A Reference-based Theory of Phraseological Units: the Evidence of Fossils

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Summary

In this paper we examine the unique lexical items in the expressions *beck and call, by dint of, a moot point,* and *to take umbrage*. We compare the collocational clusters of these lexical fossils with those of their 'unfossilised' counterparts in the British National Corpus. According to the linear model of phraseology, these items can be situated at the frozen end of the 'free combinations - pure idioms' continuum. However, we find that it is preferable to discuss these expressions in terms of reference. Basing our arguments loosely on Peirce's semiotic theory of signs, we distinguish between 1) *denominators* (either simple or complex referring expressions) and 2) *interpretants* (discursive constructions often thought of as free combinations, but in fact constrained by the principles of the lexicogrammar). The criterion of reference provides us with a more nuanced framework for discussing a range of phraseological phenomena without having to take into account in the first instance their syntactic or semantic status.

1.0 Introduction

In lexicology, 'cranberry morpheme' is a well known term used for affixes or roots which only occur in a single word or lexeme, such as *cranberry, disgruntle, twilight* or *unbeknownst* (Makkai 1972:120). Curiously, there appears to be no term which specifically refers to the larger-than-morpheme items found in *beck and call, by dint of, moot point* or *take umbrage*. There are of course plenty of terms for the expressions in which these items are found, perhaps the most widespread being 'archaisms' (Gaudin and Guespin 2000), although there have been various other designations such as 'cranberry collocations', 'defective collocations' (Moon 1998b), 'fossilised expressions' and 'lexical irregularities' (Knappe 2005:7). In this paper, we use 'lexical fossil' to refer to the unique lexical items in these expressions. This conveys the fact that at a previous stage of the language these items were more lexically productive. The term appears to have been first used by Brooke (1988) and Bennett (1997), although they were referring, we believe unwisely, to the expression as whole.

Following Allerton's notion of levels of word co-occurrence (1984), we define **fossils** as lexical items which occur in a unique context, typically in the form of a complex word or group (*by dint of, a moot point*) or complex group or phrase (*at someone's beck and call, to take umbrage*). We use 'unique context' in this definition very loosely, since each fossil has a different range and type of lexical environment, as we demonstrate in the corpus evidence below. In fact, we argue throughout this paper that the only difference between lexical fossils and other lexical items is their potential to refer, in semiotic terms, to a category.

The general view of fossils in linguistics is that they essentially belong to the frozen extremities of phraseology. Hartmann and James give the following definition in their dictionary of lexicography:

> **archaism** a word or phrase which is no longer in current use except in fixed contexts such as legal documents, nursery rhymes, poetry or prayers… (Hartmann and James 1998)

It was Charles Bally who first pointed out that an archaism is inseparable from its lexical environment:

> Tout fait d'archaïsme est l'indice d'une unité dont il n'est qu'un élément, autrement dit, l'indice d'une unité phraséologique […] On ferait comprendre la nature archaïque (et par conséquent locutionnelle) d'un groupe en insistant expressément sur le traitement de tel ou tel fait de syntaxe dans la langue vivante. (Bally 1907 [1951]: 82)[1]

In French linguistics, lexical fossils are therefore usually seen as *locutions* or complex words from a syntactic point of view, including Pottier's (1967) *lexies complexes* and Martinet's (1985) *synthèmes*. The related idea that semantic bleaching or de-semanticisation is a defining feature of locutions is associated with the work of G. Gross (1996) as well as Gaudin and Guespin (2000: 217). This viewpoint may also be detected in the linear model of phraseology, exemplified by Howarth's (1998:164, 2000:216) well-known continuum ranging from free combinations (*blow a trumpet*) to increasingly conventionalised restricted collocations (*blow a fuse*) and figurative idioms (*blow your own trumpet*). It is noticeable that the endpoint of Howarth's continuum includes a fossil in the pure idiom *blow the gaff*.

In our view, such a linear approach is unfortunate. In the first instance, the linear model of phraseology assumes that there is such a thing as 'free combination'. This runs counter to the mass of data which demonstrate that every item, whether a fossil or a grammatical item, has a specific collocational environment (as argued, for example in Gledhill 2000). The linear model also suggests that since lexical fossils do not refer independently, they are only used in fixed lexical contexts, an argument that can be easily refuted using corpus evidence. We would claim instead that rather than categorising these expressions in terms of form (*archaism, fossilised expression, locution* etc.), it is more useful to discuss their potential to refer, an approach that has been demonstrated for lexical items as well as longer stretches of text (see for example, Frath 2005).

