On the fuzziness of nominal determination

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Abstract:

Proceeding from a semantic-pragmatic notion of nominal determination, this article argues that there is no strict line of division between nominal determination, on the one hand, and classification and qualification, on the other. Our analysis will focus on nominal adnominals, as in *s*-genitive constructions (***John's*** *book*) and noun+noun sequences (***cat*** *food*), and we will be looking at two languages, English and Swedish. What looks like two clearly distinguishable construction types in the two languages turns out to be a family of different constructions with partly overlapping properties. In particular, we will discuss various 'non-prototypical' *s*-genitive constructions and noun+noun sequences, which have so far received little attention in the literature and which all exhibit, in various ways, 'mixed' properties, i.e. properties typical of both construction types.

*On the fuzziness of nominal determination**

0 Introduction

In this article we argue that there is no strict line of division between nominal determination, on the one hand, and classification and qualification, on the other, where all the three functions are understood as semantic-pragmatic notions. Our analysis will focus on two languages, English and Swedish, and will depart from determiner *s*-genitive constructions (***John's*** *house*) and noun+noun (N+N) sequences (***cat*** *food*). We will show that what looks like two clearly distinguishable construction types in these two languages turns out to be a family of different constructions with partly overlapping properties and are, thus, examples of constructional gradience. Our analysis will therefore focus on 'non-prototypical' *s*-genitive constructions and N+N sequences, which exhibit various mixed properties.

In the following we first critically examine the notion of 'determination' or 'determiner' (Section 1). In Section 2 we introduce three constructions that are prototypically associated with the functions of determination (determiner *s*-genitive constructions), classification (N+N sequences) and qualification (combinations of nouns with adjectival adnominals). Section 3 characterizes what is meant by 'gradience' and what counts as evidence for it. Section 4 provides the main empirical part of the article and contains analysis and discussion of the various non-prototypical variants of the constructions introduced in Section 2. Section 5 summarizes our findings and addresses the general issue of the relevance of gradience and 'fuzzy' data for linguistic theory.

1 The notions ‘determination’ and ‘determiner’

Like most other linguistic terms, ‘determination’ and ‘determiner’ have been used in different ways.

First of all, there is a very broad notion of ‘determination’ and ‘determiners’; see for example the following quotation from Bussmann (1996): “Determination – the syntactic-semantic relation between two linguistic elements whereby one element modifies the other, as does *scientific* in *scientific book* (= complementation modification)”. This broad notion of determination covers more or less the whole spectrum of the semantic functions conveyed by adnominal expressions and is synonymous to the broad sense of ‘modification’.

On the other hand, there is a very narrow use of the term ‘determiner’ in the generativist quarters where it is strongly associated with ‘determiner phrases’ and the DP-hypothesis, according to which determiners (as functional elements) are the head of what traditionally has been called a ‘noun phrase’ (NP). This usage has, in turn, grown up from the tradition within structural approaches to assume a structural position or slot of ‘determiner’ (cf. e.g. Lyons 1999). Most linguists use, however, relatively narrow notions of determination and determiners, akin to the one behind the DP-hypothesis, without necessarily subscribing to the hypothesis itself. Here are two representative definitions for English:

> The determiner is a key function in the structure of the NP. When a determiner is added to a nominal, a construction at the NP level is formed. In the case of

nominals headed by singular count nouns, addition of a determiner is generally obligatory:

i. *[New car] was stolen. [bare count singular nominal]

ii. [The / One / Ally's new car] was stolen. [determiner + nominal]

…Each determiner has its own specialised meaning. However, one general function of all determiners is to add a specification of definiteness (*the* or *Ally's*) or indefiniteness (*one*). (Payne and Huddleston 2002: 354-355)

Determiners are function words which are used to specify the reference of a noun (Biber *et al.* 1999: 258)

Clearly, even the (narrow) definitions of the term 'determination' and 'determiner' do not always agree. First, there is a great deal of confusion about the status of determiners, i.e. whether 'determiner' is a function (cf. e.g. Payne and Huddleston 2002), a syntactic position (e.g. Lyons 1999) or a word class (cf. e.g. Biber *et al.* 1999). Thus, for instance, *Ally's* in *Ally's new car,* considered a determiner in Payne and Huddleston, is not a determiner according to the definition in the Biber *et al.* grammar. Second, and related to the first, 'determination' or 'determiner' can be defined semantically, functionally and morphosyntactically. The *semantic* part is about fixing, or restricting reference of nominals, its *functional* counterpart is about converting nominals that are

not full NPs into full NPs (or DPs), and the *morphosyntactic* part is about such properties of determiners as being a member of a closed set of words.

The three criteria converge for the English articles, and the normal procedure for identifying other determiners and setting up the category of determiners in a language or across languages is by picking up expressions that are, in one or another way, similar to the English articles. The usual assumption is, in fact, that articles are the core determiners. However, the majority of the world's languages lack articles, and opinions differ on the applicability of the notions 'determination' and 'determiner' to such languages. But identifying determiners even in article languages is not trivial. The basic problem here, as in all categorisation and in linguistic categorisation in particular, is that evaluation of similarities can be founded on different and not necessarily clustering criteria.

First, in some cases elements that combine the 'right' semantics and the 'right' function do not form a homogeneous class within a language. For instance, while the indefinite and definite articles in English are morphosyntactically comparable to each other, in Swedish only the indefinite article appears prenominally (1a), while the definite article is suffixed (1b). However, Swedish has in addition a prenominal definite element *den* which is more or less obligatory when the definite noun is modified by an adjective (1c). Deciding on which of these elements should count as determiners is a complicated matter and depends on the criteria one assumes to be crucial (cf. Börjars' 1998 careful analysis leading to the exclusion of the suffixed article from the determiner class).

(1) a. *e-n* *dag* b. *dag-en* c. *de-n* *varm*-a *dag-en*

a-COM	day	day-the.COM	def-COM warm-DEF	day-the.COM
‘a day’		‘the day’	‘the warm day’	

In addition, even expressions with similar, not to say, identical ‘determiner’-semantics can show different morphosyntactic behaviour. The demonstrative *denna* ‘this’ combines with the articleless noun (2a) in Standard Swedish, while the comparable demonstrative *den* ‘that’ normally occurs with definite nouns (2b):

(2) a. *denna* *dag* b. *den* *dag-en*

this.COM	day	that.COM	day-the.COM
‘this day’		‘that day’	

Finally, what other elements, in addition to articles, should count as determiners, is also subject to cross-linguistic variation. Consider the words *nästa* ‘next’ and *följande* ‘following’ in Swedish, which have the same morphosyntactic behaviour as the definite determiner *denna* ‘this’: they are in complementary distribution with articles and, if there is an adjective following them, it has to occur in the ‘weak’ or definite form (cf. 3a-b). They also have the right semantics in fixing reference of a nominal deictically or anaphorically, and should therefore count as determiners. The corresponding expressions in English do not behave as determiners in that a combination of *next / following* with a noun requires the presence of articles or other determiners (4).

(3) Swedish

a. *denna* *varm-a* *dag* b. *nästa / följande* *varm-a* *dag*

this.COM warm-DEF day	next / following warm-DEF day
'this warm day'	'the next / following warm day'

(4) the next / the following warm day

Thus, the relation between semantics, function and morphosyntax with respect to determination, as in most other linguistic areas, is not always straightforward, which raises various interesting questions. For instance, is the morphosyntactic difference between the Swedish indefinite and definite articles, and the one between the two Swedish demonstratives relevant for understanding the semantics and functions of determination, or is it just an accidental fact? Likewise, is it a pure accident that the words for 'next' and 'following' behave differently in English and Swedish, or does this fact give important insights on the semantics and functions of determiners? Finally, can these morphosyntactic differences witness of the different semantics of the English resp. Swedish expressions, or is the formal difference in their behaviour just accidental and not directly linked to any semantic difference? In other words, which element fixes the reference of *day* in *the next day – next*, *the*, or both, and how should we know this?

Questions akin to these will be of interest for us in the present paper, although primarily in relation to other types of expression than functional words. Our agenda is to investigate to what extent determination can be distinguished from other phenomena. As we hope to show, the borderlines between them and determination are sometimes quite fuzzy, which makes determination a gradient rather than well-delimited phenomenon.

In pursuing our agenda we take a stance on three issues. First, we will be using the traditional notion of NP rather than the generative notion of DP, in line with the account

of NP structure in the grammars of English (e.g. Quirk *et al*. 1985; Payne and Huddleston 2002) and typological work on the noun phrase (e.g. Plank 2003). Second, determination will be understood as a semantic-pragmatic notion, in the sense of **restricting the reference of a nominal**, or **'token restriction'** (cf. Seiler 1978). And third, we will limit our discussion to only two languages, English and Swedish.

2 Reference-restricting, qualifying and classifying nominal adnominals: prototypical constructions in English and Swedish

2.0 Adnominal functions and semantic types of adnominals

Noun phrases in the traditional sense are most often understood as consisting of a head noun, either alone or in combination with various noun-phrase modifiers, or 'adnominals', as we will call them. Adnominals have various functions within the noun phrase; for our purposes it is sufficient to distinguish among the following ones:

1. **reference restriction** (token restriction) = determination, e.g. *John's* in *John's book* and *the* in *the book*, and
2. **non-reference restriction**, subsuming
    a. **qualification**, e.g. *interesting* in an *interesting book* and *of duty* in *a man of duty*, and
    b. **classification** (denotation-restriction, type restriction), e.g. *theatre* in *a theatre ticket* and *yellow* in *yellow flowers.*

In this paper we will primarily be interested in nominal adnominals, i.e., adnominals based on nominals (nouns, noun phrases and things in-between). In English and Swedish, nominal adnominals typically convey the reference-restricting (determiner) vs. denotation-restricting (classifying) functions in two different constructions – 'standard', or 'determiner' *s*-genitive constructions vs. noun+noun (N+N) sequences. Qualifying functions are typically conveyed by adjectival adnominals. Table 1 below illustrates these three types of adnominals within one and the same noun phrase. We start by presenting these typical function-form mappings in Sections 2.1-2.3 Section 4 will be devoted to less prototypical nominal adnominals.

INSERT TABLE 1 here

2.1. Determiner *s*-genitive constructions

In both English and Swedish, nominal adnominals with reference-restricting function are typically *s*-possessors in examples such as *John's book (*Sw. *Jans bok)*. Here the possessor *John* helps to identify whose book it is, namely John's, in this way restricting the actual reference of *book* to one particular entity. The possessor acts thus as *anchor*, or as a *reference point entity* (Langacker 1995; Taylor 1996: 17) for the identification of the head's referents. Clearly, not all entities are equally good in providing clues for the identification of other entities. The *s*-possessor is prototypically referential: *John* in *John's book* refers to a specific person. More then that, anchors themselves have to be sufficiently salient in the context. Accordingly, **the best and most frequent possessors** are **humans** and, in addition, easily accessible, i.e. topical or at least **definite** ones (see e.g. Rosenbach 2002 for empirical evidence for English *s*-genitives.)

