

**Partitive Constructions and Partitive Elements  
Within and Across Language Borders in Europe**

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# **Pseudo-Partitives and Individuation**

## **A Study on Adnominal Genitives in German**

Alexander Pfaff

University of Stuttgart, Germany

**Abstract** Pseudo-partitives in German do not normally allow genitive marking of the inner nominal, but in the presence of an adjective this is possible. But even then, it is usually a marked option. It has been suggested that genitive marking is the preferred option if the inner nominal is plural. This is partly true, but we adduce additional observations suggesting that there are also semantic conditions making reference to the degree of individuation of the referent of the inner nominal: genitive marking is preferred if the inner nominal denotes a plurality of referents that are high on the individuation scale.

**Keywords** Pseudo-partitive. Individuation. Genitive. German. Adjectival inflection.

**Summary** 1 Introduction. – 2 Genitives and Pseudo-Partitives. – 2.1 The Genitive Problem. – 2.2 Genitive or Not? – 3 Data Assessment and Reflections. – 3.1 Practical Considerations. – 3.2 The Survey. – 3.3 Some Further Comments. – 4 Theoretical Ramifications. – 5 Concluding Remarks.



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## 1 Introduction

Simple pseudo-partitives in German involve juxtaposition of two nominals, the classifier/measure noun and the inner nominal.<sup>1</sup> Genitive marking on the inner nominal is not normally an option:

- (1) a. *ein Liter / Glas Wein*  
a liter / glass wine  
'a liter / glass of wine'  
b. *ein Kilo / Sack Karotten*  
a kilo / sack carrots  
'a kilo / sack of carrots'  
c. \**ein Liter / Glas Wein-es*  
a liter / glass wine-GEN

In the presence of an adjective, however, genitive marking is possible, but even here it is not mandatory. Instead we observe a competition of various constellations. For simplicity, we will only focus on the aspect most relevant here – the presence/absence of genitive marking:

- (2) a. *ein Liter französisch-en Wein-es*  
a liter French-WK.GEN wine-GEN  
b. *ein Liter französisch-er Wein*  
a liter French-NOM.SG wine  
'a liter of French wine'

For the most part, it would seem as though this is a matter of style/register; to a great extent, use of the genitive is a feature of formal/written language. This would explain why the genitive is not normally used in pseudo-partitives (even when possible), and dispreferred when compared to alternative constructions. A recent study by Zimmer (2015) argues that, at least with plural inner nominals, the genitive is actually the preferred option. We will argue here that this

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We would like to thank two anonymous reviewers for valuable comments and constructive feedback on a previous draft, which helped improve the quality of this article considerably. All remaining shortcomings are ours.

One point deserves mentioning: we have not been able to incorporate all suggestions by the reviewers, notably those concerning aspects of the methodology. The reason is that the study underlying the discussion was a mere preliminary survey intended to get a first impression of a range of phenomena. It does not fully comply with the standards for experiment design, but cannot be modified after the fact, either. We will incorporate the suggestions unaddressed here in a follow-up study (in preparation).

**1** We adopt the term “inner nominal” from Falco, Zamparelli 2019, and analogously use “outer noun/nominal” for the classifier/measure noun.

observation is a step in the right direction, but also that it is not the context PLURAL per se that favours the genitive. We will suggest that the genitive appears to make a semantic contribution in that it has an individuation effect, or, conversely, that the genitive is the preferred option *iff* the referent of the inner nominal is high on the scale of individuation, or construed as a plurality of individuals.

This claim, if true, could have far-reaching consequences for the analysis of pseudo-partitives or even genitive noun phrases more broadly in Modern German. However, the data situation is not as clear as suggested above, and it is far from obvious to what extent other native speakers share this intuition. The problem lies in the status of the genitive; semantic and stylistic considerations overlap, and with individual examples it is not clear at all how to evaluate/judge the genitive.

The article is structured as follows. In Section 2, we will discuss the (morphosyntactic) licensing conditions and use of (adnominal) genitives in Modern German. We will then look specifically at genitives in pseudo-partitives and suggest that the genitive has an individuation effect on the referent of the inner nominal. In Section 3, we will discuss a preliminary survey that, to some extent, corroborates this underlying intuition, but also offer some critical reflection and comments. Section 4 briefly addresses some theoretical concerns, and Section 5 concludes.

## 2 Genitives and Pseudo-Partitives

Even though, technically, Modern German possesses morphological genitive marking for certain items, its precise status as an element of German grammar is rather elusive. To a great extent, the genitive is on the retreat in (spoken) German, its function being taken over by the preposition *von*:

- (3) a. *das Auto*        *von*    *mein-em* *Lehrer*  
the car            from    my-DAT    teacher  
‘my teacher’s car’
- b. *die Schwester* *von*    *mein-em* *Lehrer*  
the sister        from    my-DAT    teacher  
‘my teacher’s sister’
- c. *manche*        *von*    *d-en*        *Äpfel-n*  
some            from    the-DAT    apples-DAT  
‘some of the apples’

Several German dialects have completely lost a morphological genitive, but also in Standard German, which does still possess the genitive, use of the genitive is often associated with a higher register or

written language. Colloquially, the prepositional paraphrase is typically preferred. Setting aside this particular issue, there are some peculiar morphological and morpho-syntactic aspects to consider.

