Nominal and Verbal Gerunds with Genitive Subjects in Present-Day English:

A Comparative Corpus Study

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ABSTRACT

This thesis examines the cross-linguistically rare category of possessive *–ing* constructions through a comparative corpus analysis of nominal gerunds (e.g. *Davis' tripling of the car tax*, *their amassing of enormous wealth*) and verbal gerunds (e.g. *women's entering the work force*, *his attending the ceremony*) with genitive subjects in Present-Day English. The current study adds to a growing body of literature on *–ing* nominalizations by investigating the representational, aspectual, syntactic, and referential behavior of nominal and verbal gerunds with genitive subjects and the semantic features of their possessors. The data analysis reveals significant areas of difference and overlap between the two gerundive constructions, which help draw attention to their underlying semantics and account for the use of one gerund type over the other in particular environments. It is argued, however, that the corpus results presented here might be too specific to nominal and verbal gerunds with genitive subjects, posing limitations on the extent to which they can be generalized to their subjectless counterparts.

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1 INTRODUCTION

1.1 *The English Gerund: An Overview*

The English gerund and the way it functions both internally and externally have received much attention in the literature. The gerund is typically defined as an –*ing* deverbal noun whose internal syntax combines features of both noun and verb (Lees 1968 [1960]; Ross 1973; Declerck 1991; Langacker 1991; Pullum 1991; Heyvaert 2003, 2004, 2008; De Smet 2008: 55). Gerundive constructions have been traditionally classified into two types: nominal and verbal. The nominal gerund behaves like a noun phrase (NP) and typically combines with determiners, adjectives, and *of*-phrases that serve as verbal arguments (De Smet 2008: 56). On the other hand, the verbal gerund functions externally as an NP and internally as a verb phrase (VP) and is therefore associated with verbal negators, adverbs, and direct objects (Malouf 1996: 256–7). Example (1) shows a nominal gerund combining with a determiner (*the*), two adjectives (*quiet* and *patient*), and an *of*-phrase, whereas (2) illustrates how a verbal gerund can occur with a verbal negator (*not*) and a direct object (*the job*).[1]

1. President Bush would be wise to devote the same attention elsewhere around the globe to **the quiet, patient nurturing of the democratic spirit.** [Nominal gerund with a determiner, two adjectives, and an *of*-phrase]
2. Meeting with reporters in Los Angeles, Jackson sounded resigned to **not getting the job.** [Verbal gerund with a verbal negator and a direct object]

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[1] Unless otherwise indicated, all examples have been extracted from the Collins Wordbanks Online (WBO) Corpus.

This thesis is restricted in its scope to nominal and verbal gerunds with genitive subjects[2] in Present-Day English. Possessive *–ing* constructions as in (3) and (4), which constitute the main focus of this research, are quite infrequent in English (Taylor 1996: 266) and therefore provide a fertile ground for investigation.

3. Seen in this light, **the boys' stoning of arriving and departing friends in William Dean Howells's hometown** becomes a perversely affectionate form of salute. [Nominal gerund with a genitive subject]

4. But Annie had cut her hand quite badly as a result of **Kate's asking the Santerian god for help.** [Verbal gerund with a genitive subject]

1.2 *The Semantic Properties of Nominal and Verbal Gerunds*

Before delving into the research topic in the following sections, it is important to present an overview of what has been posited in the literature so far regarding nominal and verbal gerunds. Nominal gerunds have been analyzed in the literature as designating so-called 'actions' (Lees 1968 [1960]: 64–5; Marchand 1969: 302; Fraser 1970). Quirk et al. (1985) argue that nominal gerunds – compared to *–ion* (e.g. *destruction*), *–ment* (e.g. *judgment*), and *–al* (e.g. *betrayal*) nominalizations – zoom in on "the conduct of the action itself" (1551) or on an "activity that is in process" (1292) rather than on "the action as a whole event, including its completion" (1551). Compare the *–ing* nominalizations in (5a, b) to their *–ion* variants:

5. a. . . . **China's normalising of relations with Indonesia in August** paved the way for diplomatic ties with other South-East Asian nations. [cf. China's normalization of relations]

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[2] *Genitive subjects* is used here as an all-inclusive term to refer to both genitive NPs and possessive determiners premodifying gerunds (for more on the distinction, see pages 22–3).

b. He cited . . . two more-controversial stances: **Evans' elevating of women into ministry,** and his avowal of speaking in tongues and other Pentecostal expressions. [cf. Evans' elevation of women into ministry]

Quirk et al.'s claim ties in with what has been regarded as the 'imperfectivizing' function of the *–ing* suffix, which foregrounds the processual character of the event rather than its onset or completion (Langacker 1991; Taylor 1996: 270; Smith & Escobedo 2002; Egan 2003; De Smet 2010: 1170). Similarly, Brinton (1998: 48–9) maintains that the *–ing* suffix in nominal gerunds does not preserve the ontological aspectual features of the verb it attaches to but converts it into an activity, which is durative, atelic, and dynamic. In fact, one of the main differences between nominal and verbal gerunds in the literature is that nominal gerunds are said to emphasize the notion of activity by not allowing 'stative' or 'relational' predicates. Example (6) shows how verbal gerunds can be used to refer to 'relational processes' in the corpus data, whereas the same is not grammatically possible for nominal gerunds.

6. What does this tell you about their attitudes to music and to **your becoming a musician?** [cf. *your becoming of a musician]

An opposing view holds that the *–ing* suffix in general has an 'atemporalizing effect' (Langacker 1991; Heyvaert 2003; De Smet 2010: 1169–70). In other words, the *–ing* suffix in gerundive as well as participial constructions implies "temporal and aspectual neutralization" (De Smet 2010: 1169) rather than durativity and/or dynamicity. To illustrate the effect of 'atemporalization', an isolated instance of a nominal gerund is compared to its contextualized counterpart in (7a, b) below, which demonstrate how the context in which the gerund is used, and not the *–ing* suffix, determines the extent to which an event is likely to be interpreted as durative and/or dynamic. Likewise, against the

'imperfectivizing' character of the –*ing* suffix discussed in the literature,
examples (8)–(9) illustrate how both nominal and verbal gerunds can refer not
only to ongoing but also to completed events.

7. a. **Avram's courting of the press.** [Isolated nominal gerund]

   b. He said Malcolm "went ballistic" over **Avram's courting of the press.**
   [Contextualized nominal gerund]

8. a. Turkey will want to raise what it sees as **Greece's blocking of Turkish
   attempts to join the European Community.** [Nominal gerund referring
   to an ongoing event]

   b. Like Milner, he hoped that British-South Africans would win the
   elections, but since **his ousting of Milner,** British immigration had all but
   dried up. [Nominal gerund referring to a completed event]

9. a. All these activities, we might note, are compatible with **Wren's
   providing the skilled services of an amanuensis (secretary and
   assistant)** in exchange for his board and lodging. [Verbal gerund referring
   to an ongoing event]

   b. This led to **my receiving a letter from the Exbury Estate saying that
   Edmund de Rothschild would be happy to offer us a rather large
   specimen from a group planted by his father.** [Verbal gerund referring
   to a completed event]

The major semantic notions that have dominated the analysis of nominal and
verbal gerunds in the literature are those of 'action' and 'fact'. These labels,
however, have been too general to clearly distinguish between the two types of
gerunds or explain why language users choose one expression over the other
(Heyvaert 2008: 39). Langacker (1991: 32) argues that this distinction between
action-referent and factive –*ing* nominalizations cannot be based only on the
semantics of the construction itself (see also Quirk et al. 1985: 1064; Declerck

1991: 497; Heyvaert 2004: 501). Although Lees (1968 [1960]) originally assigned the semantic label of 'fact' to verbal gerunds with genitive subjects only, both nominal and verbal gerunds as illustrated in (10)–(11) can encode 'actions' or 'facts' as long as the context in which they are used presupposes and makes assertions about a true proposition (Kiparsky & Kiparsky 1971: 348).

10. a. The government is expected to begin **its questioning of Mr. Quattrone today.** [Action-referent nominal gerund]

b. In **their partaking of the fruit,** then, they brought mankind to mortality, which gave us conditions necessary for having children – but also to die. [Factive nominal gerund]

11. a. His aggressive behaviour at the door in particular was clearly to do with **his protecting the den.** [Action-referent verbal gerund]

b. I am very grateful to Stan Cohen for **his writing a preface to this book, a book which I see as a modest attempt to implement a research agenda first set out by him.** [Factive verbal gerund]

1.3 *Genitive vs. Objective/Common-Case Subjects in Gerunds*

Nominal and verbal –*ing* clauses have always been regarded as dependent, with their subject taking either the genitive or objective/common-case form of a determiner/NP (Quirk et al. 1985: 1063; Biber et al. 1999: 125; Huddleston & Pullum 2002: 1190). It has been pointed out in the literature that verbal gerunds with genitive subjects present an especially intriguing case where a clause-like construction that has "the force of a verb" (Quirk et al. 1985: 1064) is given a nominal feature (see also Biber et al. 1999: 125; Heyvaert et al. 2005: 71–2). While nominal gerunds are defined in part by their ability to combine with definite and indefinite determiners such as *the* and *a*, the same does not hold for verbal gerunds, with the exception of possessive determiners and a few "hybrid

constructions" (Huddleston & Pullum 2002: 1189) where a demonstrative such as *this* and a quantifier like *no* can be used as illustrated below:

12. a. **This constant telling tales** has got to stop. [Verbal gerund with a demonstrative] (Huddleston & Pullum 2002: 1189)
b. There'll be **no stopping her.** [Verbal gerund with a quantifier] (Huddleston & Pullum 2002: 1189)

The choice between genitive and objective/common-case subjects in verbal gerunds has been widely regarded as a matter of register (Quirk et al. 1985: 1063; Biber et al. 1999: 750; Huddleston & Pullum 2002: 1192; Heyvaert et al. 2005: 73–4). While objective/common-case subjects in verbal gerunds predominate in both formal and informal registers, there is evidence that the use of genitive subjects is relatively more common in formal than in informal speech (Biber et al. 1999: 750; Heyvaert et al. 2005: 77). From a grammatical standpoint, Huddleston & Pullum (2002: 1190) argue that possessive determiners used with verbal gerunds such as (13a, b) are optional since they can be omitted or replaced with pronouns in the objective case.

13. a. He saw no purpose in **their visiting this abortive hulk of masonry.** [cf. (them) visiting this abortive hulk of masonry]
b. He was a priest and wrote a book about **his leaving the Catholic Church,** called *The Path from Rome*. [cf. (him) leaving the Catholic Church]

Apart from the register differences noted above, Quirk et al. (1985) and Biber et al. (1999) give different accounts of why language users tend to choose genitive or objective/common-case subjects in verbal gerunds. Quirk et al. (1985: 1063–4) posit that genitive subjects are favored when the NP is a pronoun or has a personal reference. This is in line with the prescriptive tradition that advocates the

use of the genitive form especially if the subject of the gerund is a personal pronoun (Biber et al. 1999: 750; Heyvaert et al. 2005: 73). Compare examples (14)–(15) below:

14. I intend to voice my objections to **their** receiving an invitation to our meeting. [Subject personal pronoun] (Quirk et al. 1985: 1063)
15. I didn't know about **the weather** being so awful in this area. [Non-personal subject NP] (Quirk et al. 1985: 1064)

Biber et al. (1999: 750) suggest that the choice between genitive and objective/common-case subjects is a meaningful one since they do not convey the exact same meaning; while the genitive subject emphasizes the action itself, the objective/common-case subject focuses on the person doing the action. Compare the genitive subjects in (16a, b) to their objective counterparts in (17a, b):

16. a. I appreciate **your being there.** [Verbal gerund with a possessive determiner] (Biber et al. 1999: 750)
    b. You don't mind **my calling you Toni,** do you? [Verbal gerund with a possessive determiner] (Biber et al. 1999: 750)
17. She might not want **me barging in on a special occasion like that.** [Verbal gerund with an object pronoun] (Biber et al. 1999: 751)
    b. It is hard to imagine **him leading a crusade for Meadowell.** [Verbal gerund with an object pronoun] (Biber et al. 1999: 751)

Finally, it should be pointed out that the genitive subject on the one hand and the objective/common-case subject on the other are not freely interchangeable in all verbal –*ing* constructions. In fact, any potential alternation between genitive and objective/common-case subjects depends on the type of the pronoun/NP used with verbal gerunds (Huddleston & Pullum 2002: 1992). For example, dummy pronouns (e.g. *there*), 'fused-head NPs' (e.g. *this*, *all*), and 'pronoun-final

partitive NPs' (e.g. *both of them*, *some of us*) can only occur in non-genitive form (Huddleston & Pullum 2002: 1192). See examples (18a, b) below.

18. a. He resented **there having been so much publicity** [cf. *there's having been so much publicity] (Huddleston & Pullum 2002: 1192)

b. I won't accept **this being made public** [cf. *this's being made public] (Huddleston & Pullum 2002: 1192)

It has also been suggested that the genitive form is not preferred with plural nouns ending with a sibilant /s/ or /z/ or lengthy noun phrases that require a 'group genitive' (Quirk et al. 1985: 1064; Huddleston & Pullum 2002: 1192–3), in which the *s*-genitive attaches to a word at the end of a noun phrase other than its head (Quirk et al. 1985: 1344; Biber et al. 1999: 298).

19. Do you remember **the students and teachers** protesting against the new rule? [Plural nouns ending with a sibilant /s/] (Quirk et al. 1985: 1064)

20. It involved the **Minister of Transport** losing face. [Complex noun phrase requiring a 'group genitive'] (Huddleston & Pullum 2002: 1192)

Following this broad overview of the claims in the literature about nominal and verbal gerunds and the case of their subject determiner/NP, it is important to present the analytical categories used for the corpus study at hand. In what follows, the parameters that have been the basis for the analysis will be identified and discussed in detail, and the research hypotheses will be formulated and situated within the existing literature.

1.4 *Parameters of Analysis*

The parameters used for corpus analysis and the analytical categories referred to in this thesis take inspiration from a number of different sources in the literature. This comparative corpus study applies representational, aspectual, syntactic, and

referential analyses to nominal and verbal gerunds with genitive subjects and includes a semantic feature analysis of their possessor NPs. These axes will be clearly defined below.

1.4.1 *Representational Parameter*

A representational analysis examines *–ing* clauses as grammatical units expressing "patterns of experience" through which language users can conceptualize and describe different events (Downing & Locke 2006: 122–3). This thesis uses the taxonomy of representational or experiential categories proposed by Downing & Locke (2006: 125), which includes three major types of process ('material', 'mental', and 'relational') as well as three subsidiary processes, of which only 'verbal' is relevant to the current study. These categories also correspond to four of the semantic domains of single-word verbs suggested by Biber et al. (1999: 360–4), which include 'activity verbs', 'mental verbs', 'verbs of existence or relationship', and 'communication verbs'. 'Material processes' are generally defined as processes of doing or happening (e.g. *running, joining, giving, drowning, falling*); 'mental processes' are those of perception, cognition, or affection (e.g. *seeing, hearing, understanding, liking, wanting*); 'relational processes' refer to processes of being or becoming (e.g. *being, becoming, turning* followed by an adjective); and 'verbal processes' denote those of saying and communicating (e.g. *saying, telling, singing*) (Downing & Locke 2006: 125, 151; Biber et al. 1999: 360–4).

