

**THE GRAMMATICALIZATION OF IMPACT:
BANG AND SLAP IN ENGLISH***

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ABSTRACT

English impact words like *bang* and *slap* synchronically undergo grammaticalization into modifiers of prepositional phrases in expressions like *bang on time* or *slap into the fence*. The origin of these uses is found in contexts like *the explosion went bang over our heads*, where the ideophonic character of the impact form first brings it into a context which can seed reanalysis and, as a result, grammaticalization.

Examination of the stages of this process documents several features of grammaticalization, specifically the lack of co-ordination between semantic and categorial development, and the extent to which ‘extraneous’ features of lexemes like ideophony can interfere with the usual patterns of markedness that determine the susceptibility of forms to be grammaticalized.

1. INTRODUCTION

Many common examples of grammaticalization comprehend three processes: a change in meaning, a reduction in phonological form, and a shift of categorial status, by which content morphemes are converted into function ones. It is the combination of these processes that makes this type of grammaticalization distinct from, on the one hand, ordinary instances of semantic, phonological and syntactic change, and, on the other, from coalitions involving only pairs of these (for example, semantic and phonological change alone do not constitute grammaticalization). The development from the Latin demonstrative *ille* ‘he/that’ to the definite article *le* ‘the’ in French illustrates how grammaticalization can intertwine all three modalities of language change (see, among many others, Epstein 1994). Phonological attrition in the shift from a bi- to a mono-syllabic form is made obvious by the orthography, the

syntactic/categorial change can be seen in the transition from a pronoun and adjective in Latin to a determiner in French, and the meaning difference is characterized by the contrast between an anaphoric identifier of participants (Latin) and a marker of definiteness, generic status, and noun gender (French). The semantic change takes in an increase in the degree of the meaning's abstraction: whereas the Latin form had a deictic function that indexed real world objects and actors, in French the article expresses notional relations whose place is within the discursive arena of the text.

Some types of grammaticalization, however, do not involve phonological change: Heine et al. (1991) provide an example from Ewe which illustrates semantic and categorial development in the absence of any alteration to the overt shape of the form. (1) - (5) illustrate the grammaticalization of a body-part term into a marker of spatial and other relations:

(1) *épe* *megbé* *fá*
 3sg.POSS back be cold
 'His back is cold'

(2) *é-le* *xO* *á* *megbé*
 3sg-be house DEF behind
 'He is behind the house'

(3) *é-nO* *megbé*
 3sg-stay behind
 'He stays back'

(4) *é-kú* *le* *é-megbé*
 3sg-die be 3sg.POSS-behind
 'He died after him'

- (5) *é-tsí* *megbé*
 3sg-remain behind

‘He is backward/dull’ (Heine, Claudi and Hünemeyer 1991:65-66)

Here, just as in English, the word for ‘back’ is used to cover a variety of notions: in (1) it simply refers to an object, the body part; in (2) and (3) it expresses spatial relations with different degrees of abstraction; in (4) it refers to time; and in (5) to quality. Categorical development runs from ordinary noun in (1) and (2), to adverb in (3), to postposition in (4), and beyond. Such a pathway conforms to the typical pattern in grammaticalization, which is for a member of a ‘major’ category to be reanalyzed as belonging to a ‘minor’ one. The distinction between these types of syntactic category is not clear cut but rather represents a cline (see Hopper and Traugott 1993:103-4; Croft 1991:42, 52, 143). Major categories are nouns and verbs: they can be found in practically all the world’s languages, are likely to be realized as fully fledged words rather than affixes, and are lexically open, in that they readily admit new members imported from elsewhere. Minor categories, by contrast, incorporating prepositions, conjunctions, pronouns, particles, demonstratives, auxiliaries, etc., have much smaller membership, are more likely to be affixes, are lexically closed, and are not necessarily universal (see Croft 1991: 42 for comments on the universality of adpositions). In between we find the transitional categories adjective and adverb: these are often derived from major category sources (Hopper and Traugott 1993:104), show considerable cross-linguistic variation in their syntactic manifestation, and, in the case of adjectives, may be closed classes or even entirely absent (Hopper and Traugott 1993:104). In grammaticalization, this transitional category often provides a possible transit point for a form en route from major to minor status.

