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### Author

Hawkshaw, Carolyn Anne

### Publication Date

2023

Peer reviewed|Thesis/dissertation

The “Secret Inclination” of the German Weak Masculine Nouns: A Case of Usage-Driven  
Paradigmatic Change.

A Diachronic Corpus Study (1350–1900).

By

Carolyn Anne Hawkshaw

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

German

in the

Graduate Division

of the

University of California, Berkeley

Committee in Charge:

Professor Thomas Shannon, Co-Chair

Professor Irmengard Rauch, Co-Chair

Professor Andrew Garrett

Summer 2023

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## Abstract

The “Secret Inclination” of the German Weak Masculine Nouns: A Case of Usage-Driven Paradigmatic Change.

A Diachronic Corpus Study (1350–1900).

By

Carolyn Anne Hawkshaw

Doctor of Philosophy in German

University of California, Berkeley

Professor Thomas Shannon, Co-Chair

Professor Irmengard Rauch, Co-Chair

Over the course of the Early New High German (ENHG) period (ca. 1350–1650), the German inflectional system underwent significant restructuring. Among the affected Middle High German (MHG) inflectional classes was a class of masculine nouns traditionally labeled “weak,” defined by the presence of the ending *-(e)n* in all forms except the nominative singular, which usually ended in *-e*. In the modern language (New High German [NHG]), the nouns that once belonged to this class are spread out across at least four inflectional classes: one group of nouns (Group 1), most denoting people and large animals, has remained in the weak masculine class, while in each of three other groups (Groups 2–4), the paradigm has been rebuilt with a different part of the original weak paradigm as its base.

This corpus study explores the causes of these changes through the lens of a usage-based framework, proceeding from the hypothesis that high token frequency renders word forms more resistant to analogical change, while low token frequency leaves them vulnerable to loss and replacement. It traces the diachronic paths of 37 current and former members of the weak masculine class from MHG through ENHG into NHG, measuring their token frequencies in different forms at different stages of their development. Token frequency is shown to have been the driving force behind the breakup of the class: in Groups 2, 3, and 4, the original weak forms that have been preserved and become the base of the rebuilt paradigm are, in most cases, the most frequent forms, while those that have been lost are correspondingly infrequent.

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## Introduction

In the revised 13<sup>th</sup> edition of Gustav Wustmann's *Allerhand Sprachdummheiten*, certain German masculine nouns are accused of having harbored a “geheime Neigung zur starken Beugung” (Schulze 1955: 2).<sup>1</sup> The authors were referring to inanimate nouns like *Funke/n* and *Glaube/n*, which once belonged to the weak masculine (*n*-stem) class, but are now partly strong and have alternate forms with and without *-n* in the nominative singular.<sup>2</sup> However, the statement could reasonably be applied to the entire class of weak masculine nouns, which has exhibited a “secret inclination towards strong inflection” for at least a millennium; even the most stable weak masculine nouns — *Bote*, *Knabe* — have endings other than the etymologically expected weak ones from time to time. In some cases, the inclination has progressed from “geheim” to overt: many former weak masculine nouns, particularly those denoting inanimate objects, have left the class altogether and joined other (strong) inflectional classes. Some (e.g., *Schelm*) have retained their original nominative singular in apocopated form, but adopted strong endings in the rest of the paradigm; in other cases (e.g., *Garten*), the oblique singular form ending in *-(e)n* has become the base of a new strong paradigm; and finally, some former weak masculine nouns (e.g., *Schlange*) have become feminine.

This diachronic corpus study seeks to uncover the inner workings of the German weak masculines’ (at times secret, at times quite blatant) “Neigung zur starken Beugung.” It traces the development of 37 current and former weak masculine nouns from Middle High German through Early New High German into the 19<sup>th</sup> century in search of an explanation for their chronic instability.<sup>3</sup> What are the forces that have driven some nouns to change their class affiliation completely, while others have flirted with strong inflection, but then returned to the straight and narrow?

At the same time, this study is intended as a modest contribution to the ongoing debate in the linguistic literature — driven by Fertig (1999, 2013, 2016, 2019), Albright (2002, 2003, 2008, 2010), Hill (2007, 2020), Garrett (2008), and others — concerning the mechanics and causes of analogical paradigm change. When inflectional paradigms are rebuilt, as has occurred more than once in the case of the German weak masculines, what are the factors that determine which part of the original paradigm becomes the base of the new one — in other words, which form(s) survive the restructuring and which do not? In particular, what is the role of token frequency in base selection, and to what extent do the relative token frequencies of individual forms correlate with their loss or retention?

In chapter 1, I provide an overview of the changes which have affected the weak masculines, and introduce several theories which might help to explain why these changes have

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<sup>1</sup> Wustmann is the late-19<sup>th</sup>-century equivalent of the self-proclaimed language guru Bastian Sick, whose popular book series *Der Dativ ist dem Genitiv sein Tod* (2004, 2005, 2006, 2009, 2013, 2015) has come under fire for being inappropriately prescriptive and insensitive to changing linguistic norms. The statement quoted here appears in Schulze’s revised edition, but not in Wustmann’s original edition from 1892.

<sup>2</sup> The term *schwach* ‘weak’ is the usual designation for German nouns that have the inflectional marker *-(e)n* in the oblique singular forms and in the plural (those that are the subject of this study), as opposed to nouns that have other endings in these forms, which are *stark* ‘strong’. This terminology was introduced by Jacob Grimm in the 19<sup>th</sup> century, and it has remained in use since then even though it probably no longer reflects the structure of the German inflectional system (see, e.g., Kern and Zutt 1977: 68–72; Rettig 1972: 41–65; Marko 1972).

<sup>3</sup> For information about the wanderings of these nouns prior to Middle High German, see, e.g., Wessén 1914; Wilmanns 1896, 1909; Sütterlin 1887; Grimm 1870.

occurred, including the usage-based model which, I argue here, handles the data most effectively. In chapter 2, I present the corpus which lies at the foundation of this study, and discuss the design of the study and the methods that I used to extract and analyze the data. Chapters 3 and 4 contain an overview of the data set: the 37 nouns are introduced in chapter 3, while chapter 4 deals with the morphological and extramorphological properties of the individual tokens. Finally, in chapters 5–8, I present the data for each of the four groups of nouns in turn.

For Middle High German, I have relied primarily on the grammars of Weinhold (1883), Paul (1881), and Michels (1979), and on the very comprehensive digital edition of Lexer’s *Mittelhochdeutsches Handwörterbuch*, which includes all entries listed in the *Mittelhochdeutsches Wörterbuch* of Benecke, Müller, and Zarncke. I have also consulted the relevant volume of the more recent *Mittelhochdeutsche Grammatik* edited by Klein et al. (2018), which Klaus-Peter Wegera generously made available to me before publication.

My main sources of information on the development of the weak masculines through the ENHG period have been the eight-volume *Grammatik des Frühneuhochdeutschen*, edited by Besch et al., and particularly Klaus-Peter Wegera’s third volume on noun inflection from 1987; its smaller and more recent cousin, the *Frühneuhochdeutsche Grammatik*, edited by Ebert et al. (1993); Klaudius Bojunga’s dissertation from 1890; and Hermann Molz’ very comprehensive, but sadly unfinished, monograph from 1902 on noun inflection since MHG. Schottelius’ *Ausführliche Arbeit Von der Teutschen HauptSprache* from 1663 has provided a useful period snapshot.

The two ENHG grammars are founded on data from the *Bonner Frühneuhochdeutsch-korpus*, a systematically assembled corpus of Middle and Upper German prose texts from the latter half of each of the 14<sup>th</sup> through 17<sup>th</sup> centuries (1350–1400, 1450–1500, 1550–1600, 1650–1700). Both adopt a primarily structural, classificatory approach, to the extent that this is possible for a transitional period defined by instability and variation.

Bojunga and Molz fill out the diachronic picture and provide more detail about the trajectories of individual nouns. Bojunga’s analysis relies on data presented in Kehrein’s *Grammatik der deutschen Sprache des fünfzehnten bis siebenzehnten Jahrhunderts* (1854), the first attempt at a comprehensive grammar for the period that we now call Early New High German, though it would perhaps be more accurately described as a catalogue of forms. Bojunga appears to have drawn all of his examples from Kehrein wholesale without evaluating them or consulting the source texts, and because — as both Wegera and Molz note<sup>4</sup> — Kehrein’s material is itself lacking, Bojunga’s findings should be approached with caution. Wegera and Molz are at times harshly critical of Bojunga’s work: Molz accuses his predecessor of not having done his homework,<sup>5</sup> and Wegera points to the speculative nature of many of Bojunga’s observations.<sup>6</sup> At the same time, both acknowledge the value of his contribution and its importance for their own work on post-MHG German noun inflection. Wegera describes it as “[d]ie einzige umfassende, umfangreichere Darstellung zur Entwicklung der Substantivflexion”

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<sup>4</sup> Wegera refers to Kehrein’s grammar as a “methodisch unzureichende Belegsammlung” (28), while Molz has established that “das material [...], auf das sich Bojungas erörterungen gründen, kann nicht als genügend bezeichnet werden” (211). Kehrein’s “Grammatik” really is no more than a list of forms grouped by grammatical category (or, in the sections on sound change and syntax, by sound and syntactic structure, respectively).

<sup>5</sup> “Der mangel an ausreichender lectüre hat den verf[asser] zuweilen zu irrigen schlüssen geführt.” (211)

<sup>6</sup> Bojunga’s dissertation “[bietet] einen in Teilen gelungenen, in Teilen spekulativen Begründungszusammenhang für die Entwicklung” (29).

[in ENHG] (29), and Molz admits that, despite its flaws, “das ganze der arbeit [bietet] eine so reiche fülle von sicheren ergebnissen, dass ich den ins allgemeine gehenden theoretischen erörterungen nicht allzu viel neues hinzufügen kann” (211). With his dissertation, Bojunga laid the foundation for later work on ENHG noun inflection.

Molz’s monograph from 1902 is the first volume of what was meant to be a three-volume work on noun inflection since MHG, with one volume devoted to each gender. Unfortunately, the third volume on the feminine nouns, which would no doubt have revealed much about the adventures of the former weak masculine nouns which have become feminine (see chapter 6), was never published. Had Molz completed it, it would be the most comprehensive work of its kind.

Unlike Bojunga, Molz went to the trouble of collecting and evaluating most of his own material. His corpus (214–215) is extensive, especially for the 16<sup>th</sup> century, for which he claims to have examined 20 volumes in their entirety, including the complete text of *Weisskunig* and all of the 16<sup>th</sup> volume of the complete works of Hans Sachs. For this reason, his results are likely more reliable than Bojunga’s in many cases.

Despite its thoroughness, though, Molz’s study is problematic in certain ways. As Wegera (1987: 29) notes, the temporal and regional distribution of the forms cited is often obscured, partly because the source material “[wird] wenig kritisch interpretiert,” but also because Molz has tried to squeeze five centuries’ worth of linguistic data into a framework constructed from the perspective of the modern language. The study is organized around the inflectional classes of NHG, which, to complicate matters further, are referenced in many cases by the names of the corresponding OHG classes: *a*-stems, *i*-stems, etc. It is thus virtually impossible to trace the development of any specific group of MHG nouns (say, the weak masculines, as we have undertaken to do here) into NHG, since these nouns are all discussed under different headings. The MHG weak masculines that are still weak today are dealt with in the category “Schwache masculina,” but those that are strong today appear in the *a*-stem and *i*-stem categories, and those that are now feminine are mentioned only in passing (presumably they would have been discussed at length in the third volume, which, sadly, we will never have access to).

Though Molz claims to have used statistical methods to evaluate his material (210), he never explains exactly how he decided which texts to include in his corpus (beyond a vague note that “gesichtspunkte” discussed in Burdach, Kluge, Schröder, and von Bahder were “massgebend” [215]), or how he went about collecting his “belege.” He acknowledges himself that many of his examples are listed without a source, particularly those that he has borrowed from Kehrein and others, but also some of his own examples which he took down in the early stages of the project: “Ich verfuhr bei der prüfung der denkmäler natürlich statistisch, unterliess aber im anfang, durch falsche vorbilder verleitet, die genauere aufzeichnung des fundortes jeder form” (210).

For the modern language, I have consulted a range of reference works, including the *Duden-Grammatik* in the 8<sup>th</sup> edition from 2009; the usage handbooks *Richtiges und gutes Deutsch* from Duden (2001) and *Fehlerfreies und gutes Deutsch* from Wahrig (2003); and the grammars of Hentschel and Weydt (2003), Helbig and Buscha (2001), Eisenberg (2013, 1989), the *Leibniz-Institut für Deutsche Sprache* (IDS) (1997), Jung (1984), Engel (1988), Heidolph (1981), Erben (1972), Griesbach and Schulz (1960), and Zifonun et al. (1997).

The *Deutsches Wörterbuch* of Jacob and Wilhelm Grimm has been my constant companion throughout, as have the multi-volume *Frühneuhochdeutsches Wörterbuch* produced

by Reichmann et al., the online Duden, and the various dictionaries available on the DWDS (*Digitales Wörterbuch der deutschen Sprache*) site maintained by the *Berlin-Brandenburgische Akademie der Wissenschaften*.

Throughout this work, Middle High German (MHG) can be understood to refer to the normalized, sanitized written language described in the grammars for the period from about 1050–1350; Early New High German (ENHG) to the (as yet unstandardized) written language used in the German-speaking region from ca. 1350–1650; and New High German (NHG) to the modern standard (written) language used from the late 17<sup>th</sup> century to the present day, with emphasis on the years since about 1800.

## Acknowledgements

I would like to thank everyone who has contributed to this project in even the smallest of ways, and particularly the following individuals:

Prof. Dr. Oskar Reichmann and Prof. Dr. Anja Lobenstein-Reichmann, for their hospitality in Heidelberg in the summer of 2013; for giving me access to a variety of resources without which this project would not have been possible; and for bringing the Heidelberg-Bär, a.k.a. Heidelbärchen, into my life;

Prof. Dr. Klaus-Peter Wegera, for taking time out of his busy schedule to meet with me in Bochum, and for passing on a copy of his as yet unpublished Middle High German grammar;

The “Korpusleute” at the IDS in Mannheim, and particularly Mr. Gerd Piroth, for answering many questions;

My dissertation committee, for their feedback, support, and encouragement: Prof. Shannon, for going through the document with a fine-toothed comb and spotting every misplaced comma, unitalicized German noun, factual error, *und und und*; Prof. Rauch, for awakening my interest in Early New High German many years ago and for her frequent reminders to let the data do the talking; Prof. Garrett, for stepping in late in the game and for helping me to make this work more accessible to a wider audience; and the late Prof. Gary Holland, for providing valuable feedback in the early stages of this project;

My fellow dissertators Sarah Harris and Christine Vais, for providing company and moral support on Zoom; for being extremely useful as sounding boards; and for their many helpful table-formatting suggestions;

Niko Euba, for enabling my career as a German language teacher (with the result that I now have many students to enlighten about the weak masculines);

All of the people mentioned in the three points above, and the many other wonderful people with whom I have crossed paths at U.C. Berkeley — faculty, staff, and fellow students — for making me feel at home on campus; for many intellectually stimulating conversations, seminars, and choir rehearsals; and for contributing to the warm, snuggly feeling that will always come over me when I look back on my time at this institution;

My parents and Melissa, for everything.

# 1 The Importance of Token Frequency in the Development of the German Weak Masculines

## 1.1 The Restructuring of the Weak Masculine Class

### 1.1.1 The Weak Masculines in MHG

In MHG, the weak masculines constituted a fairly stable class of about 1,209<sup>7</sup> masculine nouns which inflected in most cases according to the following pattern (Weinhold 1883: 491):

Type A			
<i>bote</i> ‘messenger’			
	Sg.	Pl.	
(1)	N	<i>bote</i>	<i>boten</i>
	A	<i>boten</i>	<i>boten</i>
	D	<i>boten</i>	<i>boten</i>
	G	<i>boten</i>	<i>boten</i>

Most nouns in the class were disyllabic, ended in *-e*, and were stressed on the initial syllable. Those that did not conform to this pattern were

1. compounds, reflecting varying degrees of transparency (e.g., *höuschrecke* ‘grasshopper’, *einhörne* ‘unicorn’, *steinmetze* ‘stonemason’, *truhsæze* ‘seneschal’);
2. trisyllabic nouns beginning with the unstressed prefix *ge-* (e.g., *geloube* ‘belief’, *geselle* ‘companion’);
3. di- or trisyllabic nouns with initial stress that ended in the sequence [əC(ə)], where C was usually a liquid (e.g., *navel(e)* ‘navel’, *veter(e)* ‘cousin, relative’) but could also be a nasal (e.g., *bësem(e)* ‘broom’); or
4. foreign loan words of four or more syllables with penultimate stress and final *-e* (e.g., *patriarche* ‘patriarch’, *ewangeliste* ‘Evangelist’).

The *-e* on the stem of the noun was systematically apocopated (and sometimes syncopated in forms other than the nominative singular) in certain environments (Weinhold 1883: 20, 72, 491; Paul 1884: 25–26; Michels 1979: 61; Grimm 1870: 22, 313, 601):

1. after liquids when the preceding vowel was short and stressed (Type B)
2. (less frequently) after short vowel + nasal (Type C)
3. occasionally after short vowel + other consonants, notably *h* and *t*

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<sup>7</sup> Lexer’s *Mittelhochdeutsches Handwörterbuch* (in the digital version, accessed 12/8/22) has 1,183 nouns marked “swm.” (schwaches maskulinum), excluding substantivized adjectives and compounds whose heads exist as independent words. My estimate of 1,209 weak masculine nouns includes, in addition to these, 26 nouns which are classified as weak in one or more grammar of MHG (Grimm 1870; Michels 1979; Paul 1881; Klein et al. 2018), but which either do not occur at all in Lexer or, if they do, are assigned to other inflectional classes there.



		Type B <i>ar</i> ‘eagle’		Type C <i>van</i> ‘flag, banner’	
		Sg.	Pl.	Sg.	Pl.
(2)	N	<i>ar</i>	<i>arn</i>	<i>van</i>	<i>vanen</i>
	A	<i>arn</i>	<i>arn</i>	<i>vanen</i>	<i>vanen</i>
	D	<i>arn</i>	<i>arn</i>	<i>vanen</i>	<i>vanen</i>
	G	<i>arn</i>	<i>arn</i>	<i>vanen</i>	<i>vanen</i>

Apocope of final *-e* was common in Upper German dialects, regardless of the shape of the stem (Michels 1979: 61–63), and also occurred with some regularity on nouns that were used as titles accompanying people’s names (Klein et al. 2018: 86–87).

Occasionally, the inflectional ending *-(e)n* failed to materialize in the oblique singular forms. Omission of *-(e)n* was especially common on nouns with nasal-final stems (Weinhold 1883: 492; Klein et al. 2018: 89; Michels 1979: 158, 170); Weinhold cites the dative singular forms *nam* (~ nom. sg. *nam(e)* ‘Name’), *licham* (~ nom. sg. *licham(e)* ‘corpse’), *schelm* (~ nom. sg. *schelm(e)* ‘rascal, pest; pestilence’), and *brunn* (~ nom. sg. *brunn(e)* ‘fountain’). In rapidly spoken NHG, the ending *-(e)n* often merges with an immediately preceding stem-final nasal; assuming that phonological reduction also occurred in spoken MHG in this environment, the absence of *-(e)n* in these cases is not surprising. The ending was also sometimes lost after non-nasal consonants, though this was less common and, according to Weinhold (1883: 493), limited to Austrian dialects.<sup>8</sup> Finally, inflectional endings of all kinds — not just those on weak masculine nouns — were frequently omitted in MHG on titles accompanying people’s names (Klein et al. 2018: 90, 94), as well as in certain syntactic conditions (Michels 1979: 158):

1. In pairs of nouns conjoined with *und* ‘and’, *oder* ‘or’, or *noch* ‘nor’, particularly in the genitive, one of the two nouns (usually the first) could remain uninflected, as in the phrase *haz und nîdes vol* ‘full of hate and malice’.
2. When one genitive noun phrase was dependent on another, the inflectional ending could be omitted on the noun in the superordinate noun phrase. As an example of this phenomenon, Michels cites the line *der gast nam swirtes jâmer war* ‘the guest perceived the host’s sorrow’ from Wolfram’s *Parzival*; here, *jâmer*, the genitive object of *nam ... war*, is missing the expected inflectional ending *-s*.

Just under half of the MHG weak masculines (544/1,209, or 45%) had animate referents; about half (619/1209, or 51%) were inanimate, and 3% (34) could be either animate or inanimate, depending on the context. Among animate nouns, about 67% (363) denoted people; about 30% (162) referred to animals or other non-human creatures (e.g., mythical beings such as goblins); and the remaining 3% (19) could designate either.

A significant proportion of animate MHG weak masculine nouns (at least 119/578, or about 21%) were agent nouns derived from verbs (e.g., *kempfe* ‘fighter’ ~ NHG *Kämpfer*; *becke* ‘baker’ ~ NHG *Bäcker*). Most of these no longer exist in the language today; those that have not died out completely have been rebuilt with the suffix *-er*, which is now the dominant means of forming agent nouns in German. Among the surviving weak masculine agent nouns are the

<sup>8</sup> All of the examples that Weinhold cites appear in rhyming couplets; this suggests that rhyme and metrical structure may have contributed to the loss of the ending here.

compounds *Anwalt* ‘lawyer’, *Herzog* ‘duke’, and *Torwart* ‘goalie’, which have become strong, and *Nachkomme* ‘descendant’, *Nachfahr(e)* ‘descendant’, and *Vorfahr(e)* ‘ancestor’, which are still weak today.

The 653 inanimate MHG weak masculine nouns span a range of semantic fields; most common are words for long, narrow, often sharp objects such as poles and beams, and for unpleasant aspects of the human experience (pain, sickness, harm, negative emotions).<sup>9</sup> The best represented categories are given in table 1.1, with examples.

Table 1.1. Semantic categories represented among inanimate MHG weak masculines

Category	Examples
Beams, poles, rods; other long, narrow, sharp objects/tools (88 nouns)	<i>balke, kolbe, rieme, sparre, klobe, stecke, bolze, phloc(ke)</i>
Ailments, pain, harm, (unpleasant/negative) emotions (72 nouns)	<i>bange, huoste, siuche, smërze, snupfe, swër(e), schade</i> ; compounds with <i>-tage</i> : <i>siechtage, sûmtage, darbetage, lamtage, wêtage</i>
Plants and parts of plants (60 nouns)	<i>palm(e), bluome, sâm(e), trûbe, krësse, rose, rëbe, sprozze</i>
Body parts (54 nouns)	<i>wade, backe, dûme, goum(e), mage, nac(ke), nier(e), rûck(e)</i>
Clumps, small pieces of things; lumps, protrusions (52 nouns)	<i>klumpe, mocke, brocke, schërbe, scholle, stumpf(e), schërze</i>
Stones/rocks (36 nouns)	<i>ammetiste, smaragde, dîamante, saphîr(e); schroffe, schorre, vels(e), wacke</i>
Cloth/fabric (31 nouns)	<i>lappe, lumpe, vetze, plunder, ham(e), kotze, hader</i>
Containers; units of measurement (23 nouns)	<i>metze, kaste, ôme, elle, mëste, trage, gucke, mût(te)</i>
Flames, sparks, shiny objects (15 nouns)	<i>vunke, zander, (ge)lohe, schîne, vlam(me), zunde</i>
Borders, edges, frames (14 nouns)	<i>bort(e), kringe, ram(e), schranke, ëter, stade</i>
Streams, flowing water (13 nouns)	<i>brunne, gieze, phlûm(e), strâm(e), gumpe, sîfe, wâge</i>
Vehicles, particularly boats (12 nouns)	<i>nache, karre, slite, kocke, holche, kan, schalte, nâve</i>
Months, days, seasons (11 nouns)	<i>merz(e), mei(g)e, mittewoche, ougest(e), lenze, aberëlle</i>
Coins (9 nouns)	<i>batze, ducâte, gros(se), franke, marzel(le), mörche</i>

In addition to the weak masculine class, MHG had a variety of other noun classes, including a weak feminine class which followed the same pattern as the weak masculines (*zunge* ‘tongue’: nom. sg. *zunge*, all other forms *zungen*) and several strong classes representing all three genders; the largest (most type frequent) of these are given in (3) (Weinhold 1883: 488–506).<sup>10</sup> In all of these classes, as in the weak masculine class, final/medial unstressed *-e-* was generally apocopated/syncopated after liquids and nasals (e.g., *nagel* ‘nail’: dat. sg. / nom./acc./gen. pl. *nagel(e)*, gen. sg. *nagel(es)*, dat. pl. *nagel(en)*). Polysyllabic masculine nouns in the *tac* class with stems ending in *-en* (*morgen, rëgen, kristen*) thus had *-(e)n* in all forms except the genitive

<sup>9</sup> As Zubin and Köpcke (1984) note, it is common in German (and in many other languages) for nouns belonging to the same semantic category to have the same gender. This may also apply to smaller inflectional classes within a single gender category.

<sup>10</sup> For a concise overview of the structural changes that have affected the system of nominal inflection as a whole, see Durrell 1990 or Nübling 2008; for a more detailed account, see Kern and Zutt 1977, Wegera 1987, or Pavlov 1995.

singular; this group of nouns overlapped with the weak declension in at least five slots in the paradigm: the dative and accusative singular, and the nominative, accusative, and genitive plural.

Some MHG strong masculines like *tac* ended in *-e* in the nominative singular (*hirte*), like the weak masculines; however, this pattern was rare.

In the class of feminine nouns ending in *-e* (*gēbe*), the *-n* in the dative and genitive plural was later extended to cover the whole plural system, yielding a mixed paradigm with *-e* in all singular forms and *-(e)n* throughout the plural (cf. the paradigm of NHG *Schlange* given in (5) below).

Masculine:

	<i>tac</i> ‘day’		<i>gast</i> ‘guest’	
	Sg.	Pl.	Sg.	Pl.
N	<i>tac</i>	<i>tage</i>	<i>gast</i>	<i>geste</i>
A	<i>tac</i>	<i>tage</i>	<i>gast</i>	<i>geste</i>
D	<i>tage</i>	<i>tagen</i>	<i>gaste</i>	<i>gesten</i>
G	<i>tages</i>	<i>tage</i>	<i>gastes</i>	<i>geste</i>

Feminine:

(3)

	<i>gēbe</i> (f.) ‘gift’		<i>kraft</i> (f.) ‘strength’	
	Sg.	Pl.	Sg.	Pl.
N	<i>gēbe</i>	<i>gēbe</i>	<i>kraft</i>	<i>krefte</i>
A	<i>gēbe</i>	<i>gēbe</i>	<i>kraft</i>	<i>krefte</i>
D	<i>gēbe</i>	<i>gēben</i>	<i>kraft, krefte</i>	<i>kreften</i>
G	<i>gēbe</i>	<i>gēben</i>	<i>kraft, krefte</i>	<i>krefte</i>

Neuter:

	<i>wort</i> ‘word’		<i>künne</i> ‘family, clan’	
	Sg.	Pl.	Sg.	Pl.
N	<i>wort</i>	<i>wort(er)</i>	<i>künne</i>	<i>künne</i>
A	<i>wort</i>	<i>wort(er)</i>	<i>künne</i>	<i>künne</i>
D	<i>wortes</i>	<i>worte(r)n</i>	<i>künnes</i>	<i>künnen</i>
G	<i>wort</i>	<i>worte, worter(e)</i>	<i>künne</i>	<i>künne</i>

### 1.1.2 The Weak Masculines in (E)NHG: The Four Groups

The structure of the weak masculine paradigm has not changed significantly since the 12<sup>th</sup> century; weak masculine nouns still end in *-e* or *-ø* (no ending) in the nominative singular, and in *-n* or *-en* in all other forms (Group 1):<sup>11</sup>

<sup>11</sup> For a general overview of the NHG system of noun inflection, see any of the modern grammars (Duden 2009; Eisenberg 1989, 2013; Engel 1988; Erben 1972; Jung 1984; Helbig and Buscha 2001; Hentschel and Weydt 2003; Griesbach and Schulz 1960; Heidolph et al. 1981; Zifonun 1997). Alternative approaches to noun classification in the modern language are discussed in, e.g., Durrell 1977, 1990; Jørgensen 1969; Hermodsson 1968; Rettig 1972; Bech 1963; Wurzel 1994a; Beeler 1958; Wiese 2000; D. Bittner 1994. Approximate frequencies of the various NHG noun classes (type and token) are given in Schluoff 1974.

		Group 1a		Group 1b	
		<i>Bote</i> ‘messenger’ (< MHG <i>bote</i> )		<i>Bär</i> ‘bear’ (< MHG <i>bër</i> )	
(4)		Sg.	Pl.	Sg.	Pl.
N		<i>Bote</i>	<i>Boten</i>	<i>Bär</i>	<i>Bären</i>
A		<i>Boten</i>	<i>Boten</i>	<i>Bären</i>	<i>Bären</i>
D		<i>Boten</i>	<i>Boten</i>	<i>Bären</i>	<i>Bären</i>
G		<i>Boten</i>	<i>Boten</i>	<i>Bären</i>	<i>Bären</i>

In the modern language, as in MHG, the inflectional marker *-(e)n* is sometimes omitted in the oblique singular forms, particularly in the dative and accusative. Most grammars advise omitting the ending when the noun is unpreceded, i.e., has no other elements accompanying it in the noun phrase. Unpreceded weak masculine nouns are ambiguous with respect to number in all of the oblique cases (the singular and plural are identical), and — perhaps because the ending *-(e)n* is more frequent as a plural marker than as a singular case marker — singular forms ending in *-(e)n* are likely to be misconstrued as plurals (Duden 2009: 214–15, 964; Duden 2001: 858; Wahrig 2003: 327). Some contexts in which (weak) nouns are frequently unpreceded include

1. newspaper headlines and other headings:

Englische Erzieherin für **Prinz** und Prinzessin der saudischen Königsfamilie gesucht.  
DAAD-Preis für **Student** aus China. (Duden 2009: 215)

2. lists and juxtapositions of two or more nouns, and particularly binomial expressions as defined by Lambrecht (1984):

das Verhältnis zwischen **Patient** und Arzt  
Das Gesuch muss **Name**, Beruf und Anschrift des Antragstellers enthalten. (Duden 2001: 858)

3. titles accompanying people’s names:<sup>12</sup>

eine Einladung bei **Präsident** Dr. Schmidt  
die Einschaltung von **Bundestagspräsident** Gerstenmaier (Duden 2001: 861)

4. prepositional phrases:<sup>13</sup>

der Unterschied zwischen **Mensch** und **Affe** (Wahrig 2003: 327)  
Besetzung: ein Forstmeister mit **Assistent** (Duden 2001: 858)

<sup>12</sup> Most of the affected nouns are words that denote occupations. Duden (2001: 426) advises that the word *Herr*, unlike other weak nouns, must always be inflected, even in the absence of a preceding determiner or adjective, e.g., “Wir werden **Herrn** Müller anrufen.”

<sup>13</sup> Note that many of the uninflected weak nouns cited in the other categories are also prepositional objects, and that the first example in the prepositional-object category is also a binomial expression.

5. attributive phrases introduced by *von* and *als*:

Aber alle diese Gattungen priesen den Mann als **Held** (Duden 2009: 215)  
aus einer Seele von **Mensch** wird ein hartgesottener Geschäftsmann (966)

6. use in the citation form:

was man so ***Idealist*** nennt  
die Beugung von »**Dirigent**« (Duden 2001: 859)

While the structure of the paradigm has remained more or less stable over the centuries, most of the inanimate nouns that belonged to the class in MHG (*Garten*, *Bogen*) — as well as some that rank very low in the animacy hierarchy (*Schnecke*, *Schlange*), and a few words for people and larger animals — have shifted into other inflectional classes:

		Group 2		Group 3		Group 4	
		<i>Schelm</i> ‘rascal’ (< MHG <i>schëlme</i> )		<i>Garten</i> ‘garden’ (< MHG <i>garte</i> )		<i>Schlange</i> ‘snake’ (f.) (< MHG <i>slange</i> (m.))	
		Sg.	Pl.	Sg.	Pl.	Sg.	Pl.
(5)	N	<i>Schelm</i>	<i>Schelme</i>	<i>Garten</i>	<i>Gärten</i>	<i>Schlange</i>	<i>Schlangen</i>
	A	<i>Schelm</i>	<i>Schelme</i>	<i>Garten</i>	<i>Gärten</i>	<i>Schlange</i>	<i>Schlangen</i>
	D	<i>Schelm</i>	<i>Schelmen</i>	<i>Garten</i>	<i>Gärten</i>	<i>Schlange</i>	<i>Schlangen</i>
	G	<i>Schelm(e)s</i>	<i>Schelme</i>	<i>Gartens</i>	<i>Gärten</i>	<i>Schlange</i>	<i>Schlangen</i>

These shifts began gradually in the MHG period and picked up considerable momentum at some point in the late 14<sup>th</sup> or early 15<sup>th</sup> century (Bojunga 1890: 65, 69; Wegera 1987: 152–153, and cf. also the charts in Molz 1902: 272–277, 281–291).<sup>14</sup> In most cases, they had attained completion by the end of the 16<sup>th</sup> century.

These developments are arguably all cases of analogical extension, or proportional analogy in the traditional sense, whereby inflectional patterns other than the etymologically expected weak one are imposed on weak masculine nouns.<sup>15</sup> In the first shift (Group 2), the

<sup>14</sup> For Bojunga, this process begins in the late 15<sup>th</sup> century (65), but Molz’s more extensive material suggests that it was already well underway by the end of the 14<sup>th</sup> century. Isolated examples of nominative singular forms ending in *-(e)n* and of genitive singular forms ending in *-(e)ns* are attested already in MHG:

- Klein et al. (2018: 89) cite the nominative singular forms *aposteln*, *swibogen*, *brvnnen*, *herren*, *lichnâmen*, *magen*, *wissagen* (each occurring only once in the corpus), *menschin* (2x), *schaden* (2x), and *namen* (7x), while Grimm (1870: 601) lists *waben*, *willen*, and *namen*. Most of these nouns denote inanimate objects.
- A study of 13<sup>th</sup>-century official documents by Lindgren (1954) turned up several genitive singular forms of weak nouns with the ending *-ens*, including *grauens*, *pfawens*, *schadens*, and *wingartens* (668), corresponding to the NHG words *Graf* ‘count’, *Pfau* ‘peacock’, *Schaden* ‘harm’, and *Weingarten* ‘vineyard’. Weinhold (1883) lists the forms *pfâns* (~ NHG *Pfau*), *smerzins* (~ NHG *Schmerz* ‘pain’), and *enins* (~ NHG *Ahn* ‘ancestor’), noting that the genitive singular ending *-ens* is most common in Upper German dialects in MHG (493).

<sup>15</sup> These developments could also be construed as (partial) leveling, if one widens the definition of leveling to encompass alternations in inflectional affixes as well as stem alternations, as Hock (1991) and others have proposed doing: in the first scenario (*Schelm*), the *-ø /-en* alternation in the singular has been leveled in favor of the

pattern that is extended is that of the strong masculine nouns with no ending in the nominative singular and *-e* (optionally also umlaut) in the plural (*der Stift*, pl. *die Stifte*; *der Baum*, pl. *die Bäume*). The pivot for the extension (the form common to the original and superimposed paradigms) is an apocopated nominative singular, which speakers must have identified as a strong form.

In the second case (Group 3), the extended pattern is that of strong masculine nouns with *-en* in the nominative singular and no ending (but sometimes umlaut) in the plural (*der Wagen*, pl. *die Wagen/Wägen*; *der Hafen*, pl. *die Häfen*). Here the extension of the strong pattern presupposes reanalysis of the weak oblique singular form ending in *-n* (*den Garten*): at some point, speakers must have ceased to view this form as a stem in *-e* with an inflectional ending *-n* attached to it (*Garte+n*), and interpreted it instead as a stem in *-en* with a zero marker (*Garten+∅*).<sup>16</sup> In this scenario, the pivot for the extension of the strong pattern was one (or perhaps all) of the six forms which, in both paradigm types, have the ending *-(e)n*: the accusative or dative singular, or any of the four plural forms, which sometimes have umlaut in the strong paradigm (sg. *der Faden* : pl. *die Fäden*), but not always (sg. *der Wagen* : pl. *die Wagen/Wägen*). As we will see below, the starting point of the shift may have been different for each noun.

Finally, in the third scenario (Group 4), the adopted pattern is that of the mixed feminine nouns with *-e* in the singular and *-n* in the plural (sg. *die Lampe* : pl. *die Lampen*). Here, the pivot for the extension was either the nominative singular or the plural, and, as in the second scenario above, may not have been the same for all nouns that have followed this path.

The gaps left behind by these three groups of nouns — and by the many MHG animate weak masculines that no longer exist — have been filled in the interim by a substantial number of borrowed words, most of which end in stressed suffixes such as *-at*, *-ist*, *-ent*, *-ant*, and *-ot* (e.g., *Aktivist*, *Präsident*, *Pilot*). In fact, despite the mass migration of inanimate nouns into other classes, the total number of weak masculine nouns in the language has increased over time, from about 1,209 in MHG to at least 1,420 in NHG<sup>17</sup> — though many of the more recent borrowings

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apocopated nominative singular (though a new alternation of *-∅* [nominative, accusative, and dative singular] and *-s* [genitive singular] has been introduced at the same time); in the second scenario (*Garten*), the *-e / -en* alternation in the singular has been leveled in favor of the oblique singular form; and in the third scenario (*Schlange*), this alternation has been leveled in favor of the unapocopated nominative singular. Because in all three scenarios the result is a paradigm type that already exists in the language, it is impossible to tell whether extension or leveling has occurred. In any case, Garrett (2008), Hill (2007), and Fertig (2016) have argued convincingly that most, if not all, paradigmatic changes that have traditionally been described as leveling can also be explained as instances of proportional analogy / extension, or attributed to other (extramorphological) mechanisms, including interference in production and/or perception.

<sup>16</sup> This is what Fertig (2013: 27–37) refers to as C-reanalysis, where the form that is reanalyzed occupies the C-slot in a proportional equation of the form  $A : B = C : D$  whose solution is an analogical innovation. In this case, we can construct the equation *den Wagen* (acc. sg.) : *der Wagen* (nom. sg.) = *den Garten* (acc. sg.) : D, where D represents the innovative nominative singular form *der Garten*.

<sup>17</sup> D. Bittner (1991: 98–99) estimates that, in the modern language, the weak masculine class contains

- (a) about 70 native and about 400 non-native nouns ending in schwa, including many with the suffix *-loge* (e.g., *Löwe*, *Schütze*, *Virologe*);
- (b) about 10 native inanimate nouns ending in schwa, most of which are in a transitional state and no longer strictly weak (e.g., *Friede*, *Funke*);
- (c) about 40 native animate nouns, mostly monosyllabic, many of which are in the process of becoming strong (e.g., *Bär*, *Fink*);

are scientific terms and other uncommon words with limited applicability which most speakers rarely use (e.g., *Bryophyt* ‘moss’, *Aerobiont* ‘aerobe’). While some of these loanwords were already in the German lexicon in MHG,<sup>18</sup> most entered the language in the 18<sup>th</sup> and 19<sup>th</sup> centuries (Köpcke 1995: 167); most are of French (ultimately, Latin or Greek) origin, and most are animate.

The weak masculine class has also absorbed some nouns that were strong in MHG, including *christen* ‘Christian’ (NHG *Christ*), *raben* ‘raven’ (NHG *Rabe*), *scheffen* ‘juror, lay judge’ (NHG *Schöffe*), *heiden* ‘heathen’ (NHG *Heide*),<sup>19</sup> and *helt* ‘hero’ (NHG *Held*). *Christ*, *Rabe* and *Schöffe* had already begun to shift in MHG; the others joined the class en route to NHG.

The nouns that have remained in the class (Group 1), and those that have joined the class since the Middle Ages, share certain extramorphological properties (see, e.g., D. Bittner 1991; Duden 2009; Duden 2001; Köpcke 1995, 2000, 2000a, 2005; Wahrig 2003; Helbig and Buscha 2001; Heidolph 1981; Griesbach and Schulz 1960; Erben 1972; Eisenberg 1989, 2013; Engel 1988; Hentschel and Weydt 2003; Zifonun et al. 1997; Jung 1984):

1. As indicated above, most have animate referents; they denote people or animals.
2. Many of them end in *-e* and have penultimate stress; those that do not are either monosyllabic or, if they have more than one syllable, are stressed on the final syllable.

None of these properties defines the class all by itself; for example, it is not the case that all weak masculine nouns are animate, or end in *-e*, or are stressed on the final syllable. Nor do all of these attributes need to be present in order for a noun to belong to the weak declension; some weak nouns, for example, are animate but lack *-e* (*Bär*, *Mensch*). At the same time, none of these features is unique to weak masculine nouns; many other nouns in the language are animate (*König* ‘king’, *Prinzessin* ‘princess’), end in *-e* (most feminine nouns, the masculine *Käse* ‘cheese’), etc. The weak masculine class thus constitutes a category with fuzzy boundaries of the sort ideally suited to prototype-theoretical analysis, a category in which some members are more central than others and no one feature is common to all members (Rosch 1978).

Köpcke (1995: 168) has defined two prototypes for the class:<sup>20</sup>

- 
- (d) at least 800 animate nouns with non-native suffixes such as *-ist*, *-at*, *-ent*, *-ant*, and *-graph* (e.g., *Produzent*, *Kapitalist*); and
  - (e) about 100 inanimate nouns with non-native suffixes, particularly *-ent*, *-ant*, *-phyt*, and *-graph* (e.g., *Sonorant*, *Automat*).

Adding these figures together, we arrive at a total of 1,420 nouns. My own count of nouns labeled weak in the 1997 Duden dictionary yielded a slightly higher number (2,068 nouns, not including compounds or substantive adjectives). Kusová (2014: 104–105) has only 448, but appears not to have counted many of the less frequent nouns.

<sup>18</sup> See above under MHG nouns (1.1.1). Lexer has 76 weak masculine nouns with non-native suffixes, including 6 with *-ant(e)*, 8 with *-ât(e)*, 5 with *-ent(e)*, 5 with *-êt(e)*, 19 with *-ist(e)*, and 12 with *-it(e)/-ît(e)*. Of these, 41 denote people, 7 denote animals or other creatures, and 27 are inanimate; in one case, the meaning is unclear. 45 have survived into the modern language.

<sup>19</sup> MHG *heiden* (NHG *Heide*) began life as a substantivized adjective.

<sup>20</sup> See also Köpcke 2000a on the diachronic reorganization of the class around the prototype. In the *Duden-Grammatik* (2009), too, it is suggested that the class may be organized around a prototype or prototypes, though the authors never mention prototypes overtly: the nouns covered by their Rule 2 (*-e* in the nominative singular, animate,

	<u>Prototyp I</u>	<u>Prototyp II</u>
	[+menschlich]	[+menschlich]
(6)	mask. Genuszuweisung	mask. Genuszuweisung
	auslautendes Schwa	Ultimabetonung
	Penultimabetonung	mehrsilbig
	mehrsilbig	

The prototypes share the features [+*menschlich*] (human), *mehrsilbig* (polysyllabic), and *mask. Genuszuweisung* (masculine gender); they differ only in that the first ends in *-e*, while the second does not (the loss of *-e* yields a noun that is stressed on the final rather than the penultimate syllable). They can be combined into a single schema representing the prototypical syllable structure of all weak masculine nouns, as follows:

$$(7) \quad [(X\$) K_0^{\wedge}VK_0(\text{ə})]^{21}$$

The prototypical weak masculine noun in the modern language thus consists of one stressed syllable surrounded by (optionally) one or more unstressed syllables to the left, and *-e* [ə] to the right (e.g., *Matróse*).

It also denotes a human being (is [+*menschlich*]): a noun is more likely to belong to the weak masculine class the more closely its referent resembles a (male) human being. In figure 1.1 (from Köpcke 1995: 178),<sup>22</sup> the first noun listed in each row matches the prototype exactly, while the last noun is situated furthest from the prototype.

Prototyp I	<i>Matrose</i>	<i>Kurde</i>	<i>Schimpanse</i>	<i>Falke</i>	<i>Gedanke</i>	<i>Mensch</i>	<i>Bär</i>	<i>Glaube</i>
Prototyp II	<i>Artist</i>	<i>Leopard</i>	<i>Trabant</i>					

Figure 1.1. Weak masculine nouns arranged in order of prototypicality (from Köpcke 1995)

Three recent studies, two of which are Köpcke’s own, have yielded empirical evidence for the continued validity of the weak masculine prototype in the early 21<sup>st</sup> century. In a nonce-probe experiment (Köpcke 2000a), 31 students of Germanistik at a North German university were asked to form the genitive singular and nominative plural of 37 nonce words (nouns). They were given the gender and meaning of each noun, but no other information. All nouns were read aloud so that the subjects could hear the stress pattern. The subjects produced weak genitive singular forms more often for nouns that matched the weak masculine prototype than for nouns that did not.

In another experiment, also led by Köpcke (2005), 24 students in a German 6<sup>th</sup>-grade class (all native speakers) were instructed to write a fairy tale using the weak masculine nouns *Gefährte*, *Bote*, *Held*, *Prinz*, *Bär*, and *Falke*. They were allowed to use each noun as often as they deemed appropriate. The noun forms that the children produced in their stories were

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*-n* in the plural) are said to form the “Kernbestand” of the weak class (212), and nouns in the class are defined by “bestimmte formale und semantische Merkmale — meist nicht nur eins allein, sondern im Verbund mit anderen Merkmalen” (211).

<sup>21</sup> In this schema, \$ represents a syllable boundary and X an unstressed syllable or syllables not further specified; K stands for *Konsonant* ‘consonant’ and V for *Vokal* ‘vowel’. All weak masculines have at least the stressed syllable in the middle, though many are missing at least one of the outer unstressed syllables, hence the parentheses.

<sup>22</sup> A simpler version of this prototypicality scale is given in Köpcke 2000b: 158.



classified as either strong or weak; nominative singular and plural forms, which are ambiguous with respect to inflectional class, were excluded from the analysis. In the children's stories, the proportion of weak forms was 100% for the two nouns closest to the prototype (*Gefährte*, *Bote*), and declined with increasing distance from the prototype (*Falke*: 75%; *Held*: 38%; *Prinz*: 54%; *Bär*: 13%).

More recently, Schäfer's (2019) statistical study of weak masculine nouns in the DECOW12A web corpus revealed that nouns further from the prototype were more likely to exhibit strong inflection than those closest to the prototype.

Further evidence in support of the prototype can be gleaned from speakers' inflectional treatment of strong nouns that have at least some of the features associated with the prototype (animacy, *-e*, final stress, non-native suffixes). Strong and mixed nouns that denote people are sometimes inflected according to the weak pattern in the oblique singular forms (Duden 2009: 214; see also Augustin 2012). Mixed nouns that end in the non-native pseudo-suffix *-or* (*Autor*, *Direktor*, *Pastor*), which have variable stress, are particularly susceptible to weakening in the singular; these are stressed on the penultimate syllable in the singular, where they are strong (nom. *der Aútor*, acc. *den Aútor*), but in the plural, where they end in *-en*, the stress shifts to the suffix (*die Autóren*). Apparently, the noun *Autor* is especially prone to weakening (Wahrig 2003: 318); the forms *den/dem Autoren* in the accusative and dative singular are quite common. Native nouns of one syllable are also affected (the *Duden-Grammatik* [2009] cites weak forms of *Zwerg*); here, though, the model for the extension of the weak pattern is not the prototypical weak noun (*Matrose*, *Artist*), but rather a noun like *Mensch*, which is lower on the prototypicality scale.<sup>23</sup>

To summarize the facts of the case, the nouns that belonged to the weak masculine class in MHG are now spread out across at least four different inflectional patterns (Groups 1, 2, 3, and 4):

- 1) Some are still weak (e.g., *Bote*, *Mensch*). In many cases, the original final *-e* (< OHG *-o*) in the nominative singular has been preserved (*Bote*); in others, it has been lost via

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<sup>23</sup> The consensus among scholars today seems to be that the strength of the prototype is waning and, with it, the stability of the class. As Thieroff (2003: 113) notes, citing evidence from Duden 2001 (*Richtiges und gutes Deutsch*), several nouns that conform to the prototype — in particular the version of the prototype ending in a stressed syllable — are nonetheless susceptible to loss of endings (*Architekt*, *Dirigent*, *Dozent*, *Drogist*). Indefrey (2002) has demonstrated with a nonce-probe experiment that many German speakers today do not factor in the criterion of animacy when deciding whether to inflect an unfamiliar noun according to the weak pattern; at least for those who participated in the experiment, the criterion 'final *-e*' was a more reliable indicator of weak inflection than either animacy or stress pattern. Köpcke himself concedes in later publications that the final *-e* likely bears more weight than the other features that define the prototype: "Gleichwohl ist das finale Schwa ein wesentlich besseres Merkmal als die Belebtheit, denn abgesehen von etwa 20 Fällen werden alle Maskulina, die dieses Merkmal aufweisen, schwach dekliniert" (2000a: 109); "Die Validität des Schwa als Kennzeichen für die schwache Deklination ist [...] verhältnismäßig hoch einzuschätzen" (2005: 71). Paulfranz' (2013) study of genitive singular case markers on strong and weak nouns in German newspapers led the author to question whether the prototype would prove strong enough to ensure the survival of the weak masculine inflectional pattern in the coming centuries: "[Es] scheint [...] unwahrscheinlich, dass sich über die kommenden Jahrhunderte nur wegen einiger prototypischer Vertreter ein Flexionsmuster hält, dem nur noch drei Prozent aller deutschen Substantive folgen, wenn seine Kasusendungen gleichzeitig immer weniger gebraucht werden." (81) While these objections are justified, they have no bearing on the present study, which is concerned with the emergence of the prototype rather than its capacity to sustain the weak masculine class in the future.

- apocope, a regular and largely predictable phonological process (*Mensch*). The nouns in this group are organized around at least one prototype (many are animate, end in *-e*, and are stressed on the penultimate syllable), such that each has some, but not necessarily all, features of the prototype, and the inflectional behavior of a noun is more stable the more features it has in common with the prototype.
- 2) Some have joined, or are in the process of joining, the class of (mostly monosyllabic) masculine strong nouns with *-(<sup>h</sup>)e* in the plural (e.g., *Schelm, Hahn*). In cases where the shift is complete, the original MHG weak pattern is preserved *only* in the nominative singular (*schëlme* → *Schelm*); all of the forms that once ended in *-(e)n* have become strong (acc./dat. sg. *schëlmen* → *Schelm*; gen. sg. *schëlmen* → *Schelm(e)s*; pl. *schëlmen* → *Schelme*). All nouns in this group have lost their original *-e* through apocope.
  - 3) Some have joined, or are in the process of joining, the class of strong masculine nouns with *-en* in the nominative singular and, in some cases, umlaut in the plural (e.g., *Garten, Kasten*). Here, if the shift is complete, and if the noun has an unumlautable stem vowel (*a, o, u*), the original weak forms are preserved *only* in the accusative and dative singular (*garten* → *Garten*). In the nominative singular, the original MHG form ending in *-e* (*garte*) has been replaced by the oblique singular form ending in *-(e)n* (*Garten*); in the genitive singular, the strong ending *-s* has appeared on top of the original weak ending (*garten* → *Gartens*); and in the plural, the stem vowel has acquired an umlaut (*garten* → *Gärten*). If the stem vowel cannot take umlaut, the weak pattern is preserved in the plural, too (*rechen* ‘rakes’ → *Rechen*).
  - 4) Some have joined the group of mixed feminine nouns ending in *-e*, which, like the weak masculines, pluralize in *-(e)n* (e.g., *Schlange, Fahne*). Disregarding the gender shift for the time being, these have retained their original MHG weak forms in the nominative singular (*slange* → *Schlange*) and throughout the plural (*slangen* → *Schlangen*), but not in the oblique singular forms (*slangen* → *Schlange*).

## 1.2 Explaining the Changes

Where did the NHG weak masculine prototype come from? Why have inanimate nouns been almost completely eliminated from the class, and why have some nouns lost their membership in the class despite appearing to match the new prototype exactly (MHG *schëlme* ‘rascal’, for example)? More precisely: Why have the original weak forms of these nouns survived into the modern language in some cases, but not in others, and why are the affected forms not the same for all nouns that have left the class?

### 1.2.1 Token Frequency: A Usage-Based Account

It seems likely that at least since the MHG period, speakers have had less exposure to the now defunct weak forms than to the forms that are still alive today — that the latter have remained engraved in speakers’ minds as a result of frequent repetition, i.e., token frequency, while the former have faded from disuse. Speakers of MHG and ENHG presumably had little

difficulty accessing forms that they were hearing and producing every day, but when the discourse context demanded a form that they either had never encountered before or had only encountered a few times, they had to (re)construct that form from other forms of the same noun that were more accessible to them in the moment. As long as they could access both the nominative singular and at least one of the oblique singular forms, they had enough information to situate the noun in the weak declension and could generate the other (unknown) forms accordingly. If, however, accessible forms of the noun were compatible not only with the weak pattern, but also with another inflectional pattern that had broader applicability (greater type frequency), speakers may have been inclined to construct unknown forms according to this more type-frequent pattern instead.

These ideas can be traced back at least to Hermann Paul and his pioneering work *Prinzipien der Sprachgeschichte*, which has influenced generations of linguists since its first publication in 1880.<sup>24</sup> Paul (1937: 110) defines analogy as a “kombinatorische Tätigkeit” (combinatory act) whereby we create new elements by applying learned rules or proportions to words that do not (yet) follow them, but that share formal and semantic properties with words that do. Most often, our creations are words that already exist in the language and conform to its conventions (“etwas [...] was schon früher in der Sprache üblich gewesen ist”), but sometimes they are innovations (“etwas vorher nicht Dagewesenes”). Each time a new form is created in this way, that form’s impression in our minds is strengthened, and the likelihood that the innovation will be repeated increases (114).<sup>25</sup> The more often a form is produced (the higher its token frequency), the greater the probability that the form will be reproduced.

Whether a needed word form is reproduced from memory or created by analogy in the moment of language use depends on how firmly the (existing) word is rooted in our minds (in our “Seele”). If we have never heard the existing form before, as is often the case with inflectional morphology,<sup>26</sup> or if there is no existing form, we have no choice but to create a new form by analogy on the basis of other forms that are accessible to us. We may also create a novel form if we have heard the existing form before, but not very frequently, so that it has not left a lasting impression (114).<sup>27</sup> In fact, we are constantly producing forms that we have never

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<sup>24</sup> See especially chapter 5 on analogy (Paul 1937: 106–121; for an English translation, see Auer and Murray 2015: 84–98).

<sup>25</sup> “Man muss nun beachten, dass alles, was auf diese Weise [by analogy] geschaffen wird, eine bleibende Wirkung hinterlässt. Wenn diese auch nicht von Anfang an stark und nachhaltig genug ist, um eine unmittelbare Reproduktion zu ermöglichen, so erleichtert sie doch eine künftige Wiederholung des nämlichen Schöpfungsprozesses, und trägt dazu bei die etwa entgegenstehenden Hemmungen noch mehr zurückzudrängen. Durch solche Wiederholungen kann dann hinzugefügt werden, was dem Neugeschaffenen etwa noch an Macht fehlte, um unmittelbar reproduziert zu werden.” (114)

<sup>26</sup> “Bei den wenigsten Nominal- und Verbalformen, die wir aussprechen, findet eine rein gedächtnismässige Reproduktion statt, manche haben wir nie vorher gesprochen oder gehört, andere so selten, dass wir sie ohne Hilfe der Gruppen, an die sie sich angeschlossen haben, niemals wieder in das Bewusstsein würden zurückrufen können.” (112)

<sup>27</sup> “Eine Proportionsbildung [analogical creation] findet gar keine Hemmung in der Seele, wenn für die Funktion, für welche sie geschaffen wird, bisher überhaupt noch kein Ausdruck vorhanden gewesen ist. Aber auch dann nicht, wenn zwar ein abweichender Ausdruck bereits üblich, aber dem betreffenden Individuum niemals überliefert worden ist, was bei etwas selteneren Wörtern häufig genug der Fall ist. Ist aber die übliche Form einmal gedächtnismässig aufgenommen, so ist es eine Machtfrage, ob in dem Augenblick, wo eine bestimmte Funktion ausgeübt werden soll, zu diesem Zwecke eine Form durch einfache Reproduktion ins Bewusstsein gehoben wird,

experienced, often without realizing that we are doing so (110).<sup>28</sup> A new form that we create may or may not differ from the existing, conventional form. The more prominent the existing form is in our minds, though, the more likely we are to use that form rather than create a new one in its place.

If the forms that are accessible to us in the moment can only belong in one (inflectional) class, the task of (re)creating other (unknown) forms is relatively straightforward, since there is only one rule that can be applied. In many cases, though, the accessible forms meet the criteria for membership in more than one class, and the speaker engaged in “kombinatorische Tätigkeit” is forced to choose between two or more competing rules, or patterns (111).<sup>29</sup> Most often, under these circumstances, the pattern that applies more widely (with the greater type frequency) will prevail (111, 113–114).<sup>30</sup> While most word forms in small classes with few members are fated to lose this competition, some can survive if they have been reinforced through frequent repetition (“durch häufige Wiederholung besonders intensiv dem Gedächtnisse eingeprägt”) (111). If the form that wins out is different from the etymologically expected form, the result is an analogical innovation.

As long as innovations of this sort are limited to the individual speaker and rejected by the rest of the speech community, they cannot survive. Either the individual is corrected by other speakers and acquires the conventional form, or, if this never happens, then the form disappears with the speaker when she dies. Only if the innovation is allowed to spread throughout the speech community does a shift in usage result (115).<sup>31</sup>

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oder mit Hilfe einer Proportion.” (114) “Macht” seems here to correspond roughly to the modern concept of token frequency.

<sup>28</sup> “Es ist eine nicht zu bezweifelnde Tatsache, dass eine Menge Wortformen und syntaktische Verbindungen, die niemals von aussen in die Seele eingeführt sind, mit Hilfe der Proportionsgruppen [existing rules] nicht bloss erzeugt werden können, sondern auch immerfort zuversichtlich erzeugt werden, ohne dass der Sprechende ein Gefühl dafür hat, dass er den festen Boden des Erlernten verlässt.” (110)

<sup>29</sup> In a later chapter, Paul notes that formal ambiguity of this sort is widespread in the inflectional classes of the Indo-European languages as a result of sound changes that have affected the inflectional system inconsistently (223–224). He cites the example of the *o*- and *i*-declensions in Gothic, which merged only in the nominative and accusative singular, while the other forms remained distinct (223).

<sup>30</sup> “Vor allem [...] ist eine Gruppe dann leicht im Stande ihr Muster über das Gebiet einer verwandten Gruppe auszudehnen, wenn sie diese in Bezug auf die Häufigkeit der vorkommenden Fälle bedeutend überragt.”

Later in the same chapter, Paul continues: “Sobald eine Form ihrer Gestalt nach mehreren Klassen angehören kann, so ist es auch möglich von ihr aus die andern zugehörigen Formen nach verschiedenen Proportionen [patterns/rules] zu bilden. Welche von den verschiedenen anwendbaren Proportionen dann sich geltend macht, hängt durchaus nur von dem Machtverhältnis ab, in welchem sie zu einander stehen.” (113–114) Again, “Macht” seems to denote token frequency here.

<sup>31</sup> “[J]ede [...] Überschreitung des Usus erscheint, auf ein Individuum beschränkt, wo sie zu dem Üblichen ein Mehr hinzufügt, ohne sich mit demselben in Widerspruch zu setzen, als eine gewisse Kühnheit, wo sie aber das letztere tut, geradezu als Fehler. Ein solcher Fehler kann vereinzelt bleiben, ohne zur Gewohnheit zu werden, kann auch, wenn er zur Gewohnheit geworden ist, wieder abgelegt werden, indem man sich durch den Verkehr das Übliche aneignet, sei es zum ersten Male, oder sei es von neuem. Wenn er aber auch nicht wieder abgelegt wird, so geht er in der Regel mit dem Individuum zu Grunde, wird nicht leicht auf ein anderes übertragen. [...] Nur wenn sich innerhalb eines engeren Verkehrskreises an einer grösseren Anzahl von Individuen spontan die gleiche Neuschöpfung vollzieht, kann sich eine Veränderung des Usus herausbilden. Die Möglichkeit eines solchen spontanen Zusammentreffens vieler Individuen beruht auf der überwiegenden Übereinstimmung in der Organisation der auf die Sprache bezüglichen Vorstellungsgruppen. Je grösser die Zahl derjenigen, bei denen die Neubildung

While usage-based approaches to language (change) such as that which Paul espoused were abandoned for much of the 20<sup>th</sup> century, they have risen to prominence again in recent decades as computers and other technological tools have vastly expanded our access to linguistic data. Paul's ideas can be found scattered throughout the linguistic scholarship of the last half-century (for an overview, see Auer and Murray 2015), and his influence is particularly noticeable in the work of Joan Bybee, who has written extensively on morphological and morphophonemic change.

For Bybee, as for Paul, the words and phrases that are accessible to us at any given moment (those that are stored in our mental lexicon) form connections in our minds of greater or lesser strength, depending on the similarity of the items involved (lexical connection). Morphological rules, or schemas, emerge from this elaborate network as we identify patterns among the items that we have amassed in our mental cabinets (2007: 167–193). Individual items within the network become more prominent and easier to access the more frequently we use and encounter them (their lexical strength increases), and by the same token, items lose strength if we do not encounter them regularly (1988: 131; 1995: 235–239). Items are stored in our minds in the form of exemplars: new items we encounter are mapped onto existing exemplars, or if no exemplar exists yet for a given item, a new one is created. Each mapping strengthens the exemplar, so that the item becomes easier for us to access the next time we need it (2006: 716–717).

Bybee, like Paul, has suggested that the impetus for language change should be sought in language use. Systemic change begins with individual instances of (analogical) innovation by speakers of all ages, and not just by children in the acquisition phase, as generative linguists have proposed (2010: 114–119). Analogy is not merely an observable diachronic phenomenon, but also a “cognitive processing mechanism” that is activated in the minds of individual speakers each time they use language to communicate (2010: 72–73).<sup>32</sup> Like Paul, Bybee has observed a correlation between innovation and the inaccessibility of existing forms (1988: 132–133), and between inaccessibility and low token frequency: in order for a word to be accessible to the average speaker in the moment in which the speaker requires it, it must have been encountered with sufficient frequency to have left a lasting impression in the speaker's mind (it must have sufficient lexical strength) (2010: 75). Finally, like Paul, she has observed that the patterns that serve as models for innovation — schemas or classes that attract new members — tend to be very type-frequent; that is, they apply to large numbers of lexical items (1980: 56).

Much of Bybee's work in the area of morphology is devoted to the internal structure of inflectional paradigms. Building on Vennemann (1972), Watkins (1962), and Mańczak (1958a, 1958b, 1963), she has established that the forms of an inflectional paradigm are not all created equal: some forms, and the semantic concepts they represent, are basic, while others are derived. Forms that are semantically unmarked, or basic, are also basic morpho(phono)logically in the sense that speakers use them as models when creating novel forms: “[S]peakers construct unidirectional relationships (or lexical connections) between morphologically related stem forms

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auftritt, um so leichter wird die Übertragung auf andere, je mehr gewinnt das, was anfangs als Fehler erschien, an Autorität.” (115)

<sup>32</sup> Auer (2015: 192) claims that in Bybee and Moder 1983 (reproduced in Bybee 2007: 127–147), Bybee “explicitly rejects Paul's notion of analogy.” She rejects Paul's notion that analogy must be proportional; she does not reject his theory outright. Her own concept of analogy is broader than Paul's; in addition to proportional analogy in the traditional neogrammarian sense, it encompasses cases (such as that discussed in the article in question) which cannot be explained in terms of proportional equations.

in such a way that the semantically unmarked or basic form is also morphophonologically basic” (1988: 132–133). Bybee has found copious evidence of the morphological basic-derived relation in language change (certain forms are likely to have developed from others diachronically); in child-language acquisition (children construct certain forms using other forms as bases); and in psycholinguistic nonce-probe experiments in which participants are asked to generate unknown forms of nonce words (1985: 49–79).

The basic forms in a paradigm are autonomous (2007: 50),<sup>33</sup> meaning that they have independent representation in the speaker’s mental lexicon and are likely to be stored and processed as whole units rather than as strings of morphemes. A word can become autonomous more easily if it is semantically simple and if its morphological structure is opaque; most importantly, though, in order to become and remain autonomous, a word must have very high token frequency (2007: 51–52, 13–14). Basic forms are the forms in the paradigm that speakers use all the time and can access quickly. These forms are also the most resistant to morphophonemic change (53; see also Mańczak 1963: 37): if changes occur within a paradigm, they are likely to affect other, less autonomous forms first, and the forms that change are likely to be reconstructed on the model of the basic form(s). Cross-linguistically, some forms are more likely to be semantically unmarked (and therefore basic / highly frequent / autonomous) than others; these are forms that correspond to what Mayerthaler (1981: 11–13) calls “prototypische Sprechereigenschaften” – that reflect the attributes and experience of the (proto)typical speaker. For nouns, the relevant categories are nominative/subject/agent, animate, definite, singular, and (recent efforts at inclusivity notwithstanding) masculine.

To summarize the positions of Paul and Bybee (and others who have followed in their footsteps, such as Becker [1994]), high token frequency can strengthen the representation of a word form in our memories, enabling us to recall the item more easily and reducing the likelihood that we will replace it with an innovative form on the model of a more type-frequent pattern. At the same time, it increases the likelihood that the form will be chosen as the base for new forms if analogical innovation occurs elsewhere in the paradigm. Low token frequency has the opposite effect, causing forms to die out — particularly in small inflectional classes with few members and in cases of formal ambiguity — and to be supplanted by other forms that we can construct and access more easily.

The position that analogical paradigmatic change involves replacement of entire word forms, rather than modification of existing forms (say, by substitution of one inflectional marker for another), has been taken up again recently in Hill 2020. Hill cites examples from various languages, including that of the shift *molten* → *melted* in English, illustrating that a theory of analogy as word modification (as opposed to replacement) cannot account for most analogical changes without positing intermediate forms that never materialize (e.g., in the case of *molten* → *melted*, the forms *\*melten* and *\*molted*, which are not attested anywhere in the history of English).

For additional empirical evidence that the token frequency of inflected forms determines — at least to some extent — the ease with which speakers can access them, we can look to the cognitive branch of linguistics. Several recent studies have revealed that whole-word frequency — as opposed to lemma or stem/morpheme frequency — can facilitate processing of inflected forms, decreasing the time needed to recognize them in lexical-decision tasks (see especially Lõo

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<sup>33</sup> “The directionality of the basic-derived relationship depends on the degree of autonomy: the more autonomous form serves as the basic form, and the less autonomous forms are derived” (2007: 50).

et al. 2018 on Estonian noun inflection and Granlund et al. 2019 on Estonian, Finnish, and Polish noun inflection, but also Baayen et al. 2003 on Dutch noun plurals; Balling and Baayen 2008 on Danish; Baayen et al. 2007 on morphologically complex words in English; and Luke and Christianson 2011 on English inflected verbs).

Whole-word frequency may affect not just recognition, but also production of morphologically complex words. A study of Russian words with verbal and adjectival prefixes ending in /z/ (Kapatsinski 2010) showed that speakers of Russian make fewer spelling errors in such words the more (token-)frequent the words are. Further, it revealed that the likelihood of spelling errors can vary within a single inflectional paradigm according to the token frequencies of the individual forms; the error rate is lower for forms that are more frequent.

Returning now to our four groups of (former) weak masculine nouns, it seems likely that in Group 1 (*Bote*), the basic, autonomous, most frequent form is the nominative singular, in keeping with principles of semantic markedness (though the oblique forms must also be frequent enough here to sustain the weak pattern); and that in Group 2 (*Schelm*), the basic form is also the nominative singular, but in this case with apocopated *-e*.

In Group 3 (*Garten*), the basic form is a locally unmarked accusative or dative singular. As we have seen, the nominative singular is typically the least marked form in the noun paradigm. However, forms that are typically marked (derived / less frequent / not autonomous) may be unmarked for certain words or classes of words with idiosyncratic meanings; Tiersma (1982) and others (e.g., Bybee 1985: 74–77) have dubbed this phenomenon “local markedness.” For example, nouns denoting objects that occur most often in pairs or groups (body parts such as arms, legs, and teeth; lower life forms that we encounter most commonly in groups, such as ants and geese) may be unmarked in the plural and marked in the singular (Tiersma 1982: 835). While nouns are usually unmarked in the nominative, some may be unmarked in other cases; for example, words denoting places may be unmarked (basic / most frequent) in the locative, and words for tools or instruments in the instrumental in languages that have those cases (843). It follows that nouns that denote inanimate objects, such as those in Group 3 (*Garten*), may be locally unmarked in cases that mark the patient or (often) location of the action (e.g., dative or accusative).

Finally, in Group 4 (*Schnecke*), one of the plural forms is basic (also locally unmarked), though the nominative singular may have come to share this function after the shift from masculine to feminine gender.

If Bybee’s predictions about the basic-derived relation and the direction of analogical change are correct, we would expect these paradigms to have rearranged themselves diachronically in such a way that the less autonomous, less frequent, semantically derived forms are derived morphologically (following a pattern with high type frequency) from the more autonomous, more token-frequent basic forms. This is exactly what has happened in Groups 2 and 3: in Group 2 (*Schelm*), the plural and oblique singular forms are now all derived from an apocopated nominative singular, and in Group 3 (*Garten*), the whole paradigm is built on the oblique singular form ending in *-en*. Both former weak masculine types now inflect according to the considerably more type-frequent strong masculine pattern with *-ø* in the nominative singular and *-s* in the genitive singular. In Group 4, the shift appears to have been motivated partly from outside the paradigm; the more type-frequent mixed feminine pattern may have been extended once these nouns had become associated with feminine gender (because the plural forms were autonomous, while the singular forms were not).

That token frequency has been the main driver of the Group 3 shift has been accepted among Germanists at least since Otto Behaghel, who observed in 1883:

[I]n allen Fällen, wo jetzt der Nominativ auf **-en** ausgeht, handelt es sich um Sachbezeichnungen; dagegen sind die Wörter, welche die alte Nominativform ohne **-n** bewahrt haben, fast ausschließlich Ausdrücke für Personen und für Tiere: man vergleiche Affe, Ahne, Bote, Buhle, Bürge, Drache, Erbe, Fink, Falke, Ferge, Gatte, Genosse, Hase, Jude. Diese verschiedene Behandlungsweise bei lebenden Wesen und bei Sachen erklärt sich daraus, daß die ersteren viel häufiger als Subjekt und demnach im Nominativ der Einzahl erscheinen als die letzteren. Und je häufiger eine Form angewandt wird, desto leichter widersteht sie der Verdrängung durch eine Analogiebildung. (173–174)

Nouns that denote people (Group 1) are used more frequently in the role of subject, and by extension in the nominative case, than those that denote inanimate objects (Group 3). This observation is reiterated in Molz (1902: 269–270; 278),<sup>34</sup> Bojunga (1890: 65),<sup>35</sup> Steche (1927: 106), Becker (1994: 61), and in some of the modern grammars (Erben 1972, footnote on 139–40).