2. Digging for Lexical Fossils

Fossils are unique lexical items, but the expressions which make up their typical lexical environments range in size. The following table sets out a sample of fossil expressions at every rank of the lexicogrammatical system (Halliday and Matthiesson 2004):

Rank	Category	Fossil Expressions
Clause	Propositional	*many a little makes a mickle*[2]
Phrase[3]	Verbal	*take umbrage*
	Prepositional	*at someone's beck and call*
Group	Conjunctive	*not withstanding that*
	Verbal	*eke out*
	Prepositional	*by dint of*
	Nominal complex	*hue and cry*
	Nominal (Epithet)	*with bated breath*
	Nominal (Classifier)	*a moot point*

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[1] "Every archaism is the mark of a unit in which it is just one element; i.e. the mark of a phraseological unit […] The archaic (and therefore locutional) nature of a phrase can be shown by examining precisely how one or more of its syntactic features operate in current language use." (My translation).

[2] This proverbial means 'many small amounts add up to a large one' and is attested in the writing of George Washington. It was misquoted and consequently transmitted as *Many a mickle makes a muckle*.

[3] The analysis of *take umbrage* and *at someone's beck and call* as group complexes or phrases rather than groups is discussed in the analysis below. Simply put, in Hallidayan grammar a group is a complex word and a phrase is a simple clause.

| Word | Determinative affix | *cranberry* |

The categories in this table are of course arbitrary, in that the actual functional category of the expression depends on the cut-off point used to present the item in the first place. This point is discussed at length below, but can be quickly demonstrated with the example *beck and call*, which is at first glance a nominal group. The fact that this expression only occurs in the sequence *at* + POSSESSIVE means that there is no reason why we cannot include *at* and the possessive as parts of a multiword expression. Of course, the perspective of the corpus linguist or grammarian may not correspond to that of the lexicographer, who may choose *beck* as the entry item in a dictionary.

Probably the most frequent types of lexical fossils involve binomial expressions, which are lexical complexes linked by *and* or *or*. As collocations, the first item in a binomial predicts the presence of the second. As Gläser (1998) points out, many binomials are irreversible and involve the reduplication of the first item by alliteration or an approximate homophone as in *bits and bobs*, *dribs and drabs, spick and span*. Many also involve semantic reformulation of the first item as in *beck and call, hale and hearty, hue and cry, kith and kin, rack and ruin*. The first item is usually a lexical fossil, while the second may still be productive in English. Etymologically, the two items may not be synonyms, although the second is usually a metaphorical extension of the first. For example, the items in the legal term *let or hindrance* are approximate synonyms from different stages of Middle English, and the expression itself co-exists with the Latinate equivalent *impediment or obstruction.* Similar non-fossil-bearing binomials such as *aid and abet, goods and chattels, null and void* have become a signal feature of the register of legal writing (as signalled in Mellinkoff 1963).

In the following sections, we examine four fossils (or near fossils) at the ranks of group and phrase in the table above, namely *moot, dint, beck* and *umbrage*. We compare the definitions for these expressions in the Cobuild dictionary (Sinclair *et al* 1995) with examples taken from the British National Corpus (Aston and Burnard 1998). Our methodology is set out below in the discussion of the item *moot*. One aim of this survey is to test to what extent these items are used in recurrent collocational clusters, and whether these interconnect with other clusters, which we have termed 'cascades' (Gledhill 2000). The definitions given by Cobuild are significant because they establish that these items are numerous enough to warrant an entry in a frequency-based dictionary aimed at language learners. From a diachronic perspective, it turns out that all of the fossils we examine here are either polysemous or have several homonyms even in Modern English, and thus all have multiple entries in the Shorter Oxford English Dictionary or SOED (Trumble and Stevenson 2002). The main point of the analysis carried out below is therefore not to establish all of the different meanings of these items, but to examine the referential potential for each, that is to say to what extent the expression refers as an independent whole or whether it depends on a broader lexical environment.

2.1 Moot

The Cobuild dictionary lists *moot* either as a verb or a gradable adjective and defines the latter discursively as "If something is a **moot** point or question, people cannot agree about it." (Sinclair *et al*. 1995: 1074). From this perspective, the most significant meaning of *moot* is therefore 'subject to debate', although the SOED also gives as contemporary uses 'of no practical significance' and 'an assembly, mock trial'.

