquirers may therefore easily fail to establish its historically correct function. Having failed to reach any analysis, they may resort to particularly creative hypotheses, since they have to come up with some analysis and any analysis will do. The only alternative is to abandon the morph entirely (Lass 1990: 82). The former is exaptation.

Exaptation is therefore not a primitive process, but rather a scenario for 'extreme reanalysis'. Its existence is an answer to the question: why and under what conditions do items or structures sometimes shift to perform radically different functions from those that they performed in ancestor grammars? Obsolescence is a scenario that often presents this extreme case of acquisition. 'Normal' reanalysis is generally only partial analysis failure; for instance, speakers establish the surface form and function correctly, but not the structure. Exaptation, on the other hand, is near-total analysis failure: only the surface form is correctly established, and function and structure are left unanalysed. Some cases of degrammaticalization also result from this kind of near-total analysis failure. Creolization might be another, but for very different reasons.

In light of this discussion, I will adopt the following definition of linguistic exaptation: "the phenomenon of a morph that instantiates an obsolescent morphosyntactic

feature being reassigned to express some other new or existing morphosyntactic feature and which, in doing so, is reassigned to some other new or existing morphosyntactic category" (Willis 2010: 171).

This definition raises another important point: is novelty of function with respect to the entire language system a requirement for exaptation? An element whose function is unknown may come to express a category previously unexpressed in the language; it may extend an existing category; or it may be assimilated completely to an existing category. On the definition adopted here, exaptation does not need to contribute a new function to the language. Indeed it can be difficult to tell whether a category is new, cf. the contributions to this volume by Joseph, by Meul & Vermandere and by von Mengden.[4] Acquirers may be drawn to attribute an existing function to a morph whose role is unclear, but they are also free to posit new functions or features, so there is no reason to make a principled distinction between the two situations (cf. Narrog this volume). The important thing is that the function is new for the item undergoing exaptation, not that it is new to the language.

Put more simply, this definition reduces to exaptation being a subcase of category or feature reanalysis: exaptation is the phenomenon of a morph that instantiates an obsolescent morphosyntactic feature undergoing feature reanalysis (adapted from Willis 2010: 171), where feature reanalysis is a type of reanalysis that involves some morphosyntactic item being assigned to express a morphosyntactic feature (N, V, D, C, Person, Number, Case, Polarity) different from the one assigned to it in the ancestor (model) grammar (Harris & Campbell 1995: 61; Langacker 1977).

If exaptation simply reduces to feature reanalysis, do we still need the concept? Yes. Exaptation is special because it involves obsolescent morphosyntactic forms and these sometimes favour rapid change. During acquisition, the evidence for the function (feature values) of these forms is weak. In the absence of evidence, acquirers may either ignore them (eliminating the form from the language) or they may abduce a hypothesis about their function (feature values) (cf. creolization): exaptation 'saves' an obsolescent morph that would otherwise 'die', cf. Lass (1990: 82). These hypotheses are fairly unconstrained hence non-directional.

Degrammaticalizations of the type discussed earlier are minimally distinct from this, but neither reduces to the other. The underlying phenomenon is rather morphosyntactic obsolescence and opacity and the unusual conditions for acquisition that this gives rise to.

Having discussed definitional questions concerning exaptation, degrammaticalization, obsolescence and reanalysis, we now turn to two concrete examples, one of degrammaticalization, one of exaptation to see how they apply in practice.

3 Degrammaticalization 'something' > 'thing'

The first case concerns what might be thought of as a degrammaticalization pathway, whereby new generic nouns are created from pronouns. This runs counter to the generally expected line of development, which involves grammaticalization: generic nouns such as 'person', 'thing' or 'place' frequently give rise historically to indefinite (unknown-specific) pronouns such as 'someone', 'something' or 'somewhere' (Haspelmath 1997). Heine & Kuteva (2002: 208–209, 232–233, 295–296) recognize the following instantiations of this general grammaticalization path:

[4] This issue has been discussed by Simon (2010: 47–50), who considers linguists' failure to insist on conceptual novelty for items undergoing exaptation to be a way in which historical linguistics does not faithfully adopt the concept from evolutionary biology.

(5) THING > INDEFINITE PRONOUN e.g. Nahuatl *itlaa* ‘thing’ > *tlaa* ‘something’;
MAN > INDEFINITE PRONOUN e.g. Latin *homo* ‘man’ > French *on* ‘indefinite pronoun’;
PERSON > INDEFINITE PRONOUN e.g. Albanian *njeri* ‘person’ > ‘somebody, anybody’.

However, there seems to be an inverse degrammaticalization path of the following type (cf. also Narrog 2004, 2007 on the idea that exaptation too occurs repeatedly in the same way in different contexts in the same and different languages, hence is amenable to generalization):

(6) INDEFINITE PRONOUN > THING e.g. Old Church Slavonic *něčĭto* ‘something’ > Bulgarian, Macedonian *nešto* ‘thing’; Old Irish *ní* ‘something’ > Irish *ní*, Scottish Gaelic *nì*, Manx *nhee* ‘thing, matter’.

