

*What a freak paper this is: Noun to adjective transitions of *freak* in British and American English[#]*

Research Article

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Abstract: In this paper, I address the question of whether British and American web data pattern in the same way when it comes to attributive *freak* being used as an adjective or whether one variety is more tolerant towards the item crossing the nominal word class boundary than the other. In order to test this research question, I present a corpus-based analysis of 1,000 random tokens of attributive *freak* in the British and American sections of the Corpus of Global Web-based English (GloWbE). Contrary to my hypothesis that American English (AmE) favours noun to adjective transitions of *freak* over British English (BrE), the findings suggest that BrE is more open to *freak* crossing the nominal word class boundary than AmE. Further, the study reveals that nominal *freak* is almost restricted to the use of one to two frequent bigrams, both in BrE and AmE. In all other cases, *freak* is underdetermined for word-class status but leans towards an adjective interpretation.

Keywords: *freak* • noun to adjective • British English • American English • GloWbE

1 Introduction

It is well-known that English has a series of words that belong not just to one but to two different word classes. Well-known examples are *fun* and *key*, which, traditionally nouns, can also take the role of adjectives.¹ This is illustrated in examples (1) and (2) from the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC). Here, *fun* and *key* do not serve as nouns but as adjectives, obvious from the intensifiers *very* and *particularly* modifying them.

- (1) They're finding out it's a **very fun** car to drive [...] (COCA, 2014)²
- (2) The company considers Germany to be a **particularly key** market. (BNC)

While there has been some qualitative research on word class transitions from nouns into adjectives reflecting present-day usage data (see e.g. Denison 2001; 2007; 2017), there is as yet no quantitative account of single items adopting dual word class membership in present-day English (PDE). This paper presents a first such approach by focussing on the item *freak* and investigating a total of 1,000 random

- 1 The OED (online, 3rd edn.) lists *fun* and *key* both as nouns and adjectives but with the nominal use predating the adjectival one (the earliest recorded use of *fun* as a noun: 1699; the earliest recorded adjective use: 1827; for *key*: the nominal use goes back to the Old English period while the first unequivocal adjective use is recorded in 1995). For a quantitative, diachronic account of *fun* and *key*, see De Smet (2012).
- 2 Bold print in this and all the ensuing examples is my own.

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[#] This paper is dedicated to Thomas Berg on the occasion of his 65th birthday.

tokens in British and American web-based English.³ On this basis, I address the question of whether British and American web data pattern in the same way when it comes to the readiness with which *freak* is used as an adjective in BrE and AmE or whether one variety is more tolerant towards items being used as nouns and adjectives than the other. Since AmE has generally been shown to be more economic than BrE (see e.g. Kövecses 2000: 179–202; Biber 2003; Biber et al. 2009; Rohdenburg & Schlüter 2009; Kleppel et al. 2021; Mondorf forthc.), my hypothesis is that web-based AmE is more open to *freak* crossing the nominal word class boundary than web-based BrE.

This paper is organized as follows: In Section 2, I will look into previous studies on word class changes and word class indeterminacy. Section 3 then unfolds the hypothesis that AmE is more tolerant word class transitions of *freak* than BrE. In Section 4, I outline the methodology employed in this paper. Here, I elaborate on the OED meanings of *freak* assigned to the nominal and the adjectival set (Section 4.1), on how I distinguish between nouns, adjectives and what I call an ‘underdetermined set’ of *freak* in attributive position (Section 4.2) and, finally, on the corpora in use and the dependent and independent variables (Section 4.3). Section 5 then presents empirical evidence on the lexeme *freak*. This is followed by a discussion of the findings (Section 6). Some conclusions and an outlook are offered in Section 7.

2 Word class changes and word class indeterminacy: Previous research

The literature is replete with examples that illustrate category changes (diachronic) or category indeterminacy (synchronic)⁴ involving different word classes. These are not restricted to nouns that adopt a second function as adjectives as in the cases of *fun* and *key* (see e.g. Denison 2001; 2007; De Smet 2012) but also involve such as other types of category changes/transitions as illustrated in (i)–(v) below (for the examples, see e.g. Plag 2003: 107–108; Berg 2014):

- (i) *bottle* (noun > verb)
- (ii) *better* (adjective > verb)
- (iii) *poor* (adjective > noun)
- (iv) *down* (preposition > verb, noun)

While the examples in (i) to (iv) are typically interpreted as classical cases of conversion, where word class change is abrupt and immediate (see e.g. Denison 2016; 2017), the present paper focuses on the category boundary between nouns and adjectives, which, diachronically, involves a stepwise change from noun to adjective (see Denison 2017: 303). Synchronically, this means that some examples can clearly be assigned to the class of adjectives, while other are more nominal in character.

Denison (2007) suggests three specific conditions which hold for items undergoing a change/transition from the class of nouns to that of adjectives. These are:

- there is a lexical gap in the adjective class in the sense that there is no other lexeme which has the semantics expressed by the converted noun (e.g. *fun*, *key*)
- the noun is or can be a mass noun or can at least be used without a determiner (e.g. *this is fun* (BNC))
- the noun is semantically gradable (e.g. *it's time for a little fun* (BNC))

Historically, gradient word class changes from category A to B include the change from adjectives to adverbs (functioning as intensifiers). Adamson (2000) has portrayed the historical trajectory of *lovely*, which has turned from a descriptive adjective to an adverb functioning an intensifier. Similar developments are suggested for affective adjectives such as *good*, *nice*, *jolly*, *pretty*, *dirty*, *bloody* (see

3 For more information on the Corpus of Global Web-based English (GloWbE), representing web-based data, and the search procedures applied, see Section 4.3.