Phonological reduction, then, is less important than meaning and category as an indicator that grammaticalization has taken place: it is the union between the semantics of a term and its degree of syntactic autonomy (in other words, its category) that is the real sign of a grammaticalization chain. The purpose of the present paper is to explore the nature of the linkage between categorial and semantic development in grammaticalization. It is a commonplace of studies of grammaticalization that ‘in diachronic change...structural adjustment tends to lag behind creative-elaborative functional reanalysis’ (Givón 1991:123). This is true both of phonological alteration and of changes to a form’s lexical category, and results in mismatches where the semantics of a morpheme change considerably, but its category fails to show a corresponding degree of change. The case studies presented here will document this for an area of the English lexicon and demonstrate that the lack of mutuality between meaning and category change can sometimes be quite great. Two further issues will also be addressed: the question of how ‘basic’ or ‘unmarked’ vocabulary has to be in order to qualify as a likely candidate for grammaticalization; and how far other factors (specifically, ideophony/onomatopoeia) can override this.

2. GRAMMATICALIZATION OF ENGLISH IMPACT FORMS

English has constructions in which major category words denoting impact can be used as minor category modifiers of verbs and prepositional phrases:

- (6) *Slam went his hand to the ground.*
- (7) *They ran slap up to the door.*
- (8) *We have got a decision which is smack against us (OED smack v2 7b).*
- (9) *The train left bang on time.*
- (10) *I was sprung at the pictures, so bang goes my sickie.*

In (6) actual impact is involved; in (7) the context is one where impact would be possible, but is not entailed (or even implied) by the expression (one can run slap up to a door without colliding with it). In (8), (9) and (10), however, there is no situation of physical contact whatsoever, so that the words' impact reference is completely missing.

Other impact words admit this kind of construction. In addition to the constructions in (6) - (10) the following are also possible:

- (11) *The dodgem car went bump onto the edge*
- (12) *The dinghy was driven thump against the jetty*
- (13) *The corporal ran full butt at the lieutenant (OED butt v.6).*

In the cases furthest removed from the basic impact sense - (7), (8), (9) (10) and (13) - there has been an abstraction of meaning so that the impact term now means something like 'directly, straight, exactly'. The range of meanings of impact terms in (6) - (13), however, is considerably wider than this. The meaning shift from concrete to abstract, as well as the alterations in category, suggest a chain of grammaticalization in which the impact word, originally a noun or verb, is reanalyzed as a member of one of the minor parts of speech, which for the moment I will content myself by calling 'particle' (on reanalysis as one of the principal mechanisms of grammaticalization, see Hopper and Traugott 1993:48-50). This change would demonstrate the cline of categoriality (Hopper and Traugott 1993:104):

major category (> adjective/adverb) > minor category

I will now illustrate this cline by focussing on a selection from the OED citations of *bang* and *slap*. The arrangement of senses offered by the dictionary is inadequate for our purposes and needs to be modified. This is for two reasons, both

of them results of the different aims of the lexicographer and the student of semantic change. Firstly, the dictionary account is not sufficiently explicit: a fine-grained arrangement of senses was not something that the lexicographers were aiming for. In addition, the OED fails to demonstrate how principles of polysemy and implicature enter into the processes of lexical change. The reordering proposed here starts from the assumption that the earliest meaning of the particle will be the one semantically closest to that of the major category form, and that subsequent meanings will form a chain linked by sense components and/or implicatures shared by adjacent forms. The present analysis will also show how the grammaticalization and semantic change pathways are messy as the result of layering and overlap between ‘old’ and ‘new’ forms.

References to ‘ordering’ should not be interpreted as making a claim about the actual historical sequence of changes, with each change incrementally leading to the next and no link of the chain appearing until the previous one is in place. That would be to take an unnecessarily diachronic perspective on the data, viewing them as simply no more than parts of a development that unfurls sequentially through time. While grammaticalization is most characteristically thought of as a diachronic phenomenon, synchronic polysemies that apply to content words and convert them into more grammatical forms should be seen as involving identical cognitive processes to the ones that obtain in diachrony. As a result, it is unnecessary to adopt a strictly diachronic approach to grammaticalization. For many of the phenomena discussed under that broad framework, a diachronic perspective will clearly be appropriate: grammaticalization chains encompassing a complete transition from major to minor category, developing over many centuries and unleashing wholesale phonological changes to the morpheme are probably best approached as essentially diachronic phenomena. This is much less clear, however, in cases like the present one, which are attested over a fairly short time span and do not carry with them any change to the surface shape of the morpheme, so that the conceptual and phonological

differences between the source forms and their grammaticalized output are not especially gross. These phenomena are probably best viewed as belonging to the realm of synchronic language use, embedded in discourse, in which speakers creatively elaborate linguistic elements and use them in novel functions.¹ Synchrony and diachrony, after all, are different planes of linguistic description rather than inherently distinct modes of language, in which a dynamic exists between changing and stable elements.