In both languages *s*-genitive constructions have the following formal properties:

First of all, both the *s*-possessor and the whole matrix construction are full NPs, and the *'s* attaches typically to the end of the possessor-NP (5a-b). Second, the possessor is at the leftmost position in the NP and cannot co-occur with any other element having determiner function, cf. (6a-b). That is, the initial article in (5a) below goes with the possessor and not the head. As described in Section 2, the Swedish article (and, further, determiner) system is far more complex than the English one in that determiners and articles appear in different places in a NP.[1] However, most significantly, *s*-possessors cannot co-occur with any of those. Third, the *s*-possessor renders the whole prenominal possessive NP definite, at least when the possessor itself is definite (7); opinions on the (in)definiteness of possessive NPs with indefinite possessors differ, however.[2] These three properties underlie the standard analysis of *s*-possessors as **determiners** in the prenominal possessive NP. Swedish *s*-possessors share an additional property with definite determiners in requiring the following adjectival adnominals appear in the 'weak', or definite form (cf. 8a-c) – cf. Section 3.3 on the different adjectival forms.

(5) a. [the old man]$_{NP}$'s book

b. *[min-a föräldr-ar]*$_{NP}$*-s lägenhet*

my-PL parent-PL-GEN apartment

'my parents' apartment'

(6) a. (*a / the) John's book

b. *(*en) Martin-s lägenhet / *Martin-s lägenhet-en*

a:COM Martin-GEN apartment / Martin-GEN apartment-the.COM

'Martin's apartment'

(7) [the teacher]'s book> the book of the teacher

(8) a. *en* *stor* *lägenhet* b. *denna* *stor-a* *lägenhet*

a:COM big apartment this:COM big-DEF apartment

c. *Martin-s* *stor-a* *lägenhet*

Martin-GEN big-DEF apartment

'Martin's big apartment'

2.2 N+N sequences

In English, nominal adnominals with denotation-restricting, or classifying function are typically the first part of a N+N sequence as in *puppy toy*.[3] Here the adnominal *puppy* helps to specify what type of toy it is, thereby restricting the class of potential denotata for *toy* to a particular subset of it. Note that even though the denotation of the resulting class, *puppy toy*, is subsumed under the denotation of *toy*, its reference is not yet fixed. In contrast to *s*-possessors, adnominals like *puppy* in *puppy toy* are not referential, i.e., not referring to a specific puppy but to puppies in general – puppies as a class or the properties of puppies as a class. Thus, the adnominal in a N+N sequence and the whole sequence itself are not NPs, but nouns or nominals.[4] The whole sequence is therefore neutral as to definiteness and has to combine with explicit determiners in order to function as an NP – among other things, with determiner *s*-possessors. Any article preceding a N+N sequence goes therefore with the head (or, rather, with the whole sequence) and not with the adnominal (as in a determiner *s*-genitive constuction). Positionally, a classifying adnominal is adjacent to the head and can therefore follow optional adjectival adnominals pertaining to the head, or rather, to the whole N+N sequence (9).

(9) the old [puppy toy]

The prototypical classifier constructions in Swedish are noun+noun compounds (10). Non-mediated compounds consist of just two nominal stems (10a), while mediated ones involve a linking morpheme in-between, akin to the German *Fugenmorphem*, the Greek -*o*-, the Russian -*o*-/-*e*- and the various Lithuanian intermorphemes. Many Swedish N+N compounds are formed with a compound marker -*s*-, which looks like the genitive marker (10b) and has developed historically from a genitive inflection into a mere marker of the compound juncture – a situation familiar from quite a few other languages. In a few rare cases there are some other linkers (10c). The first part of a compound can sometimes be a compound itself (10d).

Since non-mediated compounds are very common, we will use the term 'N+N sequence' as a cover term for both English N+N sequences described above and Swedish N+N compounds. Importantly, however, in contrast to English, Swedish compounds are easily recognizable as *words* and not phrases on morphosyntactic and phonetic grounds, and for all morphological and syntactic purposes, they behave like a simplex nominal, namely their last part. Among other things, compounds show the usual opposition in definiteness in combining with preposed indefinite and suffixed definite articles (cf. 10a and 10e).

(10) a. *en* *hund-leksak,* *en* *student-lägenhet*

a:COM dog-toy, a:COM student-apartment

'a toy for dogs, a dog toy'; 'a student apartment'

b. *värld-s-marknad-en*

world-LINKER-market-the.COM

'the world's market'

c. *gat-u-korsning-en*

street- LINKER-crossing-the.COM

‘the street crossing’

d. *svart-vin-bär-s-saft*

black-wine-berry-LINKER-juice

'blackcurrant juice'.

e. *hund-leksak-en*, *student-lägenhet-en*

dog-toy-the.COM, student-apartment-the.COM

’the toy for dogs, the dog toy’; ‘the student apartment’

The whole N+N sequence functions as **a label for a category of its own**, a more or less unitary concept, even though in many cases its meaning is fairly transparent (*puppy toy*, or *a student apartment*). However, even for these simple cases there remain many unsolved problems in what semantic categories are involved when the meaning of *puppy toy* is in one or another way derived from the meanings of *puppy* and *toy*.[5]

2.3 Constructions with qualifying adjectival adnominals

Purely (non-restrictive) qualifying adnominals in English and Swedish are typically based on adjectives, as in *interesting book* or *beautiful cat*. Again, adjectival adnominals together with their head have to combine with explicit determiners in order to become full NPs. Adjectival adnominals in English and Swedish show considerable differences in their form and behaviour.

In English, the absence of any particular markers on either adjectival adnominals or the adnominal in the N+N sequence makes them quite similar to each other, which

underlies both the traditional school grammar view that the nominal adnominal in examples such as *cat food* and *a student performance* is an adjective (as e.g. noted by Payne and Huddleston 2002: 537) as well as recent theoretical suggestions to analyse them as relational adjectives derived from nouns, behaving syntactically like adjectives but retaining the morphosyntactic properties of a noun (Spencer 2003, 2005).

In Swedish, constructions with adjectival adnominals differ from both determiner *s*-genitive NPs and from N+N sequences in a much more radical way. First, Swedish, like several other Germanic languages, retains the distinction between ‘weak’ and ‘strong’ adjective forms, in this case mainly triggered by (in)definiteness of the whole NP: ‘weak’, or definite forms are used in definite NPs, and while ‘strong’, or indefinite forms, further distinguishing among different gender-number forms, are used in indefinite NPs (11). Second, definite NPs with adjectival adnominals require the presence of both the preposed unbound determiner *den/ det/de* introducing the matrix NP and the bound suffixed article attached to its lexical head – the phenomenon known as ‘double determination’ (*överbestämdhet*) (11c).

(11) a. *e-n* *stor* *lägenhet*
a-COM big:COM apartmentCOM
‘a big apartment’

b. *e-tt* *stor-t* *hus*
a-N big-N house-N
‘a big house’

c. *de-n* *stor-a* *lägenhet-en*
the-COM big-DEF apartment-DEF.COM
‘the big apartment’

2.4 Summarizing the properties of the three adnominal types

The functions of reference-restriction, qualification and classification have so far been presented as clearly delimited from each other semantically and as unambiguously and iconically mapped unto distinct classes of adnominals: reference-restricting adnominals, typically located most distantly away from the head noun, classifying adnominals, typically located adjacent to the head, and qualifying adnominals, located in-between (cf. e.g. also Seiler 1978), see Table 1 in Section 2.1. Table 2 summarizes the major semantic and formal properties of the three English and Swedish adnominal construction types considered so far, where a construction type roughly refers to a combination of a head noun with the corresponding type of adnominal.

###INSERT TABLE 2 here ####

This ideal function-form mapping is further visualised in figure 1 below.

INSERT FIGURE 1 here

In the ensuing part of this article we will show that this ideal iconic function-form mapping can be disturbed in various ways, witnessing of gradience within the domain of nominal modification.

3 ‘Gradience’ in our approach

It is well known that there is no strict borderline between the two functions of qualification and classification, and there is not always consensus on what exactly should count as the one or the other. What is even more interesting for our purposes and what constitutes the main focus of the present paper is that the borderline between reference restriction (determination) and non-reference restriction (classification) is not always obvious either. This claim is *per se* not altogether new (cf. e.g. Seiler 1978). The issue of fuzziness of nominal determination has been particularly raised with respect to possessive constructions – see e.g. Plank’s (1992) work on possessive pronouns in German and Taylor’s (1996) cognitive-grammar account of English possessives (see also Kay and Zimmer 1976), or very recently Desagulier’s (forthcoming) analysis of English measure genitives (*a week’s holiday, twenty years’ imprisonment*) within a Construction Grammar approach. In the present paper we will connect particularly to Taylor’s (1996) work as well as to our own past research on possessives from a cross-linguistic perspective (e.g. Koptjevskaja-Tamm 2003, 2004) and on possessives in English (Rosenbach 2002, 2003, 2004, 2005, 2006).

We propose that three different groups of facts can cast doubts on the possibility of strictly separating reference restriction, on the one hand, from classification and qualification, on the other hand, i.e. witness of ‘gradience’ with respect to the two phenomena. We distinguish between gradience on the level of the language system and gradience in language use (cf. also Rosenbach 2006).

1. *Existence of* MIXED CONSTRUCTIONS *in the language system, where ‘mixed*

constructions' refer to construction types which share properties of two (prototypical) construction types.

An example of a mixed construction is provided by Swedish non-determiner *s*-genitive constructions, e.g. *en handlingens man* 'a man of action' (lit. 'a the-action-GEN man). As will be shown in Section 4.1.1, they combine certain morphosyntactic properties of determiner *s*-genitive noun phrases, in which the genitive adnominal has reference-restricting function, and those of adjective-noun combinations, whereby the adnominal has a qualifying, i.e. non-reference restricting function.

More generally, if *A* is the prototypical reference-restricting construction type and *B* is the prototypical non-reference-restricting construction type, it is not *a priori* clear whether construction *C* that combines properties of both be categorised as reference-restricting, as non-reference-restricting or as something in-between. In some cases, this can be interpreted as a symptom for the semantic intermediateness of the correspondent meanings between reference restriction and non-reference restriction, although not necessarily so.

2. *Existence of* CONSTRUCTIONAL AMBIGUITY *in language use, whereby one construction token may systematically have two different interpretations and, thus, represents two different construction types.*

An example of constructional ambiguity is the expression *a solicitor's office* (see Section 4.1.2), which represents two different construction types – a determiner *s*-genitive noun phrase, *[a solicitor's] office*, and a classifying *s*-genitive construction preceded by an article, *a [solicitor's office]*, each with its own 'constructional' interpretation. In the former case, *a solicitor's* has a reference-restricting (determiner)

function, and the whole construction lacks any classifying elements. In the latter case, reference restriction is attributed to the indefinite article *a*, whereas *solicitor's* has a classifying function. It is, of course, a trivial fact that one and the same expression can correspond to different underlying structures. Of relevance for us is the fact that this systematic ambiguity is often irrelevant for communication, i.e., both interpretations are congruent with a particular situation / meaning, both are more or less functionally equivalent and the hearer can choose any of those.

A general conclusion is that if *A* is the prototypical reference-restricting construction type and *B* is the prototypical non-reference-restricting construction type and construction tokens of the form *a* can be systematically ambiguous between representing *A* and *B* without disrupting communication, then the difference between reference restriction vs. classification and qualification is not always pronounced and / or important.

3. Existence of CONSTRUCTIONAL VARIATION *in language use, whereby one meaning may be regularly conveyed by two construction types.*

Constructional variation is found in the frequent alternation between *Bush's administration* vs. *the Bush administration* (see Section 4.3). The former exemplifies a determiner *s*-genitive noun phrase, where *Bush's* has a reference-restricting (determiner) function and there is no overt element for expressing a classifying function. The latter is an example of a N+N sequence preceded by the article, where articles have normally a reference-restricting function and the first N in an N+N sequence normally has a classifying (non-reference restricting) function. The question is, thus, whether *Bush* in *the Bush administration* has either only a classifying function,

only a reference-restricting function, or combines both. In other words, how are the functions of reference-restriction and classification distributed between *the* and *Bush* in the *Bush administration*?