### 1.2.2 Is Token Frequency Epiphenomenal? An Alternative to the Usage-Based Account

Many linguists, foremost among them proponents of Natural Morphology (NM) (Mayerthaler, Wurzel, Andreas and Dagmar Bittner), but also early defenders of markedness theory such as Joseph Greenberg, have questioned the importance of token frequency in language change, claiming that frequency has no explanatory power in itself but is merely an “Epiphänomen der Natürlichkeit” (Mayerthaler 1981: 137) or “symptom” of markedness (Greenberg 1966: 71; see also A. Bittner 1988: 420 and 1996: 30–35 in reference to suppletion). In NM, language change is said to reflect, and to occur as a direct consequence of, speakers’ inherent drive to optimize the language system — to make it as “natural” as possible by substituting unmarked structures for marked ones in all domains of the grammar and lexicon, e.g., by minimizing allomorphy, maximizing transparency, ensuring that each form has only one function (biuniqueness) and that semantic complexity is reflected in morphological structure (constructional iconicity), etc. (see, e.g., Harnisch 1988: 428; Mayerthaler 1981, particularly chapters 1, 3, and 6; Wurzel 1984a, 1994b). The optimal inflectional class is one whose members

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<sup>34</sup> “Die dingbezeichnungen [...] wurden überwiegend im obliquus gebraucht. [...] Die namen unpersönlicher begriffe hafteten so in ihrer *n*-gestalt in dem bewusstsein der sprechenden.” (278)

<sup>35</sup> “So ist also beim lebenden wesen der nom. der vielgebrauchte, der durch das kraftgesetz widerstandsfähigste und darum herrschende kasus, während beim unbelebten gegenstand der acc. (als der meistangewandte oblique kasus) diese stelle einnimmt.” The “kraftgesetz” dictates, in cases where two (sets of) forms with the same function are in competition with one another, which of the forms is most likely to prevail: “Sobald eine gleichstellung, ein parallellaufen zweier in gleicher eigenschaft angewandter gruppen in derselben proportionsgleichung stattfindet, wird der geist danach streben, diesen überfluss, der für ihn nur ballast ist, zu beseitigen. [...] Die gruppe wird die andere verdrängen, welche die kraft besitzt, zuerst auf die schwelle des bewusstseins zu treten. Diese grössere kraft besitzt ... die gruppe, welche die häufigsten eindrücke auf die seelischen sprachwerkzeuge gemacht hat, die am stärksten besetzte psychische gruppe.” (6) (See also Paul 1937: 111–112.)



share at least one extramorphological (e.g., phonological, semantic, prosodic) property — ideally, one which is unique to the class in question, such that the presence of Property A implies membership in Class A (e.g., if an OHG noun ends in *-o*, it belongs to the weak masculine class). In order to remain stable, an inflectional class must remain implicatively linked with an extramorphological property at all times; if it becomes decoupled from its property as a result of changes in other domains of the language, then it must attach itself to a new property, or risk extinction (Wurzel 1984a: 116–172).

Dagmar Bittner (1987; 1991: 86–97) applies this principle to the German weak masculine class, illustrating that the development of the weak masculines from OHG through MHG into NHG has been driven exclusively by extramorphological impulses. In OHG, the weak masculines all ended in *-o* — that is, they shared a phonological feature. On the way to MHG this *-o* was weakened to *-e* [ə], as were all other full vowels in final syllables (*-a*, *-i*, *-u*, *-e* [e]), with the result that in MHG, the weak masculines were one of five different competing paradigm types associated with the ending *-e*, representing nouns of all genders. In the course of MHG and ENHG, this morphological markedness resolved itself as the feature [ends in *-e*] became linked with feminine gender, and specifically with the mixed feminine class. Most nouns ending in *-e* were absorbed into this class, regardless of gender; those that did not follow this trajectory joined other classes that had stabilized themselves by forming associations with other extramorphological properties. Among masculine nouns, the strong nouns ending in *-e* lost their final *-e* and were pulled over into the dominant strong masculine class (*tac*), while the weak masculine nouns ending in *-e* became linked with the extramorphological (in this case, semantic) property of animacy, which has kept them relatively stable to this day.<sup>36</sup> According to Bittner, the presence of *-e* on masculine nouns is still implicatively linked with weak inflection in the modern language: “Das Bedürfnis zum Erhalt von *Schwa* im Wortausgang der schw. Msk. ergibt sich daraus, daß es sich um eine Grundformeigenschaft handelt, an die das Flexionsverhalten der schw. Msk. implikativ geknüpft ist” (97). However, the property of animacy is *not* implicatively linked with the presence of *-e* (or, by extension, with the weak paradigm type), since there are several masculine nouns in the language — some weak and some strong — that do not end in *-e*, but that nonetheless denote people or “höhere Tiere” (e.g., *Mensch*, *Greis*, *Schelm*, *Gemahl*, *Ochs*): “Belebtheit wird lediglich zu einer Voraussetzung für das Auftreten von *Schwa*, es besteht kein implikatives Verhältnis zwischen den beiden Eigenschaften” (97).

While this account may explain in part how the weak masculine class came to be made up almost exclusively of animate nouns ending in *-e*, it does not explain why the nouns that have left the class have followed three different trajectories. Bittner describes the developments that have affected these groups of nouns — apocope of final *-e*; the attraction of *-n* into the nominative singular of inanimate nouns; the gender shift of nouns denoting plants, body parts, and lower life forms — as largely regular extramorphological processes which destabilized the MHG weak masculine class, bringing about the association with final *-e* and with animacy (1991: 90–91; these are Steche’s [1927: 102–103] “anfressende Vorgänge”). The apocope of final schwa is, in fact, a regularly occurring, largely predictable phenomenon, and may partly account for the Group 2 shift (see chapter 6). However, the appearance of *-n* in the nominative singular in Group 3 and the gender shift in Group 4 require further explanation. Both of these

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<sup>36</sup> As we have seen, most of the weak masculines that were not animate and/or did not end in *-e* (e.g., those in Groups 2 and 3) have also been, or are still being, pulled over to the dominant strong masculine paradigm type.

developments are easily explained with reference to token frequency, as we will see in chapters 7 and 8.

The association of weak masculine nouns with extramorphological properties, in particular animacy, has no doubt helped keep the weak forms alive and the class of weak masculines stable (e.g., through the attraction of other nouns, including loan words, into the class in ENHG; cf. Becker 1994: 59–60). However, this association had to take shape in speakers' minds before it could influence the continuing development of the class. To link the weak masculine paradigm with animacy, for example, one would have to use or encounter at least the nominative singular and one oblique singular form of a wide variety of animate weak masculine nouns with sufficient frequency that there would be no doubt in one's mind that these nouns were weak. At the same time, one would have to *not* encounter at least the nominative singular (possibly also the genitive singular) of many inanimate nouns in the class, so that these nouns could be linked with the strong pattern. The association (Köpcke's prototype!) likely came about as a result of token (in)frequency.

Further, NM has no explanation for the preservation of irregular, unnatural, opaque, untidy forms — those forms that, by Bybee's account, have survived only because frequent repetition has rendered them autonomous — other than that they represent semantically unmarked entities that fall into the “Nahbereich” of the typical speaker and “Kernbereich” of the language (A. Bittner 1996: 31–32).<sup>37</sup> While it is certainly important to explore the mechanisms behind token frequency, the “Nahbereich” of the speaker is highly subjective and difficult to define, as Andreas Bittner himself admits (“die Eingrenzung des Bereichs des dem Sprecher Nächstliegenden mit Hilfe unabhängiger Kriterien [ist und bleibt] ein Problem” (32); “die Kriterien für die Grenzen des Nahbereichs [...] [bleiben] etwas unscharf” (33). Token frequency is more easily measured and provides insight (if only indirectly) into the composition of the “Nahbereich.” Furthermore, while the concept of the “Nahbereich” may help to explain why certain forms are more frequent in the first place, it is the strength of a form's representation in our memories — a function of its token frequency — that determines whether and how quickly we can access it, and by extension, whether we continue to use it so that it can be passed on to the next generation of speakers (cf. Bybee 2007: 17–18).

### 1.2.3 Alternative Theories of Base Selection in Analogical Change

#### 1.2.3.1 Speaker Confidence / Informativeness

Albright (2002, 2003, 2008, 2010) has argued that speaker confidence, rather than frequency, is the driving force behind analogical change. The form that is chosen as the base of the restructured paradigm is not necessarily the most token-frequent (though it may be coincidentally), but that from which speakers can generate the rest of the paradigm with the greatest confidence; it is the form that exhibits the fewest neutralizations and that reveals the

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<sup>37</sup> But see also Harnisch (1988: 429), who argues that there is a place for token frequency within the theory of NM as a factor that determines which of two optimization strategies a speaker is likely to select for a given word. If a word is highly token-frequent, the path to optimization lies not in maximizing transparency, but in facilitating access and recall (these words are typically not transparent, but they are shorter and more differentiated and thus easier to remember).

most information about the underlying shape of the word. Albright describes his confidence model as follows:

[L]earners select base forms as part of a strategy to develop grammars that can produce inflected forms as *reliably* or as *confidently* as possible. In order to do this, learners compare different members of the paradigm, using each to attempt to predict the remainder of the paradigm with a grammar of stochastic rules. The part of the paradigm that contains as much information as possible about how to inflect the remaining forms is then selected as the base form, and a grammar is constructed to derive the rest of the paradigm. In this model, analogical change occurs when the resulting grammar derives the incorrect output for certain derived (non-basic) forms, and these errors come to replace the older, exceptional forms. (2008: 146)

For example, in cases where stem alternations have been leveled in Yiddish verb paradigms, the form that has been extended (the base) has, almost without exception, been the first-person singular — the most informative form, he argues — rather than the expected third-person singular, the most frequent and least marked form in the paradigm.

However, most of the examples that Albright discusses involve leveling or extension of stem alternations *within a single paradigm or inflectional class*; it is not clear how such a theory can account for analogical developments like those that have torn apart the class of weak masculine nouns, where the affected words wander across class boundaries and there are no stem alternations in the paradigm to begin with. In particular, it is not clear how it can accommodate cases in which a single paradigm is rebuilt more than once around different bases, since one would expect the most informative form to remain constant for all members of a given inflectional class. Albright's model demands that all lexical items have the same base (the "single surface base hypothesis") and does not allow for "word-by-word effects" arising from local markedness (2002: 114–115); however, the German weak masculines seem an unequivocal example of precisely such effects. This may be one of the rare cases Albright mentions (115) for which his model does not predict the correct outcome and an alternative explanation is needed.

In any case, the only form in the MHG noun paradigm which is in any way informative about the rest of the paradigm is the genitive singular: a noun form ending in *-(e)n* in the genitive singular could only be weak, whereas a form ending in *-(e)n* in the accusative or dative singular or in the plural could be either strong or weak, as could a nominative singular form ending in *-e* or *-ø* (see 1.1.1). The confidence model predicts that all German noun paradigms should be (re)built with the genitive singular as base, which is not what has occurred in this case.

### 1.2.3.2 Semantic Generality

In some cases of paradigmatic change, base selection may be dictated not by the token frequency of individual forms, but by the semantic complexity of the morphological categories involved. Garrett (2008) cites the example of Ancient Greek verbs, showing that in Ancient Greek, in most instances of analogical change involving the present and aorist, the aorist stem has been extended into the present system. In this respect, Ancient Greek differs from English and other languages, where, in comparable cases, the present stem is usually preserved and extended into the preterite and other non-present tenses. Token frequency cannot explain the

direction of change in Ancient Greek, since present forms are more frequent than aorist forms (139). The aorist is, however, more general semantically than the present, in the sense that it has a wider range of uses. Semantic generality may render a category salient, and in this respect, it may have the same effect as token frequency: “[M]orphological categories with a broader sphere of usage (or less complex meaning) are more salient in memory, hence more easily accessed in language production, and hence serve as bases in the derivation of new forms” (142).

As in the case of informativeness, though, the semantic complexity/generality of a grammatical category should remain constant for all members of an inflectional class; in fact, it should remain constant for all words in the language. Thus, semantic generality is not likely to have been the driving force behind the breakup of the German weak declension, since the “sphere of usage” of the case (nominative, accusative, dative, genitive) and number categories (singular, plural) was likely the same for all MHG weak masculine nouns. One could argue that the nominative has a broader range of uses for animate than for inanimate nouns, since in the former case, but (usually) not in the latter, the category “nominative” includes the category “vocative.” This may partially account for the Group 2 shift (*Schelm*), but it does not explain why the inanimate nouns in this group became strong, nor does it explain the shifts in Groups 3 (*Garten*) and 4 (*Schlange*).

#### 1.2.4 Other Contributing Factors

Other factors, such as number differentiation (Molz 1902: 291; Bojunga 1890: 8–10, 75; August 1975: 7–8) and, in the case of the nouns in group (4) (*Schnecke*), speakers’ inability to determine the natural gender of lower life forms (Becker 1994: 61), may also have contributed to the shifts. As Molz (1902: 291) has suggested, though, the need for number differentiation via umlaut among nouns ending in *-en* was likely more pressing in nouns that were used very frequently in both numbers — in other words, number differentiation may have come about as a direct consequence of token frequency. Similarly, speaker uncertainty regarding the (grammatical) gender of Group 4 nouns was probably the result of token *infrequency*: if speakers had been using and hearing the singular forms of nouns like *Schnecke* regularly, they would have had no trouble recalling the gender of these nouns.

That token frequency has had a part in the restructuring of the weak masculine class is not a new idea — as we will see in the next section, the literature on the weak masculines is full of vague references to frequency (words such as “überwiegen(d)” and “häufig” abound). However, nowhere are statistics cited in support of these claims. The purpose of this study is to provide empirical evidence that 1) the forms that I and others have identified as basic are, in fact, the most token-frequent forms of the weak masculine nouns at most stages of their development from MHG through ENHG into NHG — the period in which the restructuring occurred — and that 2) the weak forms that have been lost were infrequent enough (at least during the transitional phase, and probably also in later periods) that speakers may not have been able to access them and would have needed to resort to analogical innovation in order to fill these slots in the paradigm. Even if token frequency did not cause the restructuring, something which we may never be able to prove definitively, I hope to show that there is at the very least a strong correlation between high token frequency and the retention of forms over time, and between low token frequency and replacement by innovative forms.

In the next section, the changes in Groups 2, 3, and 4 are discussed in greater detail. These developments are addressed individually in 1.3.1–1.3.3; 1.3.4 deals with nouns that have followed more than one of the four trajectories, and 1.3.5 with the continuation of the Group 2 and Group 3 shifts into the modern language.

### 1.3 A Closer Look at Groups 2, 3, and 4

As noted in the previous chapter, the MHG weak nouns that have left the class have organized themselves into three groups (Groups 2–4), each of which has followed a different path.<sup>38</sup>

#### 1.3.1 Group 2: *Schelm*

One group, consisting of both animate and inanimate nouns, has permanently lost the final *-e* in the nominative singular and has acquired the strong markers *-(e)s* in the genitive singular and *-e* or *-ø* (in some cases accompanied by umlaut) in the plural:

Group 2			
<i>Schelm</i> ‘rascal’			
(< MHG <i>schëlme</i> )			
	Sg.	Pl.	
(7)	N	<i>Schelm</i>	<i>Schelme</i>
	A	<i>Schelm</i>	<i>Schelme</i>
	D	<i>Schelm</i>	<i>Schelmen</i>
	G	<i>Schelm(e)s</i>	<i>Schelme</i>

This process likely unfolded in three stages (Bojunga 1890: 50–65):

1. First, the final *-e* on the stem was apocopated. This resulted in redundancy in the nominative singular, where two classes of masculine nouns — strong nouns like *tac* (see [3] in 1.2.1) and newly apocopated weak nouns (e.g., *schelm*) — now had the same (non-)ending.

The apocope was triggered in part, as in MHG, by the presence of stem-final liquids and nasals, particularly after short syllables and mainly in Upper German dialects (50–51). In the late 15<sup>th</sup> century, however, a new trigger emerged: *-e* began to be apocopated more or less systematically after secondarily stressed syllables (55–65). This procedure, which Bojunga and others call *Behaghels Gesetz* because it was first observed by Otto Behaghel, was applied consistently throughout the German-speaking region, and not just — or even primarily — in Upper German dialects. It affected all polysyllabic weak nouns, including compounds (e.g., *leichnam*, *herzog*, *mundschenk*) and nouns ending in the suffixes *-eme*, *-ene*, *-ele*, and *-ere* (e.g.,

<sup>38</sup> The first detailed accounts of these processes are those of Bojunga (1890) and Molz (1902). Earlier works (Kehrein 1854; Grimm 1870; Behaghel 1886; Gortzitza 1843, 1854, 1866) mention some, but not all of them, and never go into depth; later discussions in Wilmanns 1909, Steche 1927, D. Bittner 1991, Becker 1994, Köpcke 2000a, Pahre 1985, and the two ENHG grammars (Wegera 1987; Ebert et al. 1993) mostly reiterate the observations of Bojunga and Molz.

*besen, ärmel, einsiedel, adler*), many of which were originally compounds. It also affected nouns of one syllable that were used frequently either as the heads of determinative compounds (*-herr, -fürst, -gart, -graf, -prinz*) (52, 56) or as proclitics or enclitics, or immediately preceding proclitics. In the latter category are nouns such as *fürst, graf, herr, and prinz*, which occur frequently as titles accompanying proper names (in connection with titles, see also Molz [1902: 241–242] on *Herzog*) and are often followed by prepositions such as *von* and *zu*, which can be proclitic themselves. This was not entirely a new phenomenon, since already in MHG there was a tendency to apocope words used as titles, as we have seen (1.1.1).

Weak masculine nouns were also susceptible to apocope when their initial syllable (the stem syllable) bore especially heavy stress, as when the word was used regularly as an expletive (“Schimpfwort”) or as a term of endearment (“Kosename”). This probably happened with *geck, hach, jud, lump, narr, pfaff, schranz, and thor* ‘fool’, which were used frequently as expletives, and with *spatz*, a common hypocorism (55–56). The word *Mensch*, which is still weak today, may also have lost its final *-e* due to frequent use as an expletive (56–57).

Many nouns never made it past the first stage of this process. Some lost their final *-e* temporarily but recovered it en route to NHG, likely under the growing influence of Middle German, in which apocope was not as widespread as in the southern dialects (54). In other cases (e.g., *Mensch, Herr*), the apocope was permanent, but did not suffice to bring about a shift into the strong declension (probably because the weak oblique forms were very frequent, though Bojunga never says so explicitly).

2. Once the *-e* had been lost in the nominative singular, the affected *n*-stem nouns assumed strong markers in the remaining singular forms, “die nächste um den nom. sg. sich scharende formengruppe” (57). The weak ending *-(e)n* was lost altogether in the accusative and dative singular and was replaced with *-(e)s* in the genitive. Some nouns have remained suspended at this stage (*Bauer* ‘farmer’, *Schmerz, Spatz, Vetter*) and have come to occupy the so-called mixed declension in NHG, which has strong forms in the singular, but weak forms in the plural (e.g., *Staat*: nom. sg. *der Staat*, acc./dat. sg. *den/dem Staat*, gen. sg. *des Staat(e)s*, pl. *die Staaten*).<sup>39</sup>

3. In the third and final stage, the strong pattern (MHG *tac*) spread from the singular into the plural, where the last remaining weak forms gave way to strong forms ending in *-e* or *-ø*, sometimes with umlaut. Nouns that have reached the final stage of this process include *Aar, Anwalt, Herzog* (umlaut), *Leichnam, Bräutigam, Hahn* (umlaut), *Tropf* (umlaut) ‘idiot’, *Schwan* (umlaut), *Schelm, Salm* ‘salmon’, *Strauß* ‘ostrich’, *Wiedehopf, Greis, Keim, Kern*, and several nouns ending in *-el* and *-er* (e.g., *Besen, Ärmel*).

While most of the affected nouns had completed the shift by the late 16<sup>th</sup> century, some nouns continued to fluctuate past that point; weak forms of *Hahn, Salm, and Strauß*, for example, are attested well into the 18<sup>th</sup> century (Molz 1902: 238), and the umlaut did not catch on in the plural of *Herzog* until around the same time (242). In particular, animate nouns in the first group seem to have shifted later than inanimate nouns (223).

Pahre (1985) argues that the polysyllabic native weak masculines in this group have split along animacy lines:

<sup>39</sup> Bojunga (59) and Steche (1927: 10) speculate that the preservation of the mixed pattern in these cases may owe itself to the need to keep the singular and plural forms distinct (59). It is not clear, though, why the need to distinguish singular and plural should have been greater for these words than for those that have completed the shift.

- Most nouns denoting people (e.g., *Anwalt, Bräutigam, Gemahl, Gevatter, Herzog, Jünger*) have become strong (with either *-e* or *-ø* in the plural).
- Inanimate nouns (e.g., *After, Ampfer, April, Ärmel, Besen*) have become strong with *-ø* in the plural (though some have retained the *-n* from the weak declension).

More likely, though, these nouns now have different markers in the plural (*-e / -ø*) because of their prosodic structure: those stems whose second syllable has secondary stress (those that were originally compounds, e.g., *Leichnam*) now pluralize in *-e* in most cases, regardless of animacy, whereas those ending in an unstressed syllable (*Adler, Ärmel, Besen, Stiefel, Zettel, Koller*) now have *-ø* in the plural, and sometimes *-n*. Almost all of the nouns that Pahre lists in the second (inanimate) category have an unstressed final syllable containing the vowel *-e-* (*-en, -el, -er*); in the modern language, words of Germanic origin tend to be, at most, disyllabic and to have a trochaic stress pattern (long-short), and already in MHG, there was a tendency to simplify one of two adjacent schwa syllables by deleting the schwa (e.g., *besme / besem* instead of *beseme*). Grimm (1870: 330, 600–601) and Reichmann et al. (1993: 79) note that syncope of *-e-* in the inflectional ending *-(e)n* was/is more common among polysyllabic words ending in *-en, -el, -er* than among monosyllabic words; I assume the same applies to apocope of final *-e*.

### 1.3.2 Group 3: *Garten*

In another group, consisting exclusively of inanimate nouns, the inflectional ending *-(e)n* from the oblique singular forms has been attracted into the nominative singular and become part of the noun stem.<sup>40</sup> Here, as above, the strong marker *-s* has appeared in the genitive singular (in this case, on top of the already present *-(e)n*), and in some cases, the plural form has acquired an umlaut:

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<sup>40</sup> Nouns that followed this path are, according to Bojunga (1890: 71–72), *backen, balken, ballen, barren, batzen, bissen, bogen, bolzen, braten, brocken, brunnen, bunzen, daumen, dosten, dukaten, felsen, fetzen, fladen, flocken, flecken, galgen, garten, gattern, gaumen, gehren, graben, groschen, grotzen, haken, hamen, hoden, hopfen, husten, karren, kasten, kloben, knochen, knollen, knorren, knoten, kolben, koben, kragen, krappen, kuchen, laden, lappen, leimen, letten, loden, lumpen, magen, maien, nachen, nacken, pfoften, pfriemen, possen, rachen, raden, rahmen, rasen, rechnen, reigen, reihen (<rei(g)e), reihen (<rihe), riemen, rinken, ritten, rocken, roggen, schatten, schemen, scherben, schinken, schragen, schuppen, schlitten, schnupfen, schwaden, socken, sparren, spaten, sporn, staden, stapfen, stecken, stollen, storren, striemen, topfen, tresen, tropfen, wasen, zacken, zapfen, and zinken.*

Molz's list (1902: 269) is somewhat shorter; it includes all of the nouns just listed except *bolzen, bunzen, dosten, felsen, flocken, flecken, gattern, gehren, grotzen, hamen, knollen, leimen, maien, nacken, reigen, reihen (<rihe), rinken, ritten, socken, sporn, storren,* and *topfen*, and also one noun not given in Bojunga: *ranze/n*.

Group 3			
<i>Garten</i> ‘garden’ (< MHG <i>garte</i> )			
	Sg.	Pl.	
(8)	N	<i>Garten</i>	<i>Gärten</i>
	A	<i>Garten</i>	<i>Gärten</i>
	D	<i>Garten</i>	<i>Gärten</i>
	G	<i>Gartens</i>	<i>Gärten</i>

This shift was likely facilitated by the existence of about 22 (Molz 1902: 292) inanimate masculine strong nouns ending in *-en* (*Hafen, Faden, Wagen*), whose paradigm overlapped with the weak masculine paradigm in several forms (66; see also 1.1.1 above). In some cases, the infinitives of etymologically related verbs, which were identical to the *-en* forms of these nouns and which could be used as nouns themselves, may also have helped to strengthen the form ending in *-(e)n*, e.g., *grabe* (NHG *Graben*) ‘ditch’ ~ *graben* ‘to dig’; *knote* (NHG *Knoten*) ‘knot’ ~ *knoten* ‘to knot’; *schade* (NHG *Schaden*) ‘damage’ ~ *schaden* ‘to damage’ (67). There may also have been some interaction with the inanimate neuter nouns ending in *-en*, many of which began life as substantive infinitives but later took on independent meanings (*erdbeben, essen, leiden, wesen, zeichen, leben, vertrauen*) (270).

These nouns are/were thought to be very frequent after prepositions, many of which govern either the dative or the accusative; Molz notes (278): “Man beachte nur die häufige Verbindung der dingbezeichnungen mit präpositionen und die von diesen regierten casus.” Additionally, some of them may have been used frequently in partitive genitive constructions, in which, especially if no determiner was present, the genitive could easily be reinterpreted as a nominative (*roggen, loden*) (293).

It is not clear which of the seven forms in the weak paradigm ending in *-(e)n* served as the model for the new strong nominative singular form, or in which order the weak nominative singular, genitive singular, and (in some cases) plural forms were replaced with strong forms. According to Bojunga (1890), the shift began in the accusative (singular) — the most frequent of the oblique (singular) forms, he claims (65) — and the spread of this form into the nominative singular was expedited by the simultaneous appearance of the strong ending *-s* in the genitive singular (66, 68). Both of these shifts began at around the same time (in the late 14<sup>th</sup> century); most nouns had finished shifting in the nominative and genitive singular by the end of the 16<sup>th</sup> century, except *Schatten*, whose weak genitive singular form held out for about a century longer (70).

Once the *-n* from the accusative singular had established itself in the nominative, the singular and plural forms of the affected (former) weak nouns were identical (e.g., nom. sg. *garten* : pl. *garten*) and needed to be differentiated; this was achieved by introducing umlaut into the plural forms (nom. sg. *garten* : plural *gärten*) (75).

Molz (1902) agrees with this assessment, on the whole, though his findings suggest that the shift is just as likely to have begun in the dative singular as in the accusative singular: both of these forms are more frequent (taken individually) than the genitive singular, but neither is more frequent than the other (278).

Like Bojunga, Molz emphasizes the role of number differentiation in this process, even insinuating at one point that the introduction of umlaut into the plural may have triggered the shift of the singular forms into the strong declension. Presumably, umlaut took hold in the plural of strong nouns ending in *-en* (which did not have umlaut historically) sometime in the 14<sup>th</sup>



century (268).<sup>41</sup> It appeared first in the Upper German dialects (Alemannic, Bavarian, Swabian),<sup>42</sup> where apocope was rampant and the strong vocalic plural marker *-e* was often lost (278–279). Around the same time, and in the same region, the inanimate weak masculine nouns were beginning their shift into the class of strong nouns ending in *-en*. A series of detailed and somewhat enigmatic charts (272–277, 281–291) seems to show that the processes that introduced umlaut into the plural, *-n* into the nominative singular, and *-s* into the genitive singular of inanimate weak masculine nouns all began (aside from a few isolated occurrences in MHG texts; see footnote 14 in 1.1.2 above) in the 14<sup>th</sup> century.<sup>43</sup> These developments, like the introduction of umlaut into the plural of strong nouns for number differentiation, began in the Upper German dialects and spread gradually to the north, first into the Middle German dialect region (Rhenish Franconian, West/East Middle German) and finally into Low German (272–277). That all of these shifts seem to have proceeded in parallel suggests, for Molz, a close connection between them: “[...] es wird klar ersichtlich, dass da, wo der umlaut herrschte [sic], der anschluss an die *na*-stämme [strong nouns ending in *-(e)n*] zuerst erfolgte” (280).<sup>44</sup>

At the same time, Molz acknowledges that the presence of umlaut in the plural likely presupposes a strong singular paradigm — in other words, that, in most cases, the singular forms probably shifted before the plural forms: “Man darf [...] annehmen, dass einem pl. *gräben*, *kästen*, *schäden* ein nom. sg. *graben*, *kasten*, *schaden* und im gen. *grabens*, *kastens*, *schadens* entspricht, ja dass der *i*-pl. einen starken sing. voraussetzt” (277). In older texts, however, some nouns preserve the etymologically expected nominative singular form in *-e* while also introducing umlaut in the plural, so that the completed shift of the singular forms cannot have been a precondition for the introduction of plural umlaut: “Es wäre eine durchaus irrige annahme, dass der umlaut erst nach der uniformierung der cons[onantischen] stämme mit den *na*-stämmen eingetreten sei” (277–278).

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<sup>41</sup> It begins to appear in MHG already but probably does not become established until later; it is difficult to tell from the literature. Molz (1902: 268) cites an unumlauted MHG plural form *wegene* (corresponding to a singular *wagen*) but does not provide a source. Weinhold (1883: 480) cites two instantiations of the plural form *wegen* (< *wagen*), both rhyming with *pflügen*, including one in the *Steirische Reimchronik* from the early 14<sup>th</sup> century. I have not been able to identify the source for the other.

<sup>42</sup> Evidently, Molz does not consider Swabian to be an Alemannic dialect.

<sup>43</sup> *Schaden* and *graben* are the first nouns to show umlaut in Molz’s material; these have it already in the 14<sup>th</sup> century. For the other nouns that appear in his tables (*bogen*, *brunnen*, *garten*, *karren*, *kasten*, *kragen*, *laden*, *magen*, *schragen*), Molz could not find any forms in 14<sup>th</sup>-century texts, but he assumes that they, too, began to shift in the 14<sup>th</sup> century (277). The shifts of the nominative and genitive singular also seem to have begun in the 14<sup>th</sup> century for most of the nouns that Molz has included.

It is not altogether clear, though, how we are to interpret the contents of these charts. Molz lists a variety of inflected forms — most of which are shifted (strong) forms with *-ens* in the genitive singular, *-en* in the nominative singular, and umlaut in the plural — and explains that wherever no form is given, the expected (unshifted, weak) form obtains (271). However, he also includes several unshifted forms without explanation, and there are almost certainly other shifted forms that Molz has omitted, so that it is impossible to tell how many forms from each period have shifted and how many have not.

An even more inscrutable chart in Bojunga (69) seems to show that strong singular forms did not begin to appear until the late 15<sup>th</sup> century.

<sup>44</sup> According to Molz, this may also help to explain why so few of these nouns continue to form their plural with umlaut in the standard language, which has its origins in Middle German, where umlaut was less commonly used for number differentiation (279).

In some cases, the shift may have begun in the plural, if this form was sufficiently frequent (293). This may have occurred in the case of words denoting coins (*batzen*, *groschen*, *dukaten*), particularly those with small values. These nouns never acquired umlaut in the plural — perhaps because they were rarely used in the singular, so that there was no need for number differentiation. Many of the words Molz lists in this category had (and in some cases, e.g., *Hode*, still have) alternate feminine forms ending in *-e*; some of these — *Backe* and *Socke*, for example — now exist only as feminine nouns ending in *-e*.

The order in which the forms shifted is also addressed in some of the modern grammars (Duden 2001; Wahrig 2003; Jung 1984; Eisenberg 1989, 2013), though only with reference to the singular forms, and only in connection with nouns that are still shifting today (see 1.3.5.2 below). According to Duden (807), Jung (276), and Eisenberg (1989: 153), the *-n* appeared in the nominative before the *-s* was attached to the already present *-(e)n* in the genitive; Wahrig (317–318) claims that the two forms shifted in the reverse order (genitive before nominative). A later edition of Eisenberg’s grammar (2013: 154–155) also claims that the genitive shifted first.

It is not clear why one form should have shifted earlier than the other; those who try to explain their position do so in very vague terms. Duden (807) claims that the *-n* was added in the nominative singular “weil es als zum Wort gehörend empfunden wurde,” and that then the rest of the paradigm became strong by association with words whose nominative singular form already ended in *-en*, such as *Wagen*. Jung (276) and Eisenberg (1989: 153) make similar assertions, while Wahrig and the later edition of Eisenberg (2013) do not offer any explanation at all.

That some Group 3 nouns, including MHG *boge* (NHG *Bogen*), are attested in ENHG with *-en* in the nominative singular, genitive singular, and plural forms all at around the same time (Wegera 1987: 98–99) suggests that the shift of the nominative singular may have preceded that of the genitive singular in at least some instances. However, it seems likely that there was considerable variation from one noun to the next.

This process affected not only inanimate nouns, but also some nouns denoting fish; Bojunga mentions the nouns *bolchen*, *karpfen*, *rochen*, *hausen*, *kraken*, and *salmen*.<sup>45</sup> He speculates that these must have been used very frequently in the plural, but did not become feminine, as one might expect them to have under these circumstances (see 1.3.3 below), because of the association with the masculine category name *Fisch* (74). Molz’s theory (294) seems more plausible: speakers categorized these fish as inanimate objects because they encountered them most often as lifeless objects at the market or on a plate (“die fische im sinne eines unbelebten verkaufsgegenstandes”).

In the earliest phase of the shift, while the inflectional system was still rearranging itself and before the weak pattern became associated with animacy in speakers’ minds, the mixed genitive singular marker *-(e)ns* was sometimes attached to nouns denoting people, which ordinarily did not yield to the pressures exerted by the strong pattern (Bojunga 1890: 76–77). Bojunga cites the form *knabens*; Molz gives *anherrens*, *bubens*, *narrens*, *kurfürstens*, *herrens*, *gesellens*, *menschens*, and several others (335–336). Wegera (1987: 158) cites mixed genitive singular forms of *Fürst*, *Herzog*, *Graf*, and a few other animate nouns, most from the late 17<sup>th</sup> century. These forms, which Molz views as evidence that “[d]ie scheidung zwischen belebtem und unbelebtem war [...] von anfang keine genaue, scharf bestimmte” (296), had, according to

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<sup>45</sup> *Krake* is weak again today, and *Salm* has become strong by the process described in 1.3.1; *Bolch(e)(n)* seems to have been replaced entirely by *Kabeljau*.

Bojunga (77), largely disappeared from the language by the end of the 17<sup>th</sup> century; Molz cites a few forms from the 18<sup>th</sup> century (336).

### 1.3.3 Group 4: *Schlange*

A final group of former weak masculine nouns, which were either inanimate or (like the fish) situated near the bottom of the animacy hierarchy, did not succumb to the influence of the oblique singular forms like the nouns described above. Instead, they retained their original nominative singular form and became feminine, joining the class of mixed feminine nouns ending in *-e*, the dominant class for feminine nouns in German today:

Group 4		
<i>Schlange</i> 'snake' (f.)		
(< MHG <i>slange</i> (m.))		
	Sg.	Pl.
(9)	N	<i>Schlange</i> / <i>Schlangen</i>
	A	<i>Schlange</i> / <i>Schlangen</i>
	D	<i>Schlange</i> / <i>Schlangen</i>
	G	<i>Schlange</i> / <i>Schlangen</i>

The shift likely proceeded from the plural, which, according to Bojunga and Molz, was so much more frequent than the singular in most cases that speakers would have had to reconstruct the singular from it (Bojunga 1890: 80, 84; Molz 1902: 292; Becker 1994: 61). After the form *diu* had been replaced by *die* in the nominative singular of feminine nouns, the plural definite article for nouns of all genders (*die*) was the same as the feminine singular definite article in both the nominative and accusative, so that it was easy to think that these nouns were feminine (Bojunga 1890: 80). The influence of Low German dialects, in which the masculine and feminine singular definite articles were identical, may also have contributed to this development for some nouns (81), including *fahne*, *schnecke*, and *schlange* (89).

In particular, this shift affected words for body parts (*hode*, *backe*, *wade*); small animals, including fish (*asche*, *barbe*, *ratte*, *grille*, *heuschrecke*); and plants (*blume*, *knospe*, *koralle*, *palme*, *traube*) (89).<sup>46</sup>

Some of these nouns, which were used more frequently in the singular forms than the others, also developed into masculine nouns ending in *-en*, following the Group 3 path (see 1.3.2). In the case of *Hode*, Bojunga speculates that frequent use in the singular by people in the medical profession may have helped to keep the masculine variant alive:

Während im leben der sing[ular] nur höchst selten gebraucht wird und deshalb bei eintretendem bedürfnisse neuschöpfung nach dem plur[al] nötig ist, der dann zum

<sup>46</sup> Once again, Bojunga (1890: 81–89) helpfully provides a list of all the nouns that participated in this shift. These are *asche*, *bache*, *backe*, *barbe*, *bîge*, *blume*, *belche*, *borte*, *breme*, *dille*, *dorsche*, *fahne*, *flocke*, *flade*, *griebe*, *grille*, *hefe*, *palme*, *heuschrecke*, *hirse*, *hode*, *humpe*, *karpfe*, *karre*, *kieme*, *knospe*, *kohle*, *koralle*, *krampe*, *krätze*, *kresse* (plant), *kresse* (fish), *lohe*, *made*, *maie*, *metze*, *niere*, *pranke*, *rade*, *saite*, *ratte*, *ratze*, *rebe*, *scherbe*, *schlange*, *schleie*, *schnake*, *schnecke*, *schnepf*, *scholle*, *schwäre*, *siele*, *socke*, *sprosse*, *spule*, *stapfe*, *strähne*, *strieme*, *tolde*, *trappe*, *traube*, *trespe*, *wabe*, *wade*, *waise*, *wacke*, *weihe*, *zacke*, *zinke*, *zotte*, and *zwiebel*.

geschlechtswechsel drängte, ist in der sprache der medizinischen wissenschaft auch der sing[ular] oft gebraucht, so dass hier eine einfache gedächtnismässige reproduktion auch des sing[ular] stattfinden konnte. In diesem kreise war also keine gelegenheit zum geschlechtswechsel gegeben, und so ist in der medizin der sing[ular] heute noch mask[ulin] im gegensatz zur verkehrssprache: *der hoden*. (84)

The masculine variant is not limited to medical contexts anymore, as far as I can tell; the two forms are used interchangeably today, and the masculine form in *-(e)n* may even be slightly more common than either the masculine or the feminine ending in *-e* (in the current online Duden, *der/die Hode* is said to be “seltener für” *der Hoden*; see 1.3.5.2).

### 1.3.4 Nouns Belonging to More Than One Group

Some MHG weak masculine nouns have followed more than one of the paths described above. The nouns listed in table 1.2 have undergone a semantic split along animacy lines, such that the inanimate doublet has joined Group 3, while the animate doublet has either remained weak (*Drache*, *Rappe*, *Franke*, *Knote*, *Lump*) or joined Group 2 (*Tropf*, pl. *Tröpfe*) (Eisenberg 2013: 155; Duden 2009: 217; Ljungerud 1955: 62–63).<sup>47</sup>

Table 1.2. Animate and inanimate doublets of former weak masculine nouns

Animate	Inanimate
<i>Drache</i> <sup>48</sup> ‘dragon’	<i>Drachen</i> ‘kite’
<i>Rappe</i> ‘black horse’; originally ‘raven’	<i>Rappen</i> ‘rappen (Swiss unit of currency)’
<i>Franke</i> ‘Frank, Franconian person’	<i>Franken</i> ‘franc (Swiss unit of currency)’
<i>Knote</i> ‘coarse, uneducated person’	<i>Knoten</i> ‘knot’
<i>Tropf</i> ‘deplorable person’	<i>Tropfen</i> ‘drop (of water)’
<i>Lump</i> ‘rascal’	<i>Lumpen</i> ‘cloth, rag’

In the case of the animate *Tropf*, presumably the *-e* was apocopated regularly because the word was used frequently as an expletive, and *Tropf* was not frequent enough in the oblique singular forms or in the plural for the weak pattern to sustain itself. It is not clear why this has not happened with *Lump*, too. Regardless, in all of these cases, speakers may have felt the (subconscious) need to differentiate the doublets morphologically once their meanings had diverged, possibly accelerating the split.

Some other nouns, many of which have been torn between the strong and weak declensions at least since MHG, have also developed doublets. These are given in table 1.3 (cf. Duden 2009: 216–219; Ljungerud 1955: 63–65; Eisenberg 2013: 155).

<sup>47</sup> Bojunga (1890: 73) also mentions the pairs *batzen* ~ *petz*, *lappen* ~ *laffe*, *reihen* ~ *hahnrei*, and *maien* ‘maibusch’ ~ *mai* (which became strong by analogy with the other names for months).

<sup>48</sup> According to Ljungerud (1955: 62), the split of *Drachen* had not yet attained completion at the time of his study.

Table 1.3. Other former weak nouns that have undergone a semantic split

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<i>Fels</i> ‘rock mass’ ~ <i>Felsen</i> ‘cliff’
<i>Schreck</i> ‘shock’ ~ <i>Schrecken</i> ‘terror, fear’
<i>Reif</i> ‘ring’ ~ <i>Reifen</i> ‘tire’
<i>Pfropf</i> ‘clot’ ~ <i>Pfropfen</i> ‘stopper, plug’
<i>Klump</i> (in the expressions <i>in/zu Klump fahren</i> / <i>in Klump schlagen</i> ‘to destroy completely’) ~ <i>Klumpen</i> ‘lump, clump’
<i>Ball</i> ‘ball’ ~ <i>Ballen</i> ‘bale’
<i>Nutz</i> ‘benefit’ ~ <i>Nutzen</i> ‘benefit’ (no semantic distinction)

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In these cases, both doublets are strong, but one belongs to Group 2 and the other to Group 3. A semantic distinction is not always discernible (there is none at all in the case of *Nutz/en*), and often the shorter variant has a specialized or archaic usage, whereas the meaning of the longer form is more general and often also more frequent (*Reif*, *Pfropf*, *Klump*, *Nutz*). In the case of *Schreck/en*, the split may have been motivated by a need to distinguish singular and plural for the countable variant (*Schreck*), but not for the (typically) non-count noun *Schrecken*, which refers to a feeling of anxiety or dread. The common idiomatic expression *ach, du Schreck!*, in which the longer form in *-en* is never possible, may also have helped to sustain the older form *Schreck*.

### 1.3.5 Ongoing Change in the Modern Language<sup>49</sup>

#### 1.3.5.1 Ongoing Shift into Group 2

In some cases, the restructuring processes outlined above have continued to affect weak masculine nouns to this day. Many nouns which the grammars and dictionaries claim still belong to the weak declension (e.g., *Bär*) have in fact attained at least the second stage of the Group 2 shift (*Schelm*) in the informal spoken language. Several grammars of modern German note a tendency toward omission of the *-en* ending in at least the dative and accusative singular of certain nouns (e.g., *den/dem Magnet*, where we would expect *Magnet<sup>en</sup>*) and interpret the omission as a sign that the nouns affected are shifting from the weak into the strong class (*RgD*: 859; *Duden-Grammatik*: 214; *FgD*: 316–317). For example, the authors of *RgD* observe that “[e]s besteht eine starke Neigung, bei schwach gebeugten maskulinen Substantiven im Dativ und Akkusativ Singular die Deklinationsendung abzuwerfen und die Substantive dadurch zu starken zu machen” (859).<sup>50</sup> In some cases, the *-en* in the genitive singular is also replaced by *-s* (*des*

<sup>49</sup> In the following discussion, I refer to the *Duden-Grammatik* (Duden 2009) and the usage handbooks *Richtiges und gutes Deutsch* (Duden 2001) and *Fehlerfreies und gutes Deutsch* (Wahrig 2003) by the following abbreviations:

Duden 2009 (*Grammatik*) = *Duden-Grammatik*

*Richtiges und gutes Deutsch* = *RgD*

*Fehlerfreies und gutes Deutsch* = *FgD*

<sup>50</sup> Concerning the special status of the dative and accusative singular in this connection, see also Gortzitza (1854: 420): “[D]ie Uebergänge in die starke Dekl. [zeigen] sich vorzugsweise im Dat. und Akk. [Sg.] [...], so daß man, wenn nicht auch genug Fälle des starken Genit. und des starken Plur. vorkämen, sich versucht fühlen könnte, lieber ein Abwerfen der Flexionsendung anzunehmen.” As noted above, the omission of inflectional endings need not signal a class shift; even nouns that otherwise appear firmly rooted in the weak declension (animate nouns ending in *-e*) and those that do not ordinarily strengthen via loss of endings (inanimate nouns ending in *-e*) can — and should,

*Magnets*), yielding a completely strong paradigm in the singular (*RgD*: 860; *FgD*: 316–317). The shift into the strong class is complete when the weak plural marker *-en* is replaced by the strong ending *-e* (*die Magnete*) (*FgD*: 316, 318). These phenomena, it is claimed, only affect weak nouns that end in a consonant; nouns ending in *-e*, such as *Bote* and *Affe*, are still anchored in the weak declension, cf. *FgD*: 316; *Duden-Grammatik*: 214; *RgD*'s lists of nouns for which “die Unterlassung der Deklination [ist] nicht korrekt” (860), which do not include any words ending in *-e*; and also Thieroff (2003: 117), who claims that loss of ending in the dative and accusative singular occurs “fast ausschließlich bei Substantiven [...], die nicht auf Schwa enden.”<sup>51</sup> For the most part, only the singular forms of weak nouns participate in this class shift, while the plural forms remain stable: “Im Plural bleiben diese Substantive — mit wenigen fachsprachlichen Ausnahmen — schwach” (*RgD*: 860). In other words, most nouns remain frozen at the second stage of this process.

Groups of nouns that are especially susceptible to strengthening<sup>52</sup> via the process delineated above tend to lack one or more of the features that comprise Köpcke's weak masculine prototype(s) (see 1.1.2); they include:

- a. Nouns of one syllable, cf. *Duden-Grammatik* (212): “Bei Einsilblern besteht eine Tendenz zur starken Kasusflexion sowie – etwas zögerlicher – zum *e*-Plural.”
- b. Inanimate nouns (“Sachbezeichnungen”) with certain foreign suffixes (*Duden-Grammatik*: 213). Suffixes listed are *-and*, *-ant*, *-ent*, *-ist*, *-ast*, *-at*, *-et*, *-it*, *-ot*, *-nom*, *-loge*, and *-agoge*; the two ending in *-e* (*-loge*, *-agoge*) only form nouns that refer to people, and so are not relevant here. It is not clear whether this rule applies to native inanimate nouns, as well; at least, the authors do not say so explicitly.
- c. Compound nouns with a weak final member: “Zusammengesetzte Wörter werden leichter von diesem Deklinationswechsel erfasst als eingliedrige” (*RgD*: 860). This process seems to affect all weak nouns indiscriminately, provided they end in a consonant, and not just inanimate nouns. The examples given — *Buchfink*, *Dompfaff*, *Schmutzfink*, and *Teddybär* — are all words for creatures that are either alive or (in the case of *Teddybär*) imagined to be alive. However, the heads of these compounds are all monosyllabic, so that they also fit into category (a) above.

In addition to these general categories, *RgD* and *FgD* provide extensive lists of individual nouns which they claim are prone to (partial) strengthening. *RgD* (860) groups these nouns according to their origin (whether they are “deutsche Wörter und Lehnwörter” or

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in most cases, according to Duden and Wahrig — remain uninflected in the oblique singular forms if there is not also a determiner or attributive adjective present in the noun phrase. It is conceivable, though, that frequent (syntactically conditioned) omission of endings on nouns ending in a consonant may be accelerating the shift of these already unstable nouns into the strong declension.

<sup>51</sup> Ljungerud's (1955: 66–68) corpus contains isolated instantiations of the inanimate nouns *Friede/n*, *Glaube/n*, *Name/n*, and *Wille/n* without the inflectional ending *-n* in the dative and accusative singular (“Auch ich werde Friede finden” [66]; “ein Rest von Glaube” [67], etc.). In the examples that he cites, however, the noun is always unprecedented; the strengthening seems to serve the purpose of number differentiation and is probably not indicative of a broader trend. Indeed, most of these nouns are now gradually absorbing the inflectional ending *-n* into their stems (see 1.3.5.2).

<sup>52</sup> I use the word *strengthening* exclusively to refer to the (partial) shift of a weak noun into a strong inflectional class, and not, e.g., in the phonological sense.

“Fremdwörter”). Under the heading “deutsche Wörter und Lehnwörter,” we find a collection of nouns that are mostly monosyllabic;<sup>53</sup> those that are not (*Steinmetz, Vorfahr*) are compounds whose final member is monosyllabic. These nouns can thus be grouped together with the words in the first category above. The nouns listed under “Fremdwörter”<sup>54</sup> are, with the exception of *Gnom*, all polysyllabic and stressed on the final syllable (both features of the prototypical weak masculine noun), and otherwise have little in common; they are not even preponderantly inanimate, as one might expect. It is not clear why these words, in particular, should cause problems for speakers.

*FgD* (317–318) lists nouns according to the stage of the strengthening process that they have attained. Not surprisingly, the number of nouns affected decreases as the strengthening progresses (36 in the dative and accusative singular,<sup>55</sup> 15 in the genitive singular,<sup>56</sup> and only 12 in the plural<sup>57</sup>). All of the nouns that undergo strengthening in the genitive singular also do so in the dative and accusative singular; the only new noun introduced in the genitive singular category is *Nachbar*, which is frequently endingless in the dative and accusative, as well, and which some grammarians assign to the mixed declension (e.g., Gortzitza 1866: 1). For nouns that have reached the final stage (replacement of *-en* with *-e* in the plural), both strong and weak inflection is acceptable in all forms; the only word in this category that cannot have a strong plural ending in the standard language is *Dompfaff*. Once again, it is difficult to say why these nouns, in particular, should be affected; they share very little beyond their membership in the weak masculine class.

In all three reference works, speakers are cautioned to avoid using strong forms of weak masculine nouns, especially in writing. The authors of *FgD* (316) tell us, in their general introduction to the phenomena described above, that “[i]n der Schriftsprache sollte in der Regel die schwache Deklination beibehalten werden, die starke Deklination gilt bei den meisten Substantiven als umgangssprachlich,” and remind us of this repeatedly throughout the section. In *RgD*, the strengthening of weak masculine nouns is described under the heading “Nicht anerkannte Unterlassung der Deklination” (859–863). The *Duden-Grammatik* (214) cites several examples of weak nouns with strong endings in the singular oblique forms, starring the noun in each case to indicate that the strong ending is considered ungrammatical:

Aber dann wird es dem \*Elefant doch zu blöd und er kommt raus.  
Dies trifft seitens des \*Helds auf größtes Unverständnis [...].  
In den meisten ihrer Romane gab es einen \*Held.

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<sup>53</sup> *Bär, Bub, Bursch, Fink, Geck, Held, Hirt, Mensch, Mohr, Narr, Ochs, Schenk, Steinmetz, Vorfahr*

<sup>54</sup> *Automat, Barbar, Brillant, Diplomat, Elefant, Exponent, Fotograf, Gendarm, Gnom, Kamerad, Komet, Konkurrent, Lakai, Leopard, Militarist, Obelisk, Patient, Planet, Polizist, Soldat, Vagabund*

<sup>55</sup> Animate nouns listed are the monosyllabic native nouns *Mensch, Fürst, Graf, Held, Hirt, Prinz, Tor*, and *Zar*, and also some foreign words: *Architekt, Diplomat, Dirigent, Dramaturg, Drogist, Fabrikant, Fotograf, Gendarm, Gnom, Intendant, Jurist, Kamerad, Kommandant, Komponist, Konkurrent, Militarist, Patient, Patriarch, Polizist, Präsident, Prokurist, Regent, Superintendent, Therapeut*. Words for inanimate objects are *Brillant, Exponent, Hydrant*, and *Obelisk*.

<sup>56</sup> Native German words listed are *Bär, Fink, Geck, Nachbar, Narr*, and *Vorfahr*; foreign words (“Fremdwörter”) are *Automat, Barbar, Elefant, Komet, Lakai, Leopard, Planet, Soldat*, and *Vagabund*.

<sup>57</sup> *Greif, Ahn, (Acker)Bauer, Diakon, Magnet, Matador, Oberst, Papagei, Spatz, Thermostat, Tribun, Untertan, Dompfaff*

Cocktails kommen aus dem \*Automat und schmecken auch so.  
 Die Füllkapazität des \*Automats beträgt 280 Kartenetuis.  
 Ihr Idioten, warum habt ihr diesen \*Narr nicht aufgehalten?

The authors state explicitly that the starred nouns “werden standardsprachlich schwach flektiert” (214).

In some cases, though, the strong forms have found acceptance in the standard language alongside the expected weak forms. We have already seen that according to *FgD*, the nouns that have reached the third and final stage in the strengthening process may now follow either the strong or the weak declension; “[b]eide Formen gelten als standardsprachlich” (318). The authors of the *Duden-Grammatik* make a similar claim about the nouns in the second of the three categories listed above (inanimate nouns with foreign suffixes); in these cases, the “Flexionsklassenwechsel” is “standardsprachlich anerkannt” (214) (but cf. *FgD* [317], where it is emphasized that the four inanimate nouns *Brillant*, *Exponent*, *Hydrant*, and *Obelisk* should always have the weak ending in writing).

In addition to the examples given above, the *Duden-Grammatik* (223–248) presents a long list of nouns, both strong and weak, which exhibit variation in gender, inflection, or both, and for which the variation is acceptable in the standard language. Masculine nouns on this list with alternate strong and weak genitive singular and/or plural forms are given in the tables below. Most of these nouns fall into one of two categories: (1) they are always weak in the plural but have variant strong and weak genitive singular forms (in other words, they are partly in the mixed class); or (2) they can be either strong or weak in both the genitive singular and the plural (meaning that in the plural, they can end in either *-en* or *-e*). I have not included nouns such as *Drache* and *Fels*, which exist as both strong and weak nouns with distinct meanings (see 1.3.4), nor have I included nouns that have variant forms in the nominative singular but not in any of the oblique singular forms or in the plural (*Friede/n*, *Funke/n*, etc.; see 1.3.5.2); these will be addressed separately below. In each table, the nouns are listed in the first column, and notes from Duden are given in the second column where they are relevant.

Table 1.4. Nouns that are always weak in the plural but have strong and weak variants in the genitive singular

<i>Ahn</i> ‘ancestor’	—
<i>Bauer</i> ‘farmer’	—
<i>Gevatter</i> ‘relative; godfather’	The weak genitive singular ( <i>Gevattern</i> ) is archaic.
<i>Nachbar</i> ‘neighbor’	The strong genitive singular form is given in parentheses, indicating a preference for the weak form.
<i>Typ</i> ‘guy’	—
<i>Zeh</i> ‘toe’	The genitive singular is either <i>Zeh(es)</i> or <i>Zehen(s)</i> .

Source: Data from Duden 2009 (*Duden-Grammatik*)

*Hanswurst* and *Prahlhans* have alternate forms in the genitive singular but are always strong in the plural, and *Bär* ‘battering ram’ is always strong in the genitive singular but has alternate strong and weak nominative-singular forms. All of these nouns except *Fatzke* end in a consonant, and all of them except *Bär* ‘battering ram’, *Hahn*, *Zeh*, and *Protz* ‘tree’ are animate.



Table 1.5. Nouns with strong and weak variants in both the genitive singular and the plural

<i>Fatzke</i> ‘twerp’	—
<i>Fex</i> ‘buff, enthusiast’	Weak forms are given in parentheses.
<i>Fratz</i> ‘hussy, rascal’	Weak forms are given in parentheses.
<i>Greif</i> ‘griffin’ <sup>58</sup>	—
<i>Hahn</i> ‘faucet, plug’	The weak genitive singular form is only acceptable in Swiss German. The strong plural has umlaut: <i>Hähne</i> . <i>Hahn</i> ‘rooster’ is always strong in both forms.
<i>Lump</i> ‘rascal’	Strong forms are given in parentheses.
<i>Oberst</i> ‘colonel’	—
<i>Pfau</i> ‘peacock’	The weak genitive singular form is used only in certain dialects.
<i>Protz</i> ‘tree; show-off’	—
<i>Steinmetz</i> ‘stonemason’	—

Source: Data from Duden 2009 (*Duden-Grammatik*)

Table 1.6. Other nouns with variable inflection

<i>Bär</i> ‘battering ram’	The genitive singular is <i>Bärs</i> (strong); the plural can be either <i>Bären</i> or (in technical contexts) <i>Bäre</i> . When it means ‘bear’, only weak forms are acceptable.
<i>Hanswurst</i> ‘buffoon’	The genitive singular is <i>Hanswurst(e)s</i> or <i>Hanswursten</i> ; the plural is always strong, either with or without umlaut: <i>Hanswurst(e)</i> or <i>Hanswürste</i> . The weak genitive singular is given in parentheses.
<i>Prahlhans</i> ‘braggart’	The genitive singular is either <i>Prahlhanses</i> or (archaic) <i>Prahlhansen</i> ; the plural is always strong, with umlaut: <i>Prahlhänse</i>

Source: Data from Duden 2009 (*Duden-Grammatik*)

### 1.3.5.2 Ongoing Shift into Group 3

The process described under Group 3 above (*Garten*) is still underway in the case of 10–13 inanimate nouns that have alternate nominative singular forms in *-e* and *-en* and that have the hybrid strong/weak marker *-(e)ns* in the genitive singular: (*Buchstabe*), *Friede/n*, *Funke/n*, *Gedanke/n*, *Gefalle/n*, *Glaube/n*, *Haufe/n*, (*Hode/n*), *Name/n*, *Same/n*, *Schade/n*, and *Wille/n*.<sup>59</sup> Molz (1902: 305) surmises that these nouns may have been more frequent in the nominative singular than other nouns in Group 3:

Es ist zweifelhaft, ob auch bei diesen *n*-stämmen das sprachliche hauptgewicht auf den obliquen casus ruht. Aus der tatsache, dass die wahrung der echten nom.-form in der ganzen nhd. zeit fast regel ist, ergibt sich, dass die form des nom. doch stark genug im gedächtnis eingepägt war, um dem andrang nach ausgleich mit den obliquen casus zu widerstehen.

<sup>58</sup> *Greif* also appears on *FgD*’s list of nouns that have completed the strengthening process and can be either strong or weak in all forms.

<sup>59</sup> Paulfranz (2013: 36) also includes *Nutz/en* in this group.

The abstract nouns in this group (*Friede/n*, *Glaube/n*, *Name/n*, and *Wille/n*) may have retained their old nominative-singular form by analogy with the abstract feminine nouns ending in *-e*, of which there are many: *Liebe*, *Treue*, *Gnade*, etc. (305).

There is widespread disagreement as to the correct usage of these nouns in the language today.<sup>60</sup> In most cases, both nominative singular forms are possible, though usually one form is said to be more common than the other, and sometimes one of the two forms is deemed “veraltet” or “gehoben.” Of the nouns in this group, *Buchstabe* and *Name/n* appear to be shifting the most slowly. *Buchstabe*, in particular, has the distinction of being the only noun in this category for which the ending *-(e)n* has not been completely replaced by *-(e)ns* in the genitive singular, even if the form in *-(e)ns* is more widely used today (*RgD*: 200; *Duden-Grammatik*: 218). In the nominative singular, the *Duden-Grammatik* (217) and Helbig and Buscha (2013: 214) allow only the form *Buchstabe*, and Wurzel (1984b: 134) claims that this form is still the “Normalform.” It seems likely, then, that for at least some speakers of German, *Buchstabe* is still a regular weak noun. In the case of *Name/n*, too, the nominative singular form ending in *-e* is the norm today (*FgD*: 298; *RgD*: 616; *Duden-Grammatik*: 217; Helbig and Buscha 2013: 214; Jung 1984: 276–277, Nordmeyer 1961: 280), though the form *Namen* is also possible (*RgD*: 616; *Duden-Grammatik*: 217).

At the other end of the spectrum, *Gefalle/n*, *Same/n*, and *Schade/n* have, according to most accounts published within the last ca. 40 years, largely completed the shift into the strong declension. The *Duden-Grammatik* (217), *FgD* (298), *RgD* (342, 735, 743), and Jung (1984: 276) agree that the nominative singular form ending in *-en* is preferable to that ending in *-e* for all three nouns; Wurzel (1984b) does not mention *Schade/n* (perhaps he views it as fully strong and thus unproblematic) but prefers the *-en*-variant for *Same/n* and *Gefalle/n* (134). Even Erben, writing as early as 1964, claims that *Same* and *Schade* are “seltener” than *Samen* and *Schaden* (112).

The status of the remaining nouns in this category — *Gedanke/n*, *Wille/n*, *Glaube/n*, *Funke/n*, *Friede/n*, *Haufe/n*, *Hode/n* — is less clear, at least as regards the form of the nominative singular; the genitive singular of these nouns ends in *-(e)ns* more or less without exception. For *Gedanke/n* and *Wille/n*, *FgD* (298), *RgD* (337, 942), the *Duden-Grammatik* (217), Helbig and Buscha (2013: 214), and Jung (1984: 276) all prefer the *-e* form in the nominative singular, while Wurzel (1984b: 134) and Nordmeyer (1961: 280) claim the two competing nominative singular forms have equal status. Erben (1964) does not mention either noun in connection with nouns whose nominative singular is gradually assuming the shape of the oblique forms (112), which suggests that he views these nouns as regularly inflecting weak nouns (though he also does not mention *Gefalle/n*, which the other grammars agree is firmly in the *-en* camp today — perhaps because, in his view, it has completed the shift and is no longer in flux). There also seems to be a slight preference for the *-e* form today in the case of *Glaube/n* (*Duden-Grammatik*: 217; *FgD*: 298; *RgD*: 390). However, Helbig and Buscha (2013: 212) allow both

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<sup>60</sup> The following is a summary of data presented in six of the reference works that I have consulted — the *Duden-Grammatik* (Duden 2009); *Richtiges und gutes Deutsch* (Duden 2001); *Fehlerfreies und gutes Deutsch* (Wahrig 2003), and the grammars of Helbig and Buscha (2013), Jung (1984), and Erben (1964) (the others avoid the issue altogether) — as well as some relevant articles. The titles of the two Duden reference works and of *Fehlerfreies und gutes Deutsch* are abbreviated as in the previous section.

*Glaube* and *Glauben*, and Jung (1984: 276) prefers *Glauben*. Wurzel (1984b) and Erben (1964) do not mention *Glaube/n* at all.

In the case of *Funke/n*, the two nominative singular forms appear to have approximately equal standing; the *Duden-Grammatik* (217), *FgD* (298), *RgD* (330), Erben (1964: 112), Jung (1984: 276), and Wurzel (1984b: 134) all claim that both forms are equally acceptable. Helbig and Buscha (2013: 214) only allow *Funke*, however, and the authors of *RgD* (807–9, 330) indicate that the form in *-e* is more frequent than that in *-en*.

The literature is sharply divided regarding the nominative singular of *Friede/n*. The *Duden-Grammatik* (217), *FgD* (298), and Wurzel (1984b: 134) prefer *Frieden*, while Erben (1964: 112), and Jung (1984: 276) both prefer *Friede*; Helbig and Buscha (2013: 212) seem to allow both forms, with a slight preference for *Frieden*. *RgD* (325) and Sandberg (2000, on the basis of data from the corpora at the *Leibniz-Institut für Deutsche Sprache* (IDS) in Mannheim) suggest that the two forms may be semantically distinct: when *Friede/n* means ‘peace’ as opposed to ‘war’, the two nominative singular forms are used interchangeably (“werden [...] ohne stilistischen Unterschied gebraucht”), but when it means ‘peace’ in the sense of ‘harmony’, only the form *Friede* is acceptable. The existence of such a distinction is controversial, however (see Joeres 1996 and 2003).

There may also be a semantic distinction in the case of *Haufe/n*, though here the distinction is one of animacy. *Haufe/n* is usually inanimate, denoting a heap of objects; sometimes, however, it can refer to a crowd or large group of people, and in the latter case, the form *Haufe* is (or was at one point) more common, according to the older grammars (e.g., Erben, Jung). The semantic distinction appears to have faded in the past 30–40 years, and in recent scholarship, if a preference for one of the two forms is expressed at all (*Duden-Grammatik*: 217; *RgD*: 422; *FgD*: 298; Wurzel 1984b: 134), it is usually in favor of the form in *-en*, regardless of what the word means.

*Hode* is rarely discussed in the grammars; the *Duden-Grammatik*, Helbig and Buscha (2013), Jung (1984), and Erben (1964) do not mention it at all. Unlike the other nouns in this group, it can be feminine as well as masculine; most former weak nouns that have become feminine (Group 4) no longer have alternate masculine forms. *FgD* (298) and Wurzel (1984b: 134) allow both *Hode* and *Hoden*; the authors of *RgD* (433) prefer *Hoden*, but also allow the weak *Hode* (with genitive *des Hoden*) and occasionally *die Hode* (*f.*). In any case, the singular forms of *Hode* are probably most frequent in scientific contexts and otherwise extremely rare, so that the question of how to construct the nominative singular almost never arises for ordinary speakers.

If, in each case, one of the two nominative-singular forms really were more widely accepted, or acceptable, than the other, as the grammarians claim about many of these nouns, then one would expect it to have a higher token frequency. Ljungerud (1955) and, more recently, Joeres (1996) have tested the relative token frequencies of the two competing nominative singular forms for all these nouns except *Buchstabe* and *Hode*.<sup>61</sup> Ljungerud’s data comes from literary texts written between 1850 and 1950; Joeres’ is drawn from the *Frankfurter Allgemeine Zeitung* and from the IDS corpora in Mannheim.<sup>62</sup> Their results (summarized in table 1.7), which

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<sup>61</sup> Ljungerud discusses *Buchstabe* briefly (59–60) but does not include it in the category of nouns with variable nominative singular forms. It is very infrequent overall in his material. The nominative singular forms that he found all end in *-e*, and the two genitive singular forms in his corpus both end in *-ens*.

<sup>62</sup> He omitted the Thomas Mann and Goethe corpora because these texts were, in his view, not sufficiently current.

should be viewed with caution because both sample sizes are quite small, confirm the majority opinion with regard to most nouns. In both studies, *Gedanke* was found to be more frequent than *Gedanken*; *Gefallen* more frequent than *Gefalle*; *Wille* more frequent than *Willen* (at least in the simplex form); *Glaube* more frequent than *Glauben* (in the simplex form); *Schaden* more frequent than *Schade*,<sup>63</sup> *Samen* more frequent than *Same* (though the *-e* form is somewhat more common in the older material); and *Name* more frequent than *Namen*. The semantic split which Erben and Jung describe in the case of *Haufe/n* is observable in Ljungerud’s older material (56), but not in Joeres’, where *Haufen* is more frequent than *Haufe* regardless of meaning.

Table 1.7. Distribution of *-e* and *-en* in the nominative singular of inanimate weak masculines that are still shifting (Ljungerud/Joeres)

	Ljungerud		Joeres	
	<i>-e</i>	<i>-en</i>	<i>-e</i>	<i>-en</i>
<i>Gedanke/n</i>	many	0	187	0
<i>Gefalle/n</i>	0	many	0	1
<i>Wille/n</i> (simplex)	172	7	140	3
<i>Glaube/n</i> (simplex)	142	19	151	9
<i>Name/n</i>	many	rare	454	6
<i>Schade/n</i>	rare	many	2	124
<i>Same/n</i>	18	23	8	20
<i>Friede/n</i>	159	141	25	55
<i>Funke/n</i>	58	29	52	10
<i>Haufe/n</i> (simplex)	41 animate 9 inanimate	65 animate 86 inanimate	1 (no semantic distinction)	17 (no semantic distinction)

Source: Data from Joeres 1996 and Ljungerud 1955

The studies yielded different results in the case of *Friede/n*. Ljungerud found the two forms to be approximately “gleich gewöhnlich” (52–54); in Joeres’s study (315), by contrast, *Frieden* was considerably more frequent than *Friede*, except when the noun was preceded by a determiner or a strong form of an attributive adjective, in which case the two forms had about the same frequency (42 *Friede* : 36 *Frieden*). Neither could identify a semantic distinction of any kind.

*Funke/n*, which, according to most grammars, is equally acceptable with *-e* and with *-en* in the nominative singular, was found in both studies to be more frequent in the form *Funke* by a substantial margin.

Paulfranz’ (2013: 90–91) Google search of all nouns in this group, including *Buchstabe* and *Hode/n*, yielded numbers which, for the most part, agree with Joeres’ and Ljungerud’s (see table 1.8). *Hode/n*, as the grammars indicate, appears to be more frequent in the form with *-en*,<sup>64</sup> and, assuming that most tokens of *Buchstabe* ending in *-en* are genitive plural rather than nominative singular forms, the numbers for *Buchstabe* are consistent with the grammars’ claims

<sup>63</sup> Ljungerud found only one older example of *Schade* in a novella by Hans Franck from 1932: “Dem Pfarrer war kein Schade geschehen”); Joeres found it only in certain fixed expressions (e.g., “Es soll dein Schade nicht sein”).

<sup>64</sup> Paulfranz’ count of forms ending in *-e* does not include nominative and accusative singular feminine forms; she searched only for sequences of *der* + NOUN. However, my own Google search for “die Hode” (1/11/23) turned up only 90 hits (excluding duplicates and sites that Google considers spam).

that the form *Buchstabe* is still the norm today. The numbers for *Haufe/n* are much closer together than one might expect; Paulfranz attributes this discrepancy to the strong online presence of a media company named *Haufe*.

Table 1.8. Distribution of *-e* and *-en* in the nominative singular of inanimate weak masculines that are still shifting (Paulfranz)

	<i>-e</i>	<i>-en</i>
<i>Schade/n</i>	73,700	9,480,000
<i>Friede/n</i>	1,100,000	1,120,000
<i>Haufe/n</i>	255,000	327,000*
<i>Same/n</i>	226,000	1,230,000*
<i>Gefalle/n</i>	4,060	136,000**
<i>Funke/n</i>	721,000	246,000*
<i>Glaube/n</i>	5,490,000	411,000
<i>Gedanke/n</i>	9,200,000	2,180,000***
<i>Hode/n</i>	8,540	240,000*
<i>Name/n</i>	54,000,000	3,220,000
<i>Wille/n</i>	4,600,000	115,000
<i>Buchstabe</i>	1,250,000	2,240,000***

Source: Data from Paulfranz (2013: 90–91)

\* includes some genitive plural forms (exact number not specified)

\*\* includes some past participles (exact number not specified)

\*\*\* includes many genitive plural forms (exact number not specified)

For some of these nouns, the choice of ending in the nominative singular in a given context may depend, at least to some extent, on whether the form is used as an independent noun or as the head of a determinative compound. Ljungerud’s and Joeres’ findings suggest that the variant in *-en* may be more frequent among compounds than among simplex forms in the case of *Wille/n*, *Glaube/n*, and *Haufe/n*, and that the opposite may be true of *Friede/n*.<sup>65</sup> Nordmeyer (1961: 280) implies that the variant in *-e*, which he seems to allow for all nouns in this category (except *Hode/n*, which he does not discuss), may not be possible in some compounds (*Weltfrieden*, *Feuerfunken*, *Steinhaufen*, *Blumensamen*).

<sup>65</sup> **Wille/n:** In Ljungerud’s corpus (1955: 59), the two forms of *Wille/n* are almost equally distributed among compounds (13 *-willen* : 19 *-wille*), while among simplex forms, the nominative singular in *-e* is considerably more frequent than that in *-en* (see table 1.7). Joeres has four examples of *-willen* in compounds, versus only three of the simplex (1996: 326); unfortunately, he does not tell us how many tokens with *-wille/n* he found in all.

**Glaube/n:** Ljungerud has 23 *-glauben* : 25 *-glaube*, versus 19 *Glauben* : 142 *Glaube*. In Joeres’ data, while the percentage of *en*-forms of *Glaube/n* is quite low both for compounds (4/36, or 11%) and for simplex forms (9/160, or 6%), it is slightly higher among compounds (1996: 318).

**Haufe/n:** The form *-haufe* is extremely rare in compounds; Ljungerud has only one example (57), and Joeres has none (320). Ljungerud references the compounds *Misthaufen*, *Scheiterhaufen*, and *Trümmerhaufen*; these are all inanimate, so we expect the *-en* form to prevail in these cases.

**Friede/n:** In Joeres’ data (1996: 315–316), the forms *Friede* and *Frieden* have approximately equal frequency among compounds (22 *-friede* : 21 *-frieden*), while the simplex *Frieden* is about twice as frequent as the simplex *Friede* (see table 1.7). Ljungerud does not provide any data on compounds with *-friede/n*.

The lemmatization of these competing forms in the online Duden dictionary<sup>66</sup> provides further clues as to their status. Whenever both forms are (still) widely in use, they are combined into a single lemma; this is the case with *Friede/n*, *Funke/n*, *Glaube/n*, *Gedanke/n*, and *Wille/n*. Otherwise, the two forms are lemmatized separately, and the less common form contains a cross-reference to the more widely used variant, but not vice versa. *Same/n*, *Schade/n*, *Gefalle/n*, *Haufe/n*, and *Hode/n* are all presented in this way. In addition, the entry for the less common variant always contains a usage note indicating that the form is rare or archaic: *Same* is “selten”; *Namen* is “seltener”; *Haufe* and *Schade* are “veraltet”; *Gefalle* was common in the 18<sup>th</sup> and 19<sup>th</sup> centuries, but not any more; *Hode* (which can be either masculine or feminine) is “seltener für” *Hoden*. The nominative singular form *Buchstaben* — ending in *-(e)n* — is not listed anywhere as an acceptable variant, which indicates that it is not considered standard.