1.4.2 *Aspectual Parameter*

An aspectual analysis focuses on the situation types expressed at the level of VP (Vendler 1967). Unlike the representational analysis, which focuses on the lexical meaning of the verb itself, the aspectual analysis goes far beyond by concerning itself with the entire VP in which the verb is used, including objects (Depraetere

& Langford 2012: 139). This thesis makes use of two overlapping taxonomies in the literature. The more general one is proposed by Depraetere & Langford (2012: 139–43), who distinguish between four situation types based on the following three semantic features of VPs: 'duration' (durative vs. punctual), 'dynamicity' (dynamic vs. stative), and 'inherent endpoint' (defined endpoint vs. no implied finality). These criteria produce the situation types of 'state', 'activity', 'accomplishment', and 'achievement' as summarized in the table below (Depraetere & Langford 2012: 142–3).

	State	Activity	Accomplishment	Achievement
Duration	+	+	+	-
Dynamicity	-	+	+	+
Inherent Endpoint	-	-	+	+

Table 1
(Depraetere & Langford 2012: 142)
Semantic features of situation types

By contrast, Quirk et al. (1985: 200–9) provide a much more refined taxonomy by differentiating between 11 situation types (see page 14). Quirk et al. (1985: 200–6) distinguish between three types of stative situations: 'qualities' (inalienable personal characteristics), 'states' (less permanent personal characteristics), and 'stances' (permanent or temporary states). In addition, Quirk et al. (1985) draw further distinctions between (i) two types of durative/dynamic/non-conclusive situations: 'goings-on' (actions by inanimate forces) and 'activities' (actions by animate subjects) (207); (ii) two types of durative/dynamic/conclusive situations: 'processes' (a change of state over a period of time) and 'accomplishments' (actions that have inherent endpoints) (207–8); (iii) two types of punctual/dynamic/non-conclusive situations: 'momentary events' (non-agentive events without duration) and 'momentary acts' (agentive events without duration) (208); and (iv) two types of punctual/dynamic/conclusive situations: 'transitional events' (non-agentive events without duration that involve a change of state) and

'transitional acts' (agentive events without duration that result in a change of state) (208–9). Table 2 below provides a summary of the different situation types proposed by Quirk et al., along with a few select examples.

Stative Situation Types				
	Qualities (e.g. *be a man, have blue eyes*)	**States** (e.g. *be bored, have a cold*)	**Stances** (e.g. *live, stand, lie, sit*)	
Durative Situation Types			**Punctual Situation Types**	
Non-Conclusive	**Goings-on** (e.g. *rain, snow*)	**Activities** (e.g. *write, eat*)	**Momentary Events** (e.g. *sneeze, explode*)	**Momentary Acts** (e.g. *knock, nod*)
Conclusive	**Processes** (e.g. *grow up, improve*)	**Accomplishments** (e.g. *write* (a letter), *eat* (a biscuit))	**Transitional Events** (e.g. *drop, receive*)	**Transitional Acts** (e.g. *begin* (a project), *stop* (a car))
	Non-Agentive	**Agentive**	**Non-Agentive**	**Agentive**

Table 2
(Quirk et al. 1985: 201, 206)
Overview of all situation types

1.4.3 *Syntactic Parameter*

A syntactic analysis of nominal and verbal gerunds with genitive subjects involves examining the clausal functions they assume in the corpus data. To this end, Heyvaert et al.'s (2005: 76–7) classification of syntactic roles has been adopted, and seven clausal functions have subsequently been identified. These are subject (with and without anticipatory *it*) as in (21a, b), subject complement ('subject predicative' in Biber et al. (1999: 126)) as in (22), object as in (23), prepositional complement of a verb ('prepositional object' in Biber et al. (1999: 129–30); Quirk et al. (1985: 727)) as in (24), prepositional complement of an adjective as in (25), postmodifier of a noun as in (26), and prepositional complement with adjunct function (serving as an adverbial phrase) as in (27).

21. a. **Two women** had come in and **she** asked them to wait, giving them magazines to look at. [Subject] (Biber et al. 1999: 98)

b. It was hard to believe **that he had become this savage with the bare knife.** [Subject with anticipatory *it*] (Biber et al. 1999: 155)

22. Well, his son Charlie was **a great mate of our Rob's.** [Subject complement] (Biber et al. 1999: 98)

23. The pilot saw **a field** ahead. [Object] (Biber et al. 1999: 98)

24. Both methods rely **on the accurate determination of the temperature and pressure of the gas.** [Prepositional complement of a verb] (Biber et al. 1999: 98)

25. I'm not afraid **of anything.** [Prepositional complement of an adjective] (Biber et al. 1999: 105)

26. He was a poet, a teacher **of philosophy**, and a man **with a terrible recent history.** [Postmodifier of a noun] (Biber et al. 1999: 104)

27. AM, 37, is alleged to have shot Robert **with a rifle.** [Prepositional complement with adjunct function] (Biber et al. 1999: 104)

1.4.4 *Referential Parameter*

A referential analysis sees nominal and verbal gerunds as NPs that express a range of activities or events. Downing & Locke (2006: 417–22) identify four different types of NP referents, according to which NPs can be classified as generic, specific definite, specific indefinite, and non-specific indefinite. A generic NP refers to an entire class of entities, rather than to a specific object or individual in the real world (Biber et al. 1999: 265; Downing & Locke 2006: 421). Generic reference can be realized by the use of definite, indefinite, or zero articles (Downing & Locke 2006: 421) as indicated in examples (28a–d) below.

28. a. They say **the elephant** never forgets. [Generic reference with a definite article] (Downing & Locke 2006: 421)

    b. They say **an elephant** never forgets. [Generic reference with an indefinite article] (Downing & Locke 2006: 421)

    c. They say **elephants** never forget. [Generic reference with a zero article and a plural count noun] (Downing & Locke 2006: 421)

    d. They say **exercise** keeps you healthy. [Generic reference with a zero article and a mass noun] (Downing & Locke 2006: 421)

On the other hand, specific-definite reference is typically marked by the use of the definite article (*the*), deictic demonstratives (e.g. *this*, *that*), possessive determiners (e.g. *your*, *their*, *my*), or personal pronouns (e.g. *he*, *they*) (Biber et al. 1999: 328–9; Downing & Locke 2006: 417). A specific-definite NP refers to a single and identifiable instance or group of instances of a particular class through 'anaphora', 'cataphora', or 'exophora' (Quirk et al. 1985: 351; Downing & Locke 2006: 414, 419–20). The highlighted NPs in (29a–c) denote specific-definite entities identified in a previous part of the discourse, a later part of the discourse, and outside of the discourse respectively (Quirk et al. 1985: 351; Downing & Locke 2006: 414).

29. a. Before Gerald joined the Navy, **he** made peace with his family. [Anaphoric reference to *Gerald*] (Quirk et al. 1985: 351)

    b. Before **he** joined the Navy, Gerald made peace with his family. [Cataphoric reference to *Gerald*] (Quirk et al. 1985: 351)

    c. I never thought things would come to **this.** [Exophoric reference to *this extreme*] (Downing & Locke 2006: 414)

Indefinite reference is realized by indefinite articles (e.g. *a*, *an*, *any*, unstressed *some*) or the zero article (Downing & Locke 2006: 417). An indefinite NP is

generally understood to introduce a new entity in the discourse, whether such an entity is specific or not (Quirk et al. 1985: 272; Biber et al. 1999: 260). Based on this observation, two types of indefinite reference can be distinguished: specific-indefinite reference, which denotes a specific, but unidentifiable instance of a class; and non-specific indefinite, which signals any member of a class (Downing & Locke 2006: 418). Compare the two types in (30a, b) below:

30. a. I've bought **a new car**. [Specific-indefinite reference] (Downing & Locke 2006: 418)

b. I need **a new car**. [Non-specific indefinite reference] (Downing & Locke 2006: 418)

1.4.5 *Semantic Parameter for Possessor NPs*

A semantic feature analysis of possessor NPs requires examining the genitive subjects of nominal and verbal gerunds as in (31a, b) against the possessor referents of genitive NPs as in (32). The analysis is based on two cross-cutting criteria: (i) the degree of animacy of the possessor NP in possessive *–ing* forms and genitive NPs and (ii) the type of noun associated with both genitival constructions.

31. a. **God**'s assembling of the armies of a vengeful justice [animate proper noun in a possessive nominal gerund]

b. **Bonaparte**'s joining the army and attacking us [animate proper noun in a possessive verbal gerund]

32. **Today**'s student [inanimate common noun in a genitive NP]

Moving away from the animate-inanimate dichotomy that has dominated much of the literature, Rosenbach (2006: 105) proposes a four-way classification of animacy, which includes the semantically gradient categories of 'human',

'animal', 'collective', and 'inanimate'. This classification allows language users to conceptualize NP referents as being "more or less close to their own species" (Rosenbach 2006: 106), which explains why 'human' is considered more animate than 'animal' under such a model. Rosenbach's animacy hierarchy in turn draws upon Zaenen et al.'s (2004: 120–2) general coding scheme for animacy. According to Zaenen et al. (2004: 121), 'human' can refer to one or more persons as well as any entity that behaves like a human, 'animal' denotes non-human animates including animals, viruses, and bacteria, 'collective' is used for organizations that display a large degree of group identity and are characterized by a collective voice and/or purpose, and 'inanimate' mainly includes temporal and locative nouns and concrete objects or substances.

This analysis of possessor NPs applies the coding scheme for animacy suggested by Hinrichs & Szmrecsanyi (2007: 449–50), which builds on the above two models. In their study of the variation between prenominal *'s* and periphrastic *of* in genitival constructions, Hinrichs & Szmrecsanyi (2007: 449) manually assign a coding value to each possessor NP before calculating the mean animacy value for each genitive type. The coding scheme shown in Table 3 is used for the corpus study at hand.

	Coding Value	Examples
Human	1	*Girl, John, ghost, god*
Animal	2	*Dog, flu, E. coli*
Collective	3	*Team, company, the UN*
Inanimate	4	*Morning, Thursday, house, table*

Table 3
(Hinrichs & Szmrecsanyi 2007: 449)
Coding scheme for animacy

The semantic feature analysis of possessor NPs also involves identifying the possessor referents of both possessive *–ing* constructions and genitive NPs as proper or common nouns. Common nouns include both countable (e.g. *book,*

chair) and uncountable nouns (e.g. *information*, *furniture*), can be inflected for number (only in the case of countable nouns – e.g. *books*, *chairs*), and can take definite (e.g. *the book*) or indefinite forms (e.g. *a book*) (Quirk et al. 1985: 246; Biber et al. 1999: 62–3). On the other hand, proper nouns typically have one unique referent such as a person (e.g. *John*), a place (e.g. *Massachusetts*), a month (e.g. *August*), or a day (e.g. *Monday*) and are usually written with an initial capital letter (Quirk et al. 1985: 288; Biber et al. 1999: 241–2). Both the common-proper noun distinction and the four-way classification of animacy serve as the basis for the analysis of the possessor NPs in the corpus data.

1.5 *Research Objectives*

The research into possessive *–ing* constructions in Present-Day English has been motivated by how they have received very little attention in the literature. Indeed, there does not seem to be much scholarly interest in these rare constructions, aside from the aforementioned register differences and potential interchangeability between genitive and objective/common-case subjects in *–ing* clauses. Using the Longman Spoken and Written English (LSWE) corpus, Biber et al. (1999: 750) note that given the choice between accusative and possessive *–ing* constructions, language users opt for the former in over 90% of the cases. Similarly, Mair (2002: 112) emphasizes the rarity of possessive *–ing* constructions, dismissing them as "archaic" and extremely infrequent in Present-Day English (see also Taylor 1996: 266).

Starting out from the above observations, this thesis aims to bridge a gap in the literature by examining possessive *–ing* constructions in the corpus data based on their representational, aspectual, syntactic, and referential behavior and contrasting the semantic features of their possessor NPs with those of the possessor referents of genitive NPs. More specifically, the thesis concerns itself

with several lines of research inquiry, inspired by a number of existing claims in the literature. The research hypotheses can be summed up as follows:

- In his study of double-possessive nominalizations, defined as *–ing* forms (e.g. *understanding*) plus *–ion* nominalizations (e.g. *discussion*) and their various allomorphs *–tion* (e.g. *appreciation*), *–sion* (e.g. *invasion*), etc. that are both preceded and followed by a possessive phrase (e.g. *my understanding of the idea*, *John's discussion of the topic*), Mackenzie (2007: 225) notes that "mental processes clearly predominate". Does the same conclusion apply to possessive nominal gerunds in the corpus data when they are the only constructions taken into account?

- To what extent do nominal gerunds emphasize the notions of 'durativity', 'atelicity', and 'dynamicity' as pointed out by Brinton (1998: 48–9) when they are contrasted with their verbal counterparts? How does that tie in with the representational categories that nominal and verbal gerunds with genitive subjects typically denote in the corpus data?

- Fanego (2004: 11) and De Smet (2008: 60) concur that both nominal and verbal gerunds have been associated throughout their history with prepositional use (see also Houston 1989: 176; Expósito 1996: 173–80). Does this observation still hold in Present-Day English, and what are the syntactic functions that nominal and verbal gerunds with genitive subjects generally assume in the corpus data?

- Quirk et al. (1985: 326) regard the genitival construction as "a noun phrase embedded as a definite determinative within another noun phrase". Likewise, Biber et al. (1999: 294) maintain that "the genitive phrase most typically is a definite noun phrase with specific reference, which also gives specific reference to the superordinate noun phrase" (for similar arguments, see Huddleston 1988: 90–1; Lyons 1999: 23; Rosenbach 2002:

14). Can this definition be extended to possessive *–ing* constructions? In other words, do possessive nominal and verbal gerunds always refer to specific actions or events in the corpus data? Moreover, based on what has been noted in the literature regarding 'generic *you*' (Quirk et al. 1985: 354; Biber et al. 1999: 330–1), is there any difference between how nominal and verbal gerunds behave referentially when premodified by *your* as opposed to *their*, *its*, *his*, and *my*?

- What kind of conclusions can be drawn from comparing the semantic features of the possessor NPs in nominal and verbal gerunds to those of the possessor referents of genitive NPs? Additionally, is there a correlation between the type of possessor NPs (common or proper) in nominal and verbal gerunds and the referential status of such constructions?