More generally, if *A* is the prototypical reference-restricting construction type and *B* is the prototypical non-reference-restricting construction type and both can be systematically used for conveying the same meaning *X* in specific collocations (or construction tokens),[6] this indicates that the corresponding meanings are compatible with both constructions, i.e., they share aspects of both reference-restriction and non-reference restriction. That means that there is no strict border separating reference restriction from classification and qualification and that (at least for these meanings) the speaker is free to choose between the two possible construals, see figure 2 below.

INSERT FIGURE 2 HERE

Section 4 will present several cases in English and Swedish that provide evidence for the fuzziness of determination according to the three aspects listed above.

4 Empirical evidence: non-prototypical constructions

4.0 Introduction: constructions under scrutiny

In this section we will discuss three groups of constructions with 'less prototypical' nominal adnominals in English and Swedish:

1. Non-determiner *s*-genitive constructions (Section 4.1)[7]

a. non-determiner *s*-genitive constructions (constructions with "inserted genitives") in Swedish: *en syndens kvinna* 'a woman of sin' (Section 4.1.1)
b. classifying *s*-genitive constructions in English: *women's magazine* (Section 4.1.2)

2. N+N sequences with proper-noun adnominals: *the Bush administration, Blairregeringen* 'the Blair government' (Section 4.2)
3. Constructions with onomastic genitives: *Parkinson's disease, Beethoven's Ninth* (Section 4.3)

It will be shown how these constructions deviate from the typical function – form correspondence in tables 1-2 above and how, for this reason, they may be analysed as mixed constructions and / or enter into relations of constructional variation and ambiguity.

4.1 Non-determiner *s*-genitive constructions

Both English and Swedish have non-determiner *s*-genitives. As they differ, however, with respect to the semantic relations they can express and in how they convey 'non-prototypicality', they will be discussed separately below.

4.1.1 Constructions with 'inserted' *s*-genitive in Swedish as mixed constructions

Swedish has a class of constructions with so-called 'inserted genitives' (*inskjutna genitiver*) illustrated in (12). In these examples, the genitive adnominal itself is definite, cf. *handlingens* 'lit. of the action' in (12a), *folkets* 'lit. of the theatre' in (12b) and *ljudmiljöns* 'lit. of the sound environment', but it is preceded by the indefinite article,

which, thus pertains to the head (as is emphasized by our use of brackets in the examples). Since ‘inserted genitives’ can co-occur with indefinite articles and, therefore, with at least some determiners (cf. below), they clearly differ from the more normal, determiner *s*-genitives, as in *Pers hus* ‘Per’s house’, and can be considered *mixed constructions*, as will be shown shortly below.[8]

(12) a. *en [handling-en-s]* *man*

a:N action-DEF.COM-GEN man

'a man of action'

b. *en* *[folk-et-s]* *teater*

a:COM people-DEF.N-GEN theatre

'a theatre for people'

c. *en* *ljudmiljö-n-s* *Greenpeace*

a:COM sound.environment-DEF.COM-GEN Greenpeace

'a kind of Greenpeace for the sound environment'

(from a suggestion to fight against high sound volume in restaurants)

Constructions with ‘inserted genitives’ fall into several semantic types. Examples (12a) and (12b) illustrate **qualification** and **classification** respectively, whereas (12c) is **metaphorical**: the genitive indicates the target domain for the metaphor (for the details cf. Koptjevskaja-Tamm 2003: 537 – 549). The whole construction constitutes a stylistically marked choice and, although fairly productive, is clearly marginal as compared to its main rivals – nouns with adjectival adnominals (e.g., *en syndig kvinna*

‘a sinful woman’) and N+N compounds (e.g., en *folk-teater* ‘a people-theatre’). Non-lexicalised inserted genitives are used most productively as metaphors.

Morphosyntactically, constructions with inserted genitives combine properties of both determiner *s*-genitive NPs and constructions with adjectival adnominals or N+N compounds.

To start with the former, inserted genitives themselves, as already mentioned, are always definite. In the majority of cases they consist of one noun in the definite forms, both in the singular and in the plural. Occasionally, however, they can have their own adjectival adnominals preceded by the definite determiner *den / det /de* (13b) or involve conjoined definite nouns (13a) and, thus, pattern structurally like other *definite NPs* in Swedish, including ‘normal’ *s*-genitives. They can also be followed by adjectives pertaining to the head of the matrix NP, which in such cases appear in the definite form, exactly like after determiner *s*-genitives, cf. (13a). However, inspite of their formal properties as definite NPs, it is unclear to what extent they can count as referential (generic interpretation might be an option in some examples, although not in all).

(13) a. *ett [ruttenhet-en-s och dubbelmoral-en-s] förlovad-e*

a:N corruption-DEF.PL-GEN and double.moral-DEF.PL-GEN promised-DEF

land

country

'a promised land of corruption and double standards’

b. *en [de-t sund-a förnuft-et-s] metod*

a:COM the-N COMMON-DEF sense-DEF.N-GEN method

‘a method dictated by common sense’

(http://www.kevius.com/polya/lex1.html)

On the other hand, in contrast to determiner *s*-genitives, inserted genitives can be preceded not only by the preposed indefinite article, but also by adjectives pertaining to the nominal head of the matrix NP, which is completely excluded for determiner *s*-genitives that normally appear NP-initially (cf. Tables 1-2 in Sections 2.0 and 2.4). Interestingly, such adjectives appear in the indefinite, 'strong' form and agree with the nominal head (cf. *väldig* 'huge:COM.INDEF' in (14) below with *förlovade* 'promised:DEF' in (13a)). Combinability with determiners and with adjectival premodifiers is otherwise typical of constructions with non-reference-restricting adnominals, both qualifying (adjectival modification), and classifying (N+N compounds, cf. (14b) for both).

(14) a. *en* *väldig* *[kött-et-s]* *man*

a:COM huge (COM.INDEF) flesh-DEF.N-GEN man

'a mighty man of flesh' (Pitkänen 1979: 76)

b. *en* *liten* *gul* *vår-blomma*

a:COM little (COM.INDEF) yellow (COM.INDEF) spring-flower

'a little yellow flower'

The vast majority of inserted genitives occur as adnominals to indefinite singular nouns and are, thus, preceded by the indefinite article *en / ett*. Heads in the plural are attested as well, even though much more rarely (example (15) below is the plural correspondence to example (12a)).

(15) *De* *var* *poet-er* *och* *talare* *inte* ***handling-en-s*** ***män.***

They were poet-PL and speaker(PL) not action-DEF.COM-GEN man.PL

'They (the Girondists) were poets and speakers, not men of action'

(http://www.sub.su.se/national/tfran16.htm)

Inserted genitives cannot, however, co-occur with the suffixed definite article. A reasonable question is then whether inserted genitives are categorically restricted to indefinite contexts, for instance, for semantic reasons. However, a closer analysis unveils that constructions with inserted genitives do in fact occur in clearly definite contexts, even though indefinite contexts are indeed favoured. Consider ex. (16) below. Ex. (16a) contains a definite NP with the numeral 'three', a construction which normally patterns as a 'double-determined' definite NPs with adjectival adnominals (cf. Section 2.3), i.e., is marked both with the preposed determiner *den/det/de* and with the definite article on the head noun (*männen* 'the men'). In such (and many other) examples the head noun lacks the suffixed article, which leads to the conclusion that it is exactly the presence of genitive adnominals that blocks this suffixation. In ex. (16b), a similar construction is now expanded by the inserted genitive *handlingens* 'of the action' – and the suffixed definite article on the head noun is no longer possible (cf. *män* 'men'). The ban on the suffixed definite article in this and many other comparable examples shows that it is exactly the presence of inserted genitive adnominals that blocks this suffixation.

(16) a. *de* *tre* *stor-a* *männ-en*

DEF.PL three great-PL/DEF man.PL-the.PL

’the three great men’

b. *de tre stor-a handlingens män(*nen),*

the.PL three great-DEF action-DEF.COM-GEN man.PL

‘the three great men of action (von Stein, Gneisenau and Scharnhorst)’ (Cecilia Bååth-Holmberg, “Far och son”, 1915, http:// runeberg.org/faroson/11.html)

The exposition above and examples (12) to (16) lead to several conclusions. First, constructions with inserted genitives are a truly **mixed construction type**, which combines morphosyntactic properties of determiner *s*-genitive NPs (adnominal itself being a definite NP, ex. (13), obligatory definite marking of adjectives following the genitive, ex. (13a), incompatibility with definite head nouns, ex. (16b)) and those of nominals with adjectival adnominals or N+N compounds (combinability with indefinite articles and adjectival premodifiers in the indefinite form, ex. (14a), or with the definite pronominal determiner and adjectives in the definite form, ex. (16b)). Inserted genitives themselves are formally intermediate between typical reference-restricting (determiner) and non-reference-restricting adnominals, as summarised in Table 3 below, where bold lines highlight the cross-constructional similarities.

###INSERT TABLE 3 HERE ###

Second, it is particularly significant for our purposes that inserted genitives show different co-occurrence patterns with preposed indefinite and suffixed definite articles. This does not come as a complete surprise, since the two differ in their morphosyntactic

status and since such distributional differences are attested elsewhere in Swedish, e.g. in the behaviour of proper names (cf. Börjars 1998 and Koptjevskaja-Tamm 2003: 531–532 for details). In addition, constructions with inserted genitives show not only mixed, but even **contradictory** properties: inserted genitives have the same effect on the form of the following adjectives as definite determiners, which is in contradiction to the indefinite article pertaining to the matrix NP and to the optional indefinite adjectives appearing in-between the article and the genitive. Inserted genitives, thus, have a *janus-like* behaviour: they function as determiners for everything following them, but as modifiers for everything preceding them (cf. Perridon's (1989: 189–201) analysis of inserted genitives as determiners in NPs that are further embedded in another, indefinite NP). The non-determiner part of this behaviour is relatively easy to account for, since inserted genitives are not used for reference-restricting functions. Their determiner-like behaviour is semantically less obvious and seems to be, at least, partly triggered by the formal characteristics of the adnominal as the definite NP with the genitive marker.

4.1.2 Classifying *s*-genitive constructions in English: mixed constructions, constructional ambiguity and constructional variation

Classifying s*-genitives as mixed constructions*

In addition to determiner *s*-genitive constructions (Section 2.1), English has another, much less usual type of *s*-genitive construction, as in *women's magazine*. In this construction the *s*-adnominal is not referential and does not specify *whose* magazine, but rather *what type of* magazine it is. A women's magazine is a special type of magazine to be primarily used by women, in the same vein as a puppy toy is a special type of toy to be primarily used by puppies. The *s*-genitive here has therefore

classifying function and all properties typically associated with a classifying adnominal, hence the name 'classifying genitive' (cf. Biber *et al.* 1999: 294-5). Thus, the *s*-adnominal is not an NP, but a noun (usually) or nominal (occasionally, as in *an [old people]'s home*; cf. e.g. Taylor (1996:289) or Payne and Huddleston (2002:469). The whole construction is not a NP, either (Taylor 1996: 300-301), and as such needs to combine with an overt determiner that marks it as either indefinite (17a) or definite (17b). In these particular cases the singular marking of the determiners clearly refers to the singular head *magazine* and not the plural possessor *women*. The classifying *s*-adnominal, in contrast to the determiner *s*-genitive, is typically adjacent to the head, and any premodifier to the head therefore has to precede the *s*-adnominal, as shown in (17b) (cf. with ex. (9) in Section 2.2).[9]

(17) a. a [women's magazine]

b. this interesting [women's magazine] vs.