I have claimed (and reiterated the claims of others) that certain categories of weak masculine noun may have been used more frequently over time in certain inflectional forms, and that the effects of token frequency may account for the divergent paths that these nouns have followed. In the next chapters, I provide data to support these claims.

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<sup>66</sup> *Duden*, svv. “Friede, Frieden, der,” “Funke, Funken, der,” “Glaube, *seltener* Glauben, der,” “Gedanke, Gedanken, der,” “Wille, *selten* Willen, der,” “Name, der,” “Namen, der,” “Same, der,” “Samen, der,” “Schade, der,” “Schaden, der,” “Gefalle, der,” “Gefallen, der,” “Haufe, der,” “Haufen, der,” “Hode, der *oder* die,” “Hoden, der,” “Buchstabe, der,” accessed July 16, 2023, <https://www.duden.de>.

## 2 Corpus and Methodology

### 2.1 The Corpus

To test my hypotheses about the influence of token frequency on the development of the weak masculine class, I assembled a corpus of German texts spanning the period from 1350 to 1900, and created — using the programming language Python — a simple mechanism to search it for tokens of weak masculine nouns. My starting point of 1350 marks, by most accepted standards, the boundary separating MHG and ENHG and the approximate point at which the MHG literary norm begins to break down (see Ebert et al. 1993: 5 for a discussion of problems surrounding periodization). I chose to stop at 1900 in order to avoid having to obtain permission to use texts protected under copyright law. The corpus contains 10 texts (five prose and five rhyming verse) from each 50-year period within this window.<sup>67</sup>

I opted to create my own corpus because when I began work on this project, there was no existing functional corpus covering the entire period of interest. The *Referenzkorpus Frühneuhochdeutsch* — the fourth in a series of historical German corpora compiled and maintained by researchers at the universities of Bochum, Halle-Wittenberg, and Potsdam, and the most comprehensive corpus of ENHG to date — is still not complete (as of August 2023), and in any case does not extend past the year 1650. Its smaller cousin and predecessor, the *Bonner Frühneuhochdeutschkorpus*, extends 50 years further (to 1700) but has numerous gaps and could not be combined easily with later corpora, such as the *Deutsches Referenzkorpus (DeReKo)* from the *Leibniz-Institut für deutsche Sprache (IDS)*.

My corpus contains a mixture of literary, religious, scientific, historical, and legal texts from various regions within the German-speaking world. In an effort to get as close to the spoken language as possible, I included at least one drama from each period beginning with Period 4 (1500–1550), and several of the earliest texts are either memoirs or narratives with at least some dialogue. While I tried to choose texts representing as many genres and regions as possible, I did not set out to include an equal number of texts from each genre category or region, since it would have been virtually impossible to find enough material from some of the earlier periods. Furthermore, in a study of primarily written texts, the category “region” ceases to be relevant around the late 17<sup>th</sup> century (Period 7) and no later than the first half of the 18<sup>th</sup> century (Period 8), a time in which the standard language was establishing itself as the dominant variety and travel was becoming increasingly commonplace (see also Ebert et al. 1993: 8). From this point onward, most written texts lack clearly defined linguistic features that would enable us to situate them in one dialect region or another.

Included in the corpus are the first ca. 30,500–30,700 words of each text. In some cases, I combined two or more shorter texts from the same author or source to reach a total of about 30,700 words for that source. I allowed more words of a text if the first ca. 30,700 words included many words that did not match the style or idiom of the rest of the text (e.g., prose headings/titles in verse texts, character names in dramas, passages in other languages or dialects that could not be omitted); or if other texts from the same period were too short and the extra

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<sup>67</sup> The corpus has 12 texts from Period 2 (1400–1450) and 11 texts each from Periods 4 (1500–1550) and 10 (1800–1850). Some of the texts that I had chosen initially to represent these periods turned out to be too short, so that I had to add texts to reach the desired number of words in each case.

words would bring the total word count for the period up to about 307,000 (30,700 x 10). This was the case in Periods 2, 4, and 10.

For each period, then, there are between 307,000 and 315,000 words of text, depending on the amount of extraneous material and particularly the number of dramas in the period. Roughly half of the words in each period come from prose texts, and the other half from verse texts (see table 2.1).<sup>68</sup> The entire corpus contains 3,415,488 words.

Table 2.1. Corpus word count, by period (including prose/verse distribution)

Period	Prose (%)	Verse (%)	Total (n)
1 (1350–1400)	50	50	<b>307,679</b>
2 (1400–1450)	59	41	<b>307,922</b>
3 (1450–1500)	50	50	<b>307,969</b>
4 (1500–1550)	49	51	<b>314,236</b>
5 (1550–1600)	49	51	<b>312,330</b>
6 (1600–1650)	50	50	<b>314,766</b>
7 (1650–1700)	50	50	<b>311,499</b>
8 (1700–1750)	50	50	<b>310,712</b>
9 (1750–1800)	50	50	<b>311,463</b>
10 (1800–1850)	50	50	<b>308,785</b>
11 (1850–1900)	50	50	<b>308,127</b>
<b>All periods</b>	<b>51</b>	<b>49</b>	<b>3,415,488</b>

I removed rhyming verse passages from prose texts and prose passages (including stage directions and most titles) from verse texts; I also eliminated most passages in foreign languages (e.g., Italian, French, Latin) and in dialects other than that in which the main text is composed (e.g., Low German dialogue in an otherwise Standard German novel). All omissions are clearly marked in the text files, and in cases where the text includes passages in languages other than German, this is indicated clearly in the database. I did not omit the names of characters in dramas, since doing so would have distorted these texts to the point of unreadability. Weak masculine tokens that appear in character names are marked as such in the database and excluded from further analysis.

Most of the texts in the corpus are drawn from online repositories of German literature such as Zeno.org and Project Gutenberg; however, some of the earlier texts are from print editions (including several volumes in the series *Deutsche Texte des Mittelalters*) and had to be typed in by hand. Those that I did not type in myself I copied in exactly as they were, without correcting errors, except in cases where a symbol was not displaying correctly and it was clear from the context which symbol was intended. I did remove most formatting (boldface/italics/underline), and in the verse texts, I replaced line breaks with forward slashes to save space. The texts are all saved in .txt format in a designated folder on my computer, and are neither parsed nor tagged (see the next section for a discussion of some of the difficulties of working with an unparsed, untagged corpus). A complete list of the texts in the corpus can be found in appendix A.

<sup>68</sup> The ratio of prose to verse is slightly higher in Period 2 than elsewhere because it was difficult to find suitable verse texts from this period.



The mechanism to search the corpus is spread out over two Python files, both of which I created myself:

1. The first of these contains a list of file names for all the texts in the corpus. The code in this script assigns the text files to variables, opens them, accesses their contents, and splits the texts into lists of individual words which can be tested to see if they match an input string — in this case, an orthographic variant of a weak masculine noun.
2. Another Python file — the search mechanism proper — contains a set of functions that take, as variables, (a) a list of texts representing any part of the corpus, and (b) a string or list of strings representing one or more orthographic variants of a noun. The program looks for the input string(s) (the noun) in the specified texts and returns any instances of those strings that it finds in the texts, including 15 words of context to either side in each case. The code in this file can be used to search for any word or part of a word in the corpus, provided one has access to the text files.

A brief note on the inclusion of verse texts in the corpus: many recent corpus studies dealing with language change exclude verse on the grounds that it does not reflect typical language use (see, e.g., Schulz 2007: 100–106). While it is true that people do not ordinarily communicate with one another in rhyming verse, it is also true that poems and songs, particularly those that are very popular, are read, recited, quoted, sung, and otherwise encountered by average speakers all the time. As we have seen, the strength of an item’s representation in a speaker’s mind, and by extension, the likelihood that the item will be able to withstand the forces of language change, depends not only on how often the speaker produces the item, but also on how often she encounters it. If a poem or song is encountered very frequently by enough speakers, it can influence the direction and pace of language change as much as any other instance of language use. In particular, poetry may help to ensure the preservation of archaic forms which would otherwise be doomed to extinction. For these reasons, I have opted to include verse texts in my corpus, but only rhyming verse, since in the case of blank and free verse the boundary with prose is often fuzzy. In the analysis, I take into account the effects of the variable “prose/verse” along with those of other factors I suspect may have influenced speakers’ decisions to inflect (or not inflect) weak masculine nouns (e.g., absence of a preceding determiner and/or attributive adjective, use as a title accompanying a person’s name; see 4.5).

## 2.2 Methodology

For this study, I used the corpus and Python scripts described in the previous section to measure the relative frequencies of different forms of 37 weak masculine and former weak masculine nouns — representing the four categories discussed above — in the period from 1350–1900 (all nouns are given in table 2.2). Most of the nouns are of Germanic origin, though there are also some loan words that entered the language prior to ENHG (e.g., *Prinz*). All are words that still exist in the language today. Among the 37 nouns are six animate nouns ending in *-e* that are still weak (Group 1a); six animate nouns ending in a consonant that are still weak (Group 1b); five nouns ending in a consonant that are now (partly) strong (Group 2); five inanimate nouns that now have *-en* in the nominative singular and are strong (Group 3a); six inanimate nouns that are still shifting or continued to shift until very late (Group 3b); three nouns

that have undergone a semantic split (Group 3c); and finally, six nouns ending in *-e* that have become feminine (Group 4).

Table 2.2. The 37 nouns

Group	Nouns
1a	<i>Affe, Bote, Bube, Knabe, Löwe, Pfaffe</i>
1b	<i>Bär, Graf, Held, Herr, Mensch, Prinz</i>
2	<i>Hahn, Herzog, Leichnam, Schelm, Schmerz</i>
3a	<i>Bogen, Brunnen, Garten, Kasten, Schatten</i>
3b	<i>Buchstabe, Friede/n, Funke/n, Name/n, Schade/n, Wille/n</i>
3c	<i>Drache/n, Fels/en, Tropf/en</i>
4	<i>Backe, Fahne, Grille, Rebe, Schlange, Schnecke</i>

The selection of nouns was complicated by the unfortunate reality that most (native) weak masculine nouns are not very frequent to begin with. I chose nouns for which I could find at least 30 and preferably 100 or more tokens in the corpus.

Because the corpus is not tagged, I had to find a way to ensure that my search mechanism would capture as many forms of these nouns as possible, particularly in the periods that predate the standardization of German orthography. To this end, I created a third Python script in which I defined each noun as a list of possible orthographic variants, all of which were included in the search. I selected these variants myself, drawing on the lists of attested orthographic representations of ENHG phonemes provided in Ebert et al. (1993: 38–63, 84–151) and on my own experience with ENHG. All orthographic variants found in the corpus are listed in the tables in 3.2.

In my effort to capture all possible orthographic variants, I also captured a fair amount of garbage, which then needed to be filtered out manually — a laborious and time-consuming undertaking. The orthographic variants for the noun *Hahn*, for example, included the form *han*, which readers may recognize as a highly frequent contracted early form of the verb *haben* ‘to have’. In the case of *Bote*, it was often not possible to tell without looking at the context whether *bot* was a form of the weak masculine *Bote* or of the neuter noun (*Ge*)*bot* ‘commandment’, which is also quite frequent in ENHG texts — particularly in texts dealing with religious topics — in reference to the ten commandments. *Bot* could of course also be the preterite of the verb *bieten* ‘to offer; to command’, though this came up less frequently in the corpus than other forms of this verb which were clearly identifiable as verb forms (forms beginning with *ge-* and ending in *-st* or *-(e)t*, for example) and could be eliminated right away without looking at the context.

After running the Python search function on each noun, I transferred the output of the Python script to a relational database in FileMaker Pro, where I manually recorded the following properties of each token:

#### 1. Case: N, A, D, G, ?

To determine the case, wherever possible, I looked to the syntactic context rather than relying on inflectional markers in the noun phrase. Formal markers are often uninformative and even misleading, particularly in ENHG; notably, *-n* often occurs in place of *-m* in the dative singular in early texts, and adjective inflection is so inconsistent in ENHG that adjective endings are not reliable indicators of membership in any grammatical category.

In some instances, it was impossible to determine the case of the noun. Ambiguity arises most often when there is no determiner accompanying the noun. However, in the accusative and dative, there can be ambiguity with a determiner, too, since the forms of both the determiner and the noun are the same in the accusative singular and dative plural of weak masculine nouns: the noun phrase *den Menschen* could be either accusative singular or dative plural, and in the earlier periods, it could also be dative singular with *-n* instead of *-m*. Question-mark tokens in the case category fall roughly into four categories:

- a. They are the objects of prepositions that can take more than one case — either two-way prepositions like *an*, or prepositions whose case rection has changed over time, such as *ohne/ane* — and the context does not make it clear which one is intended. In situations like these, it was sometimes possible to determine the case by looking at other instances of the problematic preposition in the same text.
- b. They are preceded/modified by numerals or other expressions of quantity (e.g., *viel/wenig*), which in earlier periods are often followed by a partitive genitive but in the modern language behave like ordinary attributive adjectives. Case ambiguity also arises with expressions such as *was* ‘what kind of’ and *voll* ‘full of’, which used to govern the genitive. Tokens in this category are marked “?” for case until the year 1700, unless some part of the noun phrase has unambiguous case marking.
- c. They may be non-head members of compounds whose members are written as separate words, e.g., *menschen lieb* (NHG *Menschenliebe*). Here it is not clear whether the token *menschen* should be treated as an independent element at all. If it is independent, the case is likely genitive, but in most instances, it is impossible to tell.
- d. The syntax is loose or opaque, or the token is part of a fragment in which there is not enough information to determine the case of the noun.

## 2. Number: Singular, Plural, ?

To determine number, too, I relied primarily on the context rather than on the form of the word. If the referent was obviously plural, I marked the token plural even if, formally, it appeared to be singular. Number ambiguity arises in many of the same environments as case ambiguity, e.g., in potential non-head members of compounds and in noun phrases (particularly prepositional objects) with determiners ending in *-(e)n*. Number ambiguity is also common with nouns such as *Schmerz* and *Schatten*, which are used regularly in the oblique cases and can, but need not, refer to discrete entities.

## 3. Gender: Masculine, Feminine, Neuter, ?

For most nouns, I assumed that the gender was masculine unless an accompanying determiner or attributive adjective was clearly marked for some other gender. For all nouns in Group 4 (*Schlange*) and for the noun *Mensch*, which is frequently neuter, I marked all tokens with question marks that were not unambiguously gender-marked.

4. Inflectional Marker: *-e, -ë, -en, -en, -n, -'n, -ø, -", -', -ns, -ens, -es, -s, -er, ?, other*

For the purposes of this study, the term *inflectional marker* is defined as any orthographic element added to the *e*-less stem of the MHG noun. For simplicity's sake, the ending *-e* is always considered to be an inflectional marker, regardless of whether it can or should be analyzed morphologically as part of the noun stem.

5. Animacy: yes (human), yes (other), yes (?), no, ?

Here, I noted whether or not the token denoted a living being, and if it did, whether the referent was human or some other living creature (e.g., an animal). Most nouns (27/37) are either animate or inanimate all the time; 9/37 nouns (*Tropf/en, Schnecke, Schlange, Hahn, Name, Funke, Fahne, Grille, and Bote*) denote both living creatures (people and animals) and inanimate objects/concepts. *Leichnam*, which is ambiguous with respect to animacy, is marked “?” everywhere. Some of the noun-internal variation in this category can be attributed to polysemy (as in the case of *Tropf/en, Schnecke, and Hahn*); in other cases, variation results from metonymy (for example, a *sturmvan* is a banner, but can also refer by extension to the person holding the banner). Instances of personification/anthropomorphization, where an inanimate object or concept takes on human attributes without actually becoming human, are marked “?” in this category. All of these cases of variation are addressed in depth in chapter 3.

6. Conditions likely to induce apocope in the nominative singular and/or non-weak inflection in the oblique singular forms, or otherwise to affect the developmental trajectory of weak masculine nouns (see 1.1.2)

a. Absence of determiners / attributive adjectives (unprecededness)

The grammars indicate that in the modern language, at least, weak masculines need not, or should not, be inflected in the oblique singular cases if they are unpreceded, i.e., accompanied by neither a determiner nor an attributive adjective; it seems likely that speakers would have omitted endings under these circumstances in the earlier periods, too. In the database, I made a note of any determiner or attributive adjective that was present in the noun phrase, and if neither was present, I marked the token unpreceded. Forms of *all-* were considered to be determiners, as were preposed possessive adjectives/pronouns.<sup>69</sup> Most tokens marked “?” in the determiner and attributive adjective categories were cases in which an element accompanying a different noun (e.g., in a compound NP) could be understood to extend into the token NP (e.g., “*auff seinem acker/wisen oder garten*”).

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<sup>69</sup> In the earlier periods, words that look like preposed possessive determiners may in fact still be personal pronouns in the genitive case; because it is impossible to tell the difference in most instances, these are all classified as determiners. Tokens with postpositive possessive adjectives/pronouns and attributive adjectives (e.g., “*herre min*”), which are quite common in the earlier periods and particularly in verse texts, are marked “n” in the determiner and attributive adjective categories.

In addition to unprecedentedness, I kept track of the following specific conditions in which, as noted in 1.1.2, nouns are likely to be unpreceded (in conditions 3 and 4, the omission of the ending may also be attributable to the stress pattern of the noun):

1. Use in the citation form: In the modern language, nouns in the citation form (denoting the word, i.e., the linguistic representation, rather than its external referent) typically do not exhibit inflectional markers. A token was labeled “y” in this category if it appeared in apposition to the word *Wort* or *Name* (e.g., “in dem wort «**wille**»”, “darumb ich im gib den nammen **löwen**”) or in a structure with a verb of calling or naming such as *heißen* or *nennen* (e.g., “Sie hat mich **Bub** geheißen”; “der was nũ genant **herr** Dietrich”). Tokens after the formulaic *mit namen* (see 3.2.3) were labeled “?”.
2. Use in attributive phrases with *als* ‘as a’: Tokens were labeled “y” in this category if they appeared after *als* in attributive structures, e.g., “Als **Knabe** war dieser große Geist genötigt [...]”.
3. Use as a title accompanying a person’s name: Bojunga tells us that titles regularly underwent apocope in MHG/ENHG because, as proclitics, they never carried primary stress (see 1.3.1). Titles are also cited in the modern grammars and usage handbooks as an example of an environment in which nouns are frequently unpreceded, and thus may remain uninflected in the oblique singular forms if they happen to be weak (see 1.1.2). Any token that preceded a person’s name (*Herr Damis*) or another noun denoting a person (*Herr Vater*) and appeared to share its referent with that name or noun was labeled either “y” or “?” in this category. If a token was followed by an attribute of place with *zu* or *von* (*herzoge zu Sachssen*), it was also considered to be a title. Tokens with preceding determiners (*dem Printzen Demetrio*) were labeled “?”, since here it was often not clear whether the token should be construed as a title or whether the following name was just another noun in apposition to the token.
4. Use in direct address or as an interjection: It has been observed that the weak masculine nouns are more susceptible to apocope and omission of inflectional endings when they are used in a vocative role or as interjections, particularly expletives — contexts in which they bear especially heavy stress and are not dependent on any other sentence element (see 1.3.1). Tokens were only classified as interjections if they were not dependent on any other syntactic element (e.g., *Mensch! (O ich) elender Tropff! Dieser Schandbube! (O) des Schmerzens!*); prepositional phrases that function as interjections, such as *bi gotes namen*, were not included here. Tokens of the adverbial *schade*, which is commonly used as an interjection, were also not included; these I removed from the data altogether (see 3.2.3).

b. Use as head of a determinative compound

Bojunga notes that MHG nouns that were frequently used as heads of compounds, where they bore secondary rather than primary stress, were more often subject to apocope than other nouns (see 1.3.1). I expected to find more compounds among tokens of nouns

in Groups 1b (*Herr, Graf*) and 2 (*Schelm*), which no longer end in *-e* in the modern language, than in the other groups, particularly in the earlier periods. A token was considered to be the head of a compound if there was at least one element preceding it that restricted its meaning in some way, and if all members of the potential compound were written together as a single word. If the token was detached from other potential members, it was labeled “?” in this category.

c. Use as prepositional object

Regular use as the object of a preposition is likely to reinforce the weak marker *-en* in the oblique singular forms, since nouns that commonly have this function are presumably very frequent in the oblique forms with *-en* and less so in the nominative singular, where this ending is not found (see 1.3.2). At the same time, the prepositional phrase is an environment in which nouns are frequently unpreceded, a condition favorable to the omission of inflectional markers (see 1.1.2). I expected to find that within the group of nouns that are used frequently as prepositional objects, those that are regularly accompanied by a determiner or attributive adjective in the singular forms belong mainly to Group 3, while those that are most often unpreceded may have followed other paths. I noted whether each token was or was not the object of a preposition, and recorded the preposition used in each instance to test whether the nouns behaved differently after different prepositions.

A token was marked “?” in the prepositional object category if

1. it was preceded by an expression of quantity; in this case, the noun may be dependent either on the expression of quantity (and thus in the genitive case) or on the preposition that precedes it;
2. it was not clear whether the element on which it was dependent should be classified as a preposition, as in the case of the bipartite prepositions *von ...wegen*, *an ...statt*, and *um/durch/von* etc. *...willen*; these are the products of grammaticalization, and their structure is often still transparent in the early periods; or
3. it was preceded by the interrogative expression *was für* ‘what kind of’, unless it was obviously in the nominative.

I expected to find the following across all periods, and especially in the early periods prior to the standardization of the language (1–6):

1. Nouns that are still weak today (Group 1, e.g., *Bote*) are significantly frequent in all forms, particularly in the singular, in all periods. These may be especially frequent in the nominative singular, but the other forms need to be well represented, too.
2. Nouns that have lost the *-e* in the nominative singular and are now strong (Group 2, e.g., *Schelm*) occur more frequently without *-(e)n* than with it. Either they are very frequent in the nominative singular — perhaps they are used mainly in direct address, where the *-e* is especially prone to apocope — or they frequently lose the inflectional ending in the

oblique singular forms (particularly in the dative and accusative) due to prosodic, metrical, or syntactic factors, or for other noun-specific reasons.

3. Inanimate nouns that now have *-(e)n* in the nominative singular (Group 3, e.g., *Garten*) are more frequent in the dative and/or accusative singular and/or in the plural than in the nominative and genitive singular, which are probably quite infrequent. These nouns may be especially frequent after prepositions. Inanimate nouns that have alternate nominative singular forms today (Group 3b, e.g., *Wille/n*) are likely more frequent in the nominative singular than other nouns in this group.
4. Nouns ending in *-e* that have become feminine (Group 4, e.g., *Schnecke*) are more frequent in the plural than in the singular. If they occur in the singular at all, then primarily in the nominative; singular forms ending in *-(e)n* are likely rare in this group.

The next two chapters contain an overview of the entire data set of 30,497 tokens representing the 37 current and former weak masculine nouns (lemmas) that are the subject of this study. In chapter 3, I introduce the nouns, providing information about their total frequencies, their distribution in the corpus, their semantic properties (e.g., animacy, polysemy), orthographic variants attested in the corpus, and other relevant details that might aid in interpreting the data. In chapter 4, I give an overview of the variables by which I categorized the tokens. The variables that apply to all noun forms (number, case, gender, inflectional marker) are addressed first, followed by the factors that have been linked with *e*-apocope and/or omission of expected weak inflectional markers and that are likely to have contributed to the shifts of weak masculine nouns into other inflectional classes (e.g., absence of preceding determiner/adjective, use as title, use as head of compound, use in direct address). Where correlations and trends emerged, I have noted these, but only tentatively at this stage; generalizations across the entire corpus are likely of limited value, since the frequencies of the individual nouns, and the conditions under which they have developed, vary considerably.

### 3 The 37 Nouns

#### 3.1 Total Frequencies; Distribution in Corpus

Tables 3.1 and 3.2 show the total frequencies of the 37 nouns in each time period (table 3.1) and in prose and verse texts (table 3.2). In table 3.1, in addition, two Deviation of Proportions (DP)<sup>70</sup> values are given for each noun. These values appear in the last two columns; those in the second-to-last column reflect the distribution across time periods, while those in the final column tell us how evenly the nouns are distributed across the 115 texts in the corpus. The value of the DP ranges from 0 to 1, where 0 indicates a perfectly even distribution and 1 a maximally uneven distribution. In table 3.2, since there are only two values for each noun, the distribution of tokens is given in percentages rather than in DP values.

All 37 nouns occur at least once in most time periods, though the nouns are somewhat unevenly distributed across periods and, particularly, texts. The period DP for most nouns is closer to 0 than to 1, indicating an acceptable level of dispersion in the corpus. However, some nouns are more evenly distributed than others: *Garten*, *Friede/n*, *Name/n*, *Knabe*, *Schlange*, and *Brunnen* have very even distributions (DP less than .2), while *Leichnam*, *Pfaffe*, and *Prinz* have DPs above .5, signaling a very uneven distribution. *Prinz* is almost entirely absent in the earliest periods; *Leichnam* and *Pfaffe* are most frequent in the 14<sup>th</sup> and 15<sup>th</sup> centuries (*Pfaffe* also in the early 16<sup>th</sup> century) and very infrequent otherwise. *Schelm*, *Herzog*, *Funke/n*, *Schnecke*, *Grille*, and *Graf* are also quite unevenly distributed (DP greater than .4): *Herzog* is concentrated in the first five periods (14<sup>th</sup>–16<sup>th</sup> centuries), and *Funke/n* in the last three; *Grille* occurs mainly in the last five periods; *Schelm* and *Schnecke* are most frequent in the 16<sup>th</sup> and 17<sup>th</sup> centuries; and *Graf* peaks in periods 2, 5, and 10 while otherwise maintaining a relatively constant frequency.

The distribution by text is extremely uneven; only the most frequent nouns, which occur in almost all texts, have DP values under 0.5: *Herr*, *Mensch*, *Schmerz*, *Garten*, *Friede/n*, *Name/n*, *Schade/n*, and *Wille/n*.

Sadly, the nouns *Schnecke* and *Backe* are not very well represented in the corpus at all. *Schnecke* is missing altogether in two periods (1 and 10), and there are no more than 10 tokens of either noun in any period.

The total number of tokens declines over time, as we see in the period totals at the bottom of table 3.1, which are represented as a bar graph in figure 3.1. There is a spike in Period 5.

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<sup>70</sup> The DP, a measure of dispersion commonly used to assess the distribution of words and phrases across corpus parts (Brezina 2018: 52), is calculated using the following formula:

$$DP = \frac{\text{Sum of absolute values of (observed – expected proportions)}}{2}$$

The expected proportion for each corpus part is obtained by dividing the number of words (tokens) in that corpus part by the total number of words (tokens) in the corpus. In my corpus, the expected proportion was the same up to two decimal places for all periods (0.09), since all contain roughly the same number of words. The observed proportion for a given word (e.g., *Affe*) in a given period (e.g., Period 1) is equal to the number of tokens of that word in that period (there are 8 tokens of *Affe* in Period 1, for example) divided by the total number of tokens of that word in the corpus (in the case of *Affe*, 125).



Table 3.1. Distribution of tokens by noun and period (including DP values; prose and verse)

Noun \ Period	Period											Noun Total	DP (Period)	DP (Text)
	1	2	3	4	5	6	7	8	9	10	11			
<i>Affe</i>	8	6	26	5	22	0	11	17	10	8	12	<b>125</b>	0.25	0.61
<i>Bote</i>	62	85	48	21	21	21	41	4	12	18	17	<b>350</b>	0.31	0.51
<i>Bube</i>	3	14	3	33	59	15	24	3	30	35	4	<b>223</b>	0.36	0.62
<i>Knabe</i>	41	36	32	46	61	97	40	29	52	92	47	<b>573</b>	0.16	0.50
<i>Löwe</i>	27	22	201	21	92	42	45	39	23	15	27	<b>554</b>	0.34	0.63
<i>Pfaffe</i>	112	29	16	206	12	15	3	2	4	6	11	<b>416</b>	0.58	0.72
<i>Bär</i>	5	8	7	5	11	16	12	19	18	1	6	<b>108</b>	0.25	0.62
<i>Graf</i>	6	229	18	42	487	14	36	20	44	143	82	<b>1,121</b>	0.49	0.72
<i>Held</i>	30	25	60	8	19	154	80	119	73	23	66	<b>657</b>	0.30	0.60
<i>Herr</i>	1,297	1,518	860	734	1,561	603	486	501	435	390	347	<b>8,732</b>	0.23	0.37
<i>Mensch</i>	1,609	297	805	372	312	399	336	578	569	315	370	<b>5,962</b>	0.23	0.40
<i>Prinz</i>	0	3	0	0	1	111	352	35	24	29	7	<b>562</b>	0.64	0.82
<i>Hahn</i>	2	1	3	13	9	5	4	19	22	18	11	<b>107</b>	0.32	0.63
<i>Herzog</i>	20	110	39	29	133	8	8	4	7	31	8	<b>397</b>	0.44	0.69
<i>Leichnam</i>	78	36	64	3	2	17	2	2	9	5	10	<b>228</b>	0.51	0.70
<i>Schelm</i>	0	1	4	13	16	12	28	1	5	17	3	<b>100</b>	0.41	0.72
<i>Schmerz</i>	41	40	83	45	54	122	142	203	147	183	153	<b>1,213</b>	0.24	0.43
<i>Bogen</i>	12	20	19	7	9	129	22	20	31	38	26	<b>333</b>	0.32	0.51
<i>Brunnen</i>	57	33	101	37	30	64	62	46	16	28	43	<b>517</b>	0.18	0.51
<i>Garten</i>	59	54	46	28	84	79	79	43	46	87	57	<b>662</b>	0.13	0.40
<i>Kasten</i>	0	2	1	14	11	6	12	3	5	5	6	<b>65</b>	0.30	0.65
<i>Schatten</i>	3	7	15	9	11	55	44	82	73	64	81	<b>444</b>	0.35	0.52
<i>Buchstabe</i>	9	5	14	14	4	25	22	11	30	11	7	<b>152</b>	0.24	0.59
<i>Friede/n</i>	62	138	86	71	93	117	59	35	67	43	75	<b>846</b>	0.15	0.38
<i>Funke/n</i>	2	1	6	3	1	3	12	6	28	30	21	<b>113</b>	0.44	0.64
<i>Name/n</i>	160	117	240	201	304	171	158	123	116	96	106	<b>1,792</b>	0.15	0.30
<i>Schade/n</i>	68	195	117	128	123	34	32	39	7	8	8	<b>759</b>	0.38	0.49
<i>Wille/n</i>	350	232	264	189	168	135	112	75	61	76	118	<b>1,780</b>	0.22	0.37
<i>Drache/n</i>	11	6	13	16	26	10	24	6	9	7	12	<b>140</b>	0.20	0.58
<i>Fels/en</i>	164	9	16	7	27	51	48	64	58	45	45	<b>534</b>	0.27	0.58
<i>Tropf/en</i>	8	8	5	6	11	20	34	31	27	62	38	<b>250</b>	0.31	0.50
<i>Backe</i>	1	3	8	2	1	2	4	4	5	2	5	<b>37</b>	0.25	0.81
<i>Fahne</i>	2	9	9	6	9	28	11	10	13	20	33	<b>150</b>	0.27	0.62
<i>Grille</i>	0	1	1	3	2	1	19	9	9	11	8	<b>64</b>	0.42	0.50
<i>Rebe</i>	7	15	11	4	5	13	3	11	14	15	15	<b>113</b>	0.20	0.86
<i>Schlange</i>	13	10	45	24	47	25	36	26	16	18	21	<b>281</b>	0.18	0.76
<i>Schnecke</i>	0	2	1	2	9	10	7	4	1	0	1	<b>37</b>	0.45	0.56
<b>Period Total</b>	<b>4,329</b>	<b>3,327</b>	<b>3,287</b>	<b>2,367</b>	<b>3,846</b>	<b>2,630</b>	<b>2,450</b>	<b>2,243</b>	<b>2,116</b>	<b>1,995</b>	<b>1,907</b>	<b>30,497</b>		

Note: The values in this table are for the entire corpus, including both prose and verse texts. They are sample sizes ( $n$ ); percentages are not included due to space limitations.

*Herr* and *Mensch*, the two most frequent nouns, are best represented in the earlier periods. *Mensch* is exceptionally frequent in Period 1, and particularly in Merswin's *Buch von den neun Felsen*, which contains 693 tokens of *Mensch*, more than any other text in the corpus; this text accounts for nearly half (43%) of all tokens of *Mensch* in Period 1 and about 12% of all tokens of *Mensch* in the corpus. When *Herr* and *Mensch* are removed from the data, the distribution across periods evens out somewhat, though the spike in Period 5 remains (see figure 3.2). In

Period 5, two other well represented nouns, *Graf* and *Name/n*, are at their most frequent; in this period we find 497 tokens of *Graf* and 305 tokens of *Name/n*.

Collectively, the nouns in this study are used more often in prose (17,467 tokens, or 57%) than in verse texts (13,027 tokens, or 43%). The distribution varies quite a bit from one noun to the next, however, and for more than half of all nouns (20/37, or 54%), the proportion of verse tokens exceeds that of prose tokens. *Graf*, *Prinz*, *Herzog*, and *Buchstabe* occur mainly in prose texts, while *Held*, *Schmerz*, *Schatten*, *Funke/n*, *Drache/n*, and *Fahne* are for the most part confined to verse texts; the figures for the remaining nouns lie between these two extremes.

Table 3.2. Prose/verse distribution by noun (all periods)

Noun	Prose		Verse		Noun Total ( <i>n</i> )
	<i>n</i>	%	<i>n</i>	%	
<i>Affe</i>	66	53	59	47	<b>125</b>
<i>Bote</i>	178	51	172	49	<b>350</b>
<i>Bube</i>	139	62	84	38	<b>223</b>
<i>Knabe</i>	215	38	358	62	<b>573</b>
<i>Löwe</i>	336	61	218	39	<b>554</b>
<i>Pfaffe</i>	187	45	229	55	<b>416</b>
<i>Bär</i>	32	30	76	70	<b>108</b>
<i>Graf</i>	947	84	174	16	<b>1,121</b>
<i>Held</i>	113	17	544	83	<b>657</b>
<i>Herr</i>	5,357	61	3,375	39	<b>8,732</b>
<i>Mensch</i>	4,049	68	1,913	32	<b>5,962</b>
<i>Prinz</i>	425	76	137	24	<b>562</b>
<i>Hahn</i>	34	32	73	68	<b>107</b>
<i>Herzog</i>	315	79	82	21	<b>397</b>
<i>Leichnam</i>	146	64	82	36	<b>228</b>
<i>Schelm</i>	41	41	59	59	<b>100</b>
<i>Schmerz</i>	334	28	879	72	<b>1,213</b>
<i>Bogen</i>	148	44	185	56	<b>333</b>
<i>Brunnen</i>	290	56	227	44	<b>517</b>
<i>Garten</i>	344	52	318	48	<b>662</b>
<i>Kasten</i>	31	48	34	52	<b>65</b>
<i>Schatten</i>	99	22	345	78	<b>444</b>
<i>Buchstabe</i>	117	77	35	23	<b>152</b>
<i>Friede/n</i>	331	39	515	61	<b>846</b>
<i>Funke/n</i>	29	26	84	74	<b>113</b>
<i>Name/n</i>	953	53	839	47	<b>1,792</b>
<i>Schade/n</i>	463	61	296	39	<b>759</b>
<i>Wille/n</i>	1,117	63	663	37	<b>1,780</b>
<i>Drache/n</i>	38	27	102	73	<b>140</b>
<i>Fels/en</i>	262	49	272	51	<b>534</b>
<i>Tropf/en</i>	104	42	146	58	<b>250</b>
<i>Backe</i>	21	56	16	44	<b>37</b>
<i>Fahne</i>	24	16	126	84	<b>150</b>
<i>Grille</i>	30	47	34	53	<b>64</b>
<i>Rebe</i>	39	35	74	65	<b>113</b>
<i>Schlange</i>	100	36	181	64	<b>281</b>
<i>Schnecke</i>	15	41	22	59	<b>37</b>
<b>Total</b>	<b>17,469</b>	<b>57</b>	<b>13,028</b>	<b>43</b>	<b>30,497</b>

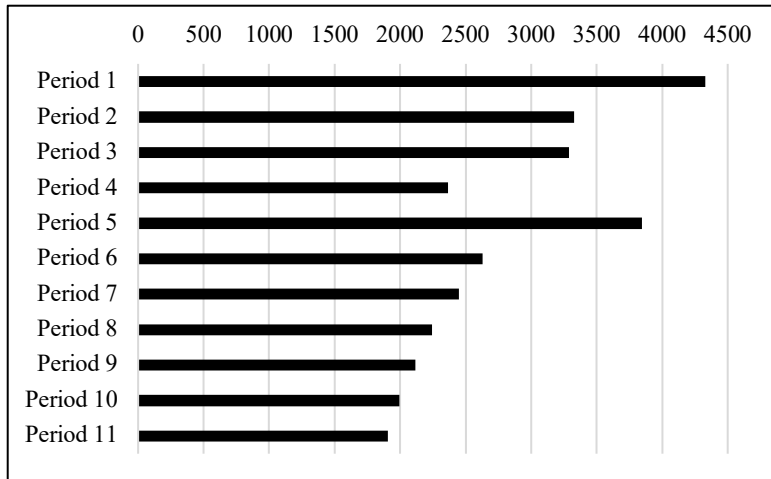


Figure 3.1. Token distribution by period (all texts)

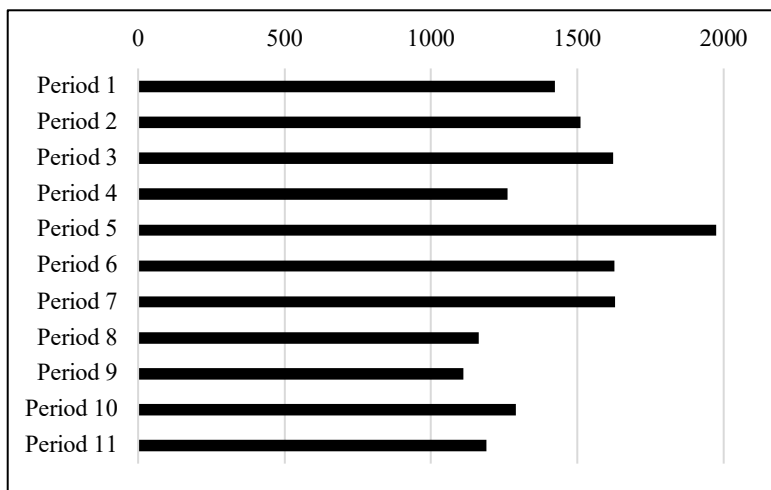


Figure 3.2. Token distribution by period (all texts; not including *Mensch* and *Herr*)

The overall distribution of prose and verse tokens remains more or less constant across all time periods, with exceptions in Periods 1, 2, 4, 9, and 11 (see table 3.3). In Periods 1 and 2, the ratio of prose to verse is significantly higher than in the remaining periods. In Period 2, there is slightly more prose than verse in the corpus to begin with (see table 2.1 in the previous chapter), so the higher ratio is to be expected; in Period 1, the balance is disrupted by one very repetitive prose text that contains more weak masculine tokens than any other text in the corpus (*Merswin's Buch von den neun Felsen*).

Periods 4, 9, and 11 have more verse than prose tokens. Here, the abundance of verse tokens is likely due to chance: the corpus has slightly more verse than prose for Period 4 (51% to 49%), but this is also true of Period 5, where the distribution looks more like that of the corpus as a whole. In Periods 9 and 11, the corpus contains prose and verse in approximately equal proportions.

Table 3.3. Prose/verse distribution by period

Period	Prose (%)	Verse (%)	Total ( <i>n</i> )
1 (1350–1400)	71	29	<b>4,329</b>
2 (1400–1450)	72	28	<b>3,327</b>
3 (1450–1500)	59	41	<b>3,287</b>
4 (1500–1550)	39	61	<b>2,367</b>
5 (1550–1600)	59	41	<b>3,847</b>
6 (1600–1650)	50	50	<b>2,629</b>
7 (1650–1700)	57	43	<b>2,450</b>
8 (1700–1750)	57	43	<b>2,243</b>
9 (1750–1800)	45	55	<b>2,116</b>
10 (1800–1850)	52	48	<b>1,995</b>
11 (1850–1900)	46	54	<b>1,907</b>
<b>Entire Corpus</b>	<b>57</b>	<b>43</b>	<b>30,497</b>

### 3.2 Semantic Properties and Usage Notes; Orthographic Variants

In this section, I provide a brief profile of each noun, including at least the following information about the noun in each case:

1. Orthographic variants of the noun stem (without final *-e*) that are represented in the corpus;<sup>71</sup>
2. Meaning(s) and other relevant semantic properties; in particular:
  - a. whether the noun has meanings other than that which is prevalent in the modern language, and if so, whether and to what extent the semantic variation affects the noun’s status in the animacy hierarchy (for example: if it has an animate referent most of the time, does it have secondary inanimate uses?)
  - b. whether its meaning and/or usage have changed over time

Where applicable, I also address

3. gender variation;
4. developmental processes in which the noun has participated (e.g., grammaticalization in the case of *Wille/n*) that have brought about a change in the function of the word in at least some instances;
5. frequent collocations which language users may process as chunks; and
6. complications associated with locating the noun in the corpus and deciding which potential tokens to include in the data.

The nouns are arranged first by group (1a, 1b, 2, 3a, 3b, 3c, 4), then by animacy (prototypicality), and finally, by the evenness of their distribution in the corpus (their DP by time

<sup>71</sup> Capitalized forms are not listed as separate variants. Most variants appear in the corpus both with and without initial capitalization.

period): the nouns that are most evenly distributed — i.e., that have the lowest DP values — are discussed first. In the tables at the beginning of each section, lighter shading indicates a closer resemblance to Köpcke’s prototype(s) for the modern language (see 1.1.2).

The relevant dictionary entries are cited at the beginning of each noun profile, with URLs. The *Deutsches Wörterbuch* of Jacob and Wilhelm Grimm and the *Digitales Wörterbuch der deutschen Sprache* are abbreviated throughout as *DWB* and *DWDS*, respectively; the online Duden is referred to simply as “Duden”, and Lexer’s *Mittelhochdeutsches Handwörterbuch* as “Lexer”. Entries from Lexer (MHG) are listed first, followed by those from the *DWB* (ENHG/NHG) and finally, those from the modern dictionaries (Duden; *DWDS*).

URLs are not given for individual entries either in the *DWB* or in Lexer because in these cases, the URL is the same for all entries; URLs for these websites can be found in the bibliography. The access date for all dictionary citations is July 16, 2023.

### 3.2.1 Group 1

Table 3.4. Nouns in Group 1 (summary)

Sub-group	Noun	Meaning (NHG)	MHG form(s)	OHG form(s)	Orthographic variants	Tokens	DP
1a	<i>Knabe</i>	boy, lad	<i>knabe</i>	<i>knabo</i>	<knab>, <chnab>	573	0.16
	<i>Bote</i>	messenger	<i>bote</i>	<i>boto</i>	<bot>, <boht>, <both>, <bott>, <bod>, <pot>, <pott>	350	0.31
	<i>Bube</i>	boy; knave; Jack (playing card)	<i>buobe</i>	<i>Buobo</i> <sup>72</sup>	<bub>, <bueb>, <buob>, <büb>, <pub>, <pueb>, <puob>	223	0.36
	<i>Pfaffe</i>	priest, cleric	<i>phaffe</i>	<i>phaffo</i>	<pfaff>, <pfaf>, <paff>, <phaff>	416	0.58
	<i>Affe</i>	ape, monkey	<i>affe</i>	<i>affo</i>	<aff>	125	0.25
	<i>Löwe</i>	lion	<i>lö(u)we</i> , <i>lëwe</i> , <i>leu</i> , <i>leo</i>	<i>le(w)o</i>	<löw>, <leu>, <lew>, <leo>, <loew>, <leb>, <leob>, <leuw>, <löuw>	554	0.34
1b	<i>Herr</i>	lord, master, Mr., sir	<i>hër(re)</i>	<i>hëriro</i> , <i>hërōro</i> , <i>hër(r)o</i>	<herr>, <her>, <heer>, <här>, <hêrr>, <hêr>, <hër>	8,732	0.23
	<i>Mensch</i>	person, human being	<i>mensc(e)</i>	<i>mennisco</i>	<mensch>, <mentsch>, <mönsch>, <mönch>, <mänsch>	5,962	0.23
	<i>Held</i>	hero	<i>helt</i>	<i>helid</i>	<held>, <heldt>, <helt>, <helld>, <heltt>	657	0.30
	<i>Graf</i>	count, earl	<i>grāve</i>	<i>grāvo</i>	<graf>, <graff>, <grau>, <grav>, <grof>, <groff>	1,121	0.49
	<i>Prinz</i>	prince	<i>prinz(e)</i>	not attested	<prinz>, <printz>	562	0.64
	<i>Bär</i>	bear	<i>ber</i>	<i>bero</i>	<bär>, <ber>, <beer>, <bähr>, <per>	108	0.25

<sup>72</sup> The noun *buobo* is attested in OHG only as a person’s name (*DWDS*, s.v. “Bube, der,” accessed 7/16/23, <https://www.dwds.de/wb/Bube>).

## 1. *Knabe* ‘boy, lad’

Lexer, s.v. “knabe, swm.”

*DWB*, s.v. “knabe, m.”

Duden, s.v. “Knabe, der,” <https://www.duden.de/rechtschreibung/Knabe>.

*DWDS*, s.v. “Knabe, der,” <https://www.dwds.de/wb/Knabe>.

Until recently, *Knabe* was widely used to refer to a human boy, particularly one of school age. Over the last two centuries or so, the noun *Junge* (also a weak masculine noun) has largely replaced it in the standard variety and in northern dialects; *Bube* (see #3 below) has been more common in the south at least since the 14<sup>th</sup> century (*DWB*; *DWDS*). Today, the online Duden designates *Knabe* “veraltend” (obsolescent) and “gehoben” (elevated), and assigns it a frequency rating of two out of five bars, indicating that in a million word forms, it occurs more than once, but fewer than 10 times.

In addition to the variants listed above, there are five potential tokens of *Knabe* ending in *-p(p)*. I did not include these because in at least two of these cases, I could not determine with certainty whether the token was a form of *Knabe* or of *Knappe*, which has existed as an independent lexeme at least since MHG and often has the same meaning as *Knabe*. In total, there are 35 tokens with stem-final *-p(p)(e)*, most of which belong to *Knappe*.

## 2. *Bote* ‘messenger’

Lexer, s.v. “bote, swm.”

*DWB*, s.v. “bote, m.”

Duden, s.v. “Bote, der,” <https://www.duden.de/rechtschreibung/Bote>.

*DWDS*, s.v. “Bote, der,” <https://www.dwds.de/wb/Bote>.

*Bote* began life as an agent noun derived from an ancestor of the modern German verb *bieten*, which once had the meaning ‘to notify’ (*DWDS*). It usually denotes a human messenger; however, it is sometimes used figuratively (particularly in verse texts) in reference to a non-human creature or inanimate entity that signals the coming of something else (e.g., “Die Lerch als **Morgenbote**,” “Als **Bot** voraus das Bächlein eilt,” “Draußen **Frühlingsboten** schweben,” “Ein neues Glück uns anlacht, als ein **Bote** / Der Hoffnung”). This usage is especially common in compounds, notably in the compound *Vorbote* ‘harbinger’, which is unambiguously inanimate in four of eight instances.

The extremely frequent compound *Zwölfbote* ‘apostle’, which accounts for nearly half of all *Bote* compounds (35/76), is animate most of the time. However, in one inanimate instance, it denotes the feast days of the apostles, rather than the apostles after whom they are named.

*Bote* occurs mainly in the earliest periods (1–3), particularly in the chronicles and travel reports of the 14<sup>th</sup> and 15<sup>th</sup> centuries, and its frequency decreases over time; the last four periods (7–11) have no more than 17 tokens each. In the modern language, it is most commonly used to denote a mail carrier, often in the compound *Postbote*.

### 3. *Bube* ‘boy; knave; Jack (playing card)’

Lexen, s.v. “buobe, swm.”

*DWB*, s.vv. “bube, m.,” “bub, m.”

Duden, s.v. “Bube, der,” <https://www.duden.de/rechtschreibung/Bube>.

Duden, s.v. “Bub, der,” <https://www.duden.de/rechtschreibung/Bub>.

*DWDS*, s.v. “Bube, der,” <https://www.dwds.de/wb/Bube>.

*DWDS*, s.v. “Bub, der,” <https://www.dwds.de/wb/Bub>.

*Bube* is often synonymous with *Knabe*; however, unlike *Knabe*, it can also assume the negative connotation of a knave, scoundrel, or other undisciplined person, e.g., in the compound *Spitzbube*. The pejorative usage was especially common in ENHG (particularly in the 16<sup>th</sup> and 17<sup>th</sup> centuries) and is considerably less so today. In the modern standard language, it most often denotes the Jack in a set of playing cards (much like the English word *knave*), though in southern dialects it is still the usual term for a human boy, always in the apocopated form without *-e* (*Bub*). My corpus contains only two instantiations of *Bube* as playing card. One is from Büchner’s play *Leonce und Lena* (Period 10):

Die Erde und das Wasser da unten sind wie ein Tisch, auf dem Wein verschüttet ist, und wir liegen darauf wie Spielkarten, mit denen Gott und der Teufel aus Langeweile eine Partie machen, und Ihr seid ein Kartenkönig, und ich bin ein **Kartenbube**, es fehlt nur noch eine Dame [...].

Here the playing card is a metaphor for a character in the drama, and the referent is at once the inanimate playing card, the animate human figure on the playing card, and the human character in the drama who identifies with the (figure on the) card. In the other instance, in a poem by Annette Droste-Hülshoff (Period 10), the reference is clearly to the human figure on the card (the Jack of Hearts) rather than to the playing card as inanimate object:

Da trat einst Wintermorgens früh/ Ein Mann in seine Stube,/ Seltsam verschabt wie ein Genie/ Und hager wie **Coeur-Bube** [...]

In both of these cases, the referent is more animate than not.

### 4. *Pfaffe* ‘priest, cleric’

Lexen, s.v. “phaffe, swm.”

*DWB*, s.v. “pfaffe, pfaff, m.”

Duden, s.v. “Pfaffe, der,” <https://www.duden.de/rechtschreibung/Pfaffe>.

Duden, s.v. “Dompfaff, der,” <https://www.duden.de/rechtschreibung/Dompfaff>.

*DWDS*, s.v. “Pfaffe, der,” <https://www.dwds.de/wb/Pfaffe>.

*DWDS*, s.v. “Dompfaff, der,” <https://www.dwds.de/wb/Dompfaff>.

*Pfaffe* used to be the generic term for a priest or cleric, but around the time of the Reformation (*DWB*) it took on derogatory undertones. In the modern standard language, outside

of historical fiction and other texts on historical topics, it is used only in the derogatory sense, while the words *Pfarrer*, *Priester*, and *Geistliche/r* have superseded it in its original function. In my corpus, it is extremely infrequent from Period 5 onward.

At least since the 16<sup>th</sup> century, the compound *Dompfaff* (without *-e*) has been used as a colloquial designation for the bullfinch, a bird whose black head feathers and red underside call to mind the regalia worn by clerics; my corpus does not contain any examples of this usage.

## 5. *Affe* ‘ape, monkey’

Lexer, s.v. “affe, swm.”

*DWB*, s.v. “affe, m.”

Duden, s.v. “Affe, der,” <https://www.duden.de/rechtschreibung/Affe>.

*DWDS*, s.v. “Affe, der,” <https://www.dwds.de/wb/Affe>.

Most often, *Affe* denotes an ape or monkey; as primates, however, apes bear a close resemblance to humans, so it should come as no surprise that the noun *Affe* frequently has a human or human-like referent: in just over half of all cases (64/125, or 51%), it denotes either a human being (usually one perceived to be unrefined, or of below-average intelligence, or both) or (in about 14 cases) an ape with human-like attributes and abilities, as in fables and other allegorical texts. In an additional 15 cases, representing 12% of all tokens of *Affe*, people are likened to apes (“die Kinder sind wie Affen”; “wer aber trinkt über mass, der wirt schimpflich als ain **aff**”). *Affe* co-occurs with *Pfaffe* in three instances (see #4 above).

## 6. *Löwe* ‘lion’

Lexer, s.v. “löwe, swm.”

*DWB*, s.v. “löwe, m.”

Duden, s.v. “Löwe, der,” <https://www.duden.de/rechtschreibung/Loewe>.

*DWDS*, s.v. “Löwe, der,” <https://www.dwds.de/wb/Löwe>.

*Löwe* is the least human-like of the creatures in Group 1a and, arguably, in all of Group 1. It is usually a lion, but — in a somewhat less animate secondary sense — can also denote the constellation Leo and the corresponding Zodiac sign. At times, it moves up in the animacy hierarchy: particularly in the earlier periods, lions appear regularly as speaking characters in fables and the like.

The word *Löwe* exhibits considerable orthographic variation; this was an obstacle to locating tokens in my untagged corpus, and despite my best efforts to capture and tame them all, some may still be at large. In the earlier periods through 1650 (Period 6), the stem vowel is unrounded (<e>; 201 tokens) almost as often as it is rounded (<ö>, <oe>; 204 tokens), and the semivowel is spelled alternately with <o>, as in OHG and in Latin; with <w>, as in modern German; with <b>; and occasionally with a combination of these symbols (*leoben*). The variant



*leu(w)(e)* (or *löuw*, in two instances), with a diphthong, is also quite common.<sup>73</sup> At least some of the tokens with <o> are probably forms of the Latin word *leo*; there are 23 of these in the data, all from before 1600.<sup>74</sup> None have Latin inflectional markers in the oblique singular forms or in the plural, but one token — *leonen*, in the dative plural, from Period 2 (Oswald von Wolkenstein) — may be a combination of the German inflectional marker *-en* and the Latin oblique stem *leon-*. The form *Leu(e)* persists into the 19<sup>th</sup> century in verse texts; otherwise, only *Löw(e)* is attested after 1650.

## 7. *Herr* ‘lord, master, Mr., sir’

Lexer, s.v. “hêrre, hërre, swm.”

DWB, s.v. “herr, m.”

Duden, s.v. “Herr, der,” <https://www.duden.de/rechtschreibung/Herr>.

DWDS, s.v. “Herr, der,” <https://www.dwds.de/wb/Herr>.

*Herr* is the most frequent of the nouns in this study, accounting for nearly one third of all tokens. In the modern language, it is most commonly a title corresponding to English *Mr.* or — in religious contexts — a lord, especially the Lord Jesus Christ. It began life as the comparative form of the OHG adjective *hêr* (NHG *hehr*) ‘noble, sublime’, and in the earliest periods it is sometimes difficult to tell whether the substantivized (comparative) adjective *hehr(er)* or the noun meaning ‘lord’ is intended; 14 tokens, all from Periods 1–4, are ambiguous in this respect.

Other homographs that had to be filtered out include the MHG/ENHG equivalents of the NHG words *her* ‘here, towards the speaker’ (extremely frequent!) and *Heer* ‘army’; in all of these cases, the meaning could be determined from the context.

I did not include forms of the compound *Junker* ‘squire’ < *Jungherr(e)* (a strong masculine noun in the modern language) since it is not clear at what point the association with *Herr* ceases to be transparent. In addition to 43 tokens of *Junker* / *jun(g)ker* (without *h*), spread out across all periods except the first, there are 27 tokens of *Jung(k)her(r)(e)* / *jung(k)her(r)(e)*, *Junc(k)her(r)(e)* / *junc(k)her(r)(e)* in the corpus, all from the 15<sup>th</sup> and 16<sup>th</sup> centuries, which could probably still be considered forms of *Herr*. Of these, eight have weak masculine inflection in the oblique singular forms (five tokens) and in the plural (three tokens); in the nominative singular, one ends in *-herre* and two in *-herr*. The rest all end in *-her*.

Of the nouns in this study, *Herr* has the largest share of vocative tokens: 25% of all tokens of *Herr* are used in direct address, versus no more than 16% for any other noun (*Prinz* has 16%, and *Held* and *Schelm* have 11% each; all other nouns have considerably less).

<sup>73</sup> The sequence <ew> in the variant *lew(e)* no doubt also represents a diphthong in most cases — particularly where the final *-e* is apocopated — but unless the word happens to occur in a rhyming couplet, we have no way of ascertaining its pronunciation.

<sup>74</sup> The corpus has 24 in all; I omitted one token from Period 7 (Abraham a Sancta Clara) which was obviously Latin: “kein ansehlicher Thier aber ist/ als der Löw/ dahero das Wörtl **Leo**, Löw/ anderthalbhundertmahl in der Heil. Schrift zu lesen/“

## 8. *Mensch* ‘person, human being’

Lexen, s.v. “mensch, mensch, swstmn.”

*DWB*, s.vv. “mensch, m.,” “mensch, n.”

Duden, s.v. “Mensch, der,” [https://www.duden.de/rechtschreibung/Mensch\\_Individuum](https://www.duden.de/rechtschreibung/Mensch_Individuum).

Duden, s.v. “Mensch, das,” [https://www.duden.de/rechtschreibung/Mensch\\_Frau](https://www.duden.de/rechtschreibung/Mensch_Frau).

*DWDS*, s.v. “Mensch, der,” <https://www.dwds.de/wb/Mensch>.

*DWDS*, s.v. “Mensch, das,” <https://www.dwds.de/wb/Mensch#2>.

*Mensch*, the second-most frequent of the 37 nouns, is a human being in the broadest possible sense. Beginning in MHG, it is attested with neuter as well as masculine gender; the masculine and neuter were used more or less interchangeably through about the 15<sup>th</sup> century, at which point the neuter variant came to designate a person of female sex specifically, while the masculine form continued to be used for a person of any sex. The derogatory use of the neuter in the modern language in reference to a bitch or whore dates back to the 18<sup>th</sup> century (*DWDS*); the (neuter) plural *Menscher*, also with derogatory meaning, was common already in the 17<sup>th</sup> century.

In my corpus, 63 tokens of *Mensch*, most from the first two periods (1350–1450), are unambiguously neuter. An additional 3,620 tokens, representing about 60% of all tokens of *Mensch*, have question marks in the gender category. Any token that was not clearly marked for gender and was in a form other than the nominative or accusative singular (the only two forms in which the masculine and neuter paradigms never overlap) fell into this category. The majority of these tokens are likely masculine.

*Mensch* is extremely frequent in the first period — where it occurs mainly in Merswin (1,047 tokens), Langenstein (772 tokens), and the St. Georgener Prediger (750 tokens) — and is distributed fairly evenly across the remaining periods.

## 9. *Held* ‘hero’

Lexen, s.v. “helt, -des, stm.”

*DWB*, s.v. “held, m.”

Duden, s.v. “Held, der,” [https://www.duden.de/rechtschreibung/Held\\_Held\\_Recke](https://www.duden.de/rechtschreibung/Held_Held_Recke).

*DWDS*, s.v. “Held, der,” <https://www.dwds.de/wb/Held>.

*Held*, denoting a hero, is one of five weak masculine nouns in this study with origins in other inflectional classes; the others are the Group 3 nouns *Buchstabe*, *Friede/n*, *Schatten*, and *Fels/en* (see 3.2.3). It belonged to the strong *a*-stem class in OHG and MHG (see the paradigm of MHG *tac* in [3] in 1.1.1); by the late 15<sup>th</sup> / early 16<sup>th</sup> century, it had established itself in the weak class (Molz 1902: 341; my data show this, too), but strong oblique singular forms continued to occur sporadically through the ENHG period and have persisted into the modern language. The shift of *Held* into the weak declension was likely facilitated by a combination of factors, including its semantic resemblance to other weak masculine nouns (it has a human referent) and perhaps also infrequent use in the oblique singular forms.

*Held* occurs primarily in verse texts; only about 17% of all tokens of *Held* are in prose. It is not found at all in the prose texts of the first two periods.

## 10. *Graf* ‘count, earl’

Lexer, s.v. “grâve, swm.”

*DWB*, s.v. “graf, m.”

Duden, s.v. “Graf, der,” [https://www.duden.de/rechtschreibung/Graf\\_Titel](https://www.duden.de/rechtschreibung/Graf_Titel).

*DWDS*, s.v. “Graf, der,” <https://www.dwds.de/wb/Graf>.

*Graf*, the third-most frequent noun in Group 1, is a title which was bestowed on moderately high-ranking nobles in the German-speaking region from the time of Charlemagne until 1919, when the Constitution of the Weimar Republic abolished the rights and privileges associated with the nobility. In the modern language, it is found mainly in surnames and in historical texts. It is especially frequent in the earlier periods — particularly Periods 2 and 5, which are very chronicle-heavy — and in Period 10, where it is found mainly in the novels and short stories of E.T.A. Hoffmann, Heinrich von Kleist, and Ludwig Tieck. Almost all tokens of *Graf* (947/1,121, or 84%) are in prose texts.

*Graf* has the highest percentage of title tokens (32%) in Group 1 and the second-highest overall; only *Herzog* in Group 2 (39% titles) has more titles proportionally. It is also the most frequently compounded of the Group 1 nouns; 24% of all tokens of *Graf* (271/1,121) are compound heads. The most frequent *Graf* compounds are *Markgraf* (163 tokens), *Pfalzgraf* (53 tokens), *Landgraf* (29 tokens), and *Burggraf* (21 tokens); *Rau(c)hgraf* is represented with two tokens, and *Himmelgraf* and *Wildgraf* with one token each. In each of these compounds, the first member designates the territory or region under the *Graf*’s jurisdiction.

## 11. *Prinz* ‘prince’

Lexer, s.v. “prinze, swm.”

*DWB*, s.v. “prinz, m.”

Duden, s.v. “Prinz, der,” <https://www.duden.de/rechtschreibung/Prinz>.

*DWDS*, s.v. “Prinz, der,” <https://www.dwds.de/wb/Prinz>.

*Prinz* is the only noun represented in the data that is not attested in OHG. It entered the language in the 13<sup>th</sup> century (*DWB*) from French (*prince* < Latin *princeps* ‘ruler’), and seems to have been borrowed straight into the German weak masculine declension; by the time our period of interest begins, in any case, it is firmly established there. At first, it referred, as in Latin and older French, to a ruler in general; the present-day usage, which aligns with that of the English word *prince*, dates back to the early 17<sup>th</sup> century.

*Prinz* has the most uneven distribution of the 37 nouns in this study. It is one of only three whose DP calculated across periods is greater than or equal to .5; the others are *Pfaffe* (.58; see #4 above) and *Leichnam* (.5; see 3.2.2). Tokens of *Prinz* are heavily concentrated in Periods 6 and 7 (the 17<sup>th</sup> century), which have 111 and 352 tokens, respectively. *Prinz* occurs only four times between 1350 and 1600 (Periods 1–5), and in the 18<sup>th</sup> and 19<sup>th</sup> centuries (Periods 8–11), the average number of tokens is only 23.5.

## 12. *Bär* ‘bear’

Lexer, s.v. “bär, swm.”

*DWB*, s.v. “bär, m.”

Duden, s.v. “Bär, der,” [https://www.duden.de/rechtschreibung/Baer\\_Raubtier](https://www.duden.de/rechtschreibung/Baer_Raubtier).

Duden, s.v. “Bär, der,” [https://www.duden.de/rechtschreibung/Baer\\_Rammklotz](https://www.duden.de/rechtschreibung/Baer_Rammklotz).

*DWDS*, s.v. “Bär, der,” <https://www.dwds.de/wb/Bär>.

*Bär* is the least frequent of the 12 nouns in Group 1, and the only noun in Group 1b with a non-human referent. In most cases it denotes the animal; in several instances, people are likened to bears in metaphors and similes (comparative structures with *als* and *wie* account for about 15% of all tokens of *Bär*), and in one case, it is inanimate, representing an inn with the name *Zum schwarzen Bär(en)*: “Ich habe die Wirtin zum ›Schwarzen Bär‹ mit sechs Kindern bekommen” (Beer, Period 7). The inanimate sense of ‘battering ram’ (see 1.3.5.1) is not attested in the corpus. *Bär* is unequivocally weak in OHG and MHG, but has recently shown signs of shifting into the strong class on the model of the nouns in Group 2; in my data, strong oblique singular forms begin to appear in the early 17<sup>th</sup> century and persist into the modern language.

### 3.2.2 Group 2

Table 3.5. Nouns in Group 2 (summary)

Noun	Meaning (NHG)	MHG form(s)	OHG form(s)	Orthographic variants	Tokens	DP
<i>Schelm</i>	prankster, rascal, imp	<i>schëlm(e)</i> , <i>schalm(e)</i>	<i>scalm(o)</i> , <i>skelmo</i>	<schelm>, <schalm>	100	0.41
<i>Herzog</i>	duke	<i>herzoge</i>	<i>herizoho</i> , <i>herizogo</i>	<herzog>, <hertzog>, <herczog>	397	0.44
<i>Hahn</i>	rooster; tap	<i>han(e)</i>	<i>hano</i>	<held>, <heldt>, <helt>, <helld>, <heltt>	107	0.32
<i>Leichnam</i>	corpse, (dead) body	<i>ličam(e)</i>	<i>līhhamo</i>	<leichnam>, <leychnam>, <leýchnam>, <lichnam>, <lychnam>, <leicham>, <licham>, <licham>, <lichamm>, <lycham>, <lichom>	228	0.5
<i>Schmerz</i>	pain	<i>smerze</i> (m./f.)	<i>smerza</i> (f.)	<schmerz>, <schmertzt>, <schmercz>, <schmärz>, <schmärtzt>, <smercz>, <smertzt>, <smerz>, <smerzc>	1,213	0.24

1. *Schelm* ‘prankster, rascal, imp’, pl. *Schelme*

Lexer, s.v. “schëlme, schëlm, schalme, schalm, swstm.”

*DWB*, s.v. “schelm, m.”

Duden, s.v. “Schelm, der,” <https://www.duden.de/rechtschreibung/Schelm>.

*DWDS*, s.v. “Schelm, der,” <https://www.dwds.de/wb/Schelm>.

In the modern language, the word *Schelm* denotes a (male) person who enjoys teasing and playing tricks on others, and whom others perceive as a nuisance. However, like the English word *pest*, it originally referred to a pestilence or plague; this was its only meaning in OHG and continued to be its primary function in MHG (the first definition given in Lexer for *schelm(e)*, *schalm(e)* is ‘pest, seuche’). By MHG times, it had developed the secondary sense of ‘corpse’; later it was applied to a living human being, first pejoratively in reference to a villain, traitor, or thief, and finally in the somewhat less negative modern sense of ‘rascal’ or ‘prankster’ (*DWDS*). Only the animate usage is attested in my corpus. *Schelm* is extremely rare in the 14<sup>th</sup> and 15<sup>th</sup> centuries, where one might expect to encounter the inanimate sense still; it does not occur at all in the first period, and Periods 2 and 3 have only five tokens between them.

2. *Herzog* ‘duke’, pl. *Herzöge*

Lexer, s.v. “her-zoge, swm.”

*DWB*, s.v. “herzog, m.”

Duden, s.v. “Herzog, der,” [https://www.duden.de/rechtschreibung/Herzog\\_Adligler](https://www.duden.de/rechtschreibung/Herzog_Adligler).

*DWDS*, s.v. “Herzog, der,” <https://www.dwds.de/wb/Herzog>.

*Herzog*, like *Graf* (see 3.2.1 above), is a title of nobility, albeit one of more elevated status; only the king ranks higher than the *Herzog*. In OHG, *herizogo* was one of several compounds with the head *-zogo*, all agent nouns derived from the verb *ziohan* ‘to move, pull’ (NHG *ziehen*); the first member, *heri*, is the ancestor of NHG *Heer* ‘army’. Originally, then, the *herizogo* denoted a commander, a person who led an army. The structure of the compound appears still to have been transparent in MHG, where we find, in addition to *herzoge*, the two compounds *manzoge* and *magezoge*, both referring to a teacher or educator (leader of men). *Herzog* is the only one of these compounds that has survived into the modern language, and most speakers no longer perceive it as a compound. Like *Graf*, it is most frequent in the prose texts of the first five periods, largely disappears from the scene in Periods 6–9, and then springs back into action in 19<sup>th</sup>-century works of fiction.

*Herzog* is used as a title more frequently than any other noun in this study, at least proportionally; it has this function in 39% of all instances (155/397). The number of title tokens is greater for both *Graf* (364) and *Herr* (2,649), but titles make up a smaller share of all tokens in these cases (32% for *Graf* and only 30% for *Herr*).

### 3. *Hahn* ‘rooster, cock; tap’, pl. *Hähne*

Lexer, s.v. “han, hane, swm.”

*DWB*, s.v. “hahn, m.”

Duden, s.v. “Hahn, der,” <https://www.duden.de/rechtschreibung/Hahn>.

Duden, s.v. “Hahnen, der,” <https://www.duden.de/rechtschreibung/Hahnen>.

*DWDS*, s.v. “Hahn, der,” <https://www.dwds.de/wb/Hahn#1>.

*DWDS*, s.v. “Hahn, der,” <https://www.dwds.de/wb/Hahn#2>.

*DWDS*, s.v. “Hahnen, der,” <https://www.dwds.de/wb/Hahnen>.

A *Hahn* is primarily a rooster, or an inanimate representation thereof, as in the compound *Wetterhahn* ‘weathercock’. However, it can also refer by extension to a tap or faucet (*Wasserhahn*, *Bierhahn*), or to the hammer of a firearm (*Dampfhahn*) — both objects which, in their original form, resembled roosters — and by further extension to a pub or drinking house, a place in which taps are commonly found. Sometimes it denotes a person: a *Hahn* can be a bold, proud, sexually potent man; in the compound *Truthahn* (‘turkey’), a boastful, irritable person; in the compound *Schnapphahn*, a thief; and in the expression *Hahn im Korb(e)* (literally, ‘rooster in the basket’), a lone man in a group of women, or more generally, the person in a group who is most valued. Finally, when it is red, the *Hahn* is a symbol for fire.

Almost all of these meanings are attested in my corpus. *Hahn* is unambiguously a (living) adult male bird in 65 instances (61%); the weathercock appears 11 times, and the tap four; *Hahn* refers to a person in 10 instances; and finally, in the remaining 17 instances — most involving anthropomorphization of roosters and weathercocks — its animacy status is ambiguous.

*Hahn* is distributed fairly evenly across all periods but is most frequent in the 18<sup>th</sup> and early 19<sup>th</sup> centuries, where it occurs mainly in verse texts. For most speakers, the plural of *Hahn* is now *Hähne*, though the old weak plural form (*Hahnen*) has been preserved in hunting jargon (*DWDS*). Weak forms are also still found in compounds such as *Hahnenschrei*, *Hahnenfeder*, and *Hahnenkamm*. In some Swiss dialects (Duden, *DWDS*), the inanimate *Hahn* ‘tap’ has followed the Group 3 path and now has *-(e)n* in the nominative singular (*der Hahnen*).

### 4. *Leichnam* ‘corpse, (dead) body’

Lexer, s.v. “lîcham, lîchame, stswm.”

*DWB*, s.v. “leichnam, m.”

Duden, s.v. “Leichnam, der,” <https://www.duden.de/rechtschreibung/Leichnam>.

*DWDS*, s.v. “Leichnam, der,” <https://www.dwds.de/wb/Leichnam>.

Like *Herzog*, *Leichnam* was originally a compound. Its first member, *Leich-*, is related to the feminine noun *Leiche*, the slightly more common designation for a corpse in the modern language (it has three frequency bars in the online Duden, versus only two for *Leichnam*). The second member no longer exists in German as an independent word; it can be traced back to MHG *ham(e)* and further to OHG *hamo*, both of which denote a skin, cloth, or other covering (the same root is found in NHG *Hemd* ‘shirt’). The *-n-* in the NHG word probably goes back to a variant of the OHG compound *lihhamo* in which the first member ended in *-en*, *lîchenhamo*; this was later shortened to *lîchenamo* (*DWB*).

