On the (non-)equivalence of constructions with determiner genitives and noun modifiers in English[1]

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The question of equivalence of constructions with determiner genitives (*the FBI's director*, *the chair's leg*) and noun modifiers (*the FBI director*, *the chair leg*) is a crucial one for Rosenbach's (2007a, 2010) approach to the gradience between genitive and noun + noun constructions as well as for any study of grammatical variation treating the two constructions as syntactic variants (Szmrecsanyi *et al.* 2016). However, the assumption that there is such equivalence has recently been challenged by Breban (2018) for English and Schlücker (2013, 2018) for German. The present article defends the view that determiner genitives and identifying noun modifiers are sufficiently similar to alternate in certain choice contexts from a variationist perspective, which, as will be shown, proceeds from a notion of equivalence different from the one adopted by in-depth semantic–pragmatic studies. Proper noun modifiers take a prominent role among identifying noun modifiers in their ability to alternate with determiner genitives, but the argument and analysis in this article is not restricted to them.

Keywords: determiner genitives, noun modifiers, genitive variation, grammatical variation, (notions of) equivalence

1 Introduction

In a series of publications (Rosenbach 2006, 2007a, 2007b, 2010)[2] I have argued that there is a whole family of constructions with genitives and noun modifiers in English which partly overlap semantically and thus show constructional overlap and gradience. Proper noun modifiers (*the **FBI** director*) play a prominent role in this work as they may combine properties of both determiner genitives and noun modifiers. They have attracted considerable interest since, not only in English (Breban 2018) but also in German (Zifonun 2010; Schlücker 2013, 2018) and Swedish (Koptjevskaja-Tamm 2009, 2013), to the extent that a whole volume (Breban & Kolkmann 2019) is devoted to them. One of the controversial questions discussed in the literature is if and to what extent (proper) noun modifiers are really equivalent to determiner genitives (see, in

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[2] See also the unpublished papers by Koptjevskaja-Tamm & Rosenbach (2005) and Rosenbach (2009), both available online.

particular, Breban 2018; Breban *et al.* 2019; Schlücker 2013, 2018).[3] The issue of equivalence between determiner genitives and proper noun modifiers is an important one, because I have taken the variation between the two constructions as both a corollary of the gradience between them as well as a heuristic diagnostics for it (see particularly Rosenbach 2010). A corollary, because noun modifiers have been on the rise since the Late Modern English period and semantically extended to highly salient referents (i.e. animate and proper nouns), thus encroaching on the semantic territory compatible with determiner genitives, while determiner genitives have extended to non-animate possessors and thus to contexts compatible with noun modifiers (Rosenbach 2007a; Biber & Gray 2011, 2016; Szmrecsanyi *et al.* 2016). And a heuristic, because the ability of (proper) noun modifiers to alternate with determiner genitives (e.g. *the FBI director* vs *the FBI's director*) is considered as evidence that they are similar in meaning (i.e. equivalent) to determiner genitives in certain contexts.

In this article I will defend the view that determiner genitives can alternate with (proper) noun modifiers, i.e. that they can be equivalent. Note from the outset that I will argue from a variationist rather than gradience perspective in this article.[4] As stated above, the two are related and in fact proceed from the same notion of equivalence, which, as will be shown throughout this article, differs from what theoretical semantic–pragmatic approaches consider as equivalent.

In the following I will first clarify how 'equivalence' is defined in variation studies (section 2). In the main part of the article (section 3) I then discuss to what extent determiner genitives and (proper) noun modifiers can be regarded as equivalent in certain choice contexts. In particular, I argue that (proper) noun modifiers, like determiner genitives, may function as referential anchors (section 3.1). In section 3.2 I discuss whether potential equivalence is restricted to definite noun phrases. The question of the semantic relations that can be expressed by both a determiner genitive and a (proper) noun modifier is addressed in section 3.3. In section 3.4 I argue that common noun modifiers can alternate with determiner genitives, too, under certain conditions. Section 3.5 deals with lexicalising expressions, which provide for a specific form of variation, and section 3.6 gives a synthesis on the discussion of equivalence. The article concludes in section 4, clarifying some remaining differences in perspective between variation studies and gradience studies and giving a short outlook on future research and method.

2   Equivalence and grammatical variation

Over the past decades a whole new paradigm of grammatical variation has emerged within linguistics devoted to the study of grammatical alternations. Researchers working within

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[3] Throughout this article I will put 'proper' in brackets whenever a statement holds equally for proper and common noun modifiers. Note further that I will be using the term *proper noun modifier* throughout to indicate that it is a type of noun modifier, though – as correctly pointed out by Breban (2018: 384, fn. 5) – proper nouns are strictly speaking a subclass of proper names. Note explicitly that the latter are not excluded here.
[4] The latter is described in detail in Rosenbach (2006, 2007a, 2007b, 2010).

this paradigm try to determine the range and interplay of factors that govern the choice between alternating constructions and account for the mechanisms of this choice as well as the dynamics of change arising from it; see, e.g., Krug *et al.* (2013: 9–12) for a brief overview on this line of research. This field of research faced from the outset the particular problem of defining meaning equivalence between two grammatical variants.[5] Meaning equivalence is a prerequisite for any variation study, but in certain conceptions of syntax different constructions necessarily express different meanings (e.g. Bolinger 1977 or Gries & Stefanowitsch 2004). If two constructions entail different meanings, then, according to these views, there cannot be equivalence between any two grammatical variants, and thus no true grammatical variation.

Variation studies, however, take a softer view on equivalence than in-depth semantic–pragmatic studies. They proceed from the observation that there are alternative ways of 'saying the same thing' within a speech community (Labov 1972: 188) and then capture this sameness (i.e. equivalence) under the abstract notion of the linguistic variable.[6] That is, the observation of variation logically comes first and testifies to the equivalence of alternating constructions in language usage. What matters is what speakers treat as 'saying the same thing'. However, capturing this sameness/ equivalence theoretically is important in order to define the scope of possible alternation, i.e. the linguistic variable. In so doing, researchers of grammatical variation proceed from 'rough semantic equivalence', first put forward in Weiner & Labov's (1983) pioneering study on active/passive alternation. According to this definition, grammatical variants ought to 'normally have the same meaning in a truth-conditional sense' (Weiner & Labov 1983: 30).

In the present article I will proceed from what Cruse (2000: §3.2) subsumes under *descriptive meaning*, a cover term conflating *ideational meaning* (Halliday 1970) and *referential, logical* or *propositional meaning* (see also J. Lyons 1995: §1.7). Equivalence is then defined as *descriptive synonymy* in the sense of identity of descriptive meaning (J. Lyons 1995: §2.3). This includes truth-conditional equivalence, i.e. the fact that the expressions are true or false under the same state of affairs as well as identity in sense relations and the meaning that determines reference. Accordingly, any difference in the non-descriptive meaning of constructions/variants, such as pragmatic or stylistic preferences, is not denied, but is ignored on the level of selecting relevant expressions for analysis. Such differences in fact often form part of the analysis. After all, variation studies do not assume free or random variation but proceed from the idea of 'orderly heterogeneity' (Weinreich, Herzog & Labov 1968) and the main task of the researcher it to find out when to use one construction rather than the other.

Do variants need to be equivalent in *all* their descriptive meaning in those cases where expressions can express a variety of meanings? Not necessarily – it is sufficient that they share some meaning component. Consider the various ways of expressing the future in

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[5] See also Rosenbach (2002: 22–3, 2007a: 151–3) or Tagliamonte (2006: §5) and literature cited therein.
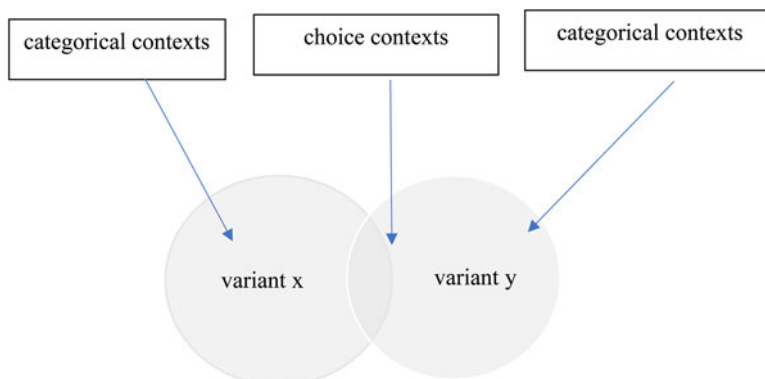[6] See, e.g., Tagliamonte (2006: §5) or Walker (2010) for a discussion on the linguistic variable.

Figure 1. (Colour online) Categorical versus choice contexts in grammatical variation

English (e.g. *will, shall, going to*). They share the meaning of FUTURE but differ in the expression of PREDICTION, INTENTION, PROXIMITY etc. (cf. also Jacobson 1980: 26).

A useful way of visualising the scope of variation studies is the distinction between *categorical contexts* which only allow one variant, and *choice contexts* where both variants can be used (cf. Rosenbach 2002: 28), as illustrated in figure 1. It is choice contexts that define the space of potentially alternating (i.e. equivalent) expressions for variation studies.

Accordingly, in the present article I adopt a notion of equivalence defined as descriptive synonymy in the sense of partly overlapping descriptive meaning(s) determining the scope of choice contexts.

3   Equivalence between determiner genitives and (proper) noun modifiers

In Rosenbach (2007a, 2009, 2010) various examples are given that demonstrate that determiner genitives and (proper) noun modifiers can be used interchangeably in discourse. One particularly good example comes from P. D. James' novel *Devices and Desires*, where there is repeated reference to a dinner party held by the Mairs, which is referred to either as *the Mair dinner party* or as *the Mairs' dinner party*, without any difference in the descriptive meaning of the two (see Rosenbach 2007a: 152–3).

(1) (a) He was at **the Mair dinner party**. (P. D. James, *Devices and Desires*, p. 270, emphasis mine)

   (b) 'There was a rather cryptic exchange at **the Mairs' dinner party** between him and Hilary Roberts.' Rickards crouched forward, his huge hand cradling the whisky glass. Without looking up, he said: '**The Mair dinner party**. I reckon that cosy little gathering – if it was cosy – is at the nub of this case…' (P. D. James, *Devices and Desires*, pp. 274–5, emphasis mine)

   (c) 'She and that housekeeper at the Old Rectory, Mrs Dennison, are the only ones who were at **the Mairs' dinner party** who made no attempt to produce an alibi…' (P. D. James, *Devices and Desires*, p. 279, emphasis mine)

The question now is what precisely constitutes this alternation, i.e. how can we define equivalence for these two variants? As a first approximation let's state that both constructions consist of a 'possessum' (*dinner party*) and a nominal dependent ((*the*) *Mairs*), called a 'possessor' in possessive noun phrases, that are linked by the same (possessive) relation (both can be paraphrased as 'the dinner party held by the Mairs'), if in different syntactic positions and configurations. In other words, they are different ways of expressing adnominal possession. This is also the core operationalization for defining the linguistic variable for 'classic' genitive variation, i.e. the variation between a determiner genitive and an *of*-genitive (e.g. *the FBI's director* vs *the director of the FBI*); see also Rosenbach (2002: 26–7). Proceeding from the notion of equivalence as outlined in section 2 above, descriptive synonymy is given in the expression of POSSESSION, which is to be understood here as a rather wide category, clearly going beyond the everyday sense of legal ownership. McGregor (2009b: 1) gives the following characterisation of possession:[7]

> … it is a relational concept that potentially covers a wide range of conceptual relations between entities, including, for human beings, between persons and their body-parts and products, between persons and their kin, between persons and their representations (e.g. names, photographs), between persons and their material belongings (animate and inanimate items they own), between persons and things that they have usership-rights to or control over, between persons and cultural and intellectual products, and so on. For other animates and inanimates a more restricted range of conceptual relations is generally available.

