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Subjectivity, indefiniteness and semantic change[1]

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In this article I discuss article usage in NPs with subjective and objective adjectival premodifiers. The main topic of the article is the tendency of semantically subjective adjectives to be used in indefinite NPs. This correlation is independent of the frequency of the adjective, and the uneven article distribution becomes even more skewed when an overt indicator of subjectivity, such as *very* or *much*, is introduced to the NP. I explain this tendency in terms of accessibility: subjective modifiers provide the speaker with a way of expressing a personal evaluation of the referent, and this evaluation is typically new information in discourse. Consequently, subjective premodifiers strongly favour indefinite NPs. By contrast, objective modifiers often encode information that is typical of the referent or else accessible from context or through world knowledge. Because the information expressed by the modifier is accessible, the accessibility of the discourse referent itself determines article choice, and the distribution of articles is more even. I also show that the connection between subjectivity and indefiniteness may provide the linguist with a useful tool in semantic disambiguation and diachronic research. Case studies of two polysemous *-ing* participles, *moving* and *glowing*, show that when used as a nominal premodifier, the subjective sense of the word (e.g. *moving*, 'emotionally touching') strongly favours indefinite NPs over definite NPs. We will also see that when a participle (*outstanding*) or a noun (*key*) develops a subjective sense and undergoes category change to adjective, the new sense is particularly often used in indefinite constructions, and the semantic change and gradual adjectivisation of the word is mirrored in the gradual increase in the use of indefinite NPs.

1 Introduction

Recent research on adjectival modifiers has shown that certain adjectives are strongly connected with either the definite or indefinite article in language use. Generally, these studies have focused on the so-called post-deictic function of the adjective (Halliday 1994: 183), where the adjective helps the reader/hearer identify the referent or retrieve it from discourse. For example, Breban (2010: 257–8) notes that adjectives, such as *next*, *usual*, *only*, *same* and *main*, combine with the definite article to form a complex determiner (e.g. *the next*, *the same*), while words like *certain*, *further* and *specific* are used with the indefinite article in their identifying function: *a certain*, *a specific*. The close bond between the article and the secondary determiner can also be observed in the syntactic position of the adjectives: as part of a complex determinative element,

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these adjectives can only occur prenominally and cannot be used as predicatives. They also lack other features typical of central adjectives: they do not denote a property of the referent and cannot be coordinated with a descriptive adjective. In other words, they can be regarded as 'peripheral adjectives' (Breban 2010: 250). The boundary between primary and secondary determiners has been studied by, among others, Denison (2006), Davidse *et al.* (2008), Breban (2010) and Breban *et al.* (2011).

The above studies have all focused on the way adjectives acquire a secondary determiner function and become closely linked with the primary determiner. However, systematic studies on the connection between more descriptive adjectives and articles have, to my knowledge, been thus far a relatively neglected area of linguistic research. We do find some isolated observations of certain trends, but they are not followed up by detailed analyses. For example, Thompson (1988: 174–7) notes that her (rather small) data set of English conversations included only one prenominal adjective in a definite NP, while there were altogether 32 prenominal adjectives in indefinite NPs. Paradis (2000: 252; 2001: 60), on the other hand, notes that reinforcing adjectives, such as those in *an absolute bliss* or *a total mess*, typically occur in indefinite NPs. She comments on this briefly, saying that '[reinforcing adjectives] have a descriptive rather than an identifying function' (Paradis 2000: 252).

In this article it will be argued that we can arrive at an even more accurate explanation than the one offered by Paradis when the relative subjectivity/objectivity of the adjective is taken into account. I will argue that the connection between the descriptive function of the adjective and the indefiniteness of the NP observed by Paradis holds not only for reinforcing adjectives but also for a much larger class of adjectives that express the speaker's subjective evaluation of the referent ('subjective adjectives' for short). Importantly, the issue is not about the descriptive or characterising function as such: when more objective adjectives are used to describe the referent, there is no systematic correlation with indefiniteness.

As the focus of this article is on actual language use instead of potential syntactic realisations of articles and adjectives, the arguments formulated here are supported by case studies that draw their data from large corpora of Present-Day English: the 100-million-word *British National Corpus* (henceforth, the BNC) and the 450-million-word *Corpus of Contemporary American English* (COCA). The data for the diachronic studies are taken from the *Corpus of Historical American English* (COHA), a 400-million-word corpus of American English from 1810 to 2009.

The article is organised as follows. Section 2 will begin by providing a brief overview of the relevant theoretical issues. Section 3 introduces the main research question in more detail and offers some preliminary corpus findings regarding article usage with subjective and objective adjectives. Section 4 focuses on two constructions that are used to modify an adjective from a subjective standpoint (*very* ADJ and *much* ADJ-comp). Section 5 brings further support to the argumentation by introducing corpus studies of polysemous adjectives, where one sense of the word is clearly subjective (e.g. *moving*, 'emotionally touching') and the other more objective (e.g. *moving*, 'in motion'). Section 6 extends the topic to diachronic case studies of Participle > A

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(*outstanding*) and N > A category change (*key*), and the case studies are followed by conclusions and suggestions for further research in section 7.

2 Theoretical background

Subjectivity has been an increasingly important topic of linguistic research in recent decades (see e.g. Traugott 1982, 1989; Langacker 1990; Stein & Wright 1995; Athanasiadou *et al.* 2006; De Smet & Verstraete 2006; Davidse *et al*. 2010), but the term itself has been understood and used in various ways (De Smet & Verstraete 2006). First, subjectivity can be defined as 'speaker-relatedness' in very general terms, and in this sense it is an all-pervasive feature of language. Indeed, in his seminal paper Benveniste remarks that '[l]anguage is marked so deeply with the expression of subjectivity that one might ask if it could still function and be called language if it were constructed otherwise' (1971 [1958]: 225). According to this view, everything we say is in some way subjective, from the construction of discourse participants as *you* and *I* to describing objects as *nice* or *red*.

However, subjectivity can also be used in a narrower sense. Somewhat problematically (or at least inconveniently), the most prominent theoreticians of subjectivity, Traugott and Langacker, both define the term differently. For Langacker, subjectivity has to do with the speaker's role in the construal. If the speaker figures implicitly as an 'offstage locus' of an expression, as in *this person*, the construal is considered subjective (Langacker 2008: 77; De Smet & Verstraete 2006: 366). In an objective construal, on the other hand, the speaker's role is less prominent, and the focus is on the described entity (as in *the person sitting opposite Mike*).

Traugott, by contrast, defines subjective expressions as those 'the prime semantic or pragmatic meaning of which is to index speaker attitude or viewpoint' (2010: 32). In this article *subjectivity* is understood and used in Traugott's sense. The main distinction is made between semantically subjective adjectives (e.g. *interesting*, *pleasant*) and semantically more objective adjectives (e.g. *urban*, *empty*). In other words, the focus is specifically on form–meaning pairs that encode subjectivity (see e.g. Cuyckens *et al.* 2010: 4–5) instead of the more general kind of subjectivity discussed by Benveniste (see above). Importantly, subjectivity, as defined by Traugott, can also be applied to diachronic research. Many studies have convincingly shown that, especially in grammaticalisation, the direction of semantic change tends to proceed from more objective to more subjective meanings, i.e. expressions undergo *subjectification* (see e.g. Traugott 1982, 1989, 2010; Cuyckens *et al.* 2010, and the references therein).