To address the research questions above, the remainder of the thesis is organized as follows. Section 2 describes the extraction and sorting of data and the methodology used for corpus analysis. Section 3 includes a detailed quantitative and qualitative analysis of the data and an overview of corpus results. Finally, Section 4 closes with a summary of key findings and conclusions and suggestions for further research.

2 METHODOLOGY

2.1 *Data Extraction and Sorting*

The comparative study carried out is based on the Collins Wordbanks Online (WBO) Corpus, which includes a total of 455 million word forms in both written and spoken English. The data encompasses different time periods (from the early 1960s to 2005), text forms (newspaper, book, spoken, magazine, ephemera, report), and domains (news, fiction, nonfiction) from different countries (the United Kingdom, the United States, Australia, Canada, India, New Zealand, South Africa, Ireland).

For the purposes of this thesis, 400 nominal and 400 verbal gerunds with genitive subjects have been randomly extracted from the corpus. For both nominal and verbal gerunds, a distinction has been made between –*ing* constructions premodified by genitive NPs (realized by the enclitic marker *'s* or its zero allomorph) and those preceded by possessive determiners (*your*, *their*, *its*, *his*, *my*). Examples (33)–(34) demonstrate all the relevant constructions that have been used for this corpus study.

> 33. a. The Independent's reference to **Britpop's plundering of the rock canon** was equally significant. [Nominal gerund with a genitive NP marked by the enclitic postposition *'s*]
> b. Paddington survivor Pam Warren is the latest victim because she exposed the truth about **Stephen Byers' mishandling of Railtrack.** [Nominal gerund with a genitive NP realized by the 'zero genitive']
> c. She added that **his flouting of international law** could lead to his prosecution as a war criminal. [Nominal gerund with a possessive determiner]

34. a. The testimony they heard mostly centered on **McClanahan's buying the movie tickets.** [Verbal gerund with a genitive NP marked by the enclitic postposition *'s*]

b. Dr McKegg attributes the toothbrushing project's success to **principals' backing the scheme.** [Verbal gerund with a genitive NP realized by the 'zero genitive']

c. "There is no shame in **your taking a long-overdue retirement,"** he wrote. [Verbal gerund with a possessive determiner]

The data has therefore been divided into four sets of 200 nominal and 200 verbal gerunds with genitive NPs and 200 nominal and 200 verbal gerunds with possessive determiners as illustrated in Table 4 and Figure 1 below. Including both genitive NPs and possessive determiners in the analysis of possessive *–ing* constructions ensures that the results are not skewed in favor of one type of possessor NP over the other. In addition, it allows for a quadripartite analysis that contrasts data sets of equal frequency against one another.

	Nominal Gerunds	Verbal Gerunds
Genitive NPs	200	200
Possessive Determiners	200	200
Total	400	400

Table 4
*A numerical overview of the corpus data selected for the thesis*
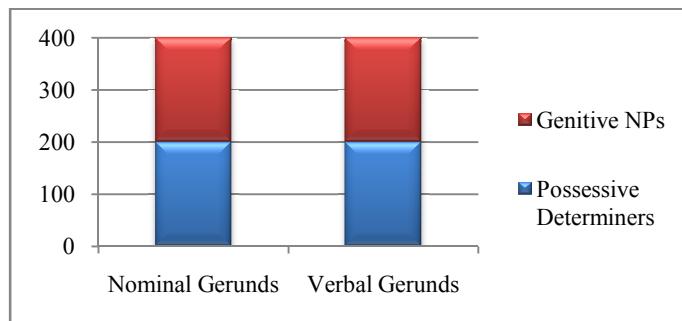
Figure 1
A graph showing the four data sets in relation to one another

The data sorting for nominal and verbal gerunds with genitive NPs has been rather straightforward. The patterns [genitive NP + –*ing* form + *of*] and [genitive NP + –*ing* form + determiner] have generated 282 and 526 hits respectively in the corpus, and 200 nominal and 200 verbal gerunds out of these patterns have been identified and selected. On the other hand, the data sorting for nominal and verbal gerunds with possessive determiners has been quite convoluted. The possessive determiners *your*, *their*, *its*, *his*, and *my* (*her* has been excluded as it has identical forms in the objective and genitive case) considerably vary in their frequency in the corpus. The sequences [*your*, *their*, *its*, *his*, *my* + –*ing* form + *of*] and [*your*, *their*, *its*, *his*, *my* + –*ing* form + determiner] have generated a total of 629 and 1,313 hits respectively in the corpus. In order to select 200 nominal and 200 verbal gerunds out of the above sequences that include a representative set of all possessive determiners in the corpus, the following formulae have been used:

- Target instances of nominal gerunds with possessive determiners (200) / total number of hits in the corpus (629) * 100 = 31.8%
- Target instances of verbal gerunds with possessive determiners (200) / total number of hits in the corpus (1,313) * 100 = 15.2%

Tables 5 and 6 show a full breakdown of the search queries used for the extraction of nominal and verbal gerunds, a few examples of the units of analysis they have rendered, the total number of hits they have generated, and the number of relevant instances that have been selected (using the above percentage values in the case of nominal and verbal gerunds with possessive determiners).

Search Query	Unit of Analysis	Total Hits	Selected Instances
[tag="POS"] [tag="VVG"] [word="of"]	Arthur's stealing of	282	200
[word="your"] [tag="VVG"] [word="of"]	Your running of	15	5
[word="their"] [tag="VVG"] [word="of"]	Their trumpeting of	122	39
[word="its"] [tag="VVG"] [word="of"]	Its encircling of	121	38
[word="his"] [tag="VVG"] [word="of"]	His cutting of	341	108
[word="my"] [tag="VVG"] [word="of"]	My chanting of	30	10
		911	**400**

Table 5

The extraction, sorting, and selection process for nominal gerunds

Search Query	Unit of Analysis	Total Hits	Selected Instances
[tag="POS"] [tag="VVG"] [tag="DT"]	Ford's losing the	526	200
[word="your"] [tag="VVG"] [tag="DT"]	Your saying that	215	33
[word="their"] [tag="VVG"] [tag="DT"]	Their visiting this	183	28
[word="its"] [tag="VVG"] [tag="DT"]	Its achieving a	114	17
[word="his"] [tag="VVG"] [tag="DT"]	His finding an	583	89
[word="my"] [tag="VVG"] [tag="DT"]	My cutting the	218	33
		1,839	**400**

Table 6

*The extraction, sorting, and selection process for verbal gerunds*
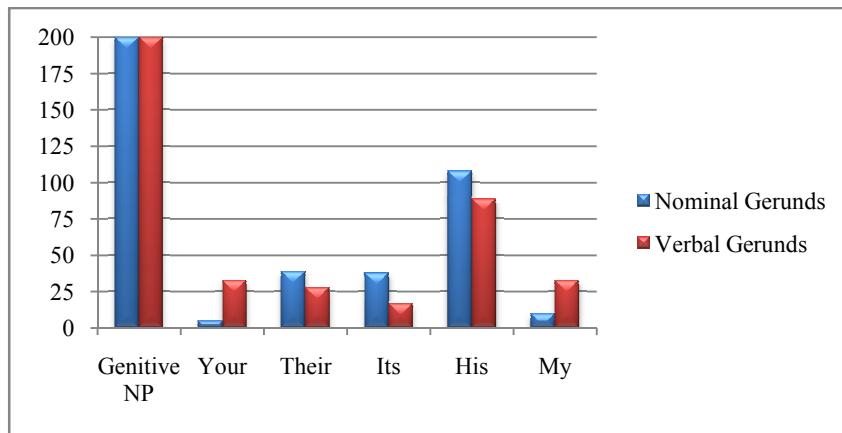
Figure 2

A graphical overview of the selected nominal and verbal gerunds

In addition to the search queries noted above, 200 instances of genitive NPs have been randomly extracted from the WBO Corpus using the search query

[tag="POS"] [tag="NN|NNS|NP|NPS"]. This has rendered units of analysis such as *today's student*, *journalists' right*, *Adrina's treachery*, and *the Wilsheres' house*. For the purpose of understanding the nature of the genitive subject of nominal and verbal gerunds, the semantic features of the possessor referents of these 200 genitive NPs have been contrasted with those of the possessor NPs of the 200 nominal and 200 verbal gerunds premodified by genitive NPs.

2.2 *Data Noise*

The search queries used for the extraction of nominal and verbal gerunds have generated considerable data noise with regard to the type of *–ing* forms as well as the genitival constructions found in the corpus. As a result, the data has been manually edited to identify nominal and verbal gerunds premodified by genitive NPs and possessive determiners. The constructions indicated below have been deemed irrelevant along the way and subsequently been excluded from the analysis:

- *–ing* forms that have completely lost their processual meaning and turned into concrete nouns as in (35)–(36) or fixed idiomatic expressions as in (37). The constructions in (36a, b) especially allow what Quirk et al. (1985: 1065) call a "mode interpretation" as long as they do not have a direct object.

35. a. A somewhat heated discussion took place at **Saturday's sitting of** the Alien Immigration Board for the Port of London, . . . [Fully nominalized gerund]

b. For your own benefit not mine, I'll be bound, was what he meant as he reached out a fine-veined hand with **its tracing of** liver spots to pat Michael's pony. [Fully nominalized gerund]

36. a. Without the foundation of **Rankl's training,** the company could never have grown. [Mode rather than action interpretation]

b. Can you go to Preston this afternoon? They'd love you to do **your reading** this evening. . . . [Mode rather than action interpretation]

37. Connie, Kathleen, Conn and Auntie join with us, your loving parents, in wishing you joy on **your coming of age** and hoping you will have a long and happy life. [Fixed idiomatic expression]

- Present participle forms as in (38a), present progressive forms as in (38b), and participial adjectives as in (38c) (see Quirk et al. 1985: 413, 1325–27; Biber et al. 1999: 392, 530).

38. a. It conducts a 'full-court press' **consisting** of massive numbers of collectors of all kinds, in the United States, in China, and elsewhere abroad. [Present participle form]

b. He thinks God's **doing** this especially for Leo. [Present progressive form]

c. In his **pioneering** A Proletarian Science (1980) Stuart Macintyre drew attention to an important tradition of British working-class' autodidacts. [Participial adjective]

- *–ing* forms in which the preposition *of* typically associated with nominal gerunds belongs to the base verb, making such constructions ambiguous since they can be interpreted as either participles or gerunds as in (39a, b).

39. a. Conversely, there was a strong correlation between the children developing cancer and their adoptive parents' **dying of** cancer before the age of fifty (but not if a parent dies after sixty or seventy). [*Of* belongs to the base verb *die*]

b. Maybe there's an injunction on my **talking of** the cup. [*Of* belongs to the base verb *talk*]

- Instances of 'independent genitives' (Quirk et al. 1985: 329) ('elliptic genitives' in Biber et al. (1999: 296–7)) as in (40a), 'local genitives' (Quirk et al. 1985: 329–30) as in (40b), and 'post-genitives' (Quirk et al. 1985: 330–1) ('double genitives' in Biber et al. (1999: 299)) as in (40c).

40. a. The country, he says, has been so weakened psychologically that its situation is akin to **Germany's** following the First World War. ['Independent genitive' in which the superordinate NP in a genitival construction is omitted (*Germany's situation*)]

b. And in Song of the City, Popkin pulls off what the corporate types he disdains (read his take on **McDonald's** targeting of Market Street and 43d Street) might call synergy. ['Local genitive' attached to a restaurant's name]

c. Both events were triggered by **a pal of Dave's** selling a pack of lies about her to a downmarket Sunday newspaper. ['Post-genitive' in which an *of*-phrase is combined with a genitive]

- Titles of books, programs, or works of art that are premodified by possessor NPs referring to their creators as in (41a, b).

41. a. For an example, see books at **University of Michigan's Making of America (MoA) Exhibit umich.edu**, which has thousands of 19th century books and periodicals available. [*Making of America* is a book exhibition held by the University of Michigan]

b. Lorraine Ashbourne (of **BBC1's Playing the Field**) chose a creamy, dusty rose; . . . [*Playing the Field* is a BBC television series]

- Instances in which a single quotation mark is mistakenly tagged in the corpus as denoting a genitive relation as in (42a, b).

42. a. The European newspapers spent more time on the **'accidental'** shelling of the Palestine Hotel the day before that killed journalists. [*Accidental* is an adjective modifying *shelling*]

b. Prawy was relieved at Maazel's fall from grace, which he attributed to **'a series of unlovely intrigues'** surrounding the conductor-intendant. [*A series of unlovely intrigues* bears no possessive relation to *surrounding*]

- Cases of exact duplicates in the data.

3 CORPUS ANALYSIS

In what follows, subsections 3.1 through 3.4 describe in much detail the representational, aspectual, syntactic, and referential analyses of the corpus data. Subsection 3.5 concludes by examining the semantic features of possessor NPs in possessive *–ing* constructions and in genitive NPs. The corpus results are presented for each subsection and illustrated at all times with examples, tables, and visualizations for easy interpretation.

3.1 *Representational Analysis*

The aim of the representational analysis of nominal and verbal gerunds with genitive subjects is twofold. First, it seeks to challenge Mackenzie's (2007: 225) claim that "mental processes clearly predominate" in the cross-linguistically rare category of double-possessive nominalizations. In his study, Mackenzie limits double-possessive nominalizations to instances with *–ing* or *–ion* (and its various allomorphs *–tion*, *–sion*, etc.) suffixes that are both preceded by a possessive NP in the form of an enclitic postposition *'s* (or its zero allomorph) or a possessive determiner and followed by a possessive NP introduced by an *of*-phrase (Mackenzie 2007: 220–1). He illustrates the constructions under investigation by the following examples:

43. Caesar's destruction of the city [*–ion* nominalization preceded by an enclitic *'s* and followed by an *of*-phrase] (Mackenzie 2007: 218)
44. My understanding of the assignment [*–ing* nominalization preceded by the possessive determiner *my* and followed by an *of*-phrase] (Mackenzie 2007: 218)

For the purpose of this study, Mackenzie's claim is partially tested on the basis of the process types designated by double-possessive *–ing* nominalizations in the

corpus data. Relevant constructions for this line of inquiry are demonstrated in (45a, b).

45. a. Waltemeyer said the United States considered **the Kurds' taking of Kirkuk** premature. [Nominal gerund with a genitive NP]
b. The apostolic administrator is directly responsible to the Holy See for **his running of the diocese.** [Nominal gerund with a possessive determiner]

Second, this representational analysis aims to investigate Brinton's (1998: 48–9) assertion that nominal gerunds imply dynamicity by contrasting them with their verbal counterparts. This notion of 'dynamicity' can be evaluated by how often each gerund type designates 'material' and/or 'relational' processes in the corpus data. The so-called 'durativity' and 'atelicity' of nominal gerunds posited by Brinton (1998: 48–9) are evaluated and discussed as part of the aspectual analysis in subsection 3.2 (page 36).