This definition comprises adnominal (*John's house*) and predicative possession (*John owns/has a house*) as well as possessive relations not expressible by a determiner genitive (e.g. *a man of honour, a women's magazine*) and thus needs to be narrowed down by three restrictions to define the field of enquiry for English genitive variation: first, the structural restriction to adnominal possession; second, the restriction to anchoring possessors (as opposed to non-anchoring possessors, e.g. *a man of honour*);[8] and third the restriction to possessors that restrict the reference of the noun phrase (as opposed to those that restrict its denotation, e.g. *a women's magazine*).[9]

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[7] See also, e.g., Seiler (1983), Nichols (1988), Taylor (1989, 1996) or Heine (1997) on possession.

[8] Typical anchoring possessives, according to Koptjevskaja-Tamm (2002: 147), are Legal Ownership (*Peter's hat*), Kin Relations (*Peter's brother*), Body-part (*Peter's leg*), disposal (*Peter's office*), Author or Originator (*Peter's poem*), Carrier of Properties (*Peter's braveness*), Social Relations (*Peter's neighbours*), Part–Whole (*the mountain's top*), Temporal Relations (*Monday's performance*) and Locative Relations (*Stockholm's banks*), though even this list is only exemplary. In this article I will also include so-called 'subjective' and 'objective' relations under the notion of possession, where the head noun is a deverbal noun, as these are relations that can be expressed by the prototypical construction in English to express possessive relations, i.e. a determiner genitive (*John's writings, John's murder*). According to Nikiforidou (1991), such subjective and objective relations can be derived metaphorically from possessive meaning. Note also that my use of 'anchoring possessives' includes both referential anchors (*John's house*) and non-referential anchors (*a women's magazine*); for discussion see Rosenbach (2006: 100–1), and see also note 9 below.

[9] The distinction between 'reference restriction' and 'denotation restriction' corresponds to Rosenbach's (2006) distinction between 'token-restriction' (determination) and 'type-restriction' (classification), Seiler's (1978) distinction between 'determination of reference' and 'determination of concept', and what Taylor (1996) calls
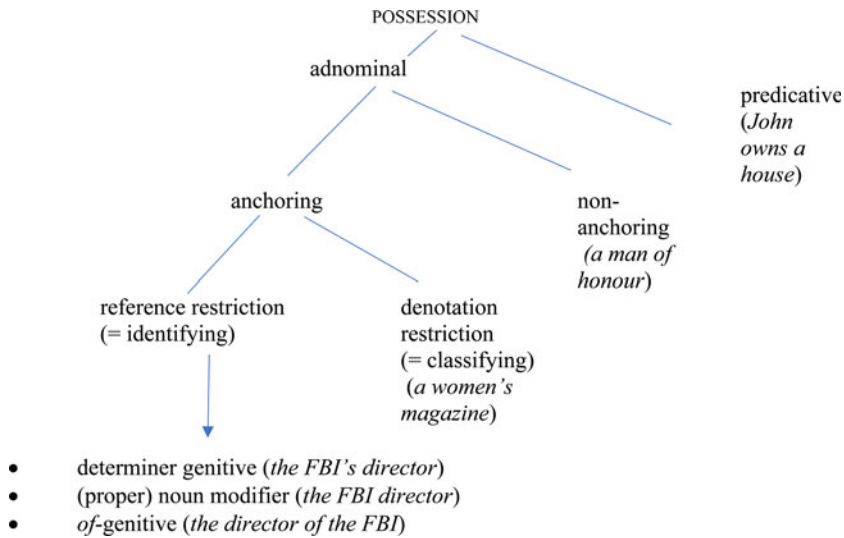
Figure 2. (Colour online) Defining the linguistic variable for English genitive variation

Getting back to the alternation in (1) we can now note that *the Mairs' dinner party* and *the Mair dinner party* (i) are true (or false) under the same conditions, (ii) express the same sense relation of POSSESSION and (iii) in both cases the nominal dependent/possessor (*(the) Mairs*) has identifying function in the sense of restricting the reference of the noun phrase (see also section 3.1 below). Defining equivalence like this, we actually get three potential genitive variants: determiner genitives (*the FBI's director*), (proper) noun modifiers (*the FBI director*) and *of*-genitives (*the director of the FBI*);[10] see figure 2.

While there has been a long tradition of studying the variation between determiner genitives and *of*-genitives in English (see the overview given in Rosenbach 2014), the actual variation between determiner genitives and (proper) noun modifiers is still largely unexplored and even debated. In fact, Szmrecsanyi *et al.* (2016) is the first and only study treating genitives and noun modifiers as variants from a variationist (i.e. quantitative) perspective. The debate centres on the following questions:

1. Are identifying (proper) noun modifiers indeed referential anchors (or, how do they identify)?
2. In which contexts can (proper) noun modifiers alternate with determiner genitives? In particular, is the identifying function (and alternation) restricted to
    (a) definite noun phrases
    (b) certain semantic relations
    (c) proper nouns?

'instance specification' versus 'type specification'. All these distinctions capture the fact that anchoring constructions have restrictive meaning only differing in the locus of restriction (reference vs denotation).

[10] See also section 4 below for a brief discussion on a possible widening of classic genitive variation.

These questions will be addressed in turn below.

3.1   The identifying function of (proper) noun modifiers

Noun modifiers are not noun phrases but nouns or nominals.[11] They typically have classifying meaning, i.e. they designate a subtype of the head. As such, they are positioned in prehead position. A standard example would be *this expensive [**cat** food]* where the noun modifier *cat* specifies the type of food. In contrast, determiner genitives help to specify the referent of the noun phrase. Rather than restricting the denotational scope of the head noun, they restrict the reference of the noun phrase, as in *John's house*, where *John* specifies whose house it is. As such, determiner genitives have identifying function, defined as 'reference restriction' (see above). Determiner genitives are regarded – from different theoretical angles – as '(referential) anchors' (e.g. Löbner 1985, 1998, 2011; Rijkhoff 1989; Hawkins 1991; Barker 1995; Haspelmath 1999; Rosenbach & Vezzosi 2000; Koptjevskaja-Tamm 2001, 2002) or 'reference point entities' (Langacker 1995; Taylor 1996; Keizer 2007; Willemse 2007; Willemse *et al*. 2009) that help to identify the referent of the noun phrase by reference to this anchor (or reference point). It is by reference to John that the hearer/addressee can identify whose house it is, i.e. John's.

In Rosenbach (2007a, 2009, 2010) I argue that some (proper) noun modifiers may share the identifying function of determiner genitives and can be considered referential anchors, at least in certain contexts. In a similar vein, Schlücker (2013) analyses identifying proper noun modifiers in German[12] as 'anchoring modifiers' within a version of Rijkhoff's (2002, 2009) model of the English noun phrase adapted by Zifonun (2010) for German.[13] In the expression *the FBI director* the proper noun modifier *FBI* helps to restrict the reference of the noun phrase, specifying whose director it is, i.e. the FBI's, and in this respect functions like a corresponding determiner genitive (*the FBI's director*). As referential anchors, however, proper noun modifiers must themselves be referential. Theoretically, this is a problematic assumption, as a noun modifier – unlike a determiner genitive (or a corresponding

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[11] See Rosenbach (2007a: §2.2) for a further specification of noun modifiers. Note that I'm using the term 'noun modifier' in a general sense rather than referring to modifiers in the more specific sense of Payne & Huddleston's (2002: 449) adjunct (modifier)/complement distinction. Note further that I will stay largely agnostic on the question of whether noun modifiers form syntactic phrases or morphological compounds (cf., e.g., Bauer 1998), as their precise morphosyntactic status is irrelevant for the question of semantic equivalence, though I will briefly address the question below in this section when discussing Breban's (2018) analysis.

[12] Schlücker (2013, 2018) argues that her analysis of German proper noun modifiers can be transferred to English. The main difference between the two languages is that structurally in German they are clear compounds, while English morphology makes the distinction between compound and phrase a notoriously difficult one. Also, locative relations typically get expressed in German (as in Dutch) by denominal adjectives (*die Brüsseler Landschaft* rather than **die Brüssel-Landschaft*), while English uses proper noun modifiers more liberally with locatives (*the Brussels landscape*).

[13] Rijkhoff's (2002, 2009) functional model of the English noun phrase captures what is usually regarded as determiners within the grammars of English (e.g. Quirk *et al*. 1985; Payne & Huddleston 2002) either as discourse-referential modifiers (e.g. definite/indefinite article) or as localising/anchoring modifiers (e.g. determiner genitives, certain prepositional phrases).

of-genitive) – is not a noun phrase and should thus constitute an 'anaphoric island', in the sense of Postal (1969) or Sproat (1988), and thus be non-referential.[14] However, proper nouns constitute a special case as they have unique reference and may retain their inherent referentiality as modifiers. This is demonstrated in (2) by Schlücker (2013: 466), applying the classic test for referentiality, i.e. anaphoric reference (see Ward *et al.* 1991).

(2) (a) the search of the Wulff$_i$ residence he$_i$ was not informed of
     (b) the beginning of the Berlusconi$_i$ trial where he$_i$ however did not appear

Further evidence for the referentiality of proper noun modifiers comes from translations. Rosenbach (2010: 165) gives an example where the English proper noun modifiers in *the* **Grieg** *Piano Concerto* and *the* **Sibelius** *Violin Concerto* get translated in German by a prenominal genitive (**Griegs** *Klavierkonzert*) and postnominal *von*-construction (*das Violinkonzert von* **Sibelius**) respectively. That is, in both cases the translator chose a construction with a clearly referential possessor in German, although German has the structural means for a one-to-one translation (*das Grieg-Klavierkonzert, das Sibelius-Violinkonzert*). To illustrate this further, English often uses a (proper) noun modifier where Afrikaans uses a determiner genitive (Rosenbach 2017: 7), as in (3), where the Afrikaans *se*-genitive in **Taalejare se** *dorpsdam* in (3a), a prenominal determiner genitive, gets translated into English as the proper noun modifier *the* **Yearsonend** *dam* in (3b) (*Taalejare/Yearsonend* is the name of a village).