This development does not occur in any of the other Celtic or Slavonic languages. For this reason, attention in the rest of this section will focus entirely on the Goidelic Celtic languages and on South Slavic.[5] Cognate items elsewhere in Slavic, such as Russian *nečto*, Czech *něco* ‘something’, retain distributions typical of pronouns. The direct cognate of Old Irish *ní* has been lost in Brythonic Celtic, but the related animate counterpart survives in Welsh *neb* ‘anyone, no one’, which has the syntax of a pronoun. The claim is not that the pathway in (6) is the norm, or that it is more common than the pathway identified in (5); merely that its repetition in two independent innovation events calls into question the idea that degrammaticalization is always a unique, inexplicable event, and that this repetition demands an explanation.

In the earliest attested stages of the languages in question, these items manifested fewer lexical properties and more pronominal properties than they do today.[6] Old Irish pronominal use of *ní* as ‘something’, glossing the Latin indefinite pronoun *aliquid*, is shown in (7), while a similar Old Church Slavonic example is given in (8).

(7) **ní** du-thabairt do neuch
something.ACC to-give.INF to someone.DAT
‘to give something to someone’ (*Milan glosses* 98.a.4) (Old Irish)

(8) mněaxǫ bo ǫ zlata plĭny sǫštę ili **něč’to** ino.
think.IMPF.3PL PRT it gold.GEN full be.PRES.PART or something else.NEUT
‘… for they thought it was full of gold or something else.’ (*Codex Suprasliensis* i.26v.19) (Old Church Slavonic)

Category membership is normally established by distributional and morphological tests (Brinton 2000: 118–126, Culicover 2009: 11–60). In order to demonstrate that these items have undergone category reassignment, we need apply established tests for (count) noun status, specifically those that successfully distinguish count nouns from indefinite

[5] Discussion of the Bulgarian example here is based on the discussion in Willis (2007: 278–283), where further details may be found.

[6] Old Irish is the common ancestor of the modern Goidelic Celtic languages, namely, Irish, Scottish Gaelic and Manx; and Old Church Slavonic, as attested in manuscripts produced in Bulgaria, can be treated as the ancestor of Bulgarian and Macedonian. Irish data in this section are drawn from eDIL, the electronic Dictionary of the Irish Language (Toner, Bondarenko & Arbuthnot 2013), while Slavonic data are from the digitizations of the canonical Old Church Slavonic texts, namely, the Corpus Cyrillo-Methodianum Helsingiense (http://www.helsinki.fi/slaavilaiset/ccmh/) and the PROIEL corpus (http://foni.uio.no:3000/) (Eckhoff & Haug 2009).

pronouns. These are: (i) count nouns have plural morphological forms; indefinite pronouns do not (*thing* : *things*, but *something* : **somethings*); (ii) count nouns may appear after a numeral; indefinite pronouns cannot (*two things*, but **two somethings*); (iii) count nouns may appear in a phrase containing a demonstrative; indefinite pronouns cannot (*this thing*, but **this something*); (iv) count nouns may be modified by a non-predicative adjective, while indefinite pronouns may not (*the main thing*, but *(*the*) *main something* or **something main*);[7] (v) count nouns may be modified by a definite article, while indefinite pronouns may not (*the thing* vs. **the something*);[8] and (vi) a count noun may be quantified over, while an indefinite pronoun may not (*each thing*, *many a thing* vs. **each something*, **many a something*).

We can now apply these criteria to demonstrate that these items have become more noun-like over the course of their history, having undergone a shift from pronoun to noun.

The most important evidence comes from the morphological test in (i). These items all lack plural morphological forms at their initial stage, but gain them in the course of their history. In the modern languages we have:

(9) Bulgarian, Macedonian *nešta* 'things'
Irish *nithe* 'things, matters'
Scottish Gaelic *nithean* 'things, matters'
Manx *nheeghyn* 'things, matters'

There are no plural forms attested in Old Church Slavonic or Old Irish. There is a substantial body of extant material in both languages and we would expect such a common word to be found if it existed. Alternatives are attested in both languages, for instance, Old Church Slavonic *děla* (sing. *dělo*) 'things, deeds, works' and Old Irish *réte* (sing. *rét*) 'things'. Dual forms appear first in Middle Irish and plural forms in Early Modern Irish e.g. the plural *na neiche-si* 'these things (the things-DEM) (*Betha Colaim Chille* p. 242, l. 6, ms. 1532).

Tests (ii) and (iii) are applied in (10), which shows that these items may be preceded by a numeral and may be modified by a demonstrative in the modern languages:

(10) Bulgarian *tezi pet nešta* 'these five things'
Macedonian *ovie pet nešta* 'these five things'
Irish *na cúig ní seo* 'these five things' (the five thing.SG this)
Scottish Gaelic *na còig nithean seo* 'these five things' (the five thing.PL this)
Manx *ny queig nheeghyn shoh* 'these five things' (the five thing.PL this)

Neither of these properties is attested in Old Church Slavonic. Modification by a demonstrative is found already in Old Irish, while modification by a numeral appears first in Middle Irish, for instance, *dá ní* 'two things (dual)' (*Book of Leinster*, f. 110a, l. 30, twelfth century).

[7] In English, the availability of preposed adjectives would also distinguish the two (*a blue thing* vs. *(*a*) *blue something*), but this depends on word order, since a postposed alternative (*something blue*) is available for indefinite pronouns. This dependence on word order means the test is best avoided for languages with postnominal adjectives (Celtic) or with some pragmatic freedom of word order (Slavonic).

