Category change in English with and without structural change[1]

Abstract

This paper offers a partial taxonomy of changes of category (word class), exemplified with recent English data. The paper takes as its starting point a structuralist syntax which employs constituent structure and conventional category labels but which lacks empty categories or elaborate functional structure. No fixed, universal inventory of categories is assumed. Three types of category change are distinguished: those where only the affected node and its phrasal projection change labels; those where the topology of the syntactic tree is altered as well; and those where a wholly new category enters the grammar. Most but not all of the examples of category change involve grammaticalization. There is evidence of gradience, and semantics may lead syntax. A distinction is drawn between ambiguous and equivocal syntax, where the latter is under-determined. I suggest that WYSIWYTCH ("What you see is what your theory can handle") militates against the recognition of syntactically equivocal strings, and I conclude that for handling grammatical change of the kind surveyed, a rigidly structuralist syntax may turn out to be unrevealing.

1 Introduction

This chapter is limited to category change. However, since most grammaticalisation involves category change, and much category change involves grammaticalisation, the concerns of this chapter – and indeed some of the examples – have a direct bearing on the thematic questions posed by the editors.

I take as my starting position the kind of constituency syntax practised, for example, in Huddleston & Pullum (2002) – that is, working with the initial assumption that for any grammatical sentence, we can and should find a systematically justified, rigorous structural description that is closely tied to its actual non-null morphemes.[2] (However, I return to this assumption in §§2.2, 2.3, 3.2 and 5 below.) One way of organising a discussion of category

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[1] I am grateful for improvements and references suggested by the editors and by Tine Breban, Hendrik De Smet, Marianne Hundt, Anette Rosenbach and Nigel Vincent.

[2] Notice that Huddleston & Pullum relax the generally accepted constraint against upwards branching in constituency structure trees – see for example (2002: 412, 419-422, 1073) – though only for what they call 'fused-head' and 'fused relative' constructions. One explicit reason is to reduce the amount of overlap that has to be recognised between categories, by which they mean a given word showing multiple, non-simultaneous category memberships (i.e. **in different contexts**) (Huddleston & Pullum 2002: 421).

change is according to the effect on such syntactic structure: does the change only require a different label for the node in question and its immediate phrasal projection, or does it require a change in the topology of the tree? Furthermore, is the replacing category one that already existed in the language, or is it a new addition to the inventory of categories? It is on this basis that the chapter is organised. I discuss a handful of category changes in the history of English and attempt to generalise from them about questions of gradience and gradualness. Anything which can be said in this context about category change in general should apply to grammaticalisation as well.

2   Category change without structural change

2.1   N~A

In previous work I have written about change from noun to adjective (Denison 2001, 2007), giving detailed consideration to examples like *fun* and *key*. Now Huddleston & Pullum (2002: 1643) say that conversion from noun to adjective is 'very rare', citing flower names like *rose* and *orange* and, from more recent times, *sexist* and *Oxbridge*, and suggesting that the frequent citation of *fun* in this context actually 'reflects the paucity of clear examples'. Haspelmath too lists conversion between noun and adjective in either direction as 'unattested (or rare) changes' and goes on to say that 'word-class changes invariably turn content-words into function-words' (Haspelmath 1998: 329). That would suggest that all category changes are instances of grammaticalisation. Perhaps Haspelmath's statements have statistical validity cross-linguistically, but neither corresponds to my experience for English, though of course if you look at grammaticalisation alone, content-word > function-word is what you will find. But in English it is entirely possible to find transfers both ways between N and A and therefore not involving loss of content.

While the conversion A > N can be brought about by ellipsis – *hopeful (boy/girl)*, *daily (newspaper), bitter (beer)* – which is an abrupt process, I suggested that N > A was stepwise (**gradual** in the sense used by Traugott & Trousdale (this vol.)). I give a brief illustration of the latter using web data for *rubbish*, which for some speakers is well on the way to having an adjectival use alongside its nominal one:

(1)   A self-confessed "rubbish" golfer won a £15,000 car after fluking a hole-in-one. (BBC, 8 Jul 2008, http://news.bbc.co.uk/1/hi/scotland/north_east/7494943.stm)

(2)   A totally horrible and rubbish gig which was the beginning of the end of the relationship between the singer and me. (http://flickr.com/photos/khl/sets/1349235/ <accessed 19 Jan 2009>)

(3)   i know its [*sic*] rubbish but i need it to win the manufacturer's race to win an older, rubbisher version (http://www.gtplanet.net/forum/showthread.php?t=59545&page=24 <accessed 12 Jul 2008>)

(4)   And today was rubbish.
        […] It started off alright, […] [b]ut after that it started to get rubbisher. (http://wyldethingy.blogspot.com/2006/05/not-best-day-ever.html, dated 8 May 2006 <accessed 12 Jul 2008>)

(5)   Because i like to take a lot of photos when i go out but the light on my V975 seems very rubbish. (http://3g.co.uk/3GForum/showthread.php?t=34311, dated 28 Feb 2006 <accessed 13 Jul 2008>)

(6)   And the prize for rubbishest blogger in the world goes to... Me! (http://changingcycles.blogspot.com/2008/03/and-prize-for-rubbishest-blogger-in.html, dated 30 Mar 2008 <accessed 19 Jan 2009>)

(7)   and I can't imagine Harry Hall's selling anything rubbish. (http://yacf.co.uk/forum/index.php?topic=7464.15, dated 19 Sep 2008 <accessed 19 Jan 2009>)

The word *rubbish* could in principle be either a noun or an adjective in pre-nominal modifier or predicative use, as in (1) and the first instances in (3) and (4). Coordination with a true adjective as in (2) is suggestive of adjectivehood without being incontrovertible proof. However, a comparative *rubbisher* in (3) and (4) and modification by *very* in (5), both incompatible with nounhood, are clear indications of adjectival status. So too are a superlative, *rubbishest* as in (6) or *most rubbish*, and post-pronominal use as in (7).