The BNC has 119 instances of the word form *moot*. Around a third of these (43) involve the combination *moot point*. To establish whether there are other collocational patterns with *moot,* we use the cluster function in Wordsmith tools. The program takes all the word forms in a data sample, such as *a*, and counts the number of three-word sequences starting with this word

(e.g. *a moot point* = 42 occurrences, *a moot question* = 3). The program then moves on to the next word in the sequence (*moot*) and counts all the three-word sequences associated with this word (*moot point whether = 10, moot point as* = 4 occurrences) and so on. In order not to count every three-word sequence in the corpus, the search is only carried out on the concordance lines found by Wordsmith Concord. This rough-and-ready method gives an idea of the general lexical environment of a word without having to sort the concordance lines beforehand. Here are the first fifteen lines of results for *moot*:

Rank	Cluster	Frequency
1	a moot point	42
2	is a moot	31
3	it is a	10
4	moot point whether	10
5	of the moot	7
6	at the moot	4
7	in the moot	4
8	moot point as	4
9	point as to	4
10	the moot and	4
11	was a moot	4
12	a moot question	3
13	as the moot	3
14	is moot whether	3
15	it is moot	3

If we assume that the elements within each cluster can be sequenced grammatically, the clusters around *moot* reveal a collocational cascade running on from one cluster to the next: *it is ('s, was) + a moot point (question) + whether (as to)*. A less frequent alternative involves a projecting adjective *it is ('s, was) moot whether (as to)*. Where the clusters do not match we appear to have a different lexical item: *of (at, in, known as) + the (a) + moot + (hill)* This sequence is associated with the meaning 'assembly' or 'meeting' and this explains a name which crops up in the data, namely *moot hill*. Although *moot-1* and *moot-2* are cognates of a verb in Old English related to 'meet', in modern English we appear to have two different lexical patterns.

The most typical lexical contexts of *moot-1* consist of a projecting adjective introducing an extraposed clause bound by the conjunctions *how, as to* and *whether*. The projected clauses all express a difficult decision, and the typical genre is usually that of legal or technical analysis:

1. … It is **moot whether** that phrase covers a situation where the accused departs with the victim 's consent.
2. It is **a moot point whether** a supranational authority is also required…
3. **Whether** such prohibitions would meet the requirements of the situation as far as society is concerned is **a moot point**, but it is worth considering .
4. In other words, it is a **moot point** as to **whether** the effort to develop interval and ratio scale measures is really worth it…
5. …certainly true that there were ideological differences but **whether** those were the reason for the split or not is a er is a , is a **moot question** and I suspect not .

We can relate this pattern to a more general extraposition involving *it is* + EPITHET + *whether*, as in:

1. …it is **debatable whether** incomes have risen as fast as GNP…
2. However, it is **doubtful whether** this form of liberalism is viable.
3. …it is **uncertain whether** US hegemony can be re-established or **whether** a different mode of regulation under Japanese or European domination will be constructed.

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4. Sometimes it is unclear whether misconduct is sufficiently linked to the job
   to entitle the employer to take disciplinary action.
5. …it is questionable whether such an attack could be effective.
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There is a clear difference between the *moot whether* and *debatable whether* constructions. In the *debatable* examples, what is at stake is whether some material process (in Halliday's terms) is *efficient, effective* or *viable* and this is introduced by a series of negative mental or communicative qualities (*debatable, doubtful, uncertain, unclear, questionable*). In the extraposed *moot* clauses*,* a problem (often expressed spatially as a *point*) turns around whether some relational process is *required* or *should be worth* doing. Since relational processes are more prevalent in argumentative, expository discourse, it is not surprising that *it is a moot point whether* is associated with texts of this type.

   We saw in the first set of examples that the item *moot* can also be used as a referring noun or as a classifier, as in the following examples:

```
1. At the close of a moot the judge or judges declare which counsel or side
   performed best…
2. The most common breach of etiquette committed by the enthusiastic beginner
   when arguing a moot case is the expression of a personal opinion…
3. …it is the duty of the advocate to call the attention of the court to all
   decisions that are in any way against the submissions he makes; but this may
   not be possible in moot conditions .
4. The TE Electronics spin-off is now moot, and Tandy says it is likely to sell
   most of its other manufacturing assets instead
5. The last point must at present be a moot one, since no guide-lines have been
   laid down professionally on just how deeply a social worker can be involved.
```

Example 1 gives us a clear nominal context for *moot-2* ('assembly') while examples 2 and 3 involve *moot-2* as classifier meaning 'training session for lawyers'. Examples 4 and 5 bring us back to the main use of *moot-1* ('debatable') although here *moot* refers to an attribute.