4 Throughout this paper, I use the term “indeterminacy” in a synchronic sense for items that are in the process of crossing word class boundaries but that cannot be unequivocally assigned to word class A or B. “Indeterminacy” is here used in the same sense as “underdeterminedness” (see Section 2).

Adamson 2000: 54), *right* (Ito & Tagliamonte 2003) and *downright* (see Méndez-Naya 2008). Other cases of stepwise word class changes involve the change from verbs into adjectives as obvious from such participles as *modest-looking*, *awe-inspiring* and *surprised* (see Vartiainen 2016; see also Denison 1998: 229–230; 2016; Huddleston & Pullum 2002: 1437–1439), from adjectives into determiners (e.g. *certain*, *various*, *divers(e)*; see e.g. Denison 2006; 2007; Breban 2011; 2012; 2014), or from verbs into prepositions (e.g. *following*, *concerning*, see e.g. Aarts 2007: 145–150; Kortmann & König 1992; Oloffson 1990).

That (gradient) category changes such as those outlined above have raised linguists' awareness is at least in part due to the fact that they tie in with the larger philosophical question of whether categories are discrete, as argued by Aristotle (see Aristotle 1963) and Frege (in his dictum *tertium non datur* (Frege 1903/1970)), or whether they allow for different degrees of word class membership (for an overview, see Aarts et al. 2004). The latter tradition is associated with prototype theory as advanced by Eleanor Rosch (e.g. 1975; 1978) and further developed e.g. in Lakoff (1987). In this tradition, items do not simply belong to a category or not but there are better and worse examples of a category (with the prime example being the prototype). No matter whether we look at Labov's (1973) well-known experiment involving cups and bowls, Ross' treatment of nouniness (1973) or such qualitative and quantitative studies on word class changes as portrayed, for example, in Crystal (1967), Denison (2001; 2007; 2017), De Smet (2012) and Vartiainen (2016), categories are interpreted within a non-discrete framework. The present paper is rooted in this tradition.

In the context of gradient word class changes, Denison (2017: 304) has drawn attention to the fact that many usage-based examples which we perceive of as either nouns or adjectives are, in fact, underdetermined for word class status (involve category indeterminacy). What this means is that they can be interpreted as nouns or adjectives without a change in meaning and without a difference in constituent structure. Denison (2017) also uses the term "vagueness" (and not ambiguity) to refer to those cases underdetermined for word class status. By means of illustration, he provides examples such as (3), in which *expert* can both be interpreted as a noun and as an adjective.

- (3) You could do it yourself or get **expert** help. (BNC, quoted from Denison 2017: 304)

In Section 4, we will see that the notion of underdeterminedness is one of the key concepts employed in this paper: since many instances of *freak* are not compatible with a binary division into nouns or adjectives, they fall into the underdetermined set.

While there are corpus-based approaches to word class changes (diachronic) or transitions (synchronic) from nouns into adjectives in the literature, most of them are qualitative in nature (see e.g. Denison 2001; 2007; 2017; Taylor 2012). One exception is De Smet (2012), who investigates diachronically to what extent *fun* and *key* are used as adjectives, resulting from reanalyses of these items in specific environments. As yet, however, there is no comparison of British and American usage data answering the question of how readily each variety allows for an item to be used as a noun and as an adjective. This is where the present paper sets in, providing a first quantitative survey of how the item *freak* is used in contemporary web-based English.⁵

3 Hypothesis

In this paper, I will suggest the hypothesis that web-based AmE is more open to items crossing the nominal word class boundary than BrE. This hypothesis goes back to the assumption variously stated in the literature that AmE is more economic than BrE (see e.g. Kövecses 2000: 179–202; Biber 2003; Biber et al. 2009; Rohdenburg & Schlüter 2009; Kleppel et al. 2021; Mondorf forthc.). Applied to the present

⁵ The present paper does not claim to offer a comprehensive answer to the question of how readily BrE and AmE allow for items to cross word class boundaries. Future studies will have to provide quantitative comparisons of many more items that are in transition from word class A to B.

case, ‘more vs less economic’ means: if *freak* does not only serve as a noun but also as an adjective, this is more economic than if it serves as a noun only (and we need other adjectives to express the adjective sense of *freak*, accordingly).

In the literature, the contrast between a higher and a lower degree of economy of expression is typically operationalized as a plus or minus of explicit forms. Let us illustrate this for the antagonistic verb *battle*. Here, the verb variably occurs with a preposition as in (4) or without a preposition as in (5).

- (4) Rescuers had to **battle against** strong winds and teaming rain to try to rescue them. (BNC)
 (5) Off to Cincy next week to **battle** a team with a solid defense and a steady offense. (COCA)

While BrE typically takes the prepositional variant, AmE tends to go for the preposition-less option (for a quantitative study on newspaper data revealing that BrE takes the prepositional variant following the forms *battled/battling* in as many as 69.5% of all cases whereas the figure is as low as 5.7% in AmE, see Rohdenburg 2009: 199⁶).

Questions of word class status are different from antagonistic verbs involving optional prepositions in that we are not dealing with the presence or absence of a form (e.g. the preposition-containing and the preposition-less variant) but in that an existing form (here, *freak*) is used as a member of two different word classes. The difference between the scenario outlined in examples (4) and (5) and the situation found in the case of *freak* is illustrated in Table 1.