With the above hypotheses in mind, a brief overview of the different representational categories that are relevant for this study is in order. Table 7 and Figure 3 below show the various process types that the four data sets (comprising 200 instances each) denote in the corpus.

Data Set	Process Type			
	Material	**Mental**	**Relational**	**Verbal**
Nominal + Genitive NP	182 (91%)	3 (1.5%)	0 (0%)	15 (7.5%)
Nominal + Poss. Det.	174 (87%)	14 (7%)	0 (0%)	12 (6%)
Verbal + Genitive NP	167 (83.5%)	11 (5.5%)	12 (6%)	10 (5%)
Verbal + Poss. Det.	158 (79%)	16 (8%)	12 (6%)	14 (7%)

Table 7
Frequency of the different process types designated by the four data sets
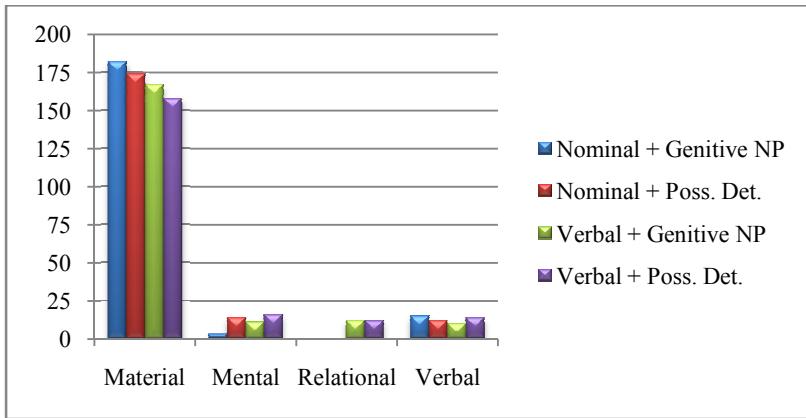
Figure 3

A graphical representation of the process types denoted by the four data sets

Examples (46)–(49) demonstrate the different process types associated with nominal and verbal gerunds with genitive subjects in the corpus data. (46a, b) refer to 'material processes', (47a, b) to 'mental processes', (48a, b) to 'relational processes', and (49a, b) to 'verbal processes'.

46. a. Turkey will want to raise what it sees as **Greece's blocking of Turkish attempts to join the European Community.** [Nominal gerund denoting a 'material process' (process of doing)]

    b. He listened fascinated as Thompson talked of slots in programming schedules and the long lead time between the commissioning of a show and **its reaching the screen.** [Verbal gerund denoting a 'material process' (process of happening)]

47. a. I had to face the uncomfortable fact that **my favouring of Stacey when choosing the checkout on my many recent visits to the store** had been noticed even by thick Brenda. [Nominal gerund denoting a 'mental process' (process of affection)]

    b. A movement made by someone hiding behind the arras of the old king gives an intriguing dramatic colour to **Hamlet's seeing the ghost of his**

father in the dark room, while Gertrude does not. [Verbal gerund denoting a 'mental process' (process of perception)]

48. a. Of course, her body was still much more developed than mine, but I remembered what Momma had said about **Tony's combining the two of us.** [Verbal gerund denoting a 'relational process' (process of being)]

b. The US government's anti-trust case against Microsoft could result in **its becoming a number of "Baby Bill" companies.** [Verbal gerund denoting a 'relational process' (process of becoming)]

49. a. If **my recounting of our story and the effects which a miscarriage of justice have had on us** can help towards that aim, then I thank God. [Nominal gerund denoting a 'verbal process' (process of communicating)]

b. Farmer spokesman Safir Ahmed said no one should be upset about "just a little flip remark" that preceded **Clinton's reciting a Gandhi quote that's Farmer's favorite and is used in her campaign materials.** [Verbal gerund denoting a 'verbal process' (process of communicating)]

The data above shows that of 400 processes designated by nominal gerunds with genitive NPs and possessive determiners, only 17 (4.25%) are identified as 'mental'. These include processes of cognition (*questioning* (in the sense of expressing doubt), *misreading*, *picturing*), processes of affection (*valuing*, *favoring*, *honoring* (in the sense of holding someone or something in high regard), *blaming*), and processes of perception (*sighting*, *witnessing*). Some of the aforementioned *–ing* forms can call for multiple interpretations depending on the context in which they are used. For example, a semantic distinction has been made between *questioning* as an *–ing* form that means asking or inquiring as in (50) and doubting as in (51).

50. With **lawyers' questioning of potential jurors starting today,** Massino faces a racketeering rap that could land him behind bars for the rest of his life. [*Questioning* referring to the 'verbal process' of interrogating]

51. The grin he gave me somewhat modified his words, yet it was still clear he did not enjoy **my questioning of his judgment.** [*Questioning* referring to the 'mental process' of doubting]

The corpus results here provide decisive evidence for how rare 'mental processes' are in nominal gerunds with genitive NPs and possessive determiners. This goes against Mackenzie's (2007: 225) general conclusion that the vast majority of double-possessive *–ion* (and its various allomorphs) and *–ing* nominalizations refer to 'mental processes'. It also indicates that while Mackenzie's claim may collectively hold true for both types of nominalizations, such a pattern is not realized when only double-possessive *–ing* nominalizations are taken into account. What can reasonably follow then is that the *–ion* nominalizations in Mackenzie's data may have tipped the scale in favor of 'mental processes'. Such an assumption, however, is beyond the scope of this thesis and therefore merits its own investigation.

The second line of inquiry here concerns the fact that nominal gerunds are commonly held as implying dynamicity in the literature. This notion can be examined by comparing nominal gerunds with genitive subjects to their verbal counterparts with regard to the extent to which they denote 'material' and/or 'relational' processes in the corpus data. The aim is to confront what has been posited in the literature about how nominal gerunds typically designate ongoing activities or events (Lees 1968 [1960]: 64–5; Marchand 1969: 302; Fraser 1970; Quirk et al. 1985: 1292, 1551; Brinton 1998: 48–9).

The results above show that 'material processes', which include processes of doing (e.g. *giving*, *leaving*, *dancing*) and processes of happening (e.g.

receiving, *dying*, *drowning*), predominate in all four data sets. A total of 356 of 400 (89%) nominal gerunds with genitive subjects refer to 'material processes'; for verbal gerunds with genitive subjects, a comparable 325 of 400 (81.25%) denote the same process type. Using the absolute frequencies above, a chi-square test is performed to determine whether the difference in numbers is of any statistical significance. As shown in Figure 4 below, a P-value of 0.002 indicates that this difference cannot be coincidental, confirming that nominal gerunds with genitive subjects tend to refer more to 'material processes' than do their verbal counterparts. This is in full agreement with how nominal gerunds in the literature are said to emphasize the processual character of actions or events rather than their onset or completion. It can thus be argued that language users may prefer nominal over verbal gerunds when they need to express an activity that is in process.

356	44	X	X	X	X
325	75	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
	CALCULATE	CLEAR			
	Chisquare	9.486790310837			
	Correlation	0.108256695844			
	P-value	0.002			
	Conclusion				
	Very strong evidence against the null hypothesis				
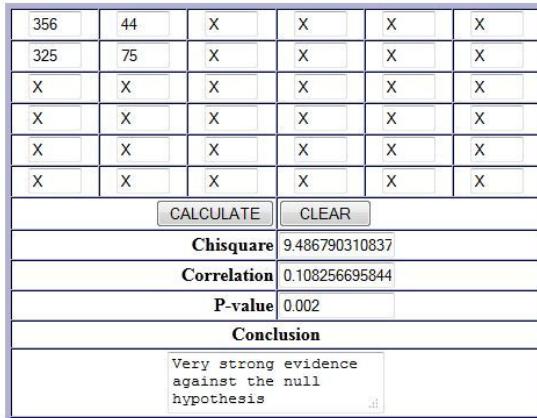
Figure 4

Material processes are associated more with nominal than verbal gerunds

Further to the notion of 'dynamicity', nominal gerunds with genitive subjects have been contrasted with their verbal counterparts with regard to whether they allow 'relational' or 'non-action' predicates. While nominal gerunds in the corpus data do not refer to any 'relational process', verbal gerunds designate 24 instances

of the process type. Examples (52a, b) illustrate how verbal gerunds with genitive subjects allow 'relational' predicates, whereas nominal gerunds do not.

52. a. Televisión Española, . . . was desperately trying to change the popular European misconception of **Spain's forming a part of Africa.** [cf. *Spain's forming of a part of Africa]

b. Therefore, **his becoming a mere translator** was to me a grievous personal disappointment, quite apart from the sorrow I felt on his behalf. [cf. *his becoming of a mere translator]

This contributes additional evidence that nominal gerunds are more likely to highlight the dynamicity of actions or events rather than denote processes of being or becoming. It also indicates that the choice between nominal and verbal gerunds is not always a matter of stylistics; nominal and verbal gerunds cannot replace one another in all contexts as demonstrated in the examples above. Within the scope of 'relational processes', this is certainly the case as they tend to be in complementary distribution.

3.2 *Aspectual Analysis*

The semantic notions of 'durativity' and 'atelicity' that Brinton (1998: 48–9) posits for nominal gerunds are examined here through a contrastive analysis of the aspectual features of both nominal and verbal gerunds with genitive subjects. This involves identifying the different situation types expressed at the level of the VP in the corpus data based on two cross-cutting taxonomies: a general one that distinguishes between four situation types (Depraetere & Langford 2012: 139–43) and a more comprehensive one that recognizes 11 of them (Quirk et al. 1985: 200–9). The aim is to investigate whether nominal gerunds with genitive subjects refer more to durative (those having a temporal contour) and atelic (those lacking an inherent endpoint) situations than do their verbal counterparts.

Starting with the general taxonomy proposed by Depraetere & Langford (2012: 139–43), four situation types have been identified based on the three semantic features of 'duration' (durative vs. punctual), 'dynamicity' (dynamic vs. stative), and 'inherent endpoint' (defined endpoint vs. no implied finality). Table 8 and Figure 5 below present an overview of the different situation types in the corpus data as denoted by the four data sets.

Data Set	Situation Type			
	Accomplishment	**Activity**	**Achievement**	**State**
Nominal + Genitive NP	84 (42%)	45 (22.5%)	69 (34.5%)	2 (1%)
Nominal + Poss. Det.	70 (35%)	89 (44.5%)	32 (16%)	9 (4.5%)
Verbal + Genitive NP	55 (27.5%)	30 (15%)	94 (47%)	21 (10.5%)
Verbal + Poss. Det.	78 (39%)	17 (8.5%)	82 (41%)	23 (11.5%)

Table 8

Frequency of the different situation types designated by the four data sets
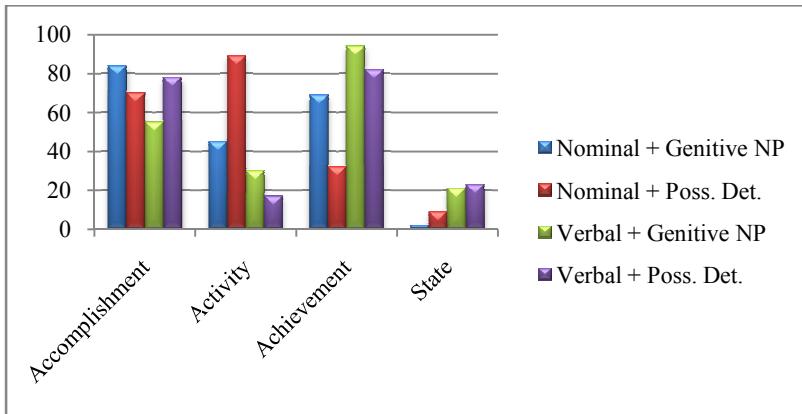

Figure 5

A graphical representation of the situation types denoted by the four data sets

Under this classification, the situation type 'accomplishment' refers to durative, dynamic, and conclusive events, 'activity' to durative, dynamic, and non-conclusive events, 'achievement' to punctual, dynamic, and conclusive events, and 'state' to durative, stative, and non-conclusive events (Depraetere & Langford 2012: 139–43). Examples (53)–(56) illustrate the different situation types found in

the corpus data, with (53a, b) referring to 'accomplishments', (54a, b) to 'activities', (55a, b) to 'achievements', and (56a, b) to 'states'.

53. a. She wouldn't allow **Bettina's unearthing of the past** to disturb the wonder of it all. [Nominal gerund referring to an 'accomplishment']
b. It appeared that the reason for **their making this journey** was that they were leaving the warm waters of the South Sea, as it was now the beginning of summer, to enjoy the fresh waters of the North Sea. [Verbal gerund referring to an 'accomplishment']

54. a. They'd never imagine how it is for me, torn between them and worried by **their flouting of common sense.** [Nominal gerund referring to an 'activity']
b. Irked, Kravis explained the importance he placed on **Drexel's handling the bonds.** [Verbal gerund referring to an 'activity']

55. a. "Neville felt rejected by the tribe he had chosen," said Peter Beattie, now Labor Party premier of Queensland, referring to **the Liberals' dumping of Bonner.** [Nominal gerund referring to an 'achievement']
b. I'd greatly appreciate **your taking a few moments to tell me a bit about yourself and how the programme has worked for you.** [Verbal gerund referring to an 'achievement']

56. a. Much has been made of the barbarity of the Aztecs: their penchant for ripping out the still-pulsating hearts of victims; **their wearing of flayed skins;** their constant warfare. [Nominal gerund referring to a 'state']
b. Allen Tate, Brewer and Ford met in New York that winter and agreed a salary of $1500 with an additional fee of $150 for **Ford's attending the Olivet Writers' Conference during the summer of 1937.** [Verbal gerund referring to a 'state']

With the much more refined taxonomy proposed by Quirk et al. (1985: 200–9), further distinctions have been drawn between the above situation types based on the semantic notion of 'agentivity', generally defined by whether an action or event has a "deliberate or self-activating [human] initiator" (Quirk et al. 1985: 207). This means that an agentive situation type (e.g. *your writing a name*) typically has a human agent (*you*) performing an action (*writing a name*), whereas a non-agentive situation type (e.g. *Venus' crossing the Sun's disc*) has a non-human force (*Venus*) going through an event (*crossing the Sun's disc*). Exceptions to this are a few nominal and verbal gerunds in the corpus data that are considered non-agentive even when they have human subjects (e.g. *becoming*, *dying*, *drowning, receiving*) since they refer to processes of happening that lack the deliberateness noted above.

Under Quirk et al.'s classification system, durative, dynamic, and conclusive situations are divided into the agentive 'accomplishments' as in (56a, b) and the non-agentive 'processes' (associated with verbal gerunds only in the corpus data) as in (57a, b); punctual, dynamic, and conclusive situations into the agentive 'transitional acts' as in (58a, b) and the non-agentive 'transitional events' as in (59a, b); and punctual, dynamic, and non-conclusive situations into the agentive 'momentary acts' as in (60a, b) and the non-agentive 'momentary events' (no instances in the corpus data). These aspectual categories have been used to refine and extend the current analysis by differentiating between the four situation types discussed above.