   The relationship between *moot-1* and its most frequent collocate *point* also merits examination. *Point* is very productive in phraseological terms, involved in frequent metaphors of spatial organisation (*cutoff, reference, starting, turning, vantage) + point* as well as mental vision (*certain, different, particular, personal, specific) + point of view*. As we have seen, *point* is commonly used with evaluative adjectives of verbal communication in an extraposed projecting clause (*arguable, contentious, controversial, debatable) + point whether*. But while it might be thought that an expression such as *it is a debatable point whether* would be more frequent than *it is a moot point whether*, there are over 20 examples of *moot point* in the BNC and less than 10 examples of the other related expressions put together. Most of these involve an attribution of some textual reference rather than projection:

```
1. …the author would suggest also resident in the case of overseas source income
   but that is an arguable point.
2. I get the impression from the general atmosphere and a few exchanged looks
   that this is a contentious point.
3. Which is the oldest of these is a debatable point, obviously…
4. How far is it reasonable to extrapolate these results to the non-poor is a
   highly debatable point.
5. It is a tendentious point, since the convention is that treaties are always
   signed by the executive.
```

To summarise: *Moot-1* is a dependent lexical item used in colligation with extraposed clauses, which as a complex construction refers to a debatable or ill-defined technical point. *Moot-2* is an independent lexeme which refers to a legal assembly.

2.2 Dint

The Cobuild dictionary discusses *dint* as a fixed phrase with the slightly awkward definition: "If you achieve a result **by dint of** something, you achieve it by means of that thing, used in written English." (Sinclair *et al*. 1995: 460). From this perspective *by dint of* appears to be the equivalent of 'by means of', although the SOED also mentions contemporary uses such as 'blow, impression' and 'stroke with a weapon'. The SOED gives early evidence of *dint* as a nominal in examples such as *You feel the dint of pity* (Shakespeare). The SOED also notes that *dint* is distantly related to *dent*.

The clusters function of Wordsmith suggests that only one phraseology is involved for this item, although it is more complex than the one suggested by Cobuild: *and* (*only*) + *by dint of* + POSSESSIVE / EPITHET + nominal:

Rank	Cluster	Frequency
1	by dint of	67
2	dint of a	6
3	dint of the	5
4	dint of their	4
5	only by dint	4
6	and by dint	3
7	dint of great	3
8	dint of many	3
9	dint of its	3

The Cobuild definition points out that *by dint of* relates a success to the reason for this success. The BNC evidence suggests that the reason for the success is usually clearly stated, but there is more: *by dint of* always involves an emphatic evaluation (often with two epithets linked by *and*) of some material process (most typically *effort, energy* or *work*):

1. **By dint** of **careful and meticulous research** she was able to provide the defence with evidence that every significant statement published …
2. An archmage, **by dint** of **great effort and much expenditure of time**, might eventually obtain a small staff made from the timber of the sapient pear tree.
3. The work at present obtained in Edinburgh was only **by dint** of "**great energy and hard work** by the employers"…
4. he had got to where he was today **by dint** of **sheer hard work and determination**…
5. This rapid growth has been achieved **by dint** of **strong and imaginative leadership** pushing the firm into new areas…

If we compare *by dint of* with its counterpart *by means of* (1742 occurrences), we can see that *by means of* consistently associates an empirical activity of observation or measurement (expressed by *achieved, assessed, carried out, conducted, obtained, reached*) to a precise methodology, as in the following examples:

1. The course is **assessed** by **means** of **clinical and written examination** at the end of the first year and by assessment of a thesis based upon a research project presented after the third year.
2. The alternative to a fail-safe structure from the airworthiness certification point of view is **establishing**, by **means** of **full scale testing**, the fatigue life of the structure concerned
3. Deviancy amplification is **achieved** by **means** of a relatively simple **positive feedback loop**.
4. In a liberal democracy government is **held accountable** to citizens by **means** of **regular free elections**, in which citizens choose between competing parties of politicians.
5. A random poll of 16 departments of urology was **conducted** by **means** of a **telephone conversation** with each consultant's secretary or the clerk responsible for admissions.

Another synonym of *by dint of* mentioned in the SOED is *by force of*. With 67 occurrences *by force of* has the exact same frequency as *by dint of* but a much more restricted set of right-collocates. There are two possible contexts: 1) *by force of* + (*arms, personality, will*) relating material historical success with personal force and 2) the fixed expression *by force of circumstances* which relates some hard effort with adverse conditions:

1. It is for this reason that when a Kingdom has been **taken** by **force** of **arms**, it is said to have been taken by the sword.
2. Charlemagne was a charismatic man who **held** his widespread and disparate peoples together as much by **force** of **personality** as by **force** of **arms**.
3. … it was bad luck on Dave Millard who had begun brilliantly and who, though eventually **submerged** by **force** of **circumstances**, had still shown Johnston a player he evidently never saw in Australia.
4. … other mechanical means of launching aircraft may have to be **adopted** by **force** of **circumstance** unless in the meantime aircraft designers find new means of lessening the length of take-off required…
5. In the early stages of the war, most of Free France's fighting, by **force** of **circumstances**, had been against other Frenchmen in Africa, the Middle East, and elsewhere.

