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Title: **The real distribution of the English "group genitive"**

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The real distribution of the English “group genitive”

Abstract

The English possessive *’s* (POSS-S) is widely regarded as a clitic which attaches at the right edge of noun phrases. The so-called “group genitive”, where POSS-S attaches after a postmodifier (*the man in the corner’s hat*), is crucial to theoretical accounts. We evaluate both theoretical and descriptive treatments.

We then describe the actual use of POSS-S in the spoken component of the British National Corpus, with particular attention to postmodified possessors, demonstrating that the crucial pattern is surprisingly marginal and that at least one other pattern has been missed entirely. This leads to discussions of grammaticality versus usage, of postmodification, and of the factors that condition the use of POSS-S and their relevance to theory.

The real distribution of the English "group genitive"

1 Introduction[1]

Consider English possessive constructions of the type exemplified in (1) and (2):

(1) the caller's voice (JJV 317)[2]

(2) the then president of America's daughter (K62 006)

These constructions, denoting possession in a broad sense, have received a great deal of attention, principally through the ability of the element *'s* to attach to the word on the right edge of the possessor NP, which as in (2) need not be the head, rather than simply to the head of the possessor NP, as in (1). Accounting for the behaviour of *'s* has proved controversial, with one camp considering *'s* to be the "'poster child' of special clitics" (Anderson 2005: 423-4), while the other considers *'s* to be an affix on a head (e.g. Bermúdez-Otero & Payne forthcoming). None of the previous theoretical studies have related their approach to the actual behaviour of *'s* in a large corpus: this gap will be filled in the present paper.

Terminology in this area varies. The term INFLECTION can be used in a formal/distributional way (where it contrasts, say, with CLITIC), or functionally (in contrast

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[2] Unless otherwise indicated, the examples in this paper are taken from the spoken component of the British National Corpus (henceforth BNC), which is described in more detail in Section 4.1.

with DERIVATION). The element *'s* as found in (1) and (2) is usually called either GENITIVE (implying a form) or POSSESSIVE (more likely a function). Neither label is ideal. Huddleston & Pullum in the *Cambridge Grammar* refer to GENITIVE CASE (2002: 146), choosing a formal label – which in principle is reasonable for a single form with a variety of meanings – but one that to our minds is more appropriate for elements which form part of a case system. Since at least some uses of *'s* cannot be handled in terms of a case system, we prefer the term POSSESSIVE *'S*, abbreviated henceforth as POSS-S, taking "possessive" loosely to cover the wide range of functions and meanings whose core is possession in the everyday sense. Here we are following another scholarly tradition, as in Allen (1997), Booij (2008), for example.

Since discussion of POSS-S tends to figure largely in classifications of clitic behaviour and vice versa, we will start by discussing the concept of clitic and evaluate the treatment of POSS-S in theoretical work (Section 2). We then discuss its treatment in descriptive grammars (Section 3). In Section 4 we describe the actual use of POSS-S in the spoken component of the British National Corpus (BNC), with particular attention to what happens when the possessor is postmodified – the factor around which the theoretical accounts of POSS-S revolve. We demonstrate that the crucial pattern (2) is a surprisingly marginal use, and that at least one other pattern has been missed entirely. The relevance of postmodification is investigated further in Section 5, where we review the factors that condition the use of POSS-S, particularly with postmodified possessors, and their relevance to theory. Finally, in Section 6 we draw conclusions.

2 POSS-S and the theoretical literature

In many textbooks, POSS-S is treated as a syntactic element at the right edge of an NP, thus e.g. Carstairs-McCarthy (2002: 37) and similarly Quirk et al. (1985: 328), and indeed it is often given as the standard example of a clitic:

> In addition to inflectional affixes, there is another class of bound morphemes called **clitics**, which may be appended to independent words by syntactically motivated rules. Words to which clitics are attached are called **hosts** (or **anchors**). *Mary*, *Tonga*, and *newspaper* are the hosts of the genitive clitic *-s* in [10.58]:
>
> [10.58] a. Mary's car
>
> b. The Queen of Tonga's tiara
>
> c. The editor of the *Manchester Guardian* newspaper's car
>
> (Katamba 1993: 245)

The term CLITIC is variously defined but is generally applied to an element which lacks the prosodic independence of a word but is still positioned by syntactic rules, much like an independent word.

Zwicky (1987), however, shows that a purely syntactic approach makes the wrong predictions about the interaction between POSS-S and the word it attaches to. In an important series of papers he takes POSS-S through a series of analyses and labels, first a BOUND WORD in a three-way classification of clitics, then a SPECIAL CLITIC in a two-way classification: "special" when a clitic's syntax is different from an unreduced equivalent, and its phonology opaque (Zwicky 1977: 6), later also if it lacks a corresponding full form (Zwicky & Pullum 1983: 510; Zwicky 1987: 133). There follows a consideration of some alternative classification schemes, prompted by observations about POSS-S which reveal a more complex set of properties than are normally associated with clitics. If POSS-S was positioned by syntactic rules, by the Bracketing Erasure Principle the internal structure of the host word should be invisible to the clitic (see Kiparsky 1982). Zwicky sets most store by his observation that POSS-S is "suppressed" in the presence of any other affix with the same

allomorphy (namely the unmarked plural inflection, the 3 sg present inflection, or indeed another occurrence of POSS-S). He argues that the grammaticality facts are as follows (1987: 139-41):

(3) a. the two kids'/*kids's ideas

b. anyone who hurries'/*hurries's[3] ideas

c. a friend of my children's/*children's's ideas

d. a friend of my two kids'/*kids's/*kids's's ideas[4]

(We give a sampling of crucial examples in (3) without any contextual discussion.) These data show that the realisation of POSS-S depends on whether the word-final sibilant to which POSS-S attaches is (part of) an inflectional morpheme or not. Native speaker judgements on the data vary slightly in detail, but it seems clear that speakers do make a distinction between the *'s* attaching to morphologically simple words on the one hand and to morphologically complex words on the other. The correct suppression of POSS-S in such examples as (3) depends not just on the phonology but on the internal morphology of the host, and syntax cannot look inside words. By standard assumptions about the relation between morphology and syntax, this can be expressed as POSS-S having some affix-like properties. The term PHRASAL AFFIX is invoked by Nevis (1985) to describe its behaviour (Zwicky 1987: 134), but Zwicky concludes that POSS-S cannot be a syntactic formative and must instead be an (EDGE-LOCATED) INFLECTIONAL AFFIX (1987: 139). This is later defined as "a morphosyntactic

[3] Misprinted as *hurrie's* (Zwicky 1977: 141).

[4] Bermúdez-Otero & Payne (forthcoming: 23) present a counterexample, namely the acceptability to some speakers of *the man with the **ducks's** gun*, in which POSS-S *is* attached to the plural *-s*; this would correspond to a grammatical *a friend of my two kids's ideas*; the observation is due to Miller & Halpern (1993).

feature, distributed by syntactic rules but realized as a suffix by the same sort of (morphological) rule appropriate for the standard examples of inflectional suffixes" (1987: 142).

Using the formalism of Generalised Phrase Structure Grammar, Zwicky (1987) and later Lapointe (1990) and Miller (1992) provide analyses of English POSS-S as a phrasal affix which aim to capture these apparently conflicting properties of being positioned syntactically but attaching morphologically.[5] This is not the place to discuss the detail of these analyses, but they assume an EDGE feature which can have the feature values FIRST or LAST. This feature distributes from the mother node to the leftmost or the rightmost daughter, unlike most features, which distribute from mother to head daughter. The distribution of the exponence of the feature POSS is governed by the linear precedence rule shown in (4), i.e. all elements precede the exponence of the LAST feature.