In general, the exponence of nominal inflection is rather deficient, but in contexts such as possession, kinship, and (proper) partitivity, morphological genitive marking on the dependent noun phrase (~ inner nominal) is a possibility; compare (3) and (4):

- (4) a. *das Auto*      *d-es*      *Lehrer-s*  
          the car      the-GEN      teacher-GEN  
          ‘the teacher’s car’  
       b. *die Schwester* *d-es*      *Lehrer-s*  
          the sister      the-GEN      teacher-GEN  
          ‘the teacher’s sister’  
       c. *manche*      *d-er*      *Äpfel*  
          some      the-GEN.PL      apples  
          ‘some of the apples’

Run-of-the-mill pseudo-partitive constructions, on the other hand, usually comprise a juxtaposition of two nouns without any dependency marking, notably without genitive marking on the inner nominal:<sup>2</sup>

- (5) a. *zwei Liter Wein*      b. *\*zwei Liter Wein-(e)s*  
       two liter wine      two liter wine-GEN  
       ‘two liters of wine’

This is not, however, the whole story because, in the presence of an adjective, it is possible to mark the inner nominal with a genitive. In Section 2.1, we first address the licensing of adnominal genitives in Modern German, and in Section 2.2, we will look at some semantic consequences.

**2** In older stages of German, the genitive was regularly used in such contexts:

- (i) a. *zua flasgun uuin-es*      (Old High German)  
       two bottles wine-gen  
       DDD-AD-Kleinere\_Althochdeutsche\_Denkmäler\_1.2 > BR1\_BaslerRezept1  
       b. *zehenzug mezzo*      *ol-es*  
       a hundred measure      oil-gen  
       DDD-AD-Tatian\_1.2 > T\_Tat108

These examples are retrieved from the *Referenzkorpus Altdeutsch* (Reference Corpus of Old German) via the ANNIS search interface at <https://korpling.german.hu-berlin.de/annis3/ddd>. Zimmer (2015, § 2) gives a brief overview of the decline of the partitive genitive from Middle High German onwards.

## 2.1 The Genitive Problem

While masculine and neuter (= [-FEM]) nouns have a genitive singular exponent, feminine nouns do not display any case marking at all. The [-FEM.SG] exponent *-(e)s* is associated with strong nouns, where the qualifier ‘strong’ makes reference to an inflectional class (diachronically, a family of inflectional classes). Besides, there is a class of ‘weak’ masculine nouns that display a general oblique-case marker *-(e)n*. Plural nouns do not have a genitive exponent at all.<sup>3</sup>

Adjectives, on the other hand, have two kinds of inflection; they can inflect both strongly and weakly. This is a property of the category A, rather than a lexical property of individual items. It is the morphosyntactic environment that determines which inflection is chosen: if an (adnominal) adjective is preceded by an inflected determiner, it inflects weakly, if it is preceded by a zero element, it inflects strongly. However, the adjectival inflection has lost the strong genitive ending *-(e)s* for the [-FEM.SG] forms and uses the weak form instead.<sup>4</sup> Determiners only display the strong inflection. Both adjectives and determiners have a (strong) plural exponent for the genitive.

With these basic facts in place, let us have a closer look at genitive noun phrases. First observe that a genitive noun phrase cannot comprise merely a bare noun (examples are based on Sternefeld 2004, 21):

- (6) *der Geschmack...*  
‘the taste (of)...’
- a. \**Wein-es* (masc, strong; genitive realised = strong genitive)  
wine-GEN (intended: ‘the taste of wine’)
  - b. \**Limonade* (fem; no genitive exponent)  
lemonade (intended: ‘the taste of lemonade’)
  - c. \**Bär-en* (masc, weak; case realised = weak oblique)  
bear-wk (intended: ‘the taste of (a) bear/bear-meat’)

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**3** As an anonymous reviewer points out, nominalised adjectives could be viewed as ‘(apparent) counterexamples’; nominalised adjectives and participles retain the adjectival inflection, and as such, they do have a genitive plural ending (see next paragraph):

- (i) *die Angewohnheit Jugendlich-er*  
the habit youthful-GEN.PL  
‘the habit of teenagers (lit.: young-ones)’

For the purpose of this article, we will disregard deadjectival nouns.

**4** Thus, while *gut-es Wein-es* ‘good-STR.GEN wine-STR.GEN’ was an option until ca. the nineteenth century, Modern German uses *gut-en Wein-es* ‘good-wk wine-STR.GEN’ instead (*Wein* ‘wine’ is masculine).

- d. \**Wüirst-e* (plural; no genitive exponent)  
sausage-PL (intended: ‘the taste of sausages’)

This is a formal property of the genitive per se in that the restriction applies to adnominal genitives at large, regardless of the semantics the relation is to express:<sup>5</sup>

- (7) a. \**ein Glas / ein Liter* *Wein-es*  
a glass / a liter wine-GEN  
b. \**ein Freund* *Wein-es*  
a friend wine-GEN  
c. \**der Verzehr* *Wein-es*  
the consumption wine-GEN

There are two conditions for genitive noun phrases to be licit: (i) the noun has to be accompanied by an inflecting element (adjective, determiner), and (ii) at least one of the inflecting elements involved has to have a strong genitive ending. The latter condition entails that the genitive may be realised only on the noun, cf. (8a)/(11a), only on an adjective/determiner, cf. (9)/(11b), or on two elements simultaneously, cf. (8b). Since, by definition, weak (masculine) nouns have no strong genitive marker and adjectives are defective in the genitive for [-FEM.SG], neither can satisfy condition (ii) and an additional element is required, cf. (10a) vs. (10b):