56. a. Less well known, though no less revealing, is **William's crushing of a revolt in the north of England in 1069 and 1070 with a severity which touched all levels of society.** [Nominal gerund referring to the agentive 'accomplishment']

b. "What I remember most clearly about you at Bedford," she wrote, "was **your writing a name in an exercise book on the nursery table over and over again.**" [Verbal gerund referring to the agentive 'accomplishment']

57. a. In 1663, James Gregory had drawn attention to a method of finding the solar parallax by noting the timing and manner of **Venus' crossing the Sun's disc,** during any of the rare occurrences of that event. [Verbal gerund referring to the non-agentive 'process']

b. This high-profile strategy resulted in **Vines's becoming a media focus.** [Verbal gerund referring to the non-agentive 'process']

58. a. Too weak at the centre, too fragmented in **its granting of powers to the individual states,** the American republic seemed doomed to fail. [Nominal gerund referring to the agentive 'transitional act']

b. The impetus to **Quant's starting a revolution in quiet, arty Chelsea** was her marriage to Alexander Plunket-Greene, one of the very first old-family Englishmen in whom the spirit of the '60s blossomed. [Verbal gerund referring to the agentive 'transitional act']

59. a. They reach the point of hysteria with attempts to authenticate later passages like the ten plagues, the splitting of the Red Sea, and **Moses' receiving of the Ten Commandments on Mount Sinai.** [Nominal gerund referring to the non-agentive 'transitional event']

b. Mr. Reddy told listeners the National Front government enjoys, as he put it, the very best of health and he said there was no possibility of **its dying an unnatural death.** [Verbal gerund referring to the non-agentive 'transitional event']

60. a. The full back is not renowned for his goalscoring, but **his bludgeoning of the ball** brought a hidden talent to the fore. [Nominal gerund referring to the agentive 'momentary act']

b. It was **Benedicta's noticing the Alder Hey Children's Hospital badge that Edith was wearing** that first led her to talk to Edith about children's nursing and then to mention Helen House. [Verbal gerund referring to the agentive 'momentary act']

The first of the two research questions in this subsection is concerned with Brinton's (1998: 48–9) assertion that the *–ing* suffix in nominal gerunds converts the verb into a durative activity. This claim can be examined by comparing nominal gerunds with genitive subjects to their verbal counterparts with regard to how often they designate durative and/or punctual situation types. Durative situations as in (61a, b) are perceived as having a temporal contour (i.e. 'accomplishments', 'activities', and 'states'), whereas punctual situations as in (62a, b) are defined as not taking up time (i.e. 'achievements'). Table 9 and Figure 6 below give an overview of the durative and punctual situations in the corpus data as denoted by the four data sets.

61. a. The report, intended to set the stage for **Britain's hosting of the G8 summit of industrialised countries this summer in Scotland**, has been set out in detail by Africa Confidential. [Nominal gerund referring to a durative situation ('accomplishment')]

b. But, like President Carter, I was sure that the most effective thing we could do would be to prevent **their using the forthcoming Moscow Olympics for propaganda purposes.** [Verbal gerund referring to a durative situation ('activity')]

62. a. Second, that in Mr. Fischer's view, Hitler's principal evil was his invasion of sovereign states and **his triggering of a war against Germany.** [Nominal gerund referring to a punctual situation ('achievement')]

b. Some experts said the trigger for last Thursday's blackout may stem from **FirstEnergy's borrowing a large amount of power from other Midwest utilities.** [Verbal gerund referring to a punctual situation ('achievement')]

Data Set	Situation Type	
	Durative	**Punctual**
Nominal + Genitive NP	131 (65.5%)	69 (34.5%)
Nominal + Poss. Det.	168 (84%)	32 (16%)
Total	**299 (74.75%)**	**101 (25.25%)**
Verbal + Genitive NP	106 (53%)	94 (47%)
Verbal + Poss. Det.	118 (59%)	82 (41%)
Total	**224 (56%)**	**176 (44%)**

Table 9
*Frequency of the durative and punctual situations denoted by the four data sets*
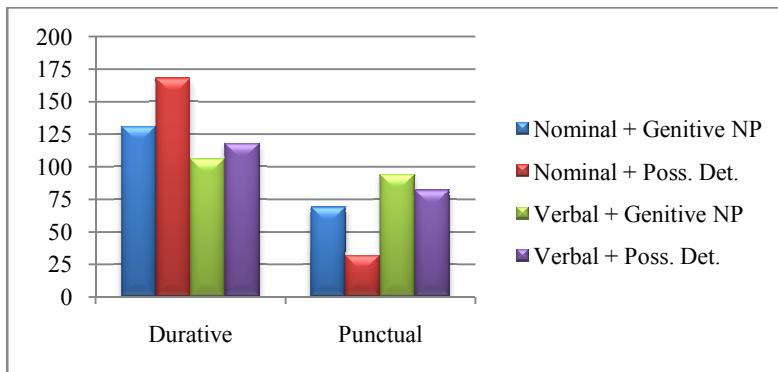
Figure 6
A graphical representation of the durative and punctual situations designated by the four data sets

The illustrations above indicate that 299 of 400 (74.75%) nominal gerunds with genitive subjects in the corpus data refer to durative situations; for verbal gerunds with genitive subjects, only 224 of 400 (56%) denote the same situation type. Moreover, verbal gerunds with genitive subjects are almost twice more likely to refer to punctual situations (44%) than are their nominal counterparts (25.25%). Figure 7 below shows the result of a chi-square test, with frequencies added for the durative and punctual situations in the corpus data. A P-value of 0 provides

strong evidence that nominal gerunds with genitive subjects refer more to durative situations than do their verbal counterparts, thereby confirming Brinton's (1998: 48–9) long-standing claim regarding how the *–ing* suffix in nominal gerunds implies durativity.

299	101	X	X	X	X
224	176	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

CALCULATE   CLEAR

Chisquare	31.06211733197
Correlation	0.193329792518
P-value	0

Conclusion

Very strong evidence against the null hypothesis
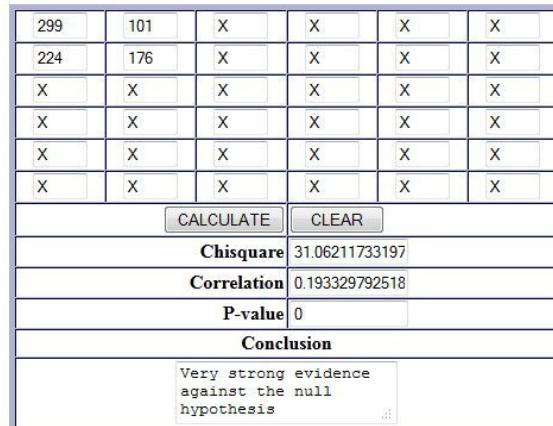
Figure 7
Nominal gerunds with genitive subjects denote more durative situations than do their verbal counterparts

The data above also shows that the frequencies of durative and punctual situation types correlate with whether nominal and verbal gerunds are paired with genitive NPs or possessive determiners. While nominal and verbal gerunds with genitive NPs refer to 237 durative and 163 punctual situations, those preceded by possessive determiners designate 286 durative and 114 punctual situations. In Figure 8, a chi-square test is used to check the statistical significance of these frequencies. The test yields a P-value of 0, indicating a very strong tendency for both nominal and verbal gerunds to refer more to durative situations when they are premodified by possessive determiners rather than genitive NPs.

237	163	X	X	X	X
286	114	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

CALCULATE CLEAR

Chisquare	13.25869221583
Correlation	0.127683855397
P-value	0
Conclusion	
	Very strong evidence against the null hypothesis
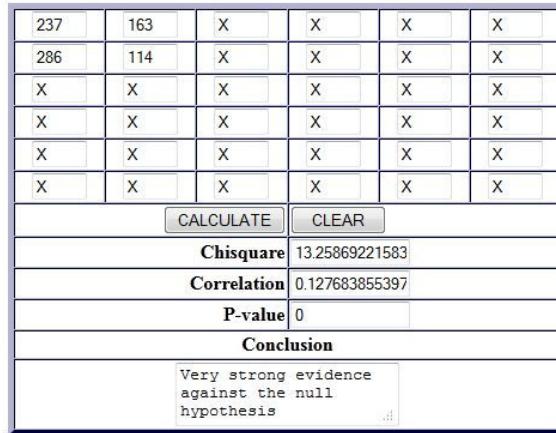
Figure 8
Nominal and verbal gerunds designate more durative situations
when combined with possessive determiners as opposed to genitive NPs

The second line of inquiry here involves investigating the notion of 'atelicity' that Brinton (1998: 48–9) posits for nominal gerunds through comparing nominal gerunds with genitive subjects to their verbal counterparts. Using the taxonomy proposed by Depraetere & Langford (2012: 139–43), telic situations as in (63a, b) are defined as those having an inherent endpoint (i.e. 'accomplishments' and 'achievements'), whereas atelic situations as in (64a, b) are those lacking an implied finality (i.e. 'activities' and 'states'). Table 10 and Figure 8 below illustrate the telic and atelic situation types in the corpus data as designated by the four data sets.

63. a. *No Roads Here* details **his ancestors' taming of the northwest.**
[Nominal gerund referring to a telic situation ('accomplishment')]
b. Every time I visited him he had some sort of comment to make about **his missing a full weekend off** . . . [Verbal gerund referring to a telic situation ('achievement')]
64. a. Spices' contamination resided not in any inherent or ritual effect – matter, being God-made, was innocent – but ensued from **their fuelling of**

the 'sensual appetite'. [Nominal gerund referring to an atelic situation ('activity')]

b. Beren also gave into **Saruman's keeping the keys of Orthanc.** [Verbal gerund referring to an atelic situation ('state')]

Data Set	Situation Type	
	Telic	**Atelic**
Nominal + Genitive NP	153 (76.5%)	47 (23.5%)
Nominal + Poss. Det.	102 (51%)	98 (49%)
Total	**255 (63.75%)**	**145 (36.25%)**
Verbal + Genitive NP	149 (74.5%)	51 (25.5%)
Verbal + Poss. Det.	160 (80%)	40 (20%)
Total	**309 (77.25%)**	**91 (22.75%)**

Table 10
*Frequency of the telic and atelic situations denoted by the four data sets*
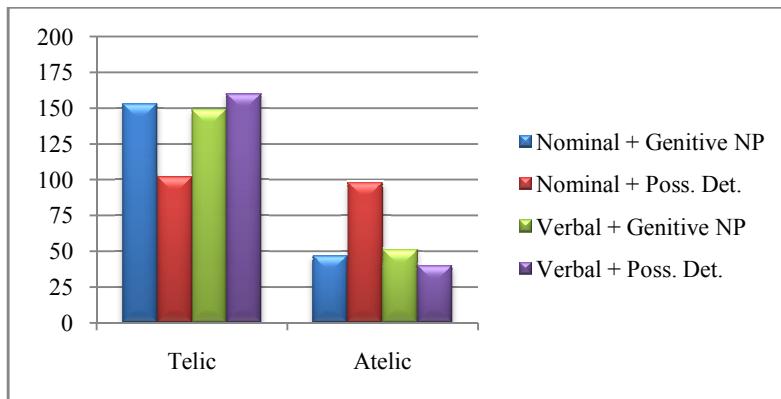
Figure 8
A graphical representation of the telic and atelic situations designated by the four data sets

While both nominal and verbal gerunds with genitive subjects generally tend to refer to telic situations in the corpus data, the semantic notion of 'atelicity' is clearly associated more with nominal than verbal gerunds. 145 of 400 (36.25%) nominal gerunds denote atelic situations, compared to only 91 of 400 (22.75%) verbal gerunds. As shown in Figure 9 below, the correlations between the above frequencies are statistically significant at a P-value of 0. This indicates that

nominal gerunds with genitive subjects denote more situations without an inherent endpoint than do their verbal counterparts. The representational and aspectual analyses in subsections 3.1 and 3.2 show that the semantic features of 'dynamicity', 'durativity', and 'atelicity' commonly associated with nominal gerunds in the literature always come to the fore when nominal gerunds are examined in relation to their verbal counterparts.
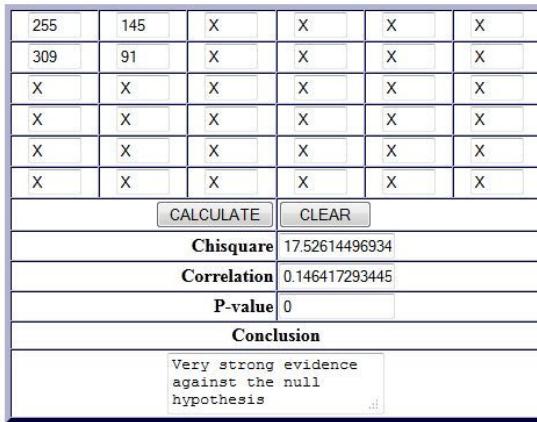
Figure 9
Nominal gerunds with genitive subjects designate more atelic situations than do their verbal counterparts

3.3 *Syntactic Analysis*

Nominal and verbal gerunds have been historically associated in the literature with prepositional use (Houston 1989: 176; Expósito 1996: 173–80; Fanego 2004: 11; De Smet 2008: 60). In order to investigate whether this observation holds in Present-Day English, both nominal and verbal gerunds with genitive subjects are synchronically analyzed on the basis of the syntactic functions they assume in the corpus data. In addition, this syntactic analysis aims to explore and account for any differences that may arise between nominal gerunds with genitive subjects and their verbal counterparts.

Adopting the classification of syntactic roles outlined in Heyvaert et al. (2005: 76–7), the clausal functions of 397 nominal and 399 verbal gerunds with

genitive subjects have been identified. Examples (65a, b) show two of the four gerundive constructions that have been excluded from this analysis because they lack the context necessary to determine their syntactic functions. The full breakdown of the syntactic positions that nominal and verbal gerunds with genitive subjects occupy in the corpus data is laid out in Table 11 and illustrated in Figure 10 below.