Literally, then, a *Leichnam* is a covering for the body. Until the 17<sup>th</sup> century, the word could refer to a living human being as well as a dead one (*DWDS*); in my corpus, it is inanimate throughout. In many instances it denotes the body of Christ as sacrament (including, very frequently, in the compound *Fronleichnam* ‘Corpus Christi’), and in ENHG, it is occasionally used as an expletive (“botz **leicham**”; twice in my corpus) and adverbially as an intensifier (two instances: “**leicham** gût” (Murner, Period 4); “**lycham** fast” (Ruoff, Period 6). The two adverbial tokens are not included in the data.

Not surprisingly, *Leichnam* is most frequent in the first three periods, where several texts deal (entirely or in part) with religious matters. As indicated above, the word *Leiche* is somewhat more common than *Leichnam* in the modern language in reference to a corpse or dead body in the general sense. *Leichnam* assumes a more animate sense in the expression *ein lebendiger/wandelnder Leichnam* (literally, ‘a living/walking corpse’), denoting a person in poor physical condition.

## 5. *Schmerz* ‘pain’

Lexer, s.vv. “smërze, swm.,” “smërze, stf.”

*DWB*, s.v. “schmerz, m.”

Duden, s.v. “Schmerz, der,” <https://www.duden.de/rechtschreibung/Schmerz>.

*DWDS*, s.v. “Schmerz, der,” <https://www.dwds.de/wb/Schmerz>.

*Schmerz* — denoting pain or discomfort in the broadest sense — was always feminine in OHG. In MHG, it could be either masculine or feminine (though the masculine appears to have been slightly more common), and in the modern language, only masculine gender is possible. The gender is marked in my corpus only in about 40% of all instances (491/1,213); many tokens of *Schmerz* are plural and/or unpreceded, making it impossible to identify the gender. Since there are no unambiguously feminine tokens in the data, and since we have evidence at least from the Grimms (*DWB*) that the feminine form was rare post-OHG, I have assumed masculine gender in these uncertain cases.

Because it is so often unpreceded, *Schmerz* is also often ambiguous with respect to number; it occurs frequently in both numbers, and in many cases it is not clear which is intended. About 13% of all tokens of *Schmerz*, all ending in *-en* and most from the first seven periods, have unknown number (163/1,213). After the year 1800, all tokens ending in *-en* are assumed to be plural.

With regard to its inflectional behavior, *Schmerz* has had a turbulent history. For most of the time period under consideration in this study, it was pulled back and forth among the Group 1, Group 2, and Group 3 trajectories; in my corpus, through the end of the 18<sup>th</sup> century (Period 9), it appears alternately with *-e*, *-ø*, and *-en* in the nominative singular and with *-en*, *-ens*, and *-es* in the genitive singular, and omission of *-en* in the accusative and dative singular is common at all stages of its development (see chapter 6). According to Adelung (1782: 129, 134), in the late 18<sup>th</sup> century, the forms *Schmerz* and *Schmerzen* were still both acceptable in the nominative singular. Not until the 19<sup>th</sup> century did *Schmerz* become established on the Group 2 path, and it has not completed that shift: only the singular forms have shifted, while the plural has remained weak (*Schmerzen*).

### 3.2.3 Group 3

Table 3.6. Nouns in Group 3 (summary)

Sub-group	Noun	Meaning (NHG)	MHG form(s)	OHG form(s)	Orthographic variants	Tokens	DP
3a	<i>Garten</i>	garden, yard	<i>garte</i>	<i>gart, garto</i>	<gart>, <gartt>, <gärt>, <gaert>, <gert>, <gertt>	662	0.13
	<i>Brunnen</i>	fountain, well, source	<i>brunne</i>	<i>brunno</i>	<brunn>, <brun>, <brünn>, <brünn>, <prunn>, <prun>, <bronn>, <pronn>	517	0.18
	<i>Kasten</i>	box, container; cabinet (in southern dialects)	<i>kaste</i>	<i>kasto</i>	<kast>, <chast>, <kaest>, <käst>, <caest>, <cäst>	65	0.30
	<i>Bogen</i>	bow, arc(h), curve; sheet (of paper)	<i>boge</i>	<i>bogo</i>	<bog>, <pog>, <boeg>, <bög>	333	0.32
	<i>Schatten</i>	shadow; shade	<i>schate, schatewe, schetewe</i>	<i>scato, scate</i> (gen. sg. <i>scatawes</i> )	<schatt>, <schat>, <schaet>, <schet>	444	0.35
3b	<i>Friede/n</i>	peace	<i>vride, vrit</i>	<i>fridu</i>	<fried>, <frid>, <fridd>, <fridt>, <frit>, <fryd>, <frÿd>, <friedt>, <fred>, <vrid>	846	0.15
	<i>Name/n</i>	name	<i>name</i>	<i>namo</i>	<nam>, <nahm>, <namm>, <nom>	1,792	0.15
	<i>Wille/n</i>	will	<i>wille</i>	<i>willo</i>	<will>, <wil>, <wüll>	1,780	0.22
	<i>Buchstabe</i>	letter (of the alphabet); orthographic symbol	<i>buochstabe</i>	<i>buohstab</i>	<buchstab>, <büchstab>, <bustab>, <büstab>, <puchstab>, <puechstab>, <puochstab>, <püchstab>, <pustab>	152	0.24
	<i>Schade/n</i>	harm, damage; injury; defect	<i>schade</i>	<i>scado</i>	<schad>, <schadd>, <schäd>, <sched>, <schaed>	759	0.38
3c	<i>Funke/n</i>	spark	<i>vunke</i>	<i>funko</i>	<funk>, <funck>, <funckh>, <vunk>	113	0.44
	<i>Drache/n</i>	dragon; kite	<i>trache, tracke, drache, dracke</i>	<i>trahho</i>	<drach>, <trach>, <drak>, <trak>, <drack>, <track>, <tragk>	140	0.20
	<i>Fels/en</i>	block of stone; cliff	<i>vels(e)</i>	<i>fel(i)s (m.), feliso (m.), felisa (f.)</i>	<fels>, <felss>, <felß>, <vels>, <velss>, <velß>	534	0.27
	<i>Tropf/en</i>	drop (of fluid); idiot	<i>tropfe, trophe</i>	<i>tropho</i>	<tropf>, <tropff>, <troppf>, <troph>, <tropp>, <droppf>, <droppf>, <dropp>	250	0.31

Note: There is no row shading in this table, as in the previous tables, because all nouns in this group are primarily inanimate.



1. *Garten* ‘garden, yard’, pl. *Gärten*

Lexen, s.v. “garte, swm.”

*DWB*, s.v. “garten, m.”

Duden, s.v. “Garten, der,” <https://www.duden.de/rechtschreibung/Garten>.

*DWDS*, s.v. “Garten, der,” <https://www.dwds.de/wb/Garten>.

In OHG, the strong and weak forms *gart* and *garto* existed alongside one another, at times with different meanings: both could denote a garden, but the strong form had the additional meaning ‘circle’ or ‘choir’. The weak form *garto*, though, seems to have been slightly more common than the strong form (*DWB*), and by MHG times, it had taken over almost completely; Lexen no longer lists a strong form *gart* with the meaning ‘garden’. The strong form continued to occur sporadically through the 17<sup>th</sup> century, occasionally with the unlauded plural *gärte* (*DWB*). Parallel to these developments, the innovative nominative singular form *garten*, with final *-n*, emerged at least as early as the 15<sup>th</sup> century (*DWDS*); my corpus has one instantiation from the late 14<sup>th</sup> century (Period 1). The Grimms (*DWB*) tell us that the weak nominative singular *garte* held out until the 18<sup>th</sup> century before yielding to the novel form *garten*. Schottelius (1663: 303) still has *Garte* in the late 17<sup>th</sup> century.

Through at least the 17<sup>th</sup> century, then, this word existed in three competing variant forms: the weak *garte*, the strong *gart*, and the innovative *garten*. (My corpus has all three.) Adding to the confusion, the unrelated OHG feminine noun *gerta* ‘rod, stick, twig’ (> NHG *Gerte* ‘rod, stick’), derived from Gmc. \**gazda* ‘spike, thorn’ (our word *Garten* goes back to Gmc. \**gardōn* [weak] / \**garda* [strong]), often has the same spelling as *Garten* in ENHG, particularly in the plural. I was able to filter most of these out of the data, but kept two instantiations of <gärten> / <gertten> which could be forms of either noun.

Of the nouns in this study, *Garten* is one of the two most evenly distributed in the corpus, the other being *Wille* in Group 3b; *Garten* has the lowest DP value calculated across periods (0.13), while *Wille* has a slightly lower DP than *Garten* calculated across texts (0.37, versus 0.40 for *Garten*).

2. *Brunnen* ‘fountain, well, source’, pl. *Brunnen*

Lexen, s.v. “brunne, swm.”

*DWB*, s.vv. “brunne, m.,” “brunn, m.”

Duden, s.v. “Brunnen, der,” <https://www.duden.de/rechtschreibung/Brunnen>.

*DWDS*, s.v. “Brunnen, der,” <https://www.dwds.de/wb/Brunnen>.

As a water source, *Brunnen* is among the more animate of the inanimate nouns in Group 3. That many speakers perceived it as such is evident in the frequency with which it is used in direct address, particularly in verse texts; fountains are spoken to directly in 5% of all instances (26 tokens), versus no more than 1% for any other noun in Groups 3a and 3b.<sup>75</sup>

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<sup>75</sup> E.g., in Goethe’s *Werther*: “»Lieber **Brunnen**«, sagte ich, »seither hab’ ich nicht mehr an deiner Kühle geruht [...]”

The Grimms (*DWB*) list *Brunnen* under the lemma *brunne*,<sup>76</sup> which suggests that the unshifted nominative singular must still have been considered acceptable in the 19<sup>th</sup> century. They complain that no one uses the correct form anymore: “[...] kaum ein einziger schriftsteller wird heute den nom. richtig setzen.” Of course, they were philologists with profound knowledge of the history of German — and, crucially, purists — and it seems likely that most ordinary speakers would have perceived the form *brunne* as archaic at this point, considering how long the innovative form *brunnen* had been in use. In my corpus, it is attested already in the early 15<sup>th</sup> century; the Grimms themselves acknowledge that it has been around at least since the 16<sup>th</sup> century, and Adelung (1782: 131), writing about a century earlier, already prefers *Brunnen* to *Brunn*.

Alongside the weak noun *brunne*, the Grimms also list a strong noun *brunn* with plural *brünne*, which they denounce as “tadelhaft.” This strong form, they claim, was especially common in the 16<sup>th</sup> century and to some extent also in the 17<sup>th</sup>; in the 18<sup>th</sup> century, it was replaced by the — in their opinion, equally objectionable — innovative strong form *brunnen*, which is still in use today. The plural *brünne* is attested twice in my corpus, both times in Period 7 (the late 17<sup>th</sup> century).

The stem of *Brunnen* has assumed various shapes in the course of the noun’s development, including *bronn-* (with *-o-* rather than *-u-*) and *born* (with metathesis), as in the names of the German cities Heilbronn and Paderborn. I have included forms of *bronn* but not of *born*, which is different enough from *brunn(e)* that it was probably not processed as the same lexeme. The corpus has 11 instantiations of *born*, all strong; three are in a verse text from Period 3 that is composed partly in a Middle German dialect (the *Pilgerfahrt des träumenden Mönchs* (Period 3, from the area around Cologne<sup>77</sup>), and the rest are from poems of the late 18<sup>th</sup> (Bürger) and 19<sup>th</sup> centuries (Hülshoff, Holz, Heyse, Dehmel).

### 3. *Kasten* ‘box, container’, pl. *Kästen* (rarely, *Kasten*)

Lexer, s.v. “kaste, swm.”

*DWB*, s.v. “kasten, m.”

Duden, s.v. “Kasten, der,” <https://www.duden.de/rechtschreibung/Kasten>.

*DWDS*, s.v. “Kasten, der,” <https://www.dwds.de/wb/Kasten>.

*Kasten* is problematic only in not being particularly frequent; with only 65 tokens, it is the least frequent in Group 3 and the fourth least frequent overall, surpassed only by the Group 4 nouns *Grille* (63), *Schnecke* (37), and *Backe* (34). It appears to have been a well-behaved weak

<sup>76</sup> The same is true of *Bogen/boge* (see below); the other nouns in Group 3a (*Garten*, *Kasten*, *Schatten*) appear in the shifted form.

<sup>77</sup> The form *born* is not typical of Cologne dialect, however; in Kölsch, the equivalent of Standard German *Brunnen* is either *Brunne* or *Pötz* < Lat. *puteus*) (*Akademie für uns kölsche Sproch*, s.v. “Brunnen,” [https://www.koelsch-akademie.de/veroeffentlichungen/online-woerterbuch?target=20&tx\\_academylibrary\\_pi1%5Baction%5D=list&tx\\_academylibrary\\_pi1%5Bcontroller%5D=Dictionary&tx\\_academylibrary\\_pi1%5Bkeyword%5D=Bruppen&tx\\_academylibrary\\_pi1%5BlanguageFrom%5D=2&cHash=a67b56f3e9c154efd0cce055a42904a7](https://www.koelsch-akademie.de/veroeffentlichungen/online-woerterbuch?target=20&tx_academylibrary_pi1%5Baction%5D=list&tx_academylibrary_pi1%5Bcontroller%5D=Dictionary&tx_academylibrary_pi1%5Bkeyword%5D=Bruppen&tx_academylibrary_pi1%5BlanguageFrom%5D=2&cHash=a67b56f3e9c154efd0cce055a42904a7)), accessed July 16, 2023). Thanks to Prof. Thomas Shannon at U.C. Berkeley (our resident expert on all things Kölsch) for bringing this to my attention.

masculine noun with consistent semantic properties from at least the 8<sup>th</sup> century<sup>78</sup> until the class split apart in ENHG, and its meaning has not changed significantly to this day. In the modern language, the plural usually has umlaut (*Kästen*); the un-umlauted form *Kasten* is authorized, but considered rare.

4. *Bogen* ‘bow, arc(h), curve; sheet (of paper)’, pl. *Bogen/Bögen*

Lexer, s.v. “boge, swm.”

*DWB*, s.v. “boge, m.”

Duden, s.v. “Bogen, der,” <https://www.duden.de/rechtschreibung/Bogen>.

*DWDS*, s.v. “Bogen, der,” <https://www.dwds.de/wb/Bogen>.

*Bogen* has a variety of meanings; all are inanimate, and all are represented in the corpus. In most cases, it is an arc in the mathematical sense, or an object shaped like an arc (an arch, for example, or the bow one uses to play a stringed instrument or shoot an arrow), but it can also be a sheet of paper. How this secondary meaning developed from the primary meaning ‘arc’ is not entirely clear; it may originally have denoted folded, or bent, paper during the production process (*DWB*; *DWDS*).

Of all the nouns in this study, *Bogen* is the most frequently compounded; 30% of all tokens of *Bogen* are compounds. The best represented are *Regenbogen* ‘rainbow’ (29 tokens), *Ellbogen* ‘elbow’ (25 tokens), and *Himmel(s)bogen* ‘sky’ (10 tokens).

Not surprisingly, arcs are especially abundant in the sole mathematical text in the corpus, a treatise of Johannes Kepler from the year 1616 (Period 6). Just over 21% (71) of the 333 tokens of *Bogen* in the corpus occur in this text.

In the modern language, the plural of *Bogen* can be either *Bogen* or *Bögen*, with or without umlaut; the two forms are often used interchangeably. According to the online Duden, the plural with umlaut is most common in the southern part of the German-speaking region (in southern Germany, Switzerland, and Austria). Adelung, writing in 1782 (141), notes that the umlauted form is used for the arc(h), while the unumlauted form is reserved for the sheet of paper; this distinction no longer exists today.

As in the case of *Brunnen*, the Grimms (*DWB*) list *Bogen* under the unshifted nominative singular (*boge*), which for them, at least, seems still to be alive and well; they take particular offense at the umlauted plural *bögen*: “[N]och sprachwidriger ist, wenn man aus dem sg. *bogen* sogar den pl. *bögen* bildet” (*DWB*). Again, it seems likely that if the old form *boge* was still in use in the 19<sup>th</sup> century, it was archaic by this time for most speakers. In my corpus, the shifted nominative singular form *bogen* is attested already beginning in Period 1 (the late 14<sup>th</sup> century).

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<sup>78</sup> The word is not listed in Schützeichel’s *Althochdeutsches Wörterbuch*, but most etymological dictionaries, including Duden and the *DWDS*, cite an OHG form *kasto* from the 8<sup>th</sup> century.

5. *Schatten* ‘shadow; shade’ (pl. *Schatten*)

Lexen, s.vv. “schate, stswm.” “schete, stf.”

*DWB*, s.v. “schatten, m.”

Duden, s.v. “Schatten, der,” <https://www.duden.de/rechtschreibung/Schatten>.

*DWDS*, s.v. “Schatten, der,” <https://www.dwds.de/wb/Schatten>.

*Schatten* can denote the shade provided by a tree, building, or other tall object, in which case it is often unpreceded in the singular. It can also be a count noun meaning ‘shadow’, in which case it is very often animate, since shadows are frequently cast by (moving) people, animals, and other objects.

The noun *Schatten* was strong in OHG; it was a masculine *wa*-stem noun with *scato* in the nominative and accusative singular and the stem *scataw*- in the rest of the paradigm (genitive singular *scatawes*, dative singular *scatawe*). This paradigm type was already very infrequent in OHG and, thanks to end-syllable weakening, had ceased to exist by MHG times, so that *Schatten* needed to find a new, more type-frequent inflectional class to join. Of the available options, the weak masculines, with their nominative singular ending in *-e* (<OHG *-o*), resembled the original paradigm most closely.<sup>79</sup> In MHG, *Schatten* followed the weak pattern in most cases, but continued to have *-s* in the genitive singular in some instances (*DWB*; Lexen).

The Grimms (*DWB*) and Adelung (1782: 126) both prefer the shifted nominative singular form (*Schatten*), but Schottelius (1663: 303), writing in the late 17<sup>th</sup> century, still has *Schatte*.

*Schatten* is not typically unlauded in the plural, but it has a variant form <schæet> / <schet> in the singular which is attested at least once in my corpus. There is also a strong feminine noun *schete* in MHG with the same meaning as the masculine *schate*; the token with the spelling <schet> (Brant, Period 3), which is preceded by *die*, may be a form of this feminine noun, but could just as easily be an unlauded plural form of the masculine noun.

6. *Friede/n* ‘peace’

Lexen, s.v. “vride, stswm.”

*DWB*, s.v. “friede, m.”

Duden, s.v. “Friede, Frieden, der,” <https://www.duden.de/rechtschreibung/Friede>.

*DWDS*, s.v. “Frieden, der,” <https://www.dwds.de/wb/Frieden>.

*Friede/n* is usually inanimate, referring either to peace as opposed to war, or to inner peace or quietude. It can denote not only the state of peace, but also a period of time in which peace is to be maintained; this is the only sense in which *Friede/n* is ever pluralized (it is singular in 99% of all instances). Sometimes it is personified, as in Johann Rist’s play *Irenaromachia* (Period 6), in which *Irene/Friede* is a speaking character.

Both nominative singular forms — *Friede* and *Frieden* — are considered acceptable in the modern language (see 1.3.5.2), and the genitive singular now ends in *-(e)ns* regardless of the shape of the nominative singular. In the 19<sup>th</sup> century, the Grimms (*DWB*) acknowledge

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<sup>79</sup> That the nominative singular served as the pivot here suggests that this form must already have been quite frequent at this stage; as we will see later, *Schatten* is the only noun in Groups 3a and 3b for which the nominative singular is the most frequent form in the paradigm.

that *-(e)ns* has become standard in the genitive, but disapprove of the innovative nominative form ending in *-(e)n* (as they do in the case of *Wille/n*; see #8 below): “dem heutigen sprachgefühl, abweichend von dem des 16 jh., ist es nicht mehr möglich dem gen. *friedens* zu widerstehen, aber der nom. darf noch *friede* lauten und wir folgen der analogie von *wille*, *willens*, *glaube*, *glaubens*, obschon sie nicht genau trifft, weil *fridu* ein starkes wort, *willo*, *giloubo* schwach sind. die nominative *frieden*, *willen*, *glauben* sind zu meiden [...]”

Like *Schatten*, *Friede/n* originally belonged to a very type-infrequent class of strong nouns — in this case, that of the Gmc. *u*-stems. By OHG times, most former *u*-stem nouns had already lost their final *-u* and had migrated into either the *a*- or the *i*-stem class; of the handful that remained, at least two, including *fridu*,<sup>80</sup> joined the weak masculine class in MHG, though most continued to exhibit strong inflection. As in the case of *Schatten*, the *u*-stems’ formal resemblance to the weak masculines in the nominative singular was likely a contributing factor in their shift into the weak declension; many *u*-stem nouns had alternate forms in *-o* already in OHG, and by MHG times, in any case, both of these vowels had weakened to *-e*.

The strong forms of *Friede/n*, unlike those of *Schatten*, persisted well into the ENHG period. In my corpus, *Friede/n* is 100% strong in the first period (it has only *-e/ø* in the nominative, accusative, and dative singular and only *-(e)s* in the genitive singular), and tokens with *-e/ø* in the dative and accusative singular do not disappear completely until Period 10. The strong *Fried* lives on in the modern language in the compound *Bergfried*, which has been used at least since the 12<sup>th</sup> century (*DWDS*) to denote the main tower of a castle or similar structure. Surprisingly, the only token of *Bergfried* in my corpus — from the *Bamberger Chronik* (Period 2) — is neuter: “Des morgens am sonntag schicket der rath hinauf und liess den thurn und das **perchfrid** zu sant Jacob einnehmen und besatzten die und liessen ander schlüssel darzu machen.” All other tokens are assumed to be masculine.

In MHG and ENHG, *Friede/n* was used with considerable frequency as the object of the preposition *zu*; the combination was so frequent that it has become lexicalized and is now an adjective (*zufrieden* ‘satisfied’). It is impossible to pinpoint the exact moment at which the lexicalization occurred — that is, at which speakers stopped analyzing *zufrieden* as a combination of the words *zu* and *Frieden*. In my corpus, the first instantiations of *zefrieden/zufrieden* written as a single word appear in Period 4 (the early 16<sup>th</sup> century); in Period 7, *zufrieden* begins to be written together with forms of the verb *stellen* (*zufriedengestellet*, *zufriedenstellt*); in Period 9, it is combined for the first time with the derivational prefix *un-* (*unzufrieden*); and the first inflected forms (*zufriedenen*, *zufriedenes*) appear in Period 10. It seems a safe assumption, then, that the *-frieden* in *zufrieden* ceased to be a noun no later than Period 7, but since it is impossible to be sure, I have omitted all tokens of *zufrieden* written as one word. There are 155 of these in all, and they are spread out across all periods beginning in Period 4; 50 are from before Period 7.

As a (predominantly) non-count noun, *Friede/n* is very often unpreceded; in fact, it is the most frequently unpreceded of the nouns in this study: more than half of all tokens of *Friede/n* (438/846, or 52%) have no other elements with them in the noun phrase.

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<sup>80</sup> The other is OHG *situ* / MHG *sit(e)* ‘custom; morals’, which is feminine in the modern language (*die Sitte*).

## 7. *Name/n* ‘name’, pl. *Namen*

Lexer, s.v. “name, nam, swm.”

*DWB*, s.v. “name, namen, m.”

Duden, s.v. “Name, der,

[https://www.duden.de/rechtschreibung/Name\\_Ruf\\_Benennung\\_Bezeichnung](https://www.duden.de/rechtschreibung/Name_Ruf_Benennung_Bezeichnung).

Duden, s.v. “Namen, der,” <https://www.duden.de/rechtschreibung/Namen>.

*DWDS*, s.v. “Name, der,” <https://www.dwds.de/wb/Name>.

With 1,792 tokens, *Name/n* is the most frequent noun in this study after *Herr* and *Mensch*. It is usually a name, but in the earlier periods, it could also denote a person, particularly when combined with other elements such as *menschen-*, *wibes-*, and *mannes-* to form compounds. The compounds *wibesnam(me)* and *froewenname* ‘woman’ occur 44 times in my corpus, all in Period 1; most of these tokens are in Merswin, but there are also four in the *Väterbuch*. In addition, there is one instantiation of *munches name* ‘monk, cleric’, also in the *Väterbuch*, and one of *Name* all by itself in reference to the Virgin Mary (“Maria, du voller **nam**”), from Teichner (Period 1).

Nominative singular forms of *Name/n* ending in *-n* have been common at least since the 14<sup>th</sup> century (my corpus has them already in the first period), and both forms are accepted in the modern standard language (see 1.3.5.2); however, the form ending in *-e* is more widespread today. The two forms are lemmatized separately in the online Duden (again, see 1.3.5.2); *Name* has four bars out of five in the frequency category, while *Namen* only has one. The genitive singular, like that of the other nouns in Group 3b, ends in *-ens* today.

Interestingly, the Grimms (*DWB*) seem not to object at all to the nominative singular ending in *-n*; they list the two forms as alternates, without expressing a preference for either form. The nominative in *-n*, they claim, predates the genitive in *-(e)ns*, which does not emerge until the 16<sup>th</sup> century; my corpus has genitive forms ending in *-(e)ns* already in the late 15<sup>th</sup> century (see chapter 7).

In verse texts of the 14<sup>th</sup>, 15<sup>th</sup>, and 16<sup>th</sup> centuries, *Name* occurs frequently in the collocation *mit nam(en)* ‘namely, in particular, notably’, which often acts as a filler and is in some cases semantically bleached. The inflected form ending in *-en* is most common here (70/95 tokens end in *-en*), but uninflected forms (*name* and *nam*) are also well represented, accounting for about a quarter of all instances of *mit nam(e)n* in poetry.

Despite having an unumlautable stem vowel, *Name* has not acquired umlaut in the plural; the plural form in the modern language is *Namen*, and no forms with umlaut are attested in the corpus. However, we can infer from Adelung’s (1782: 133) pointed admonition that the plural of *Nahme* should be *Nahmen* (and not *Nähmen*) that unumlauted plural forms must have been at least somewhat common in the late 18<sup>th</sup> century. The Grimms also cite some unumlauted plural forms, noting that the form *nämen* is still prevalent in Bavarian dialects (*DWB*).

I have excluded nine tokens of *Name/n*: five of the adverbial genitive *namens* (all in Periods 10 and 11), which, like *zufrieden*, has undergone lexicalization; three of the interjections *En numenamen!* and *Binamen!*, all from the *Väterbuch* (the connection with *Name/n* seems to have been lost here); and one of *nam*, from Oswald (Period 2), which is probably an error and should be *man* instead. All adverbial (unprecedented) tokens of *namens* from before the year 1700 are included; these are all in Periods 6 and 7, and many are capitalized.

## 8. *Wille/n* ‘will’

Lexen, s.v. “wille, swm.”

*DWB*, s.v. “wille, willen, m.”

Duden, s.v. “Wille, *selten* Willen, der,” <https://www.duden.de/rechtschreibung/Wille>.

*DWDS*, s.v. “Wille, der,” <https://www.dwds.de/wb/Wille>.

*Wille/n*, like *Friede/n*, is primarily an abstract concept, and by nature inanimate. In some philosophical and poetic texts, notably in Nietzsche (Period 11), it assumes animate qualities: for Nietzsche, the *Wille* not only *is* volition, it *has* volition of its own; like its owner, it possesses the ability to speak, command, create, tempt, etc.

Like *Friede/n*, *Wille/n* is almost always singular; it occurs only eight times in the plural. Four of these plural tokens are in the *Amberger Gesetzbuch* (Period 5) and denote the will (*letzter Wille*) in the sense of ‘document with instructions for distributing one’s property after death’, and in three of the remaining instances, *Wille/n* is used metonymically to denote the person with the will rather than the will itself. In the final instance, it refers to the (combined) wills of a married couple in love:

ihre zwey Hertz seynd gleichsamb in einen Model gegossen/ ihre zwey Gemüther über ein Laist geschlagen/ ihre zwey **Willen** nach einer Regel gemessen (Abraham a Sancta Clara, Period 7)

In the modern standard language, *Wille/n*, like *Name/n*, usually ends in *-e* in the nominative singular; the form ending in *-n* is authorized, but uncommon (see 1.3.5.2; Duden designates it “selten”). In the genitive singular, it always ends in *-(e)ns*.

As in the case of *Friede/n* (see above), the Grimms (*DWB*) accept the hybrid genitive singular form as standard but advise avoiding the nominative singular in *-(e)n*. Here, though, they list *willen* as an alternate form alongside *wille* at the beginning of the entry, suggesting that perhaps their disapproval is not quite as strong in this case. They note further that strong forms are attested sporadically in the genitive singular (*willes*) and in the accusative and dative singular and in the plural (*will, wille*), and that the compound *mutwill(e)* ‘wantonness’ is especially prone to strong inflection (“gerne stark flectiert”), while other compounds tend to adopt the mixed pattern characteristic of the simplex.

Like the other nouns in Group 3, *Wille/n* is (and has always been) frequently the object of various prepositions, including, most commonly, *um*, *durch*, and *zu*, but also *aus* and *von*. The collocations *um ... willen* and *durch ... willen* — both meaning ‘for the sake of’ or ‘on account of’ — both underwent grammaticalization very early and became (bipartite) prepositions, or circumpositions, themselves; *um ... willen* has survived with this function into the modern language, while *durch ... willen*, according to the Grimms, died out in the 16<sup>th</sup> century (*DWB*). When the genitive object is a pronoun, it is usually fused with *-willen*, often with an intervening *-t-*: *um meine(n)twillen/deine(n)twillen/deswillen/derentwillen*, etc. Because, as in the case of *zufrieden* (see #6 above), it is impossible to identify the exact moment at which these changes occurred, I have excluded most unprecedented tokens of *Wille/n* that are the objects of either *um* or *durch*. Unprecedented tokens were only included if there were other instances of *um/durch ... willen* with preceding determiner or adjective in the same text. If the token was preceded by an inflected determiner or attributive adjective (e.g., *durch seinen willen*), I left it in.

*Aus ... willen* and *von ... willen*, which were once both used in the same way as *um/durch ... willen*, may at some point also have become grammaticalized, but these collocations are less common and — particularly from in Period 4 onward — the token is more often preceded than in the case of *um/durch ... willen*, so it is difficult to say. Like *durch ... willen*, the combinations *aus ... willen* and *von ... willen* meaning ‘on account of, for the sake of’ became extinct sometime in the 16<sup>th</sup> century. I have included all objects of *aus* and *von*; there are not very many of these, in any case: 30 tokens of *Wille/n* with *von* (19 in the first six periods) and 16 with *aus* (nine in the first six periods), not including compounds. Beginning in Period 7, most instances of *aus/von ... Willen* no longer have prepositional/grammatical function.

Until very recently, *zu willen* also sometimes had pre-/postpositional function; like *um/durch/aus/von ... willen*, it could mean ‘for the sake of’, but it had a range of other meanings, including ‘favorable to’. Sometimes it had adverbial/adjectival function: *jemandem zu willen sein* meant ‘to be obedient to someone’.<sup>81</sup> Like the collocations discussed above, this phrase seems to have undergone grammaticalization and/or lexicalization to some degree; in my corpus, the preposition and object are written as a single word (*zuwille/zwillen*) in five instances, all of which I have excluded.

Other frequent collocations in ENHG — which, however, never made it into the lexicon as independent items — include *mit willen* ‘gladly; with intent’, *wider willen* ‘against (one’s) will’, *in/im willen sein (etwas zu tun)* ‘to be willing (to do something), and *nach ... willen* (according to the will of).

All of these collocations with prepositions, whether or not they have become established in the lexicon, have likely had the effect of reinforcing the oblique singular form ending in *-(e)n*, ensuring its survival. The question of why the form in *-e* has become the dominant nominative singular form even though *Wille/n* is used much more frequently in the oblique cases, and particularly as a prepositional object, will be addressed in chapter 7.

A final instance of lexicalization involves the unprecedented genitive singular form *willens*, which is often used adverbially in combination with an infinitive phrase to mean ‘determined, willing (to do something)’; the word *willens* still has this adverbial function in the modern language. In ENHG, *willens* could be combined with *in (in willens)* with no difference in meaning. According to the Grimms (*DWB*), it lost its nominal character sometime in the late 15<sup>th</sup> century; I have omitted all 64 unprecedented tokens of *willens* that appear to have adverbial function just in case.

In all, I have excluded 449 tokens of *Wille/n*: 380 ending in *-(e)n*; 64 ending in *-ens*, two ending in *-ø*, one ending in *-e*, and one ending in *-a* (to rhyme with the name *Zilla*). Adding these back in would bring the total number of tokens of *Wille/n* to 2,230.

## 9. *Buchstabe* ‘letter (of the alphabet), orthographic symbol’, pl. *Buchstaben*

Lexer, s.v. “buoch-stap, -bes, buoch-stabe stswm.”

*DWB*, s.v. “buchstab, buchstabe, m.”

Duden, s.v. “Buchstabe, der,” <https://www.duden.de/rechtschreibung/Buchstabe>.

*DWDS*, s.v. “Buchstabe, der,” <https://www.dwds.de/wb/Buchstabe>.

<sup>81</sup> According to the online Duden dictionary, the phrase still has this meaning today, but the usage is “gehoben” and “veraltend.”



*Buchstabe* was originally a compound made up of the elements Gmc. \**bōks* ‘letter, orthographic symbol’ and \**stabi-* ‘staff, rod, stick’, and denoted a wooden stick on which runes were inscribed (*DWDS*). It was strong in OHG (*buohstab*), as was its head *stab*; the head has remained largely strong since that time and is still strong today (*Stab*, pl. *Stäbe*). At some point in the late OHG / early MHG period, the compound *buochstap* / *buochstabe* split off from *stap* — by that time, the meanings of these two words had drifted so far apart that most speakers likely no longer perceived a connection between them — and began to exhibit weak inflection; the two forms appear to have been mostly interchangeable in MHG.<sup>82</sup> The element *-stabe* does not exist as an independent word in the modern language, so that the structure of the compound is no longer transparent.

In my corpus, only strong forms of *Buchstabe* are found in the singular in Period 1; weak forms begin to occur in Period 2 but do not fully replace the strong forms until Period 8. The plural of *Buchstabe* is weak throughout.

Unlike most other nouns in Group 3b, *Buchstabe* has only one authorized nominative singular form in the modern language: *Buchstabe*, with *-e* (see 1.3.5.2). Nominative singular forms ending in *-n* do occur in earlier periods in the corpus, but they are much less frequent in this case than in the rest of Group 3b. The form of the genitive singular does vary in the modern language; *Buchstabens*, with *-ens*, is most common, but the regular weak *Buchstaben* is also considered acceptable.

*Buchstabe* has the distinction of being the most frequently pluralized noun in Group 3; 66% of all tokens are plural. In chapter 7, we will consider why it has not become feminine, like other (former) weak masculines that are very frequent in the plural.

#### 10. *Schade/n* ‘harm, damage; injury; defect’, pl. *Schäden*

Lexer, s.v. “schade swm.”

*DWB*, s.v. “schade, schaden, m.”

Duden, s.v. “Schaden, der,” <https://www.duden.de/rechtschreibung/Schaden>.

Duden, s.v. “Schade, der,” <https://www.duden.de/rechtschreibung/Schade>.

*DWDS*, s.v. “Schaden, der,” <https://www.dwds.de/wb/Schaden>.

Through the late 20<sup>th</sup> century, *Schade/n* is discussed in grammars under the heading of inanimate, formerly weak nouns that have alternate forms in the nominative singular (Group 3b; see 1.3.5.2). However, the nominative singular ending in *-n* seems to have largely supplanted that in *-e* already by the late 18<sup>th</sup> century; in my corpus, the last tokens of *Schade* in the nominative singular appear in Period 8 (the early 18<sup>th</sup> century). Adelung (1782: 129) lists only *Schaden*; in the 19<sup>th</sup> century, the Grimms (*DWB*) list the two forms as alternates, and strangely, they seem to take a more favorable view of the innovative nominative singular form in this case than in the cases of *Garten* and *Bogen*, which are not usually included with Group 3b. Most of the more recently published dictionaries and grammars allow only the form in *-en*; the online Duden considers the form ending in *-e* to be archaic (“veraltet”), except in the idiomatic

<sup>82</sup> The Grimms (*DWB*) note a tendency in OHG for otherwise strong nouns to adopt the weak pattern in compounds, citing the pair *tac* ‘day’ : *suonatago* ‘Last Judgement’; they suggest that something similar may have happened in the case of *Buchstabe*. While weak forms of *Buchstabe* are not attested in OHG, there are a few in Old Saxon.

expression *es soll, wird dein, sein usw. Schade(n) nicht sein* ‘you/he etc. will be rewarded for it’, which is itself “veraltend.” In other words, from the perspective of the modern language, *Schade/n* should probably be classified with Group 3a (nouns that have completed the Group 3 shift).

However, it does have in common with several of the nouns in Group 3b that it is used frequently in a variety of collocations, many of which are likely processed as chunks (e.g., *Schaden tun/bringen/nehmen/empfangen/leiden/zufügen/anrichten; Schaden und Nachteil; Schaden und Schande; ohne/mit Schaden*); and that it has participated in at least one process of lexicalization.

Like *Friede/n*, it occurs frequently — often in unprecedented form — as the object of the preposition *zu*, particularly in phrases such as *zu Schaden kommen* ‘to be injured/harmed’ or *zu Schaden bringen* ‘to harm’. The preposition and its object are most often written as separate words, but in ENHG, they are occasionally combined to form a single word (*zuschaden*); my corpus has two tokens of *zuschaden*, both of which I have omitted (both are from Period 4).

In a more overt instance of lexicalization, the old nominative singular form *Schade* has broken off and assumed a new identity as an adjective/adverb, and often interjection, meaning ‘too bad’ or ‘(what) a shame/pity’. According to the Grimms (*DWB*), the adverbial usage extends all the way back to MHG. I have omitted all tokens of *schade* that have adverbial function; there are 71 in all, distributed evenly across all periods. All are apocopated through Period 5 (*schad*); the form ending in *-e* (*schade*) is more common from Period 6 onward and is the norm today.

As noted above, *Schade/n* is often unprecedented; 37% of all tokens have no other elements accompanying them in the noun phrase. At the same time, it is used somewhat regularly (at least 9% of the time) in the plural (unlike *Friede/n*), so that its number is often unclear. I have assumed singular in all of the collocations listed above, but it is possible that some of these tokens are plural.

## 11. *Funke/n* ‘spark’, pl. *Funken*

Lexer, s.v. “vunke, swm.”

*DWB*, s.v. “funke, m.”

Duden, s.v. “Funke, Funken, der,” <https://www.duden.de/rechtschreibung/Funke>.

*DWDS*, s.v. “Funken, der,” <https://www.dwds.de/wb/Funken>.

A *Funke/n* is a spark, either literally in the sense of ‘(moving) particle of burning matter’ or (in about half of all instances) figuratively in the sense of ‘catalyst’ or ‘latent quality with the potential to grow and develop’. In either case, it is relatively animated, if not wholly animate. At least until the 19<sup>th</sup> century, it could also denote a human being; alongside *Funke* ‘spark’, the Grimms (*DWB*) list a separate lemma with the same spelling which they define as “ein unsteter leichtfertiger mensch, ein mensch voller schelmstreiche, ein schelm.” In my corpus, it has this meaning in one instance: “Mein Herr hatte einen ausgestochenen Essig und durchtriebne **Funken** zum Page neben mir” (Grimmelshausen, Period 7). Finally, in the 18<sup>th</sup> and 19<sup>th</sup> centuries, city soldiers in Cologne were called *Funken* on account of their red uniforms; this

usage persists in the modern language in the context of Karneval: today, the *Rote Funken* are a well-known *Karnevalsverein* with roots in the Cologne city guard.<sup>83</sup>

Like *Buchstabe*, *Funke/n* is used mainly in the plural (in 61% of all instances). Again, the question arises how it ended up on the Group 3 path instead of becoming feminine, like many other (former) weak masculine nouns that are most frequent in the plural. The motivation for the shift will be explored later, in chapter 7.

In the modern language, the two nominative singular forms (*Funke* and *Funken*) exist side by side, and both are equally acceptable (see 1.3.5.2). The genitive singular always ends in *-ens*. The Grimms (*DWB*) allow both forms in the nominative singular but prefer the form ending in *-e*: “Der nom. schwankt heute zwischen *funke* und *funken*, doch wiegt jene form noch vor.” In my corpus, the nominative singular of *Funke/n* occurs only once in the first six periods: in Period 1, where it ends in *-e*, as expected. From Period 7 onward, both *Funke* and *Funken* are attested with roughly equal frequency, though the form *Funke* is slightly more common. The genitive singular is rare; it occurs only once, in Period 9, with the marker *-ens*.

## 12. *Drache/n* ‘dragon; kite’, pl. *Drachen*

Lexer, s.v. “trache, tracke, drache, dracke, swm.”

*DWB*, s.v. “drache, m.”

Duden, s.v. *Drache*, der,” <https://www.duden.de/rechtschreibung/Drache>.

Duden, s.v. *Drachen*, der,” <https://www.duden.de/rechtschreibung/Drachen>.

*DWDS*, s.v. “Drache, der,” <https://www.dwds.de/wb/Drache>.

*DWDS*, s.v. “Drachen, der,” <https://www.dwds.de/wb/Drachen>.

*Drache/n*, which was borrowed into German in OHG from Latin *draco* / Greek δράκων ‘large serpent’ (literally, ‘[creature] that sees clearly’), is one of two nouns in this study that have developed animate/inanimate doublets; the other is *Tropfen* (see #14 below). It began life as an animate noun denoting a dragon or serpent, or — in some cases — the Devil; in the 14<sup>th</sup> century (*DWDS*), its semantic scope was broadened to include a paper toy in the shape of a dragon, i.e., a kite. Over time, the two meanings developed in different directions: the animate dragon remained weak (*Drache*), while the inanimate kite became strong (*Drachen*), like most other inanimate weak nouns. Both doublets have the plural form *Drachen*. The split must have occurred very late; the Grimms (*DWB*) make no mention of alternate nominative singular forms ending in *-(e)n*, and the only nominative singular form of *Drache/n* ‘kite’ that they cite is weak (*drache*) and from the 18<sup>th</sup> century. In an interesting case from the early 17<sup>th</sup> century (not in the corpus), the word *Drache* occurs several times in the nominative, accusative, and genitive singular in a set of instructions for building a kite shaped like dragon,<sup>84</sup> always in reference to the object being constructed (Harsdörffer and Schwenter 1636: 472). In this passage, the nominative and accusative are *Drach* and *Drachen*, as expected, while the genitive form is always *Drachens*. Of course, as we will see in chapter 5, genitive singular forms ending in *-ens* were common in the 17<sup>th</sup> century even on regular weak nouns, so that this form may not indicate an incipient split.

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<sup>83</sup> I’d like to thank Prof. Thomas Shannon (U.C. Berkeley) for bringing this to my attention.

<sup>84</sup> An image of this dragon-kite is reproduced on the last page of chapter 9.

Unfortunately, there are no kites in my corpus; *Drache/n* is always animate and (like the nouns in Group 1) mostly adheres to the weak declension. This does not, however, constitute evidence that the split did not occur within the window represented in the corpus.

### 13. *Fels/en* ‘block of stone; cliff’

Lexer, s.v. “vels, velse, stswm.”

*DWB*, s.v. “fels, m.”

Duden, s.v. “Fels, der,” [https://www.duden.de/rechtschreibung/Fels\\_Gestein](https://www.duden.de/rechtschreibung/Fels_Gestein).

Duden, s.v. “Fels, der,” [https://www.duden.de/rechtschreibung/Fels\\_Huegel](https://www.duden.de/rechtschreibung/Fels_Huegel).

Duden, s.v. “Felsen, der,” <https://www.duden.de/rechtschreibung/Felsen>.

*DWDS*, s.v. “Fels, der,” <https://www.dwds.de/wb/Fels>.

*DWDS*, s.v. “Felsen, der,” <https://www.dwds.de/wb/Felsen>.

Like *Drache/n*, *Fels/en* has split into two lexemes with different meanings, both inanimate: in the modern language, a *Felsen* is a cliff in the sense of a steep overhanging rock face, while *Fels* (a non-count noun) is primarily an irregularly shaped mass of hard stone of any size. The two senses are somewhat blurred, though, and the word *Fels* can also be a count noun denoting a cliff, like *Felsen*. *Fels*, in its primary meaning, is usually strong in the singular (*den/dem Fels*, *des Felses*) and has no plural (*DWDS* lists a weak genitive singular form for *Fels*, but Duden does not); in other words, it patterns with the nouns in Group 2. *Felsen* inflects like the nouns in Group 3a.

There is little evidence of a semantic distinction in my corpus. The nominative singular form *Felsen* emerges very late — it is not attested until the early 17<sup>th</sup> century — and it is rare overall, occurring in only nine of 67 instances (13%). The referent is not always clear, but *Felsen* does in most cases seem to denote a cliff. The form *Fels*, which is much more common, has both meanings regularly, even after the appearance of the variant *Felsen*.

I suspect the semantic split may have occurred at some time in the late 19<sup>th</sup> / early 20<sup>th</sup> centuries: the meaning ‘rock mass’ likely became more frequent as mining activity increased in the course of the industrial revolution, so that it became necessary to set it apart morphologically.

*Fels/en* has had variable inflection at least since OHG, where it was either a strong masculine (*felis*) or — infrequently — a strong feminine noun (*felisa*). In its masculine form, it belonged to the same inflectional class as *Held* (OHG *helid*); the feminine noun belonged to the *ô*-stem class. Sometime in late OHG / early MHG, the masculine noun developed a weak variant: MHG *velse*. The Grimms (*DWB*) speculate that the shift into the weak declension must have begun in the genitive plural of the feminine *felisa*, which was the same as or very similar to that of the weak nouns (both forms ended in *-ono*; the lengths of the two vowels vary). The genitive plural of *Fels/en* is not very frequent in any period, however, and the feminine noun *felisa* seems to have been extremely rare in OHG, so that the likelihood of an association forming between the two genitive plural forms is small. The dative plural of the masculine noun, which ended in *-um/om* or *-un/on* in OHG (> *-en* in MHG), seems a more likely starting point: the dative is the most frequent case in both numbers.

Merswin’s *Buch von den neun Felsen*, in Period 1, contains (not surprisingly, given the title) a disproportionately large number of *Felsen*: almost 30% (158) of the 534 tokens of *Fels/en*

in the corpus occur in this text. Almost all of these tokens (141/158, or 89%) are strong dative and accusative singular forms ending in *-e* or *-ø*.

14. *Tropf/en* ‘drop; idiot, simple-minded, naïve person’, pl. *Tröpfe* (anim.) / *Tropfen* (inan.)

Lexer, s.v. “tropfe, trophe, swm.”

*DWB*, s.v. “tropf, tropfe, m.,” “tropf, m.,” “tropfen, m.”

Duden, s.v. “Tropfen, der,” <https://www.duden.de/rechtschreibung/Tropfen>.

Duden, s.v. “Tropf, der,” [https://www.duden.de/rechtschreibung/Tropf\\_Dummkopf](https://www.duden.de/rechtschreibung/Tropf_Dummkopf).

*DWDS*, s.v. “Tropfen, der,” <https://www.dwds.de/wb/Tropfen>.

*DWDS*, s.v. “Tropf, der,” <https://www.dwds.de/wb/Tropf#1>.

*Tropf/en* is the only noun featured in this study for which a semantic distinction is clearly discernible in the corpus. In OHG and MHG, it was anchored in the weak declension (OHG *tropfo, tropho*; MHG *tropfe*), and it was always inanimate, denoting a drop (of liquid). In the 15<sup>th</sup> century (*DWB*; *DWDS*), it began to be used (often disparagingly) in reference to a simple-minded, naïve person deserving of pity, one who, like a drop of liquid, was perceived as insignificant or worthless (Duden); in my corpus, this animate usage is first attested in the early 16<sup>th</sup> century (Period 4). For about a century following the emergence of the animate sense, *Tropf/en* continued to adhere to the weak declension regardless of its meaning, but in the course of the restructuring in ENHG, the two senses diverged morphologically: the inanimate ‘drop’ aligned itself with Group 3 (nom. sg. *der Tropfen*, gen. sg. *des Tropfens*, pl. *die Tropfen*), while the animate variant joined Group 2 (nom. sg. *der Tropf*, gen. sg. *des Tropfes*, pl. *die Tröpfe*).<sup>85</sup> Both nouns still exist in the modern language as separate lexemes, though the animate *Tropf* is not as frequent as it once was (the online Duden assigns it only two of five bars in the frequency category).

Even the inanimate *Tropf(en)* is not always positioned at the very bottom of the animacy hierarchy; like sparks and the water in fountains, drops of fluid are often in motion. At times, *Tropfen* ‘drop’ takes on a more animate figurative sense, as in the following examples:

Ihr Perlen dieser Heid/ ihr zarten Wasserballen// Ihr Kinder küler Nacht/ ihr hellen Feld-Krystallen// Ihr **Silbertropfen** ihr/ die unser Phöbus liebt// Die unsre Felderlust mit Lust und Leben laben/ (Klaj, Period 6)

Dir soll mein Herz nur klopfen,/ Und alle **Lebenstropfen**/ Verströmen dir zur Ehre nur. (Schubart, Period 9)

Doch erst, wo aller Menschen Witz versiegt,/ Ein armer **Tropfen** in Ägyptens Sande,/ Hier erst erkenn' ich, [...] (Hülshoff, Period 10)

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<sup>85</sup> The other strong masculine *Tropf* in the modern language, which denotes an IV bag and does not have umlaut in the plural (*Tropfe*), is a back-formation from the verb *tropfen*.

### 3.2.4 Group 4

Table 3.7. Nouns in Group 4 (summary)

Noun	Meaning (NHG)	MHG form(s)	OHG form(s)	Orthographic variants	Tokens	DP
<i>Schlange</i>	snake, serpent, dragon	<i>slange</i>	<i>slango</i>	<schlang>, <slang>, <schlanng>	281	0.18
<i>Grille</i>	cricket; whim, fancy	<i>grille</i>	<i>grillo</i>	<grill, gerill>	63	0.43
<i>Schnecke</i>	snail, slug; cithara; spiral staircase; various other meanings	<i>snecke, snegge</i>	<i>sneggo</i>	<schneck>, <schneckh>, <schnäck>, <sneck>	37	0.45
<i>Rebe</i>	(grape)vine	<i>rēbe (m./f.)</i>	<i>reba (f.)</i>	<reb>	113	0.20
<i>Backe</i>	cheek	<i>backe</i>	<i>backo</i>	<back>, <bach>, <bak>, <bakk>, <pack>	37	0.25
<i>Fahne</i>	flag, banner	<i>vane</i>	<i>fano</i>	<fahn>, <fan>, <fann>, <van>	150	0.27

#### 1. *Schlange* ‘snake, serpent, dragon’

Lexer, s.v. “slange, swm. stswf.”

*DWB*, s.v. “schlange, f.”

Duden, s.v. “Schlange, die,” <https://www.duden.de/rechtschreibung/Schlange>.

*DWDS*, s.v. “Schlange, die,” <https://www.dwds.de/wb/Schlange>.

*Schlange*, originally an agent noun derived from the OHG verb *slingen* ‘to crawl, creep’, denotes any kind of serpent or snake, and occasionally a dragon or other lizard-like creature. Especially in the 16<sup>th</sup> century, it is commonly used in the singular to refer to the serpent in the Garden of Eden or, by extension, to the Devil. In one 16<sup>th</sup>-century dramatization of the adventures of Adam and Eve in the Book of Genesis (Ruoff’s *Adam und Heva* in Period 5), the “schlang” is a speaking character — that is, somewhat more animate than usual. In the 15<sup>th</sup>, 16<sup>th</sup>, and 17<sup>th</sup> centuries, a *schlang(e)* was a kind of small-caliber rifle with a long, skinny barrel; this usage occurs three times in my corpus, twice in Götz’ memoirs (Period 5) in the compound *veldtschlanngenn*, and once in the simplex form in Murner (Period 4). *Schlange* can also denote other snake-like objects and formations, the most common in the modern language (not found in the corpus) being a line of waiting people.

The (weak) feminine *Schlange* emerged in MHG alongside the (still much more common) weak masculine; however, it did not become dominant until the 16<sup>th</sup> century. The Grimms (*DWB*) credit Luther with having dealt the final blow to the masculine variant. In my corpus, masculine tokens remain common through the second half of the 16<sup>th</sup> century.

## 2. *Grille* ‘cricket; whim, fancy’

Lexer, s.v. “grille, swm. swf.”

*DWB*, s.v. “grille, f.”

Duden, s.v. “Grille, die,” <https://www.duden.de/rechtschreibung/Grille>.

*DWDS*, s.v. “Grille, die,” <https://www.dwds.de/wb/Grille>.

A *Grille* is a cricket, but can also be a thought that enters the mind suddenly and unexpectedly, or (in the plural) a (bad) mood. The figurative usage dates back at least to the 14<sup>th</sup> century (*DWDS*); in my corpus, it accounts for more than half of all tokens (35/63, or 56%). Today, it is considered archaic (Duden).

The feminine *Grille* has existed since the 15<sup>th</sup> century (*DWDS*); however, it remains scarce in the corpus until the 17<sup>th</sup> century, as does the word *Grille* generally. In Bavarian dialects, the masculine held out at least until the 19<sup>th</sup> century (*DWB*).

## 3. *Schnecke* ‘snail, slug; cithara; spiral staircase’

Lexer, s.v. “snecke, snagge, swm.”

*DWB*, s.v. “schnecke, f.”

Duden, s.v. “Schnecke, die,” <https://www.duden.de/rechtschreibung/Schnecke>.

Duden, s.v. “Schneck, der,” <https://www.duden.de/rechtschreibung/Schneck>.

*DWDS*, s.v. “Schnecke, die,” <https://www.dwds.de/wb/Schnecke>.

*DWDS*, s.v. “Schneck, der,” <https://www.dwds.de/wb/Schneck>.

*Schnecke* denotes a snail or slug, but also any of various inanimate objects that resemble snails. Among inanimate *Schnecken*, the best represented in my corpus are the spiral staircase or tunnel, which occurs in 11 instances (ten in Andreae [Period 6]), and the cithara (the musical instrument), which is found in four instances, all in Fischart (Period 5).

Feminine tokens of *Schnecke* appear in the corpus for the first time in the early 16<sup>th</sup> century, but the masculine persists into the 18<sup>th</sup> century. Most of the later masculine tokens in the corpus are inanimate and denote architectural features — nine out of 10 of the spiral staircases in Andreae are masculine — but there is also one masculine snail in Greiffenberg (Period 7). In many southern dialects, *Schnecke* still exists to this day as a masculine noun (*der Schneck*), and can refer to a charming, attractive child as well as a snail or slug (Duden; *DWDS*).

## 4. *Rebe* ‘(grape)vine’

Lexer, s.v. “rëbe, swmf.”

*DWB*, s.v. “rebe, f. und m.”

Duden, s.v. “Rebe, die,” <https://www.duden.de/rechtschreibung/Rebe>.

*DWDS*, s.v. “Rebe, die,” <https://www.dwds.de/wb/Rebe>.

*Rebe* was feminine in OHG (either strong or weak); the masculine variant entered the scene in MHG and coexisted with the feminine for several centuries before disappearing again in

the 18<sup>th</sup> century (*DWB*). The shift from feminine to masculine gender may have happened by analogy with *Traube* ‘grape’, a former weak masculine whose gender did not fluctuate at all in OHG and MHG. In the corpus, there are several unambiguously masculine tokens of *Rebe* in the 15<sup>th</sup> century (Periods 2 and 3) but none in any of the later periods.

*Rebe* is always inanimate; it usually denotes a grapevine, but can also refer to the entire grape plant. The Grimms (*DWB*) cite examples from the 19<sup>th</sup> century and earlier — most in poetic texts — in which it is used figuratively as a synonym for *Traube*.

## 5. *Backe* ‘cheek’

Lexer, s.v. “backe, swm.”

*DWB*, s.v. “backe, m.,” “kinnbacke, kinnbacken, m.”

Duden, s.v. “Backe, die,” [https://www.duden.de/rechtschreibung/Backe\\_Wange](https://www.duden.de/rechtschreibung/Backe_Wange).

Duden, s.v. “Backe, die,” [https://www.duden.de/rechtschreibung/Backe\\_Schinken](https://www.duden.de/rechtschreibung/Backe_Schinken).

Duden, s.v. “Backen, der,” <https://www.duden.de/rechtschreibung/Backen>.

Duden, s.v. “Kinnbacke, die,” <https://www.duden.de/rechtschreibung/Kinnbacke>.

Duden, s.v. “Kinnbacken, der,” <https://www.duden.de/rechtschreibung/Kinnbacken>.

*DWDS*, s.v. “Backe, die,” <https://www.dwds.de/wb/Backe>.

*DWDS*, s.v. “Backen, der,” <https://www.dwds.de/wb/Backen#2>.

*DWDS*, s.v. “Kinnbacke, die,” <https://www.dwds.de/wb/Kinnbacke>.

In OHG, the noun *backo* denoted the lower jaw; it retained this meaning in MHG, but at the same time may also have taken on its current meaning of ‘cheek’. Both meanings have persisted into the modern language, though the meaning ‘lower jaw’ is only preserved in the compound *Kinnbacke(n)*. In the standard language, *Backe* has become feminine; in southern dialects, however, it has remained masculine and followed the Group 3 path: nom. sg. *der Backen*, gen. sg. *des Backens*, pl. *die Backen*.

Masculine forms of *Backe* continue to occur until very late; my corpus still has them in the early 18<sup>th</sup> century. All instances of the compound *Kinnbacke(n)* that are clearly marked for gender are masculine.

Interestingly, the Grimms (*DWB*) allow only the weak masculine *Backe*, but for *Kinnbacke(n)*, they list three forms: *Kinnbacke* (m.), *Kinnbacke* (f.), and *Kinnbacken* (m.). They claim the two words are not related: *Backe* ‘cheek’ is derived from OHG *bahho* ‘back; ham, bacon’ (also the source of NHG *Bache* ‘female wild boar’ < MHG *bache* ‘ham, bacon’ and of *Backe* ‘buttock’), while *Kinnbacke(n)* goes back to OHG *baccho* ‘jaw’. However, the more recent etymological dictionaries (Duden; *DWDS*) agree that *Backe* ‘cheek’ and *Kinnbacke(n)* ‘lower jaw’ have the same root, while *Backe* ‘buttock’ is related to *Bache*.

In any case, the two roots seem to have become conflated, and particularly in ENHG, the words *Backe* (whether it means ‘cheek’ or ‘buttock’) and *Bache* often have the same spelling, making it difficult to tell them apart. I have omitted all instances of *bach-* that clearly denote ham (there are at least four) and the only instance of *backen* referring to buttocks (*ars backen*, dative plural, in Wickram’s *Losbuch*, Period 4).



## 6. *Fahne* ‘flag, banner’

Lexen, s.v. “vane, van, swstm.”

*DWB*, s.v. “fahne, f.”

Duden, s.v. “Fahne, die,” <https://www.duden.de/rechtschreibung/Fahne>.

*DWDS*, s.v. “Fahne, die,” <https://www.dwds.de/wb/Fahne>.

*Fahne*, which in pre-OHG times (*DWDS*) denoted a cloth of any kind, is in most cases a banner or flag, or (in military contexts, especially in the compound *Sturmfahne*) a standard. In ENHG, by extension, it (and the corresponding diminutives *Fähnchen* and *Fähnlein*) could also denote the group of people associated with a standard, namely, an army or unit of troops within an army; this usage occurs twice in the corpus. In the modern language, it is still sometimes used as a symbol for the military, e.g., in the expressions *unter der Fahne stehen* ‘to be a soldier’, *zu den Fahnen eilen* ‘to go to war’ (archaic), *die Fahne verlassen* ‘to desert’, and in the nouns *Fähnrich* ‘standard bearer; ensign’ and *Fahnenflucht* ‘desertion’.

In the earlier periods, *Fahne* is usually masculine, but occasionally also neuter (three times in the early 16<sup>th</sup> century). The first feminine tokens appear in my corpus in the early 17<sup>th</sup> century (Period 6), and the last masculine tokens a half-century later (Period 7). Aside from one anomalous neuter token in Period 8 (Haller), all tokens are feminine from the 18<sup>th</sup> century onward. Apparently (*DWDS*), *Fahne* continued to be used with masculine gender until the end of the 18<sup>th</sup> century.

*Fahne* occurs mainly in verse texts; only 16% of all tokens (24/150) are in prose texts.

## 4 The Tokens and Their Properties (General Overview)

In this chapter, I provide an overview of the tokens and their morphological and extramorphological attributes. 4.1 covers the distribution of case, number, gender, and inflectional marker values; in 4.2, I address the conditions in which weak masculine nouns are likely to be apocopated and/or lose their weak inflectional markers in the oblique singular forms.

In some distribution tables in this chapter, the percentages do not add up to exactly 100% due to rounding. These instances are not marked.

### 4.1 Number

Most tokens (23,751, or approximately 78%) are singular. 6,222 tokens (20%) are plural, and in 524 instances (2%), the number could not be determined. All nouns except *Pfaffe*, *Buchstabe*, *Funke/n*, and the Group 4 nouns *Backe*, *Grille*, and *Rebe* are more frequent in the singular than in the plural (see table 4.3). In some cases, the proportion of singular tokens exceeds 90%; at the upper extreme are *Friede/n* and *Wille/n*, which are almost never attested in the plural. *Schmerz*, which is usually unprecedented, has the most tokens with indeterminate number (163 tokens, or 13%).

Table 4.1. Number distribution by period (prose and verse)

Period	Singular (%)	Plural (%)	? (%)	Total ( <i>n</i> )
1 (1350–1400)	83	15	2	<b>4,329</b>
2 (1400–1450)	75	23	2	<b>3,327</b>
3 (1450–1500)	83	15	3	<b>3,287</b>
4 (1500–1550)	74	23	3	<b>2,367</b>
5 (1550–1600)	84	14	2	<b>3,847</b>
6 (1600–1650)	71	25	3	<b>2,629</b>
7 (1650–1700)	80	18	2	<b>2,450</b>
8 (1700–1750)	71	28	1	<b>2,243</b>
9 (1750–1800)	75	25	0.4	<b>2,116</b>
10 (1800–1850)	75	25	0.2	<b>1,995</b>
11 (1850–1900)	76	24	0.3	<b>1,907</b>
<b>Entire Corpus</b>	<b>78</b>	<b>20</b>	<b>2</b>	<b>30,497</b>

Table 4.2. Number distribution by prose/verse (all periods)

	Singular (%)	Plural (%)	? (%)	Total ( <i>n</i> )
Prose	78	21	1	<b>17,469</b>
Verse	77	20	3	<b>13,028</b>
<b>Entire Corpus</b>	<b>78</b>	<b>20</b>	<b>2</b>	<b>30,497</b>

Remarkably, the nouns in Group 4 are *not* collectively more frequent in the plural, as has been suggested in the literature (table 4.3); three out of six of these nouns (*Fahne*, *Schlange*, and *Schnecke*) occur mainly in the singular, for reasons which will be explored below. Many of the

nouns in Group 4 are poorly represented in the corpus, however, so we should be careful not to read too much into these figures.

Table 4.3. Number distribution by noun (all periods; prose and verse)

Group	Noun	Singular (%)	Plural (%)	? (%)	Total (n)
1a	<i>Affe</i>	58	36	6	<b>125</b>
	<i>Bote</i>	64	33	3	<b>350</b>
	<i>Bube</i>	63	35	2	<b>223</b>
	<i>Knabe</i>	77	23	1	<b>573</b>
	<i>Löwe</i>	87	12	1	<b>554</b>
	<i>Pfaffe</i>	46	49	5	<b>416</b>
1b	<i>Bär</i>	59	38	3	<b>108</b>
	<i>Graf</i>	85	15	0.2	<b>1,121</b>
	<i>Held</i>	63	36	1	<b>657</b>
	<i>Herr</i>	84	15	0.3	<b>8,732</b>
	<i>Mensch</i>	68	30	2	<b>5,962</b>
	<i>Prinz</i>	93	6	0.4	<b>562</b>
2	<i>Hahn</i>	87	10	3	<b>107</b>
	<i>Herzog</i>	91	9	0	<b>397</b>
	<i>Leichnam</i>	90	10	0	<b>228</b>
	<i>Schelm</i>	60	31	9	<b>100</b>
	<i>Schmerz</i>	58	29	13	<b>1,213</b>
3a	<i>Bogen</i>	72	26	2	<b>333</b>
	<i>Brunnen</i>	82	17	1	<b>517</b>
	<i>Garten</i>	82	16	2	<b>662</b>
	<i>Kasten</i>	83	14	3	<b>65</b>
	<i>Schatten</i>	66	32	2	<b>444</b>
3b	<i>Buchstabe</i>	34	66	1	<b>152</b>
	<i>Friede/n</i>	100	0.2	0.1	<b>846</b>
	<i>Funke/n</i>	38	61	1	<b>113</b>
	<i>Name/n</i>	85	11	3	<b>1,792</b>
	<i>Schade/n</i>	86	9	5	<b>759</b>
3c	<i>Wille/n</i>	99	0.4	0.8	<b>1,780</b>
	<i>Drache/n</i>	65	34	1	<b>140</b>
	<i>Fels/en</i>	67	31	2	<b>534</b>
4	<i>Tropfen</i>	58	42	1	<b>250</b>
	<i>Backe</i>	41	57	3	<b>37</b>
	<i>Fahne</i>	62	37	1	<b>150</b>
	<i>Grille</i>	27	73	0	<b>64</b>
	<i>Rebe</i>	30	66	4	<b>113</b>
	<i>Schlange</i>	62	37	1	<b>281</b>
	<i>Schnecke</i>	68	30	3	<b>37</b>
	<b>All nouns</b>	<b>78</b>	<b>20</b>	<b>2</b>	<b>30,497</b>

*Note:* In this and most other distribution tables in this chapter, due to space limitations, values for the individual categories are given in percentages only; only the row totals are given in raw numbers of tokens. Values less than 1 are rounded to one or two decimal places; all other values are rounded to whole numbers.

The number distribution is largely consistent across all periods (table 4.1) and in both prose and verse texts (table 4.2).

## 4.2 Case

Nearly half of all tokens are in the nominative case (14,390/30,497, or 47%). This is not surprising, since the two most frequent nouns in the corpus, *Mensch* and *Herr*, belong to Group 1, which contains only animate nouns. The accusative and dative cases are represented with about equal frequency, and each of these cases accounts for about a fifth of all tokens; there are 6,006 tokens in the accusative (about 20%) and 6,321 tokens in the dative case (about 21%). The genitive case (3,207 tokens) is the least frequent, representing only about 10% of all tokens. Finally, there are 573 tokens (2%) whose case could not be determined. Of these, 372 are oblique (either accusative, dative, or genitive).

The case distribution is about the same in both numbers (see table 4.4). In the plural, there is slightly less nominative and slightly more genitive than in the singular. Where the number was unclear, the case was often also unclear: a significant proportion of number question marks are also marked ? in the case category.

Table 4.4. Case distribution by number (all periods; prose and verse)

Number	N (%)	A (%)	D (%)	G (%)	? (%)	Total (n)
Singular	50	20	20	10	1	<b>23,751</b>
Plural	39	20	22	15	4	<b>6,222</b>
?	2	26	33	2	37	<b>524</b>
<b>All</b>	<b>47</b>	<b>20</b>	<b>21</b>	<b>11</b>	<b>2</b>	<b>30,497</b>

The distribution of case values is also fairly consistent diachronically (see table 4.5). The verse texts are more nominative-heavy than the prose texts (half of all verse tokens are in the nominative), likely because inanimate nouns occur in the nominative more often in poetic texts, where devices such as anthropomorphization and personification are widespread, than in prose texts, where these phenomena are less common. At the same time, and probably for the same reason, the prose texts have slightly more dative and genitive tokens than the verse texts (see table 4.6).

Table 4.7 shows the case distribution for each noun. As expected, animate nouns are used mainly in the nominative case, and inanimate nouns in the dative and accusative cases, with the exceptions of *Brunnen*, *Schatten*, *Funke/n*, and *Fahne*; the reasons for these inconsistencies will be explored in chapters 7 and 8. Nouns that are animate most of the time but that can also refer to inanimate objects (*Drache/n*, *Tropfen*, *Hahn*, *Schnecke*, *Grille*) are also predominantly in the nominative.

Table 4.5. Case distribution by period (prose and verse)

Period	N (%)	A (%)	D (%)	G (%)	? (%)	Total (n)
1 (1350–1400)	51	18	19	10	2	<b>4,329</b>
2 (1400–1450)	46	21	21	10	2	<b>3,327</b>
3 (1450–1500)	42	19	22	13	3	<b>3,287</b>
4 (1500–1550)	45	21	21	9	4	<b>2,367</b>
5 (1550–1600)	45	17	24	11	2	<b>3,847</b>
6 (1600–1650)	46	20	21	10	2	<b>2,629</b>
7 (1650–1700)	47	21	19	11	2	<b>2,450</b>
8 (1700–1750)	43	20	21	15	1	<b>2,243</b>
9 (1750–1800)	51	19	21	9	0.3	<b>2,116</b>
10 (1800–1850)	53	20	18	9	0.3	<b>1,995</b>
11 (1850–1900)	52	21	19	7	1	<b>1,907</b>
<b>Entire Corpus</b>	<b>47</b>	<b>20</b>	<b>21</b>	<b>11</b>	<b>2</b>	<b>30,497</b>

Table 4.6. Case distribution by prose/verse (all periods)

	N (%)	A (%)	D (%)	G (%)	? (%)	Total (n)
Prose	45	20	22	11	2	<b>17,469</b>
Verse	50	20	19	9	2	<b>13,028</b>
<b>Entire Corpus</b>	<b>47</b>	<b>20</b>	<b>21</b>	<b>11</b>	<b>2</b>	<b>30,497</b>

### 4.3 Gender

Except in Group 4 and in the case of *Mensch*, which is frequently neuter, all tokens are assumed to be masculine unless clearly marked for some other gender. 215 tokens, all in Group 4 except for one dative singular token of the compound *mutwillen* (*Bamberger Chronik*, Period 2),<sup>86</sup> are feminine (<1%); 68 are neuter (<1%); and 4,005 tokens, most representing *Mensch* and Group 4 nouns, have question marks in the gender category (13%).

Most of the neuter tokens (63/68) are forms of *Mensch*, all from before 1700. Also represented in the neuter category are *Fahne* (four tokens) and *Friede/n* (one token).

In the question-mark gender category, too, most tokens (3,620/4,005, or 90%) are forms of *Mensch*, which, as noted in 3.2.1, can be either masculine or neuter. Only the nominative and accusative singular of *Mensch* are ever clearly marked for gender, and here the gender is identifiable only if there is a definite article or pronominally inflected adjective in the noun phrase. Probably most of these tokens are masculine, but *Mensch* is unambiguously neuter often enough that it seemed reasonable to label them with question marks. When all tokens of *Mensch* are removed from the data, the proportion of tokens with indeterminate gender decreases to 1% (385/24,535), while that of masculine tokens increases to 98% (23,930/24,535).

<sup>86</sup> “[...] wo sie in solcher **mutwillen** verdeien wurden, das sie uns auch ungehorsame purger und underthannen mögen machen” [...]