- der Geschmack...*  
‘the taste (of)...’
- (8) a. *gut-en* *Wein-es* (masc, strong)  
good-WK wine-STR.GEN.SG.-FEM  
‘the taste of good wine’  
b. *dies-es* *Wein-es* (masc, strong)  
this-STR.GEN.SG.-FEM wine-STR.GEN.SG.-FEM  
‘the taste of this wine’

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<sup>5</sup> For comparison: in Icelandic, the genitive cannot be used with pseudo-partitives as in German, see example (i-a) below, cf. (7a), but it is fine with other kinds of semantic relations, as in (i-b-d), cf. (6a) and (7b-c):

- (i) a. \**glas / lítri vín-s* c. *neysla vín-s*  
glass / liter wine-GEN consumption wine-GEN  
b. *vinur vín-s* d. *bragð vín-s*  
friend wine-GEN taste wine-GEN

- |      |    |  |                                  |                          |
|------|----|--|----------------------------------|--------------------------|
| (9)  | a. | <i>frisch-er</i><br>fresh-STR.GEN.SG.FEM | <i>Limonade</i><br>lemonade      | (fem)                    |
|      |    | ‘the taste of fresh lemonade’            |                                  |                          |
|      | b. | <i>dies-er</i><br>these-STR.GEN.PL       | <i>Würst-e</i><br>sausage-PL     | (pl)                     |
|      |    | ‘the taste of these sausages’            |                                  |                          |
|      |    |  |                                  |                          |
| (10) | a. | <i>*gebraten-en</i><br>steaked-WK        | <i>Bär-en</i><br>bear-WK         | (masc, weak)             |
|      | b. | <i>ein-es</i><br>a-STR.GEN.SG.-FEM       | <i>gebraten-en</i><br>steaked-WK | <i>Bär-en</i><br>bear-WK |
|      |    | ‘the taste of a steaked bear’            |                                  |                          |

If conditions (i) and (ii) are satisfied, genitive marking is possible in all kinds of nominal relations, (apparently) regardless of the semantics – including on pseudo-partitives:

- |      |    |  |  |  |
|------|----|--|--|--|
| (11) | a. | <i>ein Freund</i><br>a friend                    | <i>gut-en</i><br>good-WK                 | <i>Wein-es</i><br>wine-STR.GEN.SG.-FEM |
|      | b. | <i>der Verzehr</i><br>the consumption            | <i>lecker-er</i><br>delicious-STR.GEN.PL | <i>Würst-e</i><br>sausage-PL           |
|      | c. | <i>ein Glas / ein Liter</i><br>a glass / a liter | <i>gut-en</i><br>good-WK                 | <i>Wein-es</i><br>wine-STR.GEN.SG.-FEM |

This phenomenon is well known (see e.g. Schachtl 1989; Gallmann 1990; 1996; 1998; Müller 2002; Sternefeld 2004; 2006; Zimmer 2015; see Gallmann 2018 for a recent discussion and some complications), but it is an open question how to best account for it. We will not be concerned with its actual analysis, but rather use it as a backdrop against which we describe another observation. In the following, we will use the gloss GEN for strong genitives (on determiners, adjectives and nouns), and AGR for everything else (weak or non-genitive forms).

## 2.2 Genitive or Not?

It has transpired that pseudo-partitives can involve genitive marking after all, provided the inner nominal is modified by an adjective. Nonetheless, the fact that genitive marking is possible here does not entail that it is mandatory in these contexts. In fact, zero-marking on the noun seems to be the default, even in the presence of an (inflecting) adjective, while the genitive version is stilted and sounds archaic or artificial. The adjective in the non-genitive version tends

to agree in case with the outer nominal (but in gender with the inner nominal), i.e. it displays the case that is assigned to the macro noun phrase by the external context.<sup>6</sup>

- (12) a. *ein Glas kühl-es Bier*  
a glass cool-AGR beer  
(AGR = NEUT.NOM/ACC; *Bier* is neuter)
- b. *ein Glas gut-er/gut-en Wein*  
a glass good-AGR wine  
(AGR = MASC.NOM / MASC.ACC; *Wein* is masculine)
- c. *ein Glas frisch-e Milch*  
a glass fresh-AGR milk  
(AGR = FEM.NOM/ACC; *Milch* is feminine)

We will refer to the two types as AGR and GEN, respectively. In individual cases, the contrast between the AGR and the GEN versions may be perceived as stronger than in others, but largely it seems as though there really is only a stylistic difference – at least, in the singular.

### 2.2.1 Zimmer (2015): Genitives and Plurals?

Zimmer (2015) reports on a study (judgement tasks) on the morpho-syntactic expression of pseudo-partitivity. In particular, he examines the roles of adjectival inflection and (non-) genitive marking.<sup>7</sup> One finding is that the genitive is a marked and dispreferred option in most contexts even though the inner nominal involves an adjective. He suggests, however, that grammatical number makes a difference reporting that genitive marking is clearly the preferred option if the inner nominal is a plural, irrespective of the external case environment.<sup>8</sup> Some examples including the judgement mean are given below (the scale ranges from 6 = perfect to 1 = totally unacceptable):

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<sup>6</sup> Put differently: the outer nominal is opaque to case assignment from outside. While this is largely true for noun phrases in nominative/accusative contexts, there are complications, uncertainties and speaker variation in other case environments; see Zimmer 2015 for discussion and further references.

<sup>7</sup> He looks at a number of alternatives to genitive marking on the inner nominal, e.g. dative or accusative or weak inflection on the adjective (all these are summarised here as AGR), and contrasts those with genitive marking on the adjective (and, where applicable, noun).