Table 1. Economy of expression exemplified for antagonistic verbs involving optional prepositions and the word class status of *freak* (noun > adjective).

	more economic	less economic
<i>battle</i> used with an optional preposition	- form (no preposition)	+ form (a preposition)
word class status of <i>freak</i>	2 word classes (noun, adjective)	1 word class (noun)

Different as the two cases outlined in Table 1 may be, what they have in common is that we can distinguish between a more and a less economic alternative: it is not only more economic to omit a preposition than to use one (in cases of antagonistic verbs); it is also more economic to use one word as a member of two different word classes (as nouns and adjectives) than to use it as a member of one word class only (that of a noun). Along these lines, we may argue that a language variety which has a higher proportion of “transition” between word classes A and B is more economic than a variety which has a lower proportion of transition between the two word classes. It is for this reason that my hypothesis reads: web-based AmE has a higher proportion of word class transitions of *freak* (from nouns to adjectives) than web-based BrE.

4 Methodology

The section on methodology is split into three parts. In Section 4.1, I motivate the choice of *freak* as the item of investigation in this paper and outline its principal nominal and adjectival meanings in contemporary English as stated in the OED (online, 3rd edn.). In Section 4.2, I then unfold how I categorize all attributive uses of *freak* into a) nouns b) adjectives and c) an “underdetermined” set. The section is concluded by information on the corpus used to represent both BrE and AmE and on the independent and dependent variables of this study (Section 4.3).

6 For the more specific search restrictions applied, see Rohdenburg (2009: 199–200).

4.1 OED meanings of *freak*

Freak has been selected as the item for investigation because it is classified both as a noun and as an adjective in the OED (online, 3rd edn.) and because it has, unlike *fun* and *key* (see De Smet 2012), never been subjected to a quantitative corpus-based study before.⁷

In a first step, I will now list those nominal and adjectival senses of *freak* that are relevant for the data analysis. All of these senses go back to the definitions provided by the OED (online, 3rd edn.) and exclude both obsolete meanings and slang expressions. Senses not relevant for the present analysis (because they do not apply to the data at hand) are also excluded. This leaves us with the senses outlined in Table 2.

Table 2. Nominal and adjectival senses of *freak* relevant for the present study as provided by the OED (online, 3rd edn.).

numbering of senses in OED	<i>freak</i> as a noun (OED)	<i>freak</i> as an adjective (OED)
1		colloquial (chiefly derogatory). Of a person or thing: extremely strange and unusual in appearance or behaviour.
2		Of person, animal, or plant: that has a highly unusual physical feature. Also of a physical feature: unusually or abnormally formed
3a	A thing that is fanciful or extravagant; an eccentricity.	
3b	An abnormal, irregular, or unpredictable occurrence; a very rare or unexpected event.	Of an occurrence, event, or period of time: abnormal, irregular, or unpredictable; very rare or unexpected; one-off. (cf. nominal sense 3b)
4a	A person, plant, or animal with an unusual physical abnormality.	
4b	A person or animal with an unusual physical abnormality or trait exhibited as a curiosity in a sideshow typically forming part of a travelling carnival, circus, etc.	
4c	Sport (originally Australian). A player with exceptional skill; a very talented person.	
5a	(originally US) A person regarded as extremely strange and unusual in appearance or behaviour. Also as a more general expression of contempt.	

Table 2 reveals that the nominal and adjectival senses of *freak* are very closely related. Thus, both nouns and adjectives can express the sense of ‘an unusual physical’ feature (nominal sense 4a, adjectival sense 2) and of occurrences that are ‘abnormal’ or ‘irregular’ (see nominal senses 3a/b and adjectival sense 3). In addition, the idea of something being ‘very rare’ can be found both in nouns and adjectives (see, again, nominal sense 3b and adjectival sense 3). Also, the idea that a person or creature is strange and unusual in appearance or behaviour (nominal sense 5a and adjectival sense 1) occurs both in the nominal and in the adjectival slot.

To summarize, according to OED definitions, there are only the sports sense (sense 4c) and the idea of a person/animal with a physical abnormality taking part in a sideshow as e.g. part of a travelling circus (sense 4b) which are clearly associated with the nominal slot. In the following, I will take the meaning of *freak* as a primary criterion for classification. Only in those cases where the meaning of the token *freak* is compatible with an adjective reading can the item be classified as a member of the adjective set (but does not have to). This is when we need to look at the question of whether there are any morphological or syntactic indicators of adjectivehood in the corpus-based context and wonder what we have to do if there are none. The more detailed classification procedure is outlined in Section 4.2.

⁷ The only mention made of word class changes in the case of *freak* that I am aware of is Denison (2017: 303).

4.2 Attributive uses: Nouns, adjectives and an underdetermined set

For reasons of syntactic consistency, the present study is restricted to attributive uses of *freak*, i.e. uses in which *freak* modifies a noun. Since both nouns and adjectives can occur in attributive position (as in *those crazy people*, *those party people*) and since many of the nominal and adjectival meanings provided by the OED are semantically very close (see Section 4.1), many tokens of *freak* are underdetermined for word class status. In the following, I will outline the three different scenarios that apply to the data at hand: a) *freak* is unequivocally a noun, b) *freak* is unequivocally an adjective c) *freak* has a vague category status.

Scenario A: Nouns

Let us start by looking at example (6) from the GloWbE. Here, *freak* is a noun because its meaning is clearly nominal according to OED definitions (see Table 2): a *freak* in a *freak show* is ‘a person with an unusual physical abnormality exhibited as a curiosity in a sideshow’ (see meaning 4b in Table 2). That *freak* in *freak show* is the most frequent bigram in the nominal set and therefore highly relevant for the distribution of nominal and adjectival *freak* will be elaborated on in Section 5.

- (6) “Don’t rub it in; I tried to shrink it,” screamed my wife, then from behind her back produced this strange shrunken brown headless torso, the sort of thing you would have seen in a **Victorian freak show**. (GloWbE, GB G roddyphillips.com, BrE)

A different sense covered by the noun *freak* originally comes from Australian English and denotes a player with an exceptional skill (see sense 4c). According to OED definitions, this sense, is, once more, found in the nominal set only. For an illustration, let us look at the corpus example in (7).