A final point is that the item *dint* is not completely fixed in the prepositional group *by dint of* and there are a small number of examples which correspond to the referring lexeme meaning 'impression, hole', or a metaphorical extension of this meaning 'to make a difference':

1. …he looked as though he were digging for worms, and the **dint** was so **deep** we didn't need to dig a hole, just scrape the topsoil across to bury him . We were popular down in the village for weeks after . The second time was
2. I don't think we're going to **make** really serious **dint** with the number of children that we now have in care.

The item *dint* serves to distinguish *by dint of* from its counterparts such as *by means of* and *by force of*. It is noticeable that in each case, the context of use each of these expressions is reformulated in central item (*by means of* is consistently used with means and methodologies, *by force of* reformulates the complement of the preposition as a metaphorical force). The *dint* in *by dint of* can still therefore be seen to refer to material effort, although this is only reflected indirectly by extended constructions in which the expression is used.

2.3 Beck

Cobuild discusses *beck* as a fixed phrase meaning "If one person is **at** another's **beck and call**, they have to be constantly available and ready to do whatever they ask, and this seems unfair or undesirable." (Sinclair *et al*. 1995: 135). *Beck* seems to be the equivalent of 'disposal' or 'service' (as in *to be at someone's disposal*). The use of bold typeface in Cobuild's definition is significant in that the preposition *at* is clearly seen as part and parcel of the expression, a point which differentiates this phrase from the preposition group *by dint of*. Etymologically, *beck* is a gesture related to the verb *beckon*. The SOED gives a number of other homonyms, the most common being 'stream'.

Looking at *beck* in the BNC, Wordsmith clusters reveals at least three different sequences*:*

Rank	Cluster	Frequency
1	beck and call	42
2	at the beck	19
3	the beck and	19
4	and call of	15
5	of the beck	14
6	in the beck	10
7	at his beck	8
8	beck et al	8

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9       s beck and          8
10      his beck and        7
11      manager john beck   7
12      at your beck        6
13      beck  #             6
14      your beck and       6
15      beck in the         5
```

With 624 instances of *beck* in the corpus and only 42 of *beck and call,* it is clear that this rough-and-ready method has difficulty in teasing out all of the legitimate sequences other than *at* + POSSESSIVE *(his 's, your) + beck and call* and *at + the + beck and call + of.* The other clusters involve the homonym *beck-2* 'small stream' *in* (*crosses, of*) *+* (*a, the*) *+ beck,* as well as references to a person's name.

   Looking at the corpus evidence, there is very little to add to the Cobuild definition, although there is a contrast to be made between the participants involved. The *another* in *at another's beck and call* is clearly a person, often equated ironically with a servant:

```
1.  Servants at your beck and call, that's our place! And no gratitude…
2.  I had to be at his beck and call, night and day…
3.  Both parents were always at the beck and call of the general public.
4.  Until she mounted the stairs to go to bed, she was at her mother's beck and
    call. Lady West was domineering, demanding, and critical…
5.  "…I wouldn't remember me either if I had a man like Roman Wyatt at my beck
    and call," Myra said, grinning…
```

If we contrast this expression with the approximate counterpart *at another's disposal* the grammatical participant becomes a material means or resource. It is noticeable that although *people* can also be *at another's disposal*, the verb is usually very emphatically material: they are *placed* or *put* there:

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1.  But in general economic goods were at the disposal of the household head.
2.  The 60 or so hours he put at our disposal fled by.
3.  We need to exploit every means at our disposal to achieve our goals.
4.  King Louis's government finally put at his disposal 60 volunteer officers and
    cadets to help man the  64-gun Elisabeth.
5.  Had they not had such a resource at their disposal some might have had to
    forego particular orders…
```

As with *moot* and *dint, beck* is a dependent lexical item in a complex referring expression. While the literal meaning of *beck* may have been lost in the mists of etymology, the typical lexicogrammatical contexts of the expression still point to this usage, that is a 'gesture' associated with personal service.