Historically speaking, *rubbish* is a late ME noun of obscure etymology, whose first sense in *OED* is '[w]aste or refuse material, in early use esp. such as results from the decay or repair of buildings; debris, litter, refuse; rejected and useless matter of any kind'. It developed a derogatory attributive use by the end of the 16th century, apparently losing it again by the late 18th century, according to *OED*, which has no such citations between 1722 and 1979. Interestingly, the derived adjective *rubbishy* is only found from 1795, and in the metaphorical sense 'worthless' from 1824, so it is almost as if the standard language wouldn't tolerate the adjectival use of *rubbish* once *rubbishy* was available. (The dates don't quite match.) The British National Corpus (BNC) has *rubbishy* 12×, always as a pre-modifier, and *rubbish* about 15× as a pre-nominal modifier[3] in the metaphorical sense. There is also the mainly nineteenth-century adjective *rubbishing* 'paltry, worthless, rubbishy' (*OED* s.v.).[4]

The accidents of word formation are not predictable, nor are they entirely random. In earlier work I speculated as follows about N > A conversion (Denison 2007):

The circumstances which license such a transition seem to include:
- lexical gap = absence of an adjective (morphologically related or otherwise) with appropriate semantics

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[3] NB. The head *psychobilly* in the string *the Neff's rubbish psychobilly* is tagged by BNC as an adjective; *rubbish* never is.

[4] I am grateful to Elizabeth Traugott for pointing out this alternant and indeed antedating *OED* to 1791 from an example in LION: English Prose Drama.

- N is, or can be, a mass noun or at least can be used without D (*an article in draft, a work of genius*)
- N is semantically gradable

In the case of *rubbish*, there is hardly a lexical gap, since we have *rubbishy* as well as many etymologically unrelated synonyms (*crappy, useless, bad, …*), so evidently the functional pull is not essential. However, *rubbish* meets the other criteria. It is a mass noun, therefore usable in the singular without D. It has an obvious metaphorical extension to a subjective, evaluative meaning. It even has an ending which looks more like a productive adjectival ending than a nominal one.[5] The web examples cited as (1)-(7) illustrate two contexts which neutralise the A~N distinction, namely pre-nominal modifier and predicative complement, and which therefore are potentially equivocal syntactically.[6] (There is no relevant semantic ambiguity, however.) The transition to adjectival use need not involve structural change. It is a semantically motivated analogy, since premodifiers of provenance, material, etc. are often nouns, whereas subjective, gradable premodifiers are more typically adjectives. Once the word has developed an adjectival value, it can start to be inserted in uniquely adjectival slots, as with *rubbisher* and *rubbishest* and *very rubbish*.

Those two contexts are not the only relevant ones. Consider now this variant of the complement context:

(8)   It was really rubbish.

A context like (8) is also plausible as a **basis** of reanalysis (Harris & Campbell 1995: 72). In the older analysis where *rubbish* constitutes an NP, *really* cannot be part of the predicative complement, since adverbs generally don't modify nouns (Huddleston & Pullum 2002: 563), so *really* must therefore be modifying the verb or even the clause (cf. *It was really a mess/a disaster/the end of the world*). Once *rubbish* has gained the possibility of being an AP in (8), then *really* can move inside the predicative complement as an adjective-modifier – but that is not part of the change of category, merely a later consequence:

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[5] *OED* lists 1320 noun lemmas ending in *-ish*, but most are compounds of *dish, fish, wish*, or nouns that are primarily other parts of speech, including nationality names. Apart from real rarities, the genuinely established nouns include *anguish, dish, fetish, finish, fish, flourish, garnish, gibberish, kadish, parish, polish, radish, relish, rubbish, skirmish, tarnish, varnish, wish*. The class of *–ish* adjectives is larger (1565 lemmas) and – crucially – open-ended.

[6] I choose **equivocal** here in deliberate avoidance of the term **ambiguous**, commonly used in syntax. In semantics there is a traditional distinction between **equivocal** and **ambiguous** sentences: crudely put, an equivocal sentence is simply underdetermined for both producer and recipient, whereas the producer of an ambiguous sentence must have intended one or other of the possible readings. The implication that one of the morphosyntactic analyses must be right (and the other(s) wrong) is unnecessary.

(9)   a.   … [really] [rubbish]$_{NP}$ >
        b.   … [really] [rubbish]$_{AP}$ >
        c.   … [really rubbish]$_{AP}$

(10)   You can bid 2NT, as a SECOND NEGATIVE, showing a really rubbish hand – a queen is about the limit of this. (http://www.dur.ac.uk/bridge.club/TEACHING/bighands2.html, n.d. <accessed 14 Jul 2008>)

Example (10) must have the analysis (9)c, as *really* comes between determiner and head noun and therefore can only be functioning as modifier of an AP within the NP.

It may be no accident that *really rubbish* seems on the basis of very unsystematic informant testing to be more acceptable than *very rubbish* (and the string *a really rubbish* gets 9570 Google hits, compared to 2290 for *a very rubbish* <14 Jul 2008>). That is consonant with the suggestion that strings involving *really* are often categorially equivocal as to the node dominating *rubbish*. On the other hand the imbalance is even greater with *rubbishy* (184 *a really rubbishy* to 9 *a very rubbishy*), where there is no suggestion of category change.[7]

2.2 *Constructions*

In the preceding section I have discussed two or three contexts in which the A ~ N distinction may be neutralised. The category is only ambiguous within an approach which requires each word in a grammatical sentence to be assigned to one and only one category. I preferred to see the category in such cases as underdetermined (hence my use of the term **equivocal**). It is a small step from that preference to a fundamentally different take on syntactic analysis, namely one espoused by Croft (2001, 2007) and discussed by several contributors to this volume, where categories are not grammatical primitives at all. In that case it would be constructions that speakers (and linguists) manipulate, and – in Radical Construction Grammar at least – categories would be a mere epiphenomenon. The contexts which I noted would then be constructions: perhaps the attributive construction, the predicative construction, and so on. They would be defined by their semantics as well as by their syntactic behaviour, and within those constructions the question of possible category change would not be pertinent. Some of my data on *rubbish* and similar words could be offered in support of a Construction Grammar analysis, for example on grounds of economy of description.