*this women's interesting magazine

Classifying *s*-genitive constructions should therefore be distinguished from the much more common determiner *s*-genitive constructions. As a construction type, they are also far less frequent than N+N sequences, with which they share many properties, and can therefore be considered as its non-prototypical variant (although for single collocations the picture may be different: *lawyer's fees*, for example, is more frequent than *lawyer fees*, cf. Rosenbach forthcoming). The grammars of English usually consider them as "unusual in that they are a somewhat unproductive category" (Payne and Huddleston 2002: 470).[10]

What is important for the present argumentation is that classifying *s*-genitive constructions represent **a mixed construction**: they share the relational marker with determiner *s*-genitive constructions, but are otherwise semantically and structurally like N+N sequences, as illustrated in Table 4 below.[11]

INSERT TABLE 4 HERE

Ambiguity of construction tokens 'a(n) X_{SG}'s Y_{SG}'

In ex. (17) above the clash in the number properties of the determiner and the *s*-adnominal in *a women's magazine* allows for an unambiguous interpretation of a concrete *s*-genitive construction token as a classifying *s*-genitive construction. However, in the majority of classifying *s*-genitive constructions, both the *s*-adnominal and the head nominal are in the singular and the whole construction is introduced by the indefinite article (e.g., *a solicitor's office*). In principle, thus, many expressions with the form *a(n)* X_{SG}*'s* Y_{SG} are potentially ambiguous between a determiner and classifier interpretation of the *s*-adnominal, see (18).

(18) a solicitor's office, a beagle's head, a baby's nappy, a baby's high-chair

There are sometimes morphosyntactic and semantic clues that allow for an unambiguous interpretation of a concrete *s*-genitive construction token. In (19) the adjective *dingy* forces a classifier reading, as it can only apply to the head noun *office* and not to the s-possessor *solicitor* (emphasis added in all the following examples).

(19) The body sprawled next to a toppled chair on the floor of *a dingy solicitor's office* not far from our lodgings at 221 B Baker Street.
(http://www.users.lmi.net/wilworks/newreact/watsntes.htm)

Generally, in the simplest case, a NP with an indefinite article introduces a discourse referent that is further elaborated in the discourse (20a), and the same goes for indefinite NPs used as *s*-possessors in a determiner *a(n)* X_{SG}*'s* Y_{SG}-construction. Possible clues for the disambiguation of *a(n)* X_{SG}*'s* Y_{SG}-tokens are therefore sometimes found in a further context which shows that the *s*-adnominal has introduced a referent. In (20b), for instance, the definite NP *the lawyer* immediately following on the expression *a lawyer's office*, demonstrates that *a lawyer* has introduced a **specific referent** that is further elaborated in the discourse; the whole construction is therefore a determiner *s*-genitive structure, *[a lawyer]'s office*.

(20) a. I called a lawyer yesterday. He had very high rates.

b. A man walked into *a lawyer's office* and asked about the lawyer's rates.
"$50.00 for three questions", replied the lawyer. "Isn't that awfully steep?" asked the man.
"Yes", the lawyer replied, "and what was your third question?"
(http://www.anvari.org/shortjoke/Lawyers/227.html)

However, a very large proportion of indefinite NPs in general do not introduce any 'real' discourse referents that are further elaborated in the text, they simply mention a particular entity in passing, as an instantiation of a type rather than an interesting entity

per se, or **instance**, in Fraurud's (1996) terms – and thus remain an isolated-mention. And likewise, very often the context does not give us any clue as to the status of the *s*-adnominal, as in (21), where both *[a solicitor]'s office* and *a [solicitor's office]* are possible readings and where speaker's/writer's intentions remain unclear.

(21) Mary had a son, Charles Urquhart, who contrived to break away from the degrading associations of trade. He entered *a solicitor's office*, did well, and finally became a partner in the firm. He was my father, and I am his successor in the legal business. (Dorothy Sayers, *Strong Poison*, 124)

Now, what would be the semantic difference between the two interpretations? In the determiner genitive construction *[a solicitor]'s office* an office is identified as being related to (e.g., belonging to, being used by) some solicitor, whereas the classifying genitive construction *a [solicitor's office]* denotes or refers to an office as belonging to a particular type of place (like *a bakery* or *a hospital*) and sharing certain properties with other members of the same type. In principle, [*a solicitor's office*], although designated with a specific purpose of being used by solicitors, will occasionally fail to be the office of any concrete solicitor. On the other hand, some places occasionally used by solicitors will not get into that more or less established category, which can cause exclamations like "That solicitor's office is not really a solicitor's office at all but a broom closet", cf. also (22) (the scene depicts a girl entering the office of a particular solicitor).

(22) "Any place," the girl exclaimed as she entered, "more unlike *a solicitor's office*, I never saw! Flowers outside and flowers on your desk, Mr.

> Pengarth! Don't you have to apologize to your clients for your surroundings? There's absolutely nothing, except the brass plate outside, to show that this isn't an old-fashioned farmhouse, stuck down in the middle of a village. Fuchsias in the window sill, too!"
> (http://oppenheim.thefreelibrary.com/The-Malefactor)

In the default case, however, if someone goes to an office of a particular solicitor (i.e. the determiner reading of ex. (21)), one usually also goes to the office that is typical of solicitors (i.e. the classifying reading of ex. (21)), and the other way round. There might be exceptions, as we have seen in (22) above. However, when a particular solicitor is simply mentioned as an instance of the more general type, rather than introduced for further elaboration in the discourse, this tiny potential difference becomes even more suppressed and the whole expression easily acquires a typifying meaning.

The type of **constructional ambiguity**, illustrated by (21), is therefore often irrelevant for communication: That is, in practice, it is often rather unimportant for the hearer whether the speaker does have a specific solicitor in mind or not (cf. also Rosenbach 2003, 2006). After all, it is always possible to talk about kinds instead of their instances, since objects are always instantiations of their kinds in the first place (cf. also Krifka *et al.* 1995: 86). Note that it is certainly not a coincidence that it is **indefinite expressions** which are particularly prone to fuzziness. As argued above (Section 2.1), from a cognitive point of view, (determiner) *s*-genitives as reference points typically refer to salient (human, highly referential, topical and definite) referents (cf. Langacker 1995, Taylor 1996). Given that in expressions such as *a solicitor's office* a determiner *s*-genitive is indefinite makes it a less good referential

anchor and as such naturally prone to some categorial ‘leakage’. Combined with the fact that indefinites are conceptually close to generics, the natural direction of this ‘leakage’ is towards a classifying construction.

Constructional variation between determiner and classifying s*-genitive constructions*

Let us consider a few further examples of *a(n)* X_{SG}*’s* Y_{SG}-tokens where there is evidence that they should be morphosyntactically interpreted as determiner *s*-genitive constructions with an indefinite singular possessor NP.

Discourse referents introduced by indefinite singular noun phrases are not necessarily specific.[12] English frequently uses ‘indefinite generics’ in many various contexts (Behrens 2005: 330), ex. (23a), including *s*-genitives (23b). Note the use of the referential anaphora *his / her* indicating that the indefinite generic genitive NP *a solicitor’s* has introduced a discourse referent, in this case a **generic** one.

(23) a. The police can arrest a solicitor who refuses to show his/ her files.

b. Consequently, the police can now lawfully, with prior authorization from Government-appointed commissioners, break into *a solicitor's office* and examine *his/her* files. (http://www.unhchr.ch/Huridocda/Huridoca.nsf/0/43ff65525ff5f25980256664004cc6c0?Opendocument)

The mutual compatibility of the generic and specific readings of one and the same indefinite noun phrase (here, *a solicitor’s*) is nicely illustrated by the example in (24) below. In this example the solicitor’s office is explicitly introduced as representing a type (*a stage set for a successful solicitor’s office*), and so is the solicitor (*Mr.*

Urquhart,…, was well cast for the role of successful solicitor), while, at the same time, the solicitor, Mr. Urquhart, also constitutes a specific person.

(24) The room into which he was shown could have served as a stage set for a successful solicitor's office. …. Mr. Urquhart, tall, ascetic, discreetly grey at the temples and with the air of a reserved dominie, was well cast for the role of successful solicitor. (PD James, *Shroud for a nightingale*, 240-1**)**

Indefinite noun phrases often have *non-specific* readings, as in (25a), and the same is true for indefinite *s*-possessors. Sentence (25b) contains a morphosyntactically unambiguous determiner *s*-genitive construction, which is shown by the position of the adjective. The context is irrealis, however, and, accordingly, the *s*-possessor in (24b) does not refer to a particular entity in the 'real world', i.e. it is **non-specific**.

(25) a. He dances like a child.

b. The word is a song note he thought he might never hear again. It lifts him up, makes him as buoyant as *a child's inflatable toy* in a pool (Anita Shreve, *Eden Close*, 213).

In (23b), (24) and (25b) the generic and non-specific possessors are treated **as if they referred to a particular entity**, albeit in another model, or another mental space, to borrow Fauconnier's (1994) term (also invoked in Taylor 1996:186; see also Rosenbach 2006: 103-105 for a discussion of such constructions). However, relating an entity to a generic entity or to a hypothetical, non-specific entity (often with the pragmatic

implication of free choice, i.e., no matter which one is chosen) will be more or less tantamount to describing it as a representative of a particular general type, which is in one or another way related to the general type evoked by the adnominal. The latter, in turn, will correspond to classifying constructions, cp. (26a) and (26b), respectively.

(26) a. a [child's toy]

b. a [solicitor's office]

The tiny difference between 'an office belonging to a generic solicitor', 'an office belonging to some (unspecified), or to any solicitor', and 'something belonging to the class of solicitor's offices' is, therefore, in the majority of cases hardly relevant. The reference-restricting function of indefinite generic and non-specific *s*-genitives becomes in practice hardly distinguishable from the non-reference-restricting function of classifying *s*-genitives, and the two construction types are almost equally available for such meanings.

4.2.3 Synopsis

Non-determiner *s*-genitive constructions in Swedish and English, as discussed in Section 4.2.1–4.2.3 provide various kinds of evidence for considering reference restriction (determination) as a gradient rather than a discrete phenomenon. Swedish 'inserted' *s*-genitive constructions are primarily interesting as a mixed construction type, combining morphosyntactic properties of both typical reference restricting (determiner s-genitive constructions) and non-reference restricting constructions (constructions with adjectival adnominals and N+N compounds). English classifying

genitive constructions are also mixed to a certain extent. Even more interesting, however, is the fact that constructions of the type *(a)n* X_{SG}*'s* Y_{SG} waver between identification of an entity via an indefinite possessor vs. describing an entity as representing a category that is somehow related to the general category of potential possessors. This 'wavering' in turn follows different paths:

(a) cases like (21) can be interpreted as ambiguity of two otherwise categorical interpretations, reference restriction and type restriction, with the difference between the two interpretations being often communicatively unimportant;[13]

(b) in cases like (23b), (24) and (25b) the contrast between reference restriction and type restriction itself becomes somewhat neutralized. In these cases the reference-restricting and the classifying reading for an *s*-genitive are equally available without almost any difference in meaning. For this reason, such constructions provide an excellent 'bridge' between the two functions of reference restriction and classification.

