

# A QUANTITATIVE ANALYSIS OF THE INFLECTED AND THE PREPOSITIONAL GENITIVE IN PRESENT-DAY ENGLISH

Diana HORNOIU

"Ovidius" University of Constanța

**Abstract:** *The aim of this study is two-fold. Firstly, it considers the factors that are instrumental in the choice of the inflected and the prepositional genitive in present-day English. Secondly, it aims to identify frequency-related trends regarding the use of the inflected genitive and prepositional genitive in AmE and BrE. The quantitative analysis is based on data collected from the Frown and FLOB corpora. The distribution of tokens according to semantic categories is similar in the two varieties examined. Animate modifier classes are more common with the inflected genitive, while inanimate classes are more common with the prepositional genitive. The article addresses two additional conditioning factors involved in the variation of the inflected and the prepositional genitive: the semantic relationship holding between the head and the modifier and the impact of the impact of the postmodifier.*

**Keywords:** *inflected genitive, prepositional, modifier classes, end-weight principle, postmodifier, British English, American English, Frown, FLOB.*

## 1. Preliminary remarks

The aim of this study is two-fold. Firstly, it considers the factors that are instrumental in the choice of the inflected and the prepositional genitive in present-day English. Secondly, it aims to identify frequency-related trends regarding the use of the inflected genitive and prepositional genitive in in AmE and BrE. The scope of the analysis covers those cases where both the inflected and the prepositional genitive (also referred to as “the *of*-construction”) are possible, i.e. the case when the inflected genitive (N<sub>1</sub>’s N<sub>2</sub>) can be replaced by the prepositional genitive (‘*the* N<sub>2</sub>*of* N<sub>1</sub>’), and vice versa.

Thus, instances of double genitive (1), local genitive (2) and independent genitive (3) will not be taken into consideration.

(1) a friend of mine

\*mine’ friend

(2) we meet at Jane’s

\*we meet at of Jane

(3) her car is faster than Mary’s

\*her car is faster than of Mary

Quantitative and qualitative partitive constructions such as those given in (4) and (5) respectively) as well as *of*-constructions of material (6) are beyond the scope of this analysis, because their reference is usually indefinite and they lack an inflected genitive alternative construction (Altenberg 1982: 29f and Quirk et al. 1985: 1278). For the same reason, prepositional genitive constructions (7) with premodifying quantifiers will also be excluded:

(4) a tin of soup

\*a soup’s tin

(5) this kind of research

\*this research's kind

(6) a ring of gold

\*a gold's ring

(7) most of the students

\*the students' most

The remaining constructions are, in principle, interchangeable. However, this broad generalization should not be understood as meaning that every single occurrence has to be transformable in a particular context. Interchangeability in this case applies to the examples that belong to what Leech et al. (1994: 62) call “transformable classes”, i.e. those classes of the genitive or the *of*-construction “for which members of the opposite category also occur”. Constructions expressing partitive meanings, for instance, are transformable to the extent to which alongside the inflected genitive (8a), the alternative prepositional genitive is also possible (8b):

(8)

a. the committee's chairman

b. the chairman of the committee

However, there are still cases of partitive constructions which lack a corresponding inflected genitive form. The doubtful acceptability of the example in (9b) is a case in point (cf. Quirk et al. 1985: 1277):

(9)

a. the roof *of this house*

b. \*?*this house's* roof

## 2. Historical background

Historically, the inflected or the Saxon genitive was the basic variant compared to the *of*-construction and, with English still being a synthetic language, it appeared in almost equal numbers in both premodifying or a postmodifying positions. The *of*-construction was a marginal variant and, according to Fries (1940: 206), it occurred in less than 1% of all cases. Altenberg (1982:12) argues that initially “OF was primarily restricted to certain adverbial uses”.

During the latter part of the Old English period, however, two morpho-syntactic processes started: inflections were reduced while the word-order became increasingly strict. As a result, functional elements such as prepositions started to play a more significant role in the language, and a general reduction of the case system followed. These two processes had an important impact on the relationship between the inflected genitive and the *of*-construction. Around 1300, the *of*-construction was the most frequent variant (84.5%1) (Fries 1940: 206). In Late Middle English and Early Modern English the extensive use of *s*-less forms in certain dialects further weakened the position of the genitive (Altenberg 1982: 13).