(4) X < last

Anderson (2005) takes the discussion in a different direction, arguing that Zwicky's (earlier) taxonomy is problematic in itself, and that phonological criteria will work much better for simple clitics. For special clitics, and POSS-S in particular, he argues that morphology holds the key. Having dispensed both with the (non-)existence of a free-form variant as a classificatory property of clitics and with any kind of phonological definition (because he believes phonological clitichood to vary independently of morphosyntactic clitichood), Anderson argues that "[w]hat remains of Zwicky's defining properties of special clitics […] is their characteristic special positioning" (2005: 79). And **where** they occur is within the syntactic domain of a constituent which may be "either a maximal phrasal

[5] See also Klavans (1985), Miller & Halpern (1993) among others.

projection or a lexical category which projects such a phrase", located with reference to the first or last daughter of that domain (2005: 80, 82). There is some further discussion of the distribution of POSS-S, including a reconsideration of some of the asterisked forms in (3).[6] Anderson's conclusion is that POSS-S "can be treated as a phrasal affix, introduced at the right edge of DPs bearing a feature [Poss]" (2005: 94), which looks rather similar to Zwicky's formulation quoted above, except that it is phonological processes which reduce or inhibit multiple instances of *-s*. The terminology has now also been adopted by textbook authors, e.g. Booij (2005: 166-7), although the description of some elements as phrasal affixes is not universally accepted (see, for instance, Bermúdez-Otero & Payne forthcoming: 22-8).

Payne (2009) distinguishes between INTERNAL and EXTERNAL GENITIVES, equivalent to Payne & Huddleston's (2002) HEAD and PHRASAL GENITIVE, respectively (on which see Section 3.4 below). His proposal uses the concepts of *Suffixaufnahme* and *Suffixhäufung* and assumes that "[f]eatures can be passed from the node where they are licensed to a daughter node either as internal or external features". In the case of phrasal (group) genitives, the external feature GEN is passed to a non-head – the final word in the NP – but "the unmarked head also bears a (ghost) copy" of the feature. The effect of this ghost copy is to explain why plural heads are rare with group genitives (5): plural *s* tends to suppress POSS-S.

(5) *the kings of England's victories[7]

It should be clear at this point that the clitic and the phrasal affix analyses of POSS-S, despite their contrasts, differ only in the view taken of the morphophonological interaction

[6] Picard (1990) and Carstairs-McCarthy (1995) challenged the ungrammaticality claims embodied in (3)(b-d).

[7] The asterisk is Payne's but is consistent with Zwicky's judgement of similar examples (1987: 140 n.6).

between the *'s* and the host word.[8] They do not differ with respect to the placement of the *'s* within the phrase, which is assumed to be unproblematically at the right edge.

It is well known that there are a number of constraints disfavouring the expression of possession by POSS-S – as opposed to the *of*-construction – for instance, inanimacy or low topicality of the possessor (see for instance Rosenbach 2002, 2003; Szmrecsanyi & Hinrichs 2007). If the clitic or right edge phrasal affix analyses are straightforwardly correct, then whenever the semantic and information-structural constraints are met, we ought to get POSS-S. Absence or presence of postmodification, the length of any postmodification or the category of the final word should not matter. As far as clitics are concerned, this is captured in the first of the criteria posited by Zwicky & Pullum (1983: 503):

> A. Clitics can exhibit a low degree of selection with respect to their hosts [footnote omitted], while affixes exhibit a high degree of selection with respect to their stems.

Given its importance to the description of POSS-S, we will, beginning in Section 4, explore the extent to which right-edge positioning accurately captures the properties of POSS-S in English.

3 POSS-S in descriptive grammars

In less theoretically-minded work we also find divergent approaches to the analysis of POSS-S, although again the presumed right-edge status of POSS-S is never doubted. This section discusses a significant older contribution, then concentrates on what three of the most prominent recent descriptive grammars of English have to say.

[8] Carstairs proposes an interesting alternative. He argues for the clitic status of the possessive *'s*, but accounts for the data described in Zwicky (1987) by assuming that the *s* which appears in examples like *the cats' tails* is not some sort of merger of the plural affix and the clitic possessive, but instead "a purely inflexional (i.e. affixal) realisation of the combination of morphosyntactic properties Plural and Genitive" (1987: 159).

3.1 Jespersen, Progress in Language

The term GROUP GENITIVE, defined only by example, was apparently coined by Jespersen (1894: 279, 309-15),[9] who reviewed the histories of six subtypes. Already he was discussing interaction between plural and possessive morphemes. While Jespersen considered group genitives with an *of*-phrase in the possessor (i.e. those whose possessor was often a relatively fixed phrase, as in *the member of Parliament's lady*) to have been "settled and universal" since Early Modern English (1894: 294),[10] he noted that the rather freer group genitives with a relative clause in the possessor were rare, at least in literary language, though "very widely spread" in dialect (1894: 308). He thus combined the identification of a theoretically striking phenomenon with some cautious observations on its actual usage,[11] a combination that recurs in the more careful parts of the descriptive literature. (As we have seen, the prevailing assumption in the theoretical literature is simply that POSS-S attaches with great freedom.) His explanation, however, is baffling: that POSS-S is an "interposition" connecting two words, "now partly a suffix as of old, partly a prefix", and that "[w]henever the *s* is taken from the word to which it should properly belong (according to the old grammar) and shifted on to some other word, this latter is always followed immediately by the governing word" (Jespersen 1894: 313-5). But it *follows* (not *is followed by*), and not always immediately.

[9] The term may perhaps have been suggested by the wording of Klinghardt (1890, 1891), a paper which he cites, critically. To explain *b) King Henry the Eighth's reign.*, Klinghardt writes (1890: 99):

> Danach wird der schüler begreifen, wie leicht und bequem es im englischen sein muss, kleinere wortgruppen wie *King Henry the Eighth* (b) völlig einheitlich unter einem ton zusammenzufassen und, ganz wie einzelne worte, abzuwandeln, in den sächsischen genitiv zu setzen u. drgl.

[10] On the history of POSS-S see further Scott, Börjars & Denison (submitted).

[11] We can cite two specific – if implicit – comments on the rarity of what Jespersen called the GROUP GENITIVE: Donaldson's hint that English POSS-S is more restricted than the Afrikaans possessive (1993: 98), and Kreyer's (2003: 194) apparent finding that postmodification was avoided in his corpus in favour of *of*-constructions.

3.2 Comprehensive Grammar

Quirk et al. devote most space to the choice between POSS-S and the *of*-genitive (1985: 318-31, 1276-82). Apart from the so-called descriptive genitive they treat all POSS-S as having the FUNCTION of determinative and the FORM of a "postposed enclitic" which is "placed after the noun phrase" (1985: 328):

> This view is inescapable if we take into account the so-called GROUP GENITIVE (or 'embedded genitive'), in which the genitive ending is affixed to a postmodifier:[12]
>
> *the teacher of music's* room ['the room *of the teacher of music*']
>
> Obviously the 'possessor' in this example is the teacher, not the music; but the *'s* cannot be added to the head, as one would expect if *'s* could only be a noun inflection. Instead it is regularly added to a prepositional postmodification which is part of a name or a compound noun phrase:
>
> [[*the University of Minnesota*]*'s*] President
> [[*the Museum of Modern Art*]*'s*] Director
> [[*my son-in-law*]*'s*] prospects

That extract came from an early chapter on "Nouns and determiners". In a later chapter on "The noun phrase" they return to the group genitive as a case of multiple premodification (1985: 1344-5), where they state:

[12] Notice therefore that "genitive ending" and "postposed enclitic" are applied to the same thing.