Viewing the evidence from this perspective obviates the need to make any historical claim about the actual chronology of the process. We can suggest what the linguistic/psychological connections between the stages of the grammaticalization chain are and arrange them into an ordered sequence, but we do not have to claim that this order is the same as the historical order of the links' appearance.² The idea goes no further than to claim that the links proposed, or ones like them, are cognitively real and do reflect the way the concepts are represented in the minds of speakers. A speaker might then use a form in a novel function that skipped a few of the steps in the grammaticalization sequence, without ever having produced any intermediate forms, but this would not compromise the ordering, which is thought of as existing conceptually rather than historically (or, alternatively, as part of *langue*, not *parole*).

An alternative approach would be to suggest that, for just one impact form, the chain of polysemies develops step-wise in a linear sequence corresponding to the 'logical' order of the concepts. This historically instantiated polysemy chain would acquire the status of a paradigm and establish a canonical set of relations linking the different senses. Speakers could then take other impact forms and produce novel polysemies, skipping links in the chain so that central logical connections were left tacit, because the sense relations would be grounded in the maximally elaborated polysemy chain of the paradigmatic form, dispensing with the need for fully fleshed-out chains in any of the other words.

The role of this kind of lexical field effect in the development of grammaticalization series should not be underestimated, but such influence is unlikely to be a case of a central form which autonomously undergoes the polysemous extensions in the ‘right’ order, enabling other forms to acquire the same set of polysemies in a haphazard way. Instead, one would imagine a much more complex system of influences which would affect segments of the polysemy chains of different forms, rather than all applying in the one privileged morpheme. In fact, however, it is unnecessary to posit any scenario like this, because the purely psychological connection between meanings in the chain is an adequate foundation for the attested polysemies, and does not need to have been actualized in a single paradigm for the grammaticalization to have become widespread.

In the earliest stages of grammaticalization, the function of *bang* is best understood by reference to the meaning of the nominal,³ namely ‘heavy resounding blow’ or ‘sudden, violent, or explosive noise’ (OED *bang* sb.1):

- (14) 1855 ‘*Bang went the magazine*’ (OED *bang* v. 8b)⁴
- (15) 1855 ‘*Bang, whang, whang goes the drum*’ (OED *bang* v. 8b)
- (16) 1882 ‘*Bang, came another blank shot*’ (OED *bang* v. 8b)
- (17) 1912 ‘*Then bang-slap went my heart*’ (OED *bang* v. 8a)
- (18) 1832 ‘*A 32 lb. shot struck us bang on the quarter*’ (OED *bang* v. 8a)

In these examples *bang* seems to have equal reference to noise and impact: the contexts involve both the sound and the physical effect of the percussion (note how in (15) *bang* is coupled with the onomatopoeic *whang*).⁵ In the second set of examples the contexts show that the prominence of noise is reduced in favour of impact, which our real world knowledge shows to be the experientially more salient element of the situation - a person colliding with a piece of furniture or with someone else does not

produce a ‘bang’ in the sense of a ‘sudden, violent, or explosive noise’ or even ‘a heavy resounding blow’:

- (19) 1841 ‘*We came bang against each other*’ (OED *bang* v. 8a)
 (20) 1842 ‘*Bang went my haunch against an...angle of my bed*’ (OED *bang* v. 8a)

(21) - (23) show a new development:

- (21) 1828 ‘*I fetched way bang overboard into the trawl*’ (OED *bang* adv. a) (*trawl* ‘net’)
 (22) 1907 ‘*Do...you propose that we should walk right bang up to Teddy and tell him we’re going away together?*’ (OED *bang* adv. a)
 (23) 1885 ‘*Stevie be right good manners bang thruf to the tip o’ the tail*’ (OED *bang* adv. a)

Here the noise element is completely missing, and *bang* solely denotes impact (metaphorically in (22) and (23)), with the implication of suddenness or confrontation. In these examples impact is relevant because the idea of moving bodies coming together is still important (in (23) by virtue of the metaphor of good manners coursing through the body, or perhaps through the idea of an observer inspecting Stevie, and their examination moving through him to the tip of the tail), but in the next set of examples this context is absent:

- (24) 1795 ‘*Bang, cam in Mat Smith and’s brither*’ (OED *bang* sb. 8c.)
 (25) 1886 ‘*The moment I get interested in anything, bang goes my sleep*’ (OED *bang* sb. 8c.)
 (26) 1895 ‘*Somebody will give a surreptitious performance of it: and then bang goes my copyright*’ (OED *bang* sb. 8c.)

- (27) 1909 *'I am afraid I have to drive from here to Urfa (Edessa) which is going to cost me about £7: so bang go my proposed purchases in Damascus'* (OED *bang* sb. 8c.)