65. a. A smile hangs about the words, **his doffing of his hat to God** surely a witticism, the description of England as the Promised Land surely an act of flattery to the Englishmen around him. [Nominal gerund with an unidentifiable syntactic function]

b. He was certain that Father Kadredin was involved in the ikon's disappearance. Why else his evasiveness, the unlikely tale of the Abkhazi guerrillas, **his setting a precise contemporary value on the ikon?** [Verbal gerund with an unidentifiable syntactic function]

Data Set	Syntactic Function						
	Subj.	Subj. Comp.	Obj.	Prep. Comp. of Verb	Prep. Comp. of Adj.	Post-modifier of Noun	Prep. Phrase Adjunct
Nominal + Genitive NP	21	8	40	23	11	40	56
Nominal + Poss. Det.	45	6	35	27	18	20	47
Total	**66**	**14**	**75**	**50**	**29**	**60**	**103**
Verbal + Genitive NP	4	4	28	57	11	62	34
Verbal + Poss. Det.	14	5	33	55	6	51	35
Total	**18**	**9**	**61**	**112**	**17**	**113**	**69**

Table 11

Frequency of the different clausal functions assumed by the four data sets
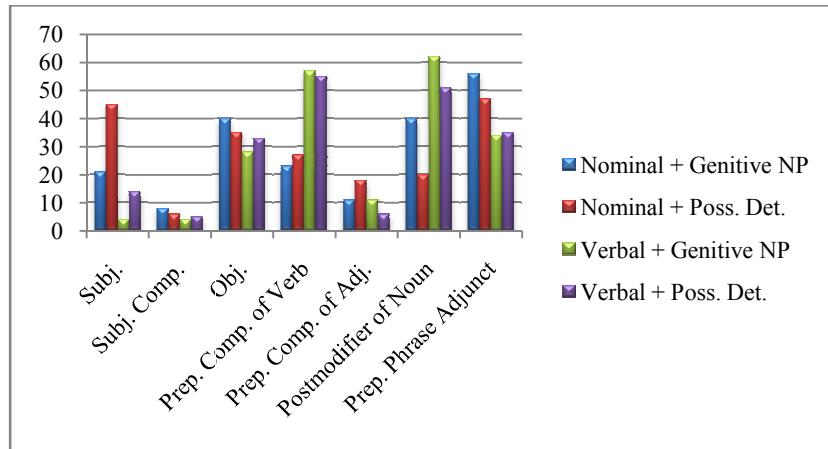
Figure 10

A graphical representation of the syntactic roles served by the four data sets

Examples (66)–(73) below demonstrate the different syntactic functions that have been identified in the corpus data. The nominal and verbal gerunds in (66a, b) function as subject, in (67a, b) as subject with anticipatory *it*, in (68a, b) as subject complement, in (69a, b) as object, in (70a, b) as prepositional complement of a verb, in (71a, b) as prepositional complement of an adjective, in (72a, b) as postmodifier of a noun, and in (73a, b) as prepositional phrases with adjunct function.

66. a. **Pandarus' tricking of the royal family** can produce appreciation for its witty skill as well as moral condemnation. [Nominal gerund functioning as subject]

b. I'm afraid **my restricting the kalla** has made you bitter. [Verbal gerund functioning as subject]

67. a. Oh, it's a daft idea, **his blaming of himself,** and it did distress my mother sorely, as well you can imagine. [Nominal gerund functioning as subject with anticipatory *it*]

b. "Thank you, Sheilah, you're kind," said Alma. "It really helps, **your saying that."** [Verbal gerund functioning as subject with anticipatory *it*]

68. a. One of NAC's crowning moments was **its hosting of a candidates'
debate for a federal election in the '80s.** [Nominal gerund functioning as
subject complement]

b. Part of the alleged bribe was **Paul's financing the bulk of fund-raising
events for Mrs. Clinton's campaign,** Youssef wrote. [Verbal gerund
functioning as subject complement]

69. a. This trip to the historic site was part of a series of events organised to
mark **Cookstown's hosting of the Twelfth celebrations.** [Nominal
gerund functioning as object]

b. I recall **his liking the argument that modest samples, in spite of their
paucity, could nevertheless be highly significant.** [Verbal gerund
functioning as object]

70. a. After the crisis was past, he showed commendable restraint in not trying
to exult over **his worsting of the Russians.** [Nominal gerund functioning
as prepositional complement of a verb]

b. The meeting ended with **Karen's sharing some of the emotional
struggles she was having since her divorce,** while her boss lent a
sympathetic ear. [Verbal gerund functioning as prepositional complement
of a verb]

71. a. This entente was curiously reminiscent of **Testino's thawing of Diana
for the famous Vanity Fair pictures in 1997.** [Nominal gerund
functioning as prepositional complement of an adjective]

b. So one day they went up a mountain to smoke dope and she said she
was worried about **his driving the car back.** [Verbal gerund functioning
as prepositional complement of an adjective]

72. a. The Iraqis will certainly be pleased with this strongly-worded statement
which they will regard as a vindication of **their championing of the Arab
cause.** [Nominal gerund functioning as postmodifier of a noun]

b. There was no further obstacle to **Tibet's becoming an official Chinese satellite.** [Verbal gerund functioning as postmodifier of a noun]

73. a. After **the Allies' pounding of Dresden in February,** he and his wife hiked to Bavaria. [Nominal gerund functioning as a prepositional phrase with adjunct function]

b. He developed a sort of woodenness and I kept expecting to see him with a stick, which I never did despite **his adopting a blue blazer and cavalry twills.** [Verbal gerund functioning as a prepositional phrase with adjunct function]

The main research goal behind this syntactic analysis is to investigate whether nominal and verbal gerunds occur more commonly after prepositions as has been posited in the literature. To test the validity of this claim, both nominal and verbal gerunds with genitive subjects in the corpus data are examined with regard to whether they favor prepositional or non-prepositional environments. Compare the syntactic functions of the gerundive constructions in (74)–(75) below:

74. a. Your continued use of the Web Site or the Web Site Services following **IPC's posting of such changes** will be regarded by IPC as acceptance of the amended User Terms. [Nominal gerund in a prepositional environment (functioning as a prepositional phrase with adjunct function)]

b. I have some concerns about **your considering a new car.** [Verbal gerund in a prepositional environment (functioning as postmodifier of a noun)]

75. a. If the SDLP do not wish devolved administration at Stormont, then **their aping of Sinn Fein** will achieve that objective. [Nominal gerund in a non-prepositional environment (functioning as subject)]

b. Even more than resenting **Mesh's keeping the Lightstone in this castle for three millennia,** the Ishkans reviled us for losing it. [Verbal gerund in a non-prepositional environment (functioning as object)]

From the above examples, prepositional environments are simply understood to comprise the syntactic roles of prepositional complement of a verb, prepositional complement of an adjective, postmodifier of a noun, and prepositional phrase with adjunct function. On the other hand, non-prepositional environments include those of subject (with and without anticipatory *it*), subject complement, and object. Table 12 and Figure 11 below demonstrate the extent to which the four data sets favor prepositional or non-prepositional environments.

Data Set	Prepositional Environment	Non-Prepositional Environment
Nominal + Genitive NP	130 (65.3%)	69 (34.7%)
Nominal + Poss. Det.	112 (56.6%)	86 (43.4%)
Total	**242 (61%)**	**155 (39%)**
Verbal + Genitive NP	164 (82%)	36 (18%)
Verbal + Poss. Det.	147 (73.9%)	52 (26.1%)
Total	**311 (77.9%)**	**88 (22.1%)**

Table 12
*Frequency of how often the four data sets are associated with prepositional use*
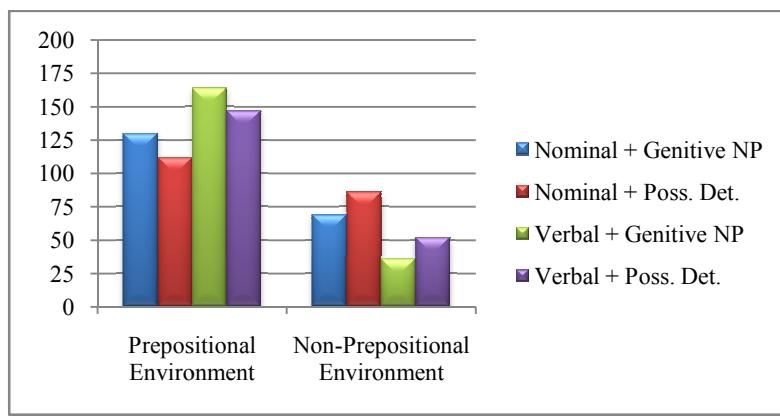
Figure 11
A graphical representation of the degree to which the four data sets favor prepositional or non-prepositional environments

The above data confirms the long-held association of nominal and verbal gerunds with prepositional use. Although both nominal and verbal gerunds with genitive subjects in the corpus data appear more often in prepositional than non-prepositional environments, they do so to varying degrees. 311 of 399 (77.9%) verbal gerunds with genitive subjects occur after prepositions, whereas such instances are found in 242 of the 397 (61%) corresponding nominal gerunds. The chi-square test in Figure 12 proves that this frequency variation is statistically significant, indicating that verbal gerunds with genitive subjects are more likely to occur in prepositional environments than are their nominal counterparts.

242	155	X	X	X	X
311	88	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

CALCULATE	CLEAR
Chisquare	27.07780009954
Correlation	0.181378683281
P-value	0
Conclusion	
	Very strong evidence against the null hypothesis
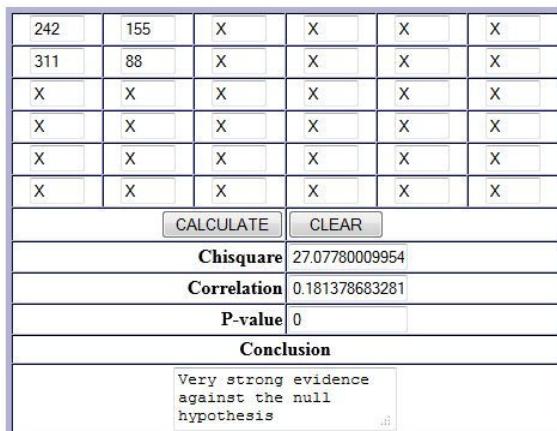
Figure 12

Verbal gerunds with genitive subjects favor more prepositional environments than do their nominal counterparts

Within the different syntactic roles that nominal and verbal gerunds with genitive subjects assume in the corpus data, a number of interesting patterns have emerged. In the remainder of this subsection, the focus is laid on the three syntactic functions of subject, prepositional complement of a verb, and postmodifier of a noun, which display the largest frequency variation between nominal gerunds with genitive subjects and their verbal counterparts. Table 13 and Figure 13 below illustrate how the three functions in question are represented in the corpus data.

Data Set	Syntactic Function		
	Subject	**Prepositional Complement of a Verb**	**Postmodifier of a Noun**
Nominal + Genitive NP	21	23	40
Nominal + Poss. Det.	45	27	20
Total	**66**	**50**	**60**
Verbal + Genitive NP	4	57	62
Verbal + Poss. Det.	14	55	51
Total	**18**	**112**	**113**

Table 13

The three syntactic functions displaying the largest frequency variation
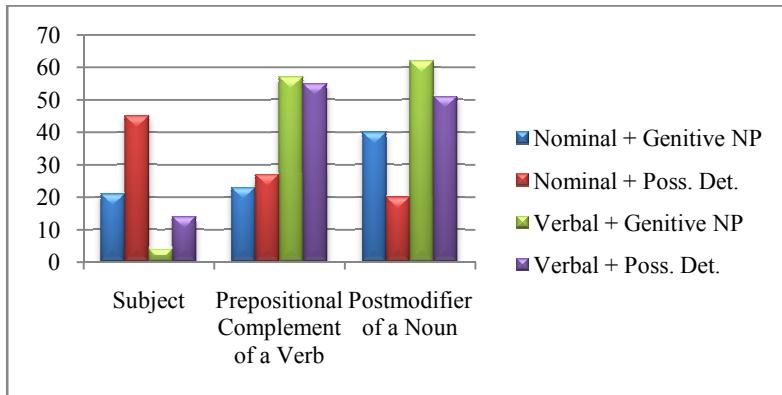

Figure 13

*A graphical representation of the three syntactic roles
with the largest frequency variation*

Using the above data, two important observations can be made. First, nominal gerunds with genitive subjects are almost four times more likely to function as subject in a given clause (66 instances) than are their verbal counterparts (18 instances). A chi-square test with a P-value of 0 confirms the statistical significance of this perceived correlation. See examples (76)–(77) for the constructions under discussion and Figure 14 for the statistical hypothesis test.

76. When Dave was in hospital, **his cutting of himself** was regarded by the doctors and nurses as no more than a symptom of his mental illness. [Nominal gerund functioning as subject]

77. Tony Blair and an army of experts have agreed that **teenagers' sneaking a drink or a puff** are a serious social problem, and that Prince Charles was absolutely right to call in the professionals. [Verbal gerund functioning as subject]

66	331	X	X	X	X
18	381	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

CALCULATE	CLEAR
Chisquare	30.93497754964
Correlation	0.193414585592
P-value	0
Conclusion	
Very strong evidence against the null hypothesis	
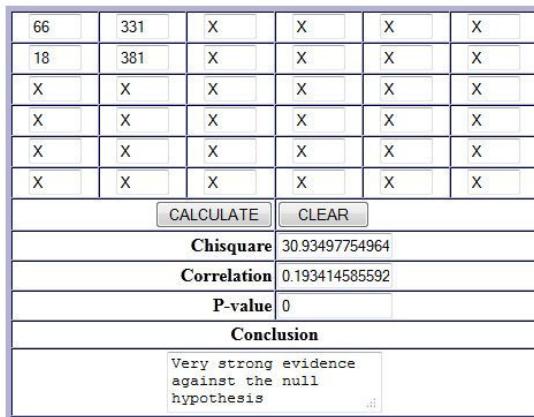
Figure 14
The subject function correlates almost four times more strongly
with nominal than verbal gerunds in the data

Second, verbal gerunds with genitive subjects are much more likely to function as prepositional complement of a verb (112 instances) or postmodifier of a noun (113 instances) in the corpus data than are their nominal counterparts (50 and 60 instances respectively). Examples (78)–(79) demonstrate how nominal and verbal gerunds assume the above functions in the corpus data. Moreover, Figures 15 and 16 below show the chi-square tests carried out for both hypotheses, providing very strong evidence for their statistical significance with P-values of 0.