> The group genitive is not normally acceptable when the postmodification is a clause, though in colloquial use one sometimes hears examples like:
>
> *Old man what-do-you-call-him’s* house has just been sold.
>
> ?Have you seen *that man standing at the corner’s hat*?
>
> ?Someone has stolen *a man I know’s car*.
>
> The group genitive is tolerable even with prepositional phrases provided it encourages no unwanted interpretation.

The only explanation offered for the failure to use a group genitive – besides the hint at (1985: 328) that fixed expression possessors are most frequent – is avoidance of ambiguity, illustrated by (6), whereas (7) “might pass muster” (their [1], [2], respectively; 1985: 1345):

(6) *the man with the cat’s ears [in sense ‘the ears of the man with the cat’]

(7) the man in the car’s ears

The implication is that (6) would be liable to being misconstrued as not being a group genitive. Other than this, there is just the vague comment cited above about the general unacceptability of the group genitive after clausal postmodification, especially in writing. No explanation is offered.

3.3 Longman Grammar

Biber et al. (1999) base most of their analyses and organisation on Quirk et al. (1985) – not always with identical terminology, however – and adds an element of systematic corpus analysis by genre and variety. They call POSS-S, using the term GENITIVE, a “case inflection

for nouns" (Biber, et al. 1999: 292, cf. also Quirk et al. 1985: 318), observe that "[m]ost nouns rarely occur in the genitive" (1999: 293), and that "[*s*]-genitives are outnumbered by *of*-phrases in all registers" (1999: 301). There is a fair bit of information on that choice. As for the group genitive, here as elsewhere "[t]he genitive suffix is attached to the last word of a genitive phrase". There is no information on constraints in usage or on frequency, apart from the following comments (1999: 298):

> The group genitive is chiefly used with more or less fixed collocations. When there is postmodification, the more common alternative is to resort to an *of*-phrase rather than an *s*-genitive [cross-reference omitted].

3.4 Cambridge Grammar

Payne & Huddleston have a more subtle take on the matter, distinguishing between HEAD GENITIVES, with inflection on the head noun, and PHRASAL GENITIVES (2002: 479-81). This follows from their decision to analyse personal pronouns as a subtype of noun, with possessive determiner use treated as the genitive case of the pronoun (2002: 327, 470-72). Given that analysis, the pronoun *I*, for example, has as its normal genitive forms *my* and *mine* (dependent and independent, respectively). The crucial data are the following pairs of examples (2002: 479, their [65]):

(8) a. *my* facial expression b. *the man opposite me's* facial expression

(9) a. *my friend's* father b. *a friend of mine's* father

If both a. and b. patterns involved the same construction – namely, a possessive marker simply being added to the last word in the phrase – there would be no explanation for the

form *me's* rather than *my* in (8)b, and similarly for *mine's* rather than *my* in (9)b. Rather, it is argued, the genitive marking is conditioned by the type of genitive: HEAD in the a. examples vs. PHRASAL in the b. examples. Payne & Huddleston go on to claim that genitive marking is inflectional, not clitic. Two arguments are given. The first, only applicable to head genitives, is the fact that genitive *my*, *our*, etc. cannot be divided into two syntactic words. The second argument, which is said to work with both kinds of genitive, is the sensitivity of the genitive to the morphological form of the word it attaches to. This relates to the criteria posited by Zwicky & Pullum (1983) already discussed. Like Quirk et al., Payne & Huddleston state as an unexplained descriptive fact that the phrasal genitive "is normally restricted to post-head dependents with the form of a PP, including *else*" (2002: 479).[13] They state that "[a]cceptability decreases as the weight or complexity of the post-head dependent increases".

Up to this point it appears that their PHRASAL GENITIVE is a terminological variant of the other grammars' GROUP GENITIVE, albeit one established on a more careful theoretical basis. However, Payne & Huddleston differ from the earlier grammars in their treatment of some coordinated and appositional possessors with a single POSS-S:

(10) The new girls […] slept in Zoey and Lucy's room.

(11) the Prime Minister, Mr Howard's tax package

[13] Why *else* should be classed as a PP is not clear; there is brief distributional justification at Huddleston & Pullum (2002: 615 n. 5).

We take example (10) from Biber et al. (1999: 298), who explicitly include it under the heading of group genitive, as would Quirk et al. (1985: 1345).[14] However, unlike (7), the last word before POSS-S also has head status[15] within the possessor noun phrase and is nominal. For Payne & Huddleston, (10) and also (11) (which is one of their examples) are therefore not phrasal genitives (2002: 481-2);[16] we will follow them in this respect. From this it becomes clear that their phrasal genitive is not co-extensive with the group genitive.

We will not adopt the term GROUP GENITIVE, reserving the term POSTMOD-POSS for possessives where the word to which POSS-S attaches is clearly not the head itself.[17] Another of Biber et al.'s examples of a group genitive is:

(12) He had to take a minute or two's rest […]

Such examples are not explicitly discussed in Huddleston & Pullum, who mention such "numerical approximations" but not as possessors (2002: 1304). We return to (and distinguish between) coordination examples like (10) and (12) in Section 4.2 below.

[14] Regarding usage, Quirk et al. consider constructions such as (10) to be "characteristic of informal speech" and "sometimes felt to be incorrect" in "formal English" (1985: 964n).

[15] Coordination and apposition are of course each the subject of a huge literature. We assume that coordinate structures do not have a single head; see for instance Huddleston & Pullum (2002: 1275) among others.

[16] Note, however, that Booij (2008: 8) takes equivalent Dutch POSS-S forms, such as *Jan en Piets vader* 'Jan and Piet's father', as evidence that "the *-s* is always phrase final".

[17] Note that an invented example like

(i) Have you heard about Jim and the girl over the road's marriage?

would be treated as POSTMOD-POSS, despite the coordination.

4 POSS-S in use

4.1 Speech

Previous studies are overwhelmingly based on written language, including the corpus work of Kreyer (see 2003: 181) and Szmrecsanyi & Hinrichs (see 2007: 443-4), while Rosenbach (2002: 134, 2005: 618,621) uses native speaker judgement questionnaires involving written language. It is agreed, however, that POSTMOD-POSS, so crucial to the analysis of POSS-S, is found particularly in spoken and colloquial language (for instance Carstairs 1987; Rosenbach 2005: 632). The data presented in this section are accordingly taken from the spoken portion of the British National Corpus, a subcorpus amounting to about 10 million words of transcribed speech. Examples were gathered with an elaborate mixture of tag searches, string searches and manual sorting in order to take advantage of the BNC's tagging without being misled by the noticeable minority of words which are mistagged or mistranscribed. The examples have been entered in a database and coded for a number of parameters relevant to the distribution of POSS-S.[18] The BNC data are supplemented as necessary by data from the ICE-GB corpus and examples from the web.

4.2 Coordination in the possessor

When possessors are coordinated, POSS-S can occur on all conjuncts, as in (20) – in fact our BNC data never involve more than two – or just on the last, (21). We have left the spelling as it appears in the corpus, but for clarity the possessor NP is sometimes underlined:

(20) his explanation for Alex's and Katherine's point about anxiety dreams (HUL 542)

(21) a room in a house, her mum and dad's house (JT4 227)

[18] This database, which also contains all the *of*-possessives and a corpus of Swedish possessives, is being made publicly available; see http://www.llc.manchester.ac.uk/research/projects/germanic-possessive-s/data/.