(3) (a) GrootKarel droom van 'n opgaardam vir daardie nat streek, en 'n "geut" – so noem hy dit – wat die water na **Tallejare se dorpsdam** bring. (Etienne van Heerden, *Die swye van Mario Salviati*, p. 43, emphasis mine)
     (b) Big Karel had dreamt of a collecting dam in that area and an aqueduct – as he called it – bringing the water to **the Yearsonend dam**. (Etienne van Heerden, *The Long Silence of Mario Salviati*, p. 38, emphasis mine)

And in the Afrikaans translation of the first Harry Potter novel we find the expression *the* **Gryffindor** *common room* translated either one-to-one as *die* **Griffindor**-*geselskamer* (a proper noun modifier/compound) or as **Griffindor** *se geselskamer* (a determiner genitive) throughout the novel. These examples illustrate that the translators considered constructions with determiner genitives and proper noun modifiers to be equivalent in meaning in these contexts.[15]

This is not to say that the two constructions, the one with a determiner genitive and the one with a (proper) noun modifier, referentially anchor in the same way. In fact they don't. In English, determiner genitives take determiner position and are tied to the expression of

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[14] See also Rosenbach (2007a: 148–9) for further discussion.
[15] Ström Herold & Levin (2019: section 4) provide more (and quantitative) evidence that English proper noun modifiers are often translated into German and Swedish genitives and prepositional phrases, though interestingly they are very rarely translated from such structures into English.

definiteness within the possessive noun phrase, narrowing down the referent of the noun phrase to a (typically) uniquely identifiable referent.[16] In contrast, noun phrases with (proper) noun modifiers are determined by the initial determiner and as such are open to the expression of definiteness. In Rosenbach (2009) I argue that the initial definite article works together with the (proper) noun modifier when referentially anchoring the NP (see also Koptjevskaja-Tamm & Rosenbach 2005: §4.2). Schlücker (2013) attributes more importance to the definite article in the process of identifying the referent of the noun phrase, assigning the identifying proper noun modifier only 'assisting' status.

> The definite determiner indicates that the noun phrase referent has to be identified and the identifying modifier helps to accomplish this task. The identifying noun modifier can therefore be regarded as an assistant to the identifying function of the determiner. (Schlücker 2013: 469)

Schlücker's analysis ties in well with Löbner's (1985, 1998, 2011) theory of definites, where the definite article is taken to indicate that the head noun is to be interpreted as a functional noun that needs to be anchored. Under this view referential anchoring is only possible within definite noun phrases (see, however, sections 3.2 and 3.4 for a critical assessment of this view).

Breban (2018) argues that proper noun modifiers are not referential anchors but mostly epithets and that although they may have identifying function, they identify the referent in a different way than a determiner genitive does. According to Breban (2018: 391),

> the contribution by the proper name modifier is not to add a second referent to which the noun phrase referred can be anchored, but instead to add a certain qualifying description … These proper name modifiers act as a cue for the addressee/reader to reconstruct a (shared) feature of the referent that will allow him/her to identify that referent. Their contribution to the communicative process is a (reconstructable, often complex description of) a feature or property associated with the referent, i.e. they function as Epithet.

Analysing proper noun modifiers as epithets allows Breban (2018) to present a uniform and thus elegant analysis of (most) proper noun modifiers, as epithets may convey meanings compatible with both qualifying and identifying uses. Her main argument is that qualifiers can also identify. Thus in *the red car* the adjective *red* helps to identify the referent of the NP. This analysis has an instant appeal as it covers the wide range of relations that can be expressed by a proper noun modifier as well as their positional restriction – they precede classifying elements and the head in the noun phrase. Evidence for the adjectival character of proper noun modifiers comes from translations, in particular the fact that expressions such as *the Brussels landscape* get translated into Dutch as *het Brusselse landschap* (denominal adjective) or *het landschap in Brussel* (prepositional phrase) but not as **het Brussel landschap* (proper noun modifier); see Breban (2018: 393). Breban argues that due to the absence of denominal adjectives for

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[16] See sections 3.2 and 3.4 below for a more detailed discussion on the definiteness of possessive noun phrases.

locations, English resorts to proper noun modifiers (*the Brussels landscape*). Note, incidentally, that English does have productive morphological processes for forming denominal adjectives from proper nouns, as e.g. in *the Hallidayan framework.* They do not necessarily block the formation of a corresponding proper-noun modifier (*the Halliday framework*), nor that of a determiner genitive (*Halliday's framework*). The fact that these proper noun modifiers may alternate in English with a corresponding adjectival form and the evidence from translations above indeed support Breban's epithet analysis. However, Breban needs to widen Halliday's (1994) framework by allowing nouns into the epithet function, originally reserved for adjectives only. And the analysis of proper noun modifiers as epithets leaves us with the mystery of a referential nominal modifier in a position usually not allowing referential elements.

Proper noun modifiers that are internal arguments of a deverbal head noun, as in *a Kerry supporter*, form a special case in Breban's account, because they are usually treated as complements in the grammars of English (Payne & Huddleston 2002: 452–3), which are distinct from modifiers, so a modifier or epithet analysis cannot apply to them. Breban analyses them as part of 'Thing' in Halliday's model, i.e. as part of the head and thus structurally as a compound. The examples chosen by Breban (e.g. *a Kerry supporter*) clearly exemplify a deverbal head noun and internal relation. In practice, however, it is often difficult to clearly identify internal arguments.[17] For example, how do we classify head nouns like *fan*, which are not deverbal but still require an argument, as in example (4) below?

(4) I have become **an Anita Shreve fan** and plan to read more of **her** books. **Her** weave of characters, crime and passion …[18]

Note that in this example the proper noun modifier *Anita Shreve* is referential as it is anaphorically referred to twice in the following context, which is a problem for a compound analysis. Even with clearly deverbal head nouns a unified compound analysis strikes me as problematic, as examplified by (5) below:

(5) The key point that blunts **the Gould and Lewontin critique of adaptionism** is that … (Pinker & Bloom 1990: 709, emphasis mine)

This cannot be a compound, not even within approaches allowing for phrasal compounds (e.g. Lieber 1988), as there is a postverbal complement of the deverbal head noun *critique*. Note, incidentally, that the proper noun modifier in (5) easily alternates with a corresponding determiner genitive (6) and in fact does so in the same source.[19]

(6) Dennett … argues that **Gould and Lewontin's critique** is remarkably similar in logic to … (Pinker & Bloom 1990: 727, fn. 2, emphasis mine)

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[17] Schlücker (2013) distinguishes between deverbal head nouns with an internal argument (e.g. *Goethe-Verehrung* 'Goethe-adoration') and those with an external argument (*Gorbatschow-Rede* 'Gorbachev speech'), arguing that only the latter may have identifying function, though structurally these are all compounds in German.

[18] Amazon.com, review of an Anita Shreve book, retrieved online 7 July 2002, emphasis mine.

[19] See also Rosenbach (2002: 17).

Schlücker's analysis (2013, 2018) of proper noun modifiers as anchoring modifiers captures their (potential) syntactic nature well and can account for the referentiality of identifying proper noun modifiers, but, as correctly pointed out by Breban (2018: 388), this analysis does not take account of the ordering restriction whereby identifying (proper) noun modifiers strictly follow any qualifying adjectives, because in Rijkhoff's (2002, 2009) model anchoring modifiers precede quantifying, qualifying and classifying modifiers. That is, Schlücker's analysis cannot account for the fact that it is *the new FBI director* and not **the FBI new director* in English.

So, from a theoretical point of view identifying (proper) noun modifiers either constitute unusual referential anchors (occurring in the wrong position in the noun phrase) or – when fitted into the right position as epithets or, for deverbal head nouns, compounds – exhibit properties not wholly consistent with epithets or compounds either. I prefer to analyse (proper) noun modifiers, or, more precisely, those (proper) noun modifiers interchangeable with determiner genitives, as unusual referential anchors rather than unusual epithets because this stresses their ability to alternate with determiner genitives.[20] In Rosenbach (2010) I argue that they constitute a mismatch in the usual correspondence of semantic function (determination, qualification/ premodification, classification) and word order within the noun phrase, where elements contributing to the reference of the noun phrase are typically situated at the left edge of the noun phrase, while elements contributing to the denotation (i.e. properties of the head noun) are typically positioned close to the head (see, e.g., Teyssier 1968; Seiler 1978; Quirk *et al.* 1985; Adamson 2000). The analysis of identifying proper noun modifiers as epithets cannot resolve this violation of the usual iconicity in the noun phrase, either, though Breban (2018: 399) explicitly stresses the fact that her version of Halliday's (1994) framework 'more radically detaches form and function', which is one way of incorporating such mismatches into a model of the noun phrase. None of the grammars of English such as Quirk *et al.* (1985), Biber *et al.* (1999) or Payne & Huddleston (2002) nor treatments of the English noun phrase such as Rijkhoff's (2002) or Keizer's (2007) mention (proper) noun modifiers with identifying function. They have only recently received attention in the linguistic literature and, as the preceding discussion shows, their theoretical status is tricky and still open to discussion.

While we have seen that it is not clear how best to treat identifying (proper) noun modifiers theoretically, the analyses both as reference points and as identifying epithets capture the fact that they restrict the reference of the noun phrase, i.e. have identifying function, so descriptive synonymy with determiner genitives is actually given in either case. Does it matter by which mental process precisely the reference of the noun phrase gets restricted? Not from a variationist point of view. To illustrate this point further, consider again classic genitive variation (*the FBI's director* vs *the director of the FBI*). Here the dependent in the determiner genitive has the structural position and

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[20] Note that from a typological view noun + noun juxtaposition expressing determiner function (i.e. referential anchoring) is not an anomaly; see Rosenbach (2010: 174–5) and references cited therein.

function of a determiner, while the dependent in the *of*-genitive is usually considered a restrictive postmodifier (Quirk *et al.* 1985: § 17.38; Biber *et al.* 1999: §8.1) or complement (Payne & Huddleston 2002: § 14.1), without conferring definiteness on the possessive noun phrase. Like constructions with an identifying (proper) noun modifier, postnominal possessives with an *of*-genitive receive their (in)definiteness from the initial determiner, which is precisely the reason why such constructions (like constructions with noun modifiers) can be either definite or indefinite, e.g. *a/the/this director of the FBI*. Functionally, they can be considered referential anchors that help to identify the referent of the possessive noun phrase just like determiner genitives (e.g. Hawkins 1991; Keizer 2007; Rijkhoff 2009), though, from a cognitive point of view, the conceptual path for identification in constructions with determiner genitives and *of*-genitives differs (see, e.g., Taylor 1996; Keizer 2007). Under a variationist definition of equivalence as given in section 2 above, however, the mental route by which anchoring possessives identify lies outside the realm of their descriptive meaning. Thus, what matters from a variationist point of view is *the fact that* determiner genitives and (proper) noun modifiers (and *of*-genitives, for that matter) help to identify the referent of the noun phrase and not *how* this identification process works in detail, though the latter is certainly an important question for an in-depth semantic–pragmatic study of these constructions and helps us to identify the factors that govern the alternation.

3.2   (In)definiteness of the matrix NP

Breban (2018) makes the important observation that proper noun modifiers may have identifying function even within indefinite noun phrases, *pace* Schlücker 2013, who argues that identifying function is restricted to definite noun phrases and that noun modifiers in indefinite noun phrases trigger a classifying interpretation.[21] Breban argues, to my mind convincingly, that in expressions like *a Christmas day tragedy* the proper noun modifier identifies an instance of the type tragedy (one that happened on a specific day, i.e. Christmas day) and thus has identifying function, rather than denoting a type of tragedy. The indefinite article merely signals that the referent cannot be sufficiently identified via the proper noun modifier. In (7) there are two more examples I found that further illustrate the identifying function of proper noun modifiers within an indefinite noun phrase:

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[21] In Rosenbach (2007a: 150) I acknowledge the fact that identifying noun modifiers can occur within indefinite noun phrases and note that the expression *a Bush administration* often expresses some counterfactual, irrealis meaning in contrast to the definite *the Bush administration*. However, I restrict potential alternation between determiner genitives and (proper) noun modifiers to the context of definite noun phrases under the assumption that determiner genitives render the noun phrase definite and thus alternation is only possible in this context (Rosenbach 2007a, 2009, 2010). See further below and section 3.4 for a modification of this view. I'm grateful to one of the reviewers for challenging me on this assumption.