2.4 Umbrage

Cobuild lists *umbrage* as fixed phrase in the definition "If you say that someone **takes umbrage**, you mean that they are offended or upset by something that someone says or does to them, often without sufficient reason." (Sinclair *et al*. 1995: 1808). The dictionary signals that *take umbrage* is equivalent to *take offence*, and suggests that the expression is a complex predicate which takes a prepositional complement after *against.* From the SOED we learn that *umbrage* (from Latin 'shade') was borrowed into Late Middle English from French, where it remains lexically productive in the modern language (*ombrager* to shade, *prendre ombrage* take offence, *faire / porter ombrage* to offend). The metaphorical extensions of *umbrage* such as 'shade of a tree' or 'suspicion' died out by the mid-18th century. On the other hand, uses such as *give umbrage* and *take umbrage* begin to be attested by the mid-19th century.

   In the BNC, there are only 27 occurrences of *umbrage*. Wordsmith consequently finds 3 clusters:

Rank	Cluster	Frequency
1	take umbrage at	5
2	umbrage at the	5
3	took umbrage at	3

In its more typical contexts, *take + umbrage* forms a complex predicate (traditionally called a 'predicate nominal'), involving *take* as a light process verb and *umbrage* as its range complement. In Hallidayan grammar, a 'range complement ' expresses a process rather than a participant (compare the range in *take a bath* versus the participant in *take an umbrella*) (Halliday and Matthiesson 2004). Both *offence* and *umbrage* therefore express the range of a mental process or quality (equivalent to *disappointment, hurt, upset* etc.). The typical subjects of *take* are institutions with high social status or people with a high opinion of themselves, while the prepositional complement of *take umbrage* is *at* (and not *against* as cited in the Cobuild example):

1. **Venice**, intensely touchy about its international status , was particularly liable to take **umbrage** if one of its representatives were not offered such a present or were offered one of less value than expected …
2. …**orchestras** can **take umbrage at** being asked to work with prodigies.
3. …I do not anticipate that **senior judges** will either feel "demeaned" or **take umbrage at** the possibility of the courts looking at the question again on fuller argument.
4. Twenty years later, Antonia White's The Sugar House actually went before a judge, when an **actress** called June Sylvaine **took umbrage at** the book's portrayal of a bitchy , overweight trouper of that name.
5. It needed only one **irascible minister** to **take umbrage at** some fancied slight or misdemeanour for there to be trouble.

Umbrage is not entirely fossilised however, since it can be introduced by a different support verb (*give, keep, save*) and can also be used independently in circumstantial prepositional phrases. In both cases, *umbrage* is conceptualised as a negative mental result or a form of metaphorical exchange:

1. **Stricken with umbrage**, she had spent the months since her destoolment sniping at her successor…
2. …she accompanied her large son and his slender young companion from the room, leaving Melanie staring after them **in umbrage**.
3. The Duke insisted that "it's fitt it be understood; for it might **give umbrage** to Achinbowie and Balfunning", and he was very clear that the gentleman in question, the son of Glengyl should not, under any circumstances, join Lord George's ship.
4. This didn't go down very well with the rest of the senate, but found great favour with Caesar, who allowed the sixty-first senator to **keep umbrage**.
5. it's part of the sales process, yes, yeah well I mean so sure **saves umbrage** of course you didn't you'd be, er I'm sure much more er careful.

We can compare *take umbrage* with its counterpart *take offence*, which is three times as frequent with 87 occurrences in the BNC. The typical clusters of *take offence* tend to involve more modification, with the most regular collocational cascade being the sequence (*at least*) + *he (she)* + *took* + (*no, grave, great, mortal*) + *offence*. Generally speaking, the subjects of *take offence* are interlocutors with no precise status, and the *offence* is usually a communicative event taking place in the context of direct speech:

1. …no **offence meant** and I I really hope that you do not **take offence** in that way. Erm…
2. His own **opening gambit** made it impossible to **take offence**. "Hello, Jenny," said a voice from a side-table. "Excuse me"; said Jenny to the man…

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    3. I was terrified that if I criticized him he would take offence and leave me,
       if not permanently, then for a few days, without giving me a sign of life,
       and so leaving me in anguish.
    4. I come from Poland and we are very outspoken in my country and I have noticed
       that in this country you people take offence very easily.
    5. For example if the speaker addresses a group of females as: "You women," they
       will take offence as compared to "Ladies..." which would be appreciated.
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The fundamental difference between *take umbrage* and *take offence* lies in the lexicogrammar: *take umbrage* is post-modified by an offending social act introduced by *at*. In contrast, *take offence* is pre-modified by evaluative terms and defines part of the conversational context of situation as an offending speech act. Both expressions therefore occupy more or less complementary niches, and this is to be expected in a lexicogrammar where items that share the same environment must either specialise or fade away.