Altenberg (1982:13) argues that in the process there was a stage when the inflected genitive was on the verge of extinction. However, this did not happen since the two forms were divided in function; the inflected genitive functioned as a premodifier, while the *of*-construction

functioned as a postmodifier. Still, this function-related distinction did not become solid and the two linguistic variants retained a certain degree of flexibility in functions in both Middle and Present-day English.

Modern English has witnessed a revival in the use of the genitive in certain registers (e.g. journalistic writing Raab-Fischer 1995: 13) or varieties of English, such as American English (Jahr 1981: 22). Although there are contexts where the two genitive constructions are mutually exclusive, in other contexts both variants are interchangeable. As Altenberg (1982: 12) points out, the choice between the inflected genitive and the prepositional genitive is “largely determined by a number of conditioning factors, linguistic as well as extra-linguistic”

### 3. Forms

While traditional grammar considers *'s* to be a *case inflection*, it is usually analyzed as a **clitic**<sup>1</sup> by linguists. The English possessive ending, however, does originate in a genitive case. In Old English, a common singular genitive ending was *-es*. The apostrophe in the modern possessive marker is in fact an indicator of the *-e-* that is missing.

Quirk et al. (1985:318) question the status of the genitive as a grammatical case in present-day English, arguing that it is rather a remnant of the case-system. However, since the main focus of this study is to examine regional variation in the use of the two possessive constructions in British and American English, this question is outside the scope of our investigation.

What is referred to in traditional grammars as the **genitive inflection** is phonologically identical with the regular plural inflection. Consequently, with regular nouns, genitive case distinctions are neutralized in the plural.

(10)

<i>The girl</i> was playing.	<i>The girls</i> were playing.
<i>The girl's</i> toys were new.	<i>The girls'</i> toys were new.

With irregular nouns, where no such neutralization can occur, a fourfold distinction always obtains:

(11)

<i>The child</i> was watching.	<i>The children</i> were watching.
<i>The child's</i> toys were new.	<i>The children's</i> toys were new.

Orthographically a fourfold distinction always obtains, since the genitive inflection is always spelled with an apostrophe: before the inflection if the noun is in the singular, after it if the noun is in the plural.

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<sup>1</sup> A **clitic** is a grammatically independent and phonologically dependent word. It is pronounced like an affix, but works at the phrase level. In the phrase *the girl next door's cat*, *- 's* is phonologically attached to the preceding word *door* while grammatically it combines with the phrase *the girl next door*, the possessor. Clitics may belong to any grammatical category, though they are commonly pronouns, determiners, or adpositions.

#### 4. Constraints on the use of the inflected and prepositional genitive

Various factors influence the choice of the inflected or the prepositional genitive. These factors operate on different levels of linguistic analysis. The following factors are instrumental in the choice of one of the two genitive variants: the semantic relationship holding between N<sub>1</sub> and N<sub>2</sub>, the lexical class of the modifier (N<sub>1</sub>), the distribution of weight and the postmodification.

The lexical class of the modifier (N<sub>1</sub>) is held to be an extremely influential factor. On the paradigmatic level, the inflected genitive is generally used with modifiers designating animate entities and entities with personal reference. On the syntagmatic level, the choice between the inflected genitive ('N<sub>1</sub>'s N<sub>2</sub>') and the prepositional genitive ('the N<sub>2</sub> of N<sub>1</sub>') is influenced by the kind of semantic relationship holding between the two nouns. Possessive relationships, for instance, are generally expressed by the inflected genitive (cf. Sinclair 1990: 129). Syntactic structural complexity has an important role to play, in this respect. Heavy modifiers, for example, can be expected to favour the prepositional genitive whereas heavy heads may select the inflected genitive (cf. Biber et al. 1999: 304).

##### 4.1. The semantic relationship holding between the head and the modifier

Although the central meaning conveyed by the genitive is possession, other meanings can be expressed by both the inflected and the prepositional genitive. Early categorizations of the genitive meanings in English were attempts to apply the categories of Latin or Ancient Greek to Modern English. Poutsma (1914: 40ff.), for instance, mentions six meanings of the English genitive ('possessive', 'origin', 'subjective', 'objective', 'appositive' and 'of measure'), all of which are genitive categories in Ancient Greek and Latin.