<sup>8</sup> “Partitive Genitive werden bei Artangaben im Plural deutlich besser bewertet als bei Artangaben im Singular. Der partitive Genitiv wird unabhängig davon, welcher Kasus vorausgeht, im Plural als sehr gut bewertet” (Zimmer 2015, 15).



(13)	a.	[...] <i>wie ein Rudel hungrig-er</i> like a pack hungry-GEN	<i>Wölfe</i> wolves	4,9
	b.	[...] <i>mit einer Gruppe jung-er</i> with a group young-GEN	<i>Menschen [...]</i> people	5,5
	c.	[...] <i>mit einer Gruppe jung-e/jung-en</i> with a group young-AGR (Zimmer 2015, 15-16)	<i>Menschen[...]</i> people	1,5

This is a rather interesting observation, which implies that the behaviour of plural inner nominals deviates from that of singular ones. But the issue is more complex than that. Zimmer puts emphasis on the formal property PLURAL, but notice that all of his (plural) examples involve living beings (humans and wolves). As we will show in the following, number may be a precondition for a higher acceptability of the genitive in pseudo-partitives, but there appear to be other semantic factors as well.

### 2.2.2 Kinds and Individuation

With the results of Zimmer’s study in mind, consider the following examples:

- (14) *Ich hätte gerne...*  
‘I’d like to have...’
- a. *ein Kilo gelb-e Rüben*  
a kilo yellow-AGR turnips  
‘a kilo of carrots’
- a’ *??ein Kilo gelb-er Rüben*  
a kilo yellow-GEN turnips  
‘a kilo of yellow turnips’
- b. *ein Kilo saur-e Gurken*  
a kilo sour-AGR cucumbers  
‘a kilo of pickled cucumbers’ or: a type of candy (‘Sour Pickles’)
- b’ *??ein Kilo saur-er Gurken*  
a kilo sour-GEN cucumbers  
‘a kilo of sour cucumbers’

Here the genitive is strongly dispreferred in spite of the plural context. This suggests that Zimmer’s observation reported above does not generalise across all kinds of inner nominals. In addition, we observe two semantic contrasts. For one thing, notice that adjective and noun potentially constitute an idiomatic phrase denoting a

type of food: ‘yellow turnips’ means carrots in several German dialects, and ‘sour cucumbers’ denote either pickled cucumbers or a type of candy. This idiomatic reading is only preserved in the AGR type, whereas the GEN type produces a compositional, i.e. literal interpretation. Thus, (14a’) is literally about turnips that are yellow, and (14b’) about cucumbers that are sour.<sup>9</sup> There is another semantic contrast: while the AGR version presents the denotation of the inner nominal as a type of food (= kind) or substance (= mass), the GEN version appears to produce an individuation effect of sorts: ‘each (individual) turnip is yellow; each (individual) cucumber is sour’. Notice that food contexts with pseudo-partitives typically invite a mass/type reading, which would then account for the fact that GEN is dispreferred in the above examples. The individuation effect in (14) is rather subtle, but it is possible to diagnose it indirectly: if the inner nominal denotes a referent that is high on the individuation scale, such as living/human beings,<sup>10</sup> and a plurality of individuals is the expected denotation, the preferences are reversed, i.e. GEN is the preferred option:

- (15) *Gestern habe ich... gesehen*  
‘yesterday I saw...’
- |    |                                    |                       |                     |
|----|------------------------------------|-----------------------|---------------------|
| a. | <i>eine Gruppe</i>                 | <i>ausländisch-er</i> | <i>Studenten</i>    |
|    | a group                            | foreign-GEN           | students            |
|    | ‘a group of foreign students’      |                       |                     |
| a’ | ?? <i>eine Gruppe</i>              | <i>ausländisch-e</i>  | <i>Studenten</i>    |
|    | a group                            | foreign-AGR           | students            |
| b. | <i>eine Horde</i>                  | <i>wütend-er</i>      | <i>Fussballfans</i> |
|    | a horde                            | furious-GEN           | football.fans       |
|    | ‘a horde of furious football fans’ |                       |                     |
| b’ | ?? <i>eine Horde</i>               | <i>wütend-e</i>       | <i>Fussballfans</i> |
|    | a horde                            | furious-AGR           | football.fans       |
| c. | <i>eine Delegation</i>             | <i>katholisch-er</i>  | <i>Nonnen</i>       |
|    | a delegation                       | catholic-GEN          | nuns                |
|    | ‘a delegation of catholic nuns’    |                       |                     |

<sup>9</sup> While (14b’), by virtue of its lexical meaning, can potentially allude to pickled cucumbers, it cannot denote the type of candy called “Saure Gurken” (‘Sour Pickles’).