[8] The availability of modification by an indefinite article would also provide a suitable test, but none of the languages under investigation has an indefinite article, so this test cannot be applied in practice in the current instance.

Next, consider test (iv), modification by non-predicative adjectives. In the modern languages, these items permit such modification and are confirmed to be nouns by this test:

(11) Bulgarian *părvoto nešto* 'the first thing' (first-the thing)
Macedonian *prvoto nešto* 'the first thing' (first-the thing)
Irish *an chéad ní* 'the first thing'
Scottish Gaelic *a' chiad nì* 'the first thing'
Manx *yn chiad nhee* 'the first thing'

(12) Bulgarian, Macedonian *glavnoto nešto* 'the main thing'
Scottish Gaelic *am prìomh nì* 'the main thing'

Such modification is not found in Old Church Slavonic. In Goidelic, *mór ní* literally 'a great thing' is used adverbially to mean 'greatly' already in Old Irish. Otherwise, as the Dictionary of Irish Language (s.v. *ní*[2]) notes, it is "rarely accompanied by an adj. of quality". The earliest example it gives is from the fifteenth century, namely, *ni gua* 'a false thing' (*Tenga Bithnúa* p. 120, §59).

Test (v) involves modification by a definite article. Use of the suffixed definite article *-to* in *neštoto* 'the thing' or as a second-position clitic *-to* in (11) above is an innovation in Bulgarian and Macedonian. The article in its entirely is an innovation in these languages, but its ancestor (a demonstrative) does not co-occur with the ancestor of *nešto* in Old Church Slavonic. This is not the case in Goidelic Celtic, where such modification appears to be old. Thurneysen (1946: 310) cites *na-nní* or *na ní* 'anything whatever' (article + *ní*). This was perhaps a Common Celtic feature, since Middle Welsh free relatives are formed in a parallel way.

Test (vi) involves compatibility with quantification, for instance, by 'each' or 'all'. This is an innovation in Bulgarian *vsičkite nešta* and Macedonian *site nešta* 'all-the things', lacking any parallel in Old Church Slavonic. Again, the pattern is older in Goidelic Celtic, where *cach ní* 'everything' is found already in Old Irish (Thurneysen 1946: 310), and retained in the modern languages, as in example (13) from modern Scottish Gaelic.

(13) Tha Riaghaltas na h-Alba airson **gach** nì as urrainn dhaibh a dhèanamh…
is government the Scotland for every thing REL can to.them PRT do.INF
'The Scottish Government wants to do everything they can…' (BBC, 26 February 2008) (http://www.bbc.co.uk/scotland/alba/naidheachdan/story/2008/02/080226_ret_tues.shtml)

These changes are summarized in Table 1. In both cases, the item in the earlier stage of the language manifests a great number of properties associated with pronominal status than the later stage. These changes thus suggest a counterdirectional category reanalysis of pronoun (D) > noun (N) and, hence, degrammaticalization (degrammation). They are clearest in the cases of South Slavic because they have taken place entirely within the documented history of the language. In Goidelic Celtic, the shift was already underway by the time of the earliest texts. Presumably, the category reanalysis had already taken place and what we see is the gradual mapping out of its consequences in the attested period. It is therefore already partially reflected in Old Irish texts and reaches its full extent in Middle and Early Modern Irish. However, the editors of the *Dictionary of the Irish Language* clearly had this interpretation of the development in mind when they presented the pronominal use as historically primary and the nominal one as secondary, noting that "the transition from indef. pron. to subst. is gradual and begins already in OIr." (Toner, Bondarenko & Arbuthnot 2013,

s.v. *ní*[2]). Further confirmation of this interpretation comes from the etymology of the item, which is clearly pronominal (< Common Celtic *ne-k^{w}os NEG + 'who'), not nominal (see Willis 2013a: 282–287 for full discussion of the issues). Such confirmation is of course also evident in the Slavic case, where the second element of *nešto* is clearly the *wh*-word 'what' (for discussion of the etymology of the first element, see Willis 2013b: 380–382).

In Goidelic Celtic, the pronominal use of *ní* is now obsolete and we have only a noun, while in South Slavic, the two uses of *nešto* exist side by side. This is perfectly compatible with the claim that degrammaticalization has taken place here. In grammaticalization, it is commonly observed that a form that has undergone grammaticalization will co-exist, often indefinitely, with its source item, a phenomenon known as layering (Hopper & Traugott 2003 [1993]: 125). Thus, *gonna* has developed as a future marker in English. The fact that *go*(*ing to*) survives as a lexical verb of motion alongside it is not normally taken as evidence that grammaticalization has not taken place. It is not unreasonable to expect that degrammaticalization will also manifest layering (cf. Trousdale & Norde 2013: 34).

In Goidelic Celtic, Old Irish *nech* 'someone' has also undergone the same development, gaining the same new morphosyntactic properties as its inanimate counterpart *ní*, yielding forms such as Scottish Gaelic *a' chiad neach* 'the first person' (innovating modification by a non-predicative adjective); *neach-ciùil* 'musician (lit. person of music)' ~ *neachan-ciùil* 'musicians' (innovating a plural form). While this development has been much more productive in Scottish Gaelic than in Irish, it is in principle common to both languages. The equivalent item in South Slavic has not developed in this way: Modern Bulgarian *njakoj* 'someone' is only pronominal. In accounting for these changes then, we will therefore need also to consider why it is a general process across both animate and inanimate pronouns in Goidelic Celtic, but is limited to the inanimate member of the pair in South Slavic.