- (7) Being a **freak athlete** doesn’t necessarily make a good basketball player. (GloWbE, US G hornets247.com, AmE)

Although one may, in a future study, question the reliability of the semantically-based categorization into a nominal and an adjectival set provided by the OED in the sense that more recent language data may defy a neat semantic classification into nouns and adjectives, I will, in this first quantitative survey of *freak*, stick with the semantic categorization provided by the OED.⁸

What I find problematic, however, is the fact that although attributive *freak* can be both a noun and an adjective in most of its senses (excluding the two senses given in (6) and (7)), the OED classifies all attributive uses of *freak* as adjectival (see OED online, 3rd edn.). In the following, I would therefore like to more critically assess this issue. In Scenarios B and C below, I will unfold when I think it is adequate to categorize an occurrence of attributive *freak* as an adjective (Scenario B) and when I will depart from OED categorization and classify *freak* as part of the underdetermined set (Scenario C).

Scenario B: Adjectives

In those cases where *freak* can be interpreted as an adjective and, additionally, contains clear morphosyntactic markers of an adjective, it will be interpreted as a member of the adjective set. The morphological and syntactic conditions that apply are summarized in Table 3.

Table 3 illustrates the non-semantic criteria for adjectivehood on the basis of *fun*, which is one of those items whose adjective status has been variously discussed in the literature (see the references in Table 3). *Fun* has been chosen because most cases of attributive *freak* do not contain either morphological or syntactic markers of adjectivehood (see Section 5). In addition to listing the morphosyntactic criteria for adjectivehood (column 2), Table 3 illustrates how the respective criterion applies by providing a relevant example from the GloWbE corpus (column 3). Finally, Table 3 gives references as to where in the literature these morphological and syntactic criteria have been summarized or applied (column 4).

⁸ The empirical data presented in Section 5 will show that the bigram *freak athlete* is extremely rare in both varieties of English, accounting for a total of four tokens in BrE and for no more than three tokens in AmE. The categorization of *freak* as either a noun or underdetermined for word class status will therefore not distort the overall picture.

Table 3. Morphological and syntactic criteria for adjectivehood in attributive position in combination with examples from the GloWbE corpus and relevant references.

	criteria for adjectivehood	example from GlobWbE	sources
A	comparative formation/superlative formation (either analytic or synthetic)	<i>the most fun month of my life</i> (BrE) <i>funner things to do</i> (BrE)	Denison 2001: 128; 2007; Taylor 2012: 56–57
B	ability to take intensifiers (e.g. <i>very</i> , <i>really</i>)	<i>the really fun part</i> (AmE)	Huddleston 1984: 328; Huddleston et al. 2002: 537; Denison 2001: 127; 2007; 2017: 306–307; De Smet 2012: 622; see also Huddleston & Pullum et al. 2002: 1643

The table shows that if items like *fun* or *freak* are used in attributive position and, in addition, occur in their comparative/superlative forms (either synthetic or analytic) or are preceded by an intensifier (e.g. *very*), they can only be classified as adjectives. Since this scenario is, however, the exception in the case of *freak* (for the empirical results, see Section 5), we need to carefully consider what to do with all those cases of attributive *freak* that do not occur in their comparative/superlative forms and are not preceded by an intensifier. In terms of their distributional properties and in terms of their semantics (excluding the two nominal senses listed under Scenario A) they can be nouns or adjectives. We turn to this set in Scenario C.

Scenario C: Underdetermined set

As my next step, I will look into those cases of *freak* which, in terms of their meaning and their morphological/syntactic properties, can either be nouns or adjectives (containing neither comparative/superlative forms nor a preceding intensifier). For this set, I will critically assess whether those cases which the OED classifies as adjectival are really unequivocal adjectives or whether they are better interpreted as part of the underdetermined set. Following my elaborations on Scenario C, I will summarize the categorization process for the 1,000 random corpus-based examples of *freak* in Figure 1.

Let us first look at example (8) from the GloWbE. Here, the meaning of attributive *freak* is clearly in line with (nominal) sense 4a ('physical abnormality') but at the same time fully compatible with adjectival sense 2 ('a highly unusual physical feature').

- (8) [...] it strikes us as an exception, being to society what a **freak creation** is to nature. (GloWbE, US G archive.org, AmE)

This example, is, in fact, directly parallel to example (9), quoted by the OED in support of the adjective reading.

- (9) His third feature..was about a **freak child** with three heads. (OED online, 3rd edn., *B. Ray, Conscience of Race xi. 90*)

Since there is no morphological or syntactic indicator of *freak* being unequivocally an adjective (for the morphological and syntactic criteria, see Table 3), I will classify examples of the type illustrated in (8) and (9) as underdetermined for word class status.

Let us now turn to those adjectival meanings (provided by the OED) which are most commonly represented in my data. These are 'extremely strange and unusual in appearance or behaviour' (sense 1) and 'very rare' or 'unpredictable' (OED, 3rd edn., sense 3). We will here first look at sense 1. Two examples which the OED quotes to illustrate this type of meaning are reproduced in (10) and (11).

- (10) We are contemptuously dismissed as an eccentric organization, as just '**another freak religion**.' (*Cumorah's Southern Messenger (S. Africa) October 148/1 1951*)

- (11) im going to be **the first weirdo freak goth girl** on the moon....JUST YOU WAIT!!!!
@hauntingez 17 January in twitter.com (accessed 31 Aug. 2022)

The problem with these examples is that the attributive position of *freak* in (10) and (11) also allows for a nominal interpretation according to OED sense 3b, with the meaning ‘an abnormal occurrence’. The same type of indeterminacy also applies to examples (12) and (13), which the OED classifies as adjective uses of *freak* in the sense of ‘very rare’ or ‘unpredictable’ (sense 3).