Table 4.7. Case distribution by noun (all periods; prose and verse)

Group	Noun	N (%)	A (%)	D (%)	G (%)	? (%)	Total (n)
1a	<i>Affe</i>	54	15	17	5	10	125
	<i>Bote</i>	53	27	12	6	1	350
	<i>Bube</i>	57	17	14	8	4	223
	<i>Knabe</i>	56	19	15	8	2	573
	<i>Löwe</i>	50	15	20	13	2	554
	<i>Pfaffe</i>	50	14	19	9	8	416
1b	<i>Bär</i>	56	18	16	6	4	108
	<i>Graf</i>	60	9	19	12	1	1,121
	<i>Held</i>	62	12	10	15	1	657
	<i>Herr</i>	63	9	16	11	1	8,732
	<i>Mensch</i>	53	13	16	14	3	5,962
	<i>Prinz</i>	57	12	17	15	0.2	562
2	<i>Hahn</i>	54	24	15	4	3	107
	<i>Herzog</i>	58	10	19	13	0	397
	<i>Leichnam</i>	32	39	21	7	1	228
	<i>Schelm</i>	43	30	17	2	8	100
	<i>Schmerz</i>	23	38	27	9	3	1,213
3a	<i>Bogen</i>	25	32	32	7	3	333
	<i>Brunnen</i>	36	22	33	8	2	517
	<i>Garten</i>	20	33	39	8	2	662
	<i>Kasten</i>	20	34	43	0	3	65
	<i>Schatten</i>	39	27	29	4	1	444
3b	<i>Buchstabe</i>	21	32	36	9	3	152
	<i>Friede/n</i>	24	37	28	10	1	846
	<i>Funke/n</i>	55	35	8	2	1	113
	<i>Name/n</i>	24	35	34	7	1	1,792
	<i>Schade/n</i>	17	51	20	8	4	759
	<i>Wille/n</i>	22	41	30	6	1	1,780
3c	<i>Drache/n</i>	38	25	19	14	4	140
	<i>Fels/en</i>	20	25	45	8	1	534
	<i>Tropf/en</i>	54	28	14	2	2	250
4	<i>Backe</i>	16	54	19	3	8	37
	<i>Fahne</i>	39	35	23	1	1	150
	<i>Grille</i>	41	22	19	11	8	64
	<i>Rebe</i>	22	26	29	20	3	113
	<i>Schlange</i>	47	22	19	10	2	281
	<i>Schnecke</i>	38	35	14	5	8	37
<b>All nouns</b>		<b>47</b>	<b>20</b>	<b>21</b>	<b>11</b>	<b>2</b>	<b>30,497</b>

Almost all of the remaining 385 tokens in the question-mark category (382/385, or 99%) are forms of nouns in Group 4, whose gender can be identified with certainty only in the nominative and accusative singular. The majority of these tokens are likely feminine, especially in the later periods, but without clear gender markers, it is impossible to tell. Finally, there are

two potential tokens of *Garten* with umlaut from Periods 1 (*weingärten*, *Schachzabelbuch*) and 3 (*geritten*, *Eyb*) which could also be forms of the MHG feminine noun *gerte* ‘branch, twig’, and one possibly feminine token of *Schatten* from Period 3 (*schet*, *Brant*).

Though only tokens of nouns in Group 4 and of *Mensch* are labeled with question marks in the gender category, gender marking is often absent in the other noun groups, as well. The plural is never marked for gender, and in the earlier periods, singular forms of the indefinite determiners *ein* and *kein* and of the possessive adjectives (*mein*, *dein*, etc.) often end in *-ø* in the nominative and accusative, regardless of gender; in addition, a large number of tokens are unpreceded in both numbers (see 4.5.1). Table 4.12 shows, for each noun, the proportion of tokens for which at least the opposition masculine/neuter versus feminine is clearly marked, both in the entire corpus and in Periods 1–6 only. This value lies below 60% for most nouns and is generally smaller in the first six periods. Tokens preceded by indefinite and possessive determiners are included in the category of gender-marked tokens beginning in the 18<sup>th</sup> century (Period 8).<sup>87</sup>

Several of the nouns in this study have undergone a change in their gender affiliation from masculine to feminine; it is therefore not surprising that we see an increase in the proportion of feminine tokens over time, though feminine tokens never make up more than 2% of the total (see table 4.10). The proportion of masculine tokens remains more or less constant, with spikes in Periods 2 and 5, while the proportion of neuter tokens — which never exceeds 1% in any period — decreases slightly.

When we remove *Mensch* (5,962 tokens), which accounts for the majority of neuter and question-mark tokens, the increase in feminine tokens becomes more pronounced, and we also see a steady, if slight, decrease in the proportion of masculine tokens over time, as the proportion of feminine and question-mark tokens increases (see table 4.11).

The distribution of genders is almost the same in prose as in verse texts (see table 4.8). When *Mensch* is excluded, the proportion of masculine tokens increases somewhat in the prose texts relative to the verse texts, while those of question-mark and neuter tokens decrease; the prose:verse ratio among feminine tokens remains about the same (see table 4.9). As we will see in 4.5.1, the verse texts have a slightly larger proportion of unpreceded tokens than the prose texts, which may account for the difference in the question-mark category here (unpreceded tokens are not marked for gender).

Table 4.8. Gender distribution by prose/verse (all periods)

	m. (%)	f. (%)	n. (%)	? (%)	Total (n)
Prose	85	0.3	0.3	14	<b>17,469</b>
Verse	87	1	0.2	12	<b>13,028</b>
<b>Entire Corpus</b>	<b>86</b>	<b>0.7</b>	<b>0.2</b>	<b>13</b>	<b>30,497</b>

<sup>87</sup> The modern system of determiners was largely in place by the mid-17<sup>th</sup> century, but continued to fluctuate at least until the end of the 17<sup>th</sup> century; in any case, it seems a reasonable assumption that any form of *ein/mein/kein* ending in *-ø* after 1700 is either masculine or neuter and not feminine.

Table 4.9. Gender distribution by prose/verse (all periods; no *Mensch*)

	m. (%)	f. (%)	n. (%)	? (%)	Total (n)
Prose	99	0.4	0.02	1	<b>13,420</b>
Verse	96	1	0.03	2	<b>11,115</b>
<b>Entire Corpus</b>	<b>98</b>	<b>0.9</b>	<b>0.02</b>	<b>2</b>	<b>24,535</b>

Table 4.10. Gender distribution by period (prose and verse)

Period	m. (%)	f. (%)	n. (%)	? (%)	Total (n)
1 (1350–1400)	82	0.2	0.5	18	<b>4,329</b>
2 (1400–1450)	94	0.2	0.6	5	<b>3,327</b>
3 (1450–1500)	82	0.4	0.2	18	<b>3,287</b>
4 (1500–1550)	86	0.3	0.3	14	<b>2,367</b>
5 (1550–1600)	94	0.4	0.2	6	<b>3,847</b>
6 (1600–1650)	86	0.6	0.1	13	<b>2,629</b>
7 (1650–1700)	88	1	0.04	11	<b>2,450</b>
8 (1700–1750)	79	0.8	0.04	21	<b>2,243</b>
9 (1750–1800)	81	1	0	18	<b>2,116</b>
10 (1800–1850)	87	2	0	11	<b>1,995</b>
11 (1850–1900)	84	2	0	14	<b>1,907</b>
<b>Entire Corpus</b>	<b>86</b>	<b>0.7</b>	<b>0.2</b>	<b>13</b>	<b>30,497</b>

Table 4.11. Gender distribution by period (prose and verse; no *Mensch*)

Period	m. (%)	f. (%)	n. (%)	? (%)	Total (n)
1 (1350–1400)	99	0.3	0	0.4	<b>2,720</b>
2 (1400–1450)	99	0.2	0.03	1	<b>3,030</b>
3 (1450–1500)	98	0.6	0	2	<b>2,482</b>
4 (1500–1550)	98	0.4	0.2	1	<b>1,995</b>
5 (1550–1600)	98	0.4	0	1	<b>3,535</b>
6 (1600–1650)	97	0.8	0	2	<b>2,230</b>
7 (1650–1700)	97	1	0	2	<b>2,114</b>
8 (1700–1750)	96	1	0.1	3	<b>1,665</b>
9 (1750–1800)	96	2	0	2	<b>1,547</b>
10 (1800–1850)	96	2	0	2	<b>1,680</b>
11 (1850–1900)	95	3	0	3	<b>1,537</b>
<b>Entire Corpus</b>	<b>98</b>	<b>0.9</b>	<b>0.02</b>	<b>2</b>	<b>24,535</b>



Table 4.12. Proportion of tokens with clear gender marking, by noun (prose and verse)

Group	Noun	Entire corpus		Periods 1–6 only	
		Has gender marker (%)	Total ( <i>n</i> )	Has gender marker (%)	Total ( <i>n</i> )
1a	<i>Affe</i>	41	125	40	67
	<i>Bote</i>	45	350	46	258
	<i>Bube</i>	44	223	44	127
	<i>Knabe</i>	63	573	57	313
	<i>Löwe</i>	77	554	79	405
	<i>Pfaffe</i>	38	416	38	390
1b	<i>Bär</i>	49	108	33	52
	<i>Graf</i>	57	1,121	49	796
	<i>Held</i>	46	657	43	296
	<i>Herr</i>	40	8,732	40	6,573
	<i>Mensch</i>	52	5,962	50	3,794
	<i>Prinz</i>	71	562	73	115
2	<i>Hahn</i>	75	107	61	33
	<i>Herzog</i>	43	397	38	339
	<i>Leichnam</i>	57	228	56	200
	<i>Schelm</i>	40	100	39	46
	<i>Schmerz</i>	33	1,213	28	385
3a	<i>Bogen</i>	57	333	58	196
	<i>Brunnen</i>	65	517	65	322
	<i>Garten</i>	65	662	62	350
	<i>Kasten</i>	58	65	50	34
	<i>Schatten</i>	41	444	43	100
3b	<i>Buchstabe</i>	29	152	30	71
	<i>Friede/n</i>	38	846	34	567
	<i>Funke/n</i>	29	113	6	16
	<i>Name/n</i>	53	1,792	49	1,193
	<i>Schade/n</i>	34	759	31	665
	<i>Wille/n</i>	52	1,780	47	1,338
3c	<i>Drache/n</i>	49	140	45	82
	<i>Fels/en</i>	56	534	64	274
	<i>Tropf/en</i>	40	250	33	58
4	<i>Backe</i>	27	37	24	17
	<i>Fahne</i>	45	150	44	63
	<i>Grille</i>	19	64	25	8
	<i>Rebe</i>	27	113	25	55
	<i>Schlange</i>	47	281	41	164
	<i>Schnecke</i>	51	37	50	24
	<b>All nouns</b>	<b>48</b>	<b>30,497</b>	<b>45</b>	<b>19,786</b>

#### 4.4 Inflectional Marker

The most frequently occurring inflectional markers in the data are, not surprisingly, *-e* (or its apocopated counterpart *-ø*) and *-(e)n*, which together account for about 98% of all tokens (29,847/30,497). Included with the *-ø* and *-n* tokens, respectively, are 78 tokens ending in *-'* and one ending in *- 'n*, where the apostrophe signifies an apocopated or syncopated *-e(-)*; all are from the last six periods, and all but one are in poetry.<sup>88</sup> In the *-en* group are seven plural tokens with a hyphen, which indicates a missing ending (in this study, always *-en*) to be carried over from a different noun in the immediate environment of the token, usually in the same phrase or clause, e.g., “**Held-** und Riesen” (Ziegler, Period 8); “**Schmerz-** und Wunden” (Lohenstein, Period 7).<sup>89</sup> The *-en* group also contains 17 tokens ending in *-e* or *-n* marked with a nasal bar (tilde, bar, or similar symbol) and eight with final *-e{n}* or *-{e}n*, where the brackets indicate that an abbreviated form has been expanded by an editor.<sup>90</sup>

After *-e/ø* and *-(e)n*, the most frequent markers are *-(e)(n)s* in the genitive singular (475 tokens, or about 1.5% of all tokens) and umlauted variants of the endings *-e/ø* and *-(e)n* (168 tokens, or about 0.5%), which occur mainly in the plural but occasionally also in the singular forms. Also represented in the corpus are *-er* (four tokens), *-(e)m* (two tokens), *-ne* (two tokens), *-nen* (one token), and *-a* (one token); all of these but *-er* and *-a* can be considered variants of the marker *-(e)n* and are classified as weak when they occur in the oblique singular forms or in the plural. (See 4.4.5 for a detailed discussion of these endings.)

Tables 4.13–4.15 show the distribution of inflectional markers in the whole data set by number and case, by time period, and by prose/verse, respectively. In each table, the figures in the umlaut column include umlauted forms ending in both *-e/ø* and *-(e)n*. I will refer back to these tables in the following discussion.

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<sup>88</sup> Strictly speaking, tokens with and without apostrophe are not equivalent, since the apostrophe indicates that the language user is aware that the form contains an *-e(-)* and has made a conscious decision to omit it. However, particularly in older texts, it is often impossible to determine whether the apostrophe stems from the writer him-/herself or was added later by an editor.

<sup>89</sup> These are included in the *-en* group because the ending *-en* is always present somewhere in the same clause; in this respect, they differ from tokens with apostrophe, where the ending is missing altogether. The distinction is subtle, however, and neither of these markers fits neatly into any inflectional marker category.

<sup>90</sup> The status of tokens ending in *-e* with nasal bar, like that of tokens ending in a hyphen or apostrophe, is unclear, particularly from a processing standpoint: do readers process *-ē* as *-e* or as *-en*?

Table 4.13. Inflectional marker distribution by number and case (all periods; prose and verse)

Number	Case	-e/ø (%)	-(e)n (%)	Umlaut (%)	-(e)(n)s (%)	Other (%)	Total (n)
Singular	N	96	4	0.01*	0	0	11,962
	A	19	81	0.04	0	0.02*	4,632
	D	15	85	0	0	0.04	4,805
	G	5	74	0	21	0	2,244
	?	49	51	0	0	0	108
	<b>All</b>	<b>56</b>	<b>42</b>	<b>0.01</b>	<b>2</b>	<b>0.01</b>	<b>23,751</b>
Plural	N	2	97	1	0	0.1	2,418
	A	3	93	4	0	0.2	1,239
	D	0.3	97	3	0	0.1	1,341
	G	1	96	3	0	0	953
	?	4	94	2	0	0	271
	<b>All</b>	<b>2</b>	<b>96</b>	<b>3</b>	<b>0</b>	<b>0.1</b>	<b>6,222</b>
?	N	0	100	0	0	0	10
	A	8	91	1*	0	0	135
	D	3	96	1*	0	0	175
	G	10*	90	0	0	0	10
	?	2	98	0	0	0	194
	<b>All</b>	<b>4</b>	<b>96</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>524</b>
<b>All forms (n)</b>		<b>13,404</b>	<b>16,440</b>	<b>168</b>	<b>475</b>	<b>10</b>	<b>30,497</b>
<b>All forms (%)</b>		<b>44</b>	<b>54</b>	<b>0.6</b>	<b>2</b>	<b>0.03</b>	

\*Represents one token

Table 4.14. Inflectional marker distribution by period (prose and verse)

Period	-e/ø (%)	-(e)n (%)	Umlaut (%)	-(e)(n)s (%)	Other (%)	Total (n)
1 (1350–1400)	51	48	0.1	0	0	4,329
2 (1400–1450)	43	55	1	1	0.03	3,327
3 (1450–1500)	42	56	0.2	1	0.1	3,287
4 (1500–1550)	40	58	1	1	0.04	2,367
5 (1550–1600)	45	52	1	2	0.03	3,847
6 (1600–1650)	38	58	1	2	0.2	2,629
7 (1650–1700)	44	52	0.4	3	0.1	2,450
8 (1700–1750)	39	59	1	1	0.1	2,243
9 (1750–1800)	45	54	0.2	1	0	2,116
10 (1800–1850)	45	52	1	1	0	1,995
11 (1850–1900)	47	51	0.4	1	0	1,907
<b>Entire corpus</b>	<b>44</b>	<b>54</b>	<b>0.6</b>	<b>2</b>	<b>0.03</b>	<b>30,497</b>

Table 4.15. Inflectional marker distribution by prose/verse (all periods)

	-e/ø (%)	-(e)n (%)	Umlaut (%)	-(e)(n)s (%)	Other (%)	Total (n)
Prose	41	57	0.6	2	0.01	17,469
Verse	48	50	0.5	1	0.1	13,028
<b>Entire corpus</b>	<b>44</b>	<b>54</b>	<b>0.6</b>	<b>2</b>	<b>0.03</b>	<b>30,497</b>

#### 4.4.1 *-(e)n*

The majority of weak masculine and former weak masculine tokens in the corpus (representing all cases and numbers) end in *-(e)n*, without umlaut (16,440/30,497, or about 54%). The proportion of tokens ending in *-(e)n* is about the same in all periods (table 4.14) and in both prose and verse (table 4.15). Most of these tokens (14,907, or about 91%) have the marker *-en*, while the remaining 1,533 end in just *-n* (table 4.16). *-en* is well represented on all nouns, roughly in proportion to the total frequencies of the nouns in the corpus. *-n* is most common on nouns whose stems end in a liquid (*Herr, Bär, Wille/n*) or (semi)vowel (*Löwe/Leu*); this is to be expected, since in MHG, weak masculine nouns with liquid stems belonged to a separate subclass in which *-e(-)* was absent throughout the paradigm (MHG Type B; see 1.1.1). The marker *-n* is particularly frequent among singular forms of *Herr*, which to this day ends in *-n* in the oblique singular forms; almost as many singular tokens of *Herr* end in *-n* (1,114) as in *-en* (1,288).

In keeping with the structure of the weak masculine paradigm, the marker *-(e)n* is found mainly in the oblique singular forms — particularly in the dative and accusative — and in the plural (see table 4.13). It also accounts for the majority of tokens with question marks in the number category (500/524 tokens, or 95%) — not suprisingly, given that it is very frequent in both numbers, while the other markers represented in the data are for the most part confined to the singular.

In the nominative singular — the only form in the paradigm in which, historically, the ending *-(e)n* does not belong — the nouns that occur most frequently with *-(e)n* belong to Group 3, though there are also a few nominative singular forms with this marker in Groups 2 and 4 (see table 4.17). The proportion of *-(e)n* tokens in the nominative singular is highest in Group 3a; *Brunnen*, which has less *-(e)n* than other Group 3a nouns, and *Backe*, whose only nominative singular token ends in *-(e)n*, are exceptions in this regard. The ending *-(e)n* never appears in the nominative singular of nouns in Group 1.

*-(e)n* is attested in the nominative singular of weak masculine nouns from Period 1 onward (table 4.17); the first nouns to adopt it are *Bogen, Garten, Name, Schade/n, and Schmerz*, followed by *Brunnen, Friede/n, Wille/n, and Schatten* in Period 2 and *Kasten and Tropfen* in Period 4. *Funke/n* and *Fels/en* are late adopters; neither has *-(e)n* in the nominative singular until the 17<sup>th</sup> century. Tokens of nouns in Groups 2 and 4 with *-(e)n* in the nominative singular disappear from the corpus after 1750 (Period 8), leaving only Group 3 nouns.

In Group 3b, all nouns except *Schade/n* have *-e/ø* more frequently than *-(e)n* throughout. The values are somewhat closer together for *Funke/n* than for the other nouns; as we have seen, recent studies have shown the two forms *Funke* and *Funken* to be about equally frequent (see 1.3.5.2).

#### 4.4.2 *-e/ø*

44% of all tokens (13,404/30,497) either end in *-e* (e.g., *mensche*) or have no ending at all (*-ø*, e.g., *mensch*), and do not have umlaut. Like tokens ending in *-(e)n*, they occur with about the same frequency in all periods (table 4.14). The majority (about 80%) lack an ending entirely; only about 19% end in *-e* (table 4.19).

The dominance of *e*-less forms in this category is striking, and the conditioning factors discussed below do not suffice to explain it. In addition to these triggers, there are at least two other factors at work here:

1. The two most frequent nouns in the corpus, *Herr* (8,732 tokens) and *Mensch* (5,962 tokens), have lost their final *-e* en route to the modern language, and both nouns occur much more frequently without *-e* than with it. From Period 3 onward, forms of *Herr* and *Mensch* ending in *-e* are extremely rare, accounting for no more than 6% of all *-e/ø* tokens of these nouns in any period. In Periods 8–11, these forms occur only in verse texts.
2. In ENHG, and particularly prior to 1600, the corpus shows a heavy bias in favor of texts from the southern part of the German-speaking region, where apocope of *-e* was, and still is, the norm. Texts from the Alemannic and Bavarian dialect regions (Upper German) exhibit apocope more or less consistently, whereas writers from further north (Middle German) typically default to the unapocoped form. Merswin, Mandeville/Velser, the *Sociabilis*, Schiltberger, and Luther are exceptions here. Table 4.18 shows the distribution of *-e* and *-ø* in each text from the first five periods (1350–1600); texts from the Middle German region are marked in boldface. All texts are listed by the shortened titles which I have assigned to them for computational purposes; more detailed information about each text, including the complete title and provenance, can be found in appendix A.

Table 4.16. Distribution of *-en* and *-n* by number and case (all periods; prose and verse)

Number	Case	<i>-en</i> (%)	<i>-n</i> (%)	Total ( <i>n</i> )
Singular	N	99.6	0.4	<b>449</b>
	A	92	8	<b>3,755</b>
	D	87	13	<b>4,070</b>
	G	80	20	<b>1,666</b>
	?	91	9	<b>55</b>
	<b>All</b>	<b>89</b>	<b>11</b>	<b>9,995</b>
Plural	N	91	9	<b>2,330</b>
	A	97	3	<b>1,154</b>
	D	93	7	<b>1,295</b>
	G	95	5	<b>911</b>
	?	96	4	<b>255</b>
	<b>All</b>	<b>93</b>	<b>7</b>	<b>5,945</b>
?	N	100	0	<b>10</b>
	A	98	2	<b>123</b>
	D	99	1	<b>168</b>
	G	100	0	<b>9</b>
	?	98	2	<b>190</b>
	<b>All</b>	<b>98</b>	<b>2</b>	<b>500</b>
<b>All forms (<i>n</i>)</b>		<b>14,907</b>	<b>1,533</b>	<b>16,440</b>
<b>All forms (%)</b>		<b>91</b>	<b>9</b>	

Unlike the ending *-(e)n*, which is most common in the oblique singular forms and in the plural, the endings *-e* and *-ø* occur mainly in the nominative singular, which accounts for 85% of all tokens with these markers (11,512/13,404; see tables 4.13 and 4.19). It is thus not surprising

that these endings, like the nominative case (see 4.2 above), make up a greater share of verse than of prose tokens (table 4.15).

Table 4.17. Emergence of *-(e)n* in the nominative singular of nouns in Groups 2, 3, and 4 (prose and verse)

Grp	Noun	Period											Total <i>-(e)n</i>	Total N. Sg.	% <i>-(e)n</i>	
		1	2	3	4	5	6	7	8	9	10	11				
2	<i>Schmerz</i>	<i>-(e)n</i>	2	—	1	—	1	5	—	7	—	—	—	16	227	7
		<i>-e/∅</i>	12	7	9	6	1	21	21	29	28	32	45			
	<i>Bogen</i>	<i>-(e)n</i>	1	—	2	—	—	37	4	5	7	4	6	66	69	96
		<i>-e/∅</i>	—	1	—	1	—	1	—	—	—	—	—			
	<i>Brunnen</i>	<i>-(e)n</i>	—	1	—	1	5	5	2	3	4	6	11	38	153	25
		<i>-e/∅</i>	21	14	18	7	5	10	26	9	1	2	2			
3a	<i>Garten</i>	<i>-(e)n</i>	1	3	5	1	3	3	13	7	8	22	5	71	108	66
		<i>-e/∅</i>	14	4	9	5	3	2	—	—	—	—	—			
	<i>Kasten</i>	<i>-(e)n</i>	—	—	—	1	1	1	2	—	—	1	—	6	11	55
		<i>-e/∅</i>	—	2	—	2	—	1	—	—	—	—	—			
	<i>Schatten</i>	<i>-(e)n</i>	—	1	1	2	4	9	15	13	16	18	16	95	113	84
		<i>-e/∅</i>	2	3	5	—	1	2	—	3	—	—	2			
-----																
	<i>Buchstabe</i>	<i>-(e)n</i>	—	—	—	—	—	—	—	—	—	1	—	1	18	6
		<i>-e/∅</i>	1	1	1	1	1	1	3	2	3	1	2			
	<i>Friede/n</i>	<i>-(e)n</i>	—	1	—	—	2	—	2	1	2	4	5	17	199	9
		<i>-e/∅</i>	13	21	31	10	11	24	11	7	19	11	24			
3b	<i>Funke/n</i>	<i>-(e)n</i>	—	—	—	—	—	—	1	1	3	3	2	10	29	34
		<i>-e/∅</i>	1	—	—	—	—	—	2	1	6	6	3			
	<i>Name/n</i>	<i>-(e)n</i>	2	—	7	3	8	—	1	3	—	1	4	29	375	8
		<i>-e/∅</i>	40	39	27	28	31	46	44	13	28	19	31			
	<i>Schade/n</i>	<i>-(e)n</i>	1	3	3	3	11	3	4	1	3	2	1	35	116	30
		<i>-e/∅</i>	11	23	24	7	7	4	3	2	—	—	—			
	<i>Wille/n</i>	<i>-(e)n</i>	—	4	2	2	5	—	3	1	—	—	—	17	385	4
		<i>-e/∅</i>	72	42	32	29	32	21	22	22	15	25	56			
-----																
	<i>Drache/n</i>	<i>-(e)n</i>	—	—	—	—	—	—	—	—	—	—	1	1	41	2
		<i>-e/∅</i>	2	2	1	4	9	3	6	2	2	2	7			
3c	<i>Fels/en</i>	<i>-(e)n</i>	—	—	—	—	—	1	3	1	—	3	1	9	67	13
		<i>-e/∅</i>	7	3	1	—	5	5	10	5	7	7	8			
	<i>Tropf/en</i>	<i>-(e)n</i>	—	—	—	1	1	1	2	1	4	12	11	33	83	40
		<i>-e/∅</i>	—	2	1	3	4	2	19	2	5	7	5			
	<i>Backe</i>	<i>-(e)n</i>	—	—	—	—	—	—	—	1	—	—	—	1	1	100
		<i>-e/∅</i>	—	—	—	—	—	—	—	—	—	—	—			
4	<i>Fahne</i>	<i>-(e)n</i>	—	—	—	—	2	—	—	—	—	—	—	2	31	6
		<i>-e/∅</i>	1	4	—	3	—	2	—	—	4	6	9			
	<i>Rebe</i>	<i>-(e)n</i>	—	—	1	—	—	—	—	—	—	—	—	1	13	8
		<i>-e/∅</i>	—	2	1	—	—	—	—	—	2	4	3			
	<i>Schlange</i>	<i>-(e)n</i>	—	—	—	—	—	—	1	—	—	—	—	1	87	1
		<i>-e/∅</i>	3	—	14	9	18	7	15	2	5	6	7			
<b>Total <i>-(e)n</i> (all 37 nouns)</b>			<b>7</b>	<b>13</b>	<b>22</b>	<b>14</b>	<b>43</b>	<b>65</b>	<b>53</b>	<b>45</b>	<b>47</b>	<b>77</b>	<b>63</b>	<b>433</b>	<b>11,962</b>	<b>4</b>

Note: All numbers in this table except those in the last column represent sample sizes (*n*). For each noun, the number of nominative singular tokens ending in *-e/∅* is provided under that of tokens in *-(e)n* for comparison.

Of the 1,892 tokens ending in *-e* or *-ø* that are not in the nominative singular, 1,730<sup>91</sup> are singular but in cases other than the nominative (the dative and accusative are best represented here), while only 107 are plural; 33 are singular with unknown case, while 22 have unknown number (table 4.19). In the oblique singular forms, the marker *-ø* dominates; 78% of all oblique singular tokens with the markers *-e/ø* (1,344/1,730) have no ending. The two endings are evenly distributed in the plural; *-ø* is found mainly in the nominative, while *-e* is more frequent in the other cases. Finally, among tokens with unknown number, *-e* is more widespread than *-ø*.

Table 4.18. Distribution of *-e* and *-ø* in Periods 1–5, by text (all cases; both numbers)

Period	Text	<i>-e</i>	<i>-ø</i>	Period	Text	<i>-e</i>	<i>-ø</i>
1	Merswin	532	40	4	<b>Hutten</b>	<b>0</b>	<b>18</b>
	Schach	0	63		Günzburg	2	43
	Langenstein	0	378		Bote	2	117
	Mandeville	94	56		<b>Luther</b>	<b>2</b>	<b>60</b>
	<b>SGPred</b>	<b>206</b>	<b>171</b>		BHGO	6	13
	<b>*Väterbuch</b>	<b>97</b>	<b>19</b>		Sachs	13	147
	Kaufringer	37	168		Birck	12	246
	<b>*Minneburg</b>	<b>53</b>	<b>23</b>		Bletz	9	148
	Teichner	9	139		Murner	0	46
Walex	2	126	Wickram	1	63		
2	Schiltberger	82	62	Losbuch	0	5	
	Ingold	0	144	Goldtfaden	0	159	
	<b>*Saaz</b>	<b>64</b>	<b>3</b>	Faust	1	123	
	Kottanerin	10	102	Goetz	20	208	
	<b>*Kues</b>	<b>42</b>	<b>29</b>	ZimmChron	82	352	
	BasChron	26	121	AGB	3	18	
	BamChron	66	139	Hager	9	112	
	Wittenwiler	24	215	Ayrer	1	137	
	Oswald	0	156	Fischart	9	159	
	<b>Rothe</b>	<b>70</b>	<b>13</b>	Ruoff	0	195	
Sociabilis	12	9	Murer	0	154		
<b>*Alexius</b>	<b>11</b>	<b>3</b>					
3	Eyb	17	118				
	Stret	7	217				
	Bbeisp	0	162				
	AugSit	18	98				
	Schedel	1	53				
	Brant	3	95				
	Folz	8	205				
	Beheim	10	211				
	<b>*Pilg</b>	<b>34</b>	<b>1</b>				
Fuetrer	7	117					

*Note:* Texts that are entirely or partly composed in Middle German dialects are marked in boldface. Texts marked with an asterisk (\*) originated in the Middle German dialect region, but not (according to König 1978: 159) in the part of that region which was not affected by apocope; in these cases, an alternative explanation for the preservation of *-e* may be necessary.

<sup>91</sup> The oblique singular count includes 20 tokens with question marks in the case category for which the possible case options did not include the nominative; see 4.2.

About half of all oblique singular tokens ending in *-e* or *-ø* (1,020/1,730, or 60%) are forms of nouns in Groups 1b, 2, and 4 (table 4.20). Also well represented are the Group 3 nouns *Friede/n* and *Fels/en*, both of which were once strong, and *Name/n*, which in 15<sup>th</sup>- and 16<sup>th</sup>-century poetic texts occurs frequently in the collocation *mit nam* (prepositional phrases with *mit* account for almost 40% of singular non-nominative forms of *Name/n* ending in *-e/ø*). Otherwise, Group 3 nouns typically do not occur with *-e/ø* in the oblique singular forms. In general, the quantity of oblique singular tokens with *-e/ø* in Groups 2 and 4 increases over time relative to that of *-(e)n* as the nouns shift into other inflectional classes, while that of nouns in other groups either remains constant or decreases.

As expected, most of the 107 tokens with *-e/ø* in the plural are forms of nouns that were once strong or have become strong: *Fels/en* (22 tokens), *Leichnam* (20 tokens), *Held* (11 tokens), *Herzog* (eight tokens), *Schelm* (five tokens) (see table 4.21). Many of these forms — particularly those ending in *-ø* — occur in lists (including binomial expressions) in which some items have plural markers and others do not, e.g., “Ir kaiser, künig, **herzog**, freien...”; “alle chönig und **hertzog**, freyen und graven.” The 15 plural tokens of *Name/n* ending in *-e* are all forms of the animate compounds *wibes-/froewennamme* and *mannes namme*, denoting women and men, respectively (see 3.2.3). Tokens in this category are concentrated in the first six periods — the four nouns that have *-e* in the plural in the modern language (*Hahn*, *Herzog*, *Leichnam*, *Schelm*) are very infrequent in the plural — and almost all strong plural tokens of *Name/n* (15/15) and *Fels/en* (17/22) are in Merswin’s *Buch von den neun Felsen* (Period 1).

Table 4.19. Distribution of *-e* and *-ø* by number and case (all periods; prose and verse)

Number	Case	<i>-e</i> (%)	<i>-ø</i> (%)	Total ( <i>n</i> )
Singular	N	19	81	<b>11,512</b>
	A	17	83	<b>874</b>
	D	28	72	<b>733</b>
	G	24	76	<b>103</b>
	?	11	89	<b>53</b>
	<b>All</b>	<b>19</b>	<b>81</b>	<b>13,275</b>
Plural	N	40	60	<b>52</b>
	A	58	42	<b>31</b>
	D	50	50	<b>4</b>
	G	56	44	<b>9</b>
	?	55	45	<b>11</b>
	<b>All</b>	<b>49</b>	<b>51</b>	<b>107</b>
?	N	—	—	<b>0</b>
	A	82	18	<b>11</b>
	D	50	50	<b>6</b>
	G	100	0	<b>1</b>
	?	75	25	<b>4</b>
	<b>All</b>	<b>73</b>	<b>27</b>	<b>22</b>
<b>All forms (<i>n</i>)</b>		<b>2,596</b>	<b>10,808</b>	<b>13,404</b>
<b>All forms (%)</b>		<b>19</b>	<b>81</b>	

Among question-mark number tokens, as in the plural, *Name/n* is very frequent, accounting for more than half of all tokens (13/23, or 57%); most tokens of *Name/n* (9/13) are forms of *wibesnamme* ending in *-e* — again, all from Merswin. The remaining tokens are forms



of *Mensch* (four tokens), *Schmerz* (two tokens), *Hahn* (one token), *Graf* (one token), *Held* (one token), and *Wille* (one token). All but three tokens in this category are unpreceded.

Table 4.20. Diachronic distribution of tokens ending in *-e/ø* in the oblique singular forms, by noun (prose and verse)

Grp	Noun	Period											Total <i>-e/ø</i>	Total Obl. Sg.*	% <i>-e/ø</i>	
		1	2	3	4	5	6	7	8	9	10	11				
1a	<i>Affe</i>	<i>-e/ø</i>	—	—	—	—	—	—	—	—	—	—	—	0	27	0
		<i>-(e)n</i>	5	2	6	—	5	—	1	3	—	2	3			
	<i>Bote</i>	<i>-e/ø</i>	—	1	—	—	—	—	—	—	—	—	—	1	87	1
		<i>-(e)n</i>	16	26	10	2	5	7	10	1	2	2	2			
	<i>Bube</i>	<i>-e/ø</i>	—	—	—	—	—	—	2	—	—	—	—	2	52	4
		<i>-(e)n</i>	—	3	1	4	25	1	6	—	5	3	—			
	<i>Knabe</i>	<i>-e/ø</i>	—	—	—	—	—	—	—	—	—	—	—	0	179	0
<i>-(e)n</i>		16	10	13	12	18	31	8	17	11	26	15				
<i>Löwe</i>	<i>-e/ø</i>	—	2	—	—	—	—	2	—	2	—	—	6	233	3	
	<i>-(e)n</i>	4	2	90	4	46	16	16	9	12	4	10				
<i>Pfaffe</i>	<i>-e/ø</i>	1	—	—	1	—	—	1	—	—	1	—	4	74	5	
	<i>-(e)n</i>	28	4	2	27	5	1	1	—	—	1	1				
1b	<i>Bär</i>	<i>-e/ø</i>	—	—	—	—	—	—	4	—	1	—	2	7	23	30
		<i>-(e)n</i>	1	1	1	1	5	—	—	3	4	—	—			
	<i>Graf</i>	<i>-e/ø</i>	—	19	2	1	42	—	2	2	—	—	3	71	359	20
		<i>-(e)n</i>	—	63	1	10	118	—	7	1	13	55	17			
	<i>Held</i>	<i>-e/ø</i>	3	—	11	—	—	6	4	7	4	1	2	38	114	33
		<i>-(e)n</i>	—	—	12	—	5	16	7	16	8	3	5			
	<i>Herr</i>	<i>-e/ø</i>	4	28	13	10	53	3	5	28	—	—	2	146	2,555	6
<i>-(e)n</i>		507	407	246	151	500	129	126	123	84	75	54				
<i>Mensch</i>	<i>-e/ø</i>	13	7	4	2	6	5	3	—	—	1	7	48	1,538	3	
	<i>-(e)n</i>	342	75	268	74	97	74	73	179	149	59	93				
<i>Prinz</i>	<i>-e/ø</i>	—	—	—	—	—	2	12	2	—	1	—	17	216	8	
	<i>-(e)n</i>	—	1	—	—	1	28	135	5	5	5	—				
2	<i>Hahn</i>	<i>-e/ø</i>	1	—	—	6	1	2	—	6	4	5	2	27	39	69
		<i>-(e)n</i>	—	—	1	3	2	1	—	1	3	—	—			
	<i>Herzog</i>	<i>-e/ø</i>	5	22	2	7	34	—	3	—	2	9	2	86	153	56
		<i>-(e)n</i>	3	21	10	1	18	—	—	—	—	—	—			
	<i>Leichnam</i>	<i>-e/ø</i>	30	19	36	—	1	6	1	2	4	2	5	106	143	74
		<i>-(e)n</i>	26	1	—	—	—	—	—	—	—	—	—			
	<i>Schelm</i>	<i>-e/ø</i>	—	—	—	—	3	5	4	1	—	8	—	21	31	68
<i>-(e)n</i>		—	1	2	2	2	—	2	—	1	—	—				
<i>Schmerz</i>	<i>-e/ø</i>	—	8	11	16	14	13	29	50	55	83	60	339	472	72	
	<i>-(e)n</i>	11	11	18	9	10	9	10	18	1	—	—				
3a	<i>Bogen</i>	<i>-e/ø</i>	—	—	—	—	—	—	—	—	—	—	0	170	0	
		<i>-(e)n</i>	9	10	9	3	3	47	13	10	14	22	11			
	<i>Brunnen</i>	<i>-e/ø</i>	4	2	5	2	1	2	14	—	—	—	7	37	273	14
		<i>-(e)n</i>	20	14	66	19	16	31	10	19	7	13	11			
	<i>Garten</i>	<i>-e/ø</i>	—	1	—	—	—	—	—	—	—	—	—	1	435	0
		<i>-(e)n</i>	38	27	24	18	66	47	54	17	32	49	45			
	<i>Kasten</i>	<i>-e/ø</i>	—	—	—	—	—	—	—	—	—	—	—	0	43	0
<i>-(e)n</i>		—	—	1	10	6	2	8	3	5	4	4				
<i>Schatten</i>	<i>-e/ø</i>	—	—	—	—	—	—	—	—	—	—	—	0	180	0	
	<i>-(e)n</i>	1	3	5	5	5	30	22	25	28	24	23				

Note: Continued on next page.

Table 4.20 (continued)

Grp	Noun	Period											Total -e/ø	Total Obl. Sg.*	% -e/ø	
		1	2	3	4	5	6	7	8	9	10	11				
3b	<i>Buchstabe</i>	-e/ø	2	—	3	1	—	—	1	—	—	—	—	7	33	21
		-(e)n	—	1	1	7	1	4	2	4	1	1	3			
	<i>Friede/n</i>	-e/ø	43	90	28	45	40	25	16	6	7	—	3	303	641	47
		-(e)n	—	17	16	13	32	50	27	19	33	23	33			
	<i>Funke/n</i>	-e/ø	—	—	—	—	—	—	—	—	—	—	—	0	14	0
		-(e)n	—	1	—	—	—	—	2	—	2	3	5			
	<i>Name/n</i>	-e/ø	8	6	16	13	23	2	5	—	—	—	—	73	1,154	6
		-(e)n	62	49	160	125	179	86	83	75	69	58	46			
	<i>Schade/n</i>	-e/ø	2	3	12	2	4	—	—	—	—	—	—	23	535	4
		-(e)n	44	112	66	92	71	21	23	30	4	6	5			
	<i>Wille/n</i>	-e/ø	2	5	8	9	17	1	1	—	—	3	6	52	1,370	4
		-(e)n	269	171	200	143	97	102	78	47	40	38	45			
3c	<i>Drache/n</i>	-e/ø	—	1	—	—	—	—	2	—	—	—	3	50	6	
		-(e)n	3	2	5	8	9	2	8	1	3	1				3
	<i>Fels/en</i>	-e/ø	123	6	3	1	5	3	12	4	4	15	12	188	292	64
		-(e)n	4	—	8	2	11	8	10	17	17	5	13			
	<i>Tropf/en</i>	-e/ø	2	—	—	—	—	1	2	—	2	3	—	10	61	16
		-(e)n	3	4	—	2	2	3	6	7	6	9	9			
	<i>Backe</i>	-e/ø	1	—	—	—	—	—	—	—	—	—	2	3	14	21
		-(e)n	—	3	3	—	1	—	3	1	—	—	—			
	<i>Fahne</i>	-e/ø	1	3	7	1	—	5	8	2	6	5	10	48	61	79
		-(e)n	—	1	—	—	7	4	1	—	—	—	—			
	<i>Grille</i>	-e/ø	—	—	—	—	—	—	—	—	—	2	—	2	4	50
		-(e)n	—	—	1	1	—	—	—	—	—	—	—			
<i>Rebe</i>	-e/ø	5	—	—	—	—	—	1	—	1	3	4	14	21	67	
	-(e)n	1	3	3	—	—	—	—	—	—	—	—				
<i>Schlange</i>	-e/ø	—	—	1	2	2	3	8	11	5	6	5	43	87	49	
	-(e)n	1	2	15	6	12	3	5	—	—	—	—				
<i>Schnecke</i>	-e/ø	—	—	—	—	2	—	2	—	—	—	—	4	15	27	
	-(e)n	—	—	—	1	1	9	—	—	—	—	—				
<b>Total -e/ø (all 37 nouns)</b>			<b>250</b>	<b>223</b>	<b>162</b>	<b>119</b>	<b>248</b>	<b>84</b>	<b>144</b>	<b>121</b>	<b>97</b>	<b>148</b>	<b>134</b>	<b>1,730</b>	<b>11,748</b>	<b>15</b>

Note: All numbers in this table except those in the last column represent sample sizes (*n*). For comparison, the values for -(e)n are provided below those for -e/ø in each row.

\*The total oblique singular count includes genitive singular tokens ending in -(e)(n)s, and is thus often greater than the sum of the values for -e/ø and -(e)n given in the middle columns of this table, particularly in Groups 2 and 3.

In the dative singular, in some instances, the *-e* may be a strong dative case marker rather than part of an uninflected weak noun stem ending in *-e*; this is especially likely with nouns that either were once strong (e.g., *Held*) or have become strong over time (e.g., *Leichnam*). In addition, some tokens with *-e* from the earlier periods may be forms ending in *-en* that are missing nasal bars. Unfortunately, it is impossible to identify these in most cases.

Regional variation may also account for some of the plural and oblique singular forms ending in *-e* in the earlier periods: in many German dialects, including most Alemannic dialects, final *-n* is deleted across the board. However, none of the texts in the corpus which have *-e* in non-nominative-singular forms of (former) weak masculine nouns also drop *-n* in other environments (e.g., in verb forms), which suggests that other factors are likely responsible for the loss of *-n* in these cases.

Table 4.21. Diachronic distribution of *-e/ø* in the plural (no umlaut), by noun (prose and verse)

Grp	Noun	Period											Total <i>-e/ø</i>	Total Pl.*	% <i>-e/ø</i>	
		1	2	3	4	5	6	7	8	9	10	11				
1a	<i>Löwe</i>	<i>-e/ø</i>	3	—	1	—	—	—	—	—	—	—	—	4	69	6
		<i>-(e)n</i>	10	9	6	3	4	9	7	5	3	4	4	1	203	0.5
1a	<i>Pfaffe</i>	<i>-e/ø</i>	—	—	—	1	—	—	—	—	—	—	—	1	41	7
		<i>-(e)n</i>	26	21	11	114	5	12	—	2	2	2	7	3	163	1
1b	<i>Bär</i>	<i>-e/ø</i>	—	2	—	—	—	1	—	—	—	—	—	1	237	5
		<i>-(e)n</i>	—	2	5	3	4	8	4	8	2	1	1	7	1,344	1
1b	<i>Graf</i>	<i>-e/ø</i>	—	1	—	—	—	—	—	—	—	—	—	1	1,811	0.2
		<i>-(e)n</i>	6	31	1	5	102	—	2	1	3	6	5	2	34	24
1b	<i>Held</i>	<i>-e/ø</i>	5	3	3	—	—	—	—	—	—	—	—	11	22	91
		<i>-(e)n</i>	1	4	18	2	7	70	32	49	16	14	13	5	31	16
1b	<i>Herr</i>	<i>-e/ø</i>	—	5	—	—	—	1	1	—	—	—	—	1	346	0.3
		<i>-(e)n</i>	87	504	66	125	187	101	60	25	48	71	53	1	1,344	1
2	<i>Mensch</i>	<i>-e/ø</i>	1	1	—	—	—	—	—	—	—	—	—	2	1,811	0.2
		<i>-(e)n</i>	367	45	229	158	69	166	113	213	191	117	137	2	1,811	0.2
2	<i>Herzog</i>	<i>-e/ø</i>	—	4	1	1	—	1	—	1	—	—	—	8	34	24
		<i>-(e)n</i>	4	4	2	1	13	—	—	1	—	—	—	8	34	24
2	<i>Leichnam</i>	<i>-e/ø</i>	1	3	3	1	—	8	—	—	—	1	3	20	22	91
		<i>-(e)n</i>	—	—	—	—	—	1	—	—	—	—	1	20	22	91
2	<i>Schelm</i>	<i>-e/ø</i>	—	—	—	—	—	1	—	—	—	3	1	5	31	16
		<i>-(e)n</i>	—	—	—	6	2	1	14	—	2	1	—	5	31	16
2	<i>Schmerz</i>	<i>-e/ø</i>	—	—	—	—	—	1	—	—	—	—	—	1	346	0.3
		<i>-(e)n</i>	4	1	4	—	4	35	51	89	52	63	42	1	346	0.3
3a	<i>Brunnen</i>	<i>-e/ø</i>	1	—	—	—	—	—	—	—	—	—	—	1	87	1
		<i>-(e)n</i>	11	2	10	6	3	11	6	13	1	7	9	1	87	1
3a	<i>Garten</i>	<i>-e/ø</i>	—	—	—	—	2	—	—	—	—	—	—	2	107	2
		<i>-(e)n</i>	4	11	5	—	5	2	3	1	—	—	—	2	107	2
3b	<i>Name/n</i>	<i>-e/ø</i>	14	—	—	1	—	—	—	—	—	—	—	15	203	7
		<i>-(e)n</i>	23	14	20	12	21	12	8	28	17	13	20	15	203	7
3c	<i>Fels/en</i>	<i>-e/ø</i>	19	—	2	—	—	—	1	—	—	—	—	22	163	13
		<i>-(e)n</i>	8	—	1	4	6	26	9	33	29	14	11	22	163	13
4	<i>Grille</i>	<i>-e/ø</i>	—	—	—	—	1	—	—	—	—	—	—	1	47	2
		<i>-(e)n</i>	—	1	—	—	1	1	19	7	7	4	6	1	47	2
4	<i>Rebe</i>	<i>-e/ø</i>	1	—	—	—	—	—	—	—	—	—	—	1	75	1
		<i>-(e)n</i>	—	10	5	3	4	12	2	11	11	8	8	1	75	1
4	<i>Schlange</i>	<i>-e/ø</i>	—	—	—	—	1	—	—	—	—	—	—	1	105	1
		<i>-(e)n</i>	9	8	15	6	14	12	7	12	6	6	9	1	105	1
4	<i>Schnecke</i>	<i>-e/ø</i>	—	—	—	—	1	—	—	—	—	—	—	1	11	9
		<i>-(e)n</i>	—	1	1	1	—	1	4	2	—	—	—	1	11	9
<b>Total <i>-e/ø</i> (all 37 nouns)</b>			<b>45</b>	<b>19</b>	<b>10</b>	<b>4</b>	<b>5</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>108</b>	<b>5,099</b>	<b>2</b>

Note: All numbers in this table except those in the last column represent sample sizes (*n*). For each noun, the number of nominative singular tokens ending in *-(e)n* is provided under that of tokens in *-e/ø* for comparison.

\* The total plural count includes tokens with umlaut and with endings other than *-e/ø* and *-(e)n*, and is thus sometimes greater than the sum of the values given in the middle columns of this table.

#### 4.4.3 *-(e)(n)s*

475 tokens (about 1% of all tokens) end in *-s* (either *-(e)s* or *-(e)ns*). Of these, the vast majority (380/475, or 80%) end in *-ens*; 56 (12%) end in *-es*, 38 (8%) end in just *-s*, and one token ends in just *-ns*. These forms are limited to the genitive singular, and together they account for about 21% of all genitive singular forms in the data (table 4.13). Like the genitive case (compare table 4.6), they are found mainly (308, or 65%) in prose texts (table 4.15).

Tokens with *-(e)(n)s* occur in all groups of nouns except Group 4, but are most numerous in Groups 2 and 3, and particularly in Group 3b (table 4.22). As expected, the marker *-(e)s* appears mainly in Group 2, while *-(e)ns* is more common in Groups 1 and 3; exceptions are *Schmerz*, which has slightly more *-(e)ns* than *-(e)s*, and *Friede/n*, which regularly has both *-(e)ns* and *-(e)s*.

Genitive singular forms ending in *-(e)(n)s* are rare in the first two periods; only *Leichnam*, *Schade/n*, *Wille/n*, and the formerly strong nouns *Friede/n* and *Fels/en* have these markers more than twice in either of these periods (table 4.23). In Groups 2 and 3, in general, their frequency increases over time relative to that of *-(e)n*, while in Group 1, apart from a few early tokens of *Mensch*, *Löwe*, and the formerly strong *Held*, they are confined to Periods 5–8.

Table 4.22. Distribution of inflectional markers in the genitive singular, by noun (all periods; prose and verse)

Group	Noun	-(e)ns (%)	-(e)s (%)	-(e)n (%)	-e/ø (%)	Total G. Sg. (n)
1a	<i>Affe</i>	0	0	100	0	3
	<i>Bote</i>	27	0	73	0	11
	<i>Bube</i>	29	0	71	0	7
	<i>Knabe</i>	6	0	94	0	31
	<i>Löwe</i>	20	2	78	0	65
	<i>Pfaffe</i>	0	0	100	0	7
1b	<i>Bär</i>	0	0	100	0	3
	<i>Graf</i>	1	1	86	13	104
	<i>Held</i>	3	10	87	0	31
	<i>Herr</i>	1	0	94	5	818
	<i>Mensch</i>	1	0	99	0	494
	<i>Prinz</i>	27	0	69	4	71
2	<i>Hahn</i>	0	33	67	0	3
	<i>Herzog</i>	0	28	32	40	50
	<i>Leichnam</i>	0	77	8	15	13
	<i>Schelm</i>	0	0	100	0	1
	<i>Schmerz</i>	49	28	15	9	47
3a	<i>Bogen</i>	95	0	5	0	20
	<i>Brunnen</i>	40	0	60	0	25
	<i>Garten</i>	57	0	43	0	28
	<i>Kasten</i>	—	—	—	—	0
	<i>Schatten</i>	80	0	20	0	10
3b	<i>Buchstabe</i>	33	0	67	0	3
	<i>Friede/n</i>	42	48	8	2	84
	<i>Funke/n</i>	100	0	0	0	1
	<i>Name/n</i>	88	1	11	0	100
	<i>Schade/n</i>	79	2	17	2	47
	<i>Wille/n</i>	79	2	19	0	107
3c	<i>Drache/n</i>	15	0	85	0	13
	<i>Fels/en</i>	24	29	41	6	17
4	<i>Tropfen</i>	—	—	—	—	0
	<i>Backe</i>	0	0	100	0	1
	<i>Fahne</i>	0	0	0	100	1
	<i>Grille</i>	0	0	0	100	1
	<i>Rebe</i>	0	0	14	86	7
	<i>Schlange</i>	0	0	58	42	19
	<i>Schnecke</i>	0	0	0	100	1
	<b>All nouns</b>	<b>17</b>	<b>4</b>	<b>74</b>	<b>5</b>	<b>2,244</b>

Note: For comparison, the values for -(e)n and -e/ø are given here alongside those for -(e)(n)s.

Table 4.23. Distribution of *-(e)(n)s* and *-(e)n* in the genitive singular, by noun and period (Groups 1, 2, and 3; prose and verse)

Grp	Noun	Period											Total <i>-(e)(n)s</i>		
		1	2	3	4	5	6	7	8	9	10	11			
1a	<i>Affe</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	—	—	—	—	—	—	0
		<i>-(e)n</i>	1	—	—	—	2	—	—	—	—	—	—	—	—
	<i>Bote</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	3	—	—	—	—	—	3
		<i>-(e)n</i>	2	1	—	—	—	2	1	—	1	1	—	—	—
	<i>Bube</i>	<i>-(e)(n)s</i>	—	—	—	—	—	1	1	—	—	—	—	—	2
		<i>-(e)n</i>	—	1	—	1	1	—	—	—	—	2	—	—	—
	<i>Knabe</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	1	1	—	—	—	—	—
		<i>-(e)n</i>	1	—	1	2	3	2	1	8	1	7	3	—	2
	<i>Löwe</i>	<i>-(e)(n)s</i>	2	—	6	—	3	—	3	—	—	—	—	—	14
		<i>-(e)n</i>	—	—	27	1	4	—	7	2	3	1	6	—	—
<i>Pfaffe</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	—	—	—	—	—	—	0	
	<i>-(e)n</i>	1	—	—	4	2	—	—	—	—	—	—	—	—	
1b	<i>Bär</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	—	—	—	—	—	—	0
		<i>-(e)n</i>	—	—	1	—	1	—	—	—	1	—	—	—	—
	<i>Graf</i>	<i>-(e)(n)s</i>	—	—	—	—	2	—	—	—	—	—	—	—	2
		<i>-(e)n</i>	—	23	—	3	35	—	—	1	4	18	5	—	—
	<i>Held</i>	<i>-(e)(n)s</i>	1	—	—	2	—	1	—	—	—	—	—	—	4
		<i>-(e)n</i>	—	—	1	—	1	8	3	5	4	2	3	—	—
	<i>Herr</i>	<i>-(e)(n)s</i>	—	—	—	—	3	1	1	1	—	—	—	—	6
		<i>-(e)n</i>	116	91	68	51	169	33	40	45	19	26	14	—	—
	<i>Mensch</i>	<i>-(e)(n)s</i>	2	1	—	1	—	1	1	1	—	—	—	—	7
		<i>-(e)n</i>	68	26	115	35	28	12	20	86	45	26	26	—	—
<i>Prinz</i>	<i>-(e)(n)s</i>	—	—	—	—	—	1	18	—	—	—	—	—	19	
	<i>-(e)n</i>	—	—	—	—	1	6	39	3	—	—	—	—	—	
2	<i>Hahn</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	—	—	—	1	—	1	
		<i>-(e)n</i>	—	—	1	—	—	—	—	1	—	—	—	—	—
	<i>Herzog</i>	<i>-(e)(n)s</i>	—	—	—	—	1	—	—	—	3	9	1	—	14
		<i>-(e)n</i>	—	8	4	—	4	—	—	—	—	—	—	—	—
	<i>Leichnam</i>	<i>-(e)(n)s</i>	—	5	5	—	—	—	—	—	—	—	—	—	10
		<i>-(e)n</i>	1	—	—	—	—	—	—	—	—	—	—	—	—
	<i>Schelm</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	—	—	—	—	—	—	0
		<i>-(e)n</i>	—	—	—	—	—	—	—	—	1	—	—	—	—
	<i>Schmerz</i>	<i>-(e)(n)s</i>	1	1	4	2	4	1	5	2	6	5	5	—	36
		<i>-(e)n</i>	1	—	5	1	—	—	—	—	—	—	—	—	—
3a	<i>Bogen</i>	<i>-(e)(n)s</i>	—	1	1	—	—	13	—	—	2	1	1	—	19
		<i>-(e)n</i>	—	—	1	—	—	—	—	—	—	—	—	—	—
	<i>Brunnen</i>	<i>-(e)(n)s</i>	—	—	—	—	—	2	2	1	2	—	3	—	10
		<i>-(e)n</i>	—	—	13	1	—	—	—	1	—	—	—	—	—
	<i>Garten</i>	<i>-(e)(n)s</i>	—	—	—	—	—	3	1	1	2	6	3	—	16
		<i>-(e)n</i>	2	1	3	1	1	3	1	—	—	—	—	—	—
	<i>Kasten</i>	<i>-(e)(n)s</i>	—	—	—	—	—	—	—	—	—	—	—	—	0
		<i>-(e)n</i>	—	—	—	—	—	—	—	—	—	—	—	—	—
	<i>Schatten</i>	<i>-(e)(n)s</i>	—	—	—	2	—	1	1	2	—	1	1	—	8
		<i>-(e)n</i>	—	—	1	—	—	1	—	—	—	—	—	—	—

Note: Continued on next page.

Table 4.23 (continued)

Grp	Noun	Period											Total -(e)(n)s	
		1	2	3	4	5	6	7	8	9	10	11		
3b	<i>Buchstabe</i>	-(e)(n)s	—	—	—	—	1	—	—	—	—	—	—	1
		-(e)n	—	—	1	1	—	—	—	—	—	—	—	—
	<i>Friede/n</i>	-(e)(n)s	6	8	10	3	6	18	3	2	6	5	8	75
		-(e)n	—	1	5	—	—	1	—	—	—	—	—	—
	<i>Funke/n</i>	-(e)(n)s	—	—	—	—	—	—	—	—	1	—	—	1
		-(e)n	—	—	—	—	—	—	—	—	—	—	—	—
	<i>Name/n</i>	-(e)(n)s	—	—	6	9	30	16	15	3	2	5	3	89
		-(e)n	2	1	2	3	1	2	—	—	—	—	—	—
	<i>Schade/n</i>	-(e)(n)s	2	12	5	5	10	1	—	3	—	—	—	38
		-(e)n	—	4	2	1	1	—	—	—	—	—	—	—
	<i>Wille/n</i>	-(e)(n)s	2	8	17	5	11	9	6	4	6	10	9	87
		-(e)n	14	1	3	—	1	—	1	—	—	—	—	—
3c	<i>Drache/n</i>	-(e)(n)s	—	—	—	—	—	—	2	—	—	—	—	
		-(e)n	1	1	2	—	2	—	2	—	1	1	1	2
	<i>Fels/en</i>	-(e)(n)s	3	—	1	—	—	2	—	2	—	1	—	9
		-(e)n	—	—	—	—	1	1	2	—	3	—	—	—
	<i>Tropfen</i>	-(e)(n)s	—	—	—	—	—	—	—	—	—	—	—	0
		-(e)n	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total -(e)(n)s (all 37 nouns)</b>			<b>19</b>	<b>36</b>	<b>55</b>	<b>29</b>	<b>71</b>	<b>71</b>	<b>63</b>	<b>23</b>	<b>30</b>	<b>44</b>	<b>34</b>	<b>475</b>

Note: All numbers in this table represent sample sizes (*n*). In each row, the values for *-(e)n* are provided below those for *-(e)(n)s* for comparison. The total number of genitive singular tokens and the percentage of *-(e)(n)s* for each noun are not included here due to space limitations; these values can be found in table 4.22. See tables 6.10 (Group 2), 7.16 (Group 3a) and 7.21 (Group 3b) for the distribution of strong *-(e)s* versus mixed *-(e)ns* endings in each period in Groups 2 and 3.

#### 4.4.4 Umlaut

168 tokens, most (155) ending in *-(e)n*, have an umlauted stem vowel. As expected, almost all of these tokens are plural (163/168, or 97%); three are singular, and two have unknown number.<sup>92</sup> Umlauted forms occur in all four cases but are most common in the oblique cases (table 4.13). Most tokens with umlaut are forms of nouns in Groups 2 and 3 (table 4.24): Umlaut with *-(e)n* occurs only in Group 3 except for one token of *Hahn* (Group 2) in the dative plural, while umlauted forms ending in *-e/ø* are about evenly distributed between the two groups (five in Group 2 versus seven in Group 3). *Garten* has the most tokens with umlaut, followed by *Schaden* and *Bogen*.

Umlauted plural forms are already attested in Period 1; their frequency increases slightly in the middle periods and diminishes again in the 18<sup>th</sup> and 19<sup>th</sup> centuries (table 4.14). There are more such forms in prose than in verse texts (table 4.15), likely because *Garten* and *Schaden*, the two nouns that have umlaut most frequently, occur more often in prose than in verse. *Garten* has umlaut in all periods, and *Schaden* in almost all; the remaining Group 3 nouns in this category begin to appear with umlaut no later than Period 6. The Group 2 nouns *Hahn* and *Herzog* do not acquire umlaut until the 18<sup>th</sup> and 19<sup>th</sup> centuries. *Schatten* only has umlaut in the singular and on tokens with indeterminate number.

<sup>92</sup> For the purposes of this study, umlaut in the singular is considered to be a spelling variant. The three singular tokens with umlaut are excluded from umlaut counts in the analysis in the later chapters.

Table 4.24. Distribution of -¨(e)n and -¨(e) by noun (all periods; prose and verse)

Group	Noun	-¨(e)n (%)	-¨(e) (%)	Total (n)
1	<i>Graf</i>	0	100	1
2	<i>Hahn</i>	20	80	5
	<i>Herzog</i>	0	100	1
3a	<i>Bogen</i>	100	0	15
	<i>Brunnen</i>	71	29	7
	<i>Garten</i>	96	4	74
	<i>Kasten</i>	100	0	4
	<i>Schatten</i>	33	67	3
3b	<i>Schade/n</i>	100	0	58
<b>All nouns</b>		<b>92</b>	<b>8</b>	<b>168</b>

Table 4.25. Emergence of umlaut in the plural in Groups 2 and 3 (prose and verse)

Grp	Noun	Period	Period											Total UL	Total Pl.	% UL
			1	2	3	4	5	6	7	8	9	10	11			
2	<i>Hahn</i>	-¨e	—	—	—	—	—	—	—	—	1	2	1	5	11	45
		-en	—	—	—	2	3	—	1	—	—	—	—			
		-¨en	—	—	—	—	—	—	—	—	—	—	1			
	<i>Herzog</i>	-e/ø	—	4	1	1	—	1	—	1	—	—	—	1	34	3
		-¨e	—	—	—	—	—	—	—	—	—	1	—			
		-en	4	4	2	1	13	—	—	1	—	—	—			
<i>Bogen</i>	-en	1	7	7	3	6	16	5	4	7	10	6	14	86	24	
	-¨en	—	—	—	—	—	13	—	1	—	—	—				
3a	<i>Brunnen</i>	-e	1	—	—	—	—	—	—	—	—	—	—	7	87	8
		-¨e/ø	—	—	—	—	—	—	2	—	—	—	—			
		-en	11	2	10	6	3	11	6	13	1	7	9			
	<i>Garten</i>	-¨en	—	—	2	—	—	2	—	1	—	—	—			
		-ø	—	—	—	—	2	—	—	—	—	—	—	74	107	69
-¨e	—	—	—	—	—	—	3	—	—	—	—					
-en	4	11	5	—	5	2	3	1	—	—	—					
<i>Kasten</i>	-¨en	1	6	1	1	4	19	5	16	4	10	4	4	9	44	
	-en	—	—	—	1	—	—	2	—	—	—	2				
3b	<i>Schaden</i>	-en	1	4	—	2	—	1	1	—	—	—	58	67	87	
		-¨en	2	25	1	11	14	1	—	2	—	2				
<b>Total UL (all 37 nouns)</b>			<b>45</b>	<b>19</b>	<b>10</b>	<b>4</b>	<b>5</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>108</b>	<b>6,222</b>	<b>3</b>

Note: All numbers in this table except those in the last column represent sample sizes (n).

#### 4.4.5 Other

The category *Other* encompasses six endings (-er, -(e)m, -ne, -nen, -, -a), none of which occurs more than seven times in the corpus. All tokens with these endings are in texts from before 1750 (table 4.14), and most are in verse (table 4.15). The most frequent marker in the *Other* category, -er (4 tokens), appears only on *Mensch*, and only in the plural. These tokens are likely neuter (see 4.3.1).



The two dative singular tokens ending in *-(e)m* (*gartem*, *puchstabm*) are both cases of assimilation, either to a preceding determiner (*im gartem*) or to an adjacent labial consonant (*puchstabm*).

The ending *-ne* occurs twice, both times on *Herr* (*herne*), and both in the poems of Michel Beheim (Period 3): once in the accusative singular, and once in the dative plural. These may be errors; most plural and oblique singular forms of *Herr* in Beheim end in *en* or *n*, as usual.

The remaining markers in this category, *-nen* and *-a*, occur only once each, on *Löwe* (*leonen*) and *Wille* (*willa*), respectively. The inflection of *Löwe* is irregular in many respects, as we will see in chapter 5; the token *willa* appears in a rhyming couplet opposite the name *Zilla* (Ruoff, Period 5).

#### 4.5 Conditions That May Affect the Inflection of Weak Masculine Nouns

In 2.2, we noted six conditions favorable to apocope<sup>93</sup> and/or non-weak inflection which are likely to have expedited the strengthening of weak nouns in Group 2, and which are pulling some Group 1b nouns into Group 2 in the modern language:

1. The noun is unpreceded, i.e., it has no other elements accompanying it in the noun phrase.
2. The noun is used as a title with a person's name.
3. The noun is used in direct address (vocative) or as an interjection.
4. The noun is in the citation form.
5. The noun appears in an attributive phrase with *als* or *von*.
6. The noun is the head of a (determinative) compound, or is itself a compound.

Further, we noted that frequent use as a prepositional object is likely to have had the opposite effect, reinforcing the weak oblique singular forms ending in *-(e)n* and possibly accelerating the shift of Group 3 nouns into the class of strong nouns with stems ending in *-en*.

This section explores the effects of these factors on the whole data set of 30,497 tokens. I begin with the factor “unpreceded,” a condition in which speakers are likely to produce non-weak singular forms in the oblique cases for the (conscious or unconscious) purpose of number differentiation, since unpreceded oblique forms ending in *-(e)n* are ambiguous with respect to number. I address the entire group of unpreceded tokens first, and then look individually at the conditions in which, according to the grammars, nouns are likely to be unpreceded: use as titles, in direct address, in the citation form, and in attributive phrases with *als*. The two largest of these unpreceded subgroups, titles and vocatives, are also susceptible to apocope on account of their

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<sup>93</sup> In this and the following chapters, the word *apocope* refers exclusively to the loss of word-final *-e*. Loss of medial *-e-* in the ending *-(e)n* (e.g., *Herren* → *Herrn*) is not addressed here, since it does not result in a change in inflectional class membership, either in MHG or in the modern language. In non-nominative-singular forms, the endings *-en* and *-n* both indicate membership in the weak declension, and there are no other noun classes that have only *-n* in these forms (and never *-en*). By contrast, the presence or absence of final *-e* in MHG could mean the difference between a strong and a weak noun (*tac* versus *bote*; see 1.1.1).

stress pattern: as proclitics, titles commonly have secondary stress, while vocatives tend to bear unusually heavy stress.<sup>94</sup>

Next, I turn to another subset of tokens whose predisposition to apocope and non-weak inflection likely owes itself to prosodic factors: tokens that are the heads of determinative compounds. Like titles, compound heads are secondarily stressed.

Finally, I address the factor “prepositional object,” which is likely to reinforce the weak masculine pattern in the oblique singular forms singular rather than cause loss of endings.

In tables 4.26–4.30, we see how each of these features is distributed in the corpus, first by case and number, then by noun, and finally by period and prose/verse. Statistics in all categories except case and number are presented both for the entire data set and for the singular forms only. In these tables, the percentages in each row do not add up to 100%, since several tokens belong to more than one category, and at the same time, the majority of tokens in the corpus do not belong to any category.

For conditions that apply to more than a few hundred tokens (“unprecedented,” “title,” “vocative,” “compound head,” “prepositional object”), I have quantified the effects just described using the chi-squared test for statistical significance, combined with the concept of relative risk, or probability ratio (PR).<sup>95</sup> To assess the effects of a given factor on apocope, I have calculated how many of the 13,275 singular tokens in the corpus with the endings *-e* and *-ø* are apocopated (i.e., end in *-ø*) and how many are not (i.e., end in *-e*), both in the presence and in the absence of the feature in question.<sup>96</sup> To test for non-weak inflection in the oblique singular forms, I have compared quantities of tokens ending in *-(e)n* (weak) with those of tokens that have other inflectional markers (e.g., *-e*, *-ø*, *-(e)(n)s*) within the group of 11,748 tokens in the accusative, genitive, and dative singular. I have calculated chi-square statistics both for the six time periods prior to 1650 — in which the morphological shifts under investigation are (for the most part) still in progress and the conditions discussed in this section are likely to have contributed most extensively to the reshaping of the paradigm — and for the entire corpus, including the last five periods, where the changes of all nouns except those in Group 3b (*Friede/n*) are largely complete.

The results of these calculations are given in tables 4.31–4.34, first for apocope and then for non-weak inflection. In each case, statistics are presented first for the whole data set and then for the prose texts alone; the numbers for all 11 time periods appear on the left, while those for the first six periods appear on the right. The proportions of apocopated and unapocopated

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<sup>94</sup> See 2.2 for a detailed discussion of these issues. Interjections are not included in the analysis because there are too few of them in the corpus to assess their effect on the development of the weak masculines. Many are forms of *Mensch* (19/52); most of the others are preceded by determiners, and it is not clear whether they should be categorized as interjections at all.

<sup>95</sup> The use of the chi-squared test presupposes that all observations are independent of one another, a requirement which no linguistic corpus can meet, since, by definition, a corpus is “not a (random) sample of linguistic features (or words) but a sample of texts which combine a number of interconnected linguistic features” (Brezina 2018: 113). Nonetheless, it is widely used in corpus linguistics as a tool to assess the statistical significance of correlations involving linguistic features. Because the observations are not all independent, however, the risk of inaccurate results is greater than it would be otherwise.

<sup>96</sup> In the *-e/ø* category, I have included tokens representing all four cases — not just the nominative — because in the earlier periods, there are several instances of *-e* in all three oblique cases which cannot be explained as strong case markers (in the dative), or dialectal forms in which final *-n* has been lost, or forms with missing nasal bars. In any event, the results do not change significantly when non-nominative tokens are excluded.

singular tokens (tables 4.31–4.32) and non-weak and weak oblique singular tokens (tables 4.33–4.34) are listed first, followed by the results of the tests for statistical significance (chi-square statistic, *p*-value, PR, 95% confidence interval [CI] for the PR). Proportions for the entire set of (oblique) singular tokens are given at the bottom of each table.

In tables 4.26–4.34, category names are abbreviated as follows:

Unprec(eded) A:	Tokens that are completely unpreceded (i.e., that have no preceding elements)
Unprec(eded) B:	Tokens that lack a determiner, but that may be preceded by an adjective
Title A:	Tokens marked “y” or “?” in the title category
Title B:	Tokens marked “y” in the title category
CF:	Citation form
Comp. A:	Tokens marked “y” or “?” in the compound head category
Comp. B:	Tokens marked “y” or “?” in the compound head category, plus all simplex tokens of <i>Herzog</i> , <i>Leichnam</i> , and <i>Buchstabe</i>
Prep. A:	Tokens marked “y” or “?” in the prepositional object category
Prep. B:	Tokens marked “y” or “?” in the prepositional object category, minus all tokens of <i>Fels/en</i>

Contingency tables for all statistical tests can be found in appendix B. I will refer back to all of these tables in the following discussion.

Table 4.26. Distribution of conditioning factors by case and number (all periods; prose and verse)

Num.	Case	Unpreceded (%)		Title (%)		Voc. (%)	CF (%)	Attr. w/ als (%)	Comp. (%)	Prep. (%)	Total ( <i>n</i> )
		A	B	A	B						
	N	30	36	18	14	21	0.8	0.6	6	—	<b>11,962</b>
	A	23	25	6	3	—	0.8	0.5	7	25	<b>4,632</b>
	D	21	25	10	5	—	0.1	0.4	9	73	<b>4,805</b>
	G	9	11	13	5	—	—	0.1	6	2	<b>2,244</b>
	?	65	86	16	16	2	18	—	9	45	<b>108</b>
<b>Sg.</b>	<b>All</b>	<b>25</b>	<b>29</b>	<b>14</b>	<b>9</b>	<b>11</b>	<b>0.6</b>	<b>0.5</b>	<b>7</b>	<b>20</b>	<b>23,751</b>
	N	28	44	2	0.4	14	0.2	0.8	11	—	<b>2,418</b>
	A	26	41	1	0.1	—	0.3	0.6	10	20	<b>1,239</b>
	D	28	44	2	0.1	—	—	0.1	8	72	<b>1,341</b>
	G	2	15	2	0.3	—	—	—	7	1	<b>953</b>
	?	18	97	—	—	—	0.4	—	10	13	<b>271</b>
<b>Pl.</b>	<b>All</b>	<b>23</b>	<b>41</b>	<b>2</b>	<b>0.2</b>	<b>5</b>	<b>0.1</b>	<b>0.5</b>	<b>10</b>	<b>20</b>	<b>6,222</b>
	N	80	80	—	—	—	—	—	—	—	<b>10</b>
	A	72	89	0.7	—	—	—	—	11	27	<b>135</b>
	D	80	89	1	0.6	—	1	—	4	94	<b>175</b>
	G	40	78	—	—	—	—	—	—	10	<b>10</b>
	?	88	96	—	—	—	—	0.5	3	8	<b>194</b>
<b>?</b>	<b>All</b>	<b>80</b>	<b>91</b>	<b>0.3</b>	<b>0.2</b>	<b>0</b>	<b>0.4</b>	<b>0.2</b>	<b>5</b>	<b>42</b>	<b>524</b>
<b>All forms (<i>n</i>)</b>		<b>7,731</b>	<b>10,040</b>	<b>3,315</b>	<b>2,193</b>	<b>2,860</b>	<b>163</b>	<b>139</b>	<b>2,268</b>	<b>6,199</b>	<b>30,497</b>
<b>All forms (%)</b>		<b>25</b>	<b>33</b>	<b>11</b>	<b>7</b>	<b>9</b>	<b>0.5</b>	<b>0.5</b>	<b>7</b>	<b>20</b>	

*Note:* All percentages were calculated with reference to the totals in the last column. At the bottom of each column is the total quantity of tokens affected by the factor in question, expressed first in raw numbers of tokens (*n*) and then as a percentage of the 30,497 tokens in the data.