(7) (a)   Although Professor Simpson's comments referred to **a 1943 case**, …
          (Minette Walters, *Disordered Minds*, p. 19, emphasis mine)
     (b)   Her hair was nearly as blond as when Gary had first met her, at **a Bob Seger concert**
          at the Spectrum (Jonathan Franzen, *The Corrections*, p. 163, emphasis mine)

In both examples the proper noun modifier is part of an indefinite noun phrase which refers to a specific referent. It helps to identify this referent by reference to a specific point in time (7a) or via a specific person (7b), but while the referents of (7a) and (7b) are specific, they are not identifiable by the addressee. We can paraphrase these expressions as 'a (certain) case from 1943' and 'a (certain) concert of/by Bob Seger', respectively. Breban (2018) analyses such proper noun modifiers as identifying epithets where the proper noun modifier 'describes a property that is not sufficient to identify the referent' (p. 394). Epithets in general can be freely found in indefinite noun phrases (Breban 2018: 393), but note that Halliday (2004: 319) explicitly restricts defining (i.e. identifying) epithets to definite noun phrases, so Halliday's model needs further widening to include such identifying epithets.

Can these proper noun modifiers possibly be referential anchors? Referential anchors are usually treated within the context of definite noun phrases (e.g. Löbner 1985, 1998, 2011; Taylor 1996; Rijkhoff 2009), because they are closely tied to the expression of definiteness (cf. also Haspelmath 1999). Von Heusinger (2002), however, presents an account of referentially anchored specific indefinites in the sense that 'the referent of the specific NP is functionally dependent on the referent of another expression' (p. 268). Under this view, 'a specific indefinite is an underspecified representation that needs an anchor in the context' (von Heusinger 2007: 290). In this account the anchor must be familiar to both speaker and hearer (see also von Heusinger 2011: 1047). The examples *a Christmas day tragedy*, *a 1943 case* and *a Bob Seger concert* all represent specific indefinite noun phrases where the anchor is a proper noun modifier, which by definition has unique reference and thus is familiar. It remains to be seen, though, how precisely identifying proper noun modifiers can be incorporated into von Heusinger's (2002) formal-semantic definition of specific indefinites as *indexed epsilon terms*.

The important question in the context of the present article is whether proper noun modifiers as in *a Christmas day tragedy* can alternate with a corresponding determiner genitive. Note that prenominal possessives consist of two noun phrases, the possessor noun phrase and the (matrix) possessive noun phrase. Only the former is explicitly marked for definiteness, while the definiteness of the latter must be inferred and thus leaves room for interpretation. While the status of possessives with indefinite determiner genitives (*a friend's house*) is highly debated (see section 3.4 below), it is generally assumed that definite determiner genitives always render the possessive noun phrase definite (e.g. Huddleston 1984: 253; Löbner 1985, 1998, 2011; Quirk *et al.* 1985: 326; Taylor 1996; Biber *et al.* 1999: 271; Payne & Huddleston 2002: 467–8).[22]

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[22] See, however, Willemse *et al.* (2009) for suggesting that even proper noun determiners can render a possessive noun phrase 'functionally indefinite'. They suggest that *Greta Garbo's knickers* can be paraphrased as 'a pair of knickers of Greta Garbo'. This is a radically new view on the definiteness of possessives and will not be further

Accordingly, *the FBI's director* translates into 'the director of the FBI' or 'the FBI director' and not 'a director of the FBI'/ 'a FBI director'.

So, while *Christmas day's tragedy, 1943's case* or *Bob Seger's concert* are all perfectly formed possessives, they designate uniquely identifiable referents or events and as such are not equivalent to *a Christmas day tragedy, a 1943 case* or *a Bob Seger concert*, where the proper noun modifiers do not uniquely identify the noun phrase's referent, as flagged by the indefinite article. Thus, proper noun modifiers within an indefinite noun phrase cannot alternate with a corresponding determiner genitive, at least not determiner genitives as we typically know them.[23]

There is, however, a very marginal prenominal genitive construction that allows an indefinite reading of a proper noun possessor. The following example (8) is taken from the American English news section of the ARCHER corpus.

(8) a Panama's main military force (ARCHER corpus, American English: 1955. wash1.n8a)

The initial indefinite article clearly determines the head (*force*) and not the proper noun possessor (*Panama)*, suggesting the structure of a classifying genitive. However, the fact that the head is directly premodified by *main military* is not consistent with a classifying genitive, which typically is adjacent to the head.[24] What is more, the possessor *Panama* helps to identify the referent of the noun phrase, suggesting the reading 'a main military force of Panama' rather than a type of main military force. However, it doesn't single out a uniquely identifiable referent as a typical determiner genitive would, as indicated by the initial indefinite article. So what we see here is the production, in a published newspaper, of a determiner genitive construction that is explicitly marked for indefiniteness and that violates a core property of determiner genitives in English, i.e. their co-occurrence restriction with other central determiners (**the/this John's book*).

What looks like a really odd construction and might strike most people as an error, is actually not an isolated example, though it is not frequent either. The examples below, all taken from the Web, illustrate the same type of construction with a locative proper noun possessor in (9a), a temporal possessor in (9b) and even a human proper noun possessor in (9c).

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pursued here, though it would be interesting to see – possibly in experimental studies – if speakers consider *Greta Garbo's knickers* and the bare plural *Greta Garbo knickers* as expressing the same thing.

[23] Alternation would be possible with the oblique genitive, but only with human possessors (*a concert of Bob Seger's*, **a case of 1943's*). The oblique genitive forms an independent structure though (sometimes considered not as a possessive but as a partitive construction, e.g. Barker 1998; Löbner 2011: 299) that only very marginally intersects with the other genitive constructions in English (e.g. Payne & Berlage 2014) and thus will be ignored here.

[24] There are counterexamples to the generalization that classifying genitives have to be strictly adjacent to the head; see, e.g., Taylor (1996: 300) and Rosenbach (2006: 85–7). However, the intervening adjectives in these examples are usually classifying adjectives or, rarely, qualifying adjectives (e.g. *a typical [women's glossy magazine]*; *a valid [driver's UK licence])*. A restrictive adjective like *main* clearly rules out a classifying interpretation in (8).

(9) (a) One visit to Via Quadronno is all it takes to determine why it has become **a New York's dining critics' favorite**[25]

(b) Local youths during **a 2016's birding inter-schools excursion** hosted by the Camdeboo Honourary Rangers.[26]

(c) This outstanding showing paves the way for **a Merkel's third term**. Germans voters have indeed handed Merkel her third term in a wave of appreciation for her role in handling the economy during the Eurozone crisis[27]

This construction has not received any attention in the grammars of English or the literature on English possessives so far (to the best of my knowledge). Clearly, the genitive in this case does not occupy the central determiner position as is typically the case with determiner genitives, as this position is already taken by the preceding indefinite article. On the other hand, it doesn't take the typically prehead position of a classifying genitive, either. Rather, it follows the central determiner *a* and precedes the postdeterminer *third* in (9c) and the restrictive adjective *main* in (8). Interestingly, this 'quasi'-determiner genitive can also be found with definite possessive noun phrases where the definiteness marking usually would be redundant; see the following examples with a locative possessor (10a), temporal possessor (10b) and human proper noun possessor (10c and 10d), which all have identifying meaning.

(10) (a) By the 1980s, increased police surveillance and implementation of increased security measures (razor wire, guard dogs) combined with continuous efforts to clean it up led to the weakening of **the New York's graffiti subculture**.[28]

(b) She participated in **the 2016's edition of Aristoteles Workshop** and came back to lend a hand to this year's students.[29]

(c) The chances of **the Merkel's coalition** surviving are "very open," Nils Diederich from Berlin's Otto Suhr Institute for Political Science told dpa, a comment that raises the spectre of early elections.[30]

(d) Nationally, support for **the Merkel's bloc** fell to 28 percent in an Infratest Dimap poll for broadcaster ARD, …[31]

[25] www.viaquadronno.com/, retrieved 1 April 2018, emphasis mine.

[26] www.graaffreinetadvertiser.com/News/Article/General/Honourary-Rangers-charity-dinner, retrieved 1 April 2018, emphasis mine.

[27] https://eastwest.eu/…/merkel-s-party-wins-german-election-coalition-par…, retrieved 6 January 2018, emphasis mine.

[28] https://en.wikipedia.org/wiki/History_of_the_New_York_City_Subway, emphasis mine.

[29] www.aworkshop.org/category/uncategorized/, emphasis mine.

[30] www.dpa-international.com/topic/merkel-looming-departure-dawn-cdu-power-struggle-181030-99-590588, emphasis mine.

[31] www.bloomberg.com/news/articles/2018-09-23/merkel-s-coalition-closes-in-on-deal-to-halt-clash-dpa-says, emphasis mine.

There is evidence suggesting that this construction is not a recent innovation. Example (8) above dates from 1955; example (11a) below comes from T. E. Lawrence's (1888–1935) memoirs; and example (11b) is from a 2011 reproduction of a book published in 1848.

(11) (a) **Our today's fatigue corporal** was a literalist, so we obeyed literally.[32]
      (b) I don't mean the schoolboys, who lose a good deal of fun by **a January's restriction on sport**. (*The Sporting Review*, by John William Carlton, p. 210, emphasis mine)

More examples of genitives with temporal dependents alternating between a clear determiner-genitive structure versus the quasi-determiner genitive described above can be found in Pepys' seventeenth-century *Diary*, e.g. *last night's drinking* versus *my last night's drinking*, briefly discussed in Rosenbach (2007a: 182–3).[33]

Either the usual article–possessor complementarity does not hold in this specific case, with English having not fully grammaticalised it (yet?),[34] or the possessor must be considered a postdeterminer or restrictive adjective[35] rather than a central determiner in these examples.

What is important in the context of the present article is that this quasi-determiner genitive, like (proper) noun modifiers, has identifying function and is neutral to the expression of definiteness. As such it may serve as a structural genitive correlate to a proper noun modifier within an indefinite noun phrase, and we can envisage the following alternation (the attested uses from the examples above are marked in bold in (12)).

(12) (a) *a Christmas day tragedy* versus *a Christmas day's tragedy*
      (b) *a New York dining critics' favourite* versus ***a New York's dining critics' favorite***
      (c) ***a 1943 case*** versus *a 1943's case*
      (d) *a third Merkel term* versus ***a Merkel's third term***

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[32] T. E. Lawrence/Lawrence of Arabia. *The Mint* (Unabridged). eBook, 2015. Part I, §19, emphasis mine.

[33] In Rosenbach (2006) I argue that the co-occurrence of a determiner and genitive in examples like (10b) points to a descriptive genitive. However, given the identifying function and positional restrictions in the examples presented above, I now regard them as an unusual ('quasi') type of determiner genitive.