Frequencies for each type are similar in the spoken BNC: ×40 like (20) with POSS-S repeated, ×33 like (21) with POSS-S once. As long as the second conjunct is not pronominal, both alternatives are usually grammatical. Biber et al. mention a partial correlation with semantic interpretation, so that joint possession may encourage a single POSS-S (1999: 298), as in (21), while repeated POSS-S may go with disjoint possession, as in:

(22) you're actually paying both the employer's and the employee's contributions. (FUF 084)

They acknowledge that speakers are inconsistent, however, and give examples where the correlation fails; see also Huddleston, Payne & Peterson (2002: 1330-2). To illustrate the point from our data, the grammar does not impose a purely conjugal interpretation of *sex life* in (23):

(23) We know much more than anyone could possibly want to know about Bill and Hillary's sex life er than we do er about prospects for economic recovery (JSK 177)

(24) I fail to see the relevancy of anyone's interest in Bill's and Hillary's sex life. (12 Sept. 2007)[19]

(25) Dick Morris' verbal incontinence yesterday about Bill and Hillary's sex lives seems to have had immediate results. (29 Jan. 1998)[20]

Nor, conversely, must (24) refer to extramarital relations. Even (25), whose plural possessum rather implies disjoint reference, does not entirely remove the pragmatic ambiguity.

[19] http://tromboneforum.org/index.php?topic=35427.msg484078 [accessed 17.9.09]

[20] http://www.slate.com/id/1000509/ [accessed 16.9.09]

Note that (20) would be entirely grammatical if either first or second conjunct plus conjunction were omitted, thus e.g.

(20)' a. his explanation for Alex's point about anxiety dreams

b. his explanation for Katherine's point about anxiety dreams

Other coordinated group genitives are rather different in this respect. Thus in time and measure expressions like (12) above, (26)a and (27) below, also generally accepted without question by native speakers, the first conjunct must be retained and furthermore disallows repeated marking with POSS-S:

(26) a. an hour and [a] half's discussion (KLX 1506)

b. !a half's discussion

c. *an hour's and (a) half's discussion

In some cases the second conjunct may instead be separated from the first:

(27) a. a day or so's time […] (KNF 248)

b. a day's time or so[21]

[21] A possible example like (27)b is

(i) if you've missed the first couple of weeks' worth or so (JYN 0782)

but we have chosen to take *or so* as an approximation not for *the first couple of weeks* but for *the first couple of weeks' worth*, in which case there is no separation.

(This is often possible with ordinary possessor coordinations too: *Alex's point and Katherine's*.)

Table 1: Coordinated expressions of time about here

A web search for *a day or so's time/work* and its separated variants is instructive:[22] Although derived from a very small sample, Table 1 suggests that there may be no strong preference either way. Attachment of POSS-S alternates between head and right edge of the possessor NP, as also in the ordinary coordinations above and in the postmodified constructions discussed in Section 4.5 below. This is a vital clue to understanding POSS-S.

4.3 Postmodification

If POSS-S really is a right-edge phenomenon, then it should occur as readily after postmodification as in head genitives, and no matter what the host word. This is at least the implication of the theoretical research (and qualified a little in the descriptive grammars) and is the view propagated in other sections of the descriptive literature, in which the prevailing assumption is that the group genitive "is a common feature of PDE [Present-day English] syntax" (Moessner 2003: 114). (Remember, however, that the term GROUP GENITIVE probably covers many examples which we would not classify as POSTMOD-POSS.) Now it is true that examples with a variety of right-edge elements like those in (28) are easily found on the web and can be readily produced and understood:

(28) a. […] or have the sound of your bell crash into the sound of <u>the person next to you</u>'s bell […][23]

[22] www.google.co.uk on 4.3.09.

b. […] a movie in which the director spends most of his time trying to point the camera at the BACK of whoever is speaking's head in order to make the lousily-recorded, mumbling and whispering that they are doing totally incomprehensible.[24]

c. i like the guy in the yellow's head/body movement.[25]

Our data – systematically gathered, naturally occurring and quantifiable – tell a different story, however. First of all, postmodification of the possessor is rare overall with POSS-S:

Table 2: Postmodification in possessors with POSS-S (BNC spoken) about here

Note that "postmodification" in Table 2 simply refers to postmodifying material in the possessor NP that comes somewhere after the head noun or pronoun. In Table 3, the structural nature of that material is classified.[26]

Table 3: Structural nature of postmodification in possessors with POSS-S (BNC spoken) about here

It will be seen that postmodification by *else* is the most common type, and that means – in every case but one – postmodification just one word long.

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[23] http://maircrosoft.com/ringing/ringingdancing.txt [accessed 5.3.09]

[24] http://www.palimpsest.org.uk/forum/showthread.php?p=97898 [accessed 5.3.09]

[25] http://www.youtube.com/watch?v=du4RNrd43kc [accessed 5.3.09]

[26] One example, (63) below, is counted twice, as its postmodifier contains both *else* and an *in*-phrase; that is why N adds up to 1 more than the total and the percentages to more than 100.

4.4 Postmodification by a single word

The most frequent type of postmodification within a POSS-S construction is the placement of a modifier immediately (Payne & Huddleston 2002: 423) after the head of the possessor NP. The head is usually an indefinite pronoun (*someone, anyone, everyone, no-one,* etc.),[27] in which case in the spoken BNC only *else* occurs as postmodifier (cf. footnote 13 above), with POSS-S attached to it. Constructions of this type contrast with the examples described in Section 4.5, in that, despite the presence of postmodification, it is far more frequent to find a POSS-S construction than an equivalent *of*-construction: in the spoken BNC, there are 123 examples (see Table 3) of POSS-S attaching to a possessor of the type *someone* [etc.] *else*, illustrated in the typical (29) and the more creative (30):

(29) But er we have to repair everybody else's bad work. (GYY 151)

(30) There's more bloody letters here for Steven than any bugger else's (KCX 8993)

By contrast there are only at most ten corresponding *of*-constructions:

(31) Now please don't think that I'm saying this for the benefit of somebody else. (G5H 005)

[27] Or, in the terminology of Payne & Huddleston (2002: 423-4) a COMPOUND DETERMINATIVE. One possessor, transcribed as <*unclear*> *else's*, is in context most likely to be *everybody* or *everyone else's*. Two examples have *any/no bugger else's* (see (30)), and in fact it would be reasonable to treat the dialectal indefinites *any/no bugger* as members of the same compound determinative class (*pace* Zwicky (1973: 101-2), who says that the distribution of postposed *else* is syntactically confined to certain pronouns).

However, all of the POSS-S examples involve animate possessors, while six of the ten possessors in *of*-phrases are inanimate (6/9 if we treat *at the hands of* as a complex preposition), so considerations of animacy are likely to have played a large part in the choice.

Postmodification can also occur with a single postposed word of other classes, but the only two cases in the spoken BNC – we discount lexicalised names – are seen in the possessor *the year before's*. Instead we give examples of other single-word postmodifiers found on the web:[28]

(32) but then instead of moving onto the path of whatever you normally would, you move onto, well, someone different's path.[29]

(33) I got the auto DVD play tip from someone here's post[30]

These constructions are highly constrained: the head of the possessor NP is drawn largely from a very limited repertoire of indefinite pronouns (*pace* the speaker of (30)).

4.5 Longer postmodifiers

The single-word postmodifier exemplified in (32)-(33) could have its own modifier, making for a longer postmodifier phrase. We give a web example:

(34) A warm heartfelt film that gives you a look at life through someone quite different's eyes.[31]

[28] It is not that such NPs do not occur in the BNC, they just do not occur as possessors; see, for instance, *Someone naughty's smashed a seat, look!* (KB8 2055). Notice also *The relatives of the President elect were testing out their new roles at the victory party* (KRU 425), in which an *of*-construction is used instead of POSS-S.