Quirk et al. (1985:321-322) divide the inflected genitive and the prepositional genitive into eight semantic categories distinguished through "sentential or phrasal analogues" (Quirk et al. 1985:321). Shown with some of the examples given in Quirk et al. (ibid.), these are:

##### **Possessive genitives**

*My wife's father* – My wife has a father.

*The gravity of the earth* – The earth has (a certain) gravity.

##### **Subjective genitives**

*The boy's application* – The boy applied for [something].

*The decline of trade* – Trade declined.

##### **Objective genitives**

*The boy's release* – (...) released the boy.

*A statement of the facts* – (...) stated the facts.

##### **Genitives of origin**

*The general's letter* – The general wrote a letter.

*The wines of France* – France produces wines.

##### **Descriptive genitives**

*A women's college* – a college for women

*The degree of doctor* – a doctoral degree, a doctorate

##### **Genitives of measure**

*ten days' absence* – The absence lasted ten days.

*an absence of ten days* – The absence lasted ten days.

### **Genitives of attribute**

*The victim's courage* – The victim had courage / was courageous.

*The policy of the party* – The party has a (certain) policy.

### **Partitive genitives**

*the baby's eyes* – The baby has (blue) eyes.

*the surface of the earth* – The earth has a (rough) surface.

Shumaker (1975) also aims at sorting genitives into categories of meaning. The categories she proposes are differentiated on the basis of sample tokens, phrasal analogues and possessive pronouns.

*Zunser's hymn* 'the hymn that Zunser produced'

*Their advice* 'they advised'

*Her amazement* 'someone amazed her'

*Her tormentors* 'the ones who torment her'

*Their Hebrew lesson* 'the Hebrew lesson that they study'

*His abruptness* 'he is abrupt'

*Miss Taylor's coffee break* 'the break Miss Taylor spent drinking coffee'

*Halsey's grocery* 'the grocery that Halsey owns'

*Her patient's closet* 'the closet that her patient uses'

*Hazel's head* 'the head is a part of Hazel'

*Your PTA* 'the PTA of which you are a member'

*Esteban's doctor* 'the doctor of whom Esteban is a patient'

*Detroit's long cold streets* 'the long cold streets in Detroit'

Miscellaneous 'The X that Y exhibits'

(Shumaker 1975:73-80)

Kreyer (2003:178) points out that "the most obvious weakness of Quirk et al.'s system is that different genitive types have the same paraphrase [...] possessive, attributive and partitive genitives are all paraphrased by 'X has Y'". He divides genitive meanings into nine categories. His categorization of genitive meanings is based on both Shumaker (1975) and Quirk et al.'s (1985). Kreyer's (2003) nine categories are listed below:

### **X is kin to Y (Kinship)**

*Peter's father* – Peter is kin to his father

### **X has (a/.) Y (Possessive)**

*Peter's car* – Peter has a car

### **Y is part of X (Partitive)**

*Hazel's head* – The head is a part of Hazel

### **X Verb (Y) (Subjective)**

*Her parents' consent* – Her parents consented

### **[someone] Verb (Y) X (Objective)**

*The boy's release* – [someone] released the boy

### **X has Y at their disposal, X makes use of Y (Disposal)**

*Peter's doctor* – Peter has the doctor at his disposal

**(the) Y in X, (the Y for X), ... (Time & Space)**

*Detroit's cold streets* – the cold streets in Detroit

*Tomorrow's weather* – the weather for tomorrow

**X is Adj (Y) (Attribute)**

*The victim's courage* – the victim is courageous

**X produces/tells/writes... Y (Origin)**

*The general's letter* – the general wrote a letter

(Kreyer 2003:178)

Kreyer's (2003) categorization model makes categorization easier than other models do, mainly due to the formulae expressed (e.g. X Verb (Y) for the *subjective* category) along with descriptions. Thus, the categorization model proposed by Kreyer (2003) can be useful in the study of regional differences in their distribution according to the semantic categories.