Table 4.27. Distribution of conditioning factors by noun (all forms)

Group	Noun	Unprecedented (%)		Title (%)		Voc. (%)	CF (%)	Attr. w/ <i>als</i> (%)	Comp. (%)	Prep. (%)	Total ( <i>n</i> )
		A	B	A	B						
1a	<i>Affe</i>	29	36	—	—	4	2	2	6	14	<b>125</b>
	<i>Bote</i>	15	21	—	—	4	—	3	22	10	<b>350</b>
	<i>Bube</i>	21	32	—	—	9	3	2	21	11	<b>223</b>
	<i>Knabe</i>	10	21	—	—	9	0.2	2	6	11	<b>573</b>
	<i>Löwe</i>	9	13	—	—	2	0.5	1	0.2	16	<b>554</b>
	<i>Pfaffe</i>	21	27	0.5	0.5	1	0.5	0.2	2	12	<b>416</b>
1b	<i>Bär</i>	25	31	—	—	3	—	3	7	16	<b>108</b>
	<i>Graf</i>	29	33	32	23	3	1	0.3	24	17	<b>1,121</b>
	<i>Held</i>	16	26	0.5	0.5	11	—	1	5	8	<b>657</b>
	<i>Herr</i>	34	41	30	20	25	0.8	0.5	7	10	<b>8,732</b>
	<i>Mensch</i>	13	19	—	—	4	0.2	0.3	3	10	<b>5,962</b>
	<i>Prinz</i>	14	24	19	7	16	—	0.4	2	11	<b>562</b>
2	<i>Hahn</i>	11	12	—	—	1	2	0.9	24	16	<b>107</b>
	<i>Herzog</i>	45	48	47	39	3	2	0.8	2	17	<b>397</b>
	<i>Leichnam</i>	31	33	—	—	0.4	—	0.4	5	21	<b>228</b>
	<i>Schelm</i>	22	28	—	—	11	3	1	4	16	<b>100</b>
		<i>Schmerz</i>	35	50	—	—	0.7	0.4	0.1	3	33
3a	<i>Bogen</i>	15	25	—	—	0.6	—	0.3	30	39	<b>333</b>
	<i>Brunnen</i>	9	15	—	—	5	0.8	—	14	42	<b>517</b>
	<i>Garten</i>	16	20	—	—	0.6	1	0.3	23	57	<b>662</b>
	<i>Kasten</i>	18	25	—	—	—	—	2	23	57	<b>65</b>
		<i>Schatten</i>	24	35	—	—	1	—	0.7	4	36
3b	<i>Buchstabe</i>	14	36	—	—	—	—	—	5	43	<b>152</b>
	<i>Friede/n</i>	52	58	—	—	1	0.1	0.1	6	31	<b>846</b>
	<i>Funke/n</i>	29	45	—	—	—	—	—	15	9	<b>113</b>
	<i>Name/n</i>	26	31	—	—	0.9	0.2	—	6	35	<b>1,792</b>
		<i>Schade/n</i>	37	60	—	—	—	0.3	0.1	0.8	31
	<i>Wille/n</i>	30	38	—	—	0.3	0.5	0.2	10	48	<b>1,780</b>
3c	<i>Drache/n</i>	21	29	—	—	4	—	0.7	4	19	<b>140</b>
	<i>Fels/en</i>	15	23	—	—	2	—	0.2	4	61	<b>534</b>
		<i>Tropfen</i>	14	31	—	—	3	0.8	—	14	17
4	<i>Backe</i>	8	19	—	—	—	—	—	16	46	<b>37</b>
	<i>Fahne</i>	24	27	—	—	2	—	1	24	25	<b>150</b>
	<i>Grille</i>	27	48	—	—	2	—	—	5	25	<b>64</b>
	<i>Rebe</i>	19	27	—	—	0.9	—	—	17	30	<b>113</b>
		<i>Schlange</i>	21	30	—	—	3	0.7	0.7	4	16
	<i>Schnecke</i>	19	22	—	—	—	8	—	3	22	<b>37</b>
	<b>All nouns</b>	<b>25</b>	<b>33</b>	<b>11</b>	<b>7</b>	<b>9</b>	<b>0.5</b>	<b>0.5</b>	<b>7</b>	<b>20</b>	<b>30,497</b>

Note: All percentages were calculated with reference to the totals in the last column.

Table 4.28. Distribution of conditioning factors by noun (singular forms only)

Group	Noun	Unpreceeded (%)		Title (%)		Voc. (%)	CF (%)	Attr. w/ als (%)	Comp. (%)	Prep. (%)	Total ( <i>n</i> )
		A	B	A	B						
1a	<i>Affe</i>	8	11	—	—	4	3	0	7	15	72
	<i>Bote</i>	8	9	—	—	5	—	2	17	9	225
	<i>Bube</i>	13	17	—	—	9	3	2	21	9	140
	<i>Knabe</i>	6	12	—	—	8	0	3	5	10	440
	<i>Löwe</i>	4	5	—	—	2	1	1	0.2	16	480
	<i>Pfaffe</i>	7	7	1	1	1	1	0	3	14	193
1b	<i>Bär</i>	5	5	—	—	0	—	0	13	11	64
	<i>Graf</i>	29	31	37	26	3	1	0.3	27	16	956
	<i>Held</i>	11	18	0.7	0.7	13	—	1	6	6	414
	<i>Herr</i>	37	42	35	24	27	1	1	5	9	7,364
	<i>Mensch</i>	8	11	—	—	5	0	0.3	3	8	4,064
	<i>Prinz</i>	13	23	20	7	17	—	0.4	3	10	524
2	<i>Hahn</i>	6	8	—	—	1	2	1	24	15	93
	<i>Herzog</i>	46	48	51	42	3	1	1	2	16	363
	<i>Leichnam</i>	32	33	—	—	0.5	—	0	6	22	206
	<i>Schelm</i>	10	15	—	—	10	5	2	5	15	60
	<i>Schmerz</i>	30	43	—	—	1	1	0.1	3	29	704
3a	<i>Bogen</i>	11	15	—	—	1	—	0.4	26	35	239
	<i>Brunnen</i>	8	11	—	—	5	1	0	15	46	426
	<i>Garten</i>	11	14	—	—	1	1	0.2	23	62	545
	<i>Kasten</i>	17	20	—	—	0	—	2	28	57	54
	<i>Schatten</i>	24	26	—	—	1	—	1	4	39	293
3b	<i>Buchstabe</i>	2	4	—	—	0	—	0	2	29	51
	<i>Friede/n</i>	52	58	—	—	1	0	0.1	6	31	843
	<i>Funke/n</i>	0	9	—	—	0	—	0	9	5	43
	<i>Name/n</i>	24	26	—	—	1	0	0	4	35	1,530
	<i>Schade/n</i>	36	58	—	—	0	0	0.2	0.3	31	655
3c	<i>Wille/n</i>	30	38	—	—	0.3	1	0.2	10	48	1,758
	<i>Drache/n</i>	5	9	—	—	3	—	0	3	12	91
	<i>Fels/en</i>	8	11	—	—	1	—	0	4	69	359
	<i>Tropf/en</i>	5	12	—	—	3	1	0	8	13	144
	4	<i>Backe</i>	7	7	—	—	0	—	0	20	73
<i>Fahne</i>		18	19	—	—	2	—	2	26	28	93
<i>Grille</i>		18	18	—	—	0	—	0	0	6	17
<i>Rebe</i>		3	6	—	—	3	—	0	26	21	34
<i>Schlange</i>		6	10	—	—	5	1	1	4	14	174
<i>Schnecke</i>		4	4	—	—	0	12	0	4	24	25
<b>All nouns</b>		<b>25</b>	<b>33</b>	<b>11</b>	<b>7</b>	<b>9</b>	<b>0.5</b>	<b>0.5</b>	<b>7</b>	<b>20</b>	<b>23,751</b>

Note: All percentages were calculated with reference to the totals in the last column.

Table 4.29. Distribution of conditioning factors by period

Factor	Period											All pds.
	1	2	3	4	5	6	7	8	9	10	11	
<b>All forms</b>												
Unprec. A (%)	17	28	24	31	33	23	20	26	27	24	27	<b>25</b>
Unprec. B (%)	22	36	29	41	40	35	29	33	34	33	34	<b>33</b>
Title A (%)	3	21	7	6	22	8	6	16	8	10	9	<b>11</b>
Title B (%)	2	13	3	5	17	4	3	10	5	7	7	<b>7</b>
Vocative (%)	5	5	8	15	10	15	10	9	10	11	9	<b>9</b>
CF (%)	0.2	0.8	0.9	0.3	1	0.4	0.4	0.2	0.2	0.1	0.9	<b>0.5</b>
Attr. w/ <i>als</i> (%)	0.1	0.7	0.4	0.2	0.4	0.5	0.4	0.4	0.6	1	0.7	<b>0.5</b>
Comp. (%)	4	11	7	7	10	5	8	4	7	7	10	<b>7</b>
Prep. (%)	18	21	20	21	22	22	20	21	20	18	21	<b>20</b>
<b>Total tokens (n)</b>	<b>4,329</b>	<b>3,327</b>	<b>3,287</b>	<b>2,367</b>	<b>3,847</b>	<b>2,629</b>	<b>2,450</b>	<b>2,243</b>	<b>2,116</b>	<b>1,995</b>	<b>1,907</b>	<b>30,497</b>
<b>Singular forms only</b>												
Unprec. A (%)	16	32	23	30	34	22	18	25	24	23	26	<b>25</b>
Unprec. B (%)	18	36	25	36	38	32	24	28	28	29	29	<b>30</b>
Title A (%)	3	26	9	8	26	11	8	22	10	13	12	<b>14</b>
Title B (%)	2	17	4	7	20	6	4	14	7	9	10	<b>9</b>
Vocative (%)	6	6	10	18	11	19	11	11	12	11	10	<b>11</b>
CF (%)	0.2	1	1	0.3	1	0.4	0.5	0.3	0.3	0.1	1	<b>0.6</b>
Attr. w/ <i>als</i> (%)	0.1	0.9	0.4	0.2	0.3	0.6	0.4	0.3	0.7	1	0.8	<b>0.5</b>
Comp. (%)	3	8	7	7	9	5	8	4	7	7	12	<b>7</b>
Prep. (%)	18	21	21	23	21	20	19	20	18	18	19	<b>20</b>
<b>Total tokens (n)</b>	<b>3,602</b>	<b>2,496</b>	<b>2,716</b>	<b>1,751</b>	<b>3,231</b>	<b>1,875</b>	<b>1,960</b>	<b>1,591</b>	<b>1,579</b>	<b>1,503</b>	<b>1,447</b>	<b>23,751</b>

Table 4.30. Distribution of conditioning factors by prose/verse

Factor	All forms			Singular forms only		
	Prose	Verse	All	Prose	Verse	All
Unprec. A (%)	20	32	<b>25</b>	20	31	<b>25</b>
Unprec. B (%)	28	40	<b>33</b>	25	36	<b>30</b>
Title A (%)	14	7	<b>11</b>	17	9	<b>14</b>
Title B (%)	8	6	<b>7</b>	11	7	<b>9</b>
Vocative (%)	6	14	<b>9</b>	7	16	<b>11</b>
CF (%)	0.6	0.4	<b>0.5</b>	0.8	0.5	<b>0.6</b>
Attr. w/ <i>als</i> (%)	0.5	0.4	<b>0.5</b>	0.5	0.4	<b>0.5</b>
Comp. (%)	9	6	<b>7</b>	8	6	<b>7</b>
Prep. (%)	22	19	<b>20</b>	21	18	<b>20</b>
<b>Total tokens (n)</b>	<b>17,469</b>	<b>13,028</b>	<b>30,497</b>	<b>13,673</b>	<b>10,078</b>	<b>23,751</b>

Note: All percentages in the tables on this page were calculated with reference to the totals in the bottom row of each set.

Table 4.31. Effects on apocope (prose and verse)

Conditioning factor / token subset	All periods				Periods 1–6 only			
	-ø (%)	-e (%)	Total -e/ø (n)	Statistically significant association?	-ø (%)	-e (%)	Total -e/ø (n)	Statistically significant association?
Unprec. A	87	13	4,272	yes $\chi^2(1) = 140.52$ , $p < .001$ , PR = 1.11, 95 CI [1.09, 1.13]	86	14	2,829	yes $\chi^2(1) = 103.84$ , $p < .001$ , PR = 1.12, 95 CI [1.10, 1.15]
Unprec. B	86	14	5,041	yes $\chi^2(1) = 159.14$ , $p < .001$ , PR = 1.11, 95 CI [1.10, 1.13]	85	15	3,331	yes $\chi^2(1) = 117.31$ , $p < .001$ , PR = 1.13, 95 CI [1.11, 1.15]
Title A	93	7	2,441	yes $\chi^2(1) = 286.91$ , $p < .001$ , PR = 1.19, 95 CI [1.17, 1.21]	90	10	1,639	yes $\chi^2(1) = 139.80$ , $p < .001$ , PR = 1.17, 95 CI [1.15, 1.20]
Title B	93	7	1,896	yes $\chi^2(1) = 200.37$ , $p < .001$ , PR = 1.17, 95 CI [1.16, 1.19]	90	10	1,269	yes $\chi^2(1) = 93.17$ , $p < .001$ , PR = 1.15, 95 CI [1.13, 1.18]
Comp. A	82	18	839	no $\chi^2(1) = 0.79$ , $p = .37$ , PR = 1.02, 95 CI [0.98, 1.05]	82	18	542	no $\chi^2(1) = 2.58$ , $p = .11$ , PR = 1.04, 95 CI [0.99, 1.08]
Comp. B	85	15	1,311	yes $\chi^2(1) = 12.99$ , $p < .001$ , PR = 1.05, 95 CI [1.03, 1.08]	85	15	944	yes $\chi^2(1) = 20.49$ , $p < .001$ , PR = 1.08, 95 CI [1.05, 1.11]
Prep. A	73	27	827	yes (w/ -e) $\chi^2(1) = 18.15$ , $p < .001$ , PR = 1.46, 95 CI [1.23, 1.75]	67	33	534	yes (w/ -e) $\chi^2(1) = 33.28$ , $p < .001$ , PR = 1.83, 95 CI [1.50, 2.26]
Prep. B	80	20	663	no $\chi^2(1) = 0.23$ , $p = .63$ , PR = 1.05, 95 CI [0.86, 1.29]	78	22	407	no $\chi^2(1) = 1.28$ , $p = .23$ , PR = 1.16, 95 CI [0.90, 1.50]
Vocative	91	9	2,512	yes $\chi^2(1) = 212.60$ , $p < .001$ , PR = 1.16, 95 CI [1.14, 1.18]	90	10	1,634	yes $\chi^2(1) = 148.19$ , $p < .001$ , PR = 1.18, 95 CI [1.15, 1.20]
All sg.	81	19	13,275		79	21	8,591	

Table 4.32. Effects on apocope (prose texts only)

Conditioning factor / token subset	All periods				Periods 1–6 only			
	-ø (%)	-e (%)	Total -e/ø (n)	Statistically significant association?	-ø (%)	-e (%)	Total -e/ø (n)	Statistically significant association?
Unprec. A	82	18	1,836	yes $\chi^2(1) = 27.05$ , $p < .001$ , PR = 1.08, 95 CI [1.05, 1.11]	77	23	1,214	yes $\chi^2(1) = 17.18$ , $p < .001$ , PR = 1.09, 95 CI [1.05, 1.13]
Unprec. B	83	17	2,222	yes $\chi^2(1) = 55.26$ , $p < .001$ , PR = 1.11, 95 CI [1.08, 1.13]	78	22	1,472	yes $\chi^2(1) = 36.84$ , $p < .001$ , PR = 1.12, 95 CI [1.08, 1.16]
Title A	91	9	1,653	yes $\chi^2(1) = 243.33$ , $p < .001$ , PR = 1.25, 95 CI [1.22, 1.28]	87	13	1,084	yes $\chi^2(1) = 146.26$ , $p < .001$ , PR = 1.27, 95 CI [1.23, 1.31]
Title B	90	10	1,201	yes $\chi^2(1) = 134.33$ , $p < .001$ , PR = 1.21, 95 CI [1.18, 1.23]	85	15	784	yes $\chi^2(1) = 71.95$ , $p < .001$ , PR = 1.21, 95 CI [1.16, 1.25]
Comp. A	78	22	474	no $\chi^2(1) = 0.31$ , $p = .58$ , PR = 1.01, 95 CI [0.97, 1.07]	81	19	374	yes $\chi^2(1) = 13.53$ , $p < .001$ , PR = 1.12, 95 CI [1.07, 1.18]
Comp. B	82	18	805	yes $\chi^2(1) = 13.20$ , $p < .001$ , PR = 1.07, 95 CI [1.04, 1.11]	84	16	662	yes $\chi^2(1) = 51.45$ , $p < .001$ , PR = 1.19, 95 CI [1.14, 1.24]
Prep. A	61	39	385	yes (w/ -e) $\chi^2(1) = 20.99$ , $p < .001$ , PR = 1.65, 95 CI [1.32, 2.06]	56	44	310	yes (w/ -e) $\chi^2(1) = 25.31$ , $p < .001$ , PR = 1.85, 95 CI [1.44, 2.37]
Prep. B	77	23	264	no $\chi^2(1) = 0.11$ , $p = .74$ , PR = 0.95, 95 CI [0.72, 1.26]	76	24	191	no $\chi^2(1) = .02$ , $p = .88$ , PR = 0.98, 95 CI [0.70, 1.36]
Vocative	91	9	904	yes $\chi^2(1) = 102.70$ , $p < .001$ , PR = 1.20, 95 CI [1.17, 1.23]	84	16	506	yes $\chi^2(1) = 36.92$ , $p < .001$ , PR = 1.18, 95 CI [1.13, 1.23]
All sg.	77	23	7,024		73	27	4,735	



Table 4.33. Effects on non-weak inflection (prose and verse)

Conditioning factor / token subset	All periods				Periods 1–6 only			
	Non-weak (%)	Weak (%)	Total (n)	Statistically significant association?	Non-weak (%)	Weak (%)	Total (n)	Statistically significant association?
Unprec. A	37	63	<b>2,292</b>	<b>yes</b> $\chi^2(1) = 600.60$ , $p < .001$ , PR = 2.54, 95 CI [2.36, 2.73]	35	65	<b>1,688</b>	<b>yes</b> $\chi^2(1) = 484.90$ , $p < .001$ , PR = 2.84, 95 CI [2.59, 3.12]
Unprec. B	35	65	<b>2,794</b>	<b>yes</b> $\chi^2(1) = 622.98$ , $p < .001$ , PR = 2.54, 95 CI [2.36, 2.73]	33	67	<b>2,006</b>	<b>yes</b> $\chi^2(1) = 474.86$ , $p < .001$ , PR = 2.79, 95 CI [2.54, 3.06]
Title A	27	73	<b>1,047</b>	<b>yes</b> $\chi^2(1) = 54.69$ , $p < .001$ , PR = 1.5, 95 CI [1.37, 1.69]	30	70	<b>760</b>	<b>yes</b> $\chi^2(1) = 101.97$ , $p < .001$ , PR = 1.92, 95 CI [1.70, 2.17]
Title B	47	53	<b>527</b>	<b>yes</b> $\chi^2(1) = 284.93$ , $p < .001$ , PR = 2.68, 95 CI [2.43, 2.96]	49	51	<b>428</b>	<b>yes</b> $\chi^2(1) = 315.32$ , $p < .001$ , PR = 3.17, 95 CI [2.83, 3.54]
Comp. A	21	79	<b>885</b>	<b>no</b> $\chi^2(1) = 2.22$ , $p = .13$ , PR = 1.11, 95 CI [0.97, 1.27]	19	81	<b>555</b>	<b>no</b> $\chi^2(1) = 1.34$ , $p = .25$ , PR = 1.11, 95 CI [0.93, 1.33]
Comp. B	33	67	<b>1,203</b>	<b>yes</b> $\chi^2(1) = 179.30$ , $p < .001$ , PR = 1.93, 95 CI [1.76, 2.11]	34	66	<b>822</b>	<b>yes</b> $\chi^2(1) = 184.95$ , $p < .001$ , PR = 2.24, 95 CI [2.01, 2.50]
Prep. A	18	82	<b>4,722</b>	<b>yes (w/ wk. infl.)</b> $\chi^2(1) = 5.45$ , $p = .02$ , PR = 1.02, 95 CI [1.00, 1.04]	17	83	<b>3,197</b>	<b>no</b> $\chi^2(1) = 0.12$ , $p = .73$ , PR = 1.00, 95 CI [0.98, 1.02]
Prep. B	15	85	<b>4,476</b>	<b>yes (w/ wk. infl.)</b> $\chi^2(1) = 31.06$ , $p < .001$ , PR = 1.05, 95 CI [1.03, 1.07]	14	86	<b>3,041</b>	<b>yes (w/ wk. infl.)</b> $\chi^2(1) = 15.09$ , $p < .001$ , PR = 1.04, 95 CI [1.02, 1.06]
<b>All obl. sg.</b>	<b>19</b>	<b>81</b>	<b>11,748</b>		<b>17</b>	<b>83</b>	<b>7,996</b>	

Table 4.34. Effects on non-weak inflection (prose texts only)

Conditioning factor / token subset	All periods				Periods 1–6 only			
	Non-weak (%)	Weak (%)	Total (n)	Statistically significant association?	Non-weak (%)	Weak (%)	Total (n)	Statistically significant association?
Unprec. A	32	68	<b>1,278</b>	<b>yes</b> $\chi^2(1) = 356.71$ , $p < .001$ , PR = 2.92, 95 CI [2.62, 3.26]	31	69	<b>1,021</b>	<b>yes</b> $\chi^2(1) = 269.84$ , $p < .001$ , PR = 2.93, 95% CI [2.57, 3.33]
Unprec. B	29	71	<b>1,524</b>	<b>yes</b> $\chi^2(1) = 309.53$ , $p < .001$ , PR = 2.67, 95 CI [2.39, 2.98]	28	72	<b>1,223</b>	<b>yes</b> $\chi^2(1) = 229.56$ , $p < .001$ , PR = 2.69, 95% CI [2.36, 3.06]
Title A	26	74	<b>922</b>	<b>yes</b> $\chi^2(1) = 116.39$ , $p < .001$ , PR = 2.05, 95 CI [1.81, 2.33]	29	71	<b>663</b>	<b>yes</b> $\chi^2(1) = 129.22$ , $p < .001$ , PR = 2.34, 95% CI [2.03, 2.70]
Title B	46	54	<b>459</b>	<b>yes</b> $\chi^2(1) = 393.14$ , $p < .001$ , PR = 3.73, 95 CI [3.32, 4.20]	47	53	<b>377</b>	<b>yes</b> $\chi^2(1) = 338.20$ , $p < .001$ , PR = 3.88, 95% CI [3.40, 4.43]
Comp. A	14	86	<b>615</b>	<b>no</b> $\chi^2(1) = 0.06$ , $p = .81$ , PR = 0.98, 95 CI [0.80, 1.20]	13	87	<b>439</b>	<b>no</b> $\chi^2(1) = 1.12$ , $p = .29$ , PR = 0.87, 95% CI [0.68, 1.12]
Comp. B	28	72	<b>859</b>	<b>yes</b> $\chi^2(1) = 135.72$ , $p < .001$ , PR = 2.17, 95 CI [1.92, 2.47]	28	72	<b>645</b>	<b>yes</b> $\chi^2(1) = 103.01$ , $p < .001$ , PR = 2.19, 95% CI [1.89, 2.53]
Prep. A	13	87	<b>2,921</b>	<b>yes (w/ wk. infl.)</b> $\chi^2(1) = 5.26$ , $p = .02$ , PR = 1.02, 95 CI [1.00, 1.04]	15	85	<b>2,083</b>	<b>no</b> $\chi^2(1) = 0.10$ , $p = .75$ , PR = 1.00, 95% CI [0.97, 1.02]
Prep. B	10	90	<b>2,765</b>	<b>yes (w/ wk. infl.)</b> $\chi^2(1) = 41.34$ , $p < .001$ , PR = 1.06, 95 CI [1.04, 1.08]	10	90	<b>1,953</b>	<b>yes (w/ wk. infl.)</b> $\chi^2(1) = 21.28$ , $p < .001$ , PR = 1.05, 95% CI [1.03, 1.07]
<b>All obl. sg.</b>	<b>15</b>	<b>85</b>	<b>7,125</b>		<b>15</b>	<b>85</b>	<b>4,996</b>	

## 4.5.1 Unprecedentedness

### 4.5.1.1 Overview

The majority of tokens (22,766, or 75%) are preceded by either a determiner or an attributive adjective, or both. 7,731 tokens (25%), extending across all nouns, cases, numbers, periods, and both prose and verse texts, have neither; they are unpreceded. A slightly larger number (10,040, or 33%) have no determiner but may be preceded by an adjective — arguably a more accurate definition of “unpreceded,” particularly in the earlier periods, where attributive adjectives tend not to contribute much in the way of grammatical information.

Regardless of how we define the concept of unprecedentedness, the proportion of unpreceded tokens is greater in verse than in prose texts (table 4.30). We can attribute this to a combination of factors. Some nouns that are frequently unpreceded are more common in verse than in prose; this is true of two of the most frequently unpreceded nouns, *Friede/n* and *Schmerz*, but not of *Herr*, *Herzog*, and *Schade/n*. At the same time, other nouns that usually have determiners and adjectives accompanying them are unpreceded more often in verse than in prose, since tolerance for unconventional syntactic phenomena tends to be higher in poetic texts.

Unpreceded tokens are found in all periods (table 4.29); however, they are particularly common in Period 5, where the two nouns that occur most often as titles — *Herr* and *Graf* — are at their most frequent. Direct address — another condition in which nouns are usually unpreceded — is also quite common in Period 5; in raw numbers, only one other period (6) has more vocative tokens (there are 406 in Period 6, versus 370 in Period 5).

The proportion of unpreceded tokens is about the same in the singular and plural (table 4.26). It is smaller in the genitive than in the other cases, which may explain in part why there are so few non-weak oblique singular forms in the genitive; as we saw in 4.4.2 and 4.4.3, most are in the dative and accusative cases. Notably, unpreceded noun forms make up a substantial share of tokens with indeterminate number and/or case: 80% of tokens marked ? in the number category (420/524), and 65% of all singular tokens whose case is unclear (70/108), have neither a determiner nor an adjective. Tokens with question marks in both the case and number categories are unpreceded 88% of the time (171/194). When we widen our definition of “unpreceded” to include tokens that may have an attributive adjective with them, the proportion of unpreceded tokens increases to 91% (462/524) in the question-mark number category, while that of unpreceded tokens with unknown case increases significantly in both numbers — particularly in the plural, where nearly all tokens with unknown case lack a determiner (97% (263/271), versus only 18% (48/271) when tokens with attributive adjectives are excluded). In the German noun phrase, most grammatical information is encoded on accompanying determiners and (at least in the modern language) attributive adjectives rather than on the noun itself, so it is to be expected that in the absence of these elements, it might be difficult to determine case and number — particularly if the singular and plural forms of the noun are identical, as they are for the weak masculine nouns in all cases except the nominative.

Additionally, tokens with case and/or number question marks account for a much larger share of unpreceded tokens than of the entire data set: 538/7,731, or about 7%, of tokens with no accompanying elements — and 819/10,040, or 8%, of tokens that lack a determiner but may have an attributive adjective — have unknown case or number, or both. Overall, only 3% of tokens in the data (903/30,497) have question marks in these categories.

In the singular, most nouns are unpreceded no more than 20% of the time (see table 4.28). Nouns that are unpreceded at a higher rate fall into one or more of the following categories:

1. They are used regularly as titles and in direct address (e.g., *Herr*, *Mensch*, *Graf*, *Herzog*);
2. They are uncountable at least some of the time (e.g., *Friede/n*, *Wille/n*, *Schmerz*, *Schade/n*);
3. They frequently have preposed genitive attributes accompanying them (e.g., “Gottes Leichnam”). Many unpreceded singular tokens of *Leichnam* and *Name/n* fall under this heading; the collocations *Gottes / unseres Herren Leichnam* and *Gottes / unseres Herren Name* are especially common.

When we look at the whole data set (table 4.27), including plural forms, the proportion of unpreceded tokens — particularly that of tokens that may have adjectives with them (Unpreceded B) — increases for most nouns; exceptions include *Herr*, *Herzog*, *Leichnam*, *Friede/n*, and *Wille/n*, all of which are used mainly in the singular. In the plural, the proportion of tokens without a determiner generally lies between 30% and 60%; that of tokens with no preceding elements at all is at least 20% in most cases. Since indefinite plural forms are never accompanied by a determiner in German, these higher figures in the plural are to be expected.

#### 4.5.1.2 Effects on Apocope and Non-Weak Inflection in the Singular

As suggested in the literature, the factor “unpreceded” (no determiner, no adjective) appears to correlate with non-weak inflection in the oblique singular forms. Of the 2,292 tokens in the oblique singular forms that have no elements accompanying them in the noun phrase (Unpreceded A), more than one-third (842, or 37%) do not have the expected *-(e)n*. The association is statistically significant; non-weak inflection is about 2.5 times more likely to occur in an unpreceded context than in a preceded one (see table 4.33).

The effect of unprecededness on non-weak inflection is even larger in the first six periods, where endings other than *-(e)n* are almost three times as likely to occur on unpreceded tokens as on preceded ones. The proportion of non-weak tokens among unpreceded tokens is slightly smaller here than in the whole corpus, but non-weak tokens account for a smaller share of oblique singular tokens overall in these periods (17% [1,370/7,996] in Periods 1–6, versus 19% [2,208/11,748] in all periods). When we remove verse tokens from the data, the association strengthens even further (compare the PR values in tables 4.33 and 4.34).

Both the PR of non-weak inflection among unpreceded tokens and the proportion of non-weak tokens drop slightly when we include in the unpreceded category tokens that have attributive adjectives accompanying them (Unpreceded B); however, the association remains significant. This is true whether we look at the whole corpus or just at the prose texts, and whether we consider all 11 periods or just the first six; here, again, the effect is more pronounced in the earlier periods.

As it happens, the majority of the 475 genitive singular tokens with the strong and hybrid markers *-(e)(n)s* are preceded by one or more elements (409/475, or 86%), in most cases (394/409, or 96%) by determiners and/or adjectives that also end in *-s* — likely an assimilatory phenomenon whereby the form of the noun is adjusted to match that of other elements in the

noun phrase.<sup>97</sup> When we exclude these 475 genitive singular tokens from the data and look only at the association of unprecededness with the markers *-e/ø* as opposed to *-(e)n* (table 4.35), both the chi-squared statistic and the effect size (PR) increase considerably in the whole corpus and in all subsets. In this case, the markers *-e* and *-ø* are between three and five times more likely to occur when the noun is unpreceded than when it is preceded, versus just under three times for all non-weak markers, including the genitive singular endings *-(e)(n)s*.

Additionally, many unpreceded tokens, particularly forms of the Group 3b nouns *Friede/n*, *Schade/n*, *Name/n*, and *Wille/n*, are found in highly frequent prepositional phrases which have in some cases undergone grammaticalization or lexicalization (see 3.2). When all unpreceded prepositional objects are excluded, the effect size (PR) increases from 2.54 to 3.21 in the whole corpus, and from 2.84 to 3.66 in the first six periods (compare tables 4.33 and 4.36).

The presence/absence of determiners and attributive adjectives (Unpreceded A) also appears to have a statistically significant effect on the apocope of *-e* in the singular forms (NADG?), though the association is much weaker in this case (table 4.31). The ending *-ø* (as opposed to *-e*) is only 1.11 times more likely to occur on unpreceded tokens than on preceded ones; as noted above, tokens with non-weak endings in the oblique singular forms are between two and three times more likely to be unpreceded than preceded (compare tables 4.31 and 4.33). The effect on apocope weakens further when we remove verse tokens (table 4.32), which are both apocopated and unpreceded more often than prose tokens, as we have seen.

When tokens with attributive adjectives are included in the unpreceded count (Unpreceded B), the PR of apocope increases slightly, particularly in the prose texts. With apocope, as with non-weak inflection, the association is stronger in the first six periods than in the whole corpus, whether or not we exclude verse texts.

While the feature “unpreceded” is unlikely to induce apocope directly, many unpreceded singular tokens have other attributes that make them vulnerable to apocope. A significant proportion of these tokens are titles accompanying people’s names (2,100/5,879, or 36%) or vocatives (1,755/5,879, or 30%), which are frequently apocopated for prosodic reasons (see 4.5.2 and 4.5.3).

## 4.5.2 Use as Title

### 4.5.2.1 Overview

2,193 tokens, representing about 7% of all weak masculine tokens in the corpus, are titles that accompany (1) people’s names (e.g., *Herr Bernhart*), (2) other appellatives denoting people (e.g., *Herr Vater*), or (3) prepositional phrases denoting location or origin (e.g., *Graf von Tilly*, *Graf zu Wallstein*). 1,122 additional tokens (about 4% of all tokens) have question marks in the title category; most of these (1,103, or 98%) are marked “?” only because they have preceding determiners, and should probably be considered titles. There are thus 3,315 tokens marked either “y” or “?” in the title category, accounting for about 11% of all tokens. The majority of these —

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<sup>97</sup> Rohdenburg (1988) has found evidence of a similar assimilatory effect in at least one Low German dialect: singular forms of the weak nouns *Minsch* (= Standard German *Mensch* ‘person’) and *Buur* (Standard German *Bauer* ‘farmer’) are more likely to have the ending *-en* when they are preceded by an attributive adjective that ends in *-en* than when there is no adjective present in the noun phrase.

64% of all title tokens (2,116/3,315), and 96% (2,102/2,193) of tokens marked “y” in the title category — are unpreceded (they have neither a determiner nor an attributive adjective). All of the 2,193 tokens marked “y” (and 67% [2,211] of all title tokens, including question marks) lack a preceding determiner, though some have adjectives with them.

Table 4.35. Association of unprecededness with non-weak inflection in the oblique singular forms (excluding genitive singular tokens ending in *-(e)(n)s*)

	Unpreceded (A)			Unpreceded (B)				
	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	<b>Total</b> <b>(n)</b>	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	<b>Total</b> <b>(n)</b>		
All periods, prose/verse	35	65	<b>2,226</b>	$\chi^2$ (1) = 810.65, $p < .001$ , PR = 3.30, 95 CI [3.04, 3.58]	33	67	<b>2,634</b>	$\chi^2$ (1) = 816.57, $p < .001$ , PR = 3.29, 95 CI [3.03, 3.58]
Periods 1–6, prose/verse	33	67	<b>1,634</b>	$\chi^2$ (1) = 605.04, $p < .001$ , PR = 3.63, 95 CI [3.27, 4.04]	31	69	<b>1,934</b>	$\chi^2$ (1) = 572.02, $p < .001$ , PR = 3.53, 95 CI [3.17, 3.94]
All periods, prose only	29	71	<b>1,241</b>	$\chi^2$ (1) = 565.51, $p < .001$ , PR = 4.54, 95 CI [3.98, 5.17]	26	74	<b>1,469</b>	$\chi^2$ (1) = 455.10, $p < .001$ , PR = 3.97, 95 CI [3.48, 4.53]
Periods 1–6, prose only	29	71	<b>991</b>	$\chi^2$ (1) = 373.42, $p < .001$ , PR = 4.14, 95 CI [3.56, 4.81]	25	75	<b>1,179</b>	$\chi^2$ (1) = 321.81, $p < .001$ , PR = 3.81, 95 CI [3.27, 4.44]

Table 4.36. Association of unprecededness with non-weak inflection (excluding unpreceded prepositional object tokens)

	Unpreceded (A)			Unpreceded (B)				
	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	<b>Total</b> <b>(n)</b>	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	<b>Total</b> <b>(n)</b>		
All periods, prose/verse	46	54	<b>1,004</b>	$\chi^2$ (1) = 638.35, $p < .001$ , PR = 3.21, 95 CI [2.95, 3.48]	40	60	<b>1,436</b>	$\chi^2$ (1) = 607.36, $p < .001$ , PR = 2.92, 95 CI [2.69, 3.17]
Periods 1–6, prose/verse	45	55	<b>728</b>	$\chi^2$ (1) = 531.52, $p < .001$ , PR = 3.66, 95 CI [3.30, 4.06]	38	62	<b>1,046</b>	$\chi^2$ (1) = 465.49, $p < .001$ , PR = 3.23, 95 CI [2.91, 3.58]
All periods, prose only	41	59	<b>563</b>	$\chi^2$ (1) = 413.82, $p < .001$ , PR = 3.84, 95 CI [3.40, 4.34]	33	67	<b>809</b>	$\chi^2$ (1) = 296.42, $p < .001$ , PR = 3.07, 95 CI [2.71, 3.47]
Periods 1–6, prose only	40	60	<b>452</b>	$\chi^2$ (1) = 309.66, $p < .001$ , PR = 3.83, 95 CI [3.32, 4.42]	32	68	<b>654</b>	$\chi^2$ (1) = 223.64, $p < .001$ , PR = 3.08, 95 CI [2.66, 3.56]

Of the 37 nouns represented in the data, only six are ever used as titles: *Herr*, *Graf*, *Prinz*, *Pfaffe*, *Held*, and *Herzog*, all animate nouns belonging to Groups 1 and 2 (see tables 4.27 and 4.28). The nouns *Herr* (2,654 titles), *Graf* (364 titles), *Herzog* (188 titles), and *Prinz* (104 titles) account for the majority of title tokens; these nouns are used as titles in at least 19% and up to 47% of all instances, depending on whether question-mark title tokens are included in the data. *Pfaffe* and *Held* are represented in the title category with only two and three tokens, respectively.

Title tokens are most common in the earlier periods (table 4.29), and particularly in Periods 2 and 5, where a significant proportion of weak masculine tokens come from chronicles and other historical texts containing long lists of names. From Period 6 onward, they occur almost exclusively in spoken dialogue in novels, dramas, and other works of fiction. There are more titles in prose than in verse texts (table 4.30).

Titles are overwhelmingly (3,210/3,315, or 97%) singular, and most (2,191/3,315, or 66%) are in the nominative case, though the other cases are also well represented here (see table 4.26). Tokens marked “?” in the case and number categories account for less than 1% of all title tokens; only 17 titles have unknown case, and only two have unknown number.

#### 4.5.2.2 Effects on Apocope and Non-Weak Inflection in the Singular

Because they are often unprecedented and secondarily stressed, titles are susceptible both to apocope in the singular and to loss and/or replacement of expected weak inflectional markers in the oblique singular forms. The effect of the factor “title” on apocope in my corpus is smaller than expected — perhaps owing to the large overall number of apocopated tokens in the singular — but nonetheless significant; in the entire data set, apocope is 1.19 times more likely to occur if the token is a title (Title A) than if it is not (table 4.31). When we focus our attention on the first six periods, the PR decreases to 1.17, indicating a slightly weaker association. Unapocopated title tokens are more common in the earlier periods; from 1650 onward, almost all title tokens are apocopated: only two titles — both in poems of Goethe (Period 9) — end in *-e*. In the prose texts (table 4.32), where the majority of titles are found, the association of titles with apocope is stronger than in the whole corpus, and here, the PR is slightly higher in the earlier periods.

The effect size (PR) decreases to 1.18 in the whole corpus, and to 1.15 in the first six periods, when we exclude tokens with a question mark in the title category (Title B). The proportion of unapocopated tokens (ending in *-e*) is slightly higher among tokens marked “y” (137/1,896, or 7%) than among question-mark titles (31/548, or 6%). As noted in 4.2.5.1, tokens marked “y” all lack at least a determiner, whereas those with question marks are almost all preceded by at least one element; the smaller proportion of apocopated tokens and lower PR value in the (mostly unprecedented) “y” group suggest that the factor “title” may have had some effect on apocope independent of unprecedentedness.

The effect of the factor “title” is somewhat larger in the case of non-weak inflection, particularly in the earlier periods and in prose texts; endings other than *-(e)n* are between 1.5 and 2.3 times more likely to occur on titles (Title A) than on non-titles, depending on which subset of the corpus we look at (see table 4.33 for the whole data set and 4.34 for the prose texts). When only those tokens marked “y” in the title category are considered to be titles (Title B), the PR of non-weak inflection increases considerably, to 2.68 for the whole corpus and to 3.17 for the first six periods. Again, these values are higher in prose texts (table 4.34); in the prose texts from Periods 1–6, endings other than *-(e)n* are nearly four times as likely to appear on titles as on non-

titles. The larger effect size among tokens marked “y” is not surprising given that all of these tokens lack at least a preceding determiner; the factor “unprecedented” may have contributed just as much here as the factor “title.”

#### 4.5.3 Use in Direct Address (Vocative)

2,854 tokens are used to address someone or something directly, and in six additional instances (labeled “?”, and included with the other vocative tokens for analysis purposes), the token may have this function, but the syntax is ambiguous. Tokens marked either “y” or “?” in this category thus account for about 9% of all tokens (2,860/30,497). They occur in all periods but are best represented in the middle periods, and particularly in Periods 4–6, which have at least 350 vocative tokens each (see table 4.29; the other periods each have between 175 and 279 tokens). Almost all of these vocative tokens in Periods 4–6 are forms of *Herr* (947/1,142, or 83%); many are found in poems and plays dealing with religious topics.

As expected, nouns in this category are predominantly animate, and those that are best represented belong to Groups 1 and 2 (*Herr*, *Prinz*, *Held*, and *Schelm* have the highest proportion of vocative tokens) (see tables 4.27 and 4.28). Vocative tokens of inanimate nouns are largely confined to verse texts; only 7/98 (7%) occur in prose texts. Of the inanimate nouns in the data, *Brunnen* (26 tokens) is most frequently used in direct address; it is also one of the most animate, as we saw in 3.2.3.

That inanimate nouns are used with some regularity in direct address in verse texts, but almost never in prose texts, may help to explain why, overall, direct address is more common in verse than in prose (table 4.30): the pool of affected nouns is larger in poetry.

Vocative tokens are mostly unprecedented: 68% (1,934/2,860) have no other elements with them in the noun phrase. In particular, almost all (2,572/2,860, or 90%) lack a determiner; the majority of preceded tokens (639/926, or 66%) are preceded only by an attributive adjective. In the 10% of cases in which a determiner is present, the determiner is some form of the possessive adjective *mein*, with the exception of one token which is preceded by *unser*.

Most vocative tokens are singular (2,529/2,860, or 88%). The remaining 12% are all plural; there are no question-mark number tokens in this category (table 4.26). All tokens used in direct address are assumed to be in the nominative case, except for two tokens marked “?” in the case category which are also in the citation form.

Direct address is likely to induce apocope in the singular (vocative tokens are heavily stressed), but not non-weak inflection in oblique forms (tokens in the accusative, dative, and genitive cases never have vocative function). The effect on apocope is roughly the same here as in the title category above; 91% of all vocative tokens ending in *-e/ø* are apocopated (versus 93% of titles with these endings), and vocative tokens are 1.16 times more likely than non-vocative tokens to have lost their final *-e*, versus 1.19 in the title category (see table 4.31 for the whole data set and 4.32 for the prose texts). As in the title subset, the PR is somewhat higher in the first six periods, which are most important for our purposes, and the effect is stronger in prose alone (table 4.32) than when verse texts are included (table 4.31).



#### 4.5.4 Use in the Citation Form

In the modern language, tokens in the citation form are generally left uninflected in the oblique singular forms; most grammars and usage handbooks authorize this (see 1.1.2). In my corpus, 163 tokens, accounting for less than 1% of all weak masculine tokens in the corpus, are marked either “y” (127) or “?” (36) in the citation-form category. They are concentrated in prose texts (table 4.30) of the 15<sup>th</sup>, late 16<sup>th</sup>, and late 19<sup>th</sup> centuries (table 4.29), and occur mainly in chronicles and travelogues in which people and places are introduced to the reader by name, e.g., “Vnd ain Herczog von Lýndbach, genant **her Setzitamësch**, der stuend ier auch trewlich bey vncz an ier ende [...]” (Kottanerin, Period 2).

The most frequent nouns in this subset of tokens are words denoting people — particularly those that are commonly used as titles, e.g., *Herr*, *Graf*, *Herzog* — and places, e.g., *Garten* (see table 4.27 for the whole data set, and table 4.28 for the singular forms only). Tokens of *Mensch* and *Wille* in the citation form appear mainly in philosophical and religious/didactic texts and in poetry; most tokens of *Wille* (6/9) are from Nietzsche’s *Also sprach Zarathustra* (Period 11).

Almost all tokens in the citation form are singular (152/163, or 93%). The majority are in the nominative case (95/163, or 58%) (table 4.26), but there are also several tokens in the accusative (43, or 26%) and dative (five, or 3%), and the question-mark case category is extremely well represented here, with 20 tokens (12% of all citation-form tokens). Most of the case question marks are singular; remarkably, tokens in the citation form account for 18% (19/108) of all singular tokens with question marks in the case category. Many of these are (or may be) in apposition to other tokens in oblique cases (e.g., “wenn ich den Namen **Mensch** betrachte” (Rist, Period 6); “mit dem namen **herr** Wernhart von Stretlingen”<sup>98</sup> (*Stretlinger Chronik*, Period 3), and all lack the expected weak ending *-(e)n*.

Of the 42 accusative and dative singular tokens with the feature “citation form,” a significant number have non-weak endings: 43% (18) of these tokens have inflectional markers other than *-(e)n*, versus only 19% in the whole data set (compare the bottom row of table 4.33). The proportion of apocopated tokens in the singular (NADG?) is also very high here: of 125 singular citation-form tokens ending in *-e* or *-ø*, 107 (86%) have the marker *-ø*. When we remove the question marks, we are left with 107 singular *-e/ø* tokens in total, of which 93 (87%) are apocopated. Whether or not question marks are included in the citation-form count, the proportion of apocopated *-e/ø* tokens in the singular is larger in this subset than in the whole data set, where only 81% are apocopated (see the bottom row of table 4.31).

While these figures do indicate that tokens in the citation form are more likely to undergo *e*-apocope and exhibit non-weak inflection than tokens of weak masculine nouns in general, there are so few tokens in this category that the factor “citation form” alone is unlikely to have had a significant effect on the development of the weak masculine class. The factor “unprecedented” has probably had more influence here: the overwhelming majority of tokens in the citation form (135/163, or 83%) have neither a determiner nor an attributive adjective with them.

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<sup>98</sup> The *Stretlinger Chronik* has 10 tokens of *Herr* in the citation form that appear in exactly this context; all have question marks in the case category.

#### 4.5.5 Use in Attributive Phrases with *als*

139 tokens appear in attributive phrases after *als*, e.g., “weil er sich dann einbilden kann, **als freier Mensch** zu handeln” (Tieck, Period 10) — another environment in which omission of expected inflectional markers is authorized in the modern language. As in most other categories, tokens in the attributive phrase category are predominantly singular (109/139, or 78%), and most are in the nominative case (87/139, or 63%); the accusative, dative, and genitive cases are represented with 31, 18, and two tokens, respectively (table 4.26). Almost all nouns in the data are used in attributive phrases with *als* at least once, though nouns in Groups 3b and 4 are poorly represented here (see table 4.27 for the whole data set, and 4.28 for the singular forms only). Attributive phrases occur more often in prose (86/139, or 62%) than in verse texts (table 4.30), and are, for the most part, evenly distributed across all 11 periods (table 4.29).

The proportion of unpreceded tokens among attributive phrases with *als* (61/139, or 44%) is lower than in the other groups of tokens likely to be unpreceded (title [64%], vocative [68%], citation form [83%]). When tokens with an attributive adjective but no determiner are considered to be unpreceded (Unpreceded B), this figure creeps upward, just clearing the 50% mark (71/139). However, it is still considerably higher than in the entire data set, where only 25% of tokens are unpreceded (table 4.26). Unpreceded tokens in attributive phrases are concentrated in the later periods, which suggests that the loss of determiners in these structures has been a fairly recent development: more than two thirds of all unpreceded tokens in this group are from after 1650, while over three quarters of all tokens from before 1650 have at least one element preceding them.

In the singular, apocopated tokens (ending in *-ø*) account for about 76% (50/66) of all tokens in this group with the endings *-e* and *-ø*, and only about 7% of all oblique tokens (3/42) in this group have non-weak endings. Both of these proportions are lower than the corresponding proportions for the whole data set (81% apocopated in the singular and 19% non-weak oblique singular; see tables 4.31 and 4.33), indicating that the factor “attributive phrase” probably has not had a significant part in the restructuring of the weak masculine class.

#### 4.5.6 Use as Head of a Determinative Compound

##### 4.5.6.1 Overview

2,268 tokens, accounting for about 7% of all tokens of the 37 nouns included in this study, are the heads of determinative compounds. 165 of these, marked “?”, are preceded by elements with which they could form a compound, but are detached from these elements in the orthography; these potential compound heads, which are included in the compound category for analysis purposes, are limited to the first seven periods.

Three of the nouns under investigation (*Herzog*, *Leichnam*, *Buchstabe*) are themselves compounds, historically; they share the stress pattern of other compounds and can be expected to behave like these with respect to apocope and non-weak inflection. When all forms of these three nouns are included in the compound count, the number of compounds in the corpus increases to 3,016, or 10% of all tokens: 2,268 total tokens marked “y/?” in the compound head category, plus all 777 tokens of *Herzog*, *Leichnam*, and *Buchstabe*, minus the 29 compounds with *Herzog*,

*Leichnam*, and *Buchstabe* (e.g., *Erzherzog*, *Fronleichnam*, *Anfangsbuchstabe*) which are included in both categories.

All 37 nouns, including *Herzog*, *Leichnam*, and *Buchstabe*, occur in compounds at least once (see table 4.27 for the whole data set, and 4.28 for the singular forms). *Bogen* is most frequently compounded, followed by *Graf* and *Hahn*, both of which have lost their final *-e*, and *Fahne*, which is now feminine with *-e* but in the earliest periods never has *-e* in the nominative singular. Frequent compounding may have contributed to the loss of *-e* in the case of *Graf* and *Hahn* (see 5.3.2 and 6.3.2); in the case of *Bogen*, though, compounding occurs too rarely in the nominative singular to have had an effect on the shape of the stem. *Löwe* and *Schade/n* are compounded the least frequently.

Compounding occurs at about the same rate in all periods, but is most common in Period 2, where *Markgrafen* and *Domherren* abound (table 4.29). Surprisingly, it is more widespread in prose texts than in verse texts, where one might expect to encounter innovative word formation more often (table 4.30).

The proportion of compounds (not including simplex forms of *Herzog*, *Leichnam*, and *Buchstabe*) remains low throughout the paradigm, never exceeding 11% in any form (table 4.26). It is somewhat larger in the plural than in the singular, particularly in the nominative plural — unexpectedly so, since the three most commonly compounded nouns (*Graf*, *Hahn*, and *Bogen*) are much more frequent in the singular than in the plural. Question marks in the number category are rare among compound tokens; in the case category, however, compound heads account for a significant proportion of question-mark tokens in both numbers. Most compounds with case question marks (27/43, or 63%) occur after expressions of quantity or in partitive structures.

#### 4.5.6.2 Effects on Apocope and Non-Weak Inflection in the Singular

Determinative compounds are said to be susceptible to apocope because their heads bear secondary stress. In the singular, contrary to expectation, the effect of compounding (Comp. A) on apocope among tokens ending in *-e/ø* is *not* statistically significant in the whole data set (table 4.31), and it becomes even less so when we take out the verse tokens (table 4.32). In the first six periods, we do find a statistically significant association in the prose texts, but it is much weaker than expected.

When all forms of *Herzog*, *Leichnam*, and *Buchstabe* are included in the compound count (Comp. B), however, the effect size increases, both in the whole data set and in all subsets. Since most singular forms of these three nouns ending in *-e/ø* are apocopated, the increase is not surprising; the most frequent of the three, *Herzog*, is apocopated in the singular in 95% of all instances (282/296).

The effect of compounding on non-weak inflection in the oblique singular forms is also not significant, as long as we include in the compound category only those tokens labeled “compound head” (Comp. A; see table 4.33). As in the case of apocope, it is weaker in prose texts (table 4.34).

Once again, the association becomes stronger when we include uncompounded forms of *Herzog*, *Leichnam*, and *Buchstabe* (Comp. B). Here, the increase in the effect size is considerable, particularly in the first six periods, where endings other than *-(e)n* are more than twice as likely to occur in compounds as in non-compounds (versus only about 1.1 times when simplex forms of *Herzog*, *Leichnam*, and *Buchstabe* are not included). *Buchstabe* is infrequent in

the singular, but *Herzog* and *Leichnam* almost always have non-weak endings in the oblique singular forms: of 153 forms of *Herzog* in the accusative, dative, and genitive singular, only 53 (35%) end in *-(e)n*, while in the case of *Leichnam*, the proportion of weak endings is even smaller (27/143, or only 19%). Weak oblique singular forms of *Leichnam* occur only in the first three periods; forms of *Herzog* ending in *-(e)n* are limited to Periods 1–5. While the compound-like properties of these nouns may be partly responsible for the prevalence of non-weak endings in these cases, there are likely other factors involved, as well (see chapters 6 and 7).

The effect on apocope may be more pronounced in compounds whose initial members have only one syllable (e.g., *Pfalzgraf*), and slightly weaker when the number of syllables not counting the head is greater than one (e.g., *Himmelsbote*). In a compound whose first member had two syllables rather than one, the presence of *-e* would yield a sequence of two trochees, which would be optimal from a prosodic standpoint (German words tend to have a trochaic syllable structure). Of 281 singular compounds ending in *-e/ø* whose initial members have more than one syllable, 74 (26%) end in *-e*, while the rest are apocopated. Among compounds whose initial members have more than one syllable, we again find 74 tokens ending in *-e*, which, however, account for a much smaller percentage of the total (74/556, or 13%).

The number of syllables in the compound seems not to affect the choice of inflectional marker (weak versus non-weak) in the oblique singular forms at all; here, the proportion of non-weak endings is slightly larger among compounds whose initial members have more than one syllable (68/316, or 22%, versus only 20% (112/549) in cases where the initial member has only one syllable.

#### 4.5.7 Use as Prepositional Object

##### 4.5.7.1 Overview

6,199 tokens, accounting for about 20% of all 30,497 tokens and 38% of the 16,106 non-nominative tokens in the corpus, are (6,097) or may be (102) prepositional objects; tokens with question marks in the prepositional object category are included with the other prepositional objects in the analysis. The proportion of prepositional objects is about the same across all periods (table 4.29), and slightly higher in prose than in verse (table 4.30).

Like the other token subsets that we have looked at so far, prepositional object tokens occur more frequently in the singular than in the plural. Overall, they make up about the same percentage of singular as of plural tokens (20% in both numbers; see table 4.26). However, when we remove the nominative from the total counts for a fairer comparison, the proportion of prepositional objects among singular tokens jumps to 40% (4,735/11,789), while that in the plural remains lower, at 33% (1,246/3,804).

The vast majority of prepositional objects (4,622/6,199, or about 75%) are in the dative case (table 4.26). Conversely, almost all dative tokens — 73% (4,622/6,321) overall, and more than 70% in each of the three number categories (singular, plural, ?) — are prepositional objects; other uses of the dative are rare. The accusative is also well represented among prepositional objects, accounting for 23% of all tokens in this category (1,418/6,199), and a significant proportion of accusative tokens (1,418/6,006, or 24%) are the objects of prepositions. Prepositional objects are virtually absent among tokens in the genitive case; only 2% of all

genitive tokens (59/3,207) have this function, and less than one percent of all prepositional object tokens (59/6,199) are in the genitive.

A significant number of prepositional objects are marked “?” in the case and number categories: 42% of all number question marks, and 45% of all case question marks in the singular (and a slightly smaller, but nonetheless significant, percentage in the plural), are or may be prepositional objects. In most of these instances, either the case or the number, but not both, could be determined from context or by looking at other instantiations of the preposition in the same text; in only 16 instances (representing less than 1% of all prepositional object tokens) could neither be determined. Many of these question-mark tokens are unprecedented, particularly in the number category: 52/100 case question marks (52%) and 174/218 number question marks (80%) have neither a determiner nor an attributive adjective accompanying them. As noted in 4.5.1, the case and number of unprecedented tokens are frequently impossible to determine.

As expected, the proportion of prepositional objects is greater in the inanimate Group 3 — particularly among nouns that have completed the shift into the strong declension (Group 3a) — than in Group 1, which contains only animate nouns that are still weak today (see table 4.27 for the whole data set, and 4.28 for the singular forms). In Groups 2 and 4, which contain both animate and inanimate nouns, the inanimate nouns are more frequently the objects of prepositions than the animate ones.

The most frequent prepositions in Group 1 are *von* (denoting the agent or point of origin), *zu* (denoting the goal), and comitative *mit* (table 4.37). In Group 3, spatial prepositions are more in evidence; *in* is especially well represented, and for all nouns in Group 3a except *Bogen*, it is the most frequent of all. *Mit* denoting the instrument is also more prominent in Group 3 than in Group 1. In Groups 2 and 4, we find a variety of prepositions, distributed in such a way that the animate nouns in these groups usually pattern with Group 1, and the inanimate nouns with Group 3.

Overall, the five prepositions that occur most frequently with the nouns featured in this study are *mit*, *in*, *von*, *zu*, and *durch* (table 4.38); similar rankings obtain when we look at prose and verse tokens separately (table 4.39) and at each of the periods individually (table 4.40). In prose texts, *mit* is most frequent, followed by *von* and *in*. In verse texts, *in* jumps to the top of the list, surpassing *mit* by 147 tokens, while *von* moves down into third place. In the individual periods, too, *mit*, *in*, and *von* are consistently at or near the top of the list; *mit* is more frequent in the earlier periods, where collocations such as *mit willen* and *mit (dem) namen* are extremely common, while *in* dominates in the later periods.

*Durch* is most frequent in the earlier periods, particularly in Periods 1 and 2, where it occurs mainly in combination with the noun *Wille/n* in the incipient bipartite preposition *durch ... willen*; in the other periods, it never rises above position 6. It is more frequent in prose than in verse texts.

In Period 1, unexpectedly, the most frequent preposition is *auf*. Here, again, Merswin’s *Buch von den neun Felsen* is to blame for the discrepancy: this text accounts for 95% (92/97) of all instantiations of *auf* in Period 1, and in all 92 cases, the object is *Fels/en*.

Table 4.37. Most frequent prepositions, by noun (all periods; prose and verse)

Group	Noun	Most frequent preposition(s)	Tokens (n)	2 <sup>nd</sup> most frequent preposition(s)	Tokens (n)	Total prep. objs. (n)
1a	<i>Affe</i>	<i>von</i>	5	<i>zu</i>	4	<b>17</b>
	<i>Bote</i>	<i>von</i>	10	<i>zu</i>	7	<b>36</b>
	<i>Bube</i>	<i>von</i>	7	<i>zu</i>	6	<b>25</b>
	<i>Knabe</i>	<i>von</i>	13	<i>mit</i>	11	<b>65</b>
	<i>Löwe</i>	<i>von</i>	28	<i>mit</i>	15	<b>91</b>
	<i>Pfaffe</i>	<i>zu</i>	13	<i>von</i>	12	<b>51</b>
1b	<i>Bär</i>	<i>von</i>	5	<i>an, unter, zu</i>	2 ea.	<b>17</b>
	<i>Graf</i>	<i>von</i>	41	<i>mit, zu</i>	30 ea.	<b>187</b>
	<i>Held</i>	<i>von</i>	16	<i>mit</i>	7	<b>53</b>
	<i>Herr</i>	<i>von</i>	197	<i>zu</i>	174	<b>884</b>
	<i>Mensch</i>	<i>von</i>	121	<i>zu</i>	67	<b>626</b>
	<i>Prinz</i>	<i>von</i>	22	<i>mit</i>	7	<b>62</b>
2	<i>Hahn</i>	<i>zu</i>	4	<i>auf, in, mit, über</i>	2 ea.	<b>17</b>
	<i>Herzog</i>	<i>zu</i>	15	<i>von</i>	3	<b>67</b>
	<i>Leichnam</i>	<i>in</i>	9	<i>mit</i>	8	<b>49</b>
	<i>Schelm</i>	<i>von, zu</i>	4 ea.	<i>mit</i>	3	<b>16</b>
	<i>Schmerz</i>	<i>mit</i>	116	<i>in</i>	68	<b>404</b>
3a	<i>Bogen</i>	<i>mit</i>	32	<i>von</i>	18	<b>130</b>
	<i>Brunnen</i>	<i>in</i>	55	<i>zu</i>	35	<b>218</b>
	<i>Garten</i>	<i>in</i>	292	<i>aus</i>	19	<b>376</b>
	<i>Kasten</i>	<i>in</i>	18	<i>an, zu</i>	4	<b>37</b>
	<i>Schatten</i>	<i>in</i>	66	<i>mit</i>	27	<b>160</b>
3b	<i>Buchstabe</i>	<i>mit</i>	28	<i>in</i>	9	<b>66</b>
	<i>Friede/n</i>	<i>in</i>	90	<i>zu</i>	79	<b>265</b>
	<i>Funke/n</i>	<i>von</i>	4	<i>aus, in</i>	2 ea.	<b>10</b>
	<i>Name/n</i>	<i>mit</i>	275	<i>in</i>	189	<b>627</b>
	<i>Schade/n</i>	<i>zu</i>	60	<i>mit</i>	50	<b>240</b>
	<i>Wille/n</i>	<i>mit</i>	161	<i>nach</i>	159	<b>855</b>
3c	<i>Drache/n</i>	<i>mit</i>	10	<i>von</i>	8	<b>26</b>
	<i>Fels/en</i>	<i>auf</i>	123	<i>von</i>	70	<b>325</b>
	<i>Tropfen</i>	<i>in</i>	10	<i>mit</i>	8	<b>42</b>
4	<i>Backe</i>	<i>an, auf</i>	5 ea.	<i>mit</i>	3	<b>16</b>
	<i>Fahne</i>	<i>mit</i>	12	<i>unter</i>	9	<b>37</b>
	<i>Grille</i>	<i>mit</i>	7	<i>von</i>	4	<b>16</b>
	<i>Rebe</i>	<i>an</i>	6	<i>mit, von</i>	5 ea.	<b>34</b>
	<i>Schlange</i>	<i>von</i>	21	<i>mit</i>	6	<b>45</b>
	<i>Schnecke</i>	<i>durch</i>	2	<i>auf, in, mit, von, zu, über</i>	1 ea.	<b>8</b>

Table 4.38. Most frequent prepositions (all periods; prose and verse)

Preposition	Tokens ( <i>n</i> )	Preposition	Tokens ( <i>n</i> )
<i>mit</i>	1,057	<i>nach</i> (postpos.)	11
<i>in</i>	1,042	<i>neben/neb(en)st</i>	11
<i>von</i>	808	<i>außer</i>	9
<i>(bis) zu</i>	630	<i>ob</i>	9
<i>durch</i>	305	<i>halb(en)/halb(er)</i> (postpos.)	8
<i>an</i>	274	<i>hinter</i>	6
<i>(bis) auf</i>	255	<i>wegen</i>	6
<i>nach</i>	253	<i>ab</i>	5
<i>bei</i>	234	<i>anstatt / (an) ... statt</i>	5
<i>an(e)/ohne</i>	156	<i>trotz</i>	5
<i>für/vor*</i>	152	<i>jenseit(s)</i>	4
<i>aus</i>	137	<i>ausgenommen</i>	2
<i>wi(e)der</i>	127	<i>vermitteltst</i>	2
<i>vor</i>	121	<i>bofen</i>	1
<i>unter</i>	115	<i>entgegen</i> (postpos.)	1
<i>(bis) über</i>	107	<i>fernab</i> (postpos.)	1
<i>um</i>	105	<i>gegenüber</i> (postpos.)	1
<i>(en)gegen</i>	54	<i>hincz</i>	1
<i>zwischen</i>	54	<i>inner</i>	1
<i>samt, zusamt, mitsamt</i>	46	<i>nächst</i>	1
<i>(von/um) ... wegen</i> (postpos.)	17	<i>sunder/sonder</i> (postpos.)	1
<i>gen</i>	16	<i>unangesehen</i>	1
<i>sunder/sonder</i>	13	<i>zu hilf</i>	1
<i>um/durch ... willen</i>	13	<i>zu wider</i> (postpos.)	1

Note: Prepositions are arranged in order of decreasing token frequency. In addition to the tokens included in this table, there are 14 tokens preceded by the expression *was für* (where *für* may or may not still be a preposition), and four tokens for which the governing preposition could not be identified with certainty (there were two or more prepositions near the token, and it was not clear which one the token was dependent on).

\*The category *für/vor* includes only those tokens of *vor* that have the same meaning as *für* ‘for’; tokens of *vor* ‘before; in front of’ are in a separate category three lines below.

Table 4.39. Most frequent prepositions, by prose/verse (all periods)

	Most frequent preposition	Tokens ( <i>n</i> )	2 <sup>nd</sup> most frequent preposition	Tokens ( <i>n</i> )	Total prep. objs. ( <i>n</i> )
Prose	<i>mit</i>	640	<i>von</i>	526	<b>3,771</b>
Verse	<i>in</i>	564	<i>mit</i>	417	<b>2,428</b>

Table 4.40. Most frequent prepositions, by period (prose and verse)

Period	Most frequent preposition	Tokens ( <i>n</i> )	2 <sup>nd</sup> most frequent preposition(s)	Tokens ( <i>n</i> )	Total prep. objs. ( <i>n</i> )
1	<i>auf</i>	99	<i>in, mit</i>	91 ea.	<b>779</b>
2	<i>mit</i>	113	<i>zu</i>	98	<b>693</b>
3	<i>mit</i>	178	<i>von</i>	91	<b>671</b>
4	<i>in</i>	98	<i>mit</i>	97	<b>508</b>
5	<i>mit</i>	177	<i>von</i>	132	<b>843</b>
6	<i>in</i>	106	<i>mit</i>	94	<b>573</b>
7	<i>in</i>	101	<i>mit</i>	72	<b>479</b>
8	<i>von</i>	85	<i>mit</i>	72	<b>460</b>
9	<i>in</i>	95	<i>von</i>	68	<b>430</b>
10	<i>in</i>	104	<i>von</i>	53	<b>369</b>
11	<i>in</i>	89	<i>von</i>	55	<b>395</b>

#### 4.5.7.2 Effects on Apocope and (Non-)Weak Inflection in the Singular

The presence of a preposition is expected to reinforce the weak pattern rather than undermine it. While there is a statistically significant correlation between prepositional objects (Prep. A) and weak inflection in the singular forms (ADG) overall (table 4.33), the association is weaker than in other categories; the expected weak endings are only 1.02 times more likely to occur on tokens that are prepositional objects than on those that are not. In Periods 1–6, where there are disproportionately many tokens of the then-strong noun *Fels/en* (most of which are prepositional objects), there is no correlation at all. The situation is much the same in the prose texts alone (table 4.34).

When we remove all 534 forms of *Fels/en* from the data (Prep. B), the association of prepositional objects with weak inflection strengthens considerably, becoming statistically significant for the first six periods both in the entire data set (table 4.33) and in the prose subset (table 4.34).

If, as seems likely, some of the singular prepositional object tokens ending in *-e* from the earlier periods are weak forms with missing nasal bars (most of these — 198/241, or 82% — are from Periods 1–6), the association of prepositional objects with weak inflection may be even stronger than the figures presented above suggest.

As expected, prepositional objects do not have a discernible effect on apocope in the singular forms. At first glance, the ending *-e* appears significantly more likely (in the prose texts of the first six periods, nearly twice as likely) to occur in the presence than in the absence of a preposition (Prep. A; see table 4.31 for the whole data set, and 4.32 for the prose data). However, when we remove *Fels/en* (Prep. B), which in Merswin — the text in which it is most frequent — most often ends in *-e*, the test for statistical significance fails. Many singular prepositional objects ending in *-e*, including almost all singular forms of *Fels/en* in this category (88/99, or 89%), are in the dative case, so that in many instances, the *-e* is probably a strong case marker rather than the unapocopated remnant of a weak ending.

To measure the possible effects of different prepositions on the inflection of weak masculine nouns, I have calculated proportions of tokens with weak and non-weak endings for all prepositions that are represented in the data with more than 30 tokens each (table 4.41). Most non-weak prepositional-object tokens end in *-e* or *-ø*; other non-weak inflectional markers are rare in this category.

In general, prepositions that (almost) always, or mainly, govern the accusative — *durch* (99% acc.), *wi(e)der* (95% acc.), *gegen* (53% acc.) — are associated with a higher incidence of regular weak inflection in the singular than those that primarily take other cases; *ane/ohne* (96% acc.) is an exception here, and objects of *für/vor* (92% acc.) and *um* (100% acc.) also have non-weak endings more often than the other accusative prepositions. As we saw in table 4.13, the non-weak endings *-e* and *-ø* occur more frequently in the accusative singular than in the dative singular overall; in the prepositional object category, however, they are slightly more frequent in the dative (18% *-e/ø* in the dative versus only 15% in the accusative), so it makes sense that we should find more weak forms after a preposition that takes the accusative.

How can we account for this apparent weak-ending-preserving effect of the accusative prepositions? Tokens that are the objects of accusative prepositions are no more likely to be preceded than those that follow other prepositions; on the contrary: with the exception of *für/vor* and *gegen*, all of the accusative prepositions are followed by unpreceded tokens at least 30% of the time, versus no more than 30% for most most other prepositions (table 4.42).



Table 4.41. Distribution of weak and non-weak inflectional markers in the oblique singular forms, by preposition (all periods; prose and verse)

Preposition	Weak (%)	Non-weak (%)	Total obl. sg. ( <i>n</i> )
<i>mit</i>	79	21	<b>731</b>
<i>in</i>	89	11	<b>882</b>
<i>von</i>	80	20	<b>535</b>
<i>zu</i>	85	15	<b>534</b>
<b><i>durch</i></b>	92	8	<b>258</b>
<i>an</i>	82	18	<b>203</b>
<i>auf</i>	48	52	<b>211</b>
<i>nach</i>	89	11	<b>231</b>
<i>bei</i>	88	12	<b>166</b>
<b><i>an(e)/ohne</i></b>	77	23	<b>104</b>
<b><i>für/vor</i></b>	84	16	<b>100</b>
<i>aus</i>	82	18	<b>102</b>
<b><i>wi(e)der</i></b>	92	8	<b>111</b>
<i>vor</i>	76	24	<b>70</b>
<i>unter</i>	80	20	<b>60</b>
<i>über</i>	80	20	<b>65</b>
<b><i>um</i></b>	84	16	<b>83</b>
<b><i>gegen</i></b>	90	10	<b>40</b>
<i>zwischen</i>	78	22	<b>37</b>
<i>(zu-, mit-)samt</i>	71	29	<b>35</b>

Note: Prepositions that mainly take the accusative are marked in boldface.