<sup>10</sup> See the detailed discussion by Grimm (2012, 54 ff.; 68-71); for the purpose of this essay, we will assume the following simplified version of that hierarchy:

(i) substance < small objects < insects/small animals < large(r) objects < animals < humans

For any given referent, the further to the right on the scale it can be located, the greater the probability that a language will conceptualise it as an individual, and the greater the likelihood that it associates with grammatical means indicating individuation such as, e.g. plural marking – and as we are suggesting here: genitive marking in pseudo-partitives.

c'	?? <i>eine Delegation</i> a delegation	<i>katholisch-e</i> catholic-AGR	<i>Nonnen</i> nuns
d.	<i>eine Herde</i> a herd 'a herd of graceful gazelles'	<i>anmutig-er</i> graceful-GEN	<i>Gazellen</i> gazelles
d'	?? <i>eine Herde</i> a herd	<i>anmutig-e</i> graceful-AGR	<i>Gazellen</i> gazelles

This also holds true if the outer nominal is a quantity expression, regardless of whether it suggests plurality/individuation by itself ('number') or not ('quantity'); see the contrast in (16).<sup>11</sup>

(16) a.	<i>eine Anzahl</i> a number 'a number of German citizens'	<i>deutsch-er</i> German-GEN	<i>Bürger</i> citizens
a'	?? <i>eine Anzahl</i> a number	<i>deutsch-e</i> German-AGR	<i>Bürger</i> citizens
b.	<i>eine Menge</i> an amount 'a large quantity of German citizens'	<i>deutsch-er</i> German-GEN	<i>Bürger</i> citizens
b'	?? <i>eine Menge</i> an amount	<i>deutsch-e</i> German-AGR	<i>Bürger</i> citizens

Together these observations suggest, on the one hand, that the AGR type is a simple extension of regular pseudo-partitives with the inner nominal denoting a kind/mass. This is also in line with the view "that in [...] expressions [like 'two kilos of books'; 'two boxes of books'], *books behaves like a mass noun*" (Rothstein 2011, 2; emphasis added), i.e. that the plural marking of the inner nominal in pseudo-partitives is actually a 'pseudo' plural with a mass denotation – which is especially obvious in food contexts. On the other hand, the GEN type makes an additional semantic contribution, which can be described as individuation effect. Therefore, an inner nominal with plural reference has a genitive preference if the referent is high on the individuation scale (e.g. a living/human being), as illustrated in (15)-(16); the context PLURAL as such is not sufficient. The genitive in food contexts, where a mass reading is expected, however, sounds unnatural because of this individuation effect, but also because a potential-ly idiomatic reading is lost, see (14).

However, as mentioned, the individuation effect is rather subtle, and often not (immediately) perceptible by many native speakers. The

<sup>11</sup> The classifier noun *Anzahl* only combines with countable nouns, whereas *Menge* is compatible with both countable and mass nouns, cf. *eine Menge deutsches Bier* 'a lot of German beer'.

judgements reported in this subsection are the author's. It is therefore not clear how general this assessment is. While several native speakers consulted largely agree with the judgements given above for (14) and (15) as such, the overall picture is not entirely straightforward. On the one hand, there are dissenting views on the interpretation of the judgements, and on the other hand, we also encounter a wide range of judgements. In the next section, we will discuss some material that motivated the claims made above in the first place, and address some aspects that need to be examined more carefully.

### 3 Data Assessment and Reflections

In order to address a number of questions concerning form and interpretation of pseudo-partitives and genitive constructions, an online survey (google forms) was conducted in October-December 2022.<sup>12</sup> It was intended as a preliminary study,<sup>13</sup> providing a broad overview and feedback as input for a more focused follow-up study (in preparation). The participants were told about the goal of the study and asked to base their judgements on their own intuition rather than on normative guidelines. They could optionally indicate their age, place of residence, and which dialect/variety they use most in everyday life; in addition, they had the option to comment on each question individually, as well as about each questionnaire as a whole. These comments were intended for internal use, but some illuminating comments will be presented below. Due to the immense amount of material, the questions were (randomly) distributed across four questionnaires (ca. 20 questions per questionnaire). Those were, in turn, disseminated via social media and mailing lists, and eventually answered by 38, 49, 30, and 45 participants, respectively. Even though around half of the participants indicated some Southern German variety as their everyday language or dialect, the rest comprises Central and Northern German, as well as Belgian German, Swiss German and Austrian varieties. In the following, we will ignore the metadata, and mostly focus on the data as such.

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**12** Accessible at the following links:

1. [https://docs.google.com/forms/d/e/1FAIpQLScVRBm-R4PTXGzoX7IFxcnIMyMrYgt-PjVMwkK\\_IGGVmbrQ1yQ/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLScVRBm-R4PTXGzoX7IFxcnIMyMrYgt-PjVMwkK_IGGVmbrQ1yQ/viewform?usp=sf_link);
2. [https://docs.google.com/forms/d/e/1FAIpQLSc\\_Uo0Imff7oB-GCPEQUH0t0Np0-ykI-aHzh2MeB2Cgo7k3hA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSc_Uo0Imff7oB-GCPEQUH0t0Np0-ykI-aHzh2MeB2Cgo7k3hA/viewform?usp=sf_link);
3. [https://docs.google.com/forms/d/e/1FAIpQLSdfcORU\\_mMHDIno5RnjWbEvfL3EA4x\\_DITge4VAJQMEMN18Kg/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSdfcORU_mMHDIno5RnjWbEvfL3EA4x_DITge4VAJQMEMN18Kg/viewform?usp=sf_link);
4. [https://docs.google.com/forms/d/e/1FAIpQLSejf6LORCbc9LgW0Fb9vKyrL34LMkZ6kYvzb3iu2eD\\_yCf-Q/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSejf6LORCbc9LgW0Fb9vKyrL34LMkZ6kYvzb3iu2eD_yCf-Q/viewform?usp=sf_link).