The main finding of this article is the strong connection between the subjectivity of the adjectival modifier and indefiniteness, which will be discussed in terms of Accessibility theory (see e.g. Ariel 1990, 2001, 2007). According to Accessibility theory, the form of the NP chosen by the speaker correlates with the accessibility of its referent in discourse. For example, a highly accessible discourse topic or a close antecedent is usually referred to by a pronoun or even a zero, while referents that are harder to retrieve are referred to by a full definite NP (Ariel 1990: 73–4; see

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also Epstein 2002a: 345, 2002b: 49). Basically, the less accessible the referent is, the more explicit information the NP needs to encode for felicitous use (i.e. the more premodifiers and/or postmodifiers it must have; see Ariel 1990: 73, 2007: 285).[2] The data discussed in this article suggest that when it comes to subjective and objective adjectival modifiers, the accessibility of the information encoded by them is also relevant for the structure of the NP. Objective modifiers often encode information that is either typical of their referent or else inferable from the discourse context or through world knowledge. By contrast, subjective modifiers encode new information that is part of the speaker's mental world to which other discourse participants have no access. As a result, subjective premodifiers show a significant preference for indefinite marking, while objective premodifiers exhibit a more even article distribution. Moreover, when subjective premodifiers are used in a definite NP, the phrase is typically postmodified: the postmodifier limits the set of referents to a uniquely identifiable entity and allows for definite marking regardless of the accessibility of the referent and/or the information expressed by the modifier.

3 Descriptive adjectives and article usage: a preliminary investigation

In principle, there is nothing in English grammar that would prevent speakers of English from using different kinds of descriptive adjectives in both definite and indefinite noun phrases (Newmeyer 1998: 41–2). Let us therefore, just for the sake of discussion, play the devil's advocate and formulate a null hypothesis:

> The definiteness/indefiniteness of the article in a noun phrase is independent of the semantics of the descriptive adjectival premodifier or the point of view expressed by the phrase.

This hypothesis would lead us to expect that the frequency of phrases like *a nice man* and *the nice man* would, by and large, follow the average distribution of the definite and indefinite articles in the ART+ ADJ + N-Sg pattern, i.e. a singular noun phrase with an adjectival premodifier.[3] Alternatively, we might see word-specific preferences, where certain adjectives occur more often with either the definite or the indefinite article without forming a more general, linguistically motivated class. In other words, the differences in article profiles would be more or less random.

Considering the topic of this article, the null hypothesis could specifically state that there is no significant difference in article distribution regardless of the relative subjectivity of the modifier: adjectives expressing the speaker's evaluation and attitude (say, *awful*, *marvellous* or *beautiful*) would be expected to pattern similarly to more objective adjectives (say, *extant*, *semantic* or *global*) or, at the very least, there would

[2] I use the term *premodifier* interchangeably with *prenominal modifier* for both subjective and objective prenominal adjectives regardless of the specific form or function of the modifier. Likewise, *postmodifier* refers to a postnominal modifier regardless of its syntactic form.

[3] As the definite article patterns with both plural and singular heads and the indefinite article with singulars only, it is, of course, necessary to limit the comparison of articles to singular NPs.

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Table 1. *ART + ADJ + N-Sg in the BNC*

a(n) ADJ N-Sg	*the* ADJ N-Sg	Total
702,794 (52.5%)	636,317 (47.5%)	1,339,111 (100%)

Table 2. *The distribution of definite and indefinite articles with some high-frequency adjectives (BNC)*

ADJ	*a(n)* ADJ N-Sg	%	*the* ADJ N-Sg	%
good	17,797	92.2	1,514	7.8
new	20,337	53.4	17,730	46.6
old	3,337	27.5	8,779	72.5
great	11,252	68.7	5,134	31.3
high	4,381	50.7	4,260	49.3
small	11,033	80.1	2,740	19.8
large	9,212	86.5	1,440	13.5
important	5,176	83.8	1,002	16.2
long	9,806	77.1	2,907	22.9
young	3,407	55.6	2,717	44.4

be no reason to assume that either one of the groups would show systematic skewing with regard to article distribution.

As a first step, let us take a look at some corpus data from the BNC. The data in table 1 reveal that, overall, definite and indefinite articles occur with roughly even frequency in the ART + ADJ + N-Sg pattern, although the indefinite article is slightly more frequent of the two. The numbers in table 1 include all instances of a pattern where an article is followed by an adjective in the positive form and a singular noun.[4]

Now, our null hypothesis predicts that we should see a somewhat similar distribution of articles regardless of the semantics of the adjectival modifier. In order to put this hypothesis to the test, let us first see how some of the most frequent adjectives in the BNC are used prenominally. All adjectives in table 2 are included in the fourteen most frequent adjectives by lemma in the BNC (Leech *et al.* 2001).

Although the data in table 2 are unsorted and unanalysed, the numbers suggest that our null hypothesis, according to which the distribution of the definite and the indefinite articles follows the overall distribution of articles in the corpus (table 1), is not correct. Of the ten adjectives studied, only three show any indication of even distribution: *new*, *high* and *young*. In all the other cases, the distribution is heavily skewed. With *old*, the definite article is the clear winner: 72.5 per cent of all NPs with prenominal *old* occur

[4] It is important to point out that the query does not retrieve noun phrases as such, but rather a syntagm that includes an article, an adjective and a singular noun; as the BNC-web is not parsed, the singular noun following the adjective is not necessarily the head of the phrase. Therefore, the query should only be regarded as a simple heuristic. Also note that the data are skewed in favour of the definite article, as indefinite non-count NPs (e.g. *important information*) are not included in the figures.

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with the definite article. However, the opposite trend seems to be much more common: in the case of *good*, *great*, *small*, *large*, *important* and *long*, it is the indefinite article that wins out by a large margin.

On closer inspection, however, it seems that the variation is not entirely random either. First, some of the adjectives that favour the indefinite article are often used in quantifying expressions. For example, *a great deal (of)* occurs 3,971 times in the corpus, while *the great deal (of)* does not occur at all. Moreover, *a large number/amount (of)* (1,535) is partly responsible for tipping the scales in favour of the indefinite article in the case of *large*: *the large number/amount (of)* only yields 255 hits. It is clear that only adjectives of dimension (see e.g. Dixon 2005: 84) are semantically well suited to modify quantities (compare **a new/young amount of*), and consequently, other kinds of adjectives, such as *new* and *young*, show a more even distribution of articles (see also Brems 2011, especially section 4.5, for a discussion of premodification in measure noun constructions).

Second, in the case of *old*, which is the only adjective in the data that occurs markedly more often with the definite article, the definite article is strongly linked to (implied) contrastive usage. Although there are some frequent collocates, such as *the old man* (1,174 hits), that partly explain the prevalence of the definite article, a more likely explanation for the distribution may be found in one of the functions of the adjective where *old* means 'past' or 'former' (as opposed to 'present' or 'current'; see Davidse *et al*. 2008), as in examples (1) and (2) below:

(1) The problem with **the old board** was that it did not innovate and did not concern itself with exporting English hops. (A14 640)
(2) Yet as of 1922 the political reliability of the teachers was notoriously low: large numbers of them were remnants from **the old regime**. (A64 387)

Turning back to the adjectives that favour the indefinite article (esp. *good*, *great*, *important*), we may explain the skewed distribution by studying the meaning of the adjectives; these adjectives are more clearly used to express the speaker's internal evaluation of, and subjective stance towards, the modified referent than the adjectives with a more equal article distribution (*new*, *high*, *young*) or the lone adjective favouring the definite article (*old*). In other words, speakers are much more likely to agree that a certain referent is *new* or *young*, for instance, than that it is *good* or *important* (see also Paradis 2008: 324). Even if properties like *new* or *young* are certainly not entirely objective, they are much more so than *good* or *important*. This subjective viewpoint is also evident in the quantifying expressions mentioned above. Phrases like *a large amount (of)* or *a great deal (of)* provide the speaker with a means of expressing a subjective evaluation of a certain quantity.