[29] http://maircrosoft.com/ringing/ringingdancing.txt [accessed 9.3.09]

[30] http://ubuntuforums.org/archive/index.php/t-764221.html [accessed 9.3.09]

Again the spoken BNC has no such examples.

We turn now to the remaining cases of POSTMOD-POSS in the spoken BNC. There are a number of recurrent types, illustrated here by a selection of examples:

(35) there was substance in the presbytery of Hamilton's claim that … (F85 20)

(36) you haven't got a cat in hell's chance of doing it (JA0 259)

(37) The implications for my daughter's safety and security, and and mine and the rest of my family's, because […] (HE7 260)

(38) […] the social services accept the implication of the director of social services report on the future of the department's elderly person's homes […] (J9M 12)

(39) the criteria in the Department of Transports manual of environmental appraisal (J9U 437)

(40) a huge percentage of the whole of Scotland's population (J9Y 43)

(41) So in a very broad sense agriculture is going to have to <trunc> con </trunc> contribute to China's, China as a whole's economic development (JJN 426)

(42) They are the colour of the leader of the council's shirt (JT7 95)

(43) [= (2)] […] and he was engaged to, then to the then president of America's daughter (K62 6)

(44) But the Prime Minister of the time's favourite W D A head Dr Gwynne Jones has now gone. (K6E 254)

[31] http://catalog.ebay.co.uk/Inside-Im-Dancing-/45055105/r.html [accessed 19.09.09]

(45) […] it's our land <pause> it's not our land <pause> it's the people of Leicestershire's land and what the people of Leicestershire land [*sic*] are saying to us sir, they're saying to us […] (KGM 22)

(46) So the whole of the planet's energy existence depends upon research chemistry. (KRF 447)

(47) You don't think it could have been the lady of the house's dress shortened for a maid (KRJ 123)

(48) This Sunday the world-wide Fun [*sic*] for Nature's Walk for the Rain Forest is taking place […] (KRT 3285)

(49) The speculation that the Archbishop of Canterbury's special envoy, Terry Waite, will be free by the end of this week. (KRT 4134)

(50) well the industry <unclear> C I T B industry training board premises are just near one of my sister's houses erm in Norfolk isn't it in Norfolk somewhere? (KGK 657)

(51) Er the individual responsible for this this is your letter from the er director of er <unclear> the Officers of the Director General's broadcasting Principle Assistant Dalek to the Director General. (HV0 148) [possessor uncertain]

Every one of the BNC examples (35)-(51) has a noun immediately before POSS-S. Notice, though, that despite these right-edge, non-head nouns, no ambiguous examples (of the type *the man with the cat's ears*) occur, just as Quirk et al. predict (1985: 1345). The overall distribution of hosts for POSS-S is shown in Table 4:

Table 4: Host word of POSS-S in possessors with postmodification (BNC spoken) about here

We have already commented on the prevalence and special status of *else* in postmodification. Otherwise POSS-S attaches to a noun or pronoun in nearly all of the remaining 95 cases (as of course it does in the 9,682 examples of POSS-S **without** postmodification of the possessor). That leaves just four examples of a different kind of host: *the year before* (×2), *a day or so*, *Charles the Second*.

The other striking fact about these examples is that many of the postmodified possessors are clearly titles or phrasal proper names – *the Department of Transport* (×10), *the Presbytery of Hamilton* (×4), *the Director of Social Services* (×2), *the Archbishop of Canterbury, the World-Wide Fund for Nature, Charles the Second*, etc. – and/or a well-established collocation or construction – *(a) cat in hell['s chance]* (×2), *the whole of X* (×2), *X as a whole, the lady of the house, a board of directors, the member of staff, a day or so* – some of which can be regarded as fixed phrases. (Indeed, patterns like *someone else* could also be counted as established collocations, or at least, constructions of very limited lexical productivity.) In Table 5 it is shown that postmodifiers that occur in POSTMOD-POSS are strikingly restricted, with at most 11 (counted generously) containing possessors that are more or less freely constructed.

Table 5: The formulaic nature of POSTMOD-POSS (BNC spoken) about here

Indeed, some of those 11 are dubious, whether because the possessor could be regarded as an established collocation (*the Prime Minister of the time*) or because ambiguity of structure makes it uncertain whether we have to do with postmodification at all (e.g. *some of the manufacturers' guarantees*).

Now although "fixed phrase" may be somewhat subjective, what seems clear is that phrasal proper names and *else*-constructions form two very special subtypes of POSTMOD-

POSS, neither of which is cited in theoretical work in support of right-edge analyses of POSS-S. If they are discounted, only 20 (at most) are left, a mere 0.2% of overall POSS-S occurrences. Notice that the total in Table 5 is lower than in Table 2 to Table 4: the missing items represent a kind of postmodification where POSS-S is **not** attached at the right edge of the possessor NP (see Section 4.6.2 below).

4.6 Avoidance strategies

Overall, the rarity of attachment of POSS-S to the right edge of a postmodified possessor is striking and at odds with the implications of the literature. Rather than use POSTMOD-POSS, speakers tend to adopt what we will refer to as AVOIDANCE STRATEGIES.

4.6.1 The *of*-construction

The obvious avoidance strategy is the construction most often mentioned as an alternative to POSS-S, namely the *of*-construction, of which there are 31,683 in the spoken BNC. There are many studies of the factors conditioning the choice between POSS-S and *of*, most recently Szmrecsanyi & Hinrichs (2007). If postmodification of the possessor were not at issue, a lengthy possessum or a possessor which is human and topical, for instance, would normally militate against the *of*-construction. Yet here it occurs:

(52) on the death, marriage or remarriage of <u>the person that you actually nominated</u>. (FUF 306)

(53) A woman in the audience/church left in the middle of the performance/wedding and as she left she trod on the foot of <u>the man at the end of the row</u>. (FSN 0790)

4.6.2 Split genitive

Another avoidance strategy is the SPLIT GENITIVE, where POSS-S is attached to the head noun, and the remainder of the possessor phrase is placed after the possessum. This involves postmodification, therefore (which is why they were counted in Table 2 to Table 4), but is not what we have been calling POSTMOD-POSS. It is not mentioned in the literature on modern English. A similar construction was frequent in Middle English, declined during Early Modern English as a result of competition from the group genitive, and is assumed to have died out by the second half of the seventeenth century (Görlach 1991: 82; C. L. Allen 2002: 73-4; Dons 2004: 43; Nielsen 2005: 255):[32]

(54) *Middle English:* þatt he was Soþ Godess Sune off Heoffne 'that he was truly God of Heaven's Son'(*Ormulum*, (C. Allen 1997: 115))

(55) *Early Modern English:* the kinges sonne of England (Altenberg 1982: 61)

The postposed element was characteristically an *of*-phrase.

That particular characteristic is not true of our data, but otherwise we can say that a split genitive appears in PDE, with up to 17 examples in the spoken BNC.[33] As such, this apparently unnoticed pattern is barely any rarer than the POSTMOD-POSS which has been crucial to theorising. Again we pick out the possessor phrase – now split by POSS-S and the possessum – with underline, and here we give more generous context than usual:

[32] For related avoidance strategies in Swedish, see Börjars (2003).

[33] (72) and perhaps (71) are not quite certain.