## 4.2. The lexical class of the modifier

The genitive case is generally paraphrased as meaning 'belonging to', 'related to', associated with'. The genitive case in English is realized as **inflected genitive** or **synthetic genitive** 's. However, we frequently find a choice between using the inflected genitive or a postmodifying prepositional phrase with *of*. The similarity in meaning and function has caused the latter to be called by some the **prepositional genitive** or the **periphrastic genitive**. Compare the examples in (12):

(12)

- a. There were strong objections from the island's inhabitants.
- b. There were strong objections from the inhabitants of the island.

Although both variants in (12) are equally acceptable, with a choice determined largely by preferred focus, for the most part either the inflected genitive or the prepositional genitive<sup>2</sup> should be selected, as shown in (13):

(13)

- a. These are father's trousers.  
\*These are the trousers of father.
- b. Let's go to the front of the house.  
\*Let's go to the house's front.

The lexical category of the modifier (N<sub>1</sub>) is generally regarded as one of the most important factors that impose constraints on the choice between the inflected or the prepositional genitive. Thus, what is of particular interest to us is under what conditions one of the two forms

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<sup>2</sup> Although the preposition *of* has become conventionalized as the main preposition of the so-called periphrastic or prepositional genitive, other prepositions can be used with a similar function: *the secretary of the Ambassador*; *the secretary to the Ambassador*; *the door of his dressing-room*; *the door to his dressing-room*.

is preferred and the cases in which only one of them is acceptable. There is a generally accepted view that the choice depends on “the degree to which [the modifier] tends towards human reference” (Leech et al. 1994: 60). Thus, many grammarians claim that the inflected genitive is selected by nouns referring to human beings whereas the prepositional genitive is usually regarded as the only choice with inanimate nouns, both concrete and abstract (cf. Jucker 1993: 126; Quirk et al. 1985: 322f.; Biber et al. 1999: 302f).

To a certain extent, the choice between the inflected genitive and the prepositional genitive can be neatly captured by hierarchies based on the degree of personal reference that can be assigned to each lexical class. Among the many approaches of this kind, Quirk *et al.*’s (1985: 314) *gender scale* is a case in point. The inflected genitive is favoured by the classes that are highest on the gender scale. Consequently, it tends to be associated with those classes of animate gender, especially with those having personal reference.

The following four noun classes of **animate nouns** normally take the genitive inflection, but the construction with the preposition *of* is also possible in most cases:

(a) **Personal names:** *George Washington’s statue*

(b) **Personal nouns:** *my sister’s pencil*

(c) **Collective nouns:** *the Administration’s policy, the majority’s platform, the party’s elder leader, the company’s working capital, the Government’s delaying tactics*. These nouns take the genitive inflection particularly when the idea of the persons in questions is to the fore. On the other hand, if these nouns are used without this connotation of individuals, the inflected genitive is not common. Compare *the family’s only concern* with *the great men of the family*.

(d) **Higher animals:** *the horse’s neck, the farm dog’s bark, the lion’s tail*.

It should be pointed out that nouns denoting **lower animals** generally take the prepositional genitive: *a cocoon of a silkworm, the egg of a sparrow, the wings of a butterfly*, etc (cf. the use of *he* and *she* as opposed to *it*).

However, the inflected genitive is also used with certain kinds of **inanimate nouns**. The inflected genitive is increasingly used with those inanimate nouns which may evoke the idea of their constituent human beings or “a notion of human beings since they occupy an intermediate status between personal and non-personal nouns (cf. Dahl 1971; Quirk et al. 1985: 324). For instance, *Italy’s policy* is understood to be the policy which was made by the Italian people.

(a) **Geographical names**

Nouns denoting geographical regions such as continents, countries, states, cities, towns, etc. take the genitive inflection especially when they are used to imply human collectivity:

(14)

Italy’s policy  
Europe’s future  
China’s development



the United States' attitude  
Maryland's Democratic Senator  
Minnesota's immigrants  
Hollywood's studios  
Radio City Music Hall is one of New York's most famous theatres.