78. a. No less than six film versions of East Lynne appeared between 1913 and 1931, tightening the novel's moralising aspects and glossing over **its questioning of the institution of marriage.** [Nominal gerund functioning as prepositional complement of a verb]
    b. If you saw his breathtaking display during the first hour or so of **England's trouncing of formidable Irish opposition,** then you will

know exactly what I mean. [Nominal gerund functioning as postmodifier of a noun]

79. a. And this could eventually lead to **France's signing the Non-Proliferation Treaty.** [Verbal gerund functioning as prepositional complement of a verb]

b. There are reports of **your leaving the Janata Dal (United) and starting a new party.** What is the reason for this move? [Verbal gerund functioning as postmodifier of a noun]

50	347	X	X	X	X
112	287	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
		CALCULATE	CLEAR		
	Chisquare	29.40178898725			
	Correlation	0.188735751740			
	P-value	0			
	Conclusion				
		Very strong evidence against the null hypothesis			
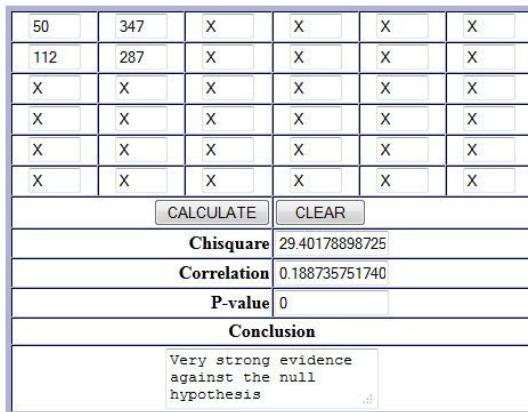
Figure 15

Verbal gerunds with genitive subjects are over twice more likely to function as prepositional complement of a verb than are their nominal counterparts

60	337	X	X	X	X
113	286	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
		CALCULATE	CLEAR		
	Chisquare	20.40705779479			
	Correlation	0.158101802742			
	P-value	0			
	Conclusion				
		Very strong evidence against the null hypothesis			
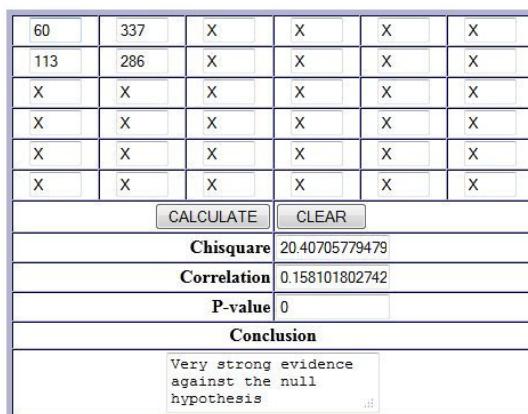
Figure 16

The postmodifier-of-a-noun function is associated more with verbal than nominal gerunds in the data

3.4 *Referential Analysis*

It has long been maintained in the literature that the genitive phrase is a definite NP with specific reference (Quirk et al. 1985: 326; Huddleston 1988: 90–1; Biber et al. 1999: 294; Lyons 1999: 23; Rosenbach 2002: 14). As both nominal and verbal gerunds in the corpus data are embedded within genitival constructions, their referential properties are examined in light of the above claim. Furthermore, taking into account the existing literature on 'generic *you*' (Quirk et al. 1985: 354; Biber et al. 1999: 330–1), this analysis aims to investigate the referential behavior of nominal and verbal gerunds when premodified by different possessive determiners.

Functioning externally as NPs, nominal and verbal gerunds can express a wide range of activities or events, which can be classified in terms of referential status into generic, specific definite, specific indefinite, and non-specific indefinite. Relevant to this corpus study are the generic and specific-definite reference types only. A generic nominal or verbal gerund as in (80a, b) refers to a type or kind of activity or event, rather than to an activity or event in the actual world, whereas a specific-definite nominal or verbal gerund as in (81a, b) denotes a single and identifiable instance of an activity or event.

80. a. Still, the figures may also be read as athletes becoming more sophisticated in **their taking of banned substances** and therefore not as easy to catch. [Nominal gerund with generic reference]
b. Clinicians can help a family at this point by inquiring about and validating the normalcy of **members' experiencing a range of conflicting emotions.** [Verbal gerund with generic reference]
81. a. It was the response to **Rommel's declining of Keitel's summons to Berlin.** [Nominal gerund with specific-definite reference]

b. Someone else who worked at the Met spoke of how Levine's lack of feeling for character led to **his inhibiting the development of ensemble work.** [Verbal gerund with specific-definite reference]

The two sets of gerundive constructions above can be interpreted as follows. (80a) generically refers to athletes' taking performance-enhancing drugs and (80b) to family members' feeling mixed emotions, while (81a, b) designate two actual events (*Rommel's declining of Keitel's summons to Berlin*, *Levine's inhibiting the development of ensemble work*) anchored with the past-tense verbs *was* and *led* respectively. Table 14 and Figure 17 below outline the frequency with which both nominal and verbal gerunds with genitive subjects denote the two reference types in the corpus data.

Data Set	Reference Type	
	Generic	**Specific Definite**
Nominal + Genitive NP	9 (4.5%)	191 (95.5%)
Nominal + Poss. Det.	11 (5.5%)	189 (94.5%)
Total	**20 (5%)**	**380 (95%)**
Verbal + Genitive NP	13 (6.5%)	187 (93.5%)
Verbal + Poss. Det.	21 (10.5%)	179 (89.5%)
Total	**34 (8.5%)**	**366 (91.5%)**

Table 14
Frequency of the two reference types represented by the four data sets
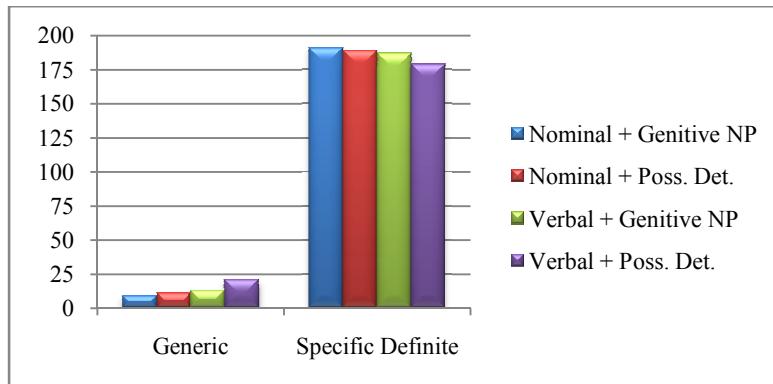

Figure 17
A graphical representation of the reference types designated by the four data sets

The data shows that 380 of 400 (95%) nominal gerunds and 366 of 400 (91.5%) verbal gerunds with genitive subjects refer to single and identifiable instances of activities or events. In order to investigate a possible correlation between the gerund type and its referential status, the dependence between the above variables is measured using a chi-square test. With a P-value of 0.049, the test indicates only moderate evidence against the null hypothesis, suggesting that a larger sample might be needed to derive any real conclusions.

For both nominal and verbal gerunds with genitive subjects, specific-definite reference predominates in the corpus data. This finding is important for two major reasons. First, it ties in with the near-universal consensus in the literature that possessive NPs are definite constructions with specific reference. Second, it indicates that this theory of definiteness can be extended to possessive –*ing* constructions as well. In this sense, it can be rightfully argued that the presence of possessive elements in the corpus data significantly increases the likelihood of gerunds referring to specific actions or events. This study should therefore not be considered an indication of the referential properties typically associated with nominal and verbal gerunds in general.

The second aim of this analysis is to investigate how nominal and verbal gerunds behave referentially when premodified by different possessive determiners. This involves examining the 32 instances of generic reference denoted by all gerunds with possessive determiners in the corpus data to identify and account for any patterns that may emerge. Table 15 and Figure 18 below show how often *your*, *their*, *its*, *his*, and *my* combine with nominal and verbal gerunds to refer to generic as opposed to specific activities or events in the corpus data.

Gerund Type	Possessive Determiners with Generic Reference				
	Your	*Their*	*Its*	*His*	*My*
Nominal	3/5	6/39	1/38	1/108	0/10
Verbal	10/33	6/28	3/17	2/89	0/33
Total	**13/38 (34.2%)**	**12/67 (17.9%)**	**4/55 (7.3%)**	**3/197 (1.5%)**	**0/43 (0%)**

Table 15

Generic vs. specific-definite reference denoted by nominal and verbal gerunds with possessive determiners
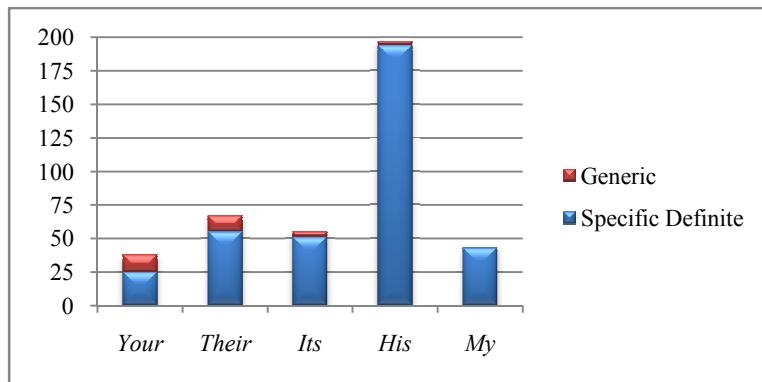

Figure 18

A graphical overview of the reference types designated by all gerunds with possessive determiners

The above illustrations show that there is not much difference between nominal gerunds with possessive determiners and their verbal counterparts in their tendency to refer to generic activities or events (11 and 21 instances respectively). A chi-square test used to check the statistical significance of these frequencies yields a P-value of 0.071, merely indicating suggestive evidence that a possible correlation between the above variables exists. Corpus examples (82)–(86) below demonstrate the reference types denoted by nominal and verbal gerunds when preceded by *your*, *their*, *its*, *his,* and *my*. Note that the two gerundive constructions in (86a, b) denote specific-definite reference as *my* does not combine with generic gerunds in the corpus data.

82. a. This, of course, is like suggesting you give open heart surgery a bash after a double bill of ER, the only difference being your kitchen cannot hint at **your botching of the job** by screaming or thrashing about on a stretcher. [*Your* premodifying a nominal gerund with generic reference]

b. Then **your taking of the Phaeton** – perhaps ultimately at the expense of your own life – was an act designed to waste a few more pounds of the wretched anti-ice. [*Your* premodifying a nominal gerund with specific-definite reference]

83. a. I would be the first to agree that some of our youth can drive us to despair at times, and their anti-social behaviour – particularly **their targeting of pensioners** – is unacceptable. [*Their* premodifying a nominal gerund with generic reference]

b. Scotland's trade unions are now in turmoil, arguing with each other and furious at **their mishandling of the assault on Labour's PFI policies.** [*Their* premodifying a nominal gerund with specific-definite reference]

84. a. Something may sound entirely plausible without **its demanding a searching openness, . . .** [*Its* premodifying a verbal gerund with generic reference]

b. The government is presenting this attack on its big business backers as showing **its taking an even-handed approach** even as it threatens tough action against illegal strikes in the country. [*Its* premodifying a verbal gerund with specific-definite reference]

85. a. These are two wide fields of knowledge, and a man's lifetime is not long enough to permit **his reaching the limits of either.** [*His* premodifying a verbal gerund with generic reference]

b. Although he had been accused of avoiding taxes, the major reason for **his leaving the Scala** seemed to be his wish for fresh challenges. [*His* premodifying a verbal gerund with specific-definite reference]

86. a. But **my questioning of the father today** did just what I wanted:
    showed him up to be the loving kind of bloke he obviously is. [*My*
    premodifying a nominal gerund with specific-definite reference]
    b. Pray do not be offended in the least by **my returning the money.** [*My*
    premodifying a verbal gerund with specific-definite reference]

The pronominal determiners *your* and *their* have the highest percentage of generic reference when combined with nominal and verbal gerunds, well above the average of 8% recorded for all possessive determiners in the corpus data. With a ratio of 34.2%, *your* is the pronominal determiner most associated with generic gerunds, followed by *their* with nearly half of that figure (17.9%). *Its*, *his*, and *my* trail behind with single-digit values of 7.3%, 1.5%, and 0% respectively. The figures above echo what Biber et al. (1999: 330–1) posit regarding how *you* (and by extension *your*) can be used as an indefinite generic pronoun to refer to people in general rather than invoke a second-person meaning. They also tie in with Quirk et al.'s (1985: 354) claim that 'generic *you*' can be replaced by its more formal equivalent *one* as illustrated in (87a, b) below.

87. a. The point is, it can't and never does influence **your** [one's] **officiating
    of matches. You** [One] simply make[s] every call and judgment as clearly
    and honestly as **you** [one] can. [*One*/*one's* replacing 'generic *you*/*your*'
    associated with a nominal gerund]
    b. It is mandatory that **you** [one] have [has] completed the following tasks
    prior to **your** [one's] **requesting a surgical procedure.** [*One*/*one's*
    replacing 'generic *you*/*your*' associated with a verbal gerund]

3.5 *Semantic Feature Analysis of Possessor NPs*

There appears to be a significant gap in the literature with regard to the semantics of the genitive subjects of nominal and verbal gerunds. The analysis presented

here aims to bridge this gap by examining the semantic features of the possessors in 200 nominal and 200 verbal gerunds premodified by genitive NPs against those of the possessor referents of 200 genitive NPs. It also sets out to investigate a possible correlation between the type of possessor NPs (common or proper) in nominal and verbal gerunds and the referential status of such constructions. This analysis hinges on the two cross-cutting criteria of the degree of animacy of possessor NPs and the type of nouns involved.

To gauge the animacy of possessor NPs in the corpus data, Rosenbach's (2006: 105) four-way classification has been adopted. This taxonomy recognizes four semantically gradient categories: 'human', 'animal', 'collective', and 'inanimate' as illustrated in (88)–(91) below. Following this classification, the possessor NP in (88) is identified as 'human' (*Derrida*), in (89) as 'animal' (*Pisces horses*), and in (90) as 'collective' referring to a UK political party (*The Tories*). (91a–c) demonstrate the three most common types of 'inanimate' possessor NPs, comprising a temporal noun (*this year*), a locative noun (*Scotland*), and a noun denoting an object (*Lake Taupo*) respectively.

88. **Derrida**'s overlooking of these important textual differences ['human' noun in a possessive nominal gerund]
89. **Pisces horses**' taking a larger, more evolved perspective on things ['animal' noun in a possessive verbal gerund]
90. **The Tories**' commissioning of the James review ['collective' noun in a possessive nominal gerund]
91. a. **This year**'s supplies ['inanimate' temporal noun in a genitive NP]
    b. **Scotland**'s people ['inanimate' locative noun in a genitive NP]
    c. **Lake Taupo**'s water quality ['inanimate' noun referring to an object in a genitive NP]

As a way to quantify Rosenbach's animacy hierarchy, this analysis applies the coding scheme suggested by Hinrichs & Szmrecsanyi (2007: 449–50). The quantification method used involves assigning the coding values of 1, 2, 3, and 4 to the semantic categories of 'human', 'animal', 'collective', and 'inanimate' respectively before calculating the mean animacy value for each data set. Table 16 and Figure 19 below illustrate the degree of animacy of the possessor NPs in the three data sets in question along with their mean animacy value.