At the present moment we lack any realistic statistics on the proportion between clearly determiner, clearly classifying, and ambiguous genitives among tokens with the structure *a(n)* X_{SG}*'s* Y_{SG}. It turns out, however, that a very large proportion of indefinite NPs in general does not introduce any 'real' discourse referents. For isolated-mentions Fraurud (1996: 72) reports as many as 75% of all the indefinite NPs (both inanimate and animate) in a written non-fiction corpus, and Dahl (1999) reports 40% of all the references to third person animate referents in a conversational corpus (both for Swedish). Our impression from the data we have looked at is that only a tiny portion of *a(n)* X_{SG}*'s* Y_{SG} -tokens contain a clearly specific referential determiner *s*-genitive.

Wavering between identification of an entity via an indefinite possessor vs. describing an entity as representing a category that is related to the general category of potential possessors is essentially of a conceptual type and is not restricted to certain languages. This is nicely demonstrated by several different translations of (or allusions to) one and the same famous quote from one of Anton Chekhov's letters to his publisher Suvorin.[14] Here's one translation of the whole passage with the relevant constructions in italics:

(27) What the aristocrat writers get for free from nature, intellectuals of lower birth have to pay for with their youth. Write a story of how a young man, the son of a serf, a former shopboy, choirboy, schoolboy and student, brought up to respect rank, to kiss priests' hands, and worship the thoughts of others, thankful for every piece of bread, whipped time and again, having to give lessons without galoshes, brawling, torturing animals, loving to eat at rich relatives' houses, needlessly hypocritical before God and man, merely from a sense of his own insignificance - write a story about how this young man squeezes the serf out of himself, drop by drop, and how waking up one bright morning this young man feels that in his veins there no longer flows *the blood of a slave, but the blood of a real man.*
(http://books.guardian.co.uk/extracts/story/0,6761,473013,00.html)

The two NPs in bold refer to two different kinds of blood as related to two kinds of human being – the kind of blood typical of slaves and the one typical of real men – and are, thus, generic. In the Russian original both are rendered by a combination of the

noun for ‘blood’ with the corresponding denominal adjective, *rab-sk-aja krov’* ‘slave-ADJ-F.SG.NOM blood’ vs. *chelovech-esk-aja krov’* ‘man-ADJ-F.SG.NOM blood’ – the prototypical denotation-restricting (classifying) construction in Russian. Different translations suggest different ways of conveying these meanings: (28a) uses prenominal possessive NPs with an indefinite (generic) possessor, (28b) contains a classifying *s*-genitive construction, while (29c) uses a prenominal indefinite (generic) *s*-possessor in one case and a property-denoting adjectival adnominal in the other.

(28) a. he has no longer *a slave’s blood* in his veins but *a real man’s* (etext.library.adelaide.edu.au/ c/chekhov/anton/c51lt/chap25.html)

b. in his attempt “to squeeze *his slave’s blood* out” (endeavor.med.nyu.edu/ lit-med/lit-med-db/ webdocs/webdescrips/heaney1447-des-.html)

c. *real human blood, not a slave’s,* is flowing through his veins (http://slate.msn.com/id/3051/)

The lack of constructional parallelism shown in (28c) is also evident in a Swedish translation which opposes the classifying N+N compound *träl+blod-et* ‘slave+blood-the.N’ to the clearly reference-restricting possessive NP with an indefinite generic possessor, *en fri människa-s blod* ‘a:COM free:COM man-GEN blood’.

Genericity has in general many different facets and manifestations (cf., e.g. Krifka *et al.* 1995, Lyons 1999: 179–198, Behrens 2005), which have mainly been studied for NPs in argument positions. As we hope to have shown in this section, generic attribution offers new challenges (cf. Strauss 2004 and Gatt 2004 for two different approaches to these issues).

4.2 N+N sequences with proper-noun adnominals in English and Swedish: constructional variation and mixed constructions

English N+N sequences with a proper-noun adnominal (PropN+N), as in *the Bush administration, a David Niven accent, a Peter Frampton song* and their Swedish counterpart, N+N compounds *Bushadministrationen* 'the Bush administration', *en Silvia brytning* 'a Silvia accent' and *en Picassotavla* 'a Picasso picture' represent yet another case of non-prototypical construction type. There are semantically different types of PropN+N sequences, what they all have in common is that these constructions morphosyntactically pattern like other N+N sequences such as *cat food*, though there are important semantic differences as will be shown in this section.

Of particular interest for the present argumentation are cases like *the Bush administration*, which are used to refer to a specific entity, identified via the first adnominal (*Bush*) and which systematically alternate with the corresponding determiner *s*-genitive construction, *Bush's administration*. There is barely any treatment of such PropN+N sequences in the literature, as far as we are aware of (though see Rosenbach 2002:17-18, 2003, and Koptjevskaja-Tamm 2005 for drawing attention to these constructions, and Kajanus 2005 for a first survey of proper-name compounds in Swedish). Warren (1978: 43-44) is a notable earlier exception. She already observes that the first element in a N+N sequence can sometimes have identifying function, as in *the Burch house*, where *Burch* refers to the name of a family, picking out a referent rather than generically referring to a class of entity. Otherwise, however, it is mainly with respect to the question whether the first noun in a N+N sequence can be the antecedent for an anaphoric element that such constructions have received any attention at all in the literature; see our discussion of Ward *et al.* (1991) below.

The goal of the following discussion is therefore twofold. On the one hand, we will cast light on the structural, and more importantly for the present purpose, the semantic properties of such proper-noun adnominals. On the other hand, they will serve as a further piece of evidence for our claim that the borderline between reference-restriction and classification is not clear-cut. Most of the facts in the discussion will come from English, but will be complemented with short comparisons with Swedish.

4.2.1 Constructional variation between PropN+N sequences and s-genitive constructions

To start with, expressions such as the PropN+N vary with a corresponding determiner *s*-genitive construction 'PropN'*s* N'. For an illustration of such variation in Modern English see e.g. ex. (29) from a novel, in which the dinner party arranged by the Mairs is a central event referred to at various points (see also Rosenbach 2005).[15]

(29) "… 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. …" (PD James, *Devices and Desires*, 274-5)

In what follows we have chosen to focus on the very frequent expressions *the Bush administration* vs. *Bush's administration*. A google search reveals that the *(the)* N+N sequence is about 10 times more frequent than the (prototypical) *s*-genitive construction.

(30) a. *(the) Bush administration*: 8,100,000 google hits (9/02/2005)

b. *Bush's administration*: 87,300 google hits (9/02/2005)

Both (29) and (30) show clear cases of **constructional variation**, whereby two construction types are systematically used for expressing one and the same meaning, namely the party at the Mairs and the administration identified by reference to Bush. The uneven distribution in this latter case is probably due to the fact that *the Bush administration* has almost proper-name status itself, analogous to *the Eiffel tower*, and is very commonly referred to like that. What matters for us here is, however, simply the fact that there is variation with a corresponding determiner *s*-genitive.

PropN+N sequences have formally all properties typically associated with **classifying constructions**. First, the adnominal is usually adjacent to the head and any (qualifying) premodifier to the head has to precede the proper-noun adnominal, as in (31).[16]

(32) the new Bush administration vs. *the Bush new administration

Moreover, the initial article does not go with the adnominal – as in determiner *s*-genitive constructions – but with the head noun, and it is therefore possible to have both an initial determiner as well as a proper-noun adnominal co-occurring in the NP, unlike in determiner *s*-genitive constructions, cf. (33).

(33) the/this [Bush administration] vs. *the/this Bush's administration

A PropN+N sequence is also, at least in principle, neutral as to definiteness of the matrix NP. In practice, however, there is a very strong preference for the definiteness marking in this particular example. According to a google search, the indefinite *a Bush administration* occurs only with a frequency of about 1%, in contrast to the definite *the*

Bush administration, cf. (34). Note also, that the indefinite uses tend to have a counterfactual meaning, as in (35), where the predicate expresses a future possibility rather than stating a fact.

(34) a. *the Bush administration*: 8,100,000 google hits (9/02/2005)

b. *a Bush administration*: 102,000 google hits (9/02/2005)

(35) If campaign rhetoric can be believed, *a Bush administration* will be more progressive and less restrictive on how this market develops than the previous ... *(*www4.gartner.com/5_about/press_room/pr20001218a.html)

Table 5 below illustrates that Prop-N sequences pattern morphosyntactically like the typical classifying N+N sequences.

###INSERT TABLE 5 HERE ###

We have thus two different expressions for identifying one and the same entity. In one of them, the head noun (*administration*) combines with an unambiguously reference-restricting adnominal (*Bush's*); the identification of the whole NP's referent is accomplished via anchoring it to a particular person. The other expression has the same structure as the expression *the puppy toy*, in which the head noun (*toy*) combines with two adnominals – a classifying adnominal *puppy*, which normally helps to restrict the class of potential denotata of the head noun to a particular subset (puppy toy) by relating it to the class of puppies or to the properties of puppies as a class, and the determiner adnominal *the*, which identifies one particular representative, referent for the whole NP. We are thus left with a dilemma as to the functions of the adnominals in *the Bush administration*, with three possible solutions:

a. *Bush* has a classifying function by restricting the class of administrations to a particular subset, whereas *the* fixes the reference;
b. *Bush* restricts the reference of administration, while *the* is pleonastic (in the same vein as it is in *the Thames* and in *the Bronx*;
c. Both *Bush* and *the* share the reference-restricting function between them (but *Bush* can also have an additional impact on the resulting meaning).

Each of these solutions has advantages and disadvantages. The first one captures the formal similarity between PropN+N sequences and N+N sequences in general, but suggests that they are semantically different from determiner *s*-genitive constructions. It is problematic in that classification in the general case is accomplished via the denotation of the first of the adnominals that is thus viewed as subsuming the whole class of potential referents or their properties as a class. To achieve full parallelism with ordinary N+N sequences, *Bush* in *the Bush administration* will therefore be taken as *denoting a kind* rather than referring to a particular person, which is not completely intuitive. In addition, classification in this particular case seems like a vacuous procedure – the defining property of the class of Bush administrations is that it is Bush's administrations. The second solution presupposes that Bush is *individual-referring* and views PropN+N sequences as completely unrelated to the more general N+N sequence type, but rather as 'a periphrastic variant' of the determiner *s*-genitive construction. Finally, the third solution is a compromise in that it views PropN+N sequences as related to the more general N+N sequence type, but having its special properties; it also suggests that their semantics is not completely equivalent to that of determiner *s*-genitive constructions.

We would opt for the third solution in that proper-name adnominals in PropN+N sequences are semantically in-between reference-restriction and classification. Nominal adnominals with a reference-restricting function need to be referential in order to serve as good referential ‘anchors’, as is the situation for determiner *s*-genitives (e.g. Taylor 1996, and Section 2.1). We would like to suggest that proper-noun adnominals in PropN+N sequences are referential and individual-denoting, too, but less so than determiner *s*-genitives. The suggestion is preliminary and has to be worked out and tested in more detail. The basic problem here is that (non-)referentiality in any of its uses is often taken for granted and there are very few ways of testing it.