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[7] For a semantic explanation of certain selectional restrictions holding between particular intensifiers and adjectives, see (Kennedy & McNally 2005). Euphony might be involved too in this case.

However, contexts such as that in (5) are not equivocal. My focus in this paper is more on change and indeed the stepwise nature of the changes observed. Furthermore, the paper is organised on the working assumption that we can usefully discuss both categories and category change, so I will not pursue a Construction Grammar interpretation further.

2.3 Gradience

A different approach to the N > A transition is to invoke gradience. I have done some brief informant testing on the data in (1)-(7) to test my strong intuition that some of the different adjective-like uses of *rubbish* would for many speakers vary in (un)acceptability. The examples were presented to 21 third-year students on a written questionnaire, with no further instructions than to ignore spelling and to score from 1 (unacceptable) to 5 (acceptable) as examples of colloquial speech.

example	1	2	3(i)	3(ii)	4(i)	4(ii)	5	6	7
form	*rubbish golfer*	*horrible and rubbish gig*	*it's rubbish*	*rubbisher*	*rubbish*	*rubbisher*	*very rubbish*	*rubbishest*	*anything rubbish*
mean	4.7	2.85	4.75	2.5	4.6	1.95	2.55	2.45	4.5
SD	0.571	1.2683	0.910	1	0.503	0.887	1.276	1.050	0.761

Table 1: Acceptability scores for adjectival *rubbish*

The results are striking. Most of the neutralised N~A contexts score an average of at least 4.6 out of 5, as might be expected, and with little variation, though the coordination *a totally horrible and rubbish gig* drops down to below 3. Most of the clear A contexts – comparative, superlative, modification by *very* – score poorly, in the range 1.95-2.55. But one clear A context – postmodification of an indefinite pronoun – scores almost as high as the first group.

If we take these results at face value, it follows that the passage from noun to adjective is not an abrupt, all-or-nothing process but a stepwise progress. Noun and adjective share many distributional properties, and for some speakers *rubbish* acquires more and more of the properties of adjectives. This is gradience: micro-steps rather than abrupt saltation from N to A. There is no implication, however, that such a process need take an extended time to be completed.

I doubt that *rubbish* has gone all the way to full adjectivehood yet, though. One indication that it may still be what Harris & Campbell (1995: 54) call an **exploratory expression** is that users can play with it:

(11)   B: you are all rubbish and i hate you all [*cry*]
         SM: No you are rubbish.
         B: you are rubbisher
         SM: you are the rubbishest person on this board.
         B: rubbish. you are the rubby rubbiesht rubbish person on this board
         SM: You are the most rubbishiestest person in the world and stop sending me abusive
         e-mails about helicopters.
         B: you are rubbish at everything, and like rubbish helicopters and rubbish war films
         (http://forum.comeonboro.com/index.php?topic=24520.0;prev_next=next, dated 15 Apr 2008 <accessed 12 Jul 2008>)

It isn't clear just what *rubby rubbiesht* in the middle of (11) is – a sort of blend of *rubbish* and

a superlative inflection? – while the last contribution from "SM" contrives to form a triple

superlative, though apparently of *rubbishy*.

Consider now some possible N > A transitions involving proper nouns as starting

point. They too seem to illustrate a gradient. Nigel Vincent (p.c. 16 Apr. 2009) offers this

recent-sounding example, though it is a pattern that is actually quite well established:

(12)   Just because you do not like "the media," there is no need to go all Daily Mail on us
         and knock the hell out of something you do not understand. (Michael Kenward, comments on
         Times Higher Education website, 13 Mar. 2009 <
         http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=405758&c=1>)

While *Daily Mail* is clearly a proper name, that newspaper's world-view is well known

enough in Britain for the connotations to be exploited satirically as in (12). The *go X*

construction doesn't require X to be an adjective, even if that is probably the unmarked filler

of the slot, as in *go (all) shy*, cf. (Huddleston & Pullum 2002: 264). No doubt the use of a

noun here is also partly licensed by *all* (Buchstaller & Traugott 2006, Quirk, Greenbaum,

Leech & Svartvik 1985: 447); adverbial *all* + NP has occurred since early Modern English.

The construction in (12) permits certain nouns as well as adjectives so long as the semantics

and pragmatics are compatible with the NP receiving a (possibly vague) referential meaning

and having both a descriptive and resultative function – properties more prototypically

belonging to APs. If this represents a micro-step away from prototypical N and towards A,

Daily Mail nevertheless remains close to the N pole of the gradient.

Graeme Trousdale calls my attention to examples like the following (p.c. 28 Jan.

2009):

(13)   While Stevenson's novel [*Dr Jekyll and Mr Hyde*: GT] is ostensibly set in London,
         Grant feels the tale has been wisely chosen as the focus for this year's Edinburgh City
         of Literature campaign. "It does seem a very Edinburgh story […]" (*The List*, 14 February
         2008)

Since Huddleston & Pullum cite *Oxbridge* in *He has a very Oxbridge accent* as having 'acquired distinctively adjectival properties' (2002: 1643), it would seem that *Edinburgh* in (13) has gone somewhat further towards adjectivehood than *Daily Mail* in (12) – *very* is usually regarded as unavailable as a noun modifier. However, compared with *Oxbridge* (a mid-nineteenth-century coinage of Thackeray's), *Edinburgh* is a more prototypical proper noun, since *Oxbridge* was from the first used attributively and has both sense and reference.