Here *bang* can be paraphrased as 'suddenly, immediately, right away': what was an implicature in (21) - (23) has become the main component of the word's meaning.⁶ The metaphor by which impact stands for suddenness is by now a dead one, because the idea of impact has been completely effaced. The senses of *bang* from this point radiate into a series of metaphorical extensions in which the 'impact' component of the meaning is entirely lost:

- (28) 1924 *'Here they were right bang on hand...'* (OED *bang* adv. a)
 (29) 1931 *'Bang opposite him...hung a...blue cylinder'* (OED *bang* adv. a)
 (30) 1936 *'Quiet garden square near Hyde Park. Real hot water.. Bang on Tubes'* (OED *bang* adv. b)

(28) - (30) illustrate the meaning 'physical proximity' (compare (22)). In the next example physical proximity is still involved, but carries a strong implication of exactitude:

- (31) 1958 *'Steering by the sun from earlier fixes we came bang on the base'* (OED *bang* adv. b)

In (32), however, physical proximity is missing and exactitude is the only sense:

- (32) 1958 *'As a realistic tale of low-life in London, it is bang on'* (OED *bang* adv. b)

The meaning development illustrated by (13) - (32) can be set out as below, with senses judged particularly close placed on the same line.

noise and impact; (noise and) impact ==>
 impact implying suddenness ==>
 suddenness, immediacy; physical proximity ==>
 physical proximity implying exactitude ==>
 exactitude

This transition illustrates a typical concrete to abstract meaning shift. But what about the categorial development? As the form develops different meanings along the grammaticalization pathway it selects different categorial frames as the most suitable syntactic vehicle. The status of *bang* in (32) is quite different from that of a plain noun or verb and from that of the *bang* found in (14) - (17), which occurs with verbs of ‘coming’ and ‘going’, and does not introduce a prepositional phrase. *Bang* in frames like this cannot any longer belong to a major category, since neither nouns nor verbs can appear as the complements of *come* and *go*.⁷ Equally, as introducing a prepositional phrase it occupies a syntactic position to which nouns and verbs are not admitted.

The sentences in (14) - (17) seem partly to rely on the ideophonic or onomatopoeic character of *bang*, where it comes to stand almost as a quotation of the sound involved. This may relate to the use of the verb *go* as a verb of speech production, as seen in constructions like (33) and (34):

(33) *So they go ‘What if we don’t want to?’*

(34) *She went ‘Get the hell out of my garden.’*⁸

Here we have a quotation of speech acting as the complement of *go*. It seems that *go* can only be followed by a direct quotation of the sound emitted, either in the form of the words themselves or of an ideophone, as evidenced by the impossibility of sentences like (35):

(35) **He went a long tirade*

The examples with *bang*, I suggest, show a similar use of verbs of motion as verbs of sound production, except that what is involved is not a quotation of speech, but rather a partly iconic representation of the sound being reported. Another significant difference is that the construction is possible with *come*, which cannot substitute for *go* as a verb of speech production in this frame⁹:

(36) **So they come 'What if we don't want to?'*

(37) **She came 'Get the hell out of my garden.'*

It is noteworthy that *bang* can appear on its own only as the complement of a verb of sound emission/speech production. When there is no such verb in the clause, *bang* is always associated with a preposition or a prepositional phrase (see (18) - (23), (28) - (32)). This suggests that a distinction needs to be made between the two uses. The origin of the grammaticalization of *bang* apparently lies in its ideophonic use in frames like those in (14) - (17). *Bang* is not simply an ideophonic word in English, since it is traceable to cognates (ON *banga*, OSw. *bānga* hammer; LG *bange(l)n* strike, beat; Ger. *bengel* cudgel. PIE **bheg* 'break') to which dictionaries do not attribute an onomatopoeic origin. In this, *bang* is unlike some other words that appear after *go* as a verb of sound emission (*go bump*, *go thump*, *go smack*, *go slap*), but its similarities to originally ideophonic lexemes seem great enough to admit it into the construction: it shares initial *b-* with *bump*, and the /æ/ vowel with *smack*, *slap* and *slam* (which is not etymologically onomatopoeic either, it seems, though of

course, as with *bang*, this says nothing about its possibilities for synchronic ideophonic interpretation).¹⁰ The transition to the use as a prepositional modifier will have been effected by frames in which the sound emission verb was accompanied by a prepositional phrase, allowing *bang* to be reanalyzed as associated with the preposition rather than the verb, and opening the way for other verbs to enter the construction (compare (18)):

(38) *The explosion came/went bang over us.*

The grammaticalization of *slap* runs along similar lines, and I will illustrate its semantic and syntactic development in grammaticalization separately. The meanings that are closest to the root meaning of the noun, ‘a blow with the hand’, are given in (39) - (40):