Table 1. Morphosyntactic properties of 'something, thing' in the histories of South Slavic and Goidelic Celtic.

	definite article	demon-strative	'each, all'	non-pred. adjective	numeral	plural
Old Church Slavonic	no	no	no	no	no	no
Mod. Bulg. and Mac.	yes	yes	yes	yes	yes	yes
Old Irish	yes	yes	yes	limited	no	no
Mod. Irish and ScG.	yes	yes	yes	yes	yes	yes

We can now turn to the main question regarding these data: what has allowed these changes to occur?

First, consider the barriers that need to be overcome in reanalysing a pronoun as a noun. The task facing a child acquirer is to establish the category membership of the given items. Any unambiguous evidence will ensure correct assignment and faithful replication of the adult system. If the language provides unambiguous morphological evidence to distinguish pronouns from nouns, reanalysis is highly unlikely. For instance, the morphology of many languages includes a system of declensional classes that poses restrictions on the possible forms of nouns in the nominative or other cases. Such a system, once its core features had been acquired, would provide a useful piece of evidence for an acquirer. If the item in question has a form that would be a valid case form for a noun, then the hypothesis that it is a noun is not disconfirmed, and may indeed be weakly and indirectly strengthened. In the case of the reanalysis of Bulgarian *nešto*, morphology placed no bar on the reanalysis.

The item happens to end in *-o* (this is a historical accident and is not a historical function of it being semantically inanimate/neuter), and Bulgarian neuter nouns mostly end in *-o*. The analogy with the noun *mjasto* ‘place’ may be particularly telling.

Table 2. Paradigmatic isolation of ‘something’ in the development of Bulgarian.

	Old Church Slavonic		Modern Bulgarian	
	interrog.	indef.	interrog.	indef.
‘who’ > ‘someone’	kŭto	někŭto	koj	njakoj
‘what’ > ‘something’	cĭto	něcĭto	**kakvo**	**nešto**
‘which’ > ‘some’	kyi	někyi	koj	njakoj
			kakăv	njakakăv
‘when’ > ‘sometime’	kogda	někogda	koga	njakoga

In Goidelic Celtic, nouns have no identifiable ending in the nominative singular, so *ní* is as good a form for a nominative singular noun as any other and the form therefore places no particular constraints on the hypotheses that might be entertained during acquisition.

Next, consider the paradigms as a whole. In Bulgarian, morphological opacity and consequential isolation from the remainder of the paradigm may lead to failure of acquirers to build the paradigm. This can be seen in Table 2, which compares the paradigms of indefinites in Old Church Slavonic with their modern Bulgarian equivalents. At both historical stages, there is a transparent relationship between interrogatives and indefinites, with each indefinite being derived from the corresponding interrogative by the addition of a prefix, Old Church Slavonic *ně-*, Bulgarian *nja-* (for details, see Willis 2013b: 380–382). The reflex of Old Church Slavonic stressed /ě/ before an unpalatalized consonant is /ja/ in standard Bulgarian, while the reflex of /ě/ before a palatalized consonant is /e/. The reflex of unstressed /ě/ is always /e/, irrespective of the following consonant (Sussex & Cubberley 2006: 511–512). Since the /ě/ in Old Church Slavonic *něčĭto* precedes the palatal affricate /tʃ/, which counts as palatalized in the system, it fails to lower, unlike the /ě/ in all other forms of the pronouns. The learner must therefore identify *ne-* as a morphophonological alternant of *nja-* in order to assign *nešto* to the *nja*-series of indefinites. The evidence to the learner is further obscured by the fact that the interrogative member of the pair, *čĭto* ‘what’, is replaced by the neuter of the interrogative determiner (masc. *kakăv*, neuter *kakvo* ‘which (one)’). This makes the pair *kakvo* ‘what’ : *nešto* ‘something’ entirely suppletive. Its isolation from the rest of the series, which is morphologically entirely regular, promotes acquisition failure: if *kakvo* ~ *nešto* is not identified as a pair, then *nešto* must be assigned features on the basis of its own behaviour and generalization across the paradigm is impossible. There is no evidence that it is not a neuter singular lexical noun, so this hypothesis can be adopted by some learners. Evidently this is what has happened in the history of Bulgarian. Adoption of this item as a lexical noun leads to the innovation (perhaps staged) of all of the characteristic syntactic behaviour of lexical nouns discussed above.

The reasoning for Goidelic Celtic *ní* is broadly parallel although the details differ. Table 3 shows the Old Irish paradigm for indefinites. The transition to nominal status and the acquisition of new properties is already well underway in Old Irish and continues into Middle Irish (Toner, Bondarenko & Arbuthnot 2013, s.v. *ní*[2]). Once again, we can interpret the development as resulting from paradigm irregularity and isolation, leading to the failure of acquirers in building the paradigm. The paradigm is highly irregular, and the morphological relationship of the neuter to the largely unified masculine–feminine form is not transparent. Category assignment (as pronouns) fails during acquisition, leading to assignment of noun as the default lexical category. The two items then effectively split apart and are acquired

separately, leading to the creation of two new lexical items, *ní* ‘thing’ and *ne*(*a*)*ch* ‘person’. The syntactic distribution of the noun is wider than that of the pronoun (e.g. being used after numerals) and it has a greater number of morphological forms (i.e. it has a plural), so the only counterevidence would be negative, from gaps in distribution, and unlikely to hinder the development.