With geographical names, Dahl (1971: 147) draws a distinction between nouns which are used in a political or sociological sense and nouns which are used in a purely geographical sense. Whereas the former often imply the notion of people related to the noun, the latter do not. These connotations of the modifier are apparent from the context. In the examples below, the head noun indicates whether the modifier is to be understood in a purely geographical (15) or rather in a sociological sense (16):

(15)  
Germany's map  
Italy's rivers

(16)  
Germany's economy  
Italy's policy

#### **(b) Locative nouns**

These nouns denote regions, celestial bodies, institutions. They take the genitive inflection when they are used with relevance to human activities:

(17)  
the hotel's occupants rather than the hotel's furniture  
the town's taxpayers  
the hotel's entrance  
the country's population  
the club's pianist  
Harvard's Linguistics Department

To a certain extent the same can be said of names referring to buildings and places such as *school*, *university*, *museum*, *hotel*, *club* etc., since they may evoke, in some contexts, a group of people closely connected to them. Similarly, titles of newspapers or periodicals may select the inflected genitive when they imply the editorial staff or the publisher(s) (Dahl 1971: 158).

Nouns denoting celestial bodies usually take the inflected genitive since they are viewed as having a personality of their own, presumably due to their godly status in ancient religions (Dahl 1971: 156). Celestial bodies were prone to personification in ancient myths and poetry and thus this personified use has become common in other kinds of texts and in spoken language.



### (c) Temporal nouns

Expressions of measurement (particularly of time) generally take the inflectional genitive construction:

(18)

an hour's work	in two years' time
a moment's thought	a moment's regret
a week's holiday	a three days' trip
two or three minutes' hunting	a pound's weight
two shillings' of apples	a five miles' distance

The same applies to adverbial denotations of time used as noun phrases:

(19)

the decade's events	this year's sales
the day's work	today's business
next year's difficulties	today's traffic problem
last night's fall of snow	this month's edition

There is often a difference in meaning between the inflected genitive and the corresponding prepositional genitive. Compare (20a) with (20b):

(20)

- a. yesterday's newspaper
- b. an invention of yesterday (i.e. 'a recent invention')

### (d) Nouns of 'special interest to human activity'

(21)

the brain's total solid weight  
the mind's general development  
the game's history  
the concerto's final movement  
the body's needs  
my life's aim  
science's influence on our society  
in freedom's name  
the strike's end  
the treaty's ratification  
the novel's structure  
the wine's character

With nouns expressing *part-whole* relationships, inflectional genitive is the usual unmarked form: *John's arm*, *Mary's green eyes*, etc.

### 4.3. The end-weight principle and the influence of postmodification

Syntactically, a heavily expanded (i.e. longer and structurally more complex) modifier (N<sub>1</sub>) tends to favour the prepositional genitive whereas an expanded head (N<sub>2</sub>) would take the inflected genitive. These syntactic choices are in line with the end-weight principle. Thus, (22b) is more acceptable than (22a). Similarly, (23a) is more acceptable than (23b) (cf. Quirk et al. 1985: 1281):

(22)

- a. His rude but intelligent 19-year-old son's arrival
- b. The arrival of his rude but intelligent 19-year-old son

(23)

- a. His son's arrival from London, where he lived during the seventies
- b. ?The arrival from London, where he lived during the seventies, of his son

Although both sentences in (22a) and (23b) breach the end-weight principle, it is only (23b) which would be regarded as unnatural or unacceptable. This can be accounted for by the fact that the sentences in (22) and (23) involve different types of expansion. In (22) the modifier *son* is expanded to the left by premodifying items, whereas in the examples under (23) the head *arrival* is postmodified by a prepositional phrase (*from London*) and an additional postmodifying non-restrictive relative clause (*where he lived during the seventies*). Altenberg (1982: 76–78) points out that premodification and postmodification differ in terms of their conditioning force. Consequently, alternative constructions are selected so as to avoid ambiguity of reference and discontinuity that might be triggered by long and structurally complex postmodifying items.

### 5. Idiomatic constructions

The following **idiomatic constructions** take the genitive inflection, though some of them allow the prepositional genitive as well:

(24)

a.

**edge:** the water's edge – the edge of the water  
the river's edge

**end:** at his journey's end – at the end of his journey

**surface:** the water's surface

**for...sake:** for her country's sake – for the sake of her country  
for God's sake - \*for the sake of the God

b.

**length:** at arm's length

**reach:** within arm's reach

**throw:** at a stone's throw

**worth:** their money's worth

The constructions in (24b) have become idioms and do not permit paraphrases with the prepositional genitive.