Table 4.42. Distribution of preceded and unpreceded tokens in the oblique singular forms, by preposition (all periods; prose and verse)

Preposition	Preceded (%)	Unpreceded (%)	Total obl. sg. ( <i>n</i> )
<i>mit</i>	59	41	<b>731</b>
<i>in</i>	77	23	<b>882</b>
<i>von</i>	82	18	<b>535</b>
<i>zu</i>	69	31	<b>534</b>
<b><i>durch</i></b>	47	53	<b>258</b>
<i>an</i>	90	10	<b>203</b>
<i>auf</i>	92	8	<b>211</b>
<i>nach</i>	83	17	<b>231</b>
<i>bei</i>	86	14	<b>166</b>
<b><i>an(e)/ohne</i></b>	54	46	<b>104</b>
<b><i>für/vor</i></b>	90	10	<b>100</b>
<i>aus</i>	83	17	<b>102</b>
<b><i>wi(e)der</i></b>	68	32	<b>111</b>
<i>vor</i>	74	26	<b>70</b>
<i>unter</i>	83	17	<b>60</b>
<i>über</i>	83	17	<b>65</b>
<b><i>um</i></b>	66	34	<b>83</b>
<b><i>gegen</i></b>	90	10	<b>40</b>
<i>zwischen</i>	78	22	<b>37</b>
<i>(zu-, mit-)samt</i>	71	29	<b>35</b>

Note: Prepositions that mainly take the accusative are marked in boldface.

I suspect part of the solution may rest with the noun *Wille/n*, which occurs very frequently in collocations with the prepositions *durch*, *wi(e)der*, *um*, *mit*, *nach*, *aus*, and

somewhat less frequently with *gegen*, *ane/ohne*, and *von*. All of these collocations are likely processed as chunks in which the noun is frozen in the weak form; two of them, *um ... willen* and *durch ... willen*, have undergone grammaticalization and become prepositions (circumpositions) themselves.<sup>99</sup> When *Wille/n* is excluded (table 4.43), the distribution of weak and non-weak endings evens out slightly for the prepositions in question.

Table 4.43. Distribution of preceded and unpreceded tokens in the oblique singular forms, by preposition (all periods; prose and verse; no *Wille/n*)

Preposition	Weak (%)	Non-weak (%)	Total obl. sg. (n)
<i>mit</i>	72	28	<b>584</b>
<i>in</i>	88	12	<b>802</b>
<i>von</i>	79	21	<b>503</b>
<i>zu</i>	84	16	<b>498</b>
<b><i>durch</i></b>	83	17	<b>100</b>
<i>an</i>	82	18	<b>198</b>
<i>auf</i>	47	53	<b>206</b>
<i>nach</i>	72	28	<b>75</b>
<i>bei</i>	88	12	<b>162</b>
<b><i>an(e)/ohne</i></b>	60	40	<b>58</b>
<b><i>für/vor</i></b>	83	17	<b>36</b>
<i>aus</i>	78	22	<b>79</b>
<b><i>wi(e)der</i></b>	69	31	<b>26</b>
<i>vor</i>	75	25	<b>67</b>
<i>unter</i>	80	20	<b>60</b>
<i>über</i>	77	23	<b>56</b>
<b><i>um</i></b>	80	20	<b>59</b>
<b><i>gegen</i></b>	89	11	<b>38</b>
<i>zwischen</i>	78	22	<b>37</b>
<i>(zu-, mit-)samt</i>	71	29	<b>35</b>

Note: Prepositions that mainly take the accusative are marked in boldface.

#### 4.5.8 Summary: Conditions Likely to Induce Apocope and Non-Weak Inflection in the Singular

Of the six factors discussed, use as a title (with or without preceding determiner) and use in direct address seem to exert the greatest influence on the presence/absence of *-e* in the singular forms of the 37 nouns in the data. In the prose texts of the first six periods (but not in the entire corpus), compounding also has a statistically significant effect on apocope.

The effect on non-weak inflection in the oblique cases is most noticeable among unpreceded tokens, regardless of whether we include in the unpreceded category tokens that are preceded by an attributive adjective. Use as the head of a compound seems also to induce non-weak inflection with some regularity, at least when simplex forms of *Herzog*, *Leichnam*, and *Buchstabe* are considered to be compounds (Comp. B). In the case of titles, the elevated effect size may owe itself to the large number of unpreceded tokens in the category; the effect is more pronounced when titles with preceding determiners and adjectives are excluded (Title B).

<sup>99</sup> As noted in 3.2.3, I did not include tokens of *Wille/n* following *um* and *durch* unless they were preceded by an inflected determiner or attributive adjective.

As expected, the presence of a preposition seems to increase the likelihood that a (formerly) weak masculine noun will appear with the expected weak ending in the accusative, dative, or genitive singular, though the effect size is small.

In most cases, the effect size is larger in the first six periods, which are most important for our purposes. The effects of prepositions on weak inflection and of titles on apocope are exceptions in this regard. The effect size also increases in many categories when verse tokens are removed from the data.

#### 4.5.9 Addendum: Influence of Rhyme and Meter in Verse Texts

Many instances of apocope and non-weak inflection which cannot be explained with reference to any of the conditioning factors discussed in the previous section are likely just regional variants (see above, 4.4.2) or can be attributed to prosodic factors, particularly (in verse texts) constraints of rhyme and meter.<sup>100</sup> Unfortunately, I did not keep track systematically of properties such as the metrical structure of the line of verse containing the token, or whether the token occurred in a rhyming couplet. However, a quick analysis of verse tokens of the six nouns in Group 1a (*Affe*, *Bote*, *Bube*, *Knabe*, *Löwe*, *Pfaffe*) suggests that these factors may have had some effect on the choice of inflectional marker in the texts in my corpus, and particularly on the presence/absence of *-e* in the singular. Several poets from the southern part of the German-speaking region who normally use the apocopated forms of these nouns use the full form with *-e* when the meter — usually a fairly rigid iambic tetrameter or pentameter — requires an extra syllable (table 4.44). At the same time, poets who ordinarily do not apocopate, or who write mainly in the standard language (after about 1650), use forms with *-ø* (or apostrophe) to accommodate the meter (table 4.45). In the case of *Bube*, all of the 32 verse tokens with the endings *-e/ø* fit neatly into the metrical structure: the apocopated form is used consistently when the following syllable is unstressed, while the form ending in *-e* appears only before stressed syllables.

Non-weak/innovative inflection in the oblique cases is rare among nouns in Group 1a, but in at least three instances (of 34), metrical constraints likely provided the impetus for the omission of an expected inflectional ending (see the top three rows of table 4.46). In the example from Wernicke in table 4.46, adding the expected ending *-en* would have resulted in a sequence of two unstressed syllables in an otherwise strict iambic hexameter. In the remaining examples, the uninflected form of *Löwe/Leue* has clearly been chosen to rhyme with *scheu/Scheue*.

In three additional instances of non-weak inflection, the expected form ending in *-(e)n* would not have worked with the metrical structure, but the token is also unprecedented, so that it is impossible to tell whether the omission was motivated by the meter or by the absence of preceding elements (see the bottom three rows of table 4.46). The two factors likely both contributed here to some degree.

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<sup>100</sup> The influence of prosody on German nominal inflection is not limited to the domain of rhyming verse, as Rohdenburg (1989) has demonstrated in a study of inflectional variation in the nominative singular of certain feminine nouns in Low German prose texts. It seems likely that prosodic factors have affected the inflection of the weak masculine nouns in Upper and Middle German prose texts, at least to some extent; however, it would require another book, or at least an article, to explore the association in depth.

Table 4.44. Examples of metrically induced -e in texts in which apocope is the norm

Source	Apocopated variant	Unapocopated variant
Oswald (Period 2)	der <b>knab</b> hin zu dem freulin rett wann ir, vil röscher <b>knab</b> ,/ auch füg ich mangem weibe/ mit kostberlicher gab	Gar laut so lacht der <b>knabe</b> vein
Sachs (Period 4)	der <b>leb</b> an allen graus/ im seinen offenen rachen but nach dem der alte <b>leb</b> gestarb	im eilet ser der <b>lebe</b> nach der <b>lebe</b> im des dankbar was
Wittenwiler (Period 3)	Sprach der <b>bott</b> zuon herren do Hern Laurein ward ein <b>bott</b> gesant	Der rache ward der <b>botte</b> fro

Table 4.45. Examples of metrically induced apocope in texts in which apocope does not usually occur

Source	Apocopated variant	Unapocopated variant
Wernicke (Period 7)	ein <b>Boht</b> des Himmelreichs ein guter <b>Boht</b> ? und schlimmer Christ ein <b>Boht</b> des Pabsts Ich lach', und die Gesellschaft find't, Dass <b>Aff</b> ? und Papagoy aus einem Lande sind. Arglistig wie ein <b>Aff</b> ?, und gleich den Bähren wild	doch trägt ein <b>Bothe</b> nicht/ Die Wahrheit offt im Brief Hier stehts, Menalcas ist ein <b>Affe</b> . (: <i>schaffe</i> )
Eichendorff (Period 10)	als <b>Bot</b> voraus das Bächlein eilt	Die Lerch als <b>Morgenbote</b> / Sich in die Lüfte schwingt (: <i>Reisenote</i> )
Schiller (Period 9)	Und auch sein <b>Bub</b> , der Ulerich	Und <b>Bube</b> heißt nun Mann
Hülshoff (Period 10)	Und – was? ein Guß? – bei Gott, da hängt der <b>Bub</b> , die wilde Katze	Wo der tränenreiche <b>Bube</b> / Der Chinese, zaubernd waltet; (: <i>Stube</i> )
Hagedorn (Period 8)	Sechs! spricht der <b>Aff</b> ?, o gib mir doch aus Gnaden So wähl' ich mir zu meinem längern Leben,/ Was Esel, Hund und <b>Aff</b> ? an ihrem aufgegeben.	Und der <b>Affe</b> fiel ihm bei Der <b>Affe</b> naht sich mit Entzücken

Table 4.46. Examples of metrically induced non-weak inflection

Source	Example
Wernicke (Period 7)	Und von dem <b>Pfaff</b> ? ein Lied und seiner Köchin sungen
Silesius (Period 7)	Jetzt wandelt beim <b>Leue</b> / Das Lamm ohne Scheue, [...]
Schiller (Period 9)	Und im Kreise scheu/ Umgeht er den <b>Leu</b> / Grimmig schnurrend; [...]
Oswald (Period 2)	der tag in hat zu <b>bott</b> gesennt
Lohenstein (Period 7)	Die Waffen der Vernunft bezwingen <b>Löw</b> und Klauen.
Schiller (Period 9)	Nicht das Knäblein unter meinem Herzen?/ Nicht was <b>Löw</b> und Tiger milden kann?

This concludes our discussion of the various extramorphological factors that may have affected the development of the weak masculine class. We will see in the next four chapters that the weight of these factors is not consistent across all 37 nouns, but that there is considerable variation from one noun to the next.

Now, let us take a closer look at each of the four groups in turn. In which form(s) is each (group of) noun(s) most frequent, and which inflectional markers does each exhibit most

regularly? Do these frequencies change over time, or do they remain constant? And in the case of nouns that are no longer weak today, which factors have contributed most to the shifts?

## 5 Group 1

We begin with the 12 nouns in Group 1, all of which — if we are to believe the leading grammars and dictionaries — belong to the weak masculine class in the modern language. In Group 1a are six moderately frequent animate nouns ending in *-e*: *Affe*, *Bote*, *Bube*, *Knabe*, *Löwe*, and *Pfaffe*. Of the 37 nouns in this study, these match Köpcke's prototype (see 1.1.2) most closely (they are animate, end in *-e*, and have penultimate stress); *Affe* and *Löwe*, the two nouns in this group with non-human referents, are somewhat further from the prototype. The nouns in Group 1a are the most stable<sup>101</sup> and can thus serve as a sort of control group, providing a benchmark against which the frequencies of other nouns with more variable inflection can be measured and interpreted.

Group 1b contains the two high-frequency nouns *Mensch* and *Herr*, which together account for nearly half of all weak masculine tokens in the corpus, as well as four other animate weak nouns that do not have a final *-e* in the modern language: *Bär*, *Graf*, *Prinz*, and *Held*. *Held*, which has its origins in the MHG strong *a*-stem declension (*tac*; cf. [3] in 1.1.1), is an outlier in many respects; however, particularly in the later stages of its development, it exhibits inflectional behavior typical of nouns in this group.

For all nouns in Group 1, the most frequent form is the nominative singular, which dominates the paradigm but does not crowd out the remaining forms (see figures 5.1 and 5.2). For the most part, the distribution of inflectional markers in this group aligns with the structure of the weak masculine paradigm: the endings *-e/ø* are, in most cases, limited to the nominative singular, while the ending *-(e)n* occurs only in the oblique singular forms and in the plural. There is no *-(e)n* in the nominative singular and very little *-e/ø* in the rest of the paradigm, and other inflectional markers (e.g., *-(e)(n)s* in the genitive singular) are rare.

In this and the next three chapters, all distribution tables and charts contain data for both prose and verse texts. Corresponding tables for the prose texts only can be found in appendix C. As in the tables in chapter 4, in some cases, the percentages may not add up to exactly 100% due to rounding; these are not marked. In the opening graphs in color, question-mark values in the case and number categories are excluded for simplicity's sake; as we will see, there are not very many of these, in any event.

### 5.1 Number

In general, as expected, nouns in Group 1 (both 1a and 1b) are more frequent in the singular than in the plural; in some cases (*Löwe*, *Graf*, *Herr*, and *Prinz*), the proportion of singular tokens exceeds 80% (see tables 5.1 [1a] and 5.3 [1b] for the whole corpus, and 5.2 [1a] and 5.4 [1b] for the distribution across periods). On average, there is more singular and less plural in Group 1b (75%) than in Group 1a (66%); *Prinz*, in particular, is extremely infrequent in the plural, while *Bär* and *Held* have slightly more plural tokens than other nouns in Group 1b. For most nouns in this group, however, and particularly in Group 1a, the plural accounts for at

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<sup>101</sup> Other studies have shown final *-e* in combination with masculine gender to be a reliable indicator of weakness in the modern language (cf. Indefrey 2002; Köpcke 2000a, 2005; see also 1.1.2 above). In my corpus, the six nouns ending in *-e* are by far the most stable of the 37 nouns, in the sense that they follow the weak pattern more or less consistently in all periods.

least 30% of all tokens — considerably more than in Groups 2 and 3 (see chapters 6 and 7), where most nouns occur less than 20% of the time in the plural, and where the weak plural has in many cases been lost. From these values, we can infer that, over the centuries, speakers have had fairly regular encounters with the weak plural forms of most of these nouns, so that the risk of replacement in the early stages of the restructuring was minimal, or at least lower than in Groups 2 and 3.

### Group 1a

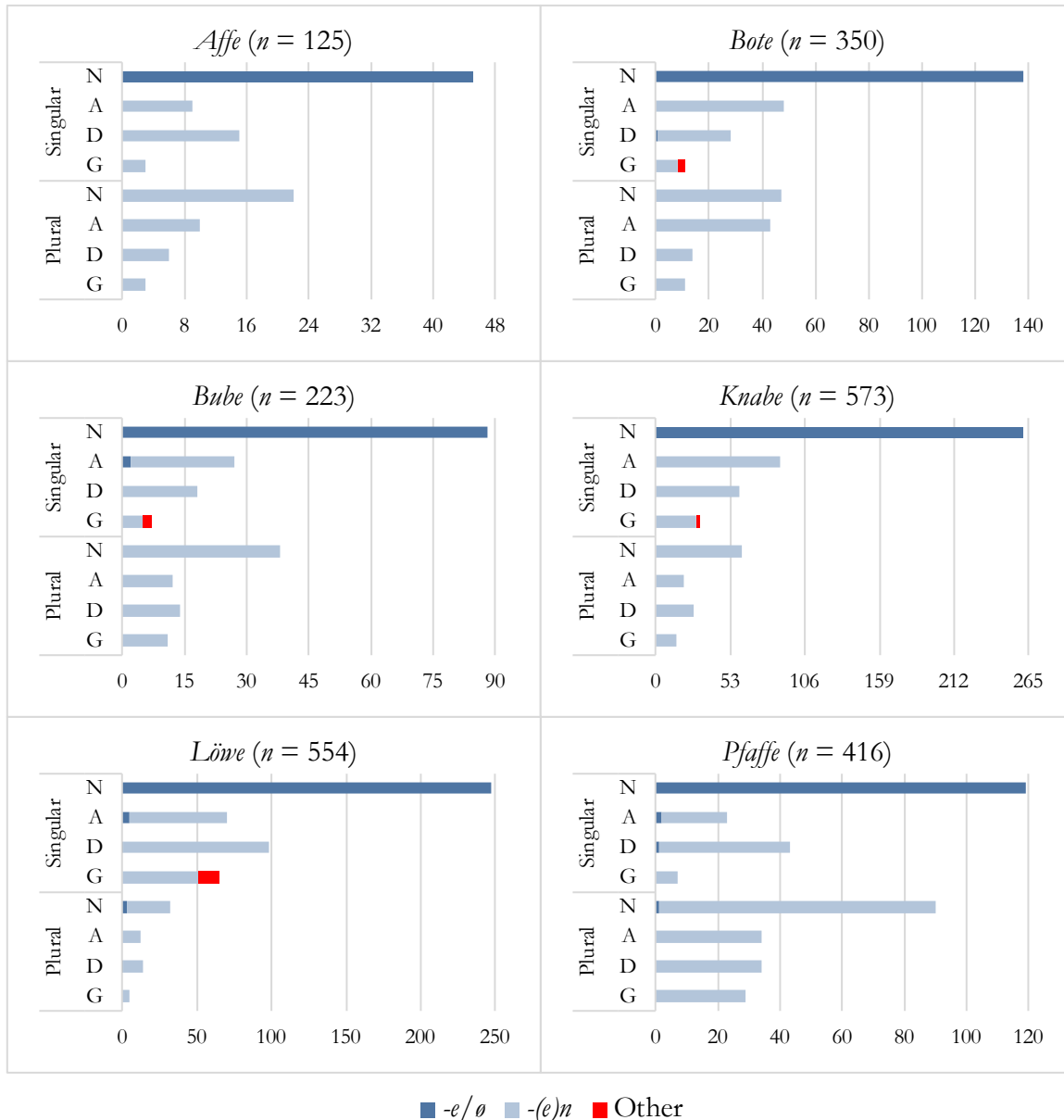


Figure 5.1. Group 1a: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values (-e/ø, -(e)n, other markers) in each form.

## Group 1b

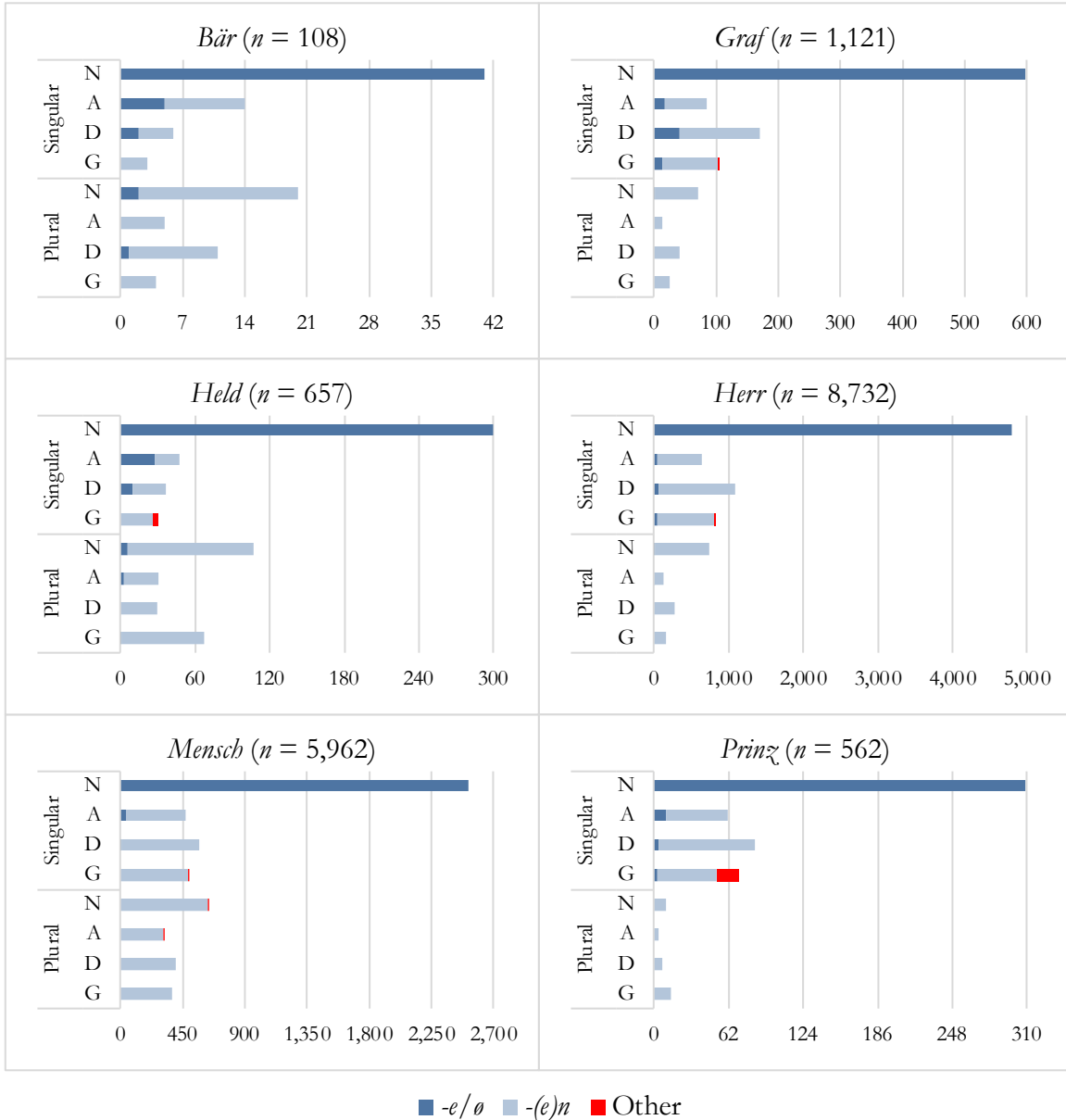


Figure 5.2. Group 1b: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form.

Table 5.1. Group 1a: Number distribution (all periods; all four cases)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>		
<i>n</i> =	125	350	223	573	554	416	Mean	SD
Sg. (%)	58	64	63	77	87	46	66	13
Pl. (%)	36	33	35	23	12	49	31	11
? (%)	6	3	2	1	1	5	3	2



Table 5.2. Group 1a: Number distribution, by period (all four cases)

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	8	62	3	41	27	112
(1350–1400)	Singular (%)	63	63	<b>0</b>	90	52	74
	Plural (%)	38	34	<b>100</b>	10	48	23
	? (%)	0	3	0	0	0	3
Period 2	<i>n</i> =	6	85	14	36	22	29
(1400–1450)	Singular (%)	67	68	79	64	55	<b>24</b>
	Plural (%)	17	29	21	36	45	<b>72</b>
	? (%)	17	2	0	0	0	3
Period 3	<i>n</i> =	26	48	3	32	201	16
(1450–1500)	Singular (%)	54	58	<b>33</b>	78	95	<b>31</b>
	Plural (%)	31	40	<b>33</b>	22	3	<b>69</b>
	? (%)	15	2	33	0	1	0
Period 4	<i>n</i> =	5	21	33	46	21	206
(1500–1550)	Singular (%)	<b>40</b>	<b>29</b>	<b>33</b>	74	86	<b>38</b>
	Plural (%)	<b>60</b>	<b>57</b>	<b>58</b>	26	14	<b>56</b>
	? (%)	0	14	9	0	0	6
Period 5	<i>n</i> =	22	21	59	61	92	12
(1550–1600)	Singular (%)	59	86	83	56	95	<b>42</b>
	Plural (%)	27	14	15	38	4	<b>42</b>
	? (%)	14	0	2	7	1	17
Period 6	<i>n</i> =	0	21	15	97	42	15
(1600–1650)	Singular (%)	—	81	<b>40</b>	71	79	<b>13</b>
	Plural (%)	—	19	<b>60</b>	29	21	<b>80</b>
	? (%)	—	0	0	0	0	7
Period 7	<i>n</i> =	11	41	24	40	45	3
(1650–1700)	Singular (%)	64	80	71	88	82	100
	Plural (%)	36	20	29	13	16	0
	? (%)	0	0	0	0	2	0
Period 8	<i>n</i> =	17	4	3	29	39	2
(1700–1750)	Singular (%)	53	<b>50</b>	67	83	87	<b>0</b>
	Plural (%)	47	<b>50</b>	33	17	13	<b>100</b>
Period 9	<i>n</i> =	10	12	30	52	23	4
(1750–1800)	Singular (%)	<b>50</b>	67	67	81	87	<b>50</b>
	Plural (%)	<b>50</b>	33	33	19	13	<b>50</b>
Period 10	<i>n</i> =	8	18	35	92	15	6
(1800–1850)	Singular (%)	75	<b>33</b>	60	89	73	67
	Plural (%)	25	<b>61</b>	40	11	27	33
	? (%)	0	6	0	0	0	0
Period 11	<i>n</i> =	12	17	4	47	27	11
(1850–1900)	Singular (%)	58	59	<b>50</b>	74	85	<b>36</b>
	Plural (%)	42	41	<b>50</b>	26	15	<b>64</b>

Note: Bold formatting is used wherever the percentage of plural tokens is greater than or equal to that of singular tokens.

Table 5.3. Group 1b: Number distribution (all periods; all four cases)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>		
<i>n</i> =	108	1,121	657	8,732	5,962	562	Mean	SD
Sg. (%)	59	85	63	84	68	93	76	13
Pl. (%)	38	15	36	15	30	6	23	12
? (%)	3	0	1	0	1	0	1	1

Table 5.4. Group 1b: Number distribution, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	5	6	30	1,297	1,609	0
(1350–1400)	Singular (%)	100	<b>0</b>	80	92	76	—
	Plural (%)	0	<b>100</b>	20	7	23	—
	? (%)	0	0	0	0	1	—
Period 2	<i>n</i> =	8	229	25	1,518	297	3
(1400–1450)	Singular (%)	<b>50</b>	86	72	66	84	100
	Plural (%)	<b>50</b>	14	28	34	15	0
	? (%)	0	0	0	0	1	0
Period 3	<i>n</i> =	7	18	60	860	805	0
(1450–1500)	Singular (%)	<b>14</b>	94	65	92	70	—
	Plural (%)	<b>71</b>	6	35	8	28	—
	? (%)	14	0	0	0	1	—
Period 4	<i>n</i> =	5	42	8	734	372	0
(1500–1550)	Singular (%)	<b>20</b>	88	63	82	52	—
	Plural (%)	<b>60</b>	12	25	17	42	—
	? (%)	20	0	13	1	5	—
Period 5	<i>n</i> =	11	487	19	1,561	312	1
(1550–1600)	Singular (%)	55	79	58	88	76	100
	Plural (%)	36	21	37	12	22	0
	? (%)	9	0	5	0	2	0
Period 6	<i>n</i> =	16	14	154	603	399	111
(1600–1650)	Singular (%)	<b>44</b>	100	54	83	54	93
	Plural (%)	<b>56</b>	0	46	17	42	5
	? (%)	0	0	0	0	4	2
Period 7	<i>n</i> =	12	36	80	486	336	352
(1650–1700)	Singular (%)	67	92	56	87	64	96
	Plural (%)	33	6	40	13	34	4
	? (%)	0	3	4	0	2	0
Period 8	<i>n</i> =	19	20	119	501	578	35
(1700–1750)	Singular (%)	58	95	59	95	62	77
	Plural (%)	42	5	41	5	37	23
	? (%)	0	0	0	0	1	0
Period 9	<i>n</i> =	18	44	73	435	569	24
(1750–1800)	Singular (%)	89	93	78	89	66	79
	Plural (%)	11	7	22	11	34	21
Period 10	<i>n</i> =	1	143	23	390	315	29
(1800–1850)	Singular (%)	<b>0</b>	96	<b>39</b>	82	63	93
	Plural (%)	<b>100</b>	4	<b>61</b>	18	37	7
Period 11	<i>n</i> =	6	82	66	347	370	7
(1850–1900)	Singular (%)	83	94	80	85	63	100
	Plural (%)	17	6	20	15	37	0

Note: Bold formatting is used wherever the percentage of plural tokens is greater than or equal to that of singular tokens.

In the prose texts (tables 5.1a–5.4a in appendix C), the percentage of singular tokens is generally about the same as, or even higher than, in the whole corpus; in the case of *Löwe* and *Prinz*, this figure increases to nearly 100% when verse tokens are excluded. At the same time, *Pfaffe*, which is already very plural-heavy in the whole corpus, becomes even more so, while in the case of *Held*, the percentage of plural tokens shoots upward, surpassing that of singular tokens. As noted above, *Held* is considerably more frequent in verse than in prose; only 17% of *Held* tokens (113/657) occur in prose texts, where they refer in most cases to the ancient Greek

and Roman heroes collectively. About a quarter (30) of all prose plural tokens of *Held* appear in Buchholtz' Baroque novel *Herkules* (Period 6); 27/30 of these are preceded by a form of the possessive adjective *unser* and denote the protagonists of the novel, Herkules and his brother Ladisla.

Question marks in the number category are rare; tokens of indeterminate number account for no more than 6% of tokens of any noun overall, and no more than 5% in the prose texts alone. *Affe* and *Pfaffe* have the highest proportion of question marks in the number category (6% and 5%, respectively); no other noun in this group has more than 3%. Of the 21 tokens of *Pfaffe* whose number could not be determined, 17 are probably non-head members of compounds whose parts are written as separate words; this is also true of all eight tokens of *Affe* marked ? in the number category. The remaining four tokens of *Pfaffe* are ambiguous either because they are unprecedented or because the preceding determiner or adjective is not clearly marked for number.

The distribution of number values in Group 1 is largely consistent across all time periods (see tables 5.2 and 5.4); the singular dominates throughout, except in those cases already addressed above (*Pfaffe*, *Held*, *Bär*, *Affe*), but the plural is also fairly well represented. In Periods 4 and 6 (the late 16<sup>th</sup> and late 17<sup>th</sup> centuries), *Bube* has more plural than singular; here it is almost always used disparagingly, often in reference to the papists, as in Luther, Murner, and Günzburg. It appears to be more frequent in the plural in Periods 1, 3, and 11, as well, but there are so few tokens in these periods that the numbers are unlikely to be significant.

## 5.2 Case

### 5.2.1 Singular

In the singular, overall, the most frequent case is the nominative; the proportion of nominative forms is usually about 60% in Group 1a (table 5.5) and slightly higher in Group 1b (table 5.7). All nouns in Group 1 occur in the nominative at least 50% of the time. *Löwe*, the noun in this group with the least human-like referent, has slightly less nominative than the others, while *Held* has slightly more. It does seem to be the case, then, that animate nouns are used frequently in the nominative, as Behaghel (1886) and others have claimed (see 1.2.1).

The oblique singular forms are also fairly well represented in this group, however — particularly the dative and accusative, each of which makes up 12%–22% of all singular forms for most nouns. Between these two forms, speakers of MHG and ENHG would have had plenty of encounters with the weak oblique form ending in *-(e)n* in addition to their many encounters with the nominative singular, enabling them to situate these nouns in the weak declension, and ensuring the preservation of the weak forms.

The genitive is the least frequent case for eight of 12 nouns in this group, including all nouns in Group 1a; on average, it encompasses only about 8% of all singular forms. It is thus not surprising that we find some innovation in the genitive singular, even in this very well-behaved group of nouns (see 5.3.1.2). The proportion of genitive tokens is highest for *Löwe* and *Prinz*.

Question-mark tokens are rare throughout, accounting for less than 1% of all singular tokens. They occur only in Group 1b.

When verse tokens are removed from the data (tables 5.5a–5.8a in appendix C), the proportion of nominative tokens decreases slightly for almost all nouns (but still remains above

50%), while those of accusative and dative tokens increase in most cases; *Affe* and *Pfaffe* are exceptions here.

Table 5.5. Group 1a: Case distribution in the singular (all periods)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<i>n</i> =	72	225	140	440	480	193		
N (%)	63	61	63	59	51	62	60	4
A (%)	13	21	19	20	15	12	17	4
D (%)	21	12	13	13	20	22	17	4
G (%)	4	5	5	7	14	4	6	3
? (%)	0	0	0	0	0	1	0	0

Table 5.6. Group 1a: Case distribution in the singular, by period

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	5	39	0	37	14	83
(1350–1400)	Nom. (%)	<b>0</b>	59	—	57	57	65
	Obl. (%)	<b>100</b>	41	—	43	43	35
Period 2	<i>n</i> =	4	58	11	23	12	7
(1400–1450)	Nom. (%)	50	53	73	57	67	<b>43</b>
	Obl. (%)	50	47	27	43	33	<b>57</b>
Period 3	<i>n</i> =	14	28	1	25	191	5
(1450–1500)	Nom. (%)	57	64	<b>0</b>	<b>48</b>	50	60
	Obl. (%)	43	36	<b>100</b>	<b>52</b>	50	40
Period 4	<i>n</i> =	2	6	11	34	18	78
(1500–1550)	Nom. (%)	<b>100</b>	67	64	65	<b>78</b>	64
	Obl. (%)	<b>0</b>	33	36	35	<b>22</b>	36
Period 5	<i>n</i> =	13	18	49	34	87	5
(1550–1600)	Nom. (%)	62	72	<b>49</b>	<b>47</b>	<b>44</b>	<b>0</b>
	Obl. (%)	38	28	<b>51</b>	<b>53</b>	<b>56</b>	<b>100</b>
Period 6	<i>n</i> =	0	17	6	69	33	2
(1600–1650)	Nom. (%)	—	59	67	55	52	50
	Obl. (%)	—	41	33	45	48	50
Period 7	<i>n</i> =	7	33	17	35	37	3
(1650–1700)	Nom. (%)	<b>86</b>	61	<b>47</b>	74	<b>43</b>	<b>33</b>
	Obl. (%)	<b>14</b>	39	<b>53</b>	26	<b>57</b>	<b>67</b>
Period 8	<i>n</i> =	9	2	2	24	34	0
(1700–1750)	Nom. (%)	67	50	100	<b>25</b>	74	—
	Obl. (%)	33	50	0	<b>75</b>	26	—
Period 9	<i>n</i> =	5	8	20	42	20	2
(1750–1800)	Nom. (%)	<b>100</b>	75	75	74	<b>30</b>	<b>100</b>
	Obl. (%)	<b>0</b>	25	25	26	<b>70</b>	<b>0</b>
Period 10	<i>n</i> =	6	6	21	82	11	4
(1800–1850)	Nom. (%)	67	67	<b>86</b>	68	64	50
	Obl. (%)	33	33	<b>14</b>	32	36	50
Period 11	<i>n</i> =	7	10	2	35	23	4
(1850–1900)	Nom. (%)	57	<b>80</b>	<b>100</b>	57	57	75
	Obl. (%)	43	<b>20</b>	<b>0</b>	43	43	25

*Note:* Bold formatting is used in cases where either the proportion of oblique tokens exceeds that of nominative tokens, or the proportion of nominative tokens is greater than 75% and that of oblique tokens less than 25%.

Table 5.7. Group 1b: Case distribution in the singular (all periods)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>	Mean	SD
<i>n</i> =	64	956	414	7,364	4,064	524		
N (%)	64	62	72	65	62	59	64	4
A (%)	22	9	11	9	12	12	12	4
D (%)	9	18	9	15	14	16	13	3
G (%)	5	11	7	11	12	14	10	3
? (%)	0	0	0	0.3	0.2	0	0	0

Table 5.8. Group 1b: Case distribution in the singular, by period

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	5	0	24	1,198	1,223	0
(1350–1400)	Nom. (%)	<b>80</b>	—	<b>83</b>	57	71	—
	Obl. (%)	<b>20</b>	—	<b>17</b>	43	29	—
Period 2	<i>n</i> =	4	197	18	1,003	248	3
(1400–1450)	Nom. (%)	75	58	<b>100</b>	57	67	67
	Obl. (%)	25	42	<b>0</b>	43	33	33
Period 3	<i>n</i> =	1	17	39	790	564	0
(1450–1500)	Nom. (%)	<b>0</b>	<b>82</b>	<b>41</b>	66	52	—
	Obl. (%)	<b>100</b>	<b>18</b>	<b>59</b>	33	48	—
	?	0	0	0	1	0	—
Period 4	<i>n</i> =	1	37	5	604	195	0
(1500–1550)	Nom. (%)	<b>0</b>	70	60	73	61	—
	Obl. (%)	<b>100</b>	30	40	27	39	—
Period 5	<i>n</i> =	6	384	11	1,370	238	1
(1550–1600)	Nom. (%)	<b>17</b>	58	55	59	56	<b>0</b>
	Obl. (%)	<b>83</b>	42	45	41	43	<b>100</b>
Period 6	<i>n</i> =	7	14	83	500	215	103
(1600–1650)	Nom. (%)	<b>100</b>	<b>100</b>	72	73	62	70
	Obl. (%)	<b>0</b>	<b>0</b>	28	27	37	30
	?	0	0	0	0	1	0
Period 7	<i>n</i> =	8	33	45	425	215	337
(1650–1700)	Nom. (%)	50	73	<b>76</b>	69	64	51
	Obl. (%)	50	27	<b>24</b>	31	36	49
Period 8	<i>n</i> =	11	19	70	476	357	27
(1700–1750)	Nom. (%)	73	<b>84</b>	67	68	50	74
	Obl. (%)	27	<b>16</b>	33	32	50	26
Period 9	<i>n</i> =	16	41	57	385	378	19
(1750–1800)	Nom. (%)	69	68	<b>79</b>	<b>78</b>	61	74
	Obl. (%)	31	32	<b>21</b>	<b>22</b>	39	26
Period 10	<i>n</i> =	0	137	9	319	198	27
(1800–1850)	Nom. (%)	—	60	56	<b>76</b>	70	<b>78</b>
	Obl. (%)	—	40	44	<b>24</b>	30	<b>22</b>
Period 11	<i>n</i> =	5	77	53	294	233	7
(1850–1900)	Nom. (%)	60	74	<b>87</b>	<b>81</b>	56	<b>100</b>
	Obl. (%)	40	26	<b>13</b>	<b>19</b>	43	<b>0</b>
	?	0	0	0	0	1	0

Note: Bold formatting is used in cases where either the proportion of oblique tokens exceeds that of nominative tokens, or the proportion of nominative tokens is greater than 75% and that of oblique tokens less than 25%.

For most of the time period under investigation, the proportions of nominative and oblique forms in the singular remain locked in a ratio of about 60% to 40% in both subgroups (1a and 1b); rarely do we find more than 75% nominative or less than 25% oblique, or more oblique than nominative (tables 5.6 [1a] and 5.8 [1b]). In general, nouns in Group 1b are used more in the nominative than those in Group 1a, particularly those that are used frequently as titles and in direct address (*Graf, Herr, Prinz*). However, even in these cases, the proportion of nominative rarely exceeds 80%.

Where the values do deviate from this standard, usually the number of tokens in the period is very small, so that the values likely do not reflect the true state of the language; this is the case for *Affe* in Periods 1, 4, 7, and 9; for *Pfaffe* in Periods 2, 5, 7, and 9; for *Bube* in Periods 3, 8, and 11; for *Bär* in Periods 1, 3, 4, 5, and 6; and for *Prinz* in Periods 5 and 11.

The remaining unexpected values can be attributed to imbalances in the corpus and are in most cases probably also not representative.<sup>102</sup>

### 1. *Bote*

**Period 11:** 80% nominative / 10% oblique ( $n = 10$ )

In this case, the proportion of nominative is larger than expected. All but one of the 10 singular tokens from this period are in verse texts, where we expect to encounter more nominative, and all but three appear in a single text (the poems of Friedrich Dahn); two tokens are in the same poem.

### 2. *Bube*

**Period 5:** 49% nominative / 51% oblique ( $n = 49$ )

**Period 7:** 47% nominative / 53% oblique ( $n = 17$ )

In these two periods, the proportion of oblique tokens is slightly larger than that of tokens in the nominative. In Period 5, almost all tokens of *Bube* denote servants; they accompany their masters either in the household, as in Wickram's *Der Goldtfaden* and in Jos Murer's plays, or in transit and on the battlefield, as in the memoirs of Götz von Berlichingen. Servants have limited autonomy and are more often the targets of others' actions than actors themselves.

There are several servants in Period 7, too; otherwise, *Bube* is used here mainly in the pejorative sense of a simple-minded and inept person — again, someone whose ability to act independently is restricted. In three instances, the *Buben* are thieves who are being punished for their crimes.

**Period 10:** 86% nominative / 14% oblique ( $n = 21$ )

In this period, almost all singular tokens (18/21) are in the nominative case. The three oblique tokens are all in prose texts. 10 of the 18 nominative singular tokens are in verse texts, and of the remaining eight, six are from the same two scenes of Büchner's *Woyzeck* in which Marie and Woyzeck are interacting with their small child; five of these six tokens are vocative.

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<sup>102</sup> The instances mentioned in the previous paragraph, in which the total number of tokens is less than 10, are not discussed further.

### 3. *Knabe*

**Period 3:** 48% nominative / 52% oblique ( $n = 25$ )

Here there are slightly more oblique forms than expected. More than half of all singular tokens (13/25) are in Füetrer's *Buch der Abenteuer*, a reworking of various 13<sup>th</sup>-century German epic poems; the passage in my corpus is based on Konrad von Würzburg's *Trojanerkrieg* and relates the events of the Trojan War. Almost all of these singular tokens denote Paris as a young boy, and most (9/13) occur in a single scene in which he is summoned to settle a dispute between Juno, Pallas, and Venus, and then led around extensively while the others decide what to do with him. In this scene, oblique forms are in the majority; only 2/9 tokens are in the nominative. Overall, non-nominative forms account for 8/13 singular tokens of *Knabe* (61%) in Füetrer. When this text is excluded, the case distribution in Period 3 corrects itself: in the remaining texts, we find seven nominative (58%) and five oblique tokens (42%), a ratio much closer to the standard for Group 1a.

**Period 5:** 47% nominative / 53% oblique ( $n = 34$ )

Again, the proportion of oblique tokens is slightly above average here. As in Period 3 (and in Periods 5 and 7 in the case of *Bube*), the majority of singular tokens occur in contexts where *Knaben* are ordered around, disciplined, reared, etc.

**Period 8:** 25% nominative / 75% oblique ( $n = 24$ )

In Period 8, more than half of all singular tokens (16/29) come from a medical text (Glorenz' *Eröffnetes Wunderbuch*) which lists remedies for various ailments, including the plague and podagra (gout). Many occur in the context of remedies involving the urine or feces of a young boy, hence the preponderance of oblique forms.

### 4. *Löwe*

**Period 4:** 78% nominative / 22% oblique ( $n = 18$ )

**Period 5:** 44% nominative / 56% oblique ( $n = 87$ )

**Period 7:** 43% nominative / 57% oblique ( $n = 37$ )

**Period 9:** 30% nominative / 70% oblique ( $n = 20$ )

Considering *Löwe*'s subordinate position in the animacy hierarchy, we expect the proportion of tokens in the nominative to be slightly below average at times, as it is in Periods 5 and 9. In Period 4, where it is especially high, the majority of tokens appear in fables in which lions behave as though they were human. 86% of all tokens (18/21) and 89% of all singular tokens (16/18) are from fables of Hans Sachs.

In general, lions occur more frequently in the nominative when they have human qualities. A comparison of the two texts in which *Löwe* is most frequent, the *Buch der Beispiele der alten Weisen* from Period 3 (154 tokens) and Wickram's novel *Der Goldtfaden* from Period 5 (81 tokens), is especially instructive in this connection. The *Buch der Beispiele* is a fable-like didactic text which seeks to illustrate appropriate human behavior through tales about animals. Wickram's *Goldtfaden* recounts the adventures of a shepherd's son, Lewfrid (*lew* 'lion' + *frid* 'peace'), thus named in honor of a lion, Lotzmann, who joins the family's flock and becomes the protagonist's constant companion. In the *Buch der Beispiele*, the lions depicted have human attributes, including

the ability to speak, while in Wickram's novel, the lion Lotzmann is more lion-like; at least, he never speaks, though he is anthropomorphized in other ways. In both texts, *Löwe* occurs only in the singular. The *Buch der Beispiele*, in which the lions behave like humans, has considerably more nominative than Wickram's novel (51% in the *Buch der Beispiele* versus only 42% in *Goldtfaden*).

#### 5. *Graf*

**Period 3:** 82% nominative / 18% oblique ( $n = 17$ )

**Period 6:** 100% nominative / 0% oblique ( $n = 14$ )

**Period 8:** 84% nominative / 16% oblique ( $n = 19$ )

In Periods 3, 6, and 8, where the proportion of nominative tokens is above the Group 1 average, all (Periods 3 and 6) or almost all (Period 8: 13/19, or 68%) singular tokens of *Graf* occur in verse texts. In the remaining periods, prose tokens are in the majority or, in the one period in which they are not (Period 9, where 40% of all singular tokens are in prose texts), very nearly so. When verse texts are excluded, the distribution evens out in most cases (see table 5.8a in appendix C).

#### 6. *Held*

**Period 1:** 83% nominative / 17% oblique ( $n = 24$ )

**Period 2:** 100% nominative / 0% oblique ( $n = 18$ )

**Period 3:** 41% nominative / 59% oblique ( $n = 39$ )

**Period 7:** 76% nominative / 24% oblique ( $n = 45$ )

**Period 9:** 79% nominative / 21% oblique ( $n = 57$ )

**Period 11:** 87% nominative / 13% oblique ( $n = 53$ )

In Periods 1–4, singular forms of *Held* occur only in verse texts, and in the remaining periods, verse tokens are in the majority. In Periods 7 and 9, prose tokens make up only about 4% of all singular tokens (there are only two in each period). In Period 11, the proportion of prose tokens in the singular is more substantial, at 23%, but still quite small. When we remove the verse tokens, the distribution of case values in Period 11 falls into line with the Group 1 norm; in the other periods, the resulting values are so small as to be virtually meaningless.

In Period 3, where there is slightly more oblique than nominative, all singular forms of *Held* are from Füetrer, and they occur mainly in battle scenes in which heroes are slain.

#### 7. *Herr* / *Prinz*

**Herr, Period 9:** 78% nominative / 22% oblique ( $n = 385$ )

**Herr, Period 10:** 76% nominative / 24% oblique ( $n = 319$ )

**Herr, Period 11:** 81% nominative / 19% oblique ( $n = 294$ )

**Prinz, Period 10:** 78% nominative / 22% oblique ( $n = 27$ )

In all of these periods, and in other periods in which the proportion of nominative tokens is higher than usual (4 and 6 for *Herr*; 6 and 8 for *Prinz*), a significant number of singular tokens are used in direct address (at least 30% and up to 50%, versus no more than 28% in any other period, and in some cases much less).



## 5.2.2 Plural

In the plural, as in the singular, the nominative is the most frequent case; however, it accounts for a smaller share of the total here than in the singular (only 40%–50%, versus over 60% in the singular; see tables 5.9 [1a] and 5.11 [1b] for the whole data set, and tables 5.10 [1a] and 5.12 [1b] for the diachronic breakdown). The only exception is *Prinz*, which has slightly more genitive than nominative. On the whole, the genitive is more frequent in the plural, proportionally, than in the singular of these nouns; in fact, for all six nouns in Group 1b, there is more genitive than accusative in the plural. Tokens labeled “?” in the case category are slightly more common in the plural, where more tokens are unpreceded, than in the singular; however, they are still extremely rare.

The diachronic distribution of case values among plural tokens is somewhat less regular than that of singular tokens (tables 5.10 [1a] and 5.12 [1b]). The nominative is still the most frequent of the four cases for most nouns in most periods, but it is usually not more frequent than the three oblique cases taken together, as it often is in the singular (compare tables 5.6 and 5.8). Further, the size of the gap separating the nominative and oblique values varies considerably from one period to the next; often, the two proportions are equal or very nearly so.

## 5.3 Inflectional Marker

### 5.3.1 *-e/ø*, *-(e)n*, Other

#### 5.3.1.1 Overview

For all nouns in Group 1, the marker *-e/ø* dominates in the singular, while *-(e)n* is the most common marker overall; in the plural, in many cases, *-(e)n* is the only attested marker. Most nouns in Group 1 have 60%–70% *-e/ø* in the singular and 40%–60% *-e/ø* overall (tables 5.13 [1a] and 5.14 [1b]). Other markers are found in only about 1% of all instances, on average, and never in the plural. No noun has such markers more than 3% of the time.

The mean proportion of *-e/ø* is slightly lower, and that of *-(e)n* slightly higher, for Group 1a than for Group 1b, which includes the formerly strong *Held* and several nouns that are used frequently as titles (*Graf*, *Herr*, *Prinz*); these nouns have more innovative forms in the singular than other nouns in Group 1.

In Group 1b, where the markers *-e/ø* are more frequently attested in the plural, these endings dominate not only the singular, but the entire paradigm, while in Group 1a, the marker *-(e)n* is more frequent overall (compare the bottom three rows of tables 5.13 and 5.14). This changes, however, when we look at the prose texts alone (tables 5.13a and 5.14a in appendix C); here, there is more *-(e)n* than *-(e)* in both subgroups. In the prose texts, as we saw in 5.1, *Held* is used more frequently in the plural — where it always ends in *-(e)n* — than in the singular.

For the well-behaved nouns in Group 1a (table 5.15), the proportion of tokens ending in *-e/ø* is always either identical to, or no more than one percentage point higher than, that of nominative singular tokens. These values lie somewhat further apart in Group 1b (table 5.16), where there are more non-weak forms in the singular; *Mensch* patterns with Group 1a here.

Table 5.9. Group 1a: Case distribution in the plural (all periods)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>		
<i>n</i> =	45	116	78	129	69	203	Mean	SD
N (%)	49	41	49	47	46	44	46	3
A (%)	22	37	15	16	17	17	21	8
D (%)	13	12	18	21	20	17	17	3
G (%)	7	9	14	12	7	14	11	3
? (%)	9	1	4	5	9	8	6	3

Table 5.10. Group 1a: Case distribution in the plural, by period

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1 (1350–1400)	<i>n</i> =	3	21	3	4	13	26
	Nom. (%)	67	52	33	50	69	46
	Obl. (%)	33	48	67	50	15	50
	? (%)	0	0	0	0	15	4
Period 2 (1400–1450)	<i>n</i> =	1	25	3	13	10	21
	Nom. (%)	0	48	0	23	40	48
	Obl. (%)	100	52	100	77	50	43
	? (%)	0	0	0	0	10	10
Period 3 (1450–1500)	<i>n</i> =	8	19	1	7	7	11
	Nom. (%)	25	5	0	29	43	82
	Obl. (%)	75	95	100	71	57	18
Period 4 (1500–1550)	<i>n</i> =	3	12	19	12	3	115
	Nom. (%)	67	50	26	58	33	45
	Obl. (%)	33	50	74	42	67	50
	? (%)	0	0	0	0	0	5
Period 5 (1550–1600)	<i>n</i> =	6	3	9	23	4	5
	Nom. (%)	50	0	22	22	75	20
	Obl. (%)	50	100	78	74	25	80
	? (%)	0	0	0	4	0	0
Period 6 (1600–1650)	<i>n</i> =	0	4	9	28	9	12
	Nom. (%)	—	50	56	54	33	0
	Obl. (%)	—	50	44	46	44	100
	? (%)	—	0	0	0	22	0
Period 7 (1650–1700)	<i>n</i> =	4	8	7	5	7	0
	Nom. (%)	75	25	57	80	29	—
	Obl. (%)	25	75	43	20	71	—
Period 8 (1700–1750)	<i>n</i> =	8	2	1	5	5	2
	Nom. (%)	63	50	0	20	20	0
	Obl. (%)	25	50	100	80	80	100
	? (%)	13	0	0	0	0	0
Period 9 (1750–1800)	<i>n</i> =	5	4	10	10	3	2
	Nom. (%)	40	50	80	70	67	100
	Obl. (%)	60	50	20	30	33	0
Period 10 (1800–1850)	<i>n</i> =	2	11	14	10	4	2
	Nom. (%)	0	64	86	90	50	50
	Obl. (%)	100	36	14	10	50	50
Period 11 (1850–1900)	<i>n</i> =	5	7	2	12	4	7
	Nom. (%)	60	43	50	50	50	43
	Obl. (%)	40	57	50	50	50	57

Table 5.11. Group 1b: Case distribution in the plural (all periods)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>		
<i>n</i> =	41	163	236	1,344	1,811	36	Mean	SD
N (%)	49	43	45	55	35	28	42	9
A (%)	12	9	13	9	17	11	12	3
D (%)	27	26	13	20	22	19	21	5
G (%)	10	15	28	12	20	39	21	10
? (%)	2	7	0	3.2	5.4	3	4	2

Table 5.12. Group 1b: Case distribution in the plural, by period

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1 (1350–1400)	<i>n</i> =	0	6	6	96	368	0
	Nom. (%)	—	50	33	51	47	—
	Obl. (%)	—	50	67	48	38	—
	? (%)	—	0	0	1	15	—
Period 2 (1400–1450)	<i>n</i> =	4	32	7	509	46	0
	Nom. (%)	75	44	43	54	24	—
	Obl. (%)	25	50	57	45	72	—
	? (%)	0	6	0	2	4	—
Period 3 (1450–1500)	<i>n</i> =	5	1	21	67	229	0
	Nom. (%)	20	100	81	46	34	—
	Obl. (%)	60	0	19	46	60	—
	? (%)	20	0	0	7	5	—
Period 4 (1500–1550)	<i>n</i> =	3	5	2	125	158	0
	Nom. (%)	33	60	0	61	27	—
	Obl. (%)	67	40	100	39	72	—
	? (%)	0	0	0	0	2	—
Period 5 (1550–1600)	<i>n</i> =	4	102	7	187	69	0
	Nom. (%)	100	40	43	45	14	—
	Obl. (%)	0	54	43	49	80	—
	? (%)	0	6	14	5	6	—
Period 6 (1600–1650)	<i>n</i> =	9	0	71	102	168	6
	Nom. (%)	33	—	44	56	36	33
	Obl. (%)	67	—	56	43	64	67
	? (%)	0	—	0	1	1	0
Period 7 (1650–1700)	<i>n</i> =	4	2	32	61	115	15
	Nom. (%)	50	50	50	59	32	20
	Obl. (%)	50	50	50	41	65	80
	? (%)	0	0	0	0	3	0
Period 8 (1700–1750)	<i>n</i> =	8	1	49	25	213	8
	Nom. (%)	63	0	37	48	29	25
	Obl. (%)	38	100	63	52	71	75
Period 9 (1750–1800)	<i>n</i> =	2	3	16	48	191	5
	Nom. (%)	50	67	38	71	34	40
	Obl. (%)	50	33	63	29	65	60
	? (%)	0	0	0	0	1	0
Period 10 (1800–1850)	<i>n</i> =	1	6	14	71	117	2
	Nom. (%)	0	50	36	77	44	50
	Obl. (%)	100	50	64	23	56	50
Period 11 (1850–1900)	<i>n</i> =	1	5	13	53	137	0
	Nom. (%)	0	40	46	66	31	—
	Obl. (%)	100	60	54	34	67	—
	? (%)	0	0	0	0	2	—

Most non-weak forms in Group 1a occur in verse texts (see 5.3.1.2); when we remove the verse tokens from the data (tables 5.15a and 5.16a in appendix C), the proportions of *-e/ø* and of nominative singular tokens in this group converge even further, while those in Group 1b remain about the same.

Table 5.13. Group 1a: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<b>Sg., n =</b>	72	225	140	440	480	193		
<i>-e/ø</i> (%)	63	62	64	59	53	64	61	4
<i>-(e)n</i> (%)	38	37	34	40	44	36	38	3
Other (%)	0	1	1	0	3	0	1	1
<b>Pl., n =</b>	45	116	78	129	69	203		
<i>-e/ø</i> (%)	0	0	0	0	6	0	1	2
<i>-(e)n</i> (%)	100	100	100	100	94	100	99	2
<b>All, n =</b>	125	350	223	573	554	416		
<i>-e/ø</i> (%)	36	40	40	46	46	30	40	6
<i>-(e)n</i> (%)	64	59	59	54	51	70	60	6
Other (%)	0	1	1	0	3	0	1	1

Table 5.14. Group 1b: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>	Mean	SD
<b>Sg., n =</b>	64	956	414	7,364	4,064	524		
<i>-e/ø</i> (%)	75	70	82	67	63	62	70	7
<i>-(e)n</i> (%)	25	30	17	33	36	34	29	6
Other (%)	0	0	1	0	0	4	1	1
<b>Pl., n =</b>	41	163	236	1,344	1,811	36		
<i>-e/ø</i> (%)	7	1	4	1	0	0	2	3
<i>-(e)n</i> (%)	93	99	96	99	100	100	98	3
<b>All, n =</b>	108	1,121	657	8,732	5,962	562		
<i>-e/ø</i> (%)	47	60	53	57	43	58	53	6
<i>-(e)n</i> (%)	53	40	46	43	57	39	46	7
Other (%)	0	0	1	0	0	3	1	1

Table 5.15. Group 1a: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<b>n =</b>	125	350	223	573	554	416		
N. Sg. (%)	36	39	39	46	45	29	39	6
<i>-e/ø</i> (%)	36	40	40	46	46	30	40	6

Table 5.16. Group 1b: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>	Mean	SD
<b>n =</b>	108	1,121	657	8,732	5,962	562		
N. Sg. (%)	38	53	46	55	42	55	48	7
<i>-e/ø</i> (%)	47	60	53	57	43	58	53	6

Note: In tables 5.15 and 5.16, the values for *-e/ø* include tokens in all four cases.

Table 5.17. Group 1a: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1 (1350–1400)	<i>n</i> =	5	39	0	37	14	83
	Nom. Sg. (%)	0	59	—	57	57	65
	<i>-e/ø</i> (%)	0	59	—	57	57	<b>66</b>
	<i>-(e)n</i> (%)	100	41	—	43	29	34
	Other (%)	0	0	—	0	<b>14</b>	0
Period 2 (1400–1450)	<i>n</i> =	4	58	11	23	12	7
	Nom. Sg. (%)	50	53	73	57	67	43
	<i>-e/ø</i> (%)	50	<b>55</b>	73	57	<b>83</b>	43
	<i>-(e)n</i> (%)	50	45	27	43	17	57
Period 3 (1450–1500)	<i>n</i> =	14	28	1	25	191	5
	Nom. Sg. (%)	57	64	0	48	50	60
	<i>-e/ø</i> (%)	57	64	0	48	50	60
	<i>-(e)n</i> (%)	43	36	100	52	47	40
	Other (%)	0	0	0	0	<b>3</b>	0
Period 4 (1500–1550)	<i>n</i> =	2	6	11	34	18	78
	Nom. Sg. (%)	100	67	64	65	78	64
	<i>-e/ø</i> (%)	100	67	64	65	78	<b>65</b>
	<i>-(e)n</i> (%)	0	33	36	35	22	35
Period 5 (1550–1600)	<i>n</i> =	13	18	49	34	87	5
	Nom. Sg. (%)	62	72	49	47	44	0
	<i>-e/ø</i> (%)	62	72	49	47	44	0
	<i>-(e)n</i> (%)	38	28	51	53	53	100
	Other (%)	0	0	0	0	<b>3</b>	0
Period 6 (1600–1650)	<i>n</i> =	0	17	6	69	33	2
	Nom. Sg. (%)	—	59	67	55	52	50
	<i>-e/ø</i> (%)	—	59	67	55	52	50
	<i>-(e)n</i> (%)	—	41	17	45	48	50
	Other (%)	—	0	<b>17</b>	0	0	0
Period 7 (1650–1700)	<i>n</i> =	7	33	17	35	37	3
	Nom. Sg. (%)	86	61	47	74	43	33
	<i>-e/ø</i> (%)	86	61	<b>59</b>	74	<b>49</b>	<b>67</b>
	<i>-(e)n</i> (%)	14	30	35	23	43	33
	Other (%)	0	<b>9</b>	<b>6</b>	<b>3</b>	<b>8</b>	0
Period 8 (1700–1750)	<i>n</i> =	9	2	2	24	34	0
	Nom. Sg. (%)	67	50	100	25	74	—
	<i>-e/ø</i> (%)	67	50	100	25	74	—
	<i>-(e)n</i> (%)	33	50	0	71	26	—
	Other (%)	0	0	0	<b>4</b>	0	—
Period 9 (1750–1800)	<i>n</i> =	5	8	20	42	20	2
	Nom. Sg. (%)	100	75	75	74	30	100
	<i>-e/ø</i> (%)	100	75	75	74	<b>40</b>	100
	<i>-(e)n</i> (%)	0	25	25	26	60	0
Period 10 (1800–1850)	<i>n</i> =	6	6	21	82	11	4
	Nom. Sg. (%)	67	67	86	68	64	50
	<i>-e/ø</i> (%)	67	67	86	68	64	<b>75</b>
	<i>-(e)n</i> (%)	33	33	14	32	36	25
Period 11 (1850–1900)	<i>n</i> =	7	10	2	35	23	4
	Nom. Sg. (%)	57	80	100	57	57	75
	<i>-e/ø</i> (%)	57	80	100	57	57	75
	<i>-(e)n</i> (%)	43	20	0	43	43	25

*Note:* The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison; ideally, in Group 1, this value should be the same as the proportion of tokens ending in *-e/ø*. Proportions of *-e/ø* that are greater than the corresponding proportion of nominative singular tokens are marked in boldface, as are those of tokens with markers other than *-e/ø* and *-(e)n*.

Table 5.18. Group 1b: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	5	0	24	1,198	1,223	0
(1350–1400)	Nom. Sg. (%)	80	—	83	57	71	—
	<i>-e/ø</i> (%)	80	—	<b>96</b>	<b>58</b>	<b>72</b>	—
	<i>-(e)n</i> (%)	20	—	0	42	28	—
	Other (%)	0	—	<b>4</b>	0	<b>0.2</b>	—
Period 2	<i>n</i> =	4	197	18	1,003	248	3
(1400–1450)	Nom. Sg. (%)	75	58	100	57	67	67
	<i>-e/ø</i> (%)	75	<b>68</b>	100	<b>59</b>	<b>69</b>	67
	<i>-(e)n</i> (%)	25	32	0	41	30	33
	Other (%)	0	0	0	0	<b>0.4</b>	0
Period 3	<i>n</i> =	1	17	39	790	564	0
(1450–1500)	Nom. Sg. (%)	0	82	41	66	52	—
	<i>-e/ø</i> (%)	0	<b>94</b>	<b>69</b>	<b>69</b>	52	—
	<i>-(e)n</i> (%)	100	6	31	31	48	—
Period 4	<i>n</i> =	1	37	5	604	195	0
(1500–1550)	Nom. Sg. (%)	0	70	60	73	61	—
	<i>-e/ø</i> (%)	0	<b>73</b>	60	<b>75</b>	<b>62</b>	—
	<i>-(e)n</i> (%)	100	27	0	25	38	—
	Other (%)	0	0	<b>40</b>	0	1	—
Period 5	<i>n</i> =	6	384	11	1,370	238	1
(1550–1600)	Nom. Sg. (%)	17	58	55	59	56	0
	<i>-e/ø</i> (%)	17	<b>69</b>	55	<b>63</b>	<b>59</b>	0
	<i>-(e)n</i> (%)	83	31	45	36	41	100
	Other (%)	0	<b>1</b>	0	<b>0.2</b>	0	0
Period 6	<i>n</i> =	7	14	83	500	215	103
(1600–1650)	Nom. Sg. (%)	100	100	72	73	62	70
	<i>-e/ø</i> (%)	100	100	<b>80</b>	<b>74</b>	<b>65</b>	<b>72</b>
	<i>-(e)n</i> (%)	0	0	19	26	34	27
	Other (%)	0	0	<b>1</b>	<b>0.2</b>	<b>0.5</b>	<b>1</b>
Period 7	<i>n</i> =	8	33	45	425	215	337
(1650–1700)	Nom. Sg. (%)	50	73	76	69	64	51
	<i>-e/ø</i> (%)	<b>100</b>	<b>79</b>	<b>84</b>	<b>70</b>	<b>66</b>	<b>55</b>
	<i>-(e)n</i> (%)	0	21	16	30	34	40
	Other (%)	0	0	0	<b>0.2</b>	<b>0.5</b>	<b>5</b>
Period 8	<i>n</i> =	11	19	70	476	357	27
(1700–1750)	Nom. Sg. (%)	73	84	67	68	50	74
	<i>-e/ø</i> (%)	73	<b>95</b>	<b>77</b>	<b>74</b>	50	<b>81</b>
	<i>-(e)n</i> (%)	27	5	23	26	50	19
	Other (%)	0	0	0	<b>0.2</b>	<b>0.3</b>	0
Period 9	<i>n</i> =	16	41	57	385	378	19
(1750–1800)	Nom. Sg. (%)	69	68	79	78	61	74
	<i>-e/ø</i> (%)	<b>75</b>	68	<b>86</b>	78	61	74
	<i>-(e)n</i> (%)	25	32	14	22	39	26
Period 10	<i>n</i> =	0	137	9	319	198	27
(1800–1850)	Nom. Sg. (%)	—	60	56	76	70	78
	<i>-e/ø</i> (%)	—	60	<b>67</b>	76	70	<b>81</b>
	<i>-(e)n</i> (%)	—	40	33	24	30	19
Period 11	<i>n</i> =	5	77	53	294	233	7
(1850–1900)	Nom. Sg. (%)	60	74	87	81	56	100
	<i>-e/ø</i> (%)	<b>100</b>	<b>78</b>	<b>91</b>	<b>82</b>	<b>60</b>	100
	<i>-(e)n</i> (%)	0	22	9	18	40	0

*Note:* The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison; ideally, in Group 1, this value should be the same as the proportion of tokens ending in *-e/ø*. Proportions of *-e/ø* that are greater than the corresponding proportion of nominative singular tokens are marked in boldface, as are those of tokens with markers other than *-e/ø* and *-(e)n*.

In the singular, the regular distribution of endings in Group 1a remains more or less intact across all periods, including the critical transitional window prior to about 1650, in which most nouns in the other groups show considerable fluctuation (table 5.17). Most of the time, the distribution of inflectional markers mirrors the case distribution (compare 5.2); the proportion of tokens ending in *-e/ø* exceeds that of nominative singular in only a few instances, almost all of which are in the 17<sup>th</sup> and 18<sup>th</sup> centuries, where the majority of non-weak oblique singular tokens are found. Markers other than *-e/ø* and *-(e)n* remain scarce throughout and are most common in the earlier periods; in the last three periods, only *-e/ø* and *-(e)n* are attested.

Group 1b (table 5.18) is somewhat less consistent than Group 1a with respect to the diachronic distribution of inflectional marker values; here, the proportion of tokens ending in *-e/ø* exceeds that of nominative singular tokens in almost all periods, since most nouns in this group have *-e/ø* in cases other than the nominative at least once per period. Even here, though, the two values are rarely more than five percentage points apart. The difference is greatest for *Held*, *Graf*, and *Bär*. In the case of the formerly strong noun *Held*, the abundance of strong oblique singular forms is to be expected; *Graf*, the noun in Group 1 that is used most often as a title, and *Bär*, which follows the regular weak pattern consistently in the earlier periods but is frequently strong beginning in the 17<sup>th</sup> century, also have more oblique singular forms ending in *-e/ø* than other nouns in Group 1b. The discrepancy is especially noticeable in the case of *Bär* because there are so few tokens to begin with.

Other endings are slightly more common in Group 1b than in Group 1a, but still account for a negligible share of the total in most cases. Again, *Held* is an exception here; in Periods 1–4, three out of four genitive singular tokens of *Held* have the strong marker *-es*.

In the plural (see the middle rows of tables 5.13 [1a] and 5.14 [1b]), the proportion of *-(e)n* stays at or just below 100% throughout the period under investigation. Endings other than *-(e)n* occur only in the first seven periods. In Group 1a, they are found only in Periods 1–4, and only on the nouns *Löwe* and *Pfaffe*: *Löwe* is represented with four tokens, all in the form *leo*, of which three are in Period 1 and one is in Period 3; *Pfaffe* occurs once with *-ø* in Period 4. In Group 1b (table 5.19), these endings occur mainly in Period 2, and almost all nouns are affected.

In the question-mark number category, as in the plural, the marker *-(e)n* is most common, occurring in 97% of all instances (170/175); the remaining tokens in this category all end in *-e/ø*, and in at least three of these instances, a nasal bar is likely missing.

### 5.3.1.2 Non-Weak Inflection

Almost all tokens in Group 1 are weak, as expected; no noun in this group — not even the formerly strong *Held* — has non-weak endings more than 9% of the time overall (see table 5.20). Non-weak forms are concentrated in the singular; as we have seen, markers other than the expected weak *-(e)n* are extremely rare in the plural.

In Group 1a, *Affe* follows the weak masculine paradigm consistently in all texts, while *Löwe*, the least prototypical noun in this subgroup, is also the least regular in its inflectional behavior. As we saw in chapter 4 (tables 4.20 and 4.23), non-weak oblique singular forms of Group 1a nouns are concentrated in the 17<sup>th</sup> and 18<sup>th</sup> centuries.

Most of the non-weak singular tokens in Group 1a (21/30, or 70%) are in the genitive and end in *-ens* (or in one case from the 15<sup>th</sup> century, which may be missing a nasal bar, in *-es*). Of these, 17 (81%) are preceded by an article or other determiner that also ends in *-s* (*ains lebens*,

Table 5.19. Group 1b: Distribution of *-e/ø* and *-(e)n* in the plural, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	6	6	96	368	0
(1350–1400)	<i>-e/ø</i> (%)	—	0	<b>83</b>	0	0	—
	<i>-(e)n</i> (%)	—	100	<b>17</b>	100	100	—
Period 2	<i>n</i> =	4	32	7	509	46	0
(1400–1450)	<i>-e/ø</i> (%)	<b>50</b>	<b>3</b>	<b>43</b>	<b>1</b>	<b>2</b>	—
	<i>-(e)n</i> (%)	<b>50</b>	<b>97</b>	<b>57</b>	<b>99</b>	<b>98</b>	—
Period 3	<i>n</i> =	5	1	21	67	229	0
(1450–1500)	<i>-e/ø</i> (%)	0	0	<b>14</b>	0	0	—
	<i>-(e)n</i> (%)	100	100	<b>86</b>	100	100	—
Period 4	<i>n</i> =	3	5	2	125	158	0
(1500–1550)	<i>-(e)n</i> (%)	100	100	100	100	100	—
Period 5	<i>n</i> =	4	102	7	187	69	0
(1550–1600)	<i>-(e)n</i> (%)	100	100	100	100	100	—
Period 6	<i>n</i> =	9	0	71	102	168	6
(1600–1650)	<i>-e/ø</i> (%)	<b>11</b>	—	0	<b>1</b>	0	0
	<i>-(e)n</i> (%)	<b>89</b>	—	100	<b>99</b>	<b>99</b>	100
	Other (%)	0	—	0	0	<b>1</b>	0
Period 7	<i>n</i> =	4	2	32	61	115	15
(1650–1700)	<i>-e/ø</i> (%)	0	0	0	<b>2</b>	0	0
	<i>-(e)n</i> (%)	100	100	100	<b>98</b>	<b>98</b>	100
	Other (%)	0	0	0	0	<b>2</b>	0
Period 8	<i>n</i> =	8	1	49	25	213	8
(1700–1750)	<i>-(e)n</i> (%)	100	100	100	100	100	100
Period 9	<i>n</i> =	2	3	16	48	191	5
(1750–1800)	<i>-(e)n</i> (%)	100	100	100	100	100	100
Period 10	<i>n</i> =	1	6	14	71	117	2
(1800–1850)	<i>-(e)n</i> (%)	100	100	100	100	100	100
Period 11	<i>n</i> =	1	5	13	53	137	0
(1850–1900)	<i>-(e)n</i> (%)	100	100	100	100	100	—

Note: Values other than 0% *-e/ø* / 100% *-(e)n* are marked in boldface.

*des lewens, des Löwens; des Knabens, eines jungen Knabens*); the *-s* from the preceding element(s) may have been attracted into the noun in these instances (see 4.5.1 in the previous chapter). In one case from Rist (Period 6), the token is in apposition to another noun which is itself preceded by a definite determiner ending in *-s* (“*jhres verwegenen Sohns deß muthwilligen **Bubens** Cupidinis vnerhörte Hurerey vnnd Vnzucht*”); there is thus considerably more *-s* than *-en* in this sequence of NPs.