**13** I.e. without full-fledged experiment design and not intended for in-depth statistical analysis.

### 3.1 Practical Considerations

Above it was stated that unmodified pseudo-partitives take an unmarked inner nominal, but in many cases, it is also possible to embed the inner nominal with a preposition (*an* ‘on’; *von* ‘from’). Hence, several tasks asked to evaluate the options zero vs. genitive vs. *an* vs. *von* – with and without an adjective. In this case, each option could be evaluated on a Likert scale from 1 (‘perfect’) to 7 (‘totally bad’). To illustrate this, consider the following example:

- |      |  |      |
|------|--|------|
| (17) | Die Zuschauer erwartet im kommenden Herbst [...]   | n=30 |
|      | ‘Spectators can look forward to [<a series of events>]’                                  |      |
| a.   | eine Reihe <i>Veranstaltungen</i> (zero)   | 3.4  |
| b.   | – (→ no plural genitive marking on N)  |      |
| c.   | eine Reihe <b>an</b> <i>Veranstaltungen</i> (preposition <i>an</i> )                     | 2.8  |
| d.   | eine Reihe <b>von</b> <i>Veranstaltungen</i> (preposition <i>von</i> )                   | 1.8  |
|      |  |      |
| (18) | Die Zuschauer erwartet im kommenden Herbst [...]   | n=30 |
|      | ‘Spectators can look forward to [<a series of special events>]’                          |      |
| a.   | eine Reihe <i>besonder-e</i> <i>Veranstaltungen</i> (A-AGR)                              | 4.1  |
| b.   | eine Reihe <i>besonder-er</i> <i>Veranstaltungen</i> (A-GEN)                             | 1.6  |
| c.   | eine Reihe <b>an</b> <i>besonderen</i> <i>Veranstaltungen</i> (preposition <i>an</i> )   | 2.6  |
| d.   | eine Reihe <b>von</b> <i>besonderen</i> <i>Veranstaltungen</i> (preposition <i>von</i> ) | 1.8  |

The outer nominal *Reihe* ‘series’ requires a countable inner nominal in the plural, cf. (16a), or put differently: a plurality of individuals. In accordance with what was said in Section 2.2.2, we should expect genitive marking on the inner nominal as the preferred option. This, in turn, is only visible in the presence of an adjective, and indeed, the GEN version scores best, cf. (18b). Notice, however, that the *von* version has practically an equally good score, regardless of the presence of an adjective, cf. (17d)/(18d). Recall from Section 2 that this preposition has been taking over most functions of the genitive in colloquial German. In a way, it could be viewed as a stand-in for formal genitive marking and indirectly supporting the idea that ‘genitive’ marking is associated with individuation. This is a problematic view, however, because *von* is not only in opposition to zero marking/AGR here, but potentially also to genitive marking as such, compare (3) vs. (4). Moreover, the main purpose of this sort of task is actually to examine the prepositions *an* vs. *von*, rather than the contribution of adjectival inflection.

Therefore, a second kind of task was used that specifically addresses that issue; for the remainder, we will focus on this task. Originally, the respective questions were conceived of as a brute ‘forced-choice’

task, where participants should choose between GEN and AGR in a given context. However, since we expected uncertainties in many cases, there was a risk that participants might simply guess and randomly pick either one. In order to avoid that, we decided on a ‘mitigated forced-choice’ task giving the participants the following options:

- (A): only GEN is possible here
- (B): only AGR is possible here
- (AB): GEN and AGR are both possible

If participants lacked a clear intuition as to which option is ‘better’ or whether there even is a ‘better option’, they could choose (AB). We expected this to be the case with many examples and many participants because, in many cases, it is simply not obvious which option is better. Option (AB) does not itself address any of our questions, but it ensures a greater reliability for the numbers for (A) and (B); the numbers for (AB) itself, in turn, can be understood as a ‘measure of uncertainty’. The participants also had the opportunity to comment on potential differences between (A) and (B) if both were considered possible. We asked especially for semantic differences; the reason for this was to see how native speakers would describe that perceived difference. In at least 100 comments, however, the participants alluded to a difference in register instead, stating that AGR is used colloquially, but GEN belongs to a more formal register. Labels used for the latter include ‘standard’, ‘prescriptive’, ‘correct’ etc. It is rather curious that several comments imply a dichotomy ‘correct’ (GEN) vs. ‘colloquial’ (AGR); this is especially, noteworthy because in one case, GEN was described as ‘grammatically correct’, but in the very same example, it scored 0%. The situation is thus such that often speakers are aware that the genitive is somehow ‘correct’ and, at the same time, they do not use it. This is precisely why the option (AB) was added. At the same time, we expected at least some contrasts to be reflected in the numbers where the ratio (A) : (B) is of primary interest.

### 3.2 The Survey

Unsurprisingly, we corroborated Zimmer’s (2015) finding that, with a singular inner nominal, there is a strong preference for AGR. Below we give the mean scores of all examples of this type:

- (19) *Singular inner nominals (mass):*
  - (A): 5.2%
  - (B): 48.2%
  - (AB): 46.7%

Moreover, we also find strong corroboration for the ideas expounded in Section 2.2.2. First of all, on average, more than 50% of the participants chose the option (A) = 'GEN only' if the referent was +animate (which in most cases also meant +human):

(20) *Plural inner nominals (+animate/human):*

(A):	53.8%
(B):	4.8%
(AB):	41.5%

Below some examples are given for illustration:

(21)	[a herd of graceful gazelles]	n=45
(A)	<i>eine Herde anmutig-er Gazellen</i>	37.8%
(B)	<i>eine Herde anmutig-e Gazellen</i>	4.4%
(AB)		57.8%
(22)	In front of the theatre [a group of former actors] gathered	n=38
(A)	<i>eine Gruppe ehemalig-er Schauspieler</i>	55.3%
(B)	<i>eine Gruppe ehemalig-e Schauspieler</i>	2.6%
(AB)		42.1%
(23)	[a delegation of catholic nuns]	n=38
(A)	<i>eine Delegation katholisch-er Nonnen</i>	60.5%
(B)	<i>eine Delegation katholisch-e Nonnen</i>	5.3%
(AB)		34.2%