- (12) The long-ago Cameroonian hunter who acquired SIV was no **freak occurrence**.
Wired May 12/1 2007)
- (13) A **freak flood** in my mom’s bodega took most of my own first-marriage memorabilia.
(*Philippine Daily Inquirer (Nexis)* 15 April 2018)

Since both nouns and adjectives can occur in attributive position and since the nominal sense 3b has a meaning that is directly parallel to the adjective meaning (i.e. ‘a very rare or unexpected event’), I have decided to classify these examples as “underdetermined for category status” in the sense that they can be analyzed either as nouns or adjectives but “leaning towards adjective use”. This latter decision is backed up by the first OED attestations of the adjectival sense 3 and nominal sense 3b: the first OED example which illustrates the idea of ‘very rare’ or ‘unexpected’ is adjectival, dating back to 1893, with the first nominal use in the category ‘irregular, unexpected, rare’ from 1927.

- (14) August Snow... Three young men... reported the **freak** weather episode in Waterbury.
Daily Commenc. Herald (Vicksburg, Mississippi) 6 September 1893)
- (15) They’ve decided that the game you played against Komer was **a freak**!
Boys’ Life February 31/1 1927)

Adding to that, my categorization into “underdetermined for word class status but leaning towards adjective use” is supported by the OED decision is to classify all those uses in which *freak* occurs in attributive position but is still compatible with a nominal reading as adjectives. In fact, the OED quotations do not contain a single example of nominal *freak* in the sense of ‘very rare’ or ‘abnormal’ if followed by a noun. Since these uses can, however, in all cases, also be interpreted as nouns (see Table 2), I have gone for what I call “underdetermined for word class status but leaning towards adjective use”. Two corpus examples which are assigned to this set are given in (16) and (17).

- (16) That is, until one night Lance sees the neighborhood **freak** family (and I do mean freak) kidnap a random truck driver for their torturous experiments. (GloWbE, US B ...ightsc.wordpress.com, AmE)
- (17) It was a **freak** accident. You can’t control them things. (GloWbE, GB G guardian.co.uk, BrE)

To summarize across all three scenarios, the categorization procedure for the 1,000 random tokens of attributive *freak* is as outlined in Figure 1.

4.3 Corpora in use and variables

In terms of the data analyzed, this study is restricted to web-based data represented by the British and American sections of the GloWbE. One reason for the choice of corpus is that the GloWbE offers British and American sub-corpora of almost equal size (extending to ~ 388 and ~ 387 million words, respectively). The other reason is that the corpus can be characterized as informal, relying on web-based data, exclusively, with 60% of the corpus from informal blogs (see Davies & Fuchs 2015). Since previous studies have suggested that items such as *fun* and *key* are more likely to be used as adjectives in more colloquial than in less colloquial contexts (for qualitative evidence, see Denison 2001; 2007), the choice of corpus may provide us with a maximum of tokens being used as adjectives.

Finally, the independent variable used in this study is the variety of English investigated (i.e. BrE vs AmE), whereas the dependent variable is the occurrence of *freak* as a noun, as an adjective or as part of the underdetermined set (see Section 4.2). Against the methodological background provided in this section, let us now turn to the quantitative analysis of attributive *freak*, presented in Section 5.

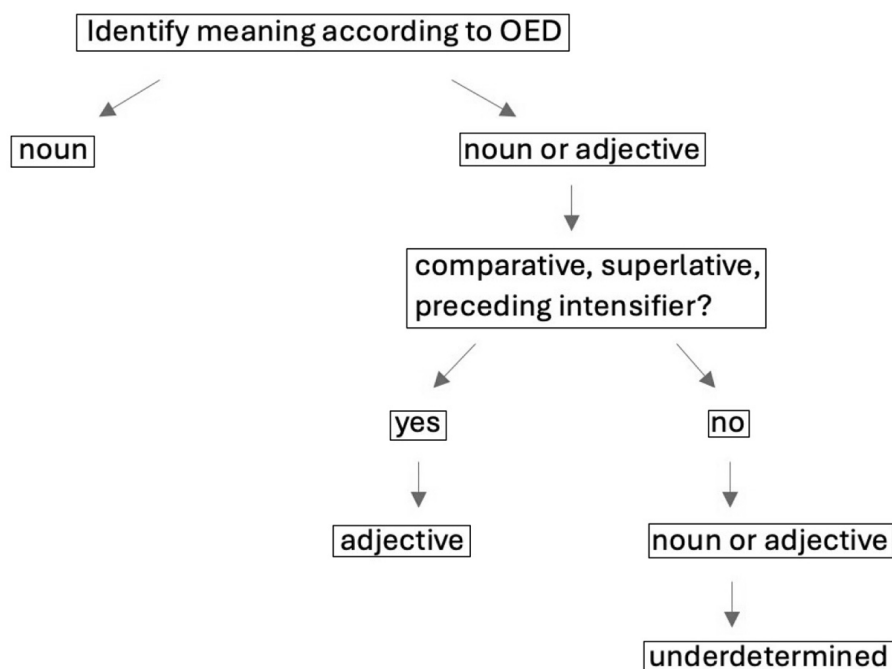


Figure 1. The categorization procedure applied to attributive *freak*.