The construction with the preposition *of*, on the other hand, is chiefly used with nouns that belong to the bottom part of the gender scale proposed by Quirk et al. (1985), i.e. with nouns denoting lower animals and with inanimate nouns. Inanimate nouns regularly take the prepositional genitive, but as we have seen a great many take the genitive inflection 's when they can be characterized as 'being of special interest to human activity', i.e. when denoting parts of the body, cultural activities or means of transport.

## 6. The prepositional genitive

The prepositional genitive, and not the inflected genitive, is used in the following situations:

- With abstract nouns and with nouns denoting inanimate entities:

(25)

a. I've been studying **the** philosophy **of** language.

b. We set up our base camp at **the** bottom **of** the mountain.

- When the noun is followed by a verb phrase or clause which defines it:

(26)

a. The players ignored **the** jeers **of** the women standing in the front row.

b. The players ignored **the** jeers **of** the women who were standing in the front row.

- When we refer to a specific date:

(27) The cathedral was destroyed in **the** fire **of** 1666

- With long and complex phrases, even when the possessive structure refers to people:

(28) A man was sentenced to death for **the** murder **of** an English tourist, Monica Cantwell

- When proper names are coordinated or the noun phrase is complex the *of*-construction is the rule:

(29)

**the** reign **of** James the second

**the** Collected Works of William Shakespeare (compare with *He took down a copy of Wordsworth's collected poems*)

- Personal adjectival heads cannot be used in the inflectional genitive. Thus, they take the prepositional genitive: *the spiritual welfare of the poor, the language of the deaf-and-dumb*.
- Uncountable nouns with generic reference do not normally take the genitive inflection: *the humidity of air*. However, in combination with *for ..... sake* inflectional genitive is also found in such cases: *for honesty's sake, for decency's sake*.
- When the noun phrase is preceded by the indefinite article the only possibility is the prepositional genitive: *She is a great admirer of Henry James*.

(30) She is a great admirer of Henry James.

- Certain fixed expressions and titles take the prepositional genitive, even though reference is made to people:

(31) He's the President of United States.  
The Prince of Wales is to visit Iceland.

- When the noun phrase is preceded by the definite article both constructions are possible, but the prepositional genitive is perceived as more emphatic. Contrast (39a) with (39b):

(32)

- a. Illness prevented him from attending his uncle's funeral.
- b. The death of his uncle was a shock to him.

While a string of prepositional genitives, as in (33a), is common, a corresponding series of inflected genitive constructions (33b) is rarely found. Usually, a mixture of these possibilities employed, as shown in (33c).

(33)

- a. the meeting of the sub-committee of the Non-intervention Committee
- b. my cousin's wife's first husband.
- c. an important handful of the Government's *supporters*.

## 7. A quantitative analysis of the inflected genitive in BrE and AmE

Many linguists have drawn attention to the fact that, in present-day English, the inflected genitive has been spreading at the expense of the prepositional genitive. This process of ongoing language change is assumed to have been taking place due to a supposed constraint on the use of the *s*-marker with inanimate nouns has been weakened. In the earlier twentieth century, Otto Jespersen was one the first linguists to call attention to this trend arguing that:

During the last few decades the genitive of lifeless things has been gaining ground in writing (especially among journalists); in instances like the following the *of*-construction would be more natural and colloquially the only one possible. (1909-49: VII, 327f.)

Among the examples which illustrate this trend he mentions the following genitive constructions: *the sea's rage*, *the rapidity of the heart's action*, or *the room's atmosphere*. Jespersen's views have been corroborated by more recent research in language change in progress in twentieth-century English (Barber 1964, Potter 1975).