4.2.2 Referentiality of the proper noun in PropN+N sequences

Di Sciullo and Williams (1987: 50–51) discuss one test according to which the proper-name part in PropN+N sequences is not truly referential: ex. (36a) is not contradictory, while (36b) is:

(36) a. John is a Nixon admirer in every sense except that he does not admire Nixon.

b. *John admires Nixon in every sense except that he does not admire Nixon.

Another commonly used test for determining whether an expression is referential (or not) is to check whether it can serve as an antecedent for certain types of pronouns (primarily personal pronouns). Examples like (37) show that the proper-noun adnominal *Bush* can be anaphorically referred to when used as the first part of a compound.

(37) The *Bush*$_i$ administration coddled electric companies, because *he*$_i$ has long personal ties to the energy industry.

Examples like (37) are interesting for several reasons. First, according to the standard view, only NPs can be antecedents for pronouns (cf. e.g. Sproat 1988), which raises the question about the status the first part in PropN+N sequence. For 'normal' N+N sequences, as discussed in Section 2.2, this is clear: the adnominal is not a full NP, but a noun or a nominal (obligatorily without determiners). However, for most proper names, the distinction between full NPs and nominals is less straightforward than for ordinary countable nouns, which complicates the attribution of *Bush* in *the Bush administration*. Payne and Huddleston (2002: 517) mention that weak proper names, "like *the Thames* or *the Bronx*, where definiteness is redundantly marked by the definite article *the*", lose their article when they do not constitute a full NP, e.g. in PropN+N sequences (e.g., (*a) Thames cruise*; also *a Beatles song*). This can be interpreted as an argument for the **non-NP-status** of proper names in PropN+N sequences.

Here Swedish PropN+N compounds appear to behave differently from their English counterparts in that the proper names with the suffixed definite article can be retained when used as the first part in a PropN+N compound, cf. (38). This is normal for proper names referring to persons or to groups of persons and could be interpreted as one argument for their status as full NPs. On the other hand, geographical proper names with the suffixed definite article normally lose it in PropN-compounds, see ex. (39), which speaks for their non-NP-status in such expressions:

(38) a. *Blå Tåg-**et*** => *en* *Blå Tåg-**et**+låt*

	blue train-the.N	=> a:COM	blue train-the.N+melody
	’the Blue Train’ (a pop group)	=> ’a Blue Train melody’	
b.	*Imperie-**t***	=> en	*Imperie-**t**+låt*
	empire-the.N	=> a:COM	empire-the.N+melody
	’the Empire’ (a pop group)	=> ’an Empire melody’	
(39) a.	*Hötorg-**et***	=> *en*	*Hötorg-s+skrapa*
	Hay.Place-the.N	=> a:COM	Hay.Place-the.N+skyscraper
	’the Hay Place’	=> ’a Hay Place skyscraper	
b.	*Kungsholm-**en***	=> *en*	*Kungsholm-s+gata*
	King.Island-the.COM	=> a:COM	King.Island-the.COM+street
	’the King Island’	=> ’a King Island street’	

Further research is needed before we can draw definite conclusions about the status of the proper-name adnominals in English PropN+N sequences and in the corresponding Swedish compounds. The fact remains though that they can be anaphorically referred to by pronouns.

This fact is problematic from yet another, related perspective. According to ‘the principle of lexical integrity’, no syntactic process or rules should be able to refer to parts of words only, cf. e.g. DiSciullo and Williams (1987). In the same vein, in earlier syntactic work N+N sequences, normally considered to be compounds, were regarded as ‘anaphoric islands’ (Postal 1969). However, Ward *et al.* (1991: 468–472) provide a long list of attested spontaneous tokens of anaphora to what they consider as word-internal antecedents, where a considerable part consists of proper names within PropN+N sequences which evoke a specific referent in the discourse corresponding to

that name or noun (e.g. *a **Thurber story** about **his** maid*). While the status of N+N sequences (including PropN+N sequences) in English is controversial, their Swedish counterparts are clear morphological compounds (cf. Section 3.2). Spontaneous cases of anaphora to the proper-name part of Swedish PropN+N compounds, like those in (40), provide therefore a particularly interesting complement to the evidence collected by Ward *et al.* (*ibid.*).

(40) a. *År 2006 är åter ett **Mozart-år**, nämligen **hans** 250:de*
year 2006 is again a:n Mozart-year namely his 250:th
födelsedag.
birthday
'2006 is once again a Mozart year, more precisely his 250th birthday.'
(Dagens Nyheter, Kultur, 22 Jan. 2005)

b. *Upprinnelse-n till den här uppsats-en är en*
souce-the.com to this.com this essay-the.com is a:com
***Östen Dahl+föreläsning**, som **han** höll vid SLING i Uppsala 2003.*
Östen Dahl+lecture that he held at SLING in Uppsala 2003
'This essay originated in an Östen Dahl lecture that he gave at SLING in Uppsala during the spring 2003.' (Eliza Kajanus p.c. 2005)

There can be different interpretations of examples such as (37) and (40). Most often they are simply ignored in those theoretical frameworks which find them difficult to accommodate. A notable exception is Wunderlich (1986) who discusses some such cases for German (e.g. *Was **Picasso**-Fans so alles veranstalten, wenn sie **ihn** verehren*.

‘All those things that *Picasso*-fans do when they adore *him’*). However, while acknowledging their existence he explains them away as being pragmatically conditioned and hence not as threatening the assumption that word structure is essentially autonomous with regard to syntax. A related way of dealing with them is to assume a bridging inference here instead of genuine referentiality of the adnominal, as suggested to us by various colleagues (Joan Bresnan and Gerhard Jäger, both p.c.). While this is certainly possible, there is no way of deciding empirically whether the antecedent to the anaphor is directly evoked or via a bridging inference, with the consequence that we either have to take examples like (37) and (40) seriously, or to give up accessibility to anaphora as tests for referentiality altogether.

We are inclined to opt for the first conclusion and accept Ward *et al*.’s argument (1991) that anaphor to parts of words is fully grammatical, but is governed by independently motivated pragmatic principles, primarily, by the degree of “the accessibility of the discourse entity which is evoked by the word-internal element and to which the anaphor is used to refer” (*ibid*.: 439). In a series of careful reading and comprehension experiments Ward *et al*. (1991) show that referents that are overall topical in a text are highly accessible for subsequent anaphora, independent of their syntactic position.[17] Significantly, the first part in common-noun N+N sequences can normally be antecedent to generic anaphora (41a) and only exceptionally by specific referential anaphora (41b), as opposed to the first part in PropN+N sequences.

(41) a. …the only way to solve this *homeless problem*, say those who work with *them*

b. *Museum visitors* can see through *its* big windows (Ward *et al*.: 1991: 469)

We take this as an additional argument in favour of treating the first part of PropN+N sequences as **individual-referring**. In other words, *Bush* is not only referential in *Bush's administration* but also in *(the) Bush administration*; both relate the administration to a specific person, Bush.

At the same time, there is, however, evidence that Bush is less salient, topical or *foregrounded* in the N+N sequence (*the) Bush administration* than in a corresponding prenominal possessive NP (*Bush's administration*).[18] In a little case study we analysed the first 50 hits for *Bush's administration* and *the Bush administration*, respectively.[19] We have excluded constructions with complex nouns, such as e.g. *George Bush, President Bush, or Mr. Bush*, which are normally avoided in N+N sequences, but are quite frequent in prenominal possessive NPs. We then counted how often *Bush* and *administration* are mentioned in the immediate context, within a range of 30 words before and after the hit, either by a full expression (e.g. by *Bush* or *the president* vs. *the administration*) or by a pronoun (*he* vs. *they* or *it*). The results are given in Figure 3. Figure 4 reports on a similar little study for the two comparable expressions, *Blairs regering* 'Blair's government' and *Blairregeringen* 'the Blair government' in Swedish. Given that Swedish is significantly less represented on the web than English, the overall number of hits for each of the two is relatively low, 24 for *Blairs regering* and 37 for *Blairregeringen*.

####INSERT FIGURES 3 AND 4 HERE ###

Both studies show that it is far more likely for the referent of the proper noun to be mentioned or referred to in the immediate and / or in the subsequent context if (s)he is encoded in the determiner possessive NP (*Bush's administration*, as in 42) than in the PropN+N sequence (*the Bush administration*, as in 27).

(42) Perhaps the most unfortunate aspect of *Bush's administration*, however, has been *his* political manipulation of the Sept. 11 terrorist attacks to sponsor legislation wholly against the spirit of the Constitution and the civil liberties it guarantees. (www.dailycardinal.com/news/2004/11/01/Opinion/staff.Opinion.Daily.Cardinal.Endorsements-788335.shtml)

The findings of our little study, which are basically in accordance with the conclusions in Ward *et al*. (1991), complement it in one important respect. We show that the choice itself of a PropN+N sequence signals the **relatively low topicality** of the PropN's referent, and this is then further reflected in its **relatively low degree of referential accessibility.**

4.2.3 Proper-noun adnominals as semantically 'mixed constructions'

Coming back to the main issue of this section, the question about the function of the proper-name adnominal in PropN+N sequences: in our opinion, referentiality of the proper-name adnominals in such cases as *Bush administration* and *Picasso picture*

underlies their ability to **restrict the reference** of the head noun. However, in contrast to the determiner genitives in the corresponding expressions *Bush's administration* and *Picasso's picture*, this restriction does not necessarily lead to **unique reference**. In this behaviour, the first part of PropN+N sequences is fairly similar to '*of +NP'*-phrases in English, as in *(a/the) picture of Picasso*, or to possessors in languages without possessor-article incompatibility, as in Italian *(una / la) mia casa* '(a/the) my house'. In all these cases, there are still additional possibilities or requirements to complement restricted reference with explicit markers of definite and indefinite reference. The division of labour between the article and the proper-name adnominal varies, though, from case to case. Thus, one and the same political leader is normally given time and occasion for standing behind one, or very rarely two or three state administrations or governments. As a result, the sets corresponding to *Bush administration* and *Blairregering* 'Blair government' have, in the default case, only one or very few instances. Consequently, *Bush administration* and *Blairregering* are predominantly used for unique reference, their first part would be normally sufficient for reference-restricting, and the definite article is functionally fairly redundant. In contrast to this, since one and the same painter – and in particular Picasso – normally 'stands behind' many paintings, the set of *Picasso paintings* covers many instances and shows the common nominal oppositions in definiteness and number (in fact, *Picasso painting* occurs very often with indefinite articles and in the plural).

On the other hand, PropN+N sequences show a tendency to function as **a label for a category of its own**, with its own characteristic properties, similar to N+N sequences with common-noun adnominals, such as *puppy toy*. It seems that this latter property in particular underlies the existence of (at least many) PropN+N sequences with proper

name as the first component. *A Picasso painting*, or *en Picassotavla* belongs to a particular category, type, kind of painting with properties of its own. This category is, obviously, related to Picasso, but its own properties can occasionally become more important than the original link to him, which justifies such examples as *Måla din egen Picassotavla*! 'Paint your own Picasso painting', and emphasizes the **classifying function** of the proper-name adnominal.

4.2.4 Synopsis

To conclude, the proper-name adnominal in PropN+N sequences such as *the Bush administration* specifies both whose administration it is – and has a reference-restricting function – as well as what type of administration it is – and has a classifying function. That is, such constructions are semantically *in-between* typical determiner and typical classifying constructions, but morphosyntactically pattern with the typical classifying N+N sequences. They provide thus a nice case of a 'clash' between typical function – form correspondence as outlined Table 1. Because of their semantic in-betweenness such PropN+N sequences may come to vary with a corresponding s-genitive construction. All this provides evidence for the fuzzy boundary between reference-restriction and classification.