5 Empirical data: *Freak*

In the following, I will subject the lexeme *freak* to a quantitative analysis in the British and American sections of the GloWbE corpus, testing the hypothesis that web-based AmE has a higher degree of items crossing the nominal word class boundary than web-based BrE. For reasons outlined in the methodology, the analysis is restricted to the occurrence of *freak* in attributive position.⁹

In all the 1,000 random tokens representing attributive uses of *freak* in BrE and AmE (of the type *freak* noun), *freak* functions as a modifier in a modifier head structure (excluding cases in which *freak* is the head of a compound which then modifies another noun as in *control freak government*). Out of the 500 original tokens in each set, 14% had to be discarded in BrE and as many as 26% in AmE because they constitute proper names or part of proper names (e.g. *The Fabulous Furry Freak Brothers* (GloWbE, AmE)), verb uses (of the type *freak people out*) or other non-attributive uses. The remaining uses are classified into whether they represent unequivocal noun uses, whether they are adjectives or whether they are part of the underdetermined set. For the underdetermined set, we will then distinguish between those more likely to be nouns and those more likely to be adjectives (see below).

Since a first glimpse at the data reveals that the bigram *freak show* is a frequent pattern both in BrE and in AmE (see Section 4.2), the number of tokens represented by this pattern is given in brackets alongside all nominal uses of *freak*. Notice that even the addition of a comparative marker as in (18) does not change the category status of *freak* in *freak show* away from being a noun. Here, the idea is that ‘Housemates’ have developed into more of a particular show type (the type being a *freak show*).

- (18) UK public want to mock so Housemates have gone from being normal to **a more freak show type**, [...] (GloWbE, GB G guardian.co.uk, BrE)

9 I would like to thank David Denison for invaluable help in matters of categorization. All remaining mistakes are, of course, my own.

Overall, Table 4 specifies the two most frequent co-occurrence patterns of nominal and of adjectival *freak* in BrE and AmE, respectively.

In terms of its structure, Table 4 is organized into four categories, two of which are designed for the word classes of nouns and adjectives, respectively, and two of which are for those that have a vague category status but are either more likely to be interpreted as a noun or as an adjective. In summary, the four categories are:

- Category A: unequivocally noun
- Category B: underdetermined but leaning towards noun use
- Category C: underdetermined but leaning towards adjective use
- Category D: unequivocally adjective

Table 4. *Freak* being a noun, underdetermined for category status or an adjective in constructions of the type *freak* noun based on N=1,000 random tokens in the British and American sections of the GloWbE corpus.

	A unequivocally noun	B underdetermined but leaning towards noun use	C underdetermined but leaning towards adjective use	D unequivocally adjective	total	% of C and D
BrE	110 (<i>freak</i> show(s): 98; <i>freak</i> athlete: 4)	0	321 (<i>freak</i> accident(s): 92; <i>freak</i> weather: 18)	1	432	74.5%
AmE	148 (<i>freak</i> (side)show(s): 107; <i>freak</i> flag(s): 22)	0	220 (<i>freak</i> accident(s): 48; <i>freak</i> (x)storm(s): 33)	1	369	59.9%

The first striking finding is that there are only two occurrences of *freak* which are unequivocal adjective cases, whereas the proportion of unequivocal noun uses is as high as 25.5% in BrE and 40.1% in AmE. The two adjective examples are quoted in (19) and (20). In both cases, attributive *freak* is preceded by an intensifier (*completely* and *very*, respectively), unequivocally identifying it as a member of the adjective set (see Section 4.2).

(19) [...] her accident was **a completely freak one-off** and it doesn't generalise women in motorsport. (GloWbE, GB B thesun.co.uk, BrE)

(20) WW2 produced **VERY freak world wide and American economic conditions** mostly with thanks to the GI Bill, [...] (GloWbE, US B ...tributedrepublic.net, AmE)

On the other hand, 74.3% of all the examples in BrE are underdetermined for category status but clearly lean towards an adjective interpretation, with a proportion of 59.6% of all items in AmE. What this shows is that although *freak* is not yet well-established as an adjective in British and American informal usage data, six (AmE) or seven (BrE) in ten examples lean towards adjective use. The difference between BrE and AmE (based on the ratio assigned to the sum of categories C (underdetermined but leaning towards adjective use) and D (unequivocal adjective use)) is statistically very highly significant, with $p < 0.001$ ($\chi^2 = 19.5$; $df = 1$).¹⁰ This means that, contrary to my hypothesis, web-based BrE is more inclined to *freak* crossing word class boundaries than AmE.

Let us now focus more strongly on the nominal slot and on the question of co-occurrence patterns of *freak* in the nominal slot. Table 4 specifies the two most frequent bigrams in both BrE and AmE. The single most frequent chunk in both varieties is *freak* show(s): the co-occurrence pattern *freak* show(s) accounts for 22.7% of all uses of *freak* in BrE and for as many as 29.0% of all cases in AmE

10 The chi-square test is based on a 2x2 contingency table in the sense that the sum of Categories A and B is compared to the sum of Categories C and D.

(including *freak sideshow(s)*). In AmE, *freak flag(s)* then accounts for another 6.0% of all uses.¹¹ In BrE, the expression *freak flag(s)* is considerably less frequent, accounting for no more than 0.7% of all cases (three tokens in total, therefore not listed in Table 4). In fact, BrE has no collocation that resembles the pattern *freak flag(s)* in terms of its frequencies of occurrence (with *freak athlete* occurring in 0.9% of all cases).¹²

When measured against the total number of examples in the nominal set only, *freak show(s)* accounts for 89.1% of all noun uses in BrE and *freak (side)show(s)* and *freak flag(s)* together for 87.2% of all cases in AmE. In other words, unequivocal noun uses have become severely restricted in both BrE and AmE, being almost confined to 1–2 fixed bigrams. In all other cases, the interpretation goes towards adjective uses but since both nouns and adjectives can occur in the attributive slot, 60–74% of all cases (see above) are underdetermined for word class membership.