It is clear, however, that by studying ten adjectives we can only draw preliminary conclusions about the way articles are connected with certain descriptive premodifiers. Moreover, the adjectives in table 2 are among the most frequent adjectives in English, which raises suspicion that a simple frequency effect might somehow explain the results better than the relative subjectivity of the adjectival modifiers. However, when we study

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Table 3. *Article distribution in subjective adjectival premodifiers of different frequencies (BNC)*

ADJ	Freq./ 1,000,000	*a(n)* ADJ N-Sg %	*the* ADJ N-Sg %	Def. NP + postmod. %
significant	121	94.3	5.7	75.2
successful	108	66.5	33.5	69.6
useful	101	96.3	3.7	84.4
interesting	96	85.9	14.1	59.9
considerable	96	91.4	8.6	95.1
attractive	52	86.7	13.3	57.6
vital	51	70.8	29.2	70.0
wonderful	49	89.6	10.4	74.8
terrible	47	80.6	19.4	71.8
funny	47	73.2	26.8	27.6
gentle	29	65.6	34.4	61.5
silly	29	73.3	26.7	14.9
pleasant	27	88.9	11.1	63.0
desperate	26	80.9	19.1	71.6
sophisticated	25	73.3	26.7	54.4
bizarre	11	76.6	23.4	75.0
embarrassing	11	75.8	24.2	72.2
delightful	11	79.6	20.4	66.7
vivid	10	82.7	17.3	77.1
disturbing	10	75.2	24.8	89.7

both subjective and objective adjectives of different frequencies, we see that the data strongly support our initial conclusions. The adjectives in tables 3 and 4 are handpicked from a frequency list of the BNC (Leech *et al.* 2001) based on an *a priori* evaluation of their relative subjectivity/objectivity.[5]

The data in tables 3 and 4 indicate that there is indeed a correlation between the subjectivity of the adjectival modifier and the use of the indefinite article. However, it is evident that handpicked and intuitively selected adjectives do not provide for a methodologically sound way of studying the connection between subjectivity and article usage. Therefore, to put the hypothesis to a more robust test, let us focus on constructions where subjectivity is overtly expressed. At this point we can also conclude

[5] Again, these data should only be considered as a preliminary step in the study as some of the adjectives have both objective and subjective senses (e.g. *grey*, 'grey colour' vs 'gloomy'; empty, 'containing nothing' vs 'meaningless'). However, a sample of the data indicates that these subjective uses are very rare. For instance, 91 out of 100 instances of *grey* denoted the colour, while 97 out of 100 instances of *empty* were used in the objective sense of 'containing nothing'. The tables also include data on the proportion of postmodified definite NPs out of all definite NPs, showing that subjectively premodified definite NPs show a strong tendency to appear with a postmodifier, while objectively premodified definite NPs occur more often without postmodification. I will discuss this matter in more detail in section 5.1.

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Table 4. *Article distribution in objective adjectival premodifiers of different frequencies (BNC)*

ADJ	Freq./ 1,000,000	*a(n)* ADJN-Sg %	*the* ADJ N-Sg %	Def. NP + postmod. %
industrial	116	36.0	64.0	19.8
military	108	45.2	54.8	42.8
professional	105	58.4	41.6	36.8
western	99	11.9	88.1	30.2
physical	95	31.1	68.9	51.9
urban	54	25.6	74.4	10.5
empty	54	52.2	47.8	16.7
Russian	52	15.6	84.4	20.0
external	49	41.0	59.0	25.9
grey	48	46.8	53.2	22.8
intellectual	25	32.5	67.5	73.6
medieval	25	43.5	56.5	25.1
linguistic	25	36.8	63.2	56.2
judicial	25	44.8	55.2	33.7
native	24	42.7	57.3	27.5
causal	12	52.5	47.5	40.4
homeless	11	48.7	51.3	20.0
evolutionary	11	36.1	63.9	28.6
conceptual	10	41.5	58.5	69.6
organisational	10	34.1	65.9	41.8

that our null hypothesis is not supported by the data and replace it with an alternative hypothesis: subjective adjectives favour indefinite constructions.

4 The effect of subjective expressions of degree on article usage

Whether or not something is considered to be *good*, *important*, *interesting* or *significant* is not only a matter of the subjective opinion of the speaker; the property expressed by the adjective is also a matter of degree. For example, we may evaluate something to be *very good* or *more interesting* than something else. Studying how adjectives are used in degree constructions provides us with a way to see whether the putative connection between speaker subjectivity and indefinite constructions is valid or not.

Based on our hypothesis, we may predict that if an expression includes a clear marker of (subjective) degree, this should have an effect on article usage. We already saw an indication of this in examples (1) and (2), where *old* was used in the sense of 'past' or 'former'. These uses typically occur with the definite article, and they cannot appear in degree constructions: **the very old board*, ∗*the older regime*. However, the focus of the following discussion will be on indefinite NPs, and the precise hypothesis is this: overt indicators of degree should result in a higher proportion of indefinite articles

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Table 5. *ART* + very + *ADJ* + *N-Sg (BNC)*

ADJ	*a very* ADJ N-Sg	%	*the very* ADJ N-Sg	%
good	1,253	98.7	16	1.3
new	16	94.1	1	5.9
old	100	96.2	4	3.8
great	140	89.2	17	10.8
high	385	88.3	51	11.7
small	515	94.5	28	5.5
large	461	90.2	50	9.8
important	395	94.0	25	6.0
long	445	96.5	16	3.5
young	86	88.7	11	11.3

compared to the simple ART + ADJ + N-Sg pattern. Specifically, I will study two syntactic manifestations of degree: the ART + *very* + ADJ + N-Sg pattern and the prenominal comparative construction intensified with the degree adverb *much* (e.g. *a*/*the much older/better/larger* N-Sg).

4.1 ART + very + *ADJ* + *N-Sg*

If our hypothesis is correct, we should see an increase in the use of the indefinite article when the degree modifier *very*, which is here considered to be an overt expression of subjectivity, is used to intensify the adjectival premodifier. Indeed, data on the high-frequency adjectives in table 5 strongly support this idea.

The data in table 5 show that, regardless of the distribution of articles in the simple ART + ADJ + N-Sg construction (table 2), the proportion of indefinite articles rises up to ∼90 per cent in the ART + *very* + ADJ + N-Sg pattern. The lowest proportion of indefinite articles is found with *high* (88.3%), and the highest with *good* (98.7%).

The 20 subjective adjectives that were studied in table 3 show a similar trend to the one seen in table 5 when they are intensified with *very*. However, as many adjectives appear very rarely in the ART + *very* + ADJ + N-Sg construction, it might be better to regard the following data simply as not disproving the hypothesis instead of providing strong support for it. In any case, of the 20 subjective adjectives, 17 show an increase in the proportion of indefinite articles with the introduction of *very* (table 6).[6]

[6] The three adjectives showing a reverse trend are *significant*, *considerable* and *successful*. In the case of *significant* and *successful*, the difference is minute (94.3% > 93.0% and 91.4% > 91.3%, respectively), and even with *considerable*, indefinite NPs are still much more common than definite NPs when *very* intensifies the adjective (the proportion of indefinite articles decreases from 85.9% to 75.6%).