4.3 Onomastic genitive constructions: constructional variation and mixed constructions in diachrony and synchrony

According to Taylor (1996: 296) onomastic genitive constructions "refer to a unique entity, or unique kind of entity" named after a certain person that is encoded by a proper-noun possessor, as in (43).

(43) Parkinson's disease, Adam's apple, Beethoven's Ninth, St. Valentine's day

As Taylor (*ibid*: 295-297) points out, onomastic genitive constructions differ from determiner *s*-genitive constructions to the extent that they express a conventionalized meaning, **naming an object** rather than **identifying it via a specific referent**. *Parkinson's disease* is a certain type of disease named after a certain Parkinson rather than the disease of a person called Parkinson, and *Adam's apple* is not an apple belonging to Adam but is the name of a body part. The possessor here is not necessarily "a cognitively accessible entity", as, unlike in *John's book*, we do not need to know who Parkinson or Adam is to identify the disease or the body part; we just need to know the conventional pairing of the two nouns. The distinction between a possessor interpretation and an onomastic interpretation comes out very well in the expression *Beethoven's Tenth*, which refers to Brahms' 1st symphony (we are grateful to Andrew Spencer for this example). Onomastic genitive constructions do not form a homogeneous class, but are rather situated on the continuum between determiner *s*-genitive and classifying *s*-genitive constructions and exhibit to different degrees properties of both these types of constructions. Taylor (*ibid*.: 297) predicts that "it ought to be possible for a given expression to move along the continuum, in the process of conventionalization". A few pages later, he further extends the right part of the continuum by adding classifying N+N sequences to the right end of the continuum and suggests that there is a lexicalization pathway from determiner *s*-genitive constructions to N+N sequences. Although he gives several nice examples illustrating partial pathways along the continuum, none of them would cover the whole continuum.

In the following we will use the example of *Beethoven's Ninth* to demonstrate that some expressions can in fact cover the whole range from determiner *s*-genitive

constructions to N+N sequences, in accordance with Taylor's prediction. *Beethoven's Ninth* names a certain piece of music, i.e. has a conventionalized meaning,[20] but is, according to Taylor, close to the determiner end of his scale. In the examples below this expression has all the morphosyntactic properties of a determiner *s*-genitive construction: the possessor (typically) does not co-occur with articles (44a), premodifiers of the head may precede immediately the head (44b), and the possessor NP can serve as an antecedent to the anaphora *his*, being thus clearly referential (44c). [0]

(44) a. *the Beethoven's Ninth

b. Beethoven's famous Ninth

c. Beethoven's Ninth is *his* most famous symphony.

However, *Beethoven's Ninth* may sometimes have the status of a classifying *s*-genitive construction, as the possessor can occasionally co-occur with an initial article (45a) and an adjectival modifier to the head may precede the possessor (45b).[21]

(45) a. In addition, I have sung in the chorus for *the Beethoven's Ninth* onstage with the Minnesota Symphony Orchestra. (www.ags.uci.edu/~bchart/about/)

b. The Reno Philharmonic's *grand Beethoven's Ninth* - a terrific close to a terrific season. (www.nevada-events.net/cgi-bin/ cal_manager2/review305.shtml)

Various examples like those in (45) can be found on the web. It seems that there is a slight shift in the meaning in that the classifying uses of *Beethoven's Ninth* usually refer to a performance of the symphony rather than the symphony itself, as well as to a type of performance, often associated with a particular performer. There is even evidence for its use as a N+N sequence, as in (46); example (46b) with *B9* illustrates presumably the upper end of the reduction process that the expression can go through.[22]

(46) a. has numerous references to great works of his time; two that you may very well recognize on first hearing are references to *the Beethoven Ninth* and Brahms ... (www.juilliard.edu/update/journal/j_articles213.html)

b. Perhaps I wasn't in the right mood - although I thought I was - but I found *last night's B9* rather routine and unmoving. (www.promenaders.freeserve.co.uk/2000/Prom0069.html)

The data above show that onomastic genitive constructions such as *Beethoven's Ninth* can cover the whole range of the spectrum from determiner *s*-genitive constructions over classifying *s*-genitive constructions to N+N sequences (fig. 5), with the meaning becoming more restricted further down the classifying end. This supports Taylor's assumption about a lexicalization pathway from determiner *s*-genitive constructions to N+N sequences, whereas the synchronic existence of a number of variants of the same expression may be taken as a case of 'layering' in the sense of Hopper (1991).

INSERT FIGURE 5 HERE

Swedish presents a parallel case here, even though the non-determiner variants are much less conventionalised. *Beethoven's Ninth* is normally expressed by a normal possessive NP with a determiner genitive, which can be followed by an adjectival adnominal in the definite form (47). The genitive can occasionally (but rarely!) function as a non-determiner genitive, e.g. with an indefinite article and an adjective in the indefinite form preceding the genitive (48a) or preceded by another, determiner genitive (48b). Occasionally the N+N compound is used (49).

(47) ***Beethoven-s*** *berömd-a* ***Nia***
'Beethoven-GEN famous-DEF Nine'
'Beethoven's famous Ninth'

(48) a. *en* *storslagen* ***Beethoven-s*** ***nia***
a:COM majestatic:COM Beethoven-GEN nine
'a majestatic Beethoven's Ninth'

b. *Det är milsvida skillnad mellan t ex* ***George Szells***
there is miles.long difference between e.g. George Szell-GEN
Beethoven-s ***nia*** *i Cleveland från 1964 och* ***Furtwänglers***
Beethoven-GEN nine in Cleveland from 1964 and Furtwängler-GEN
i Berlin från 1942.
in Berlin from 1942.
'There is an enormous difference between e.g. *George Szell's Beethoven's Ninth* in Cleveland from 1964 and *Furtwängler's* in Berlin from 1942.'

(49) *När nu Lawrence Renes följde Alan Gilberts exempel och presenterade* ***en Beethovennia*** *på strax under timmen var det inte främst tempot som störde*.
'When Lawrence Renes now followed Alan Gilbert's example and presented *a Beethoven Ninth* in just less than an hour, it was not primarily the tempo that was disturbing.'

Swedish differs from English in lacking classifier genitives, which shows that onomastic genitives can move away from determiner genitives on their own. In addition, in such uses they show the same selective combinability with articles as inserted genitives (Section 4.1.2), combining with preposed indefinite, but not with postposed definite ones.

Within the framework of Cognitive Grammar, Taylor (1996) has already argued persuasively for the existence of fuzzy boundaries between the two construction types of *s*-genitive constructions and N+N sequences, where onomastic genitives are clear 'mixed' construction types. Various expressions (construction tokens) may exihibit – to various degrees – properties of both determiner *s*-genitive constructions and classifying *s*-genitive constructions, and via a process of conventionalization one construction type may shift into another one, ultimately even into a N+N sequence. We argue, in addition, that the very existence of such **'mixed' constructions**, together with constructional variation, also demonstrates fuzziness of the borderline between the functions of reference-restriction (determination) and classification. The factors at play here, again, are the tension between identification of a specific entity via another specific entity (e.g., a concrete person who, in one or another important way, is responsible for it) and construing it as a category / entity of its own.

5 Discussion of results and conclusion

In this paper we have taken as a point of departure English and Swedish constructions in which nominal adnominals, i.e., adnominals based on nominals (nouns, noun phrases and things in-between) are typically associated with different functions: the reference-restricting (determiner) function is typically conveyed by the *s*-genitive adnominal in the determiner *s*-genitive construction (*John's toy*), whereas the classifying function is typically conveyed by the first part in the N+N sequence (*puppy toy*). We have then presented a number of constructions that in various ways provide evidence for the fuzziness of the borderline between reference-restriction and non-reference restriction, summarized in Table 6 below.

###INSERT TABLE 6 HERE ###

Given our definition of 'gradience' in Section 3 above, these constructions constitute cases which, in various ways, are semantically in-between non-reference restriction (determination) and non-reference restriction (qualification and classification, respectively). This semantic 'squishiness' shows morphosyntactically in two ways:

First, in one group the semantic in-between status goes hand in hand with mixed morphosyntactic properties, with the constructions sharing properties of the construction types that typically encode the semantic functions they share (see Swedish inserted genitives, and onomastic genitives in English and Swedish).

Second, in the other group the semantic in-between status does not show morphosyntactically, but rather one of the constructions typically encoding reference-restriction or non-reference restriction is chosen to encode this semantically indeterminate meaning. This is most clearly the case for PropN+N sequences. The case is similar with onomastic genitives, though in this case, the mixed semantic status goes also hand in hand with shifting constructional assignments.

What all these cases have in common is that they all exhibit a clash in the typical mapping of semantic function to construction type as illustrated in Figure 1 above. A further diagnostics for the semantic in-betweenness of these constructions is the fact that they can enter into various relations of constructional variation. We have identified several cases where constructional variation is particularly likely, e.g., between classification of a singular indefinite entity and reference to an entity via a generic or non-specific possessor (*a [baby's highchair]* vs. *[a baby]'s highchair*), or between 'classification' of a unique entity via a proper name and reference to it via the proper-name referent (*the Bush administration* vs. *Bush's administration*). Likewise, some expressions can be systematically ambiguous between two readings, as in the case of *(a)n X's Y* constructions such as *a solicitor's office*.

Now, given all this evidence for gradience of nominal determination, what are the implications for linguistic theory? Are we to give up clear-cut categories of determination and classification or should we treat all these cases as 'exceptions' to otherwise clear categories?[23]

Note first of all, that ignoring these overlaps between determination and classification on the one hand, and *s*-genitives and N+N sequences on the other, obscures the fact that the two indeed share properties and are thus related, and this

relatedness shows elsewhere, as for example in diachrony. As has been noted by Rosenbach (2004), there are some interesting parallels in the history of English between *s*-genitives and N+N sequences, in that their development has run in tandem.[24] Allowing for overlaps between these constructions may thus help us understand their parallel diachronic development.

Even more important is the fact that the cases discussed in this paper are not erratic 'exceptions' restricted to one or two languages, but are quite regular and productive. The phenomena discussed here have numerous cross-linguistic parallels. For instance, compounds with proper names as the adnominal part are frequently used in both Hungarian and Turkish. Many languages, e.g. Lithuanian, Georgian, the Daghestanian languages, systematically use the same or almost the same construction (e.g., head nominal + adnominal in the genitive case) both for possession, for classification and for qualification, cf. Koptjevskaja-Tamm (2005) for numerous examples.

Also, there are further constructions that provide evidence for the indeterminate status of nominal determination vis-à-vis the other functions in the noun phrase. Breban and Davidse (2003) discuss yet another case of constructional polysemy in the NP. They show how comparative adjectives (e.g. *same, similar, other*) systematically vary in expressing identifying (i.e. determiner), qualifying and classifying function. This indicates that the 'squishes' discussed in the present paper are not idiosyncratic for the constructions investigated but also show in other constructions.

The notion of 'gradience', previously restricted to functional approaches to linguistics, is currently experiencing some sort of renaissance. And while the notion of 'gradience' or 'continua' used to have a flavour of fuzziness in itself, there are now ways of making the notion more explicit. Today, even formal approaches are allowing

for gradience in grammar, as e.g. witnessed in recent probabilistic approaches to grammar (see e.g. Bod *et al*. 2003 for an overview).[25] Close in spirit to our approach to constructional gradience or fuzziness are recent approaches to categorial and constructional 'mismatches' (e.g. Francis and Michaelis 2003; Yuasa 2005), where 'mismatches' constitute non-protoypical alignments of syntactic and semantic representations (though there may be differences regarding the nature of the relation between syntax and semantics between these approaches and ours).