(39) 1825 ‘*Let fly...slap at my smeller*’ (OED *slap* adv. 1c)

(40) 1861 ‘*Andrew pushed through the doorway, and...delivered a punch slap into Old Tom’s belt*’ (OED *slap* adv. 1c)

In (41) - (44) the context is not a blow with the hand, but impact is still involved:

(41) 1851 ‘*A ball, of the consistence of hasty pudding, hit him slap in the mouth*’ (OED *slap* adv. 1c)

(42) 1676 ‘*Slap down goes the glass, and thus we are at it*’ (OED *slap* adv 1b)

(43) 1713 ‘*If they offered to come into the warehouse, then strait went the yard slap over their noodle*’ (OED *slap* adv 1b)

(44) 1890 ‘*I’m blessed if I didn’t ride slap into that drain*’ (OED *slap* adv 1b)

The next stage is for the impact no longer to be part of the actual described situation, but to be metaphorically envisaged as the potential outcome of motion:

- (45) 1831 *'I was determined to run slap ashore'* (OED *slap* adv 1b)
- (46) 1829 *'I, and my Noah's Ark, lay slap in the way'* (OED *slap* adv 2)
- (47) 1845 *'The shaft..ne'er glanced from a limb Of a tree..., but was aimed slap at him'* (OED *slap* adv 2)
- (48) 1852 *'A turnstile leading slap away into the meadows'* (OED *slap* adv 2)
- (49) 1889 *'We walked slap down to the hotel'* (OED *slap* adv 2)

Slap means something like 'directly, straight' in these examples: it acquires this sense through an image schema in which motion is seen as a trajectory that results in impact between two bodies. Contexts like (47) show how sometimes this image schema is actualized. Example (48) perhaps represents the most metaphorical occurrence of *slap*, since there is no real motion involved at all, only the potential of motion along a path. Sentence (46) and ones like it are similar in that no one needs to be actually moving: again, only potential impact is being envisaged, because it is possible to *lie slap in the way* of an imagined or anticipated path of motion even if nothing is approaching. In these examples it is unclear how far the image schema is conceptually active, and how far *slap* is simply being used to mean 'directly,' with no awareness of the source of the meaning. Examples (45) and (49) lie somewhere in the middle of the continuum: real movement is involved, but, unlike in (47), will not issue in any sort of impact.

In the next set of examples *slap* indicates that the action happens suddenly or quickly:

- (50) 1706 *'You han't been married eight-and-forty hours, and you are slap - at your husband's beard already'* (OED *slap* adv. 1a)

- (51) 1766 '*You were but twelve hours in my house, when slap comes down an express to hurry you away*' (OED *slap* adv. 1b)
- (52) 1733 '*There is no laying down anything eatable, but if you turn your back, slap, he has it up*' (OED *slap* adv. 1a)
- (53) 1736 '*I defy you to guess my couple till the thing is done, slap, all at once*' (OED *slap* adv. 1a)

This meaning is a metaphor that highlights a single aspect of a real *slap*, its suddenness or immediacy, and attributes it to other situations. Sentences (52) and (53) carry the additional implication of completion or thoroughness, and *slap* is paraphrasable by *completely, directly* (compare *bang* (25) - (27)). This is the only idea present in (54) and (55):

- (54) 1852 '*Let us be serious and finish this comedy slap off*' (OED *slap* adv 1a)
- (55) 1894 '*A ball had passed slap through his body*' (OED *slap* adv 1b)¹¹

The career of *slap* thus illustrates a pathway of increasing semantic abstraction similar to the one through which *bang* passes.

An interesting fact emerges from an inspection of examples (50), (52) and (53). As the punctuation suggests, *slap* has a high degree of independence from the rest of the clause and functions like an interjection which could be entirely omitted from the sentence. As shown by (52) and (53) (and implied by the punctuation in (50)), it is not obligatorily associated with any prepositional phrase, so remains a daughter of the VP or of the S rather than of some lower constituent. In its syntactic autonomy, this *slap* resembles major category items, which are characterized by greater combinatorial freedom within the clause. As the following examples demonstrate, representatives of minor categories like prepositions or conjunctions are excluded from occupying such a parenthetical position¹²:

- (56) **If you turn your back - with/from/by/for/at/to/against/about, he has it up*
 (57) **If you turn your back, or/and/yet/although/so/because, he has it up*

Except in phrasal verbs, prepositions require a complement, expanding into a PP, and conjunctions are equally non-autonomous, needing other phrasal or clausal elements to conjoin.