3. A Reference-Based Theory of Signs

In this section we set out an alternative way of classifying the various expressions associated with each of our lexical fossils. The approach we adopt here is loosely based on Peirce's (1931-1958) theory of semiotics. According to this theory, all signs can be described as referring expressions (**denominators**) or as discursive constructions (**interpretants**). Denominators can be terms (*ophthalmologist*) or complex expressions (*eye specialist*). Interpretants are complex signs made up of existing denominators (*a doctor who looks after your eyes*) according the established lexicogrammatical patterns of the language. The effect of this distinction is to take idioms and collocations out of a single continuum, and to place them within two different functional realms (idioms within the realm of denomination, collocations within the realm of interpretation).

'Denomination' is usually defined in terms of **reference** (as discussed in Kleiber 2002: 13-17):

> D1 Denominators **refer** as a whole to a linguistic category or object of experience. Thus all lexemes are denominators, as are many idioms and proverbs. Morphemes, grammatical items and lexical fossils often only refer as dependent elements in complex denominators.
> D2 Denominators **name** a whole category of experience. The act of naming creates a linguistic category.
> D3 Denominators become **fixed**. The relative fixedness or transportability of a denominator (whether a simple or complex word) is not a property of that particular expression but a general property of denomination.

The notion of denomination allows us to integrate the notion of lexicogrammar into a broader statement of lexical meaning. In particular, we can define lexical meaning in terms of the **sign** (Frath 2005:40,118):

> S1 A linguistic sign refers to either a **category** or **object** and can only be apprehended if it is referred to by a naming sign or denominator. A category is not a pre-existing concept, but a sign which has come from use in a speech community.
> S2 Any **knowledge** about a category or object can only be expressed by means of one or more discursive signs or 'interpretants'.
> S3 The **lexicogrammar** of a sign describes its potential to combine or collocate with other signs to create extended units of meaning.

Let us apply this system to some well-known phraseological examples. An idiom such as *kick the bucket* refers to 'dying' as a simple denominator. On the other hand *blow the gaff* refers as a complex denominator to the verbal process of 'giving away the secret' (here the verbal process is conventionally reformulated as a behavioural act of *blowing*). A similar metaphor is used in *blow your own trumpet* which refers as a complex denominator to some kind of 'boasting'. And the same goes for *blow a fuse,* which represents a metaphorical extension of the English metaphor *blow* = 'temper, mood' (cf. *blow your top*). Even the so-called 'free combination', *blow a trumpet* refers to a category of experience, although this time it appears to be incomplete. The lexicogrammar of English allows us to *blow + musical instrument*, but our precise interpretation of this complex sign requires more context, in particular we do not know whether the *blowing* is a musical form akin to *playing* or an announcement (by a herald, for example). In addition, the noun group and determiner in *blow a trumpet* have a more autonomous range of reference than in *blow the gaff* and *blow a fuse*. This is a test, as Gross (1996) has pointed out, that the item *trumpet* is being used referentially as an independent item. We therefore categorise *blow + trumpet* as an interpretant, but not because its meaning is compositional. It is an interpretant because it does not give us enough information, and thus we must turn to the context to find a more precise interpretation. In phraseological terms *blow a fuse, blow your own trumpet* and *blow the gaff* range from restricted collocations to pure idioms, but in terms of reference they are all complex denominators. Only the collocation *blow a trumpet,* often labelled a 'free combination', appears to correspond to our notion of 'interpretant'.

The expressions we have studied in this paper can now be described and differentiated according to this semiotic system:

beck
1. As with other complex nouns, *beck and call* is a simple denominator, referring to some more or less resented service. However, it is almost always used as non-referring element in the complex denominator *at POSSESSIVE beck and call* and this is in turn associated with a complex interpretant construction, as set out in 3.
2. The fluent speaker of English does not need to know that *beck* is a type of gesture. Instead, the speaker associates *beck and call* the expression with a certain genre or style. Such stylistic knowledge is a key feature of the meaning of such an expression.
3. The lexicogrammar allows for the construction *X is at Y's Z.* Thus *beck and call* is just one of a series of denominators involved in this construction. Thus *someone is at another's beck and call* (identifying relation + human participant) can be contrasted with *someone has something at their disposal.* (possessive relation + material resource).

dint
1. *By dint of* refers as a simple denominator to 'success by strenuous effort'. The referential potential of *by dint of* is however dependent on more complex interpretant constructions, as set out in 3.
2. Although the independent reference of *dint* has all but disappeared in modern English, the expression still occupies a specific niche which existed in earlier use.
3. *By dint of* is involved in a regular lexicogrammatical profile *(achieve success) by dint of (considerable effort)*. Expressions such as *by means of* or *by force of* have a similar construction *(process + by X of Y)* although they are differentiated by the fact that they display different participant roles (*by means of* with observation, *by force of* with adversity).