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Table 6. *The proportion of definite and indefinite articles in the ART* + very + *ADJ* + *N-Sg pattern (BNC)*

ADJ	*a very* ADJ N-Sg	%	*the very* ADJ N-Sg	%
significant	66	93.0	5	7.0
interesting	113	97.4	3	2.6
useful	134	97.8	3	2.2
considerable	65	75.6	21	24.4
successful	84	91.3	8	8.7
attractive	89	97.8	2	2.2
wonderful	8	100	0	0
terrible	1	100	0	0
funny	31	100	0	0
vital	6	100	0	0
gentle	13	100	0	0
silly	9	90	1	10
pleasant	80	96.4	3	3.6
desperate	1	100	0	0
sophisticated	15	88.2	2	11.8
bizarre	1	100	0	0
disturbing	7	87.5	1	12.5
embarrassing	3	100	0	0
vivid	7	87.5	1	12.5
delightful	1	100	0	0

Table 7. *Article distribution in the ART* + *ADJ-comp* + *N-Sg construction with ten frequent adjectival modifiers (BNC)*

ADJ	*a(n)* ADJ-comp N-Sg	%	*the* ADJ-comp N-Sg	%
good	3,298	88.4	434	11.6
new	26	35.1	48	64.9
old	403	33.9	787	66.1
great	2,080	70.3	878	29.7
high	1,817	71.4	727	28.6
small	717	65.3	381	34.7
large	1,056	67.0	521	33.0
important	84	63.6	48	36.4
long	511	54.1	434	45.9
young	276	35.1	510	64.9

4.2 ART + much + *ADJ-comp* + *N-Sg*

The starting point with the comparative construction is rather similar to the basic ART + ADJ + N-Sg construction, where we found a certain amount of variation in article distribution (table 7).

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Table 8. *ART* much *ADJ-comp N-Sg (BNC)*

ADJ	*a much* ADJ-comp N-Sg	%	*the much* ADJ-comp N-Sg	%
good	193	100	0	0
new	1	100	0	0
old	25	83.3	5	16.7
great	232	90.5	25	9.5
high	164	91.6	15	8.4
small	146	90.7	15	9.3
large	193	90.6	20	9.4
important	20	87.0	3	13.0
long	57	87.7	8	12.3
young	17	89.5	2	10.5

Again we see that some adjectives favour the indefinite article, while others occur more often with the definite article; the distribution is not even, and there is no apparent trend to be found. The adjectives that favour the definite article are *new* and *young*, i.e. the same words that did not show any preference for either article in the basic (positive) ART + ADJ + N-Sg construction, and *old*, which was used more often with the definite article in the positive construction.[7]

We already saw that the introduction of *very* significantly increased the proportion of indefinite articles with high-frequency adjectives (table 5). Let us now take a look at the comparative construction to see if it behaves similarly when an overt indicator of degree and subjectivity, in this case *much*, intensifies the adjective (table 8).

The results are strikingly similar to what we saw earlier with *very*: the data are heavily skewed in favour of the indefinite article.

Unfortunately, the ART + *much* + ADJ-comp + N-Sg construction is relatively infrequent, and it is therefore not possible to make a valid comparison of the subjective and objective adjectives of different frequencies that were studied in tables 3 and 4. It can be pointed out, however, that 13 of these 40 adjectives do occur in the ART + *much* + ADJ-comp + N-Sg construction in the BNC. Pooled together, there are altogether 30 tokens, and in each case the adjective is semantically subjective and the article indefinite.

5 Subjective and objective polysemies

Knowledge of the correlation between indefiniteness and subjectivity can also be applied to the study of polysemous words. In particular, the correlation may be useful in corpus annotation, where words are automatically assigned a word class label. In this

[7] *New*, *old* and *young* do form a semantically coherent class, as pointed out by an anonymous referee. However, their detailed analysis apart from the subjective/objective distinction lies outside the scope of this article.

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Table 9. *Article distribution with subjective and objective senses of* moving *(BNC)*

moving	'touching' (subj.)	%	'that moves' (obj.)	%
a moving N-Sg	69	82.1	137	55.5
the moving N-Sg	15	17.9	110	44.5
TOTAL	84	100.0	247	100.0

section I will take a look at two *-ing* participles, *moving* and *glowing*, which both have a relatively objective sense that corresponds to the basic (physical) sense of the verbs *to move* and *to glow*, respectively. As these *-ing* forms do not behave syntactically like adjectives (apart from their potential to be used prenominally), they could be analysed (and annotated) as verbs, not adjectives. The subjective senses, by contrast, behave like central adjectives. For example, they can be modified by degree modifiers (e.g. *very moving*) and appear as predicatives (e.g. *the review was glowing*).

In this section I will also discuss the underlying reasons for the correlation between subjectivity and indefiniteness. I will argue that objective modifiers can express meanings that are accessible in connection with the referent they modify; they may describe properties that are either typical of their referents or otherwise accessible through contextual factors or shared world knowledge. This allows for their frequent use in short definite NPs. By contrast, subjective modifiers are used to make a comment on the referent by imposing on it a property that is less accessible. As a result, subjective modifiers favour indefinite NPs. Furthermore, when they are used in definite NPs, the phrase is typically postmodified, which suggests that definite marking is a consequence of the reference-limiting function of the postmodifier.

5.1 Moving

Let us begin by studying two senses of *moving* that are maximally apart in terms of subjectivity. The objective sense studied is '[something] that moves or passes from one place, position, or posture to another . . . not fixed or stationary, in motion' (*OED*, 2nd edn, s.v. *moving*, 1a), while the subjective sense is '[something] producing strong emotion, esp. sadness or sympathy; touching, affecting' (*OED*, s.v. *moving*, 4).

Data from the BNC (see table 9) indicate that the more objective sense ('that moves') does not show a clear preference for either article (55.5% indefinites vs 45.5% definites), whereas the subjective sense ('emotionally touching') occurs much more often with the indefinite article (82.1% vs 17.9%).

When it comes to indefinite NPs, the objective sense of *moving* usually expresses information that is accessible either because it can be considered a typical property of the referent, as in (3), or because the information expressed by the modifier has been

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established in prior discourse, as in (4). In both examples, the modifier functions both to describe a discourse referent and to introduce it to the discourse.

(3) He was shown a blurred photograph, taken from **a moving car**, of a thief, an enemy of the state. (CLD 2177)
(4) A good example of a simple problem made complex is movement discrimination. To understand the problem we need to look at **a moving object** from the point of view of a single cell in the visual cortex. (CMH 1430)

Examples (3) and (4) illustrate that even if the information encoded by the modifier is accessible information, the fact that the discourse referent itself is new information triggers indefinite marking. In other words, there are competing motivations for definite and indefinite marking, and in these cases it is the information status of the referent that is more relevant.

The significant difference between subjective and objective modifiers in indefinite NPs is that while the more objective modifiers often express accessible information, subjective modifiers express new information. Typically, the subjective adjective is used to make a personal comment about another discourse referent, as in (5), where *leaving the Harrow* is described as *a moving experience*. In (6), on the other hand, the modified NP does not point to another NP: the letter has not been mentioned before, and the modifier is used both to evaluate the referent and to introduce it to the discourse.