To the extent that anyone feels that (12) and (13) are playful or contrived or otherwise unnatural, we might analyse them as involving **coercion**. In Michaelis (2004, reference from Amanda Patten's chapter (this vol.)), it is the syntax which coerces the semantics, though to me coercion makes at least as much sense the other way round, the semantics coercing a proper noun for the nonce into – or at least **towards** – the syntax of an adjective.

Saltation can be approached in a different way. Roberts, with some support from van Gelderen (both in this vol.), reinterprets Aarts's distinction between subsective and intersective gradience in terms of feature bundles, with subsective gradience involving one feature bundle that is a subset of another, as against intersective gradience, which does not show any subset-superset relation. Whether the distinction is modelled with features or with morphosyntactic distributional properties, it is a distinction which does not seem helpful in a case like the one sketched for *rubbish*. Roberts writes:

> A useful analogy here might be with calculus: just as a seemingly continuous curve can be treated as a series of discrete infinitesimal steps, so a seemingly gradient category (or gradual change in category membership) can be seen as a change in membership between two very similar, but nonetheless discretely distinct, syntactic categories. This naturally implies that we have some way to "measure the distance" between categories: this can be done with an appropriate feature system which breaks down major categories (N, V, etc) into smaller ones (count noun, transitive verb, etc.) up to a fairly fine-grained level. (Roberts, this volume, p.000)

Even if new subcategories can be invoked for some intermediate stages between N and A, they must for Roberts be subcategories either of N or of A, not of both – yet some contexts are simply underdetermined. I do agree with one point, that the change is not a continuous one. Inventing a series of intermediate categories may save the theory by a procedure which is somewhat reminiscent of Anderson's very different notional theory of categories, which allowed fractional placements of intermediate categories along a single cline (Anderson 1997). Featural approaches do in principle permit a distinction between subsective and intersective gradience, so long as the defining features for adjacent categories do not overlap. Yet this is not always so. There are cases where the same feature is used with different

values to define different categories, such as ability vs. inability to take plural marking, or even with the same value, such as occurrence with intensifiers (for both A and Adv).

However, by Aarts's criteria a stepwise transition between categories actually confounds the distinction that he invokes between subsective and intersective gradience (2007, etc.), since the loss of prototypicality within one category (subsective gradience) is not substantially different in nature from the acquisition of an equal number of features of another category (intersective gradience) and then onwards to full membership of the new category (subsective gradience again). Other problems with the distinction are raised by Bisang and by Traugott & Trousdale (this vol.), including failure to make allowance for semantic criteria, and poor prediction of cross-linguistic diachronic facts. Note too that even when membership of the new category is fully established, layering will usually maintain the old categorisation beside the new. Imagine speakers whose grammar permits full adjectival use of the word *rubbish*. They will surely be able to use the word as a noun too. For such speakers, *rubbish* in a common sentence like *It's rubbish* or in an NP like *a rubbish idea* cannot safely be assigned to either category, N or A, to the exclusion of the other. To insist on a unique category, in my opinion, would be to practise an artificial pseudo-rigour imposed by certain linguistic theories and not by the facts of the language.

2.4   A~D

Adjective and Noun are both major categories. As I have argued in Denison (2006), Determiner is more grammatical, more marginal, and (at least in English) more recent. I have discussed some ongoing transitions from A to D, which we can reconsider here under the heading of non-structure-changing category changes. (There is no need at this point to distinguish between central determiners and post-determiners.) Such changes are also potential examples of grammaticalisation.

Consider the nascent quantifying determiners *certain, various* and *several*. They already show some determiner-like properties such as the partitive construction – what Payne & Huddleston called the **fused-head construction** (2002: 410-2):

(14)   a.   certain of our great cities (165× in BNC)
        b.   various of these approaches (32×)
        c.   several of the papers (1088×)

They also – especially *certain* – retain some behaviour that is clearly adjectival:

(15) a. but I'm not certain
      b. the infinitely various capacities of children
      c. The limitations to production are several

The structures of most interest here are potentially equivocal NPs of the type

(16) [*various* (X^n) N]$_{NP}$

where the word in question either premodifies (as A) or determines (as D) the head of the NP (N); the term X^n here stands for one or more intervening postdeterminers or premodifying adjectives or nouns, as in

(17) a. various ethnic minority languages
      b. several other countries

Easily the most frequent collocations in this group are simple two-word NPs like

(18) a. certain people
      b. various questions
      c. several horses

without intervening elements. I have estimated frequencies from the BNC (from which, incidentally, all the examples (14)–(20) are taken). I tabulate three figures for each of the words under study: overall total occurrences of the word; uses tagged in the BNC as immediately followed by a plural noun, the vast majority of which will be of the type shown in (18); and potential uses like (17) that do have intervening premodifiers.[8]

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[8] 'Plural noun' includes the tag both for plural common noun (NN2) and for common noun, neutral for number, like *aircraft, people* (NN0). To estimate the number of two-word NPs I have excluded examples where the string of word + plural noun was preceded by an adjective, article, numeral, determiner or possessive, as in *his various bequests*, or was followed by a second noun, as in *several police officers*. I used the BNC*web* software (version 4.2), with CQP queries of the type

(i)   [pos != "(AJ.|AT.|CRD|D..|ORD|POS|)"] [word = "certain" %c] [pos = "(NN0|NN2)"] [pos != "NN."]