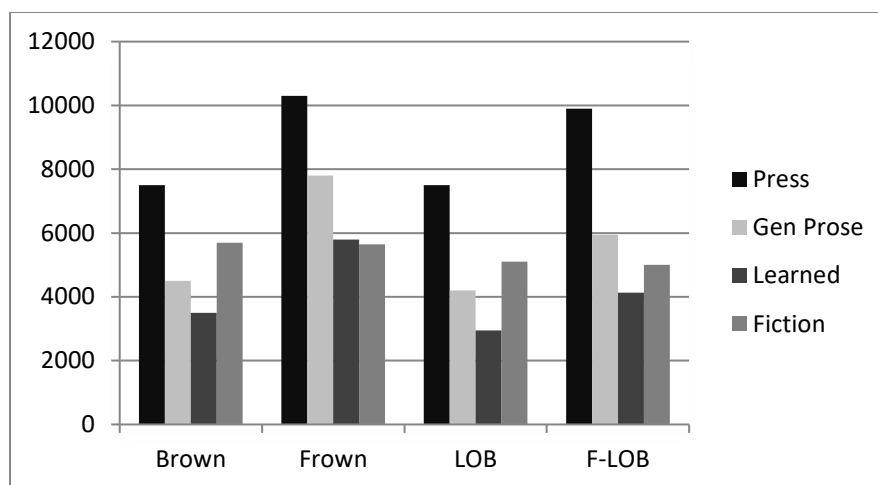
Denison (1998: 119) argues that "the ranges and relative frequencies of the competing constructions have varied over the course of time, with genitives of inanimates perhaps on the increase". However, the issue is still debatable and the phenomenon needs further empirical research before an uncontroversial conclusion can be drawn.

Available evidence from corpora (e.g. Raab-Fischer 1995; Hinrichs and Szmrecsanyi 2007) shows that any increase in the frequency of the inflected genitive due to its use with inanimate nouns is difficult to demonstrate. For Hinrichs and Szmrecsanyi (2007), working on categories A and B of the four corpora, the effect is found in AmE, but not in BrE. As sections 7 and 8 will show, there is a noticeable language change in progress regarding the use of the inflected and prepositional genitives, but no single factor can account for it.

Rosenbach's (2002: 3) empirical research confirms the trend identified by Jespersen in the earlier twentieth century that 'the *s*-genitive is currently increasing, and this increase is more advanced in American than in British English'. The trend is confirmed by the analysis of the empirical data from the Brown, Frown, LOB and F-LOB corpora<sup>3</sup>. **Figure 1** shows the increasing frequency in the use of the inflectional genitive in the four corpora. This rise is of c. 43% in AmE and of c. 25% in BrE. The greatest changes in usage are found in the information-oriented Press and Learned subcorpora, showing remarkable rises of 44% and 91% in AmE and 36% and 35 % in BrE, respectively (Leech et. al 2009). Moreover, the empirical data show that Press writing particularly favours the inflectional genitive, and the increase (unlike that of N+N sequences) shows no sign of approaching a 'saturation point'. Fiction writing, on the other hand, shows the lowest increase of genitives (virtually nil in AmE).

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<sup>3</sup> The quantitative analysis reported in sections 7 and 8 is based on the following corpora, unless otherwise indicated: **LOB** (the Lancaster–Oslo/Bergen corpus of British English, 1961); **F-LOB** (the Freiburg–Lancaster–Oslo/Bergen corpus of British English, 1991); **Brown** (the Brown corpus of American English, 1961); **Frown** (the Freiburg–Brown corpus (American English, 1992). The web addresses of these two corpus resource agencies are as follows: <http://icame.uib.no/> and <http://ota.ahds.ac.uk/>.



**Figure 1** Increase in frequency of inflected genitives 1961 - 1991/2 in Brown, Frown, LOB and F-LOB (frequencies pmw) (AmE automatic) (Based on Leech *et al.* 2009)

## 8. A quantitative analysis of the prepositional genitive in BrE and AmE

A distinction should be made between the terms *of*-phrase (which refers to all prepositional phrases introduced by *of*) and the prepositional genitive which is realized by a prepositional phrase introduced by *of* but which shares the same genitive function with the inflectional genitive as an alternative way of expressing the same meanings.