[34] Another exception to article–possessor complementarity in English is expressions like *this our friend*, which according to Rissanen (1999: 206) used to be possible in English until the seventeenth century, though to me this construction still seems to be alive in Modern and contemporary English, if with an archaic feel to it. It certainly was still there in the time of Henry James (1843–1916), to whom the following quote is attributed:

> The face of nature and civilization in this our country is to a certain point a very sufficient literary field. But it will yield its secrets only to a really grasping imagination … To write well and worthily of American things one need even more than elsewhere to be a master. (Letter to Charles Eliot Norton, 16 January 1871)

I even found a book with the title of *This Our Country* on Amazon, by Rawdon Hoare, published in 1935. Plank (1992) mentions similar constructions for German (*dieses unser Land* 'this our country'), attributed most famously to German ex-Chancellor Helmut Kohl, which he interprets as evidence against a categorical distinction between determiners and modifiers.

[35] Restrictive adjectives as in *a certain/particular person* restrict the reference of the noun phrase and have identifying function too (Quirk *et al.* 1985: §7.35).

However, this quasi-determiner construction is so marginal that we lack clear intuitions about it (at least I do). It is therefore somewhat difficult to determine for individual expressions whether there is potential alternation and what it would look like. *A Merkel's third term* should alternate with *a third Merkel term* and does so (see (13a)), but *a Merkel third term* (13b) is also attested (if rare), which indicates a further blurring of the boundaries between determiner genitives and (proper) noun modifiers.

(13) (a) Will **a third Merkel term** bring a softening of austerity?[36]

(b) If voters have decided to reward her with an absolute majority, **a Merkel third term** is likely to be marked by the same pragmatism as the first two.[37]

To conclude, the potential variation between proper noun modifiers and determiner genitives is typically – though not necessarily – restricted to the context of a definite noun phrase. Note that indefinite possessive noun phrases in general are extremely uncommon. According to Haspelmath (1999), about 95 per cent of possessive noun phrases are definite,[38] which reflects their function as referential anchors which usually is tied to the expression of definiteness in the noun phrase, though, as argued, referentially anchoring is also possible within specific indefinites (von Heusinger 2002).[39] Potential alternation is limited within this marked context between a marginal type of quasi-determiner genitive and proper noun modifiers (*a Christmas day's tragedy* vs *a Christmas day tragedy*). For the potential of common noun modifiers within indefinites (*a **barn** door*) to alternate with a corresponding determiner genitive (*a **barn's** door*) see section 3.4 below.

Note, finally, that the fact that referential anchoring is possible within an indefinite noun phrase indicates that the definite article is not necessary to induce the identifying function of a proper noun modifier, *pace* Schlücker (2013) (see section 3.1 above).

3.3 The type of semantic relation

In general, it is not at all clear what type of taxonomy we should adopt to compare the semantic relations that allow both determiner genitives and (proper) noun modifiers as there is no uniform terminology for describing either, let alone both. Rather than solving this problem and providing an exhaustive analysis of the semantic relations that can be expressed by both a determiner genitive and a (proper) noun modifier, in this

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[36] www.theguardian.com/world/german-elections-blog-2013/2013/sep/02/german-elections-2013, emphasis mine.

[37] www.telegraph.co.uk/news/worldnews/europe/germany/10327426/Angela-Merkel-gets-her-reward-for-being-guided-by-the-German-public.html, emphasis mine.

[38] Interestingly, there is evidence suggesting that proper noun modifiers with identifying function also seem to be far more likely to occur within a definite NP than an indefinite NP although – unlike determiner genitives – they are neutral in their expression of definiteness *(a/the Bush administration)*, cf. Rosenbach (2007a: 150). This indicates that the identifying/anchoring function of dependents is strongly (but not necessarily) correlated with the definiteness of the matrix NP.

[39] See also Rijkhoff (2009) for quantitative evidence showing that indefinite possessive noun phrases are extremely rare.

section I will address a few general issues that bear on the question of how equivalence is defined from a variationist perspective.

Breban (2018) argues that the range of semantic relations that can be expressed by both proper noun modifiers and determiners does not overlap completely, as proper noun modifiers can express relations that cannot be expressed by a corresponding determiner genitive (e.g. *the Abu Graibh prison*), and vice versa, and that this, in turn, challenges the assumption of equivalence between the two constructions. There certainly is evidence, from various languages, that proper noun modifiers can express a wider range of semantic relations than determiner genitives; see Breban (2018) for English, Koptjevskaja-Tamm (2013) for Swedish and Schlücker (2013, 2018) for German. Drawing on collaborative work with Julia Kolkmann and John Payne, Breban (2018) also argues that there are some core relations typically expressed by determiner genitives, such as kinship (*John's sister*) or ownership (*John's bike*), that do not occur with proper noun modifiers (actually I put forward the same claim in Rosenbach 2007a: 171 and was likewise wrong). Their claim is based on the observation that there is no single occurrence with either relation in a corpus study containing a dataset of 179 proper noun modifiers. Indeed, kin relations and legal ownership are very rarely used with (proper) noun modifiers, but they do exist, so this claim – based on negative evidence from a small dataset – can be discarded.[40] The examples in (14) all illustrate proper noun modifiers conveying an ownership relation.[41]

(14) (a) "Mr. Lindenbaum had two bags, a small one and a larger canvas duffel …" […] "**The Lindenbaum bag** and its contents, and these objects alone, of all the artefacts recovered from the crash"
(Kathy Reichs, *Fatal Voyage*, p. 350, emphasis mine)

   (b) Chuck nodded, looking past Alfred at **the Lambert house**.
(Jonathan Franzen, *The Corrections*, p. 286, emphasis mine)

   (c) I told Zamzow about the findings at **the Foote farm**, …
(Kathy Reichs, *Bare Bones*, p. 225, emphasis mine)

   (d) I found no reference to Prentice Dashwood, to **the Arthur property**, or to the officers of the H&F Investment Group.
(Kathy Reichs, *Fatal Voyage*, p. 261, emphasis mine)

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[40] Actually, Breban (2018: 386, fn. 8) herself cites one example of a proper noun modifier expressing ownership from Rosenbach (2007a), i.e. *the Weaver cars*, suggesting 'that the dispreference might be situated on the level of usage, where the speakers opt not to use the proper name construction for prototypical genitive relations'.

[41] Barbara Schlücker (p.c) points out that examples like *the Lambert house, the Foote farm* or *the Arthur property* can also be interpreted as conveying a commemorative rather than genuinely possessive relation. I agree, though I think that a possessive interpretation in terms of ownership is co-present, too, in these examples. Note, incidentally, that in Schlücker's German corpus most proper noun modifiers showing semantic overlap with a determiner genitive convey a possessive relation, defined by her as a HAVE relation, which, however, is broader in range than core possessive relations; see, e.g., *die EU-Delegation* ('the EU delegation'), which can be paraphrased as 'the EU has a delegation', which is not ownership in a legal sense.

Proper noun modifiers with kin relations are more difficult to find, but they do exist. I googled for the expression *the Obama daughter* and found the following occurrences on the Web (all retrieved 23 December 2017):

(15) (a) Is **The Obama Daughter**, Malia, Going To Go On Birth Control?[42]
     (b) See photos of **the Obama daughter's** trip to Morocco …[43]
     (c) Malia Obama was spotted in the Hamptons this past weekend
          celebrating her 19th birthday with friends at one of Montauk's hot spots. She's
          the Obama daughter that came into this world with fireworks, as Malia was
          born on the holiday, the Fourth of July …[44]
     (d) RTE News presenter Bryan Dobson later picked up on **the Obama daughter's**
          apparent boredom, tweeting: …[45]

Schlücker (2018: 294) shows that out of a collection of 115,000 German proper noun compounds there are 47 with the head lemma *Sohn* ('son'), 139 with the head lemma *Tochter* ('daughter'), 60 with the head lemma *Kind* ('child'), 17 with the head lemma *Vater* ('father') and 20 with the head lemma *Mutter* ('mother'). So while they are comparatively rare given the size of this huge database, especially the ones with head nouns denoting unique reference, like *father* or *mother*, there is apparently no categorical ban against them, at least not in German, which seems to pattern largely like English with respect to proper noun modifiers. In other words, the type of semantic relation expressed certainly plays an important role when choosing between a determiner genitive and a proper noun modifier and should therefore be studied as a factor. Prototypical, core possessive relations, however, do not *per se* define an area of non-equivalence (or categorical context).

This finding is in fact further supported by Breban *et al.* (2019), who tested the acceptability of constructions with determiner genitives and proper noun modifiers in an experimental study with authentic examples from the *British National Corpus* (BNC) in three conditions exhibiting different semantic relations.

1. Only the determiner genitive should be possible:
   Northern Ireland's experience *in Spain and Mexico in the last two World Cups taught them that heat can pose more problems than the opposition for British-based players.*
2. Only the proper noun modifier should be possible:
   President Bhutto of Pakistan was seeking to adopt a more conciliatory approach to the resolution of ***the Kashmir problem***.
3. Both determiner genitive and noun-modifier should be possible:
   Jesslyn Parkes, ***the England goalkeeper/England's goalkeeper***, *will be hoping to guide her new team, Middlesex, to a winning start.*

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[42] www.pinterest.com/pin/26317979045142285/, emphasis mine.
[43] www.aol.com/article/2016/07/05/…has…/21424654/, emphasis mine.
[44] www.inquisitr.com › Celebrities › Barack Obama, emphasis mine.
[45] www.belfasttelegraph.co.uk/…/obama-girls-malia-and-sash…, emphasis mine.

Subjects had to judge the acceptability of both a determiner genitive (e.g. *Northern Ireland's experience*) and a corresponding proper noun modifier (e.g. *the Northern Ireland experience*) on a scale of 1–10. The results largely confirm the authors' hypotheses about which semantic relations are favoured by which type of dependent (determiner genitive vs proper noun modifier): determiner genitives typically denote a possessive relation (defined here narrowly as ownership), while proper noun modifiers have a preference for a name relation (paraphrasable as, e.g., 'called', 'known as', as, e.g., in *the Sainsbury family*). However, their results also show that subjects hardly ever completely rejected a construction that should not have been possible according to the researchers' hypotheses. The expression *Kashmir's problem* (6.2) was even judged almost as good as *the Kashmir problem* (6.7), though according to the researchers the intended goal (or involvement) interpretation should only allow the latter (i.e. the proper noun modifier). Breban *et al.* construe most deviations from their hypotheses as cases where subjects have come up with a different interpretation. In the rating task subjects had to give paraphrases of any variant rated with 4 or higher, which gave the researchers a good idea what kind of interpretation subjects had in mind when rating a variant. So, for example, subjects giving *Kashmir's problem* a fair rating would often paraphrase it in a way indicative of an undergoer interpretation ('the problem that Kashmir has'), which is consistent with a determiner genitive, but is not the correct interpretation in this context. Note that subjects could also give proper noun modifier constructions a possessive interpretation, contrary to the researchers' hypotheses. Breban *et al.* interpret the space for interpretation and variability they encounter in their study as evidence that the two constructions are semantically underspecified and may be associated with various interpretations that only get finally specified/interpreted in context, in line with Barker (1995), Vikner & Jensen (2002) and Peters & Westerståhl (2013). The probabilistic nature of the mapping of semantic role to construction type observed by Breban *et al.* is precisely what leaves room for semantic overlap and variation. As such, the idea of semantic underspecification ties in well with a variationist approach.[46]

Note that Breban *et al.* (2019) only focus on some of the semantic relations determiner genitives and proper noun modifiers can express, i.e. those represented in their dataset. While all seven semantic relations tested in their study can be expressed by both a determiner genitive or proper noun modifier (if not equally likely), further research needs to specify further which semantic relations are categorically banned from either construction. Also, some of the semantic roles used in Breban *et al.*'s study still need to be fine-tuned. For example, the location role can express a variety of relations, some alternating with a determiner genitive, as in (16a), others not, as in (16b).