Now consider the numbers of plural inner nominals in food contexts where we find that, as expected GEN is strongly dispreferred:

(24) *Plural inner nominals (food context):*

(A):	6.2%
(B):	33.2%
(AB):	60.6%

The situation is not entirely symmetric, however; the ratio AGR vs. GEN here (33.2 : 6.2) is rather smaller than the ratio GEN vs. AGR in the previous case (53.8 : 4.8). In other words, the preference for AGR is not as strong here as the preference for GEN in (20). Perhaps this simply is the case, but maybe there were other factors at play as well. Consider the following examples; (25) supports our expectations, i.e. a strong preference for AGR:

(25)	‘I’d like to have [a kilo of carrots]’ (→ ‘yellow turnips’; cf. (14a/a’))	n=45
	(A) <i>ein Kilo gelb-er Rüben</i>	0.0%
	(B) <i>ein Kilo gelb-e Rüben</i>	42.2%
	(AB)	57.8%

However, the following example should have yielded similar results, but there is a noticeable difference, viz. a significantly smaller preference for AGR:

(26)	In a candy store: ‘I’d like to have [a pack of ‘Sour Pickels’] (PS: those from Haribo)’ (→ ‘sour cucumbers’; cf. (14b/b’))	n=45
	(A) <i>eine Packung saur-er Gurken</i>	4.4%
	(B) <i>eine Packung saur-e Gurken</i>	26.7%
	(AB)	68.9%

The question contained two explicit cues (‘candy store’; *Haribo*) that should only allow the ‘candy’ interpretation and rule out the ‘cucumber’ interpretation, but it turns out that not everybody even knows that type of candy. Thus, these numbers may not be entirely reliable.

Minimally, the contrast between (20), (21)/(22)/(23) vs. (24), (25)/(26), i.e. the different (dis)preferences, shows that plural number on the inner nominal is not a sufficient condition for GEN, contra Zimmer (2015). Semantic aspects also need to be taken into account; more precisely, there is a clear and strong preference for GEN only if the inner (plural) nominal denotes a +animate/human referent.

In this context, it is worthwhile pointing out the following contrast. Baby-chicks may not be at the top, but, as +animate referents, they are still rather high up on the scale of individuation. In the example below, the modifier ‘newly/recently hatched’ additionally emphasises the aspect ‘living being’. Given our assumptions, we would expect a strong preference for GEN; this expectation is indeed borne out in (27), but not in (28):

(27)	‘a wagonload of newly hatched baby-chicks’	n=49
	(A) <i>eine Wagenladung neulich geschlüpft-er Küken</i>	71.4%
	(B) <i>eine Wagenladung neulich geschlüpft-e Küken</i>	4.1%
	(AB)	24.4%
(28)	‘a portion of fried baby-chicks’	n=49
	(A) <i>eine Portion gebraten-er Küken</i>	14.3%
	(B) <i>eine Portion gebraten-e Küken</i>	30.6%
	(AB)	55.1%



Even though the (inner) noun is the same, the (dis)preferences are reversed, and, in (28), AGR scores twice as high as GEN, which is a stark contrast to (27) and appears to be unexpected. Notice, however, that – albeit unconventional –<sup>14</sup> ‘baby chicks’ in (28) is construed as a food type or a dish and as such, (28) is an instance of a food context. Given our assumptions, it is actually not too surprising then that we find a preference for AGR here. In other words, contextual/lexical information can impact the way a referent is perceived (living being vs. food); in this particular example, it is the items ‘portion’ and ‘fried’ that strongly suggest a food context. This perceived denotation, in turn, obviously has an impact on the form of the inner nominal (GEN VS. AGR).<sup>15</sup>

### 3.3 Some Further Comments

In Sect 2.2.2, we made a claim about a semantic difference between two types of pseudo-partitives in German, which can be split into two components:

1. AGR is simply an extended version of regular pseudo-partitives; the inner nominal is construed as denoting a substance (mass plural/kind) and potential idiomatic readings are preserved.
2. GEN makes a semantic contribution that can be characterised as individuation such that the inner nominal denotes a plurality of individuals; conversely, the higher the referent of the inner nominal is on the individuation scale, the greater the likelihood that GEN is the preferred option. Potential idiomatic readings are lost.

To a large extent, this claim is corroborated by the results of our preliminary study. At the same time, there are several problems mostly having to do with the interpretation of the results. For even where judgements comply with our expectations, it is not always clear that they were made for the reasons that we assume.

As already mentioned, participants commenting on a potential difference usually make reference to style/register or prescriptive

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**14** We are not aware of any menu that has fried baby-chicks on it, nor have we reason to believe that any of our participants has ever tasted fried baby-chicks; no actual baby-chicks were harmed in the course of this study. We deliberately also included unconventional examples such as this one.