(5) Leaving the Harrow was **a moving experience** in many ways for John and Maureen. (A14 813)
(6) **A moving letter**, written in May 1944, may help to explain the welcome which the National Health Service received four years later. (CMG 1025)

The difference in the accessibility of the information encoded by subjective and objective modifiers is perhaps even more evident when we consider how the modifiers are used with the definite article. Following Epstein (2002a: 333, 2002b: 49), I take the basic meaning of the definite article to signal the accessibility of a discourse referent (Epstein 2002a: 348). Indeed, when the definite article is used with the objective sense of *moving* ('that moves'), we find that both the objective premodifier and the head of the NP signal accessible information, as in (7)–(9). Again, movement is something that is either considered to be typical of the referent, well established in previous discourse or available through world knowledge:

(7) The footsteps halted, and she could see the beam of the lantern swing from side to side. [. . .] Not even hearing the rolling crackle above, she was conscious only of **the moving light** . . . (HGV 467)
(8) Ell screamed. A huge snake was unravelling from a tree, sliding along the forest floor. His left foot was trapped beneath **the moving snake**. (HTY 1320)
(9) We step backwards towards the car. [. . .] He seems eager to talk right up until we finally bid him goodbye through **the moving car window**. (HH0 2580)

In (7), *the moving light* is highly accessible because the writer has already mentioned a lantern swinging from side to side. Therefore, both the movement (*swing*) and the light (*lantern*) are accessible. The same is true for (8), where the snake and its movement

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(*sliding*) have been established in prior discourse, while in (9), the *car window* is accessible through the prior mention of *the car*. The movement of the car window is accessible through world knowledge: we know that car windows can be opened and closed, and this is why a modifier like *moving* can readily be used as a modifier to *car window* in a short definite NP.

By contrast, when a subjective premodifier is used in a definite NP, the phrase usually expresses discourse-new information. In examples (10)–(13) the author expresses a personal evaluation of the referent, and this opinion is not accessible to the reader before reading the phrase.

(10) Serious negotiations for James's return began only after the deaths of Albany and of Henry V of England, and after he had married the Duke of Somerset's daughter, Joan Beaufort, for whom he wrote **the moving love poem King's Quair**. (EF2 679)
(11) MANY people have contacted our office since the showing of **the moving film 'Wide-Eyed and Legless'** (on BBC on Sunday last), saying that their friends and relatives received an insight into the illness Myalgic Encephalomyelitis (ME) which they had not appreciated before. (K2Y 411)
(12) The Franco-Prussian war was at this time still a recent memory, and German mathematicians quickly suspected that nationalistic sentiment lay behind the accusations directed at their adopted son. There is an echo of their reaction in **the moving tribute to Minkowski delivered after his premature death in 1909 by the greatest mathematician of the age**. (B7N 1345)
(13) Helen Attwell tells **the moving story of how she discovered what happened to her brother and his crew on their last heroic flight in September 1940**. (CLU 1660)

In each example the premodifying adjective serves the dual function of describing and introducing a new discourse referent. However, the property denoted by the subjective adjective is not typical of the referent, nor is it accessible through prior discourse or world knowledge. For example, as new discourse referents, both (10) and (11) would be quite incomprehensible without the appositive noun phrases *King's Quair* and *Wide-Eyed and Legless*, respectively. Similarly, constructing the referent just as *the moving tribute* in (12) would suggest that the phrase signals accessible information, while in fact it does not; it is also a new discourse referent with low accessibility. The long postmodifier limits the reference to the extent that the definite article can be used, but without the postmodifier the phrase would probably be indefinite. The same is true for (13), where the prepositional phrase contains information that is essential for making the NP definite. Otherwise we would probably find an indefinite description: *Helen Attwell tells a moving story*. Moreover, in each example the definite article is more or less interchangeable with the indefinite article. For instance, (13) is perfectly well formed as *Helen Attwell tells a moving story of how she discovered what happened to her brother and his crew*. In other words, the use of the definite article with subjective premodifiers is largely due to the postmodifier that serves to limit the set of potential referents and overrides the unmarked choice of expressing new information with the indefinite article. These data are also in line with the larger data sets in tables 3 and 4, where the proportion of postmodified definite NPs was consistently larger for subjective adjectives than for objective adjectives with only few exceptions.

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Table 10. *Postmodified definite NPs with* moving *(BNC)*

moving	'touching' (subj.)	Postmodified	% post-modified	'that moves' (obj.)	Post-modified	% post-modified
the moving N-Sg	15	14	93.3	110	19	17.3

Table 10 shows the different postmodification tendencies for the two senses of *moving* in definite NPs.

5.2 Glowing

Glowing is another example of a word that has several senses, one of which is clearly more subjective than the others. The basic sense of the word is related to the glow caused by a physical burning process; it describes something 'that is in a glow from the action of heat; burning, incandescent' (*OED*, s.v. *glowing*, 1).

(14) **A glowing ember** landed on the wizard. (HA3 1576)
(15) He took the cigarette out of his mouth and blew on **the glowing tip**. (ALL 2082)

The second sense of *glowing* given in the *OED* is 'brilliantly luminous; brilliant, rich, and warm in colouring; also, having the glow or exuberant colouring of excitement or health' (*OED*, s.v. *glowing*, 2). However, when considering the different meanings of *glowing* in terms of subjectivity, it seems that this definition conflates two senses, one of which is relatively objective (examples (16) and (17)), and another one which is more subjective (examples (18) and (19)):

(16) Then he laid her on the bed and feasted his eyes on her, slender and seductive, totally naked except for **the glowing ruby** that flashed fire whenever she moved her hand. (JY2 4023)
(17) Bernice, on the Doctor's heels, saw **the glowing blue curve of a planet** set against the darkness of space. (F9X 2290)
(18) Merrill smiled at **the glowing face** and said, 'Yes, I'd love to see it . . . ' (HA7 4090)
(19) She turned to them with **a glowing smile**. (AEB 1428)

In (16) and (17), the glow of the ruby/curve of the planet is not produced by something burning physically. However, the luminosity of the entities is still a physically observable and objective fact, something that is either typical of the referent (*ruby*) or accessible through general knowledge (*curve of a planet*). By contrast, the glow of a face or a smile represents a metaphorical and more subjectively construed use of *glowing*. Nevertheless, even this metaphorical use of *glowing* is more objective than the most subjective sense of the word: 'ardent, impassioned, fervid' (*OED*, s.v. *glowing*, 3), as in (20) and (21):

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Table 11. *Definite and indefinite articles with different senses of* glowing *(BNC)*

	'in a glow from heat; luminous'	%	Post-modified	%	'impassioned'	%	Post-modified	%
a glowing N-Sg	43	47.3			33	89.2		
the glowing N-Sg	48	52.7	16	33.0	4	11.8	3	75.0
TOTAL	91	100.0			37	100.0		

(20) It would not have been difficult to fill this page with **a glowing report** based entirely on first impressions. (AMW 493)
(21) **A glowing profile** by a local journalist of the time said: 'There's nothing of the ruthless businessman in him.' (AHN 463)

The differences in article profiles are most evident when we compare the most objective senses of *glowing* ('in a glow from the action of heat'; 'brilliantly luminous') with the most subjective sense ('ardent, impassioned'). The data in table 11 show that while indefinite and definite NPs are quite evenly distributed with the objective sense, the subjective sense, 'impassioned', shows a massive preference for indefiniteness: in this sense, *glowing* occurs in indefinite NPs 89.2 per cent of the time. Moreover, the postmodification patterns are similar to *moving*. Only 25 per cent of the objective senses occur with a postmodifier, while the corresponding figure for the subjective sense is 75 per cent (the data are admittedly scarce, however).