It needs to be pointed out that the presence of the adverb/preposition *up* in the frame *if you turn your back___he has it up* has no bearing on the acceptability of parenthetical prepositions, which are impossible in frames with simple verbs, as in (58):

- (58) **If you turn your back - with/from/by/for/at/to/against/about, he purloins it*

Minor categories seem not to have enough independent propositional content to support parenthetical placement, but note that *phrasal* and higher constituents introduced by these categories *are* acceptable in the same frame:

- (59) *If you turn your back, with a grin he has it up*
 (60) *If you turn your back, against all odds he has it up*
 (61) *If you turn your back, in half a second he has it up*
 (62) *If you turn your back - and this is the joke - he has it up*
 (63) *If you turn your back, although he'll deny it, he has it up*
 (64) *If you turn your back, because he's a child prodigy, he has it up*

Major categories, on the other hand, have fewer necessary syntactic dependents, and so are more easily accommodated in a parenthetical position:

(65) *If you turn your back - miracle - he has it up*

(66) *If you turn your back - tragedy - he has it up*

(67) *If you turn your back - success - he has it up*

(68) *If you turn your back - joy - he has it up*

In these sentences the parenthetical NPs are interjections commenting on the event, and thus remain semantically quite independent of the frame. Verbs are also permissible in the same context, and show a similar independence. Here the possibilities seem rather more limited:

(69) *If you turn your back, look, he has it up*

(70) *If you turn your back, listen, he has it up*

(71) *If you turn your back, admit, he has it up*

The transitional categories (adjectives, adverbs) show variable acceptability in this frame. Adverbials are generally acceptable. *Suddenly*, for example, is so closely associated with the verbal group that ‘parenthetical’ is no longer an apt description:

(72) *If you turn your back, suddenly he has it up*

Note especially sentence-adverbials like *however* and *nevertheless*, which are freely admitted parenthetically:

(73) *If you turn your back, however, he has it up*

(74) *If you turn your back, nevertheless he has it up*

In Australian English, *but* is beginning to enter this class of adverbials, as evidenced by the questionable acceptability among more educated speakers of (75) and (76), in which it is a synonym of *however*:

(75) *They make a great mayonnaise, but*

(76) *If you turn your back, but, he has it up*

This usage is still subject to restrictions of register and style, but suggests that sentences like (75) and (76) do not constitute an exception to the principle that conjunctions may not appear parenthetically: *but* is both conjunction and adverb.

Adjectives, on the other hand, are excluded from a parenthetical frame:

(77) **If you turn your back, quick/dishonest/interesting he has it up*

Apparently, then, it is diagnostic of minor categories that their parenthetical appearance in the frame *if you turn your back, _____, he has it up* (or similar) is ungrammatical (more work, however, is needed to determine the interplay of semantic and more purely grammatical factors in these regularities, and to investigate further the position of the transitional categories). It is therefore notable that the *meaning* of *slap* in (50), (52) and (53), where it shows a high degree of combinatorial autonomy, is actually quite remote from the meaning of the noun or verb: at the point where the form has acquired its most abstract sense, immediacy, it still retains syntactic features that make it close to its major category source. Semantic and syntactic development do not run in phase: in the long term, the process of grammaticalization involves changes in both form and lexical category, but there can be disjunctions between the development of the two when, as is the case here, the primary arena of grammaticalization is within synchronic language use.

3. GRAMMATICALIZATION AND BASIC VOCABULARY

Usually, the words in a language that are prone to be grammaticalized are drawn from a stock of reasonably 'basic' items. These are words that, by virtue of their role of

expressing fundamental processes and orientation points in people's interaction with the world, are very suitable as the metaphorical substructure for grammatical terms. Thus, words for *head*, *go*, *back* and *have* are highly likely candidates for grammaticalization, unlike words meaning *clockwork*, *elope* or *Prices Surveillance Authority*, which one would not expect to enter any grammaticalization pathway. This can be illustrated by a discussion of the development of negatives in French. As discussed by Hopper and Traugott (1993:114-5), among many others, negation in French is accomplished by the preverbal negative particle *ne*, followed by a postverbal particle, usually *pas*:

- (82) *En décembre 1932, Freud ne mâchera pas ses*
 In December 1932, Freud NEG mince.FUT NEG his
mots
 words'

'In December 1932, Freud would not mince his words' (Mijolla 1982:18)

Pas is identical to the noun meaning 'step', and in earlier periods of the language was only one of a number of postverbal negativizing particles. These 'particles' were in fact nouns used adverbially to suggest a least quantity, in the same way as English expressions like *not to care a jot* or *not to mind a bit*. Hopper and Traugott (1993:114-5) supply a list of the adverbially used nouns that appeared in negative contexts in Old French:

- (83) *pas* 'step, pace'
point 'dot, point'
mie 'crumb'
gote 'drop'
amende 'almond'
areste 'fish bone'

beloche ‘sloe’

eschalope ‘pea-pod’

In modern French, only *pas* and, to a much lesser extent, *point*, survive as negation markers. The significant point for impact forms in English is that only the more general forms have been revamped into all-purpose negative markers, and more specialized terms like ‘fishbone’ did not make it.