The figure in the last column represents contexts where the word is directly followed either by an adjective or by two nouns, the first non-plural; the latter context in particular certainly includes irrelevant examples where the second noun is not part of the same NP, so the figures are overestimates. Queries were of the type

(ii)   [word = "certain" %c] ([pos = "AJ."] | [pos = "(NN0|NN1)"] [pos = "NN."])

	total occurrences of word in BNC	in 2-word NP	in NPs with other words intervening before head
certain	21767	8369	< 3164
various	15261	7220	< 3184
several	23414	13746	< 5210

Table 2: Two-word NPs involving *certain, various, several*

The most common equivocal context, then, is a two-word NP, and in a relatively lean structuralist account without empty categories or functional projections, the two lexical categories will simply be sisters. Over time the first word in pattern (18) could switch from A to D while remaining left sister of the head noun. Even with a second modifier in the string, the topology could remain essentially unchanged whether the item was construed as A or as D, assuming a stacked-adjective analysis for the earlier state:

(19)   [various [unresolved questions]]

None of this seems at all mysterious, and furthermore, any syntactic theory should be able to handle it. As to whether the process falls under the heading of reanalysis or not, it seems better to me to invoke analogy: what is happening is language users unconsciously observing how *various* in certain common syntactic frames behaves **rather like** a Determiner, or *rubbish* **just like** an Adjective. It is arguable whether a change of category without structural change merits the term **reanalysis** – and in the kind of lean topology that I favour, there is no rebracketing or structural change. Of course, with a syntax-centred model of language and more elaborately articulated syntactic structures, almost everything that can be said about language will be in some way 'structural', which may help to explain why Elly van Gelderen (this vol.) is baffled by the structural ~ non-structural distinction I try to draw in this paper.

There is a useful synopsis of what has been meant by the terms **reanalysis** and **analogy** in Traugott & Trousdale (this vol.: §§4.1, 4.2), and the conclusion that 'all analogization is reanalysis' depends on the more inclusive definition of reanalysis, as does the following passage, cited in Traugott (forthcoming) in discussion of Harris & Campbell (1995):

> Nevertheless, the distinction between changes that concern constituency, hierarchical
> structure, category, grammatical relations, or boundary types, and similar primarily
> "covert" aspects of syntagmatic linguistic structure on the one hand (reanalysis), and

changes based on overt patterns and templates that serve as exemplars on the other (analogy), is a useful one (Hopper & Traugott 2003).

In the present paper I have chosen to subdivide the covert class by distinguishing changes that concern constituency or hierarchical structure from those that concern (just) category.

I turn now to the post-determiner developments studied by colleagues at Leuven (Breban 2006, 2008, Breban & Davidse 2003, Davidse, Breban & Van linden 2008), which are not so straightforward syntactically. Post-determiners typically co-occur with a central determiner. In fact, Davidse, Breban & Van linden (2008) restrict their corpus counts to examples with the definite determiner *the*, and their discussion so far is largely confined to the semantics and pragmatics of the process. They say 'postdeterminers form a unit with the determiner, with the latter determining the general definite or indefinite value of the determiner complex' (Davidse, Breban & Van linden 2008: 478), sometimes with orthographic coalescence (English *another*, many Dutch examples like *dezelfde*). What kind of units? – lexical, semantic, syntactic? In published work they have not been explicit about the syntax. If the syntax went with the semantics, the implication would be of a re-bracketing:

(20)   a.   [the [old   cards]] ?>
       b.   [[the   old] cards   ]

I am not convinced that such a change has in fact taken place in all the cases they discuss. The internal constituency structure of NPs is neither particularly salient nor easy to test, but the *one*-test seems to point the wrong way in this example (invented by me):

(21)   Pick any two cards. Memorise them. Now put the cards back, shuffle the pack thoroughly, pick another two, and replace the pack face down. If your new hand contains either of the old cards, what are the chances that the other one is on top of the pack?

Here the pronoun *one* in *the other one* is a substitute for what used to be called an N-bar, but in any case a constituent: *one = old card*, where *old* means 'former, previous'. So *old* forms a constituent with its head noun *card*, not with *the*. Tine Breban has suggested that there are several intermediate stages between adjective and post-determiner, and that syntactically, *old* 'former' may be among the more conservative of the nascent post-determiners, still remaining more of an entrenched classifier than a post-determiner (p.cc. 19 Jul. 2008, 25 Feb. 2009). In any case, Breban and I are in agreement that the principal syntactic effect of the change from A to post-determiner is in fixing of the linear ordering so that the item occurs

immediately after central determiners and before adjectives, and she offers clearer examples of this ordering, such as:

(22)   That is, if the undergraduate takes one 3-cr graduate course beyond the <u>usual three</u> graduate courses, he/she will receive a tuition remission for only the final 6 credits in the program (rather than the <u>usual 9</u> credits).
(http://www.villanova.edu/artsci/liberalstudies/programs/5year.htm)

Here the post-determiner *usual* precedes numerals.

Although Breban, Davidse et al. convincingly describe ongoing changes in the English NP, a purely syntactic treatment may not show much or even **any** evidence of change. As Francis & Yuasa have demonstrated elsewhere, 'semantic change can occur in the absence of syntactic change, leading to cases of "mismatch" between syntax and semantics' (2008: 47). This too would support my suggestion above that it makes more sense to talk of semantics coercing syntax than the converse. The different aspects of grammaticalisation need not all occur simultaneously.