Table 3. Old Irish paradigm for indefinites.

	Old Irish
‘someone’	*nech* (gen. *neich*, dat. *neuch*)
‘something’	*ní* (gen. *neich*, dat. *neuch*)
‘some’ (m./f.)	*nach* (f. gen. *nacha*)
‘some’ (n.)	*na*

To summarize this section, we have seen how the development ‘something’ > ‘thing’, pronoun > noun, has occurred in parallel in South Slavic and in Goidelic Celtic. In both cases, we have seen how the change can be accounted for in terms of paradigm irregularity and acquisitional difficulty leading to counterdirectional reanalysis. The new syntax and semantics are clearly related to those of the earlier system, so we cannot speak of near-total acquisition failure and exaptation, but the fundamental mechanisms seem to be the same.

We now turn to another case, one that could be considered exaptive, where a very similar scenario and the same mechanisms lead to a radical shift in the function of a morpheme.

4 Exaptation of the English *was–were* distinction

This second example concerns the development of number morphology on verbs in English. As is well known, number marking on English verbs has been in decline since the Old English period. In Old English all verbs distinguished singular and plural (as well as person in most cases), as shown in the illustrative past-tense paradigms for the strong verb *singan* ‘sing’ and the irregular verb *wesan* ‘be’ in Table 4.

Table 4. Number marking on past-tense verbs in Old English.

	singan ‘sing’	*wesan* ‘be’
first sing.	*sang*	*wæs*
second sing.	*sunge*	*wǣre*
third sing.	*sang*	*wæs*
plural	*sungon*	*wǣron*

While complex patterns of dialect and social variation existed in Middle English, number inflections on verbs were gradually given up, earlier in the present tense than in the past (Lass 1992: 95–100, 34–41). In the main, singular forms were generalized to the plural, giving the situation that we have today, where *sang* is found both for *I sang* and *we sang*, although the reverse generalization (or generalization from the past participle) is also attested (e.g. *I bit* and *we bit* for Old English *ic bāt* and *we biton*). The only exception to the overall loss of number marking in the past is the verb *be*, where a distinction between singular *I was* and plural *we were* has been maintained in standard English. General loss of number marking

on verbs left the category of number as an isolated and obsolescent morphosyntactic category in the past tense of English verbs, finding expression in only one verb.

In the present tense, number distinctions have been retained rather better, but are by no means robust: in the standard variety, the verb *be* maintains a number distinction in the first person (*am* : *are*) and the third person (*is* : *are*), while other verbs maintain it only via the *-s* suffix in the third person singular (*she sings* vs. *they sing*). Many vernacular varieties in fact show generalization throughout the paradigm, either to *s*-forms throughout (*she sings*, *they sings*) or to *s*-less forms (*she sing*, *they sing*) throughout. There are also other possible dialect systems that do not make reference to number, such as the Northern Subject Rule (Haas 2008, 2011, Isaac 2003, Klemola 2000, McCafferty 2003, Pietsch 2005). Number is therefore an obsolescent category in the English verbal paradigm, with the exact extent of the obsolescence varying from dialect to dialect.

The *was–were* distinction participates in this general pattern, tending to be given up, either by generalization of *was* throughout the paradigm or by generalization of *were*. This represents one natural development of the trend, namely the complete elimination of number from the verbal system in the past. Indeed, Chambers (2004) considers this to be a vernacular universal. However, another possibility is also found: as number ceases to be recognized as relevant to the morphosyntax of English verbs, the morphological means of encoding it are reassigned to some other feature. In this case, the feature that is chosen is polarity. Various English dialects show a tendency towards using *were* (in the form *weren't*) in negative clauses, regardless of person and number, and *was* in affirmative clauses, also regardless of person and number. This tendency is demonstrated widely for varieties in England, namely Reading and York (Tagliamonte 1998), Fenland (Britain 2002), and outer east London (Cheshire & Fox 2009). Anderwald (2001), in a study of the spontaneous spoken portion of the British National Corpus, found that this system was found across most of the southern and central regions of England. It is also found in some parts of the United States, for instance, Ocracoke, North Carolina (Schilling-Estes & Wolfram 1994). Schilling-Estes & Wolfram (1994: 290) interpret this shift as "a movement toward supplanting phonological differentiations that indicate person and number distinctions with allomorphy that reflects the positive/negative distinction", a development that they term 'remorphologization'. In the terminology of Andersen (2006, 2008), this would be an instance of regrammation, the appropriation of different grammatical content by an already grammatical morph. Effectively then, in our terms, this is an instance of exaptation.