(56) […] the person that was having a fit would absolutely go through hell because somebody at some stage had said oh you must put something in a person's mouth that has epilepsy. (F8C 105)

(57) […] I remember when projects used to come into the group from on high, they used to filter through the organization, until they landed on somebody's desk who was actually supposed to carry out the work. (H48 740)

(58) And as you've seen with previous closures of our homes, the last three, is that we've been able to utilize some of those resources to provide that shift in policy which has been very successful, and has, er, a process that we've got <unclear> has allayed people's fears who've been used for those residential home agreements. (J3P 610)

(59) […] I could get anywhere with one stick in the taxi, or anywhere and I went to my son's, er which is now coming […] (J8F 14)

(60) <trunc> I </trunc> in the past <trunc> th</trunc> Granville mentioned these letters that used to work their way down from on high which might have just been a, <trunc> a </trunc> bit of a twinkle in somebody's eye with no money at all to spend on physical work […] (H48 827)

(61) We don't know the gentleman's name with the tape recorder (FM7 8)

(62) The only time we've <trunc> ev</trunc> you know in pubs round here is like I said when it's someone's birthday in the family (FY6 576)

(63) […] they were actually trying to say it's not my fault that thing come in, it's not my fault that things are like this, it's somebody else's fault in a different organisation. (JK5 68)

(64) And I was very friendly with the manager's secretary of the Co-op, Cyril […] (FYH 383)

(65) yes er no it's the neighbour's house across the road (GY4 391)

(66) And my neighbour's husband down the stair, he was a first class French polisher. (K6L 404)[34]

(67) To lead him work, instead of borrowing other people's in the yard. (HDH 474)

(68) This is someone's baby in the audience that we're, we're having a go at. (HM2 738)

(69) […] erm is it Clarke Kent, is that the guys name on television, you know the character, you know the guy that walks around you know he's the boy next door type figure with glasses and all the rest of it, he's no macho figure that and then in a transformation take place and woof goes flying through the air doesn't he, what is he, he's Batman isn't he (KN7 23)

(70) Well, you know, practically, the governor or the head you see, he knows what he's gotta work, but erm, I, I know because the lads don't, but he generally tells them well I wanna work so and so and he gives me a bit of paper with the horses names on wants galloping. (HYC 969)

(71) What they've paid me <pause> <trunc> wha</trunc> what I'm entitled to <pause> is erm <pause> obviously my week's wage<pause> that I've worked, fortnight's holiday pay (JNS 241)

(72) It doesn't affect the value of anybody's vote in those countries at all. (JSG 154)

[34] This example is taken from Scottish English, in which *down the stair* corresponds to Standard English *downstairs*. The sense intended here is *the husband of my neighbour (who lives) down the stair/downstairs*.

It is striking that a wider range of postmodifier is found in split genitives than in POSTMOD-POSS, including some ending in a verb, i.e. a word of a class other than nominal. Outside the BNC, split genitives were attested in which the postmodifier ends in a preposition or an adverb:

(73) the woman's bedroom who I lived with;[35]

(74) he's known for leaving smutty messages on various women's Facebook sites who work here[36]

For (73) compare *the woman (who) I lived with's bedroom*, which resembles an example said to be "fully acceptable in informal speech" (Payne & Huddleston 2002: 479).

Converting some of the above examples to POSTMOD-POSS leads to constructions which may well be grammatical (cf. Bermúdez-Otero & Payne forthcoming: 40), but whose acceptability is at best dubious (on which see Section 4.6.4 below):

(56)' […] a person that has epilepsy's mouth

(57)' […] somebody who was actually supposed to carry out the work's desk

(58)' […] people who've been used for those residential home agreements's fears

(59)' […] my son which is now coming's […]

(60)' […] a twinkle in somebody with no money at all to spend on physical work's eye […]

Other split genitives in the BNC could have been acceptably rendered without a split, but weren't:

[35] Heard in an interview in the television programme *The 60s: The Beatles Decade* (UK TV History, 20.1.07).

[36] Att. BBC Radio Nottingham 4.11.2009.

(64)' And I was very friendly with the manager of the Co-op's secretary, Cyril

(65)' yes er no it's the neighbour across the road's house

(66)' This is someone in the audience's baby that we're, we're having a go at.

4.6.3 Co-referential pronoun

A further avoidance strategy found in the corpus is the left dislocation of a postmodified possessor (underlined in the example below), seemingly in order to avoid a group genitive:

(75) Rodney <gap cause=anonymization desc="last or full name">, general secretary of Britain's largest trades union, secrets of his credit card and bank account are on sale for two hundred pounds. (HE7 2)

compare: secrets of Rodney […], general secretary of Britain's largest trades union's credit card and bank account […]

The possessive marker in this construction is a possessive pronoun (*his, her, its, their*) which replaces the possessor *in situ* and agrees with it in gender and number.

More commonly, such a co-referential pronoun follows the possessor NP directly. Examples when transcribed resemble examples from earlier periods of English such as Shakespeare's *the Count his gallies* (cited in Barber 1976: 146). The corpus contains 10 certain examples (and a further six dubious ones), including the following:

(76) a. All the other fella his rope would be dragging on the ground then you know, it was difficult to to to get the two to cooperate together. (HEM 335)

b. Well Lennox Lewis <pause> his boxing career has finished, no? (KDN 3179)

c. A, Mary Pickford her bust was thirty two inches, B, Jane [*sic*] Mansfield, her bust was forty three inches (KCU 9352)

d. And that's the furnace that creates the steam and the steam goes then to the turbines and a matter of half a million er Drax <pause> Drax power station and Ferrybridge <pause> their units are s s s half a million horsepower [unclear] half a million or six hundred five hundred million horsepower. (HEV 266)

As exemplified, the possessor in this construction may be animate or inanimate and may be a coordinated group, (76)d. The BNC transcription suggests that they are not a revival (or continuation) of the earlier construction but more likely involve a topicalisation or left dislocation of the possessor. Six of the eleven (including (76)b,c,d) explicitly feature a pause between the possessor and the pronoun.[37] It is possible (in the absence of the original recordings) to imagine such a pause preceding a stressed possessive pronoun, giving a stress pattern which would mark the possessor as the topic, pronoun + possessum the comment, but equally these examples might simply represent the kind of mid-utterance change of construction (anacoluthon) which occurs in unrehearsed speech.

4.6.4 Grammaticality vs. usage: "CASUAL" examples

Avoidance strategies involve speaker choices, and there is an often-neglected difference between grammaticality – what speakers **can** in principle do – and actual usage. (Indeed it has been claimed that spontaneous spoken English actually has a different grammar from the written English which perhaps informs the judgements of educated linguists (see e.g. J. Miller 2006).) The split genitives discussed in Section 4.6.2 above form an interesting set. They are not exactly grammatical, to judge from the reactions of colleagues, and can look somewhat

[37] The comma inserted after *Jane Mansfield* in the BNC transcription is assumed here to represent a pause.

outlandish when transcribed. One factor which may be relevant to judgements of (56)-(59) is that they involve a relative clause whose antecedent is a possessive, an "old construction […] now considered awkward" (Denison 1998: 275). Yet these split genitives have been uttered. They represent a consistently-formed pattern, apparently unobtrusive in context, with no evidence in the data of self-correction, metalinguistic comment or hesitation[38] – so not a typical speech error. Furthermore, as we have seen, they are sometimes – see here (56)-(60) – the least worst choice, in the sense that there is no obviously better alternative. To coin an acronym, they are

(77) Consistently Attested, Semi-grammatical, Unobtrusive And Least-worst = CASUAL

The distribution of POSS-S illustrates a gulf between grammaticality and CASUALness. While POSTMOD-POSS is grammatical but very limited in use, split genitives are CASUAL but often less acceptable on inspection – and therefore ungrammatical? A similar contrast turns up in some of our spoken Swedish data on POSS-S, though a different CASUAL pattern emerges there.