moot
1. *Moot* as a noun refers to a category of legal case or (archaically) a legal assembly and is therefore a simple denominator. As a nominal group, *moot point* is a complex denominator referring to a 'debatable question'. This meaning is difficult to dissociate from the technical use as a single noun, and it seems that we are dealing with the same category.
2. The SOED lists several loosely related entries for *moot*. *Moot* is thus still polysemous in Modern English and only very barely qualifies as a fossil.
3. *Moot* is specifically associated with constructions involving extraposition of projection clauses: *it is a moot point whether* or *it is moot whether* where *moot* outnumbers other apparently more transparent adjectives such as *contentious* or *debatable*.

umbrage
1. *Umbrage* refers as a denominator to 'social offence'. It occurs most frequently as a complex denominator in the expression *take umbrage*, a sign which in turn is involved in a very broad set of interpretant expressions.
2. As with *moot* above, *umbrage* is still a relatively productive item, although it is stylistically marked.
3. At the lexicogrammatical level, the difference between *take offence* and *take umbrage* is that *take offence* is usually pre-modified, while *take umbrage* is used with a specific set of experiencers (people who take themselves seriously) and post-modified by the preposition *at* (the offending phenomenon).

4. Conclusion

It is tempting to see the items that we have studied in this paper (*beck, dint, moot* and *umbrage*) as de-semanticized morphemes or empty items (Tesnière 1959:53). But the corpus evidence shows that lexical fossils are used in such consistent and extended lexicogrammatical contexts that it is possible to establish that each has very specific and productive referential properties. We cannot therefore define lexical fossils simply as unproductive lexical items. Even the most 'frozen' lexical fossils such as *by dint of* serve to distinguish the constructions they are used in from their more prosaic counterparts. In every case, the collocational environments of fossils dovetail in symmetrical complementarity with their counterparts (for example, *by dint of* occupies a very different niche to that of *by means of* or *by force of*). Neither can the expressions in which fossils are found be passed off as stylistically marked archaisms, since they occur relatively frequently in the BNC and at times even outnumber their prosaic counterparts (such is the case of *moot point* as opposed to *debatable point*).

   We chose the term 'fossil' to convey the diachronic fact that words such as *beck* and *umbrage* are attested in a more varied set of lexical environments at earlier stages of the language. Such a vanishing phraseological profile turns out to be the defining feature of these words. We have argued above that this type of information (frequency, style, traces of past phraseologies) in fact forms part of the public meaning of these items (as interpretant signs). Of course 'fossil' does not really do justice to the variety of constructions in which the items *beck, dint, moot* and *umbrage* are involved. But neither does it make sense to label these words as archaisms, fossilised expressions, restricted collocations or idioms. None of these terms suggests an extended phraseology which can be detected for these items *(achieved) by dint of (sheer hard work)*. And from the point of view of textual analysis, it is difficult to see how this phraseology differs from that of a counterpart expression such as *(conquered) by force of (arms)*. Perhaps we should just call both an 'extended phraseology' and leave it at

that? Of course, this amounts to the usual problem in phraseology studies of how to quantify the cut-off point for any lexical chunk.

In section 3 above, we argued for a different approach. From the point of view of reference, the items *beck, dint, moot* and *umbrage* differ from their counterparts *service, means, debatable, offence* in that lexical fossils do not refer as simple lexemes, but as lexical items within complex denominators. Some fossils refer more independently than others (as is the case of *moot* and *umbrage*), but even these items tend only to refer when they are part of complex expressions (*moot point* and *take umbrage*) which are themselves variable or complex denominators. But from a collocational perspective, *beck, dint, moot* and *umbrage* are just like any other lexical items, in that they are no more fixed or semantically opaque that expressions such as *at someone's disposal, by means of, a controversial point, take offence*. The only difference is that the word forms *someone's, means, controversial* and *offence* have the potential to refer directly to named categories, and generally speaking have a much greater potential to be used as resources in the lexicogrammar, although as we have seen all denominators, whether they involve fossils or not, are enrolled into the lexicogrammar as complex signs.

So, paradoxically lexical fossils are not opaque, they are vanishingly transparent. We cannot gain an understanding of their meaning through looking directly at them, although of course we can cheat and look at their etymologies in the dictionary. Instead, their everyday meanings can only be gathered, like footprints in the snow, by the phraseological imprints they leave.

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