The reanalysis that gives rise to this new system can be stated more formally.[9] This will be done here within a broadly minimalist syntactic theory, although nothing crucial depends on this particular choice of formalism. Within a minimalist formulation, the change affects the spellout rules for the morphological realization of BE, as follows:

(14) (a) BE [T: PAST] [uNum: PLURAL] = *were* ⇒ (b) BE [T: PAST] [uPol: NEGATIVE] = *were*

Before the reanalysis, in (14a), *were* is the realization of BE plus (among other features) interpretable tense and uninterpretable number features. As an auxiliary, *be* is merged directly into the T (tense) position. The tense feature of this head contributes to the semantic representation and is thus interpretable. Other features, such as number and person (the latter

[9] Discussion here focuses solely on the exaptive system with *was–weren't* contrast. For a formal analysis of a Scottish *was*-generalizing variety, see Adger & Smith (2005, 2010).

ignored here for simplicity) are present only to ensure appropriate agreement morphology, and are therefore represented as unintepretable features, whose values are copied from other elements of the clause (e.g. the subject), where they are interpretable. In this sense, *were* expresses plural number. After the change, the number feature is no longer crucial in determining the spellout (it is either not present or deleted by the morphology without having any effect on the phonological form);[10] instead, a polarity feature is now present in the representation. It too is uninterpretable, since its value is copied from elsewhere (e.g. from *not*) and it does not contribute a semantic negation to the clause. However, it influences the form, producing *were* when set to the value [NEGATIVE] and *was* otherwise. Thus, in the relevant sense, it can now be said to express polarity rather than number. The reanalysis is the failure to fully acquire the number feature, and the attribution of its effects to a polarity feature instead, so that *were* now realizes the past negative of BE.

In terms of motivating the shift, it is of course relevant that the reanalysis is supported by the behaviour of other English auxiliaries that inflect for polarity, as Schilling-Estes and Wolfram (1994: 289) note. English *-n't* behaves like a suffix rather than a clitic (Zwicky & Pullum 1983), which suggests that it should be analysed simply as the reflex of a polarity feature on auxiliaries. Evidence for the affixal status of *-n't* comes from the irregular nature of its morphology: polarity inflection on auxiliaries triggers stem allomorphy in a significant proportion of English auxiliaries, as illustrated in (15).

(15) *do* [duː] > *don't* [doʊnt]
can [kæn] > *can't* [kɑːnt]
will [wɪl] > *won't* [woʊnt]
must [mʌst] > *mustn't* [mʌsnt]

For a full list, see Zwicky and Pullum (1983: 508). In vernacular varieties, even more extreme forms of stem allomorphy are manifested in this context, and allomorphy extends to a larger set of auxiliaries than in standard varieties e.g. nonstandard varieties of southern British English have affirmative *am*/*is*/*are*/*have*/*has* > negative *ain't* [ɛnʔ], *is* [ɪz] > *isn't* [ɪnʔ], *does* [dʌz] > *doesn't* [dʌnʔ], and *did* [dɪd] > *didn't* [dɪnʔ], the last three all with irregular loss of the stem-final consonant. For northern England, Honeybone (2007) lists parallel forms, which, following Petyt (1978), he terms 'secondary contractions':

(16) *is* [ɪz] > negative [ɪnt]
has [az] > negative [ant]
does [dʊz] > negative [dʊnt]
did [dɪd] > negative [dɪnt]

It is natural therefore to suppose that the auxiliaries bear a polarity feature that matches the polarity of the sentence as a whole. Historically, this feature emerged when the negator *-n't* became attached phonologically to the auxiliary, creating the basis for the emergence of the alternations just described. The *was–were* change is extension of this feature to more items via exaptation (reanalysis of an obsolescent feature as the extension of a different existing feature).

The scenario for change is therefore:

[10] It is tempting to suggest that the number feature has been eliminated entirely by this stage of the historical development. However, number is still relevant in the present tense (*I am* vs. *you are* etc.), suggesting the feature is still present, albeit entirely inert, in the past too.

(i) children encounter the form *were* and need to establish what morphosyntactic features it reflects;
(ii) they fail to establish the uninterpretable number feature value [uNum: PLURAL], either because they do not posit the feature [uNum: ___] in their verbal system at all or because is it marginal within that system;
(iii) they need to posit the uninterpretable polarity feature [uPol: ___] as a relevant feature for auxiliaries anyway;
(iv) they mistakenly abduce this to be relevant for *were* too.

Which of the options in (ii) is correct depends on how we analyse the morphology of the contrasts *sing–sings* and *am–are–is*. If the form *sing* is the default, with *sings* being the reflex of the lexeme SING plus additional features [uPerson: 3RD], [uNum: SINGULAR], then it is possible that the feature value [uNum: PLURAL] does not actually exist in the system and is not instantiated on the other forms.

Note that [uPol: ___] is already present in the system, and already present on BE, since it already inflects for negation. What is happening is that [uNum: ___] is being eliminated from the past tense, with its surface manifestation being re-attributed to another feature already present. In this respect, then, the exaptation is a simplification of the system (reduction in the number of features required). However, this is only a property of cases of exaptation that re-assign a morpheme to an existing feature, and not of those that involve novel features.

5 Is all degrammaticalization and exaptation due to obsolescence?

The conclusion that certain examples of degrammaticalization and exaptation, namely those discussed above, are catalysed by obsolescence naturally raises the question of whether obsolescence is involved in all instances of these processes. There is also the question of whether an acquisition-based account is appropriate for all cases of exaptation and degrammaticalization. Provided we keep to a narrow definition of exaptation (i.e. limited to cases where a morpheme with a function at an earlier stage is assigned a new function later on, but excluding cases of creation of morphemes *ex nihilo*, cf. secretion, section 2.2 above), then obsolescence is central to the very concept of exaptation and therefore must be involved in all instances. The same is, however, not true of degrammaticalization. Obsolescence of inflectional paradigms is central to certain core examples of degrammaticalization, namely English/Swedish possessive *-s* (Norde 1998) and Irish first person singular pronoun *muid* (Doyle 2002). However, other examples, particularly of debonding, involve other scenarios,[11] although acquisition is often relevant there too. In some cases, analogy has been invoked. Learners establish the morphosyntactic status of one item. Upon encountering another item similar in meaning, they posit that the new item has the same morphosyntactic status as the familiar item. They are not hindered by the elusiveness of the obsolescent, but rather misled by the attractiveness of the familiar. This accounts for the shift in status of the Estonian abessive marker from case suffix to clitic in southern Estonian dialects on the model of the comitative marker, which is a clitic, as discussed by Kiparsky (2012).