In the case of adjectival interpretations (in the underdetermined set leaning towards adjective use, Category C), too, fixed co-occurrence patterns play a role. The two most frequent bigrams are given in Table 4. For BrE, these are *freak accident(s)* and *freak weather*, together accounting for 34.3% of this set. For AmE, these are (again) *freak accident(s)* plus *freak (x)storm(s)*, with x denoting any kind of modifier (as in *snowstorms*, *windstorms* etc.), together accounting for 36.8% of all cases. This means that lexical co-occurrence patterns play a role for the interpretation of *freak* as an adjective, too, but that their influence seems to be considerably weaker than the influence of fixed bigrams in the case of nominal uses.

While we have so far looked at the most frequent co-occurrence patterns of *freak*, we will now extend the analysis to all co-occurrence patterns of *freak* expressed in the nominal and the underdetermined set leaning towards adjective use (Category C), classifying them into their different lexico-semantic groups. The theoretically interesting question is whether the co-occurrence patterns of modifier *freak* + noun found in the GloWbE allow us to refine the semantic categorization offered by the OED.

In order to answer this question, we will look at the degree of semantic restriction that we find in categories A and C across BrE and AmE. Given that no more than 25–40% of all occurrences of *freak* qualify as nouns (in BrE and AmE, respectively) and that the nominal slot is already restricted to 1–2 bigrams in 87–89% of all cases (see above), our focus is primarily on the lexical co-occurrence patterns found in underdetermined slot (Category C).

The results of the empirical analysis are presented in Table 5. Columns A and B outline for the nominal and the underdetermined set which lexico-semantic patterns occur. In those cases where a lexico-semantic group is constituted by a single lexeme (e.g. *freak flag*), the table specifies the individual lexeme rather than a semantic group. In addition, the table gives the absolute number of tokens associated with each semantic group. Table 5 therefore refers to the same token set as Table 4 and is, once again, divided across BrE and AmE.

The table reveals that, by and large, nominal and adjectival *freak* divide across a limited set of lexico-semantic groups, with the choice more varied in the adjectival than in the nominal set (with the adjectival set containing seven different semantic groups in AmE and six different groups in BrE and the nominal set having four different groups in both varieties). As described above, the lexico-semantic pattern *freak (side)show/film* is the single most frequent bigram across the nominal set in both BrE and AmE. While *freak flag(s)* is clearly more frequent in AmE as compared to BrE (with *freak flag(s)* having no more than three tokens in BrE), the meaning ‘of or for a creature with an abnormal behaviour’ is also more frequently covered by AmE than by BrE. Two examples illustrating this type of meaning are provided in (21) and (22).

11 According to the OED (online, 3rd edn.), a *freak flag* refers to ‘a trait or series of traits regarded as unconventional’. In this sense, *freak* is closely related to nominal sense 4b (see Table 2, without that person occurring in a sideshow).

12 The chunks *freak show* and *freak flag* are so strongly institutionalized that the OED (online, 3rd edn.) treats them as compounds, consisting of a noun + noun structure. In a future study, one may compare compounds to non-compounds. The present paper concentrates on the word class status of *freak*, exclusively (irrespective of whether it is part of a compound or not). The criterion that is relevant to the present study is whether *freak* functions as a modifier or not (with only modifiers included in the analysis, see above).

Table 5. Lexico-semantic groups associated with *freak* + noun in categories A and C in the GloWbE corpus.

	lexico-semantic groups of <i>freak</i> + noun in Category A (unequivocally noun)	lexico-semantic groups of <i>freak</i> + noun in Category C (underdetermined but leaning towards adjective use)
BrE	freak show/film etc. (98) freak athlete/sport (4) freak flag (3) of or for a creature with an abnormal behaviour (e.g. lineage, magnet) (5)	rare/unusual weather (events) (73) strange people/creatures (14) rare/unusual products/achievements (30) rare/unusual events/occurrences (excluding weather) (193) rare/unusual time span (8) rare/unusual size/kind (3)
AmE	freak show/film etc. (107) freak athlete/sport (5) freak flag (22) of or for a creature with an abnormal behaviour (e.g. kingdom, history, magnet) (14)	rare/unusual weather (events) (58) abnormal creatures (3) strange people/creatures (24) rare/unusual products/achievements (7) rare/unusual events/occurrences (excluding weather) (121) rare/unusual time span (4) rare/unusual size/kind (3)

(21) I have over the years realized that I'm a **freak magnet**. I absolutely can't get onto a bus anywhere without the one crazy person coming over and putting their arm around me. (GloWbE, GB G yelp.com, BrE)

(22) but you show up a motorcycle rally and start spewing **your peta freak drivel** and expect to be treated kindly? (GloWbE, US G glossynews.com, AmE)

When we compare the range of nominal meanings covered by the usage data to the principal meanings listed in the OED, we may want to argue that the entry for nominal *freak* should make direct reference to the compound *freak flag(s)* (as it does for *freak show(s)*). In addition, the meaning 'of/for a creature with an abnormal behaviour' should be spelt out in the nominal entry of *freak*.

In the adjectival set, both BrE and AmE make most frequent use of the semantic category 'rare/unusual events/occurrences' (excluding references to the weather), followed by 'rare/unusual weather events'. While the third most frequent semantic group is 'rare/unusual products/achievements' (e.g. *goals*, *results*) in BrE, AmE's top three of the list is 'strange people/creatures', which comes fourth in BrE. By land large, we can conclude that BrE and AmE strongly resemble each other with respect to the lexico-semantic groups represented by the noun following adjectival *freak*. A comparison of the OED senses to the lexico-semantic groups identified on the basis of this corpus analysis makes it clear that quantitative data provide a more differentiated picture than the dictionary entry. This means that quantitative usage-data are a valuable tool for refining dictionary entries, in this case suggesting different subcategorizations of 'rare/unusual' referents.