With this in mind, it is interesting to observe that within the field of English impact terms it is just the more basic ones which do *not* appear in grammaticalized contexts as the complement of *come/go* or as the modifier of a prepositional phrase:

(78) **The dodgem car went hit against the edge* (cf. *The dodgem car hit the edge*)

(79) **The ball rolled touch into the hole* (cf. *The ball touched (the bottom of) the hole*)

(80) **The hammer came beat onto the nail* (cf. *The hammer beat the nail*)

(81) ?**It went knock into me* (cf. *It knocked into me*)

Why should this be the case? *Hit, touch, beat* and *knock* would presumably count as more basic forms than those which do suffer grammaticalization. There are two main reasons to think this. Firstly, on intuitive grounds, *hit, touch, beat* and *knock* seem much better examples of impact/percussion vocabulary than words like *slam, slap, smack, bang, bump, thump, or butt*. It is the first group of words, not the second, that would tend to be volunteered by speakers as an example of the category ‘impact word.’ In other words, they are more prototypical than the others, and less marked stylistically. This is no more than an intuition, which would have to be supported by empirical investigation among speakers.

The second reason for thinking that *hit*, *touch*, *beat* and *knock* are more basic vocabulary items is that they occupy a more central position in a taxonomy of action words than the others, being hyponyms of expressions like *do* or *act*, and superordinates of words like *thump*, *bang*, etc. (*thumping* is a type of hitting, *bumping* is a type of touching).¹³ By virtue of this centrality, they are closer to any Roschean basic level that may exist in the structure of event taxonomies (for suggestions about the applicability of taxonomies to events, see Tversky and Hemenway (1984:188) and Rosch (1978:43-6)).

On two criteria, therefore, we find that the wrong forms are undergoing grammaticalization. But when we take into account the original motivation for the grammaticalization of *bang*, etc., an explanation of the anomaly in terms of ideophony becomes available. As noted already, the forms in (6) - (13) which do grammaticalize are largely onomatopoeic in origin. The OED and the *American Heritage Dictionary* overtly comment on this in their etymologies for *slap*, *smack*, *bump* and *thump*, and the other forms show startling phonological similarity: *slam* differs from *slap* only in the manner of articulation of its final consonant, *butt* shares its onset and nucleus with *bump*, and *bang* can be seen as a compromise between the two groups, with the initial consonant of the *butt/bump* group and the same vowel as *slam*, *slap*, *smack*. By contrast, *hit*, *touch*, and *beat* are notable for their lack of phonological commonalities with the other forms, which bars them from appearing in constructions with *come* and *go* as verbs of sound production.¹⁴ *Knock* is an interesting case because, as marked in (81), it is the most nearly acceptable percussion verb in that context, which may be accounted for by its membership of a small family of presumably ideophonic impact expressions in *-ock* like *tock* and the verb *to clock* meaning ‘to strike’.

We can therefore add a rider to the usual statement about susceptibility to grammaticalization. It is true that some forms are born to be grammaticalized, in that

their semantics and status as basic vocabulary predispose them to this fate. Other forms, however, which would otherwise have seemed unlikely targets, can have grammaticalization thrust upon them because of other features they hold that put them into the right syntactic context and trigger processes - like, in the present case, reanalysis - that lead to a more grammatical output.

4. CONCLUSION

The history of English impact words has illustrated several properties of grammaticalization chains. The forms demonstrate how semantic and categorial development do not coincide, in that forms which have advanced a long way down a semantic pathway of increasing abstraction still betray a categorial status that is close to the original major-category impact form. The words also show how lexemes which one would ordinarily not expect to enter any grammaticalization pathway can be grammaticalized. This is the result of other properties of the forms, like ideophony, that make them suitable for appearance in contexts which precipitate grammaticalization. Grammaticalization should be seen as just one of the processes involved in the development of the impact forms, interacting with other - in this case iconic - aspects of language like ideophony. This relates to a view of grammaticalization as a synchronic phenomenon of language in use, involving discourse-pragmatic factors as much as to a perspective in which it is primarily a diachronic process.