To sum up this section, we may conclude that in both case studies the correlation between the subjective sense of the modifier and indefiniteness is a useful tool for semantic disambiguation: subjective premodifiers occur very rarely in definite NPs, and therefore it is probable that in phrases like *the moving* N-Sg or *the glowing* N-Sg we are dealing with the objective sense of the word, especially if the phrase is not postmodified. This observation is interesting for the purposes of corpus annotation: as the objective senses of *moving* and *glowing* are regular *-ing* participles of the verbs *to move* and *to glow*, respectively, there are good grounds for categorising them as verbs, not adjectives. By contrast, the subjective senses behave syntactically like central adjectives and should also be categorised as such. This would make corpus annotation more accurate and allow for more reliable data retrieval.

6 Diachronic studies

So far we have studied the connection between subjectivity and indefiniteness from a synchronic perspective. In this section I will introduce two case studies which show that the skewed article distribution has uses in diachronic research as well. The idea is simple: if a relatively objective word gains a more subjective sense in the course of its

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history, then we should be able to see signs of this development in article distribution. More specifically, we would expect to see a rise in the frequency of the indefinite article. This, in turn, helps us estimate when the new meaning developed and allows us to study the semantic change in detail.

6.1 Outstanding

Outstanding is a good candidate for a diachronic case study as the *OED* gives it two relatively frequent, objective senses, which are still in use, and a very frequent subjective sense. These are:

1. That stands or juts out; projecting, prominent.
2. That continues in existence or remains to be dealt with; *esp*. (of a sum of money) unsettled, unpaid.
3. That stands out from the rest; noteworthy. Also: remarkable, exceptionally good.

Now, the first two meanings are clearly more objective than the third one. However, the third sense is somewhat problematic: it is evident that the sense of being 'remarkable' or 'exceptionally good' is more subjective than just 'standing out' in a neutral way. Moreover, it seems to me that 'exceptionally good' is a stronger expression of subjectivity than 'remarkable' as it unambiguously places the property denoted by the adjective to the extreme (positive) end of the scale of evaluation.

Corpus data suggest that the most subjective sense ('exceptionally good') is the prevailing sense of *outstanding* in Present-Day English. For example, there are 68 instances of prenominal *outstanding* from 2000–9 in the COHA, and only two of these can be understood in a neutral way; all the rest are unambiguously positive. Examples (22)–(24) illustrate the predominant present-day usage:

(22) He was the best tennis player in the community and **an outstanding baseball player**. (2002)
(23) We've talked to people, Mr. Cole. You've **an outstanding reputation** for diligence, and your integrity is above reproach. (2005)
(24) It will be **an outstanding conference** this fall. (2006)

However, the situation was very different less than a century ago. Examples (25)–(27) illustrate that *outstanding* was also commonly used in neutral context in the early 1900s.

(25) It is possible to say that excessive individualism is **an outstanding curse** of American civilization, and that absence of individualism is our marked deficiency. (1922)
(26) **An outstanding weakness** of this approach in its simple form consists in the lack of explanation of how and why these responses are what they are. (1929)
(27) The affair of the Italian bombers was easily **the outstanding event** of a bloody and nerve-wracking week. It not only meant that Spain's Civil War had now passed beyond the Pyrenees, but that for the first time, Fascism, like Communism, had become an international force. (1936)

Indeed, it is not until the 1930s that we see a clear preference for *outstanding* to be used in positive contexts, and the present-day situation, where neutral uses are extremely rare, is only established in the 1970s, as shown in table 12.

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Table 12. *Positive and neutral readings of* outstanding *in singular NPs, 1910–2009, COHA*

	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Positive	9	71	107	111	122	96	58	90	73	68
Neutral	13	66	47	36	20	16	2	4	0	2
TOTAL	22	137	154	147	142	112	60	94	73	70

Table 13. Outstanding *as 'standing out in a positive way' or 'exceptionally good' in singular NPs (COHA)*

	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
indef.	2	34	63	79	89	73	47	71	64	60
def.	7	37	44	32	33	23	11	19	9	8
TOTAL	9	71	107	111	122	96	58	90	73	68

While careful data analysis is always crucial, we can still use the knowledge about the connection between indefiniteness and subjectivity as a quick-and-easy diagnostic of semantic change. Table 12 shows that the proportion of positive (i.e. the most subjective) readings of *outstanding* grows significantly in the 1930s. Interestingly, this is also the decade that marks an increase in the proportion of indefinite NPs with prenominal *outstanding*, as shown in table 13.

Even raw corpus data yield similar results: counting the proportion of indefinite NPs in all the different senses of *outstanding* reveals that the correlation between subjectivity and indefiniteness can be used as a diagnostic of semantic subjectification even without conducting a semantic analysis of the data. Figure 1 illustrates this.

6.2 Key

Let us conclude our investigation by studying the semantic change of *key*, a word that has previously been studied by Denison from the perspective of category change (see also Aarts 2007: 132–3). Denison notes that *key* has gradually lost some of its 'nouniness' and gained adjectival uses (see e.g. Denison 2001, 2007, in prep.). He distinguishes two senses of *key* that are relevant for the category change of *key* and also for our discussion: '[t]hat which serves to open up, disclose, or explain what is unknown, mysterious, or obscure; a solution or explanation' (*OED* s.v. *key* n., 6a), as in *the key to his success*, and a more recent sense of 'dominant, controlling, chief, essential; esp. designating some person or thing that is of crucial importance to others' (*OED* s.v. *key*, 17b).

The historically prior explanatory sense (*OED*, 6a) points to a unique factor that can explain a certain phenomenon, and it is therefore predominantly used with the definite article. The 'crucial' sense (*OED*, 17b), by contrast, may point to one explanatory factor

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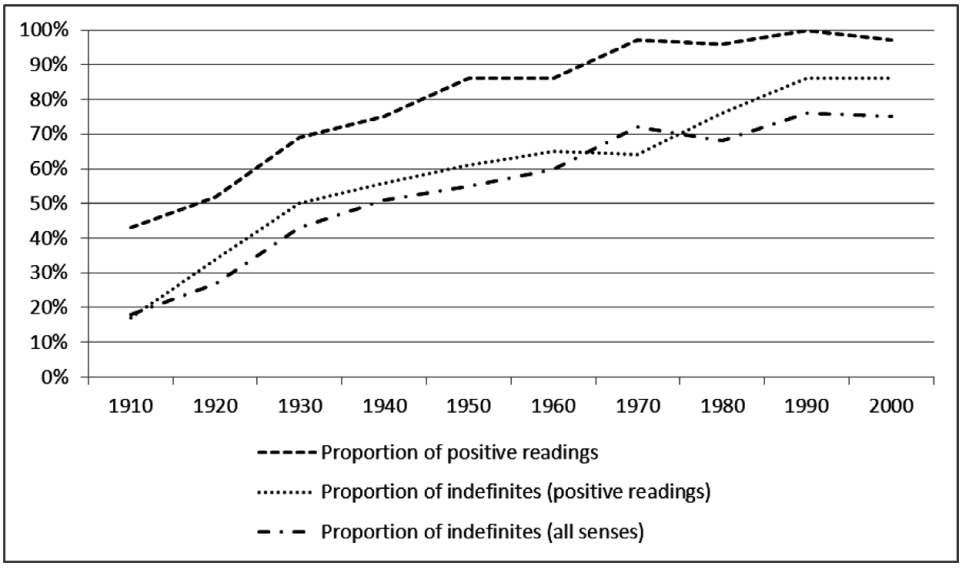