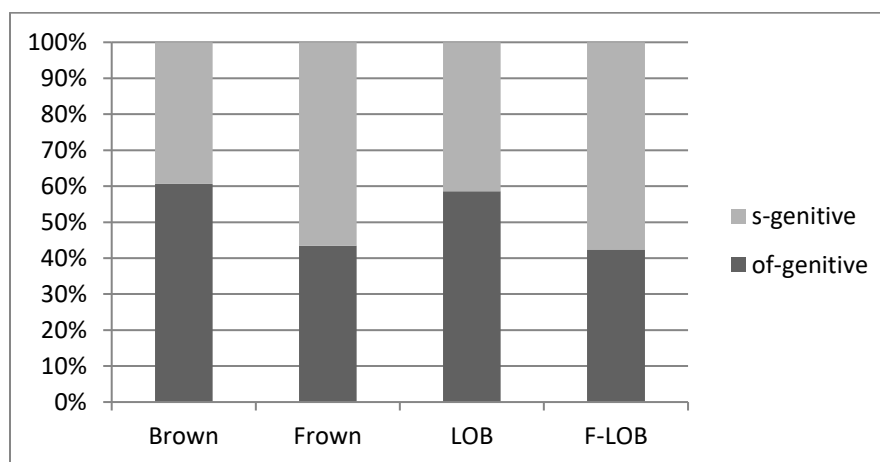
In present-day English, both the inflected and prepositional genitives are increasingly being used particularly in Press as a result of their effect of concentrating information density in the noun phrase. In a historical perspective, however, their growing popularity can be seen as a continuation of a trend centuries old (Hundt 1998:47). The prepositional genitive was rarely attested in OE, while it underwent a considerable extension of its range in ME. In ME, however, it suffered decline due to the resurgence of the inflected genitive. According to Rosenbach's (2002: 177- 234) historical account, the OE genitive inflection underwent a decline in ME up to c. 1400, when it turned into a clitic. The revived and expanding use of the inflectional genitive from EModE onward has presumably been continuing up to present-day English<sup>4</sup>.

This pattern is confirmed by Leech *et al.* (2009) whose analysis based on the hand-checked set of prepositional genitives (i.e. all *of*-phrases which are judged semantically and formally interchangeable with the inflectional genitive) from a 2% sample from each corpus. The empirical data from the four AmE and BrE corpora show a very similar decline of c.24%, and it is reasonable to assume that the close parallel, in both varieties, regarding the upward trend of the inflected genitive and the downward trend of the prepositional genitive is more than coincidental. Empirical research on the use of the two genitive constructions (Altenberg 1982; Leech *et al.* 1994; Rosenbach 2002, 2003; Hinrichs and Szmrecsanyi, 2007) has shown that a number of factors, syntactic, semantic, pragmatic, even phonological, are instrumental in determining the preference for one construction or the other. However, it should be pointed out that the inflectional and the prepositional genitives should not be considered in free variation.

<sup>4</sup> Altenberg (1982) provides a detailed account of the variation between the inflectional genitive and prepositional genitive in EModE.

For example, Rosenbach (2002: 33-74) identifies the following three factors, listed here in order of importance: animacy, topicality, and the possessive relation.

As **Figure 2** shows, the data from the Brown, Frown, LOB and F-LOB corpora suggest that the inflected genitive has overtaken the prepositional genitive in frequency in both AmE and BrE. British English is following the American lead in increasing use of the inflectional genitive (which is more frequent in Brown, and even more frequent in Frown, than the British equivalents). Moreover, BrE is itself in the lead in the decline of prepositional genitives<sup>5</sup>.



**Figure 2** Change of frequency of the prepositional genitive in relation to the inflected genitive between 1961 and 1991/2, expressed as a percentage of all ‘genitives’ (AmE automatic) (Based on Leech *et al.* 2009)

## Concluding remarks

The article addressed three conditioning factors involved in the variation of the inflected and the prepositional genitive: the lexical class of the modifier, the semantic relationship holding between the head and the modifier and the impact of the impact of the postmodifier. The quantitative analysis of the data from the Frown and FLOB corpora the inflected genitive has overtaken the prepositional genitive in frequency in both AmE and BrE. Moreover, BrE is itself in the lead in the decline of the prepositional genitive. The quantitative data allow us to safely assume that the frequency changes suggest a shift of preference has been taking place. On the other hand, Rosenbach (2002) argues that the variationist model whereby two variants are in an ‘either–or’ relation is beset with problems when applied to such syntactic alternatives as the inflected genitive and the prepositional genitive.

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<sup>5</sup> Note that the frequencies for the prepositional genitive are scaled up from a small 2% sample, and cannot therefore be regarded as more than approximations.



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