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¹ Compare Givón 1991:122: '*cognitively*, grammaticalization is not a gradual process, but rather an *instantaneous* one. It involves the mental act of the mind *recognizing a similarity relation* and thereby exploiting it, putting an erstwhile lexical

item into grammatical use in a novel context. The minute a lexical item is put into a frame that *intends it as a grammatical marker*, it is thereby grammaticalized.’ (italics original).

² Determining exactly what this order is is in fact no easy matter, because the dates of attestation accompanying the first citation of any given OED sense must not be taken as the meaning’s earliest print appearance, let alone its first appearance in the spoken language. Görlach (1991: 137) lists cases in which the OED has ignored earlier attestation in dating its citations of words that entered the language in the Early Modern Period.

³ The relationship between the nominal *bang* and that found in (14) - (18) is purely semantic, rather than categorial: in (14) - (18) *bang* refers to a noise or heavy blow, which is the same reference as the nominal.

⁴ I have made no attempt to distinguish between the different dialects of English represented in the following quotations: in most cases translations are possible into a single standard without loss of idiomaticity.

⁵ I would like to thank the anonymous *AJL* reviewer who pointed out that the fronting of *bang* found in (14) - (17) recalls the exclamatory fronting of adverbs and prepositions in expressions like *Out jumped the cat*, *On we go!* and *Off they fell*.

⁶ Note that the examples of *bang* in (25) - (27) involve not just suddenness or immediacy but sudden *disappearance*. That disappearance is not, however, an essential part of the meaning of *bang* is demonstrated by the possibility of sentences like (24). Rather, it is the verb *go* that conveys sudden vanishing or disappearance: note that the omission of *bang* leaves this idea intact: ‘*The moment I get interested in anything, my sleep goes*’ (cf. (25)). *Bang* carries a selectional preference to occur in a context of sudden disappearance, but this does not seem to be part of its meaning as such. Jane Simpson has suggested that fireworks, which involve sudden disappearance (and a loud noise) may be a salient motivating context for this extension.

⁷ There are a few curious and semantically unrelated exceptions: firstly NP complements expressing extent like *go the whole hog/way*; and then expressions denoting the state achieved: *come a cropper*, *go a pale shade of red*, *go ape*, *go bananas*.

⁸ Note that fronting of the reported speech, as with *bang* in (14) - (17), is not possible with these speech production verbs, nor with the expressions in n.6.

⁹ There are, however, a few expressions in which *come* does have this force, like *come again* as a request for repetition of the previous utterance, and *come back* in contexts like ‘So they come back at me, “why shouldn’t we?”, and I don’t have an answer’.

¹⁰ Compare also *bong*, *bing*, [bOiOiOiOiN]; *bang*, *clang*, *whang*; *wham*, *bam*, *kazam*. Note that non-ideophonic *belt*, *slug* and *slog*, in spite of their phonological similarities to these sets, have not been admitted into the construction with *come* and *go*. On ideophony, see Palmer (1992), Oswald (1994) and Rhodes (1994).

¹¹ This is an unfortunate context, since it leads to confusion with cases where impact is involved, as in (38) - (43). The uses of *slap* are in fact separate: all that is relevant to the present case is the trajectory of a moving object, rather than the impact between that object and something else. This can be demonstrated by a sentence that excludes the ideas of impact that follow from talk of balls and bodies: ‘The express passed slap through the station’.

¹² Phrasal verbs are a separate case: the prepositions and spatial adverbs in expressions like *look for* or *write down*, which under certain circumstances can appear before the verb, should not be counted as exceptions, because they are not instances of *parenthetical* placement. Note that in the sentence ‘*if you turn your back, up he has it*’, *up* is semantically (and intonationally) much more closely associated with the second clause than are the parenthetical insertions in (65)-(71). Note also that in this sentence *up* is interpretable as an adverb, and can be replaced by canonical adverbs like *suddenly*, *eagerly*, etc. The adverb interpretation is neutral for the present argument, because nothing is being asserted about the admissibility of transitional categories (i.e. adjective/adverb) in parenthesis. Where, however, *up* is a

preposition, ‘parenthetical’ placement is ungrammatical: compare ‘*if you turn your back, he has it up his shirt*’ with *‘*if you turn your back, up he has it his shirt*’.

¹³ In fact, there may be additional structure, in that *hitting* can also be seen as a type of *touching*.

¹⁴ *Knock* and *touch* are in fact probably imitative in origin (American Heritage Dictionary, s.v.), so theoretically should be permitted. We can only observe that it looks as though the phonological criteria that count as ideophony in this context are fairly narrow: the members that define the template are the originally onomatopoeic *slap*, *smack*, *bump* and *thump*, and a form must share the initial consonant of one of these groups, as well as the characteristic vowel of either. *Knock* and *touch* conspicuously fail to match this template and are consequently excluded.

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