Figure 1. *Prenominal* outstanding*: the proportion of positive readings and the proportion of indefinite NPs of the positive readings and all senses (COHA)*

out of many, and the sense is close to 'extremely important'. Hence, it can readily be used in indefinite NPs as well, as in (28) and (29):

(28) But, looking back at coverage of two decades ago, one finds that the press played **a key part** in promulgating the view that Indochina was an area of vital interest to the United States. (COHA, 1971)
(29) Bashir was **a key figure** behind the extensive sightseeing tours for Henry Kissinger during his Middle East peace shuttles . . . (COHA, 1975)

Denison (in prep.) notes that *key* starts to appear with adjectival syntax with increasing frequency from the 1970s onwards. For example, the earliest predicative use of *key* without an article comes from 1970:

(30) Two ideas were **key** in the discovery of the kinoform. (*OED*, 1970)

This roughly coincides with the first corpus example of a prenominal use of *key* with a degree modifier (31). However, it must be pointed out that both degree modifiers and comparatives/superlatives used with *key* are rare, although some isolated instances can be found in the COCA (examples (32)–(34)):

(31) I think the role of the ambassador in the Soviet Union is **a very key one**. (COHA, 1964)
(32) So therefore that was **more key** to you than Mark Fuhrman or the race issue . . . (COCA, 1995)
(33) But there's another piece of equipment **even more key** to his independence. (COCA, 2003)
(34) General Lute was one of **the most key resistors** of this idea. (COCA, 2007)

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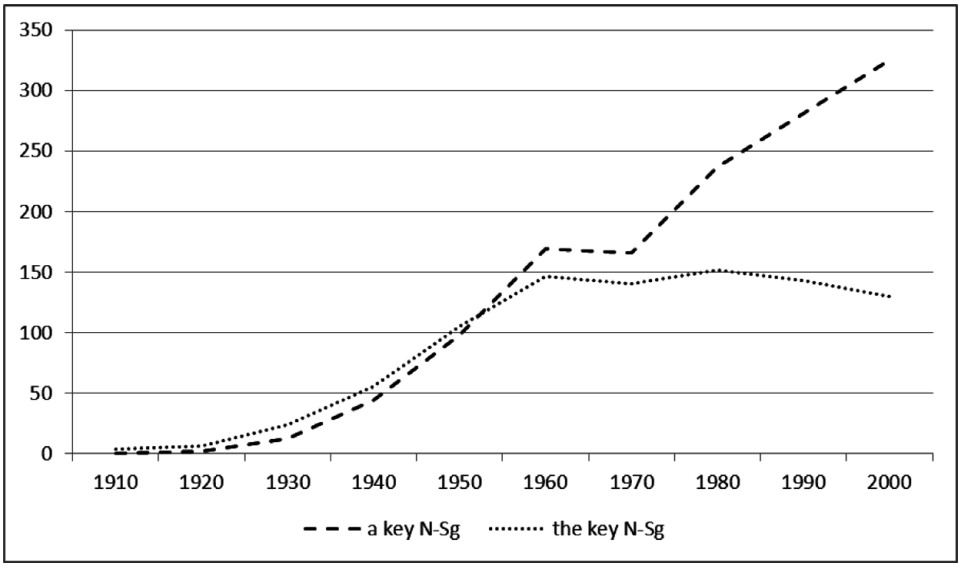


Figure 2. *The frequency of the definite and indefinite articles with* key *as a premodifier (1910–2009, COHA)*

Detailed semantic analysis of *key* is problematic, as Denison (in prep.) also observes, because the two relevant senses of *key* are closely connected. However, corpus data reveal that there has been an increase in the proportion of indefinite NPs since the 1970s, which suggests that it is the 'crucial' or the 'extremely important' sense that has become more common. Significantly, this development corresponds well to the time when we start seeing the first signs of the word's functional expansion (examples (30) and (31)).

To sum up, the data presented in figure 2 complement Denison's distributional analysis. The article profiles show that the semantic change of *key* (from its 'explanatory' sense to the 'crucial' sense) started to pick up speed in the 1970s, but the change has been ongoing up to the present day. Therefore, observing the changes in the article profiles provides us with a method for studying the semantic side of the adjectivisation process.

7 Conclusions

In this article I have discussed the correlation between semantically subjective premodifiers and NP indefiniteness. As this correlation has not been discussed in previous literature, much of this study has concentrated on providing evidence for the existence of the phenomenon, while also discussing its underlying reasons. I have suggested that the connection between subjective premodifiers and indefinite NPs can be explained in terms of information structure. Objective modifiers are often used to express accessible information: they denote properties that are typical of the referent,

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or accessible from context or through world knowledge. This makes them well suited for both indefinite and definite descriptions, and article choice is governed by both the accessibility of the modified discourse referent and the information encoded by the adjective. By contrast, subjective modifiers provide the speaker with a way of expressing a personal evaluation of the referent. This is typically new information, which is why subjective modifiers tend to be used in indefinite NPs. When they occur in definite NPs, the phrase is usually postmodified. The postmodifier serves to narrow down the set of possible referents and allows for the definite marking of the NP, even when the referent is new in discourse. I have suggested that in addition to its theoretical interest, this phenomenon can be used as a tool in the semantic disambiguation of polysemous senses, word-class annotation, as well as in studies of semantic change, where a significant increase in the proportion of indefinite NPs is indicative of the development of a new, more subjective meaning.

In the diachronic studies of *outstanding* and *key* the introduction of the subjective sense was accompanied by a gradual increase in the proportion of indefinite NPs. In the case of *outstanding*, this gradualness can be regarded as a natural consequence of pragmatic strengthening (Traugott 1989; Traugott & König 1991; Hopper & Traugott 1993). First, 'standing out' has a more neutral meaning, but the increased frequency of the positive environments in which the participle is used provides a basis for further semanticisation into 'exceptionally good'. For *key*, on the other hand, the semantic change is rather subtle, which may explain why the increase in the proportion of indefinite NPs is gradual. The increased frequency of indefinite NPs also goes hand in hand with the observed increase in adjectival syntax (e.g. comparative forms, the use of degree modifiers) in recent decades, which reveals an interesting link between semantic change (subjectification), category change (adjectival syntax) and a syntactic tendency (increased proportion of indefinite NPs).

The results of this study may also be useful for more technically minded linguists. For example, parts-of-speech taggers and syntactic parsers operate on probabilistic information, and syntactic tendencies, such as the correlation observed in this article, may be valuable for automatic corpus annotation. As it stands, many corpora provide a rather simplified analysis of word classes. For example, in the BNC-web the word class of *moving* is tagged as an adjective in both *the moving train* and *a moving experience*. In this particular case, we could achieve 91 per cent precision in the annotation by simply telling the tagger that all instances of a prenominal *moving* with a definite article are verbs (i.e. they denote physical motion). Ultimately, of course, the precision of such an approach is dependent on the relative frequency of different senses, but nevertheless, the idea would certainly merit further consideration.