[46] This idea has also found expression in the framework of Construction Grammar under the notion of 'allostructions', which are underspecified realizations of constructions (Cappelle 2006).

(16) (a) …, but she's also interested in **Quebec history**.
(Kathy Reichs, *Death du Jour*, p. 72, emphasis mine)

(b) There must be paperwork on it somewhere. At **the Kensington house**,
I should guess? (Elizabeth George, *Playing for the Ashes*, p. 162,
emphasis mine)

An exclusively locative meaning, paraphrasable with 'in' (16b) or 'from' cannot be expressed by a corresponding determiner genitive (**Kensington's house*), while a location relation allowing a HAVE interpretation as in (16a) allows alternation (*Quebec history* vs *Quebec's history*). Note that in both (16a) and (16b) the proper noun modifier has identifying function and can be considered to be a referential anchor; however, only the former is compatible with a possessive interpretation. This shows that being a referential anchor is not a sufficient condition for potential alternation with a determiner genitive; the semantic relation expressed must be a possessive one (in a broad sense of the term as in figure 2 above).

3.4 Beyond proper noun modifiers: identifying common noun modifiers

The referentiality of the dependent is an important precondition for the equivalence of a noun modifier and a determiner genitive. Only if the dependent is referential, referring to a specific person or object, can it have the identifying function typical of referentially anchoring possessives. As argued above, proper noun dependents may retain their inherent referentiality as modifiers. However, proper noun modifiers do not represent a special case but simply the clearest case of an identifying noun modifier as they are high in saliency and topicality and thus the best candidate to alternate with a determiner genitive. The examples in (17) and (18) below all illustrate common noun modifiers with identifying meaning.[47]

(17) (a) She is **the convent archivist**, you know. (Kathy Reichs, *Death du Jour*,
p. 6, emphasis mine)

(b) Robin's father, Nick, was Fazio's middle child and the only Passafaro
of his generation who never got with the Teamster program. Nick was
the family brain and a committed Socialist; … (Jonathan Franzen, *The
Corrections*, p. 394, emphasis mine)

(c) The first of **the cinema occupiers** emerged, to the relief and consternation
of the tense crowd, … (Timothy Pears, *In a Land of Plenty*, p. 643,
emphasis mine)

(18) (a) To one side of this building stood a barn, and music issued from inside:
Frank Sinatra by the sound of it, crooning a pop tune in Italian. St James
headed in this direction. **The barn door** hung partially open, and he
could see that **its** interior was whitewashed and lit by rows of

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[47] See also Rosenbach (2009: §4).

fluorescent tubes that dangled from the ceiling. (Elizabeth George, *A Place of Hiding*, p. 311, emphasis mine)

(b) Chip's doorman, Zoroaster, hurried out to help with the luggage and installed the Lamberts in the building's balky elevator. […] "Dad and I were at the housewarming in June," Enid said. "It was spectacular. They'd had it catered, and they had *pyramids* of shrimp. It was solid shrimp, in pyramids. I've never seen anything like it." "Pyramids of shrimp," Chip said. **The elevator door** had finally closed. (Jonathan Franzen, *The Corrections*, p. 24, emphasis mine)

(c) Fondly, she rubbed her cheek against his fur before replacing him in the cage. The piece of toast was nearly his size, but he managed to drag it industriously towards his nest. Elena smiled, tapped her fingers on **the cage top**, grabbed the rest of the toast, and left the room. (Elizabeth George, *For the Sake of Elena*, p. 14, emphasis mine)

In the examples in (17) the common noun modifiers are topical in context. In (17a) the whole context is about the convent, in (17b) the passage is explicitly about the family and in (17c) the larger context in which this example is embedded is situated within the cinema. In the examples in (18) the noun modifiers (*barn*, *elevator*, *cage*) are all topical in context, too. In addition, they also receive their specificity/referentiality from the fact that they denote a part/whole relation. In a part/whole relation the modifier so to speak inherits the referentiality of the noun phrase. If there is a specific door, then also the barn (18a) or the elevator (18b) it belongs to must be specific; likewise the presence of a specific instance of a top implies the presence of a specific cage (18c). Further evidence for the referentiality of these noun modifiers comes from the fact that they can be anaphorically referred to, as is explicitly done in (18a), where *barn* gets referred to later by *its*.

Schlücker (2013: §4.5) argues that *barn* in (18a) above receives its alleged referentiality by implicit or explicit reference from the context but in fact is not referential, although she does accept anaphoric accessibility as a test for the referentiality of proper noun modifiers. Schlücker treats proper and common noun modifiers differently for theoretical reasons: not being full noun phrases, noun modifiers should be anaphoric islands (Postal 1969) and thus should not be accessible for anaphor, i.e. they shouldn't be referential. Proper noun modifiers are an exception because 'they evade this restriction as they are inherently definite, and, for that reason, do not need an extra determiner' (Schlücker 2013: 470).[48] It is actually impossible to decide empirically if the anaphoric reference to *barn* in (18a) is possible because *barn* is inherently referential or if the referentiality

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[48] This is not an unproblematic assumption. Actually, there are some proper nouns that require a definite article (e.g. *the FBI*, *the Mairs*) and in these cases the article gets omitted in modifier position (**the the FBI director*, **the Mairs dinner party*), suggesting that they are not maximal NPs in that position.

is pragmatically conditioned. Does it even matter for the question of equivalence (in the variationist sense)? Not really. Note that the existence of an entity can be evoked by 'bridging inferences' (Clark 1977; Clark & Haviland 1977), which also go under the names of 'inferrables' (Prince 1981) and 'associative anaphor' (Hawkins 1978) in the literature. Two examples for bridging inferences are given in (19) (cited from Birner & Ward 1994: 94):

(19) (a)   I had dinner at that new Italian restaurant last night. It was a nice place, but **the appetizer** was far too spicy for my tastes.
     (b)   I hated that book. **The author** is an idiot.

Bridging inferences typically work via common-sense knowledge, e.g. the knowledge that dinners include an appetizer (19a) and that books have an author (19b), or by other reference to recently activated entities. The latter account for the examples in (17) above, where the referents of the proper noun modifiers have all been activated in context. According to Clark (1977), bridging inferences help the listener to identify a referent as part of the problem-solving process in communication. Unique identifiability, i.e. the cognitive status Gundel *et al.* (1993) assume for definite noun phrases of the type {*the* N} in the *Givenness Hierarchy*, can indeed be achieved by such bridging inferences (Gundel *et al.* 2001). So, what distinguishes determiner genitives from identifying noun modifiers is that the former are noun phrases and as such are referential, while a possible referential interpretation of the latter needs to be inferred from the context and thus is context dependent. Part/whole relations in specific noun phrases as in (18) all allow the inference of a specific noun modifier, as it is part of our world knowledge that the existence of a specific barn door/ elevator door/cage top entails the existence of a specific barn/elevator/top.[49] There is therefore no reason to assume that *the barn door* shouldn't alternate with *the barn's door* when barn allows a referential interpretation, even if it's 'just' pragmatically inferred. In fact, the examples of non-animate common noun modifiers in (17) and (18) above can all alternate easily with a corresponding determiner genitive: *the convent archivist* vs *the convent's archivist*, *the family brain* vs *the family's brain*, *the cinema occupiers* vs *the cinema's occupiers*, *the barn door* vs *the barn's door*, *the elevator door* vs *the elevator's door*, *the cage top* vs *the cage's top*. Example (20), discussed in detail in Rosenbach (2007a: 177–9), illustrates this variation in discourse:

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[49] Usually the argument is that the existence of the whole (in this case *barn*) makes it possible to infer the existence of the part (*door*), but our world knowledge certainly also allows the inference that the existence of a specific barn door entails the existence of a specific barn.

(20) Cut an ordinary photograph snipping a leg off the chair pictured. Then **the chair leg** is no longer visible. It is no longer part of the photographic image.
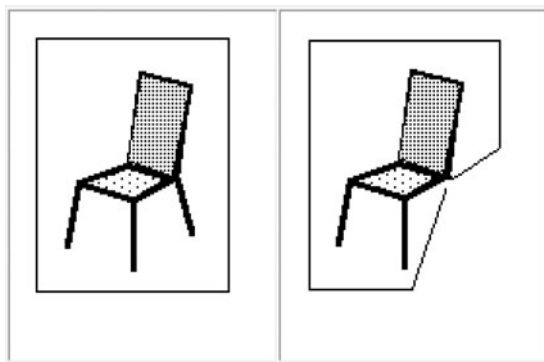
Now snip off a comparably sized piece from a diffraction image hologram containing the same chair information. When this mutilated hologram is illuminated by the reference beam the whole real space image appears – albeit dimmer and fuzzier. **The chair's leg** is preserved. In fact it can't be removed from the hologram by cutting!

That is because any part of the hologram relates to the whole of the real space image.[50]

As argued in Rosenbach (2007a), the presence of the possessive *'s* individuates and foregrounds the referent of the dependent, so the two constructions differ in their discourse-pragmatic functions.[51] Referentiality, usually treated as a binary feature, appears to be a graded semantic feature and different syntactic positions go with different degrees of referentiality (see Rosenbach 2006: 106–7 and references cited therein). Accordingly, a noun modifier can be referential (if by inference), but in this syntactic position is less so than a corresponding determiner genitive.[52] What matters for the question of equivalence, however, is that (proper) noun modifiers can be sufficiently referential to exert identifying function rather than the degree of their referentiality.

Schlücker (2013) rightly points out that in expressions like *barn door* the noun modifier has considerable classifying force and analyses it as an instance of the type *barn door* rather than the door of a specific barn. Common noun modifiers, like proper noun modifiers, often waver between an identifying and a classifying interpretation.[53] So

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[50] www.physics.ucla.edu/~chester/CES/october/, emphasis mine.

[51] See also Koptjevskaja-Tamm (2013) for showing that proper noun modifiers and determiner genitives alternate for the purpose of discourse coherence in Swedish.

[52] This actually holds for both common noun and proper noun modifiers.

[53] Biber & Gray (2011: 235, fn. 2) note that it is often difficult to classify a sequence of noun + noun clearly as either having identifying or classifying function when dealing with corpus data (rather than clear-cut examples), which

indeed a specific barn door is always (and necessarily) a particular instance of the type *barn door*, and *the Major plan* could potentially also refer to a plan typical of the former British prime minister John Major if we can conceptualise it as a type (Rosenbach 2007a: 149). What is crucial for the present argumentation is that the construction as such is compatible with *both* an identifying and a classifying interpretation in this context. For common noun modifiers to be equivalent to determiner genitives it is sufficient that the identifying meaning is available, no matter what other meaning(s) are implicitly present as well. There only needs to be a sufficient semantic *overlap* to allow alternation, not complete identity in the descriptive meaning(s) that can be expressed by either construction (see section 2 above).