CASUALness is not the same as ACCEPTABILITY, although they are obviously related. Hawkins (1994, 2004) makes important contributions to the debate on acceptability vs. grammaticality. He has argued that performance is crucial to grammatical description and that usage data must be explained by reference to processing considerations as well as underlying grammar. Newmeyer (2003) offers a sympathetic summary of usage studies before making the case for the separation of grammar and usage. Processing considerations will certainly have a bearing on what does **not** (tend to) occur, as for example our POSTMOD-

[38] The surrounding context sometimes shows dysfluency, including hesitation, however.

POSS, and also of course on what **does** occur, though CASUAL examples are neither wholly grammatical nor acceptable. Pullum (2005) is also of relevance: its focus is more on the relationship between attested examples and grammatical description. However, Pullum's discussion of "correctness conditions" and mistakes likewise does not appear to address our CASUAL category. A closer parallel is afforded by the discussion of context effects, SUBOPTIMALITY and markedness in Sorace & Keller (2005: 1508-10, 1515-17), a paper based on experimental data within an Optimality Theory framework. There is further experimental work to be done here which goes beyond the scope of the present paper.

5 Why is POSTMOD-POSS dispreferred?

Postmodification of the possessor NP is the crucial factor in the theoretical analyses of POSS-S. However, as illustrated in Section 4, speakers have a clear aversion to attaching POSS-S to a postmodifier, however grammatical the result might be. To account for this surprising fact, a number of proposals are canvassed in the following sections.

5.1 A production explanation for split genitives

One intuitive explanation of the split genitive data relates to online speaker production. Having started with the possessor rather than the possessum, a speaker will be committed to POSS-S rather than an *of*-construction. If they then find they are dealing with a possessor that is a complex, non-head-final NP, the expected POSTMOD-POSS would be impossibly awkward in some cases at least, e.g. (56)-(60). What the speaker actually produces, as often as not, is a split genitive, with POSS-S attached to the head noun and not at the right edge. In favour of this account is the fact that with postmodified possessor NPs that can be described as unequivocally non-formulaic, only split genitives occur; the possessors of POSTMOD-POSS are, as already noted, rather more restricted. Such an account would have been strengthened by good evidence of awkwardness, e.g. abandonment of a complicated POSTMOD-POSS in favour

of an *of*-construction, or hesitation in the split genitives. We have not found the former, but perhaps there is some hesitation in (59) and (71); see also note 38.

5.2 A cognition explanation for split genitives: the proximity principle

The observation that speakers appear to want to keep POSS-S attached to the head of the possessor NP provides the starting point for another possible explanation of split genitives, building on the findings of Kreyer (2003), linked to cognition and ease of processing.

In the absence of postmodification, a POSS-S construction places the heads of the possessor and possessum NPs directly adjacent to one another (*the leader's shirt*). In POSTMOD-POSS, the postmodifier would separate them (*the leader of the council's shirt*), violating what Kreyer terms the PROXIMITY PRINCIPLE, namely the requirement that "related constituents should be in the proximity of one another: the further apart related constituents are, the less acceptable the construction will be" (see Hawkins 2003: 184 "Adjacency hypothesis"; Kreyer 2003: 179-80). In *of*-constructions, the head of the possessor NP and the possessum remain equally close even under possessor postmodification (*the shirt of the leader, the shirt of the leader of the council*). Kreyer uses the proximity principle to explain why postmodified possessors tend to occur in *of*-constructions (2003: 179, 201) (and in his data, always do). Since split genitives would achieve this kind of proximity too (*the leader's shirt of the council*), the proximity principle could be invoked to explain them too. However, split genitives destroy the proximity of possessor head and its postmodifier. And the whole discussion is predicated on the assumption that the possessum has no premodification to disrupt proximity.

If the postmodified possessor NP is a more or less fixed phrase (e.g. *the leader of the council, the president of America*), POSTMOD-POSS is more likely, presumably because the entire phrase is stored as a unit and, therefore, POSS-S may be attached to it as if to a single noun with no problems for cognition. Fixed phrases such as these correspond to the "prefabs"

described by Bybee, namely "word sequences that are conventionalized, but predictable in other ways", and lexically listed: "Speakers recognize prefabs as familiar, which indicates that these sequences of words are stored in memory despite being largely predictable in form and meaning" (2006: 713).

Overall, the split genitive appears to be a measure adopted in speech to aid processing or, at least, to avoid constructions that would be hard to process. This cognitively-based explanation accounts for the restriction of the split genitives to spoken language and for their strange character when written down. Split postmodification can happen in non-possessive NPs too, both in speech and in writing. This is illustrated with examples attested in spontaneous speech:

(78) (it wouldn't read my usb-stick:) every other computer does that I've tried it in

(79) the lyrics are a bit creepy to that song

The underlining indicates the split constituent.

The following examples taken from the BNC also show splitting of long elements which would have been grammatical, if harder to process, had they been left unsplit:

(80) A difficulty arises with the Fourier transform integral of equation (11.11) because it is indefinite for certain important time-dependent functions F(t) such as the unit step function shown in figure 11.4(a). (written BNC: K90 1153)

(81) Evidence exists for Jesus's association with the militant factions and for his own probable military activity. (written BNC: EDY 577)

(82) The dispute comes at the opening today of the London Dumping Convention. (written BNC: K97 395)

(83) Erm, and at the moment we are carrying out some studies which er are nearing completion, to decided exactly what the <pause> RAF's future requirements are for tactical reconnaissance. (spoken BNC: JNN 233)

Of course, many such examples serve to maintain the principle of end-weight.

5.3 Is poss-s still a head marker?

Another explanation is historical. The fact that the split genitives are as frequent as POSTMOD-POSS with non-formulaic possessors raises the possibility that POSS-S simply retains a preference for attaching to the head of the possessor NP, a hangover from its earlier role as a genitive inflectional suffix. Its behaviour is then conditioned by competing constraints, a consequence historically of PERSISTENCE (in the sense of Hopper 1991) and of LAYERING (Hopper & Traugott 2003). Payne (2009) notes some unexpected realisations of POSS-S in informal writing on the web in which POSS-S is attached **both** to the head noun and to the right edge of the postmodification:

(84) I turn it on, wait 10 minutes for it to bring all the files over on the guy's next door's wireless, and it's done[39]

(85) Our room was small and not very well sound-proofed, the person's next door's snoring woke me up frequently

[39] In example (84), the *'s* in *guy's* might conceivably be a misspelt plural; there is, however, no such potential confusion in (85) or (86).

(86) Leroy was one of the woman's next door's grandsons and stood at a staggering six foot seven inches

Four similar examples appear in the spoken BNC with possessors postmodified by *else*, for instance

(87) Because he wastes everybody's else's time. (KBG 54)

(88) And then Clara, and er, somebody's else's name (K60 1103)

Such examples are admittedly rare and seemingly non-standard; they do, however, illustrate a tendency to attach POSS-S to the head of the possessor NP in the presence of postmodification, as well as a use of POSS-S as something other than a once-only marker. Three examples even appear in the written portion of the BNC, e.g.