3   Category change with structural change

3.1   on behalf of

Consider the underlined expression seen in

(23)   Asshe himself was filled with pride <u>on behalf of</u> his daughter. (CD2 2449)[9]

At first blush *on behalf of* looks like a complex preposition, as Quirk et al. suggest (1985: 670-3). They talk of gradience between complex prepositions and free NP sequences and give nine indicators of syntactic separatedness. *On behalf of* fails eight out of nine of them, implying that it is very close to the complex preposition end of the scale. Aarts comments that

>   [w]hichever way we look at the matter, it seems to be reasonable to posit a gradient between more or [*sic*] less fixed $P^1N^1P^2N^2$ constructions (Aarts 2007: 178)

though his 'seems' gives the clue to his theoretical stance, on which more below. The major corpus study is that of Hoffmann, who includes *on behalf of* among the 30 most frequent complex prepositions in the written component of the BNC (2005: 25, 62, 79). In ICE-GB2,

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[9] This example and many subsequent ones without an explicit attribution to a different source are taken from the BNC.

its three words are 'ditto-tagged' as a single grammatical item, a preposition. The word *behalf* scarcely occurs without *on* in British English (American English also allows *in*). The complex preposition can share a complement with a coordinated simple preposition:

(24)   the responsibility of the teacher is to act for and on behalf of society (CLY 1013)
(25)   unless it is in writing and signed by and on behalf of both Parties (CCU 149)

All of this supports the intuition that *on behalf of* forms a unit. Again, the question is, what kind of unit?

There are, however, dissentient voices who are unwilling to recognise it as a grammatical unit. For them, each word is assigned its own category. What is the category of *behalf* in Present-Day English (PDE)?[10] If it is a separate word it must be N, since it has a rare plural (*behalfs* 2×, *behalves* 3× in BNC, as against 4014 singular – the plural is never used with *of*-phrase).   It can be preceded by a possessive:

(26)   Charles felt sure that Daddy could pull the odd string on his daughter's behalf (GUF
          3203)

And of course the availability of examples like (26) – the one failed test mentioned above – is disastrous for claims of unity: the alternation between *on behalf of his daughter* in (23) and *on his daughter's behalf* in (26) seems exactly parallel to the variation between the two productive possessive patterns seen in *the legs of the piano* and *the piano's legs*. (As far as I can tell, this particular alternation is not discussed by Hoffmann (2005).) And if that is the case, then *on behalf of* is failing to behave as an indecomposable and uninterruptible unit, while the *of* within it seems to be merely a predictable grammatical formative. And there is further evidence too in support of the dissenters, in that the *of* can be repeated in coordination or shared with another P NP sequence:

(27)   However, I want to concentrate here on the technical work that the Faculty does on
          behalf, not only of its members, but of the Institute membership as a whole. (CBW
          150)
(28)   And I pay tribute now [...] to those who deliver the service on behalf and in the name
          of the Board of Social Responsibility (F86 283, sim. J6P 164))

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[10] We see the process of univerbation repeating itself, since the word *behalf*, now morphologically unanalysable, was itself formed in Old English (OE) from the PP *by* + *half*. It functioned as Adv/P, and in ME changed category to N and blended its syntax with that of *half*. I will take those earlier processes as long completed and therefore irrelevant to PDE.

Huddleston & Pullum discuss the syntax in detail in relation to a different potential complex preposition, *in front of*, mentioning *on behalf of* as another case in point (2002: 618-23), and advocating the structure

(29)   [on [[behalf]$_N$ [of NP]$_{PP}$]$_{NP}$]$_{PP}$

(likewise Roberts (p.c. 12 May 2009)).[11] Haspelmath illustrates potential reanalysis with *on (the) top of* (1998: 332). All come to the conclusion that there are no syntactic grounds for recognising such strings as complex prepositions. (There is also a brief, non-committal survey with references in (Brinton & Traugott 2005: 64-5).)

Now it seems to me that everyone is making difficulties for themselves. For example, ICE-GB2, one of the most carefully and consistently tagged of corpora, takes *behalf* as part of a complex preposition when followed by *of*, but as N when preceded by a possessive. Thus the rather parallel PPs in (30) are parsed rather differently, while the two uses of *behalf* in (31) (which is actually from the BNC) would have had to be kept apart in the ICE-GB system:

(30)   We are acting with the authority of the United Nations and on behalf of the whole world (ICE-GB S2B 030 051)
        with <PREP(ge)> the <ART(def)> authority <N(com,sing)> of <PREP(ge)> the United Nations and on <PREP(ge,ditto):1/3> behalf <PREP(ge,ditto):2/3> of <PREP(ge,ditto):3/3> the whole world [12]
(31)   Females also compete with each other for rank, on their own behalf and on behalf of their kids. (CJ3 1804)

Here BNC's tagging, normally not terribly reliable, is at least consistent: it always treats *behalf* as N and recognises no multi-word unit.

The distribution of *behalf* does not involve wholly free variation, however. The pattern *on behalf of* only occurs 18× with a pronoun as complement, of which 12 have the pronoun post-modified by *all* and one has it coordinated with another pronoun. Thus in the whole of the BNC there are only five of the following type:

(32)   And for that, on behalf of them, we thank you. (CH1 4747)
(33)   Am I there to speak on behalf of the council? Am I there to speak on behalf of me? (KRP 1740)

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[11] Notice incidentally that (27) and (28) are as awkward for the right-branching analysis of (29) as for the complex preposition analysis!
[12] I have given the relevant tags only.

as against some 844 of *on* + [possessive determiner] + *behalf*. And note the rhetorical parallelism and contrastive emphasis of (33). This particular skewing can be explained perfectly adequately with reference to thematic structure and the choices made in ordinary possessives and also in transitive phrasal verbs, where personal pronouns are strongly disfavoured in rightmost position, yet there may be an incipient tendency to restrict use of the possessive variant of *on behalf* to pronominal NPs (appearing as the possessive determiners *my, his, our*, etc. – 844×), to proper nouns (114×), and to relationship nouns (17×), with other common nouns occurring some 143 times. In the spoken portion of the BNC, which might represent better the way the language is moving, the figures for a possessive before *behalf* are as follows: possessive determiner (91×), proper name (2×), common noun (3×) – and notice that all three common noun examples are rather weak exceptions to the incipient generalisation I have proposed.[13] The ICE-GB2 corpus (speech and writing) has no common nouns there at all. It has 30 examples of *on behalf of X* as against eight of *on X's behalf*. Of the latter, seven have a possessive determiner (*my, our, your, his, their*), one a proper noun with possessive *'s* (*Mr Barnsley's*). The DCPSE (speech only) adds more of the same: *on behalf of X* 6×, *on our/his behalf* 3×.