Further research is needed to spell out the precise contexts where common noun modifiers can have identifying function and where such a function is banned. For example, a part/whole relation does not seem to be a sufficient criterion for the dependent to have identifying function, as e.g. in *the barn door*, *the elevator door* or *the chair leg*. An expression like *the building door, although expressing a part/whole relation, seems to be ruled out and it is not quite clear to me yet why. Another puzzle is the observation that identifying human common noun modifiers barely occur; diachronically human noun modifiers only surface rather late in Rosenbach's (2007a) diachronic corpus (see also Breban & De Smet 2019) and constitute only about 1 per cent of all noun modifiers in its most recent time interval (1950–99), the majority of which are proper nouns.

Yet another question is whether common noun modifiers can also have identifying function within an indefinite noun phrase. Under a specific interpretation of *a barn door* we can assume that *barn*, as in *the barn door*, may get a referential interpretation. The question, however, is whether it can alternate with a corresponding determiner genitive (*a barn's door*). This is a tricky issue and depends on the theoretical stance taken on the definiteness of indefinite determiner genitives. Under a morphosyntactic definition of definiteness, defined configurationally (C. Lyons 1986, 1999), determiner genitives occupy determiner position and render the noun phrase invariably definite, which is the standard view expressed in the grammars of English (cf. Huddleston 1984: 253; Quirk *et al.* 1985: 326; Biber *et al.* 1999: 271; Payne & Huddleston 2002: 467–8). Under this view, alternation is ruled out as *a barn's door* translates into *the barn door* and not *a barn door*. However, the definiteness status of possessive noun phrases with indefinite determiner genitives (*a barn's door*) is highly disputed. They have been analysed as invariably definite (Woisetschlaeger 1983; C. Lyons 1999, and see the references above), as semantically indefinite (Löbner 1985, 1998, 2011; Barker 2011), as weakly definite (Rosenbach 2006: 107–9), as being compatible with

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supports the idea that indeed many tokens are ambiguous in their interpretation. The blurry borderline between determination and classification has been pointed out by a number of scholars, e.g. Seiler (1978), Rosenbach (2006, 2007a), Rijkhoff (2009), Schlücker (2013) or Breban (2018).

definiteness (Taylor 1996: §7) or as functionally indefinite (Willemse *et al.* 2009).[54] If we allow for the possibility that indefinite determiner genitives are (somehow) indefinite, *a barn door* can, in principle, alternate with *a barn's door*, under a specific reading of the matrix noun phrase.[55]

3.5 Lexicalisations

Constructions with determiner genitives can undergo conventionalisation and become part of the lexicon just like any other syntactic phrase. Some typical examples of lexicalised genitive constructions are given in (21) below. They can either derive historically from productive determiner genitive constructions or are conventionalised classifying genitives (see Taylor 1996: 311 or Rosenbach 2007a: 180–1), often getting further reduced by omitting the *'s*. As fixed expressions they come to denote concepts. The examples in (22) represent a special case, where the proper name dependent is used neither to identify nor to classify the head, but helps to denote a concept by connection to a certain individual. These genitives have become known as 'onomastic genitives' in the literature (see Taylor 1996: 295–7; Koptjevskaja-Tamm & Rosenbach 2005; Rosenbach 2007a: 176–7). The particular relation between a proper noun modifier and the head noun has been called 'commemorative' (Koptjevskaja-Tamm 2009, 2013; Schlücker 2013).

(21) (a) [a/the driver]'s licence > a/the [driver's licence] > a/the [driver licence]
     (b) [a/the butcher]'s knife > a/the [butcher's knife] > a/the [butcher knife]

(22) (a) [St Valentine]'s Day > [St Valentine's Day] > [St Valentine Day], [Valentine Day]
     (b) [Planck]'s constant > the [Planck's constant] > the [Planck constant]

Naturally, there is variation between a genitive and a noun modifier for such expressions as there is typically a period during lexicalisation where both the older and the newer expression co-exist, a situation known as 'layering' within the grammaticalisation framework (Hopper & Traugott 1993). Meaning equivalence is generally given because it is the same concept/meaning that undergoes lexicalisation. Yet the issue of equivalence is a tricky one with such lexicalising expressions, as the nominal dependents lose their referentiality in the process and may become semantically specialised. For example,

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[54] Willemse (2007) and Keizer (2007: 334–6) analyse indefinite determiner genitives as weak(er) reference points (i.e. weak referential anchors). While Willemse and Keizer both remain somehow agnostic about the precise definiteness status of possessive noun phrases with indefinite determiner genitives, their analyses suggest that they are functionally indefinite when they introduce new entities into discourse.

[55] It is not clear though how to capture this theoretically. According to von Heusinger's (2002) account, the anchor of a specific indefinite must be familiar to both the speaker and the hearer. This familiarity is given as *barn* can be contextually inferred in *a barn door* (see the argument above), but it isn't given in *a barn's door*, where the indefinite determiner genitive clearly indicates non-familiarity (at least on the side of the addressee), though this distinction sounds counterintuitive given the same part/whole relation. Future research is needed to test whether alternation in usage is possible in such contexts.

under a determiner reading *a butcher's knife* designates the knife of a specific butcher, which could be any kind of knife, while under a classifying reading the expression designates a type of knife as typically used by butchers, with a non-specific reading of *butcher*. Such lexicalising expressions can be ambiguous in interpretation in contexts that allow a specific reading of the matrix noun phrase, as in the case of *a/the barn door* discussed in section 3.4 above. The fine and subtle linguistic distinction between the particular instance of a knife of a specific butcher (determiner reading) and the particular instance of the type *butcher('s) knife* (classifying reading) is often irrelevant in the actual context, especially in contexts where there is a specific butcher, as exemplified in (23).[56]

(23) Naturally, the "uptown" butchers are kept pretty busy. Although there were a few more fat pigs than usual lying hog-tied awaiting **the butcher's knife** on the seventeenth, Chencuo's day of observance, they weren't lined up.[57]

A similar type of layering of a determiner and a classifying reading holds for onomastic genitives; see the following examples from Rosenbach (2007a: 177):

(24) (a) Wave Structure of Matter (WSM) explains **The Famous Scientist Max Planck's Constant** and Quantum energy states of Light and …[58]
       (b) This constant came to be known as **Planck's constant** …[59]
       (c) For example, the simple harmonic oscillator has energy levels with a constant spacing proportional to a fundamental constant known as **the Planck's constant** …[60]

In (24a) we see a determiner genitive, referring to the scientist Max Planck ([*the famous scientist Max Planck*]*'s constant*), while (24b) is structurally ambiguous between a determiner and a lexicalised (onomastic) reading, though the context is suggestive of the latter. Example (24c) shows an unambiguous onomastic genitive, where the whole expression names this constant. In Wikipedia this constant is listed as *Planck Constant*, though it explicitly acknowledges the alternative expression *Planck's constant*, which indicates their meaning equivalence; see (25):

(25) The **Planck constant** (denoted h, also called **Planck's constant**) is a physical constant that is the quantum of action, central in quantum mechanics.[61]

In onomastic genitives both the determiner and onomastic/commemorative reading may be available (though not necessarily so for all expressions and in all contexts).[62] Note

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[56] See also Rosenbach (2006: 103–5) for further discussion and some contextualised examples. There I argue that this type of ambiguity is conceptual rather than a structural.

[57] LiAng. *The Butcher's Wife and Other Stories*, ed. and trans. Howard Goldblatt. Boston: Cheng & Tsui Company, 1995, pp. 73–4, emphasis mine.

[58] www.netactics.co.uk/max_planck_scientist.html, emphasis mine.

[59] www.colorado.edu/physics/2000/quantumzone/photoelectric2.html, emphasis mine.

[60] www.chem.cornell.edu/gse1/multidqc.html, emphasis mine.

[61] https://en.wikipedia.org/wiki/Planck_constant.

[62] For example, *Parkinson's disease* generally only allows the onomastic reading.

again that in usage the difference in interpretation, which for linguists goes together with different structures, is not really important, as under both readings *Planck's constant* is a constant invented by Planck, no matter whether we more strongly individuate the inventor (determiner reading) or the name deriving from him (onomastic reading).

All this demonstrates that the question of meaning equivalence is a difficult one for lexicalising expressions. Strictly speaking, meaning equivalence should only be given between classifying (or onomastic) genitives and a corresponding noun modifier, as they are both non-referential and express a name relation, while the determiner genitive is referential and conveys a possessive relation. However, as also argued in section 3.4, the borderline between determination and classification (i.e. referential and non-referential anchoring) can be very fuzzy to the extent that in some contexts it is irrelevant in actual communication. My position is to include lexicalising expressions in a variation study of determiner genitives and (proper) noun modifiers if an identifying meaning is (still) present, even though usually the classifying interpretation will prevail.

Lexicalising expressions form a special source of potential variation between genitives and (proper) noun modifiers and actually one that can be found already in Early Modern English: *St Valentine's Day* vs *Valentine's Day* vs *Valentine day*,[63] or *Barnardes Castle* vs *Barnard Castle*, *Gascoyne's-tower* vs *Gascoyne-tower*.[64] Breban & De Smet (2019) suggest that the emergence of proper noun modifiers has been boosted by a general proper noun modifier construction subsuming various constructions with proper noun modifiers that surface in English at different points in time. The presence of (proper) noun modifiers resulting from lexicalisations (as in *Valentine Day*, *Barnard Castle*, *Gascoyne-tower*) may have helped to instantiate such a general (proper) noun modifier construction and may have paved the way for the emergence of human proper noun modifiers at a time, when, according to Breban & De Smet's study, proper noun modifiers in general were still very rare and basically restricted to time/religious feast (*Midsomer term*) and place (*London warde*).

3.6 Discussion: assessing equivalence between determiner genitives and (proper) noun modifiers

Breban (2018) makes the useful distinction between

(a) contexts which never allow alternation (e.g. *the Abu Graibh prison*),
(b) contexts which in principle allow alternation but with different interpretations of the semantic relation (cf. *Kashmir's problem* vs *the Kashmir problem*), and
(c) contexts which allow alternation and preserve the semantic relation of the possessor and the head (e.g. *the Mairs' dinner party* vs *the Mair dinner party*).

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[63] See Rosenbach (2007a: 181) for a timeline for the evolution of this expression.
[64] Cited in Rosenbach (2002: 206).

Equivalence in the variationist sense holds only for (c), which corresponds to the choice contexts in figure 1 above; the challenge for a variation study is to identify (a) and (b) and then exclude these contexts from the analysis.

Breban (2018) put forward two main objections against the assumption that (proper) noun modifiers and determiner genitives are equivalent:

(i) Identifying proper noun modifiers are epithets and not referential anchors, so the way they identify differs from determiner genitives (see sections 3.1 and 3.3).

(ii) There is 'incomplete functional equivalence' (2018: 385) between determiner genitives and proper noun modifiers as they don't exactly occur in the same environments and the same relations (see sections 3.2 and 3.4).