In other cases, debonding seems to result from failure to establish scope or via creative expansion of scope. This is probably the more common scenario. For instance, in Bulgarian, the comparative marker *po-* has undergone debonding, having become more independent and no longer being an affix. In other Slavic languages *po-* is a prefix that

[11] Cf. Gardani's (this volume) observation that the overlap between exaptation and degrammaticalization concerns primarily those instances of the latter that can be characterized as deinflectionalization.

attaches to adjectives: Matushansky (2002: 148) considers the Russian attenuating morpheme *po-*, as found in *dorože* 'more expensive' > *podorože* 'a little more expensive' to be a prefixal functional head taking a (comparative) degree phrase as its complement. Morphologically, it is a bound morpheme attaching to an adjective, while, semantically, it has scope over the entire adjective phrase (including the 'than'-phrase): as Matushansky notes, it binds the differential and predicates 'small' of it (i.e. the difference in cost is said to be small), and this differential can only be calculated from a knowledge of the price of both entities being compared. However, the cognate Bulgarian item, which semantically forms ordinary comparatives, as in (17), can attach to other syntactic categories, including a verb phrase in (18), or a prepositional phrase in (19). It can also bear stress, as it does in (18).

(17) dobăr 'good' > po-dobăr 'better' (masc.)
star 'old' > po-star 'older' (masc.) etc.

(18) Ti pò gi znaeš.
you more them know.PRES.3SG
'You know them more.' (Bulgarian National Corpus)

(19) Vikingite, koito živejat ošte po na sever…
Vikings-the who live.PRES.3PL yet more on north
'the Vikings, who live even more to the north…' (Bulgarian National Corpus)

Given that (17) is the likely historical starting point (considering the wider Slavic context), and that the patterns in (18) and (19) are innovations, the change amounts to progressive abandonment of selectional restrictions (originally the item selects for adjectival elements, but now has no restrictions) and a widening of both semantic and syntactic scope to allow for scope over phrases as well as words.

Other debonding cases work in rather similar ways. English *-ish* undergoes debonding from adjective suffix to clitic and ultimately to independent word. This can be understood as progressive widening of its selectional restrictions and semantic scope.[12] The crucial semantic development comes in Middle English, when the suffix *-ish* gains the meaning 'somewhat' in addition to its earlier meanings 'belong to a particular social or ethnic group' (*-ish*$_1$, e.g. *Danish*, *English*) and 'sharing characteristics of, characterized by' (*-ish*$_2$, e.g. *foolish*, *sheepish*, *feverish*). This probably happens because some items of *-ish*$_2$, meaning 'sharing characteristics of', carried the implicature (maxim of quantity) that not all characteristics were shared. For instance, *goldish* and *snowish* typically meant 'gold in colour' and 'snow white in colour' indicating shared colour characteristics, but not 'made of gold' or 'made of snow', indicating other shared characteristics.[13] The semantic parallel between these nominal roots and adjectival roots denoting colours promoted parallel formations such as *bluish*, *dullish*, *greenish*, *palish*, *reddish*, *yellowish* (all first attested in the fourteenth century). New formations such as *bluish* and *greenish* necessitated new selectional requirements for *-ish*$_3$ so that it could now attach to adjectival as well as to nominal roots.

[12] The presentation of *-ish* here deals only with the emergence of *-ish* as a marker of approximation and is necessarily somewhat simplified and schematized. For further discussion of other relevant aspects, see Kuzmack (2007), Norde (2009: 223–225, 2010: 144–145), and Traugott and Trousdale (2013: 233–237), which along with the OED entries for *-ish* are drawn on in the current treatment.

[13] Narrog (this volume) suggests a remarkably similar development for Japanese *-rasi-* 'like' in cases such as *otoko-rasi-* 'manly' > '(only) appearing to be a man', serving as the basis for exaptation and debonding of *-rasi* as an evidential marker.