If that is the way possessive *behalf* is going, this would be rather more like the restricted possessive *–s* found in Dutch and German and would imply the obsolescence of genuine alternation between *on X's behalf* and *on behalf of X*. That in turn suggests that *on behalf of* is on the way to being univerbated.[14] Note here what Bybee says about usage:

> In this framework there is no strict separation of lexicon and grammar, but rather units of varying lengths and degrees of complexity may be stored lexically with the following properties: (i) the degree of strength or entrenchment of stored units is based on their text frequency; (ii) connections or associations of both a phonological and semantic nature are made among items, based on similarity or identity; and (iii) schemas of varying degrees of generality emerge from these representations. (Bybee 2003: 610)

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[13] Two identical examples (*on the plaintiff's behalf*) in the same text are in courtroom discourse, which is probably more formal and archaic than other speech, while the third is the following:

(i) just one question that I wasn't able to put on the Committee's behalf**,** but I think it is something that we would be very grateful for a short written comment and that is … (K77 346)

where *the Committee* is coreferential with *we*.

[14] It may be that we have incipient grammaticalisation rather than lexicalisation, on the basis that there are many complex prepositions of the same basic shape, and most often involving the purely grammatical, non-spatial preposition *of*. Hendrik de Smet points out (p.c. 30 Jan. 2009) that the apparent incipient selectivity for certain sorts of NP complement might suggest that complex prepositions would not necessarily be (full) members of the category P.

In Bybee's framework some sort of entrenchment of *on behalf of* would surely have to be recognised, and Hoffmann presents statistical data in support of treating complex prepositions as units. How far does such a tendency have to go before the objection to treating *on behalf of* as a complex preposition loses its force?

Now in practice the creators of tagged corpora clearly have to take a decision on the most appropriate analysis of each individual example (or at the least, allow their tagging program to do so); see Denison (2007). The BNC does employ "ambiguity tags" in certain circumstances to mark a word of uncertain category, but this would be a very clumsy device where not just the category of a word but even the number of separate items is at issue. However, the discursive description of a published grammar can take a more nuanced approach, and there it should be possible to present and to maintain dual analyses where both have some explanatory value.

3.2 Non-gradient accounts

As already noted, Huddleston & Pullum do not recognise such a complex preposition as *on behalf of*, or at least the string's entrenchment – not as a grammatical fact, anyway. Hard-nosed syntactic analysis says that at most there is a little idiom formation going on, with varying degrees of fossilisation, but nothing of interest to syntax. Why does the constituency approach fail to recognise changes like these until they have gone to completion and are safely in the past? Why too does Aarts (2004, 2007) reject nearly all inter-categorial ("intersective") gradience, by means of a mechanical counting of all available diagnostics, equally weighted, which almost always leads to a majority decision one way or the other? I propose an acronym:

(34)   **WYSIWYTCH**
        "What you see is what your theory can handle"

There is a serious purpose beneath this gently satirical coinage. Much conventional syntax makes a number of assumptions, including *inter alia* a strict separation of syntax and semantics,[15] a basic organisation of grammar by constituency (but cf. Haspelmath (1998: 332-3) on the advantage of dependency representation), and no discontinuous constituents. Every grammatical sentence can be divided into words, and every word in any unambiguous sentence belongs to exactly one of a small number of word classes. There is no redundancy

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[15] It is notoriously difficult to get students or lay people to see the difference between syntactic and semantic facts.

in grammar, and any speaker of a given variety of a language has a coherent grammar which accounts for everything acceptable that can be said, once the lexicon has mopped up any oddities; likewise for a linguist's grammar, whether or not it claims psychological reality/plausibility. A linguist's grammar must

> (i)   account for observed facts;
>
> (ii)   be internally coherent and self-consistent;
>
> (iii)   aim for elegance and economy;
>
> (iv)   prefer a compositional analysis over 'pre-fabs' wherever possible.

One suspects that (ii) and (iii) are sometimes allowed to outrank (i). I'm not even sure that (ii) and (iii) are indispensable: clearly they are desirable *ceteris paribus*, but to my mind, not so desirable as to be maintained at **any** price. In relation to (iii), Anette Rosenbach (p.c. 1 Feb. 2009) points me to this sceptical comment:

> […] there is little if any evidence for regarding efficiency of design as a particularly common feature of biological systems. In fact, quite the opposite is the case. (Johnson & Lappin 1997: 327)

As for (iv), I doubt that it is defensible psychologically.

In earlier work I had explored gradient effects in syntax, e.g. Denison (1990), and in a conference paper in 1999 I made explicit reference to the disconnect between mainstream syntax with its rigid Aristotelian distinctions and mainstream morphology with its recognition of prototype effects. That paper was eventually published as Denison (2001) (and cf. also Denison (2006: 281)), by which time I had become aware of Haspelmath (1998), where similar ideas are independently sketched.

I am certainly not advocating outright abandonment of the kind of approach exemplified by the *Cambridge Grammar*. The intellectual rigour of that work is of the highest standard, and a huge amount has been achieved over the years within its general frame of reference. Simply abandoning all the insights would be counterproductive. But bearing WYSIWYTCH in mind, maybe we can concede that strict structuralism isn't **always** the most insightful way of looking at things, and grammatical change is one domain where it does less well. For a detailed, critical, cross-linguistic survey of assumptions about universals in categories, constituency, hierarchies and much else, see Evans & Levinson (2009).