(89) The more seasoned liggers, of course, simply went around nicking everyone's else's drinks. (written BNC: CK4 3407)

This erroneous duplication is strongly reminiscent of the pleonastic doubling-up of pied piping and preposition stranding, a phenomenon sporadically attested at least from early Middle English to the present:

(90) Do you know some people well enough in some of these other seed companies to approach them and find out with whom they are dealing with […] ? (KDU 124)

5.4 Split genitive = head genitive + extraposition?

Another approach to the split genitives would be to apply the *Cambridge Grammar*'s distinction between PHRASAL GENITIVES and HEAD GENITIVES. The split genitives would then be head genitives with some kind of (possibly non-standard) extraposition of part of the NP. Compare the normal extraposition of a relative clause in (91)b with the proposed extraposition necessary to produce (92)b:

(91) a. Somebody [who was actually supposed to carry out the work] arrived.

b. Somebody arrived [who was actually supposed to carry out the work].

(92) a. somebody [who was actually supposed to carry out the work]'s desk

b. somebody's desk [who was actually supposed to carry out the work] [= (57)]

However, it is unclear theoretically how to integrate the morphological properties of POSS-S with the syntactic movement of extraposition. More serious from our point of view is that there is no explanation of (in)frequency, and that a distinction between kinds of POSS-S is being invoked that has in our view little justification.

5.5 General shape of NPs in English

In principle, the infrequency of POSTMOD-POSS might simply be a consequence of general NP behaviour. For example, postmodification might be very rare in **all** NPs, and where it does occur, the last word might still tend to be nominal. Then our data would not necessarily be telling us much about the particular proclivities of POSS-S. For some general statistics on the frequency and shape of postmodified NPs, we turn to the spoken texts of ICE-GB, a smaller

corpus[40] but one that is both tagged and parsed with quite high reliability and accuracy. The relevant figures are given in Table 6.[41]

Table 6: Postmodification in subject and object NPs (ICE-GB spoken) about here

These figures are enough to dismiss out of hand the idea that there is nothing special about possessives. In speech in ICE-GB, head-final NPs are indeed the norm, but the proportion of NPs that are **not** head-final is still considerable: 14.8% overall. Compare this with the figure for POSS-S possessor NPs in the spoken BNC, where postmodification runs at a mere 2.2% (Table 2 above), let alone with the figure for the non-formulaic core of POSTMOD-POSS, 0.2%.

6 Conclusion

The main problem addressed in this paper was the discrepancy between theoretical accounts of POSS-S and its actual behaviour. The debate on the correct analysis of POSS-S has, as the references in this paper show, been ongoing and heated for over three decades and, despite Hudson's protestation that "[i]t is embarrassing for us as a profession that we are still debating whether *John's* is the inflectional possessive (or genitive) of *John*" (1995: 387), the response from scholars has been one of increasing entrenchment on the side of either the clitic or the affix analysis. The distinction between clitic and affix can be said to be made in two dimensions: degree of attachment and type of placement. As we saw in Section 2 above,

[40] There are 637,682 words in the spoken subcorpus of ICE-GB as against 10,409,858 in the spoken part of BNC.

[41] We have counted only NPs with the function of subject or object in order to minimise difficulties caused by self-embedding of NPs; the total is quite large enough to make the point adequately. DD wishes to thank Sean Wallis, Gerold Schneider and Hans-Martin Lehmann for helpful discussions on these counts. [Note to editor: further detail is available if required on the procedures adopted with ICE-GB.]

the debate has centred on the former, the placement being assumed to be straightforwardly phrasal – in particular, right edge. In this paper, we have had little to say about the attachment but have focused on the placement. Since the non-head, right-edge placement is generally assumed to be more common in spoken language, it is on spoken and other informal data that we have focused. We have shown that the theoretically crucial behaviour of POSS-S, namely the so-called group genitive (POSTMOD-POSS in this paper), is not just very rare but clearly avoided.

As far as descriptive approaches are concerned, none of the previous studies had used spontaneous spoken language as a basis for their research. Accordingly, split genitives had not yet been identified in PDE (a finding which also has implications for descriptions of the history of English). We are not the first to demonstrate the avoidance of certain kinds of POSS-S (see, for instance, Kreyer 2003); this paper is, however, the first to show that, faced with a postmodified possessor, speakers do not always abandon POSS-S in favour of an *of*-construction. In fact, POSS-S may also remain attached to the head of the possessor NP, while the postmodification goes elsewhere. These split genitives exhibit the supposed clitic POSS-S occurring in a manner much like its original role as a simple inflectional affix.

In fact, the split genitive constructions require some further explanation and, perhaps, justification; it is, after all, tempting to write them off as production errors. It is true that they look unusual when written down, but this is also true of the more complex and spontaneous group genitives, which Kreyer (2003) showed to be avoided strongly in written language. There appears to be no problem with stating that POSTMOD-POSS is largely restricted to spoken language; we can do the same for split genitives. The split genitive is a measure that aids the production and comprehension of POSS-S constructions with a postmodified possessor. It is striking that the vast majority of POSTMOD-POSS that do occur in the data involved a fixed phrase as their possessor, which is presumably accessed and treated as a

single unit for purposes of cognition. A split genitive is unnecessary with such possessors, and indeed none occurred in the spoken BNC data.[42]

Theoretical accounts must be adapted to account for the split genitive. Any attempt to exclude it on account of its perceived "ungrammaticality" would be spurious (see Section 4.6.4 above on "CASUAL" usage). Conversely, we might ask, how safe are theories which treat as criterial a phenomenon as marginal in practice as POSTMOD-POSS (regardless of how grammatical)?

The evidence of "normal" POSS-S constructions and split genitives seems to indicate that POSS-S actually prefers to attach to the head of the possessor NP. It attaches readily to the right edge of established phrases. However, the more freely constructed POSTMOD-POSS that are noted in the theoretical literature appear to be the exception. Granted, they do show that POSS-S must be ascribed some right-edge properties, but it is a rather less obedient "poster child" than is often assumed.

[42] Nevertheless, one such split genitive, *the president's momma of America*, was attested in an interview in the television programme *When The Levees Broke – Act III* (BBC4, 19.12.06).

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Tables

Contiguous time expression	N	%	Split time expression	N	%
a day or so's time	208	56.4	*a day's time or so*	161	43.6
a day or so's work	108	44.8	*a day's work or so*	133	55.2
Total contiguous	316	51.8	Total split	294	48.2

Table 1: Coordinated expressions of time

Presence of postmodification	N	%
no postmodification	9,682	97.8
postmodification	222	2.2
Total	9,904	100.0

Table 2: Postmodification in possessors with POSS-S (BNC spoken)

Nature of postmodification	N	%
else	123	55.4
PP (*of* 75, *in* 7, *with* 2, *across* 1, *down* 1, *for* 1, *on* 1)	88	39.6
relative clause	6	2.7
numerical approximations	2	0.9
before	2	0.9
other	2	0.9
Total	222	100.4

Table 3: Structural nature of postmodification in possessors with POSS-S (BNC spoken)

Host word of POSS-S	**N**	**%**
Noun	90	40.5
Pronoun	5	2.3
else	123	55.4
other	4	1.8
Total	222	100.0

Table 4: Host word of POSS-S in possessors with postmodification (BNC spoken)

Nature of possessor	**N**	**%**
indefinite + *else*	123	59.7
title or phrasal proper name	63	30.6
other fixed phrase	9	4.4
neither title nor fixed phrase	11	5.3
Total	206	100.0

Table 5: The formulaic nature of POSTMOD-POSS (BNC spoken)

Presence of postmodification	**N**	**%**
no postmodification	82,854	85.2
postmodification	14,375	14.8
Total	97,229	100.0

Table 6: Postmodification in subject and object NPs (ICE-GB spoken)