From the outset, this new affix, here termed *-ish*$_3$, following Kuzmack (2007) and the OED entry for *-ish*, suffix[1], is more morphologically independent. In lexical-phonological terms, it is a stratum 2 affix, unlike Old English *-isc* and the cognate German suffix *-isch* (Giegerich 1999: 249); that is, it induces no phonological alternations, such as umlaut, in the root. This development is already counterdirectional, in contrast to the usual direction of change, whereby affixes develop non-compositional semantics and phonological irregularities, moving from stratum 2 into stratum 1 as a result (Giegerich 1999: 262). This shift in status is likely to have been a response to the increase in frequency and productivity brought about by the semantic innovation. Hay (2002) and Hay & Plag (2004) propose an account of English affixation according to which affix ordering is determined by ease of parsing: an easily parsed affix cannot appear closer to the root than a less easily parsed affix. They assume a dual-route model of language processing, with items parsed into their components if these components can be accessed in the lexicon more quickly than the whole word, with whole-word parsing winning otherwise. If affixed forms are less frequent than the non-derived forms upon which they are based, then the affixes will tend to be parsed separately. For instance, *green* is more frequent than *greenish*, hence decomposition into *green* and *-ish* is favoured. In Old English, items in *-isc* were often built on bound roots, and were probably often more frequent than the bare root (e.g. *ūtlendisc* 'foreign' is commoner than *ūtland* 'abroad'). The semantic shift in Middle English led to the creation of many new low-frequency items in *-ish*, which would automatically lead to the suffix being parsed out more readily, leading to greater morphological independence.

Ignoring developments that concern only *-ish*$_1$ or *-ish*$_2$, we can jump forward to the twentieth century, where *-ish*$_3$ extends its selectional requirements once more, this time to numerals denoting times, as in (20), dates, as in (21), and ages. In all these cases it means 'approximately'. It can also for the first time attach to unambiguously phrase-level entities, as in (22).[14]

(20) 'What time shall I come?' 'Elevenish,' Sam replied. ('Peter', *Trench yarns* ix.110, 1916) (OED s.v. *-ish, suffix*[1])

(21) "When would you like to be relieved?" I answered: "Octoberish if possible." (Laurence Edward LeSueur, *Twelve months that changed the world*, p. 304, 1943)

(22) She said "three o'clockish," and it's three now. (Elsie Oxenham, *The new Abbey girls*, 1923)

These changes represent a series of analogical extensions, initially based on existing formations such as *latish* and *earlyish*, as the OED (s.v. *-ish*, suffix[1], item 4) suggests. The emergence of phrase-level attachment in (22) is based on a reanalysis of the level of attachment of the suffix in a simple example like (20): this must be reanalysed from word-level attachment of the suffix to phrase-level attachment, that is, [$_{\text{NumP}}$ [$_{\text{Num}}$ *eleven-ish*]] => [$_{\text{NumP}}$ [$_{\text{NumP}}$ [$_{\text{Num}}$ *eleven*]] *-ish*].

By the 1980s and 1990s, *ish* could appear as an independent word, as in (23) (where it scopes over *happy*). It also has the option of taking scope over an entire proposition (meaning 'the proposition is true if truth values are evaluated loosely'), as in (24), not just a word or a phrase.

[14] Attachment of *-ish*$_2$ to phrases, particularly names, is somewhat earlier, and may have formed a model for this pattern too.

(23) One of those neatly crafted middle-brow plays which, because they have a pleasantly happy ending (well, ish), might make people think that they've been handed a soft option. (*Sunday Times* (Review section) 51/8, 19 October 1986) (OED s.v. *ish*, adv.)
(24) 'Trust Davie Morrow.' 'You know him?' 'Ish. He's a regular across the road.' (Colin Bateman, *Cycle of violence* vi.94, 1995) (OED s.v. *ish*, adv.)

Various processes are involved here. The initial impetus for change in Middle English comes from conventionalization of implicature, which gives rise to the new item *-ish*$_3$ with the new meaning 'somewhat, approximately'. This in turn leads to an increase in productivity of *-ish*$_3$ in Middle English, and hence to an increase in the number of low-frequency types, making the suffix more easily parsable and phonologically autonomous (shift from stratum 1 to stratum 2). Extension of selectional restrictions (noun > adjective > numeral) is perhaps driven by the semantics of the new item (what it can meaningfully apply to); effectively, there is 'semantification' of selectional restrictions (restrictions come to be defined semantically, not in terms of the syntactic category of the root). As selectional requirements are relaxed, the item takes wider scope, with the Middle English increase in phonological autonomy being repeated in recent years (shift from affix > phrasal affix > word).

On this view, debonding is basically a form of semantically driven extension, and has no special relationship with obsolescence. This view may well be generalizable to other cases of debonding, cf. the Japanese examples discussed by Matsumoto (1988). While language acquisition plays a role (for instance, in that conventionalization of implicature is only complete once a generation of children has failed to see any implicature at all), it is not a leading one.

6 Discussion and conclusion

I have argued that both degrammaticalization and exaptation are responses to difficult conditions of acquisition due to obsolescence or morphological opacity due to other reasons.

In exaptation of the English *was–were* alternation as a reflex of polarity, the relevant feature, number, was not properly acquired, and the variation in form was attributed to an existing morphological feature.

In the case of degrammaticalization of indefinite pronouns as nouns, the place of one item in the system (in South Slavic) or the whole system (Goidelic Celtic) was opaque. While the general semantics of the items was acquired successfully, membership in the paradigm was not, leading to counterdirectional reassignment of a pronoun to the class of noun.

In both cases, obsolescence and paradigm isolation favoured linguistic change, just as other cases of impeded acquisition do. For instance, both creolization and language contact lead to accelerated linguistic change due to impaired acquisition, cf. Meisel (2011) and Trudgill (2011). This is the real generalization behind all of these cases. We can thus motivate Lass's (1990: 98) observation that "useless or idle structure has the fullest freedom to change, because alteration in it has a minimal effect on the useful stuff" by concluding that the function of obsolescent structure is most likely to change, because it is hardest to acquire.

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