One suggestion I like to entertain is that what those kinds of structural approach capture are the most favoured points in the space of possible grammars. Human beings have

a pattern-forming mentality, and furthermore they seem to want to categorise the world in Roschian fashion, so why not linguistic entities too? Then such phenomena as dual constituency or dual inheritance, and non-central or overlapping categorisations, might turn out to be marked situations, more likely to be unstable and to lead to further change than straightforward constituency or inheritance and central membership of categories, but nevertheless an indispensable part of diachronic linguistic description.

4 New category

So far I have looked at changes from one category to another, assuming that the replacing category was available for pattern-matching, and distinguishing cases where the new categorial assignment is compatible with an existing syntactic structure from those where it is not. If, however, the category change is to a new category, where does that fit into the dichotomy of structural conservation vs. structural change? I argue that such a situation cannot be dealt with in the same terms at all.

I am aware of two cases in the history of English where a new word class has arisen in historical times: Determiner and Modal, as discussed in Cort, Denison & Spinillo (2006) and by Roberts (this vol.).[16] Both categories are closer to the grammatical end of the lexical ~ grammatical continuum than their parent categories, and so entry into one of these categories inevitably implies that grammaticalisation has taken place. The reasons for their addition to the inventory of categories (whether by speakers in the past, as we presume, or by historical linguists) consist of a substantial accretion of facts, including morphological ones, semantic ones, and changes in frequency of syntactic distribution. In such cases it makes no sense to look for some single syntactic structure as a basis of reanalysis, hoping to be able to show that either

   (i) the structure once had V (or A) at a certain node, and this changed to M (or D) without major topological change

or

   (ii) the structure once had V (or A) at a certain node, and this changed to M (or D) while at the same time the topology of the tree was reconfigured

in the spirit of the dichotomy I have invoked in this paper so far in §§2 and 3, respectively.

It seems to me that (i) is ruled out because speakers can have no reason to infer a different category assignment – at most they might create a new subcategory of an existing

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[16] I discount **syncategoremic** items: those that do not belong to a category, which is equivalent to calling them unique members of a category.

category on the grounds that many other members of the category were not available in that pattern. As for (ii), radical restructuring of a single pattern (at whatever level of generality) is even less motivated. Such restructuring (of both category space and the syntactic structure of a particular pattern) cannot come from consideration of that one pattern alone: it demands some kind of metric for weighing up a diverse set of patterns and distributions and innovating a more efficient overall way of capturing them. And, *contra* Haspelmath (1998: 341), I see no reason why dual analyses might not last quite a long time, and indeed be available within a single grammar; after all, it is not the individual speaker who is responsible for, and who has to track, any long-term directionality or drift.[17]

5 Conclusion

As far as word classes are concerned, I repeat part of the conclusion of a so-far unpublished draft on parallels between the histories of the minor categories D(eterminer) and M(odal):

> At present we are inclined to the view that the best way to characterise a category typologically is by a notional – principally semantic – account. See here Croft, Langacker, and others. Such characterisations allow one to generalise across languages, as indeed is widely recognised, e.g. by Huddleston (1984: 74-5) in his contrast between (often notional) **general** definitions and (structurally defined) **language-specific** definitions. However, a definition which works cross-linguistically is also one which should work diachronically across a single language at different periods of its history, and that is why we find that of the linguistic domains we have considered here, it is semantics which seems most stable. There are nouns in Old English and in PDE, and as a class they meant much the same then as now. However, their distributional and formal properties, though similar, are certainly not the same in OE and PDE. The more transient word classes, like those we have studied in this paper, may actually have no lexical members at a given time (arguably true in OE of both D and M), even though the meanings associated with the classes (e.g. definiteness for D, modality for M) can be expressed in OE by other means. A lexical class as a whole, then, considered as a morphosyntactic category of phonetically non-null words, is neither fixed nor universal. (Cort, Denison & Spinillo 2006)

Holger Diessel (2008) has drawn attention to the non-universality of all categories apart perhaps from N, V and Demonstratives/Deictics. This gives typological support to a 'surfacey' syntactic analysis which only recognises those categories that have non-null membership in a given language, rather than positing as an axiom that all languages must make full use of a fixed, universal set of categories.

As for syntactic constituency, while it certainly gives a frame for the analogical category changes of §2, it hardly plays any significant part in those changes – and indeed,

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[17] Though cf. Labov (1994: 580–6, also cf. 65–6, 595) on probability matching.

probably any grammatical model would do. For those category changes that involve structural reconfiguration (§3), constituent structure nicely represents the earlier and later states, but in itself it doesn't explain anything, and certainly not directionality (though see here Roberts's claim that 'grammaticalisation is always upward and leftward in the syntactic structure' (this vol.); grammaticalisation plays a part in all the examples I have discussed but for the N > A ones. Where category change involves a new category (§4), constituent structure representations can do little more than contrast the old and the new – the latter only when changes have crystallised and new patterns have been formed. Again, structural representations are not explanatory of the change that has taken place, and they cannot represent incipient change at all. Of course we need to confirm that the very limited set of examples considered in this paper are reasonably representative of category change, but the interim conclusion is that constituency has really not offered much help.

To some extent Construction Grammar (in most of its various flavours) may reduce the discomfort of underspecification, by focussing on the whole rather than the parts: questions such as whether *rubbish* in *a rubbish idea* is N or A (see §2.3 above), whether *behalf* in *on behalf of my family* is an independent noun or serves as part of a three-word preposition, can be relegated to a secondary consideration and possibly left undecided. But the parts cannot be ignored altogether. Here the possibility of dual or multiple inheritance allows a construction to inherit properties of different constructional schemas. I leave this point undeveloped now, but it has in any case been discussed in more detail by Traugott & Trousdale (this vol.).

In these pages I have been explicitly exploring category change. Implicitly, however, given the major role that category change plays in grammaticalisation, the claims translate to claims about grammaticalisation and gradience. The challenge now is to widen the evidence base and to demonstrate convincingly the explanatory power of Construction Grammar and gradience in modelling grammaticalisation.

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