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References

Aarts, Bas. 2007. *Syntactic gradience. The nature of grammatical indeterminacy*. Oxford: Oxford University Press.

Ariel, Mira. 1990. *Accessing noun phrase antecedents*. London and New York: Routledge.

Ariel, Mira. 2001. Accessibility theory: an overview. In Ted Sanders, Joost Schilperoord & Wilbert Spooren (eds.), *Text representation: Linguistic and psycholinguistic aspects*, 29–87. Amsterdam: John Benjamins.

Ariel, Mira. 2007. A grammar in every register? The case of definite descriptions. In Nancy Hedberg & Ron Zacharsky (eds.), *The grammar–pragmatics interface: Essays in honour of Jeanette K. Gundel*, 265–92. Amsterdam and Philadelphia: John Benjamins.

Athanasiadou, Angeliki, Costas Canakis & Bert Cornillie (eds.). 2006. *Subjectification. Various paths to subjectivity*. Berlin and New York: Mouton de Gruyter.

Benveniste, Emile. 1971 [1958]. Subjectivity in language. In *Problems in general linguistics*, 223–30, trans. Mary Elizabeth Meek. Coral Gables, FL: University of Miami Press.

Breban, Tine. 2010. Is there a postdeterminer in the English noun phrase? *Transactions of the Philological Society* 108(3), 248–64.

Breban, Tine, Kristin Davidse & Lobke Ghesquière. 2011. Types of phoric relations expressed by complex determiners in English. *Journal of Pragmatics* 43, 2689–703.

Brems, Lieselotte. 2011. *Layering of size and type noun constructions in English*. Berlin: Mouton de Gruyter.

Cuyckens, Hubert, Kristin Davidse & Lieven Vandelanotte. 2010. Introduction. In Davidse, Vandelanotte & Cuyckens (eds.), 1–26.

Davidse, Kristin, Tine Breban & An Van linden. 2008. Deictification: The development of secondary deictic meanings by adjectives in the English NP. *English Language and Linguistics* 12(3), 475–503.

Davidse, Kristin, Lieven Vandelanotte & Hubert Cuyckens (eds.). 2010. *Subjectification, intersubjectification and grammaticalization*. Berlin and New York: Walter de Gruyter.

Denison, David. 2001. Gradience and linguistic change. In Laurel Brinton (ed.), *Historical linguistics 1999: Selected papers from the 14th International Conference on Historical Linguistics, Vancouver, August 1999* (Current Issues in Linguistic Theory 215), 119–44. Amsterdam: John Benjamins.

Denison, David. 2006. Category change and gradience in the determiner system. In Ans van Kemenade & Bettelou Los (eds.), *The handbook of the history of English*, 279–304. Oxford: Blackwell.

Denison, David. 2007. Playing tag with category boundaries. In Anneli Meurman-Solin & Arja Nurmi (eds.), *Annotating variation and change* (Studies in Variation, Contacts and Change in English 1). Helsinki: Research Unit for Variation, Contacts and Change in English. Available online at: www.helsinki.fi/varieng/journal/volumes/01/denison/

Denison, David. 2010. Category change in English with and without structural change. In Elizabeth Closs Traugott & Graeme Trousdale (eds.), *Gradience, gradualness and grammaticalization* (Typological Studies in Language 90), 105–28. Amsterdam and Philadelphia: John Benjamins.

Denison, David. In prep. *English word classes: Categories and their limits* (Cambridge Studies in Linguistics). Cambridge: Cambridge University Press.

De Smet, Hendrik & Jean-Christophe Verstraete. 2006. Coming to terms with subjectivity. *Cognitive Linguistics* 17–3, 365–92.

Dixon, R. M. W. 2005. *A semantic approach to English grammar*, 2nd edn. Oxford: Oxford University Press.

Epstein, Richard. 2002a. The definite article, accessibility, and the construction of discourse referents. *Cognitive Linguistics* 12(4), 333–78.

https://doi.org/10.1017/S1360674312000354 Published online by Cambridge University Press

Epstein, Richard. 2002b. Grounding, subjectivity and definite descriptions. In Frank Brisard (ed.), *Grounding: The epistemic footing of deixis and reference* (Cognitive Linguistics Research 21), 41–82. Berlin and New York: Mouton de Gruyter.
Halliday, M. A. K. 1994. *An introduction to functional grammar*, 2nd edn. London: Arnold.
Hopper, Paul & Elizabeth Closs Traugott. 1993. *Grammaticalization*. Cambridge: Cambridge University Press.
Langacker, Ronald W. 1990. Subjectification. *Cognitive Linguistics* 1, 5–38.
Langacker, Ronald W. 2008. *Cognitive grammar: A basic introduction*. Oxford: Oxford University Press.
Leech, Geoffrey, Paul Rayson & Andrew Wilson. 2001. *Word frequencies in written and spoken English: Based on the British National Corpus*. Harlow: Longman.
Newmeyer, Frederick. 1998. *Language form and language function*. Cambridge, MA: MIT Press.
OED = *The Oxford English Dictionary*, vols. 1–20, ed. J. A. Simpson & E. S. C. Weiner (1989). 2nd edn. Oxford: Clarendon Press.
Paradis, Carita. 2000. Reinforcing adjectives. A cognitive semantic perspective on grammaticalization. In Ricardo Bermúdez-Otero, David Denison, Richard M. Hogg & C. B. McCully (eds.), *Generative theory and corpus studies* (Topics in English Linguistics 31), 233–58. New York: Mouton de Gruyter.
Paradis, Carita. 2001. Adjectives and boundedness. *Cognitive Linguistics* 12, 47–64.
Paradis, Carita. 2008. Configurations, construals and change: Expressions of DEGREE. *English Language and Linguistics* 12(2), 317–43.
Stein, Dieter & Susan Wright (eds.). 1995. *Subjectivity and subjectification: Linguistic perspectives*. Cambridge: Cambridge University Press.
Thompson, Sandra A. 1988. A discourse approach to the cross-linguistic category 'adjective'. In John A. Hawkins (ed.), *Explaining language universals*, 167–85. Oxford: Blackwell.
Traugott, Elizabeth Closs. 1982. From propositional to textual and expressive meanings: some semantic-pragmatic aspects of grammaticalization. In Winfred P. Lehmann & Yakov Malkiel (eds.), *Perspectives on historical linguistics*, 245–71. Amsterdam: Benjamins.
Traugott, Elizabeth Closs. 1989. On the rise of epistemic meanings in English: An example of subjectification in semantic change. *Language*, 31–55.
Traugott, Elizabeth Closs & Ekkehard König. 1991. The semantics–pragmatics of grammaticalisation revisited. In Elizabeth Closs Traugott & Bernd Heine (eds.), *Approaches to grammaticalisation*, vol. 1, 189–218. Amsterdam and Philadelphia: John Benjamins.
Traugott, Elizabeth Closs & Richard Dasher. 2002. *Regularity in semantic change*. Cambridge: Cambridge University Press.
Traugott, Elizabeth Closs. 2010. (Inter)subjectivity and (inter)subjectification: A reassessment. In Davidse, Vandelanotte & Cuyckens (eds.), 29–71.

https://doi.org/10.1017/S1360674312000354 Published online by Cambridge University Press