Schlücker (2018: 295) proceeds from the same notion of equivalence, concluding that 'there is no true meaning equivalence in general between both constructions', though she acknowledges that 'particular kinds of proper name compounds and genitives … exhibit a substantial amount of semantic overlap which makes them interchangeable under certain conditions' (2018: 295).

Breban's and Schlücker's interest is to give a comprehensive account of proper noun modifiers. They regard functional equivalence of *all* proper noun modifiers with determiner genitives as a prerequisite for the functional equivalence on the constructional level. Given this particular notion of equivalence, both Breban and Schlücker are of course right: there is indeed no complete functional overlap between constructions with proper noun modifiers and determiner genitives; on a constructional level they only partly overlap. Variation studies, however, naturally focus on those contexts where there is equivalence in the sense of semantic overlap, i.e. choice contexts. Categorical contexts that do not allow any choice naturally lie outside the scope of the variationist approach and their exclusion from the analysis is a heuristic necessity rather than an oversight.

I have argued that identifying (proper) noun modifiers are referential anchors (if unusual ones), in both definite and indefinite noun phrases. Note that from a variationist perspective it is sufficient that the variants are 'two ways of saying the same thing' rather than saying them in precisely the same way. Under this view it actually doesn't really matter whether we analyse these (proper) noun modifiers as referential anchors or as epithets as long as we acknowledge their function of restricting (or defining) the reference of the noun phrase and their ability to express a possessive relation, if by different routes (see section 3.1). The cognitive mechanisms or pragmatic differences that go with the way identification (reference restriction) works in these constructions are irrelevant on the level of descriptive synonymy.

While (proper) noun modifiers may have identifying meaning, they often also simultaneously express other meanings, in particular classifying meaning (e.g. *the barn door*). I have argued that in order to alternate, expressions don't need to be identical in *all* their potential descriptive meaning(s); there just needs to be sufficient semantic

overlap, even if it's only partial. In other words, it is sufficient that an identifying meaning is present, no matter what other meaning(s) is/are co-present as well.

Note finally that what ultimately matters from a variationist perspective is that expressions are *perceived as being sufficiently similar* by speakers to alternate. This means that the equivalence between (proper) noun modifiers and determiner genitives and their ability to alternate ultimately rests on the level of usage, as repeatedly argued throughout this article. Of course language usage is not independent from the language system, but it allows for deviations and for not so perfect productions and interpretation by not so perfect speakers and hearers, especially in the 'grey' areas of grammar. We should also consider the possibility that we, as linguists, postulate fine distinctions that speakers may very well be oblivious to in actual use. We seem to proceed from an ideal speaker/hearer in our theoretical analyses, even within functional approaches focusing on language usage, but these fully competent speakers/hearers hardly exist and usage can be 'messy' (at least from a theoretical linguist's point of view).[65] This is nicely demonstrated by Breban *et al.*'s (2019) experimental study, where subjects repeatedly assigned interpretations to expressions that the researchers thought were ruled out for that particular construction. In addition, the ideal state formulated by linguistic theory often gets blurred by ambiguities or vagueness in meaning that indeed allow various interpretations in context, often with little if any practical difference in meaning for the language use as argued at various points in this article. Lexicalising expressions that vacillate between a determiner genitive, classifying or onomastic genitive and (proper) noun modifiers (see section 3.5 above) further contribute to the blurring of the distinction between the expression of determination (reference restriction) and classification (denotation/type restriction) or the designation of a name relation, as does the quasi-determiner genitive discussed in this article (*a Merkel's third term*).[66]

4 Conclusions and outlook

4.1 On equivalence

In this article I argued that determiner genitives and (proper) noun modifiers are equivalent in meaning (or rather, equivalent enough in meaning) to alternate in certain contexts. It has been shown that the term 'equivalence' is used in different ways within linguistics, actually reflecting the dividing line between theoretical linguistics giving

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[65] See also Croft (2000), who points out that the different grasp of linguistic conventions by speakers (2000: 115) or ambiguities and indeterminacy in constructions (2000: 118) is a potential source for linguistic innovation.

[66] I don't want to suggest that it's only linguistically insecure speakers who use such 'weak' spots in the system to create unusual constructions or interpretations. It's also highly eloquent speakers who exploit the linguistic space offered by such 'grey' areas of grammar. For example, when analysing genitive variation in a diachronic corpus (Rosenbach & Vezzosi 2000), we observed that it is particularly authors like Chaucer and Shakespeare who use the determiner genitive with inanimate nouns, thus spearheading an innovative change that only gained momentum later in English, during the Late Modern English period.

Table 1. *Conceptions of equivalence*

Notions of equivalence	
Theoretical linguistics	Variationist framework
equivalence on the constructional level (comprising all determiner genitives and all (proper) noun modifiers)	equivalence in choice contexts (comprising only the subset of actually alternating expressions)
equivalence on all levels of meaning (e.g. semantic, pragmatic, textual)	equivalence on the level of descriptive meaning ('descriptive synonymy')
equivalence on system level (i.e. what linguists define as being equivalent; an idealization)	equivalence on usage level (i.e. what speakers/ hearers consider to be alternative ways of 'saying the same thing')

comprehensive analyses of constructions on the system level and taking into account all levels of meaning, and the variationist framework studying alternative ways of 'saying the same thing' in usage and thus proceeding from a weaker version of equivalence in terms of 'rough semantic equivalence' or descriptive synonymy; for an overview and summary see table 1.

These two perspectives are of course not mutually exclusive. Although potential alternation and thus equivalence ultimately lies on the level of usage, where fine theoretical details may be ignored or overridden as argued throughout this article, theoretical analyses are indispensable for the variationist analysis to identify the classes of alternating vs non-alternating contexts and thus define and operationalise the scope of the alternation.

4.2 On variation and gradience

As initially argued, the variationist notion of equivalence is the one conceptually underlying my gradience approach (Rosenbach 2006, 2007a, 2007b, 2010). There are, however, important differences in perspective and procedure between studying gradience and studying variation: for an argument of linguistic gradience we focus precisely on the 'grey' areas of grammar and the odd and ambiguous examples, where the distinctions between constructions get blurred, while a variationist study needs to 'squeeze' tokens into categories and quantify them. The latter has practical implications. For example, (proper) noun modifiers differ from determiner genitives and *of*-genitives in that they are not full noun phrases and their referentiality needs to be inferred from the context. It is therefore difficult to define the precise classes of (non-)alternating expressions in a straightforward way when analysing (and quantifying) corpus data as inferences can be difficult to operationalise. Note further that while the context of indefinite (possessive) noun phrases is an interesting one for a gradience approach and in principle constitutes a choice context, in a corpus study we would probably exclude it for heuristic reasons as the area of potential alternation is so
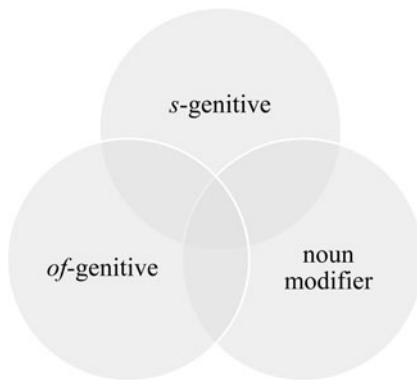
Figure 3. The web of English genitive variation

small and thus not well quantifiable and may involve structurally deviant variants as the quasi-determiner genitive, apart from the fact that we are dealing here with a theoretical wasp's nest which makes it difficult to select potentially alternating variants in the first place.

Note, finally, that a quantitative variationist study has to follow the 'principle of accountability' (Labov 1972), a core principle of variationist work, according to which we need to consider *all possible* occurrences of a linguistic variable. As such, the researcher needs to find out all contexts where a variant could have been used but wasn't. This includes the identification of *all* the variable ways of 'saying the same thing' and the contexts in which they can occur. As noted in figure 2 above, there are actually three genitive variants (*the FBI's director* vs *the FBI director* vs *the director of the FBI*). Rather than three congruent constructions, we are dealing with three partially overlapping constructions, which Szmrecsanyi *et al.* (2016: 25) aptly call 'a web of variation'. Figure 3 visualises how the three constructions are intertwined on a general level. A variationist analysis of English genitive variation should therefore, ideally, focus on the area of choice context where all three variants overlap semantically.[67]

As pointed out by Szmrecsanyi *et al.* (2016: 25), a serious complication of widening genitive variation beyond the usual binary alternation of determiner genitives and *of*-genitives is the fact that there are potentially other variants that can intersect with *s*-genitives, *of*-genitives and noun modifiers (cf. also Feist 2012: 292–3), such as other prepositional phrases For example, should the alternation of *the FBI's director* vs *the FBI director* vs *the director of the FBI* also include *the director from the FBI*? And what about adjectival variants, namely the alternation between *Halliday's framework*, *the framework of Halliday*, *the Halliday framework* and *the Hallidayan framework*? Opening up genitive variation to make it correspond more closely to the principle of accountability is certainly a desirable step, but it will increase the web of variation considerably, leaving us with further partly overlapping variants, which creates a level of complexity for the quantitative analysis that I'm not sure we can handle (yet) methodologically.

So, while in principle (proper) noun modifiers can alternate with determiner genitives and form a variant in genitive variation, it is methodologically challenging to include them in an actual variation study.[68]

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[67] Szmrecsanyi *et al.* (2016) actually study all four overlapping alternations in figure 3.

[68] The challenges to handle such a web of variation in the statistical analysis are discussed in Szmrecsanyi *et al.* (2016).

4.3   Notes on method

To further ascertain the precise classes of (non-)alternating expressions, both experimental studies and translations seem to me very promising methodological tools. In experimental studies we can test hypotheses and see in which contexts the two constructions can be used interchangeably or not, where they express distinct meanings, and where they are ambiguous in interpretation, especially for contexts only rarely attested in corpora, such as indefinite possessive noun phrases (see sections 3.2 and 3.4 above). Experiments tap the intuition of more or less verbally skilled individuals and may bring to light ambiguous or vague contexts (see also Breban *et al.* 2019).

In the case of translations, we are actually dealing with linguistically highly skilled speakers who have a high competence in assessing equivalence, because this is part of their job as translators. So, if a determiner genitive in one language gets translated as a (proper) noun modifier in another language (or vice versa), this constitutes evidence for their equivalence. In this article I've also used translations as evidence for assessing the referentiality of (proper) noun modifiers. Parallel corpora are now available that contain both original texts and their translations. They have become an excellent tool for contrastive studies (see, e.g., Aijmer & Altenberg 2013). Ström Herold & Levin (2019) is a first demonstration of a quantitative contrastive study of proper noun modifiers, genitives and prepositional possessives in a translation corpus covering English, German and Swedish.

Eventually, the synchronic nature of noun modifiers and their overlap with genitives can only be fully understood when taking a diachronic perspective. Future research ought to look in more detail at how the evolution of a general (proper) noun modifier construction described by Breban & De Smet (2019) intersects with the development of genitive constructions, and how it fits into the wider context of the English noun phrase, in particular how it relates to the observed increasing complexity within the prenominal string of the noun phrase (e.g. Biber *et al.* 2009; Biber & Gray 2002, 2011, 2016; Günther 2019).

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