Non-formal approaches may acknowledge gradience without doing away with categories, by introducing the notion of a 'turning point' (cf. e.g. Seiler 1978) or 'categorial cut-off point' (cf. Aarts 2004). That is, here the idea is that elements can be more or less prototypical members of a form class/category, but that there is generally a certain cut-off point as to whether something is perceived of as being an element of *A* rather than *B*. However, this raises the question of criteria for assigning class-membership. In Aarts' (2004) approach it is, for example, morphosyntactic criteria that determine class-membership. Transferred to the topic of the present paper, the question accordingly is what criteria there are to distinguish determination from classification. If it is morphosyntactic criteria only (as in Aarts' approach), then for most of the cases discussed the two functions remain distinct (though notice the mixed morphosyntactic properties of some onomastic genitives, such as *Parkinson's disease* and the inserted genitives in Swedish). Furthermore, under such an approach the proper-noun adnominals in PropN+N sequences with determiner function discussed in this paper (*the Bush administration*) must be regarded as classifiers, as they meet all morphosyntactic criteria for classifiers. This, however, would obscure the fact that semantically they also have determiner function. We don't propose to do away with the categories of

determination and classification but rather suggest to keep them as useful heuristics to describe the clear-cut cases, while still being aware that they are idealizations pertaining to prototypical situations.[26] Allowing for the inclusion of 'fuzzy' data that demonstrates the overlap between both functions will enrich our understanding of the nature of nominal determination as opposed to nominal classification. It's precisely the fuzzy cases that teach us something about what makes the prototypical cases prototypical. This, however, is in principle independent of the question of categoricity vs. gradience; for the time being we remain agnostic on that, asking questions instead of giving answers.

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[1] In Swedish, nouns belong to one of the two genders – common (COM) and neutral (N) – that are reflected in agreement of adjectives and determiners.

[2] On the question of the (in)definiteness of possessive NPs with indefinite *s*-possessors, see e.g. Taylor (1996:§7), Lyons (1999:22-26) and the references there.

[3] This does not mean that classification is the *only* function that N+N sequences can express in English; essentially, we are primarily concerned here with endocentric N+N sequences having modifier + head

structure. For an in-depth study of the various (and multiple) semantic relations that can be expressed in a N+N sequence in English see e.g. Warren (1978).

[4] There is a continuing debate as to whether N+N sequences in English should be regarded as morphological compounds or syntactic phrases, the references are too numerous to be listed here (cf. e.g. Payne and Huddleston 2002: §14.4 and the references there). For the purpose of this paper we remain agnostic about this issue, the important aspect being the function of the adnominal rather than its morphosyntactic status. Note also that we are using the terms 'nominal adnominal' throughout this paper, no matter whether it is part of a syntactic construction (as in prenominal possessive NPs) or part of a morphological compound (as in Swedish N+N sequences).

[5] Other typical classifiers are denominal adjectives such as *national* or *American* (cf. e.g. Levi 1978 for an in-depth analysis). But denotation-restrictive functions can also be conveyed by non-derived adjectival adnominals, which build on property words par excellence, for instance, in *old book* or *yellow cat*, where the classes of possible denotata for *book* and *cat* are restricted to particular subsets.

[6] We are adopting here the standard view in studies on syntactic variation that the constructions need to share the same propositional meaning to be regarded as variants. This means that variants need to be truth-conditionally equivalent but do not need to share any aspect of meaning, so that the two varying constructions may well differ in, for example, pragmatic meaning; see e.g. Rosenbach (2002:22-23) for discussion. Accordingly, we consider two constructions whose adnominals share the same semantic function (with respect to reference restriction, classification or qualification) as being truth-conditionally equivalent.

[7] Terminology is extremely variable here. Quirk *et al.* (1985:327) distinguish between 'genitives as determiner' and 'genitives as modifier'; Biber *et al.* (1999: 294-295) between 'specifying genitives' and 'classifying genitives', while Payne and Huddleston (2002: §16.3) talk about 'subject-determiner genitive' and 'attributive genitive'. It is also subject to discussion whether classifying *s*-genitive constructions are syntactic phrases or (possessive) compounds, cf., e.g. Taylor (1996) and the references there. For an in-depth treatment of English classifying *s*-genitive constructions, see Rosenbach (2006); for Swedish non-determiner *s*-genitive constructions see Koptjevskaja-Tamm (2003), and for a survey of

non-reference restricting genitive constructions – or constructions denoting ‘non-anchoring relations’ – in various European languages see Koptjevskaja-Tamm (2004).

[8] Since Swedish has several different classes of non-determiner genitives, we will keep the traditional Swedish terminology (*inskjutna genitiver* ‘inserted genitives’) for talking about this particular class (for details see Koptjevskaja-Tamm 2003).

[9] This is the standard situation. It is, however, occasionally possible to either premodify the classifying *s*-genitive, as in *an [[old people]’s home*, or to have a modifier intervene between the *s*-genitive and the head, as in *his [[old man]’s soft belly]]*; see Rosenbach (2006) for discussion. For the purposes of the present paper we will ignore such exceptions, however.

[10] The sometimes alleged unproductivity of classifying genitives is a complicated issue, to a large extent depending on what is meant by productivity. Such constructions can, on the whole, be fairly freely coined, see Rosenbach (2006) for further discussion.

[11] This is slightly simplified. As Rosenbach’s (forthcoming) study shows, classifying *s*-genitive constructions and N+N sequences are, roughly, in complementary distribution in that the former prefer to occur with human adnominals while the latter preferably occur with inanimate adnominals. In doing so, classifying *s*-genitives clearly pattern like determiner *s*-genitives with respect to their preference for human possessors/adnominals (for the latter see e.g. Rosenbach 2002 and references given therein), though in every other respect they are semantically and morphosyntactically like N+N sequences.

[12] The terminology here is very confusing, but for our purposes it will suffice to define *specificity* in terms of denoting a particular entity [+ specific] or not [–specific], which, roughly, corresponds to the distinction between **referential** and **non-referential**, while **a generic NP** refers to an entire class (or kind) or is used to express generalizations about a class as a whole (cf. e.g. Lyons 1999: 165–198). Note that we will also consider indefinite singulars as being potentially generic (see also Behrens 2005, but contra Krifka *et al.* 1995 and Lyons 1999:185-187).

[13] Note that in contrast to our analysis Taylor (1996: 299) explicitly argues against the view that such constructions are ambiguous. Based on an analysis of the example ‘a man’s skull’ he rather argues that it is “somewhat marginal with respect to both categories [i.e. a determiner *s*-genitive and a classifying *s*-genitive construction, MKT/AR]. That is, he analyses such constructions in terms of what we call ‘mixed’

constructions. This may be true for the specific example he discusses but we maintain that there is also a genuine ambiguity in many instances, due to the ability of referents to be perceived of simultaneously as specfic entitites as well as representatives of their type.

[14] See also Rosenbach (2006: 104-105) for providing historical evidence from Old English showing that the ambiguity/vagueness in these constructions cannot be attributed to the structural make-up of present-day English but must be of a conceptual type.

[15] According to Rosenbach (2005) this type of variation is a relatively recent development in English, which started in the late 19th/early 20th century, due to the fact that N+N sequences with a human proper noun adnominal did not occur before that period.

[16] As in other N+N sequences it is of course possible for another classifying element (adjective or noun) to directly premodify the head noun, see e.g. the *Bush defence budget*. What matters for the present argumentation is that no **qualifying** premodifier can intervene between the proper noun and the head noun, indicating that the proper-noun adnominal, like other noun modifiers, is in a position following typical qualifiers.

[17] For a more detailed description of the experiments see also McKoon *et al.* (1993).

[18] We are using the term 'topic' here in the sense of referential givenness and not in the relational sense (as contrasting topic vs. comment); cf. e.g. Gundel and Fretheim (2004: 176-178) for this distinction.

[19] For English, we used the WebCorp software (http://www.webcorp.org.uk/), a software specifically designed for conducting linguistic analyses on the web (see also Renouf 2003 for more detailed information on this tool).

[20] *Beethoven's Ninth* can combine both the original possessive meaning of authorship and the conventionalized name for a certain symphony.

[21] Strictly speaking, onomastic genitive constructions are not classifying in the same way as classifying *s*-genitive constructions or N+N sequences. Onomastic genitive constructions are special in that here a proper noun functions as a classifier, restricting the type by simply connecting it to a special individual for which the whole term stands. There is thus no obvious relation between *Parkinson* and *disease* except for the fact that the disease was named (quite arbitrarily) after a certain person Parkinson (the doctor who discovered the disease). It is also for this reason that the meaning of the 'end-product' of such coinages,

i.e. the onomastic genitive construction, needs to be learned like the meaning of a lexeme, and that onomastic genitive constructions are generally listed in dictionaires (e.g. *Parkinson's disease* and *Adam's apple* are both listed in the *Oxford English Dictionary*), whereas N+N sequences such as *cat food* are usually not (unless they are idiomatic). The class of onomastic genitive constructions is in itself very heterogeneous, with some expressions denoting a specific entity (e.g. *Halley's comet* and *Beethoven's Ninth*) and hence being closer to reference restriction, while others such as *Parkinson's disease* more clearly denote a type. It is beyond the scope of the present paper to do full justice to all these subtle (and highly interesting!) differences. Therefore, simplifying somewhat, here we consider the basic function of the *s*-possessor as classifying, as it generally restricts the type of the head noun and the 'end-product' is a noun/nominal and not an NP, while still keeping in mind that they constitute a rather special (and marginal) class of classifiers, which in itself is very heterogeneous.

[22] Cf. further examples provided by Andrew Spencer: *I've never liked Klemperer's Bruckner 8,* or *Elliot Gardner's Monteverdi Vespers remains a benchmark* (single recording/performance) vs. *Elliot Gardner's Monteverdi Vespers is always beautifully balanced* (generic performance). As Andrew Spencer suggests, there is a difficulty in getting reliable data on this from the internet because we're dealing with the kind of colloquial jargon that professional musicians use. The same problem arises in connection with the Swedish constructions discussed at the end of this section.

[23] This actually relates to current debates in linguistics as to how to accommodate 'exceptions' in linguistic theory. See, for example, the workshop on *Expecting the Unexpected – Exceptions in Grammar*, held at the DGfS-Meeting in Cologne, February 2005, where this question was extensively discussed.

[24] Both constructions have become more frequent and have started to allow phrasal adnominals from late Middle English onwards, ([*the king of England]'s daughter*; *a [pie in the sky] promise*).

[25] For morphosyntax see e.g. the stochastic-grammar approach by Bresnan and colleagues (e.g. Bresnan and Aissen 2002 for a programmatic sketch), where variation is taken to reflect gradience in grammar. Or see Keller (2000) for a formal treatment of gradient grammaticality judgements.

[26] Alternatively, Rosenbach (2005, 2006) proposes to decompose the semantic functions of determination and classification into a bundle of semantic features (such as the restrictiveness, animacy, and referentiality of the nominal adnominal), thereby revealing both similarities and differences between

them, as well as in-between states. However, this approach also cannot fully account for all the fuzziness observed but only parts of it.

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