Data Set	Animacy Hierarchy				Mean
	Human	**Animal**	**Collective**	**Inanimate**	
Nominal + Genitive NP	117 (58.5%)	0 (0%)	73 (36.5%)	10 (5%)	1.88
Verbal + Genitive NP	137 (68.5%)	1 (0.5%)	47 (23.5%)	15 (7.5%)	1.70
Random Genitive NP	107 (53.5%)	5 (2.5%)	38 (19%)	50 (25%)	2.16

Table 16
*The semantic categories of animacy as denoted by each data set*
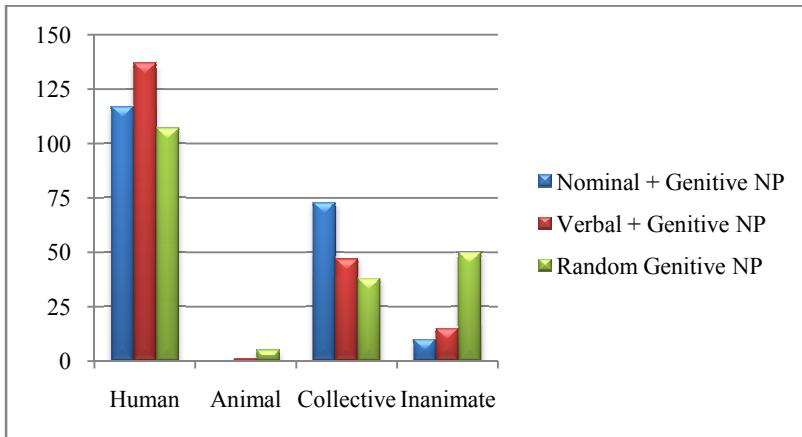
Figure 19
A graphical representation of the degree of animacy
of the possessor NPs in each data set

Interpreting the above data, the mean animacy value calculated for the possessor NPs in nominal and verbal gerunds (1.88 and 1.70 respectively) is lower than that for the possessor referents of genitive NPs. In other words, the possessor NPs in gerunds are placed further towards the 'human' end of the animacy continuum

compared to the possessors in genitive NPs. This can be attributed to how nominal and verbal gerunds typically express activities or events, with their genitive subjects or agents more likely to be animate. This observation becomes more evident when the frequency of 'inanimate' possessor NPs in the corpus data is examined. While there are 10 (5%) and 15 (7.5%) instances of 'inanimate' possessor NPs in nominal and verbal gerunds respectively, there are 50 (25%) instances of those in genitive NPs. As shown in Figure 20 below, the correlations between the above frequencies are statistically significant at a P-value of 0, indicating how possessor NPs in nominal and verbal gerunds tend to be more animate than do those in a random set of genitive NPs.

10	190	X	X	X	X
15	185	X	X	X	X
50	150	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

CALCULATE	CLEAR

Chisquare	43.42857142857
Correlation	0.259799075253
P-value	0

Conclusion

Very strong evidence against the null hypothesis
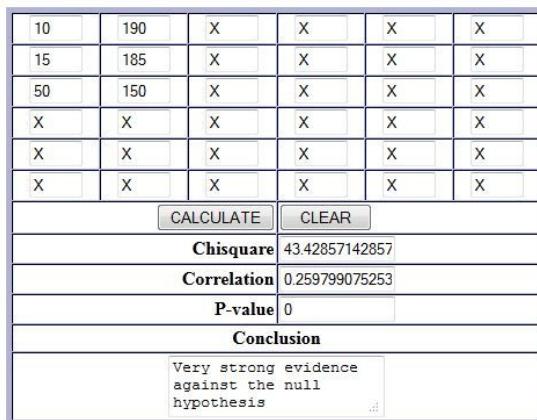
Figure 20
Possessor NPs in nominal and verbal gerunds are more likely
to be animate than are those in genitive NPs

Another aspect of the semantic feature analysis of possessor NPs concerns the classification of the possessors in nominal and verbal gerunds and in genitive NPs into two types: common nouns (e.g. *students*, *a cat*, *the companies*, *yesterday*) and proper nouns (e.g. *Jesus*, *America*, *ABC News*, *Sunday*). The frequencies of the two types of possessor NPs in the corpus data are set out in Table 17 and Figure 21 below.

Data Set	Type of Possessor NP	
	Common Noun	Proper Noun
Nominal + Genitive NP	25 (12.5%)	175 (87.5%)
Verbal + Genitive NP	29 (14.5%)	171 (85.5%)
Random Genitive NP	87 (43.5%)	113 (56.5%)

Table 17
*The types of possessor NPs in the three data sets*
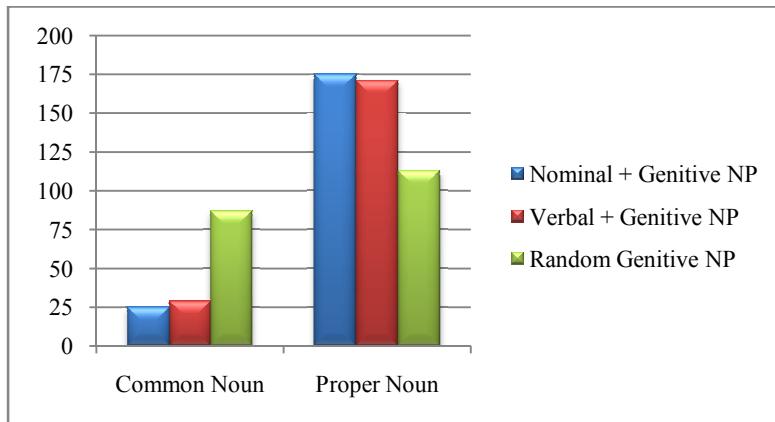
Figure 21
A graphical representation of the types of possessor NPs in each data set

As can be noted above, proper nouns constitute the majority of possessor NPs in the corpus data. However, there appears to be a clear variation with respect to how possessive common and proper nouns are represented in the three data sets. Possessive proper nouns are much more prevalent in nominal and verbal gerunds than in genitive NPs. While proper nouns account for 87.5% and 85.5% of possessors in nominal and verbal gerunds respectively, they amount to 56.5% of possessors in genitive NPs. As shown in figure 22, a chi-square test with a P-value of 0 points out that such a perceived variation is not merely coincidental.

175	25	X	X	X	X
171	29	X	X	X	X
113	87	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

CALCULATE CLEAR

Chisquare	66.97260464469
Correlation	0.316879830253
P-value	0

Conclusion

Very strong evidence against the null hypothesis
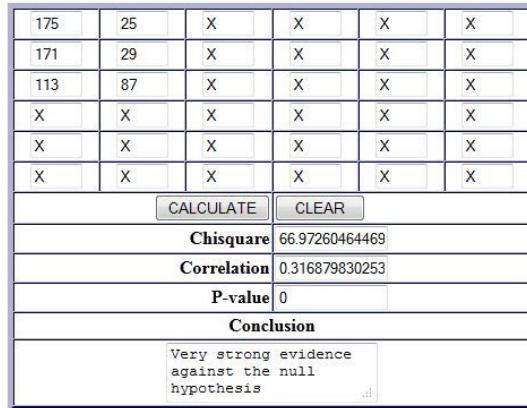
Figure 22
*Possessive proper nouns are associated more with
nominal and verbal gerunds than genitive NPs*

In what follows, the type of possessors in nominal and verbal gerunds with genitive NPs is tied to the referential status of such constructions. This involves examining how nominal and verbal gerunds behave referentially when they are preceded by possessive common and proper nouns. Since proper nouns are understood to refer to single, unique entities (Quirk et al. 1985: 288; Biber et al. 1999: 241–2), the hypothesis here is that possessive proper nouns will typically combine with nominal and verbal gerunds with specific-definite reference (cf. 'generic *you*' in subsection 3.4). Examples (92)–(93) illustrate how possessive common and proper nouns denote generic or specific-definite reference as part of gerundive constructions in the corpus data, with absolute and relative frequencies detailed in Table 18 and Figure 23 below.

92. a. Teachers can support **students' asking of more probing and appropriate questions** by asking them to think about their questions. [Possessive common noun (*students'*) premodifying a nominal gerund with generic reference]

b. The World Trade Organization's ruling that U. S. tariffs on steel imports are illegal fits a pattern of **U.S. trade officials' hitting a**

roadblock in Geneva when they try to protect an industry. [Possessive common noun (*U.S. trade officials'*) premodifying a verbal gerund with specific-definite reference]

93. a. The pain of **God's setting the soul on fire** is quite unlike the suffering of melancholy, which is the Devil's work. [Possessive proper noun (*God's*) premodifying a verbal gerund with generic reference]

b. Had Laudwine untangled my true name from **Thick's maiming of it?** [Possessive proper noun (*Thick's*) premodifying a nominal gerund with specific-definite reference]

Data Set	Common Noun		Proper Noun	
	Generic	Specific Definite	Generic	Specific Definite
Nominal + Genitive NP	8	17	1	174
Verbal + Genitive NP	11	18	2	169
Total	**19**	**35**	**3**	**343**
	(35.2%)	**(64.8%)**	**(0.9%)**	**(99.1%)**

Table 18
Frequency of possessive common and proper nouns
*with generic and specific-definite gerunds*
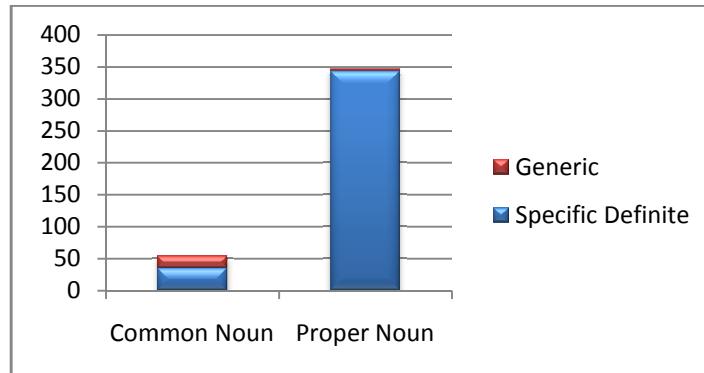
Figure 23
Generic vs. specific-definite reference denoted by gerunds
with possessive common and proper nouns

The data shows that there is no perceived variation between nominal gerunds premodified by possessive proper nouns and their verbal counterparts regarding

the extent to which they refer to specific activities or events (1 and 2 instances respectively). The difference, however, appears to lie in how the type of possessor NPs can correspond to a particular referential status in the corpus data. While 35 of 54 (64.8%) instances of gerunds with possessive common nouns are associated with specific-definite reference, an overwhelming 343 of 346 (99.1%) instances of gerunds with possessive proper nouns designate the same reference type. This confirms the original hypothesis that proper, as opposed to common, nouns are much more likely to combine with nominal and verbal gerunds that refer to specific activities or events because such nouns are inherently definite (Quirk et al. 1985: 288; Biber et al. 1999: 241–2).

4 CONCLUSION

This thesis has been designed to confront and build on a number of existing observations in the literature by means of a comparative corpus study of nominal and verbal gerunds with genitive subjects in Present-Day English. The current research has involved the quantitative and qualitative analysis of nominal and verbal gerunds with genitive NPs and possessive determiners based on their representational, aspectual, syntactic, and referential behavior and the semantic features of their possessors. The following is a summary of the key findings of the study based on each of the above parameters.

First, Mackenzie's (2007: 225) claim that 'mental processes' predominate in double-possessive nominalizations has been partially challenged on the basis of double-possessive –*ing* nominalizations in the corpus data. The lack of 'mental processes' denoted by nominal gerunds with genitive subjects implies that the –*ion* nominalizations in Mackenzie's data may have led him to his conclusion. The representational analysis has also shown that nominal gerunds with genitive subjects emphasize the notion of 'dynamicity' as has been claimed in the literature (Brinton 1998: 48–9) by referring more to 'material processes' and not allowing 'relational' predicates compared to their verbal counterparts. This suggests that language users may prefer nominal over verbal gerunds when expressing an ongoing activity and that there is a relation of complementary distribution between nominal and verbal gerunds with respect to processes of being and becoming in the corpus data.

Second, the aspectual analysis has accounted for the semantic labels of 'durativity' and 'atelicity' that Brinton (1998: 48–9) has put forward regarding nominal gerunds. In keeping with the literature, the corpus data has generated strong evidence that nominal gerunds with genitive subjects focus on the processual character of the action rather than its onset or completion by denoting

more durative and atelic situations compared to their verbal counterparts. Nominal and verbal gerunds have also been found to designate more durative situations when they are premodified by possessive determiners as opposed to genitive NPs.

Third, the syntactic analysis has confirmed the long-held association of both gerund types with prepositional use in the literature (Houston 1989: 176; Expósito 1996: 173–80; Fanego 2004: 11; De Smet 2008: 60), though it has been argued that verbal gerunds with genitive subjects tend to occur more often in prepositional environments than do their nominal counterparts. Additionally, the three syntactic functions of subject, prepositional complement of a verb, and postmodifier of a noun have been singled out as displaying the largest frequency variation between nominal and verbal gerunds with genitive subjects. The results have shown that the subject position correlates four times more strongly with nominal than verbal gerunds, whereas the syntactic functions of prepositional complement of a verb and postmodifier of a noun are twice more likely to be assumed by verbal as opposed to nominal gerunds in the corpus data.

The fourth axis of analysis has focused on the referential status of nominal and verbal gerunds with genitive subjects in light of the literature on the definiteness of the genitive phrase (Quirk et al. 1985: 326; Huddleston 1988: 90–1; Biber et al. 1999: 294; Lyons 1999: 23; Rosenbach 2002: 14). The corpus results have revealed that this theory of definiteness can be extended to possessive –*ing* constructions, as an overwhelming majority of them refer to specific activities or events. Nominal and verbal gerunds have also been examined with regard to how they behave referentially when premodified by *your* as opposed to *their*, *its*, *his*, and *my*. In line with what has been noted in the literature regarding the generic use of *you* (Quirk et al. 1985: 354; Biber et al. 1999: 330–1), *your* has been the pronominal determiner to associate most with generic gerunds in the corpus data.

The final parameter has been concerned with bridging the gap in the literature with respect to the semantics of possessor NPs in nominal and verbal gerunds. The most obvious finding to emerge from this study is that the possessors in nominal and verbal gerunds are located higher on the animacy scale than are those in genitive NPs. The corpus results have also shown that possessive proper nouns are more prevalent in nominal and verbal gerunds referring to specific activities or events than they are in genitive NPs. Parallel to how *your* in its generic sense associates more than any other pronominal determiner with gerunds denoting generic reference, inherently-definite proper nouns (Quirk et al. 1985: 288; Biber et al. 1999: 241–2) correlate very strongly with nominal and verbal gerunds with specific-definite reference.

In closing, it is of utmost importance to acknowledge a major limitation of the current study. Although this research contributes to a growing body of knowledge regarding the semantics of gerundive constructions, it is restricted in its scope to nominal and verbal gerunds with genitive subjects. A practical implication of this is that the above findings might not be transferrable to nominal and verbal gerunds in general. As such, the position of this thesis has been to argue that the possessive *–ing* construction be treated as a category in its own right. The corpus results presented here can serve as a basis for future studies aiming to compare nominal and verbal gerunds with genitive subjects to their subjectless counterparts. Further research in this area will not only explore differences and overlaps between the two constructions, but lead to a better overall understanding of their semantics as well.

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