Finally, I want to extend the analysis of *freak* in a small explorative study to occurrences beyond its use in attributive position. In order to get clear attestations of *freak* used as an adjective, I have searched for all synthetic comparative and superlative forms of the item (in any position) and for postnominal uses of *freak*, which can only be adjective uses (see e.g. Denison 2017: 307; Huddleston & Pullum 2002: 528–529; 552–553; 559–561).¹³

A search for the synthetic comparative and superlative forms *freaker* and *freakest* in the GloWbE corpus yields a single token in BrE, with no occurrence in AmE.

(23) We'll see how the live set material translates to recordings, I'm sure my **freaker** brain will still go off on the minutiae but hopefully it will involve way less editing, [...] (GloWbE, GB B thequietus.com, BrE)

13 Postnominal uses have not been listed as unequivocal criteria for adjectivehood in Section 4.2, because the main analysis is restricted to attributive uses.

This supports the assumption that web-based BrE is more advanced in the process of word class changes than web-based AmE (though a single example is by no means statistically relevant). As for postnominal uses of *freak*, I had to limit the search to the indefinite pronouns *some* and *any* (for a similar operationalization, see Denison 2017: 307). Here, the search did not yield a single token of postnominal *freak*.

To summarize, the data suggest that *freak* is just in its initial stages of word class changes, not yet occurring as a prototypical adjective. Still, there is a clear trend in both varieties to interpret cases underdetermined for word class status as adjectives. Reasons for why this trend is further advanced in the British data as compared to the American data (by a statistically very highly significant margin of 15%) still need to be explored. In a first such attempt, let us turn to the discussion of the findings in Section 6.

6 Discussion

The empirical findings presented in this paper have shown that, contrary to my hypothesis, web-based BrE is more open to *freak* crossing the nominal word class boundary than web-based AmE: the 15% difference obtained for the contrast between BrE and AmE is statistically very highly significant. Although future studies will certainly need to extend the analysis to more items which potentially have dual class membership, the findings presented here defy the common assumption, variously supported in the literature (see Section 3), that AmE is more economic than BrE. The question now emerges why this is the case.

In order to answer this question, we need to reflect on the operationalization of economy that has been applied in previous studies and that forms the basis for the hypothesis put forward in this paper. As outlined in Section 2, those studies which empirically attest to AmE being more economic than BrE, typically distinguish between more and less economic varieties in terms of the presence or absence of certain forms. Well-known examples are optional prepositions in the case of antagonistic verbs like *battle* (see Rohdenburg 2009; see also Section 3) or infinitival variation following *help* (involving the *to*- and the bare infinitive as in *I help her (to) cross the street*; see e.g. Lohmann 2011; Berlage 2014). In all of these cases, the +/- relationship refers to a more or less of formal elements inside the respective constructions.

In this paper, however, a form (here: *freak*) comes to be used as a member of two different word classes. This process is more strongly underway in BrE than in AmE. The case of *freak* raises the question of whether other cases that allow for dual class membership as nouns and adjectives (e.g. *fun*, *key*, for more such items, see Denison 2017: 303) pattern like *freak* in that BrE surpasses AmE in its share of cases underdetermined for word class status but leaning towards adjective use or whether *freak* is the odd one out. This question can only be answered by quantitatively comparing *freak* to other cases of dual class membership (noun/adjective). If it turns out that other cases pattern like *freak*, this raises the more general question a) of whether BrE is more economic than AmE or b) of whether word class transitions should not be subsumed under the notion of economy.

7 Conclusions and outlook

In this paper, we have seen that, contrary to our expectations, web-based BrE comes out as having a higher degree of items crossing the nominal word class boundary than web-based AmE. Although the two varieties differ by a margin of no more than 15%, this difference is statistically very highly significant. In addition, the empirical findings have shown that nominal *freak* is almost exclusively restricted to the bigram *freak show(s)* in BrE and to the two bigrams *freak (side)show(s)* and *freak flag(s)* in AmE. By contrast, the set of bigrams allowed in the adjectival set is more varied. Here, empirical research has suggested that the semantic categorization suggested by the OED is a salient starting point but

that quantitative usage data allow for a more refined subclassification of adjectival *freak* in attributive position.

So far, this paper has been devoted to a quantitative analysis of 1,000 random tokens involving the lexeme *freak*. Future studies should definitely extend the research to include other originally nominal items that can now be used both as nouns and adjectives. While such items as *fun* and *key* have been explored in quantitative diachronic studies (see De Smet 2012), no one has as yet (quantitatively) compared how inclined BrE and AmE are towards word class changes (diachronically) or word class transitions (synchronically). In fact, Denison (2017: 303) presents a whole list of items undergoing gradient word class changes from nouns into adjectives. These involve, among others, the items *core*, *genius*, *killer*, *surprise*, *toy* and *designer*.

In a second step, we may want to extend the question of dual class membership beyond the noun > adjective set. Other potential cases include category changes from adjectives > adverbs (e.g. *real* functioning as an adverb, see e.g. Rohdenburg & Schlüter 2009: 367), adjectives > determiners (e.g. *certain*, *various*, *divers(e)*), verbs > adjectives (e.g. *frightened*, *injured*) and verbs > prepositions (e.g. *following*) (see the references provided in Section 2). We may argue that in all of these cases, the change is stepwise rather than immediate and complete (see also Denison 2017: 303), resulting in many cases underdetermined for word class membership in PDE. By exploring a representative sample of such items across contemporary BrE and AmE (preferably on the basis of a varied set of different registers), we will be able to answer the question of whether *freak* is just the odd one out or whether BrE is generally more open to word class transitions than AmE.

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