**15** An anonymous reviewer correctly points out that, in (22)/(23), one does not know for sure whether it is the adjective, the outer nominal, or both, that actually cause(s) the difference here, and this certainly needs to be tested more carefully. Nonetheless, we believe that the overall mode of presenting the referent – as a living being or food – is a relevant factor itself.

rules (e.g. ‘GEN is grammatically correct, but AGR is ok, too’). Very few alluded to the semantic contrasts under discussion (e.g. ‘AGR makes reference to a type/kind’; ‘the AGR version is the name of the product ‘Sour Pickles’, while the GEN version indicates that the cucumbers are actually sour’, cf. (14b/b’)/(26)). In addition, several participants suggested semantic contrasts that were not anticipated. For instance, in the context of (22), one participant suggested that the GEN version refers to former actors at the theatre mentioned while the AGR version could refer to former actors in general. Also consider the following example:

(29)	‘a sack of rotten apples’	n=49
(A)	<i>ein Sack faul-er Äpfel</i>	34.7%
(B)	<i>ein Sack faul-e Äpfel</i>	2.1%
(AB)		63.2%

Notice that the adjective *faul* is ambiguous, meaning either ‘lazy’ (about people) or ‘rotten’ (about food). In this context, one participant commented that (A) = GEN means that the apples are lazy, while (B) = AGR means that they are inedible. This may have been intended as a joke, but it is actually a very astute observation, not a random play with the ambiguity. As a matter of fact, we can even discern a certain compatibility with our expectations insofar as the ‘lazy’ interpretation presupposes living being as referent while the ‘inedible’ reading applies to food. Thus, very indirectly, this comment affirms the view that GEN is associated with individuals (= living beings).

More generally, several comments on a perceived difference between GEN and AGR may actually confirm (i) and (ii) in spite of talking about different things. At the same time, precisely the diversity of such comments may be an indication that it is not that easy to pinpoint the actual difference between GEN and AGR, and that, possibly, (i) and (ii) may have to be reformulated eventually.

Moreover, recall that the genitive is largely being replaced by the preposition *von*. In many dialects, the genitive has disappeared, and in general, active use of the genitive often indicates that the speaker either has some sort of higher education or, at least, that they are rather familiar with formal/written language. In other words, even if GEN is preferred over AGR given a binary choice as in our survey, it does not necessarily mean that GEN is the only or unmarked form, the version that many speakers would actually use, see also (17) and (18). One consequence of such considerations is that the semantic generalisation cannot be considered a general property of German grammar. We might view it as a feature of a version/variety of German (which is presumably something akin to a register, rather than a regional dialect).

## 4 Theoretical Ramifications

The focus of this essay is descriptive, rather than theoretical. Nonetheless, we would like to make a brief comment here. To the extent that our claims are on the right track, in (a variety of) German, genitive marking of the inner nominal in adjectivally modified pseudo-partitives brings about an individuation effect in the sense that the referent of the inner nominal is construed as a plurality of individuals (rather than a collective/mass plural). Since Borer (2005), individuation has been associated with a functional head DIV that also hosts plural morphology and classifiers. The problem is that, in the context of pseudo-partitives, this position is associated with the outer nominal, i.e. the measure/classifier noun, see e.g. Mathieu and Zareikar (2015). Since Selkirk (1977) and Jackendoff (1977), pseudo-partitives have been analysed as monophrasal, i.e. as one extended nominal projection. Our claim here thus seems to entail that there are two loci of individuation within the same noun phrase. This is a rather unwelcome consequence that cannot easily be justified.

There is an alternative view, though. We could take genitive marking to indicate that the inner nominal is actually a DP rather than simply an NP. This might account for a number of effects observed with the genitive. Then again, one subclass of pseudo-partitives has actually been argued to be biphrasal, i.e. involving two extended nominal projections, viz. container constructions (like ‘a glass/bottle of wine’ vs. measure constructions like a ‘liter of wine’; e.g. Rothstein 2011; Grestenberger 2015). We then would be saying that the individuation reading and the content reading of inner nominals have the same source: they both constitute a separate DP (potentially indicated by the genitive case). Here the problem is that we would then predict a much greater acceptability of genitive marking with singular inner nominals if they occur with a container noun in the outer nominal; this does not seem to be the case:

(30)	‘a glass of cool lemonade’	n=49
(A)	<i>ein Glas kühl-er Limonade</i>	0.0%
(B)	<i>ein Glas kühle Limonade</i>	44.9%
(AB)		55.1%

In other words, such a construal is not unproblematic, either. It seems that, either way we approach the issue analytically, we run into problems. We leave the issue for further research.

## 5 Concluding Remarks

In this article, we have made a claim on the semantic effect and the corresponding acceptability of genitive-marked inner nominals in German pseudo-partitives: while AGR is the default option, if the inner nominal denotes a plurality of objects that are high on the hierarchy of individuation (typically, +animate/human referents), GEN is strongly preferred and AGR is dispreferred. This claim has to a large extent been corroborated by a preliminary survey. At the same time, it has been pointed out that the genitive as such has a rather problematic status in German. This is reflected in the fact that survey participants mostly contrast GEN and AGR in terms of register or ‘correctness’, rather in terms of semantic differences, but also in the fact that, in many concrete examples, it is not always easy or obvious which option to choose. Moreover, in Section 4, we hinted at the possibility that GEN may not be a canonical pseudo-partitive from an analytic point of view. Thus, there are still many open questions for further research.

### Abbreviations

<small>AGR</small>	agreement (morphology)
<small>AGR</small>	agreement (noun phrase type/construction)
<small>DAT</small>	dative
<small>FEM</small>	feminine
<small>[-FEM]</small>	masculine and neuter
<small>GEN</small>	genitive (morphology)
<small>GEN</small>	genitive (noun phrase type/construction)
<small>NOM</small>	nominative
<small>PL</small>	plural
<small>SG</small>	singular
<small>STR</small>	strong
<small>WK</small>	weak

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