The three genitive singular tokens of *Löwe* that are not preceded by elements ending in *-s* are all from the same text (Füetrer, Period 3), and all appear in the expression *in lewens weyse/weis* ‘in the manner of a lion’.

In Beheim (Period 3), the inflection of *Löwe* in the genitive singular may reflect a semantic distinction. The two *-ens* forms in this text are references to the (quasi-inanimate) constellation:

am himel ist auf gangen czu der friste/ der funft staphel des **Lewens**, das ist war.



Hie ticht ich von dem ersten haus mit seinem stot/ und von dem Lewen auch pedeüetet  
würte/ als er aufgangen ist im funften grot./ Und ist die sunn des **Lewens** her  
geweltigleich

The only other genitive singular token in this text, which denotes the animal, has the expected ending *-en*:

Czu einer czeit/ hort ich ein streit/ in dem gevilde/ Von einem lewn/ und einer chreun./  
die daucht sich wilde./ Groß was ir peyl./ sy trug im neit/ und gund im dreun./ das was  
des **leben**<sup>103</sup> geil.

It is also entirely possible that all or most of these innovative genitive-singular tokens in Group 1a are just cases of hypercorrection resulting from uncertainty. The shift of inanimate weak masculine nouns such as *Garten* into the class of strong nouns in *-en* had largely run its course by the late 17<sup>th</sup> century, and the ending *-ens* had been in use for several centuries as a genitive singular marker on (former) weak masculine nouns. At the time when the majority of these forms appear in the corpus, then, speakers had at least two options available to them for constructing the genitive singular of weak masculine nouns: the regular weak ending *-(e)n*, and the innovative marker *-(e)ns*. In light of the evolving inflectional landscape, some innovation is to be expected in this period, particularly in a form which speakers are not hearing or using very much; as we have seen, the genitive is the least frequent case in both numbers. In two texts — Wickram’s *Goldfaden* (Period 5) and Lohenstein’s *Epicharis* (Period 7) — the genitive singular markers *-(e)n* and *-(e)ns* appear to be used interchangeably (three of each in Wickram; 11 *-(e)n* versus seven *-(e)ns* in Lohenstein); these instances of text-internal variation encapsulate the inflectional instability characteristic of this period.

Table 5.20. Group 1: Distribution of non-weak (innovative) tokens (all periods)

Group	Noun	Obl. Sg. in <i>-e/ø</i> (n)	Gen. Sg. in <i>-(e)(n)s</i> (n)	Pl. in <i>-(<sup>o</sup>)e/ø</i> (n)	Pl. in <i>-er</i> (n)	Total non- weak (n)	Non-weak (%)	Total tokens (n)
1a	<i>Affe</i>	0	0	0	0	0	0	125
	<i>Bote</i>	1	3	0	0	4	1	350
	<i>Bube</i>	2	2	0	0	4	2	223
	<i>Knabe</i>	0	2	0	0	2	0.3	573
	<i>Löwe</i>	6	14	4	0	24	4	554
	<i>Pfaffe</i>	4	0	1	0	5	1	416
1b	<i>Bär</i>	7	0	3	0	10	9	108
	<i>Graf</i>	72	2	1	0	75	7	1,121
	<i>Held</i>	38	4	11	0	53	8	657
	<i>Herr</i>	146	6	7	0	159	2	8,732
	<i>Mensch</i>	48	7	2	4	61	1	5,962
	<i>Prinz</i>	17	19	0	0	36	6	562

Almost all of the remaining (non-genitive) innovative oblique singular forms in Group 1a can be explained with reference to one or more of the factors discussed in the previous chapter, including the influence of rhyme and meter (most of these tokens are in verse texts) (table 5.21).

<sup>103</sup> The context makes it clear that this is a token of *Löwe* and not of *Leben* ‘life’.

The two tokens that cannot be explained in this way, both from Ingold (prose, Period 2), are forms of *Löwe* spelled <leo>:

[...] der erschlug den rissen Goliath, und zerzart ain beren und ain **leo**.

[...] und trüg das tor der stat enweg, und zerrayss den **leo** und nam auss seim maul das honig,[...]

The orthographic variant <leo> appears to be invariable much of the time. It is also frequently uninflected in the plural (see the end of this section); four out of seven plural tokens with this spelling have no ending, while the remaining three all have different markers (*leon* [Ingold], *leonen* [Oswald], *leoem* [Füetrer]), indicating a high degree of speaker uncertainty as to how this variant should be inflected.

Table 5.21. Group 1a: Examples of non-weak inflection in the oblique singular forms

Noun	Source	Example	Conditioning factor(s)
<i>Bube</i>	Grimmelshausen (P7)	Sie hat mich <b>Bub</b> geheißen	Unprecedented Citation form
	Grimmelshausen (P7)	Er hat mich auch <b>Bub</b> genennet.	Unprecedented Citation form
<i>Bote</i>	Oswald (P2)	der tag in hat zu <b>bott</b> gesentt,/ der nach im durch das firmament/ schon dringt zu widerstreit ponent.	Unprecedented Meter
	Kaufringer (P1)	Du haist mich <b>pfaff</b> Hainreich	Unprecedented Title Citation form
<i>Pfaffe</i>	Günzburg (P4)	Auch ist gemeincklich orden wider orden, münch wider <b>pfaff</b> , vnd sind auch die predig vnglych	Unprecedented Binomial structure
	Wernicke (P7)	[...] Die ungeachtet ihrer Plag',/ Im Felde woll bezechet mit mancher Kuhmagd sprungen,/ Und von dem <b>Pfaff</b> ein Lied und seiner Köchin sungen.	Meter
	Eichendorff (P10)	Der freudige Geselle/ Grüßt <b>Pfaff</b> und Rittersmann	Unprecedented Binomial structure Meter
<i>Löwe</i>	Silesius (P7)	Jetzt wandelt beim <b>Leue</b> / Das Lamm ohne Scheue,	Rhyme/meter
	Lohenstein (P7)	Die Waffen der Vernunft bezwingen <b>Löw</b> und Klauen	Unprecedented Binomial structure Meter
	Schiller (P9)	Nicht das Knäblein unter meinem Herzen?/ Nicht was <b>Löw</b> und Tiger milden kann?	Unprecedented Binomial structure Meter
	Schiller (P9)	Und im Kreise scheu/ Umgeht er den <b>Leu</b>	Rhyme/meter

In Group 1b, the rate of non-weak inflection is somewhat higher than in Group 1a (again, see table 5.20). *Bär* has the largest proportion of non-weak forms — particularly in the singular, where 11% of all tokens (22% in the prose texts) have endings other than *-(e)n* — while *Herr* and *Mensch*, the two most frequent nouns in the data, are the most regular. Most non-weak oblique singular tokens in Group 1b (327/367, or 89%) end in *-e/ø*; only 38, or 10%, end in *-(e)(n)s*. Among tokens ending in *-e/ø*, all three oblique cases are represented, roughly in

proportion to the total frequencies of the cases in the data: 141/338 are in the accusative (42%), 136/338 in the dative (40%), and 58/338 in the genitive (17%).

As in Group 1a, many of the singular tokens in Group 1b ending in *-e/ø* are unpreceded: 211/327, or about 65%, have no preceding elements. *Bär* and *Prinz* are almost never unpreceded, and *Held* is often strong regardless of the environment in which it occurs. For all other nouns in Group 1b (*Graf*, *Herr*, and *Mensch*), though, there is a statistically significant correlation of non-weak inflection with unprecededness in the first six periods: all of these nouns are significantly more likely to have non-weak endings in an unpreceded context than in a preceded one, both in the entire corpus and in the prose texts alone (note the elevated PR values in table 5.22). When verse tokens are excluded, the association weakens slightly for all nouns except *Mensch*, which is almost always preceded in prose: there are only three unpreceded tokens, and two of these have non-weak endings.

Table 5.22. Group 1b: Association of non-weak inflection with unprecededness in the oblique singular forms (Periods 1–6)

	Prose and verse	Prose only
<i>Graf</i>	$\chi^2(1) = 138.35$	$\chi^2(1) = 121.75$
	$p < .001$	$p < .001$
	PR = 13.98	PR = 12.70
	95% CI [7.55, 25.89]	95% CI [6.85, 23.54]
<i>Herr</i>	$\chi^2(1) = 396.66$	$\chi^2(1) = 248.33$
	$p < .001$	$p < .001$
	PR = 22.25	PR = 20.94
	95% CI [14.32, 34.57]	95% CI [12.18, 36.00]
<i>Mensch</i>	$p < .001$ (Fisher's exact)	$p < .001$ (Fisher's exact)
	PR = 21.20	PR = 33.44
	95% CI [13.14, 34.22]	95% CI [13.26, 84.30]

In Group 1b, in addition to unprecededness, the factor “title” comes into play: 214 tokens, including several with determiner, are titles accompanying people’s names. For *Graf* and *Herr*, the two nouns that are used most frequently as titles, the association is statistically significant in the first six periods, and remains so whether or not we include tokens with preceding determiners in the title category (table 5.23). Of 74 oblique singular tokens of *Graf* ending in *-e/ø*, 89% (all but 8) are titles; in the case of *Herr*, the proportion of titles is even larger (141/152, or 93%).

Table 5.23. Group 1b: Association of non-weak inflection with title function in the oblique singular forms (Periods 1–6)

	Title (all, including “?”)		Title (“y” only)	
	Prose and verse	Prose only	Prose and verse	Prose only
<i>Graf</i>	$\chi^2(1) = 123.51$	$\chi^2(1) = 112.73$	$\chi^2(1) = 131.09$	$\chi^2(1) = 118.92$
	$p < .001$	$p < .001$	$p < .001$	$p < .001$
	PR = 26.30	PR = 31.30	PR = 12.49	PR = 12.45
	95% CI [9.88, 70.00]	95% CI [10.10, 96.95]	95% CI [6.94, 22.49]	95% CI [6.71, 23.09]
<i>Herr</i>	$\chi^2(1) = 244.31$	$\chi^2(1) = 144.58$	$\chi^2(1) = 427.42$	$\chi^2(1) = 272.73$
	$p < .001$	$p < .001$	$p < .001$	$p < .001$
	PR = 25.11	PR = 26.41	PR = 23.14	PR = 13.73
	95% CI [13.60, 46.38]	95% CI [45.54, 60.15]	95% CI [15.03, 35.65]	95% CI [13.73, 41.87]

Just over three-quarters of the remaining 81 tokens ending in *-e/ø* are in verse texts (62/81, or 77%), where the lack of *-(e)n* can be attributed to prosodic factors in many cases. About 22% of the verse tokens in this group (14/62) are forms of *Held* from Periods 1 and 3, which we expect to be strong in any case.

Among the 19 remaining *-e/ø* tokens that are not in verse texts are three tokens of the perennially unstable *Held*, two of *Prinz*, four of *Bär*, and 10 of *Mensch*. At least seven of the 10 *Mensch* tokens are probably neuter, and one is likely missing a nasal bar. Of the remaining two, one is immediately preceded by another form of *Mensch* which does have the expected weak ending; the word is repeated for emphasis:

Behüte, wer wird sich über einen Menschen ärgern, ein' **Mensch!** (Büchner, Period 10)

Two factors are likely responsible for the absence of *-(e)n* here: first, the heavy stress to which the token is subjected, and second, its appositive function — unlike the token that precedes it, it is not directly dependent on the preposition of which it is the object.

I cannot explain the lack of *-(e)n* in the following example from Götz von Berlichingen's memoirs (Period 6):

[...] ich hett dannoch ein **mensch** bey mir, der wust denselbigenn heimlichenn furt, das wir hienuber khammen [...]

This token could be neuter, but the masculine pronoun in the following clause (*der*) suggests otherwise.

The four tokens of *Bär* are all from Periods 7–11, where, as noted in 4.4.2 (table 4.20), *Bär* frequently has strong endings. One, from Herder (Period 9), may just be symptomatic of ongoing change, or perhaps *Bär* is left uninflected in this instance to match its fellow object of *gegen*, *Igel*:

Der Mensch, gegen den struppichten **Bär** und den borstigten Igel gesetzt, ist ein schwächeres, dürftigeres, nackteres Tier [...]

Two are heads of the same compound (*Tanzbär*, once in Period 7 and once in Period 11). Finally, in one case (in Beer, Period 7), the word *Bär* does not denote a bear, but is part of the name of an inn (in other words, it is inanimate); the preceding adjective is inflected, but not the noun:

Ich habe die Wirtin zum ›Schwarzen **Bär**‹ mit sechs Kindern bekommen.

The designation does not occur anywhere else in the text, so we cannot know for sure whether *Bär* is weak in the official name of the inn (is the inn called *Zum schwarzen Bären* or *Zum schwarzen Bär*?)

The two tokens of *Prinz* cannot be explained with reference to any particular conditioning factor:

[...] man wollte ihm erlauben, seine Sache wider den **Prinz** durch einen Zweikampf auszuführen.

Weswegen er durch seinen Abschied den **Prinz** voller Angst hinterließ [...]

Both appear in the late 17<sup>th</sup>-century novel *Die Asiatische Banise* of Heinrich Anselm von Ziegler und Kliphausen, in which *Prinz* is very frequent (it occurs 310 times in this text) and usually

follows the weak pattern in the oblique singular forms, except for seven title tokens and 18 tokens in the genitive singular ending in *-(e)ns*. As in the case of the token of *Bär* from Herder, these can probably both be attributed to speaker uncertainty in the changing inflectional landscape.

Almost all of the 38 tokens ending in *-(e)(n)s* in Group 1b have preceding determiners ending in *-s*. Of the six that do not, one is preceded by a form of *Herr* — a title — which does have a determiner with it (“*vnsers genedigisten herren Pfaltzgrafens*,” Period 5), while the others are forms of *Held* (three tokens) and *Mensch* (two tokens) from Periods 1, 2, and 4. The two forms of *Mensch* could be neuter, or there may also be nasal bars missing here.

In the plural, endings other than *-(e)n* occur in only 34 instances, of which 29 are in Group 1b. All are in Periods 1–7, and apart from four tokens of *Mensch* ending in *-er*, all have the markers *-e* or *-ø*. Together, these 34 tokens account for less than one percent of all plural tokens of Group 1 nouns (34/4,268).

All 11 plural forms of *Held* ending in *-e/ø* are from the first three periods, in which *Held* is still, for all intents and purposes, a strong masculine noun. The remaining 22 non-weak plural tokens are easily explained anomalies and probably not indicative of broader trends affecting the nouns in question:

- At least two tokens ending in *-e* are probably missing nasal bars (one *Herr* and one *Mensch*).
- The four tokens of *Mensch* with *-er* are all from the 17<sup>th</sup> century, where the neuter *Mensch* in the pejorative sense commonly has the plural *Menscher* (see 3.2.1).
- Five of the strong plural forms of *Herr* (ending in *-ø*) — all from the same text in Period 2 (the *Bamberger Chronik*) — are forms of the compound *pfar(r)herr*, which is developing into the strong noun *Pfarrer*.
- *Löwe* occurs four times with the plural marker *-ø*, always in the orthographic variant *leo/Leo*, which, as we have seen, is typically left uninflected.
- Three tokens of *Bär* ending in *-ø*, and one of *Mensch*, appear in rhyming couplets.
- Three tokens ending in *-ø* (one each of *Pfaffe*, *Graf*, and *Herr*) are unprecedented and appear in lists and/or binomial expressions, where they refer generically to the category rather than to groups of individuals:

[...] sie sein gaistlich oder weltlich, chaiser oder chönige, hertzog oder **graff**, richter oder scherch (Schiltberger, Period 2)

[...] vil frommer christen, fraw, man, **pfaff**, lay, münch, nunn (Günzburg, Period 4)

Alda feind und freind, **herr** und knecht,/ pferd und man, all auf einem haufen [...] (Weckherlin, Period 6)

In the first example, one of the other nouns listed (*chönige*) does have an unambiguous plural marker; the writer(s) may not have deemed it necessary to continue marking the plural beyond the first few items.

### 5.3.2 *-e, -ø*

As expected, the rate of apocope in the singular (including tokens in all four cases) is considerably higher in Group 1b — which contains only nouns that do not end in *-e* in the modern language — than in Group 1a, with the exception of *Pfaffe* (see tables 5.24 [1a] and 5.26 [1b] for the whole data set, and tables 5.25 [1a] and 5.27 [1b] for the breakdown by period). *Prinz* is never attested with *-e*, even in the earliest periods. The distribution of *-e* and *-ø* in the singular is much the same in prose alone (tables 5.24a–5.27a in appendix C) as in the entire corpus.

In Group 1a, the proportion of apocopated tokens in the singular is generally larger in the earlier periods and decreases over time as the standard language takes shape (table 5.25); by the 18<sup>th</sup> century, tokens ending in *-e* have a clear majority in almost all cases, and in Period 11, they vastly outnumber those with *-ø* (90% of all singular tokens from this period end in *-e*). As we have seen, all of these nouns end in *-e* in the modern language.

From the 18<sup>th</sup> century onward, apocopated tokens of nouns in Group 1a occur only in verse texts, except for one of *Löwe* in Period 8 (Bodmer) and 10 tokens in Period 10, representing *Pfaffe* (one token), *Bube* (six tokens), *Löwe* (two tokens), and *Affe* (one token). As noted above, *Pfaffe* is almost always apocopated, for reasons that will be explored below; the remaining tokens in Period 10 are in Büchner's *Woyzeck* (Period 10), where the characters converse mainly in colloquial language and occasionally slip into dialect.

The absence of *-e* in the singular of nouns in Group 1a is in most cases likely just a regional variant, and cannot be attributed to any of the extramorphological conditioning factors we have discussed. In the earliest periods until about 1700, the *-e/-ø* divide in this group coincides approximately with the geographical border separating the Upper German and Middle German dialect regions: forms without *-e* are prevalent in the Bavarian and Alemannic dialect regions (e.g., Vienna, Nuremberg, Straßburg, Tirol), while forms with *-e* are found mainly in texts from further north, in the Middle German region (e.g., Eisenach) (see table 4.18 for the distribution of apocopated and unapocopated tokens in individual texts in the earlier periods).

Nouns in Group 1a are never used as titles, and while they are all (with the exception of *Löwe*) used with moderate frequency as compound heads and in direct address — often in apocopated form — the apocope is not limited to these environments; writers who apococate in these conditions tend also to apococate elsewhere.

Apocope in Group 1a may also have been induced by prosodic/metrical constraints in some instances; see 4.5.9 above.

As noted earlier in this section, the final *-e* on *Pfaffe* is almost always apocopated; only two tokens (of 124 ending in *-e/ø*) have the marker *-e*. Of the two unapocopated forms, only one (from Period 1) predates the standardization of the language; the other is from the early 18<sup>th</sup> century (Period 9). Most tokens ending in *-e/ø* from before 1700 are from the Bavarian and Alemannic dialect regions, which may explain the abundance of apocopated forms here — but even Wernicke and Luther, the only people writing in the Middle German region before 1700 who use the word *Pfaff(e)* in the form without *-n*, apococate consistently here, and the one unapocopated token from before 1700 is from the south (Merswin, from Strasbourg), so it is not clear to what extent we are dealing with regional variation here.

Regardless of what caused it, the scarcity of unapocopated forms of *Pfaffe* in the earlier periods begs the question how the *-e* has survived into the modern language, particularly since the word is so rare today (the online Duden assigns it the lowest possible frequency rating, one

out of five bars) and — if the texts in my corpus are at all representative — has been since about 1650. I suspect the *-e* may have been restored by analogy with *Affe*, a word with which it sometimes co-occurs and whose distribution in the corpus is much more consistent in all periods, including the more recent ones.

Table 5.24. Group 1a: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<i>n</i> =	45	139	90	261	253	123		
<i>-e</i> (%)	44	31	29	52	21	2	30	16
<i>-ø</i> (%)	56	69	71	48	79	98	70	16

Table 5.25. Group 1a: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1 (1350–1400)	<i>n</i> =	0	23	0	21	8	55
	<i>-e</i> (%)	—	48	—	0	63	2
	<i>-ø</i> (%)	—	52	—	100	38	98
Period 2 (1400–1450)	<i>n</i> =	2	32	8	13	10	3
	<i>-e</i> (%)	50	3	0	8	20	0
	<i>-ø</i> (%)	50	97	100	92	80	100
Period 3 (1450–1500)	<i>n</i> =	8	18	0	12	95	3
	<i>-e</i> (%)	0	17	—	25	0	0
	<i>-ø</i> (%)	100	83	—	75	100	100
Period 4 (1500–1550)	<i>n</i> =	2	4	7	22	14	51
	<i>-e</i> (%)	0	0	14	14	14	0
	<i>-ø</i> (%)	100	100	86	86	86	100
Period 5 (1550–1600)	<i>n</i> =	8	13	24	16	38	0
	<i>-ø</i> (%)	100	100	100	100	100	—
	<i>-e</i> (%)	—	—	—	—	—	—
Period 6 (1600–1650)	<i>n</i> =	0	10	4	38	17	1
	<i>-e</i> (%)	—	40	100	26	47	0
	<i>-ø</i> (%)	—	60	0	74	53	100
Period 7 (1650–1700)	<i>n</i> =	6	20	10	26	19	2
	<i>-e</i> (%)	67	30	10	69	16	0
	<i>-ø</i> (%)	33	70	90	31	84	100
Period 8 (1700–1750)	<i>n</i> =	6	1	2	6	25	0
	<i>-e</i> (%)	50	100	100	100	68	—
	<i>-ø</i> (%)	50	0	0	0	32	—
Period 9 (1750–1800)	<i>n</i> =	5	6	15	31	8	2
	<i>-e</i> (%)	100	100	73	94	38	50
	<i>-ø</i> (%)	0	0	27	6	63	50
Period 10 (1800–1850)	<i>n</i> =	4	4	18	56	7	3
	<i>-e</i> (%)	75	75	28	84	29	0
	<i>-ø</i> (%)	25	25	72	16	71	100
Period 11 (1850–1900)	<i>n</i> =	4	8	2	20	13	3
	<i>-e</i> (%)	100	100	100	90	92	0
	<i>-ø</i> (%)	0	0	0	10	8	100

In Group 1a, we noted a decrease in the proportion of apocopated tokens over time. In Group 1b, by contrast, the rate of apocope is lowest in the earlier periods, though it remains elevated throughout (table 5.27). The increase in apocopated forms is most noticeable in the case of *Mensch* and *Herr*, the two most frequent nouns in the data. *Held*, which does not end in *-e* in MHG, appears less often with *-e* in the earlier periods than the other nouns in this group.

In Group 1b, as in Group 1a, many instances of apocope undoubtedly reflect regional variation. *Bär*, which lost its final *-e* (< *-o*) on the way from OHG to MHG on account of the stem-final liquid (see 1.1.1), has *-e* only in texts from the Middle German region, where apocope was and is generally less widespread (e.g., Rothe), and again, only in verse texts.<sup>104</sup>

The formerly strong noun *Held*, which did not end in *-e* to begin with, always appears with the marker *-ø*, except in verse texts in rhyming couplets and in other contexts where the *-e* is needed to complete the metrical structure; there are eight such tokens in all.

Table 5.26. Group 1b: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>		
<i>n</i> =	48	668	338	4,956	2,574	325	Mean	SD
<i>-e</i> (%)	4	19	2	12	18	0	9	8
<i>-ø</i> (%)	96	81	98	88	82	100	91	8

Table 5.27. Group 1b: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	4	0	23	691	879	0
(1350–1400)	<i>-e</i> (%)	25	—	9	46	46	—
	<i>-ø</i> (%)	75	—	91	54	54	—
Period 2	<i>n</i> =	3	134	18	596	172	2
(1400–1450)	<i>-e</i> (%)	33	15	17	33	24	0
	<i>-ø</i> (%)	67	85	83	67	76	100
Period 3	<i>n</i> =	0	16	27	543	296	0
(1450–1500)	<i>-e</i> (%)	—	13	0	7	3	—
	<i>-ø</i> (%)	—	88	100	93	97	—
Period 4	<i>n</i> =	0	27	3	453	120	0
(1500–1550)	<i>-e</i> (%)	—	7	33	6	0	—
	<i>-ø</i> (%)	—	93	67	94	100	—
Period 5	<i>n</i> =	1	264	6	868	141	0
(1550–1600)	<i>-e</i> (%)	0	39	0	1	0	—
	<i>-ø</i> (%)	100	61	100	99	100	—
Period 6	<i>n</i> =	7	14	66	370	140	74
(1600–1650)	<i>-e</i> (%)	0	0	2	1	4	0
	<i>-ø</i> (%)	100	100	98	99	96	100
Period 7	<i>n</i> =	8	26	38	298	141	184
(1650–1700)	<i>-e</i> (%)	0	4	0	0	1	0
	<i>-ø</i> (%)	100	96	100	100	99	100
Period 8	<i>n</i> =	8	18	54	352	177	22
(1700–1750)	<i>-e</i> (%)	0	6	0	0	2	0
	<i>-ø</i> (%)	100	94	100	100	98	100
Period 9	<i>n</i> =	12	28	49	301	229	14
(1750–1800)	<i>-e</i> (%)	0	0	0	1	0	0
	<i>-ø</i> (%)	100	100	100	99	100	100
Period 10	<i>n</i> =	0	82	6	244	139	22
(1800–1850)	<i>-ø</i> (%)	—	100	100	100	100	100
Period 11	<i>n</i> =	5	60	48	240	140	7
(1850–1900)	<i>-ø</i> (%)	100	100	100	100	100	100

<sup>104</sup> *Herr*, the other noun in this group with a liquid stem, usually does end in *-e* in MHG despite its phonological shape, perhaps because, as we have noted (3.2.1), it was originally a (polysyllabic) comparative adjective rather than a noun.



Otherwise, the main drivers of apocope in the singular in Group 1b are the factors “vocative” and, as in the case of non-weak inflection, “title.” Here, the association is generally strongest in the earlier periods; from Period 6 onward, almost all tokens of these nouns are apocopated, regardless of their function and the environment in which they occur.

Both *Mensch* and *Herr* are significantly more likely to be apocopated in Periods 1–6 when they are used in direct address than when they are not; the association is somewhat weaker in the prose texts alone (table 5.28). *Graf* is rarely used in direct address (only five times in all), but when it is, it almost always lacks a final *-e* (80% of all vocative tokens are apocopated, versus only 72% of non-vocative tokens); again, the association is not statistically significant.

Table 5.28. Group 1b: Association of *-ø* with direct address (Periods 1–6)

	Prose and verse	Prose only
<i>Mensch</i>	$\chi^2(1) = 33.08$	$\chi^2(1) = 8.42$
	$p < .001$	$p = .004$
	PR = 1.31	PR = 1.33
	95% CI [1.24, 1.38]	95% CI [1.17, 1.53]
<i>Herr</i>	$\chi^2(1) = 58.96$	$\chi^2(1) = 10.97$
	$p < .001$	$p = .001$
	PR = 1.13	PR = 1.10
	95% CI [1.09, 1.16]	95% CI [1.05, 1.16]

Since the corpus does not contain any tokens of *Prinz* ending in *-e*, it is impossible to link the absence of *-e* with any particular conditioning factor(s) in this case. However, *Prinz* is used very frequently in direct address — in the first six periods, vocative tokens of *Prinz* outnumber non-vocative tokens — so it seems likely that direct address has at least been a contributing factor here.

The factor “title” is significant in the first six periods for *Herr*, but not for any other noun in this group. Tokens of *Herr* are 1.41 times ( $\chi^2(1) = 192.08$ , 95% CI [1.35, 1.48]) more likely to be apocopated when they are titles than when they are not, and 1.31 times ( $\chi^2(1) = 104.29$ , 95% CI [1.26, 1.37]) when only tokens without preceding determiners are included in the title category.

We can observe the effects of the factor “title” at work on a smaller scale in Johannes Rothe’s *Ritterspiegel* (Period 2), a text from the Middle German region in which nouns in Group 1 are almost never apocopated. In this text, apocope occurs only twice, and only tokens of *Herr* used as titles are affected (*her Werrebolt*, *her Scipio*, versus *herre* in all other instances). Among the remaining 12 tokens of *Herr* in this text, there is only one other title (*unsir herre Jhesus Crist*), and it is debatable whether that token is a title at all (it has a question mark in the title category); it seems more likely that the name *Jhesus Christ* is in apposition to *unsir herre*.

Interestingly, in the case of *Graf*, the factor *title* appears at first glance to have the opposite of the expected effect: tokens used as titles are *less* likely to be apocopated than those that are not. However, at the same time, the majority of title tokens of *Graf* ending in *-e/ø* (192/291, or about 66%) have no final *-e*. Most of the 15<sup>th</sup>- and 16<sup>th</sup>-century chronicles — the texts in which *Graf* is used most frequently as a title — have both forms; in some of these texts, the forms have approximately equal frequency, but in most cases, apocopated forms are in the majority. One chronicle from Period 5, the *Zimmerische Chronik*, is the source of most tokens of *Graf* ending in *-e* (it has 81 tokens with *-e* versus 44 ending in *-ø*, while no other text in the corpus has more *-e* than *-ø*); most of these tokens occur in long, very repetitive lists of names in

which the writer's inflectional choices may have been influenced by other nearby tokens of the same noun, as in this list of nobles who participated in the First Crusade:

Dessgleichen so zogent mit dise nachvolgende **graven** und freiherrn: **grave** Hainrich von Schwarzenburg, **pfalzgrafe** Hugo von Tübingen, **grave** Rudolf und **grave** Huldreich von Sarwerden, **grave** Hartman von Dillingen und Kiburg, **grave** Thiemo von Eschenloch, **grave** Hainrich von Helfenstain, **grave** Adelprecht von Kirchberg, **grave** Hainrich von Hailigenberg, ain **grave** vom Fanen, herr Arnolt freiherr von Busnang, ain freiherr von Fridow, herr Ruodolf freiherr von Brandis, ain freiherr von Westenburg, **grave** Berchtoldt von Neifen, herr Albrecht freiherr von Stöffeln; item ain **grave** von Salm, ain **grave** von Viernenberg, ain herr von Bolanden; item **grave** Emmich von Lyningen, ain **grave** von Röttelen und ain **grave** von Zwaibrucken, darzu ain merkliche anzal von der ritterschaft [...].

Most of these tokens can probably be dismissed as unrepresentative; none of the 44 tokens ending in *-ø* occur in lists of this kind.

In the case of *Graf* and *Herr*, frequent compounding may also have contributed to the apocope in the earliest periods, particularly in prose. In Periods 1–6, but not in the entire corpus, there is a statistically significant (though weak) association of apocope on *Graf* with use as compound head ( $\chi^2(1) = 6.62, p = .01$ ): apocope of *-e* is 1.17 times more likely to occur on tokens of *Graf* that are compound heads than on simplex forms [95% CI (1.04, 1.31)]. The association strengthens when we look at the prose texts alone ( $\chi^2(1) = 7.75, p = .005$ ); here, apocope is 1.21 times more likely to occur on compounds than on other tokens of *Graf* [95% CI (1.07, 1.37)]. Of 128 singular tokens of *Graf* ending in *-e*, 29 (23%) are compounds; among tokens ending in *-ø*, the proportion of compounds is slightly larger (134/539, or 25%). In Periods 1–6, the gap between these two values widens; here we find, again, 23% compounds among tokens ending in *-e* (29/126), but the proportion of compounds ending in *-ø* increases to 36% (117/329). The majority of these compound tokens are in prose texts (mainly chronicles). Many of the *Graf* compounds that occur frequently in 15<sup>th</sup>- and 16<sup>th</sup>-century texts (*markgraf*, *pfalzgraf*, *landgraf*, *burggraf*) are no longer in use today except in fiction and historical texts, because the positions that they represent no longer exist (see 3.2.1).

In the case of *Herr*, there is no association at all with compounding as long as verse tokens are included in the data. In the prose texts, however, we find a weak correlation in the first six periods ( $\chi^2(1) = 10.91, p = .001$ ): *Herr* is 1.16 times more likely to be apocopated when it is the head of a compound than when it is not [95% CI (1.09, 1.24)]. Of 1,428 singular tokens of *Herr* in prose texts from Periods 1–6 that end in *-ø*, 121 (about 8%) are compounds; this is true of only 16/412 tokens (4%) ending in *-e*. In the whole corpus, including the last five periods, these values are closer together; here we find 136/2,293 compounds with *-ø* (about 6%) versus, again, 16/412 *-e* (3%). As in the case of *Graf*, most compounds with *Herr* occur only in the first six periods, and many no longer exist in the modern language: *landsherr*, *korherr*, *kirchherr*/*kilchherr*, *ban(n)erherr*, *freiherr*, *domherr*, *lehenherr*.

In the plural, almost all of the 29 tokens with the endings *-e/ø* have the marker *-ø*; only three end in *-e*, including one of the formerly strong *Held* from Period 2 and one each of *Mensch* and *Herr* which are probably missing nasal bars. As we have seen, these markers are rare in the plural overall in Group 1.

## 5.4 Discussion

In most instances, nouns in Group 1 adhere to the regular weak masculine pattern, as expected. Group 1a is most consistent in this regard, while all nouns in Group 1b — even *Herr* and *Mensch*, which very often pattern with Group 1a — exhibit strong and hybrid markers such as *-e/ø* and *-(e)(n)s* in the oblique singular forms at least some of the time. Frequent apocope of *-e* in the singular seems to go hand in hand with non-weak inflection — nouns in Group 1b undergo apocope more frequently than those in the more regular Group 1a — but since apocope is rampant in the earlier periods in both subgroups, we cannot link these phenomena definitively.

Group 1b represents a transitional stage on the path into Group 2; with the possible exception of the extremely frequent *Herr*, most nouns in Group 1b already have one foot in Group 2 in the modern language. The process is furthest along in the case of *Bär*, which has shown signs of strengthening since at least the 16<sup>th</sup> century and which for many German speakers today is a mixed noun with strong endings in the singular and *-(e)n* in the plural, like *Schmerz*. In the next chapter, we will venture further down this path and explore the final stages of the shift.

The mean proportions of singular and plural tokens, of nominative singular tokens, and of tokens ending in *-e/ø* and *-(e)n*, respectively, for **Group 1a** in the entire corpus are reproduced in table 5.29 (compare tables 5.1, 5.13, and 5.15 earlier in this chapter). These values will serve as our benchmark in the following chapters. The first row of the bottom table should be read as follows: on average, in Group 1a, tokens in the nominative singular account for 60% of all singular tokens, and 39% of all tokens (including plural forms), of each noun.

Table 5.29. Group 1a benchmark values

Number distribution in Group 1a (mean values for the entire corpus):

Singular (%)	66
Plural (%)	31

Mean proportions of nominative singular, *-e/ø*, and *-(e)n* for Group 1a in the entire corpus:

	Singular only	All forms
Nom. Sg. (%)	60	39
<i>-e/ø</i> (%)	61	40
<i>-(e)n</i> (%)	38	60

## 6 Group 2

In Group 2 are four nouns of moderate frequency — *Hahn*, *Herzog*, *Leichnam*, and *Schelm* — which have completed the shift into the strong declension and now have strong inflectional markers in both numbers, including (in the case of *Hahn* and *Herzog*) umlaut in the plural. In addition, Group 2 contains one very frequent noun (*Schmerz*) which has shifted only in the singular, remaining frozen at an intermediate stage (the plural form has remained weak: *die Schmerzen*). Two of these nouns always denote human beings and are thus situated at the top of the animacy hierarchy (*Herzog*, *Schelm*); one varies with respect to animacy (*Hahn*); and two are usually inanimate, but may be perceived as animate in some instances (*Leichnam*, *Schmerz*) (see 3.2.2).

For all nouns in this group except *Schmerz*, the frequency of weak forms ending in *-(e)n* is expected to be very low overall, and considerably lower than in the more stable Group 1. All of the original weak forms ending in *-(e)n* have been replaced by innovative strong forms, and as noted in chapter 1, analogical innovation tends to occur mainly in forms that are not very frequent. The nominative singular ending in *-e/ø*, which has been preserved, is expected to be at least as frequent here as in Group 1, and the ending *-e/ø* is expected to occur with some regularity in the remaining singular forms — particularly in the accusative and dative, which still end in *-ø* in the modern language — induced by the conditioning factors discussed in 4.5. In the case of the mixed noun *Schmerz*, where innovation has occurred in the singular only, the weak plural forms (but not the weak oblique singular forms) are expected to be more prominent than in the rest of the group.

This is, on the whole, what the corpus data show, as we see in figure 6.1. For all nouns in this group, particularly in the singular, the marker *-e/ø* dominates, while *-(e)n* is correspondingly rare. The nominative singular is not always the most frequent form in the paradigm, but it occupies a prominent position throughout. The rate of non-weak inflection is also considerably higher here than in Group 1; the endings *-e/ø* are very common in the oblique singular forms, and the strong and hybrid markers *-(e)(n)s* are much more conspicuous in the genitive singular. Most of these nouns are very infrequent in the plural; *Schmerz*, as expected, is not.

### 6.1 Number

Like the nouns in Group 1, the five nouns in Group 2 are all very frequent in the singular, and considerably less so in the plural (see table 6.1 for the whole corpus, and 6.2 for the diachronic data). The number values are even further apart in Group 2, where the plural forms have in most cases shifted into the strong declension, than in Group 1, where the weak plural has been preserved across the board; the gap separating the number values is particularly large for *Hahn*, *Herzog*, and *Leichnam*, all of which are used in the singular about 90% of the time.

*Schelm* and *Schmerz* are more frequent in the plural than the other nouns in the group and in this respect look more like the nouns in Group 1a. The elevated plural values are expected in the case of *Schmerz*, which still has weak endings in the plural in the modern language, but not in that of *Schelm*; the reasons for this discrepancy will be explored further in 6.4. In any case, as we see in table 6.2, *Schelm* is considerably more frequent in the singular than in the plural in most of the individual periods.

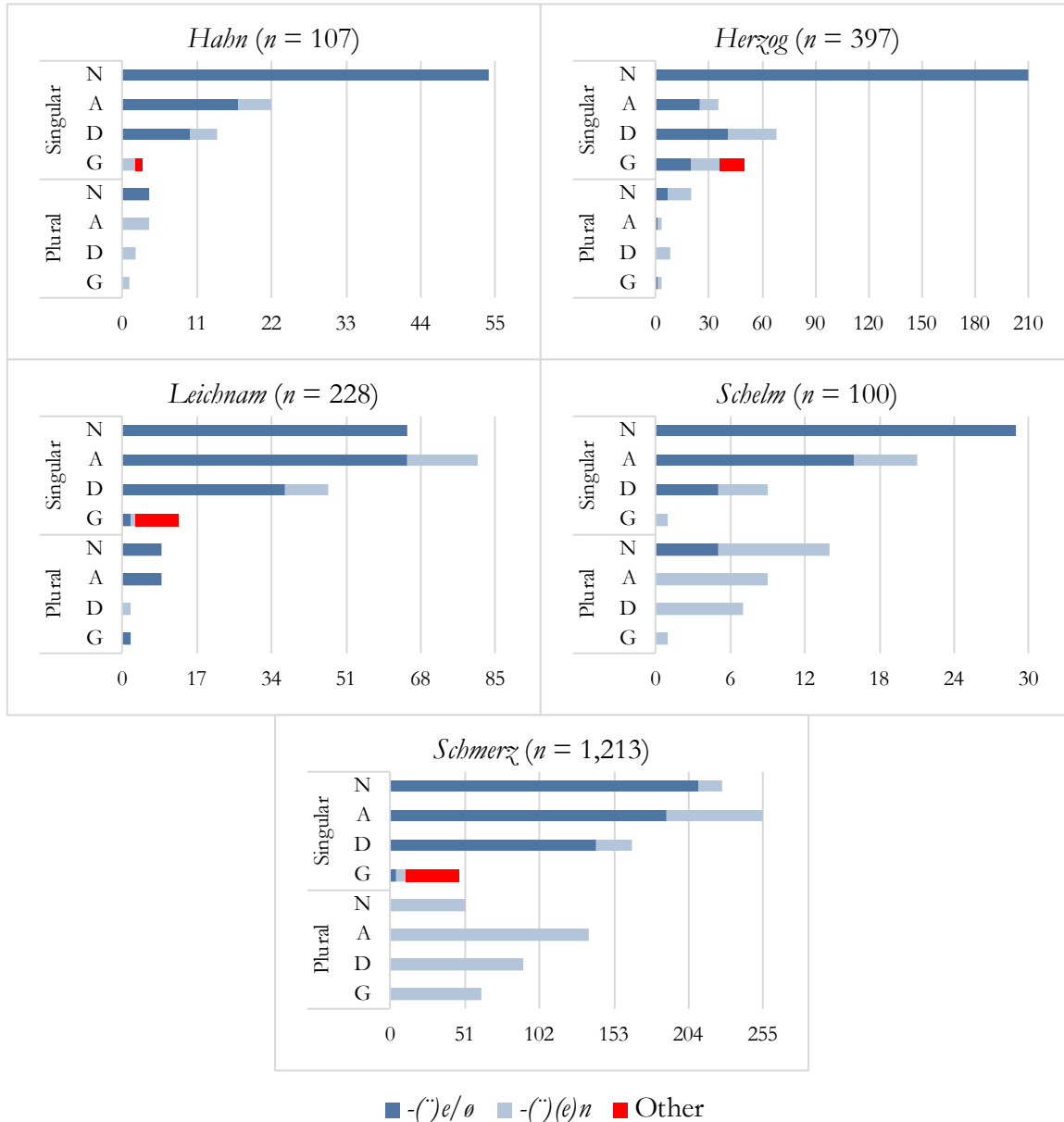


Figure 6.1. Group 2: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values (-e/ø, -(e)n, other) in each form. The values for -e/ø and -(e)n include tokens with umlaut; for the distribution of umlauted and unumlauted tokens, see table 6.11.

In the prose texts (tables 6.1a and 6.2a in appendix C), the number distribution for *Hahn*, *Herzog*, and *Leichnam* remains about the same, while the singular values for *Schelm* and *Schmerz* decrease slightly relative to those for the whole corpus; in fact, singular and plural tokens of *Schelm* are almost evenly distributed in prose texts (49% singular versus 44% plural). However, half of all plural tokens in prose (9/18) are in the same section of Grimmelhausen's *Simplicissimus* (Period 7), and 5/9 refer to the same group of *Schelme/n*. In the prose texts, as in the whole corpus, the singular is by far the dominant number in most periods.

Table 6.1. Group 2: Number distribution (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	107	397	230	100	1,213		
Sg. (%)	87	91	90	60	58	77	15
Pl. (%)	10	9	10	31	29	18	10
? (%)	3	0	0	9	13	5	5

Table 6.2. Group 2: Number distribution, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1 (1350–1400)	<i>n</i> =	2	20	78	0	41
	Singular (%)	50	80	99	—	63
	Plural (%)	0	20	1	—	10
	? (%)	50	0	0	—	27
Period 2 (1400–1450)	<i>n</i> =	1	110	36	1	40
	Singular (%)	<b>0</b>	93	92	100	68
	Plural (%)	<b>0</b>	7	8	0	3
	? (%)	100	0	0	0	30
Period 3 (1450–1500)	<i>n</i> =	3	39	64	4	83
	Singular (%)	67	92	95	75	52
	Plural (%)	0	8	5	0	5
	? (%)	33	0	0	25	43
Period 4 (1500–1550)	<i>n</i> =	13	29	3	13	45
	Singular (%)	85	93	67	<b>23</b>	76
	Plural (%)	15	7	33	<b>46</b>	0
	? (%)	0	0	0	31	24
Period 5 (1550–1600)	<i>n</i> =	9	133	2	16	54
	Singular (%)	67	90	100	63	56
	Plural (%)	33	10	0	13	7
	? (%)	0	0	0	25	37
Period 6 (1600–1650)	<i>n</i> =	5	8	17	12	122
	Singular (%)	100	88	<b>47</b>	83	40
	Plural (%)	0	13	<b>53</b>	17	30
	? (%)	0	0	0	0	30
Period 7 (1650–1700)	<i>n</i> =	4	8	2	28	142
	Singular (%)	75	100	100	<b>50</b>	46
	Plural (%)	25	0	0	<b>50</b>	36
	? (%)	0	0	0	0	18
Period 8 (1700–1750)	<i>n</i> =	19	4	2	1	203
	Singular (%)	100	<b>50</b>	100	100	53
	Plural (%)	0	<b>50</b>	0	0	44
	? (%)	0	0	0	0	3
Period 9 (1750–1800)	<i>n</i> =	22	7	9	5	147
	Singular (%)	95	100	100	60	63
	Plural (%)	5	0	0	40	35
	? (%)	0	0	0	0	2
Period 10 (1800–1850)	<i>n</i> =	18	31	5	17	183
	Singular (%)	89	97	80	76	66
	Plural (%)	11	3	20	24	34
Period 11 (1850–1900)	<i>n</i> =	11	8	10	3	153
	Singular (%)	82	100	60	67	73
	Plural (%)	18	0	40	33	27

Note: Bold formatting is used wherever the percentage of plural tokens is greater than or equal to that of singular tokens.

The proportion of question-mark tokens is larger here than in Group 1, particularly in the case of *Schmerz*, where number question marks account for more than 10% of all tokens (26% in prose texts). Most of the 163 tokens of *Schmerz* that have question marks in the number category are unprecedented (119, or 73%); in the remaining 44 instances, the preceding elements offer no clue as to the number. All but five are in oblique cases or have question marks in the case category, and all but one end in *-(e)n*. In the case of *Schelm*, all but one of the nine number question marks are potential initial members of compounds (*schelmen bein*, *schelmen dant*, etc.); here, again, all are either oblique or have unknown case, and all have the marker *-(e)n*.

The number distribution in Group 2 stays much the same across all periods, both in the entire corpus (table 6.2) and in the prose texts only (table 6.2a in appendix C). The singular is prevalent throughout, with four exceptions (marked in boldface in table 6.2):

1. *Schelm* in Period 4: Here all but one token (12/13) are in verse texts. Most denote the category/type rather than specific groups of *Schelme/n*.
2. *Schelm* in Period 7: As noted in 6.1, most of these tokens are in GrimmeIshausen.
3. *Leichnam* in Period 6: Here, again, most tokens (10/17), including almost all plural tokens (7/9), are in a single text, Andreae's *Chymische Hochzeit*, in a scene in which corpses figure prominently (alchemical methods are used to revive corpses in a laboratory).
4. *Herzog* in Period 8: There are only four tokens here; two are singular, and the other two are plural.

## 6.2 Case

### 6.2.1 Singular

Since the nominative singular has been preserved in Group 2, we expect this form to be more frequent than the other singular forms. This is the case for the more animate nouns in the group (*Hahn*, *Herzog*, *Schelm*), but not for those that are less animate (*Leichnam*, *Schmerz*), which are used primarily in the accusative (see table 6.3 for the whole data set, and table 6.4 for the breakdown by period). However, even when it is not the most frequent of the four cases, the nominative still accounts for a sizeable share of the total. As in Group 1, question marks in the case category are rare.

The distribution changes somewhat when we exclude verse tokens (tables 6.3a and 6.4a in appendix C). In the prose texts, the nominative has a clear majority only in the case of *Herzog*, while the other animate nouns have at least as much accusative as nominative, and in the case of *Hahn*, quite a bit more. Most of the prose roosters occur in contexts in which they are not particularly animate: those that are not weathervanes and taps are in most cases being hunted, consumed, or used to prepare medicine.

In the case of *Schmerz*, nominative tokens make up exactly the same share of the total in the prose texts as in the entire corpus (32%), but the proportion of accusative tokens decreases slightly to 28%, leaving the nominative in the majority.

Table 6.3. Group 2: Case distribution in the singular (all periods)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	93	363	206	60	704		
N (%)	58	58	31	48	32	45	12
A (%)	24	10	39	35	36	29	11
D (%)	15	19	23	15	23	19	4
G (%)	3	14	6	2	7	6	4
? (%)	0	0	1	0	1	0	1

Table 6.4. Group 2: Case distribution in the singular, by period

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	1	16	77	0	26
(1350–1400)	Nom. (%)	0	50	27	—	54
	Obl. (%)	100	50	73	—	46
Period 2	<i>n</i> =	0	102	33	1	27
(1400–1450)	Nom. (%)	—	58	24	0	26
	Obl. (%)	—	42	76	100	74
Period 3	<i>n</i> =	2	36	61	3	43
(1450–1500)	Nom. (%)	50	67	33	33	23
	Obl. (%)	50	33	67	67	77
Period 4	<i>n</i> =	11	27	2	3	34
(1500–1550)	Nom. (%)	18	70	100	33	18
	Obl. (%)	82	30	0	67	79
	? (%)	0	0	0	0	3
Period 5	<i>n</i> =	6	120	2	10	30
(1550–1600)	Nom. (%)	50	56	50	50	7
	Obl. (%)	50	44	50	50	93
Period 6	<i>n</i> =	5	7	8	10	49
(1600–1650)	Nom. (%)	40	100	25	50	53
	Obl. (%)	60	0	75	50	47
Period 7	<i>n</i> =	3	8	2	14	65
(1650–1700)	Nom. (%)	100	63	50	57	32
	Obl. (%)	0	38	50	43	68
Period 8	<i>n</i> =	19	2	2	1	107
(1700–1750)	Nom. (%)	63	100	0	0	34
	Obl. (%)	37	0	100	100	65
	? (%)	0	0	0	0	1
Period 9	<i>n</i> =	21	7	9	3	92
(1750–1800)	Nom. (%)	67	29	56	67	30
	Obl. (%)	33	71	44	33	67
	? (%)	0	0	0	0	2
Period 10	<i>n</i> =	16	30	4	13	120
(1800–1850)	Nom. (%)	63	40	50	38	27
	Obl. (%)	38	60	50	62	73
Period 11	<i>n</i> =	9	8	6	2	111
(1850–1900)	Nom. (%)	78	63	17	100	41
	Obl. (%)	22	38	83	0	59
	? (%)	0	0	0	0	1

The individual periods (table 6.4) look much like the corpus as a whole: in the singular, in most periods with more than 10 or so tokens, *Herzog* and *Schelm* are most frequent in the nominative, *Leichnam* is used mainly in the oblique cases, and *Hahn* and *Schmerz* fall



somewhere in the middle. This is true whether or not verse tokens are included (see table 6.4a in appendix C for the prose data). The proportion of nominative tokens rarely drops below 30%, except in cases where there are very few tokens.

In Periods 9 and 10, contrary to expectation, *Herzog* has more oblique than nominative tokens. All tokens in Period 9 but one (6/7) are in verse texts, and most are in Wieland's *Oberon*, where they occur mainly (in 3/5 instances) in the genitive in contexts in which a character is introduced as the son of a specific *Herzog*:

»Mein Nam ist Hüon, Erb und Sohn/ Des braven Siegewin, einst **Herzogs** von Guyenne.«

Kennst du mich nicht, so wiß, ich bin der Sohn/ Des **Herzogs** Dietrich von Ardennen:[...]

Er gab sich für den Sohn des **Herzogs** von Ardennen,[...]

In Period 10, though the oblique cases outweigh the nominative collectively, the nominative is still the most frequent of the four cases; the accusative, dative, and genitive are represented with only four, five, and nine tokens, respectively, while the nominative occurs in 12 instances.

The proportion of oblique tokens of *Schelm* is larger than expected in Period 10. In this case, seven of the 13 tokens are found in one poem of Annette Droste-Hülshoff in which the phrase "(Hängt) den Schelm!" is repeated several times for emphasis:

»Der Schelm ist tot, der Schelm ist tot!/ Laßt uns den Schelm begraben!/ Kriegen ihn die Hunde nicht,/ Dann fressen ihn die Raben./ Hoho hallo!«/ [...] Doch lauter, lauter schallt die Gloria./ Braust durch den Ginster die Viktoria:/ »Hängt **den Schelm!** hängt **den Schelm!**/ Hängt ihn an die Weide,/ Mir den Balg und dir den Talg,/ Dann lachen wir alle beide;/ Hängt ihn! Hängt ihn!/ **Den Schelm, den Schelm!** – – «

If the four instances of this phrase are counted as a single token, the proportion of nominative in this period increases to  $9/15 = 60\%$ .

### 6.2.2 Plural

In the plural, the nominative is most frequent only for the two nouns that denote living human beings, *Herzog* and *Schelm*. *Hahn* and *Leichnam* occur with equal frequency in the nominative and accusative, while in the case of *Schmerz*, all three of the oblique cases, including the genitive, are more frequent than the nominative (see table 6.5 for the whole corpus, and table 6.6 for the distribution by period). The total number of plural tokens is very small in most cases, though, so these proportions may not be altogether representative.

The diachronic picture (table 6.6) appears even less tidy in the plural than in the singular; however, except in the case of *Schmerz*, the samples are all too small for the percentages to be in any way informative. As in the whole corpus, *Schmerz* is used mainly in the oblique cases in all periods.

Table 6.5. Group 2: Case distribution in the plural (all periods)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>		
<i>n</i> =	11	34	22	31	346	Mean	SD
N (%)	36	59	41	45	15	39	14
A (%)	36	9	41	29	39	31	12
D (%)	18	24	9	23	26	20	6
G (%)	9	9	9	3	18	10	5
? (%)	0	0	0	0	2	0	1

Table 6.6. Group 2: Case distribution in the plural, by period

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1 (1350–1400)	<i>n</i> =	0	4	1	0	4
	Nom. (%)	—	25	0	—	0
	Obl. (%)	—	75	100	—	100
Period 2 (1400–1450)	<i>n</i> =	0	8	3	0	1
	Nom. (%)	—	75	100	—	0
	Obl. (%)	—	25	0	—	100
Period 3 (1450–1500)	<i>n</i> =	0	3	3	0	4
	Nom. (%)	—	33	0	—	25
	Obl. (%)	—	67	100	—	75
Period 4 (1500–1550)	<i>n</i> =	2	2	1	6	0
	Nom. (%)	0	100	100	33	—
	Obl. (%)	100	0	0	67	—
Period 5 (1550–1600)	<i>n</i> =	3	13	0	2	4
	Nom. (%)	0	62	—	100	25
	Obl. (%)	100	38	—	0	75
Period 6 (1600–1650)	<i>n</i> =	0	1	9	2	36
	Nom. (%)	—	100	44	50	19
	Obl. (%)	—	0	56	50	72
	? (%)	—	0	0	0	8
Period 7 (1650–1700)	<i>n</i> =	1	0	0	14	51
	Nom. (%)	0	—	—	29	16
	Obl. (%)	100	—	—	71	84
Period 8 (1700–1750)	<i>n</i> =	0	2	0	0	89
	Nom. (%)	—	50	—	—	7
	Obl. (%)	—	50	—	—	93
Period 9 (1750–1800)	<i>n</i> =	1	0	0	2	52
	Nom. (%)	100	—	—	50	21
	Obl. (%)	0	—	—	50	79
Period 10 (1800–1850)	<i>n</i> =	2	1	1	4	63
	Nom. (%)	100	0	0	75	19
	Obl. (%)	0	100	100	25	81
Period 11 (1850–1900)	<i>n</i> =	2	0	4	1	42
	Nom. (%)	50	—	25	100	12
	Obl. (%)	50	—	75	0	88

## 6.3 Inflectional Marker

### 6.3.1 *-e/ø*, *-(e)n*, Other

#### 6.3.1.1 Overview

While the proportion of nominative tokens is smaller in this group than one might expect given the trajectory that these nouns have followed (the nominative singular is in most cases the only part of the original paradigm that has survived intact), that of tokens with the markers *-e/ø* is substantial throughout, and in most cases considerably larger than in either Group 1 subgroup (table 6.7). In the singular, all nouns in Group 2, including those that are used mainly in the oblique cases, end in *-e/ø* about 80% of the time (in most cases more than 80%), versus only about 60%–70% in Group 1. These nouns also have *-e/ø* somewhat regularly in the plural — unlike those in Group 1 — so that in most cases (all except *Schmerz*), the overall proportion of *-e/ø* also exceeds that of *-(e)n* (see the bottom three rows of table 6.7).

Table 6.7. Group 2: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<b>Sg., n =</b>	93	363	206	60	704		
<i>-e/ø</i> (%)	87	82	82	83	79	83	3
<i>-(e)n</i> (%)	12	15	13	17	16	14	2
Other (%)	1	4	5	0	5	3	2
<b>Pl., n =</b>	11	34	22	31	346		
<i>-e/ø</i> (%)	36	26	91	16	0.3	34	31
<i>-(e)n</i> (%)	64	74	9	84	99.7	66	31
<b>All, n =</b>	107	397	228	100	1,213		
<i>-e/ø</i> (%)	80	77	83	55	46	68	15
<i>-(e)n</i> (%)	19	20	13	45	51	29	15
Other (%)	1	4	4	0	3	2	2

Table 6.8. Group 2: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<b>n =</b>	107	397	228	100	1,213		
N. Sg. (%)	50	53	28	29	19	36	14
<i>-e/ø</i> (%)	80	77	83	55	46	68	15

Note: The values for *-e/ø* include tokens in all four cases.

For all nouns in Group 2, the proportion of *-e/ø* is much higher than that of nominative singular (table 6.8); in the more regular Group 1, these values were about the same (compare tables 5.15 and 5.16). The endings *-e/ø* are very frequent in Group 2 in forms other than the nominative singular — particularly in the accusative and dative singular, but also in the plural in some cases. *Leichnam* is always strong in the plural; it has *-(e)n* only in the dative, where that marker is expected.

In Group 2, as in Group 1, the marker *-(e)n* is largely limited to the oblique singular forms and the plural. Here it begins to creep into the nominative singular, but only in the case of *Schmerz*, which has *-(e)n* in the nominative singular in only 16 instances, mainly (12/16) in prose texts — a minute fraction of the 1,213 tokens of *Schmerz* in the corpus.

Inflectional markers other than *-e/ø* and *-(e)n* are more common here than in Group 1, where they occur only 1% of the time on average. Most widespread is the strong genitive singular marker *-(e)s*, which appears on all nouns except *Schelm*: *Hahn* has it once; *Herzog* 14 times; *Leichnam* 10 times; and *Schmerz* 13 times. *Schmerz* also has the hybrid marker *-(e)ns* in the genitive singular in 23 instances.

Umlaut as plural marker is attested in this group only on *Hahn* and *Herzog*. All four plural tokens of *Hahn* ending in *-e/ø* have umlaut, as does one of the eight tokens ending in *-(e)n*. *Herzog* occurs only once with umlaut, and only in combination with the ending *-e*.

When we exclude verse tokens from the data (table 6.7a in appendix C), the proportion of *-e/ø* decreases slightly in the singular for all nouns except *Schelm*, for which it increases to 90%. The decrease is most precipitous in the case of *Schmerz*; in the prose texts alone, only 50% of all tokens of *Schmerz* end in *-e/ø*, versus 79% in the whole corpus. The remaining nouns in this group continue to have about 80% *-e/ø* in the singular. In the plural, the strong endings *-e/ø* are less frequent in the prose texts than in the whole corpus; for *Hahn* (which has only three plural tokens in prose) and *Schmerz*, the proportion of tokens ending in *-e/ø* drops to 0%. The share of tokens with markers other than *-e/ø* and *-(e)n* stays about the same for most nouns, but increases to 16% in the case of *Schmerz*; most of the 36 tokens of *Schmerz* with the genitive singular markers *-(e)s* and *-(e)ns* (28/36, or 78%) occur in prose texts.

As we see in table 6.9, the proportion of *-e/ø* stays above 70% fairly consistently across all time periods, and in most cases, it exceeds that of nominative singular tokens by a substantial margin; this is the case both in the entire corpus and in the prose texts alone (see table 6.9a in appendix C for the prose data).<sup>105</sup> *Leichnam* and *Herzog* are completely strong by the 17<sup>th</sup> century; the other nouns continue to exhibit weak forms in the singular through the late 18<sup>th</sup> century, but only sporadically. *Schmerz*, the only noun in this group that has not completed the shift, has *-(e)n* more frequently in the singular than the other nouns, particularly in the earlier periods; however, even here, the proportion of *-(e)n* decreases over time, and by the end of the 18<sup>th</sup> century, *Schmerz* has more or less caught up with the rest of the group.

Except in the case of *Schmerz*, the proportion of *-e/ø* in the singular typically drops below 70% only when the number of tokens is less than 10 (*Hahn*, Periods 2 and 5; *Herzog*, Period 7; *Schelm*, Periods 2–4, 9). In Period 1, where *Leichnam* is very frequent but nonetheless has slightly less than 70% *-e/ø*, we can again hold Merswin accountable: his very repetitive *Buch von den neun Felsen* accounts for nearly 60% (45/77) of all singular tokens of *Leichnam* in this period, of which almost 40% end in *-(e)n*. Even here, though, the proportion of *-e/ø* is considerably larger than that of nominative singular.

In the prose texts (table 6.9a), *Schmerz* has more nominative singular than *-e/ø* in many periods; this is because, as noted earlier in this section, most nominative singular tokens of *Schmerz* ending in *-(e)n* (12/16, or 75%) occur in prose texts.

The diachronic path of the genitive singular in this group (table 6.10) is marked by considerable variation. *Herzog* — the only one of the four fully shifted nouns in this group (*Hahn*, *Herzog*, *Leichnam*, *Schelm*) that occurs with any regularity in the genitive singular —

<sup>105</sup> In table 6.9, the inflectional marker values include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison; in this group, the proportion of *-e/ø* is generally higher than that of nominative singular tokens, whereas in Group 1, these values are often the same. Proportions of *-e/ø* under 70% are marked in boldface.

Table 6.9. Group 2: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1 (1350–1400)	<i>n</i> =	1	16	77	0	26
	Nom. Sg. (%)	0	50	27	—	54
	<i>-e/ø</i> (%)	100	81	<b>66</b>	—	<b>46</b>
	<i>-(e)n</i> (%)	0	19	34	—	50
	Other (%)	0	0	0	—	4
Period 2 (1400–1450)	<i>n</i> =	0	102	33	1	27
	Nom. Sg. (%)	—	58	24	0	26
	<i>-e/ø</i> (%)	—	79	82	<b>0</b>	<b>56</b>
	<i>-(e)n</i> (%)	—	21	3	100	41
	Other (%)	—	0	15	0	4
Period 3 (1450–1500)	<i>n</i> =	2	36	61	3	43
	Nom. Sg. (%)	50	67	33	33	23
	<i>-e/ø</i> (%)	<b>50</b>	72	92	<b>33</b>	<b>47</b>
	<i>-(e)n</i> (%)	50	28	0	67	44
	Other (%)	0	0	8	0	9
Period 4 (1500–1550)	<i>n</i> =	11	27	2	3	34
	Nom. Sg. (%)	18	70	100	33	18
	<i>-e/ø</i> (%)	73	96	100	<b>33</b>	<b>68</b>
	<i>-(e)n</i> (%)	27	4	0	67	26
	Other (%)	0	0	0	0	6
Period 5 (1550–1600)	<i>n</i> =	6	120	2	10	30
	Nom. Sg. (%)	50	56	50	50	7
	<i>-e/ø</i> (%)	<b>67</b>	84	100	80	<b>50</b>
	<i>-(e)n</i> (%)	33	15	0	20	37
	Other (%)	0	1	0	0	13
Period 6 (1600–1650)	<i>n</i> =	5	7	8	10	49
	Nom. Sg. (%)	40	100	25	50	53
	<i>-e/ø</i> (%)	80	100	100	100	<b>69</b>
	<i>-(e)n</i> (%)	20	0	0	0	29
	Other (%)	0	0	0	0	2
Period 7 (1650–1700)	<i>n</i> =	3	8	2	14	65
	Nom. Sg. (%)	100	63	50	57	32
	<i>-e/ø</i> (%)	100	100	100	86	77
	<i>-(e)n</i> (%)	0	0	0	14	15
	Other (%)	0	0	0	0	8
Period 8 (1700–1750)	<i>n</i> =	19	2	2	1	107
	Nom. Sg. (%)	63	100	0	0	34
	<i>-e/ø</i> (%)	95	100	100	100	75
	<i>-(e)n</i> (%)	5	0	0	0	23
	Other (%)	0	0	0	0	2
Period 9 (1750–1800)	<i>n</i> =	21	7	9	3	92
	Nom. Sg. (%)	67	29	56	67	30
	<i>-e/ø</i> (%)	86	<b>57</b>	100	<b>67</b>	92
	<i>-(e)n</i> (%)	14	0	0	33	1
	Other (%)	0	43	0	0	7
Period 10 (1800–1850)	<i>n</i> =	16	30	4	13	120
	Nom. Sg. (%)	63	40	50	38	27
	<i>-e/ø</i> (%)	94	70	100	100	96
	<i>-(e)n</i> (%)	0	0	0	0	0
	Other (%)	6	30	0	0	4
Period 11 (1850–1900)	<i>n</i> =	9	8	6	2	111
	Nom. Sg. (%)	78	63	17	100	41
	<i>-e/ø</i> (%)	100	88	100	100	95
	<i>-(e)n</i> (%)	0	0	0	0	0
	Other (%)	0	13	0	0	5

shows a gradual development from weak  $-(e)n$  to strong  $-(e)s$ , with a few instances of  $-e/\emptyset$  in the earliest periods. *Hahn* appears to follow a similar path, but there are too few tokens to be sure. In the case of *Leichnam*, the strong genitive singular takes hold very early, supplanting all other forms by Period 2; *Schelm* is attested only once in the genitive singular, in the weak form, in Period 9, by which time strong and hybrid genitive singular markers have long since superseded  $-(e)n$  for most other nouns in this group. Finally, in the case of *Schmerz*, the hybrid marker  $-(e)ns$  dominates through the 18<sup>th</sup> century, at which point the strong marker  $-(e)s$  takes over.

Table 6.10. Group 2: Distribution of inflectional markers in the genitive singular, by period

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	0	2	3	0	2
(1350–1400)	$-e/\emptyset$ (%)	—	100	67	—	0
	$-(e)n$ (%)	—	0	33	—	50
	$-(e)ns$ (%)	—	0	0	—	50
Period 2	<i>n</i> =	0	13	5	0	1
(1400–1450)	$-e/\emptyset$ (%)	—	38	0	—	0
	$-(e)n$ (%)	—	62	0	—	0
	$-(e)ns$ (%)	—	0	0	—	100
	$-(e)s$ (%)	—	0	100	—	0
Period 3	<i>n</i> =	1	4	5	0	10
(1450–1500)	$-e/\emptyset$ (%)	0	0	0	—	10
	$-(e)n$ (%)	100	100	0	—	50
	$-(e)ns$ (%)	0	0	0	—	30
	$-(e)s$ (%)	0	0	100	—	10
Period 4	<i>n</i> =	0	0	0	0	3
(1500–1550)	$-(e)n$ (%)	—	—	—	—	33
	$-(e)ns$ (%)	—	—	—	—	67
Period 5	<i>n</i> =	0	18	0	0	4
(1550–1600)	$-e/\emptyset$ (%)	—	72	—	—	0
	$-(e)n$ (%)	—	22	—	—	0
	$-(e)ns$ (%)	—	0	—	—	100
	$-(e)s$ (%)	—	6	—	—	0
Period 6	<i>n</i> =	0	0	0	0	1
(1600–1650)	$-(e)ns$ (%)	—	—	—	—	100
Period 7	<i>n</i> =	0	0	0	0	5
(1650–1700)	$-(e)ns$ (%)	—	—	—	—	100
Period 8	<i>n</i> =	1	0	0	0	2
(1700–1750)	$-(e)n$ (%)	100	—	—	—	0
	$-(e)ns$ (%)	0	—	—	—	100
Period 9	<i>n</i> =	0	3	0	1	7
(1750–1800)	$-e/\emptyset$ (%)	—	0	—	0	14
	$-(e)n$ (%)	—	0	—	100	0
	$-(e)ns$ (%)	—	0	—	0	57
	$-(e)s$ (%)	—	100	—	0	29
Period 10	<i>n</i> =	1	9	0	0	6
(1800–1850)	$-e/\emptyset$ (%)	0	0	—	—	17
	$-(e)s$ (%)	100	100	—	—	83
Period 11	<i>n</i> =	0	1	0	0	6
(1850–1900)	$-e/\emptyset$ (%)	—	0	—	—	17
	$-(e)s$ (%)	—	100	—	—	83

In the plural (table 6.11), as noted above, *Leichnam* is strong throughout; the ending *-(e)n* occurs only in the dative, once in Period 6 and once in Period 11. At the opposite extreme is *Schmerz*, which has endings other than *-(e)n* in only one instance, in Period 6 (*-ø*) in a verse text (Fleming: “viel tausent **Schmerz**”). The remaining nouns in this group behave more as one might expect: *-(e)n* dominates in the earlier periods, and the strong marker *-e* emerges gradually, first without umlaut, and later — beginning in Period 9 — with umlaut. In the last two periods, the plural marker *-(e)n* is no longer attested in this group of nouns except in the dative.

Table 6.11. Group 2: Distribution of *-e/ø* and *-(e)n* in the plural, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	0	4	1	0	4
(1350–1400)	<i>-e/ø</i> (%)	—	0	100	—	0
	<i>-(e)n</i> (%)	—	100	0	—	100
Period 2	<i>n</i> =	0	8	3	0	1
(1400–1450)	<i>-e/ø</i> (%)	—	50	100	—	0
	<i>-(e)n</i> (%)	—	50	0	—	100
Period 3	<i>n</i> =	0	3	3	0	4
(1450–1500)	<i>-e/ø</i> (%)	—	33	100	—	0
	<i>-(e)n</i> (%)	—	67	0	—	100
Period 4	<i>n</i> =	2	2	1	6	0
(1500–1550)	<i>-e/ø</i> (%)	0	50	100	0	—
	<i>-(e)n</i> (%)	100	50	0	100	—
Period 5	<i>n</i> =	3	13	0	2	4
(1550–1600)	<i>-(e)n</i> (%)	100	100	—	100	100
Period 6	<i>n</i> =	0	1	9	2	36
(1600–1650)	<i>-e/ø</i> (%)	—	100	89	50	3
	<i>-(e)n</i> (%)	—	0	11	50	97
Period 7	<i>n</i> =	1	0	0	14	51
(1650–1700)	<i>-(e)n</i> (%)	100	—	—	100	100
Period 8	<i>n</i> =	0	2	0	0	89
(1700–1750)	<i>-e/ø</i> (%)	—	50	—	—	0
	<i>-(e)n</i> (%)	—	50	—	—	100
Period 9	<i>n</i> =	1	0	0	2	52
(1750–1800)	<i>-e/ø</i> (%)	<b>100</b>	—	—	0	0
	<i>-(e)n</i> (%)	0	—	—	100	100
Period 10	<i>n</i> =	2	1	1	4	63
(1800–1850)	<i>-e/ø</i> (%)	<b>100</b>	<b>100</b>	100	75	0
	<i>-(e)n</i> (%)	0	0	0	25	100
Period 11	<i>n</i> =	2	0	4	1	42
(1850–1900)	<i>-e/ø</i> (%)	<b>50</b>	—	75	100	0
	<i>-(e)n</i> (%)	<b>50</b>	—	25	0	100

*Note:* Bold formatting indicates the presence of umlaut on all tokens.

### 6.3.1.2 Non-Weak Inflection

The rate of non-weak inflection — defined as the presence of endings other than *-e/ø* in the nominative singular and of endings other than *-(e)n* in the oblique singular forms and in the plural — is considerably higher in Group 2 than in the more regular Group 1. Overall, it is about 30% for most nouns in this group, versus no more than 10% in Group 1; in the case of *Leichnam*, more than half of all forms are strong (table 6.12). In the prose texts (table 6.12a in appendix C),

the proportion of tokens with non-weak inflectional markers is around 50% in the singular for all nouns except *Herzog*, which has 27%–28% non-weak forms in all subsets.

Most non-weak tokens in this group are plural and oblique singular forms ending in *-e/ø*; however, there are also many genitive singular forms in *-(e)(n)s* (only *-(e)s* for all nouns except *Schmerz*) and a handful of tokens of *Schmerz* with *-(e)n* in the nominative singular.

Table 6.12. Group 2: Distribution of non-weak (innovative) tokens (all periods)

Noun	N. Sg. in <i>-(e)n</i> ( <i>n</i> )	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Gen. Sg. in <i>-(e)(n)s</i> ( <i>n</i> )	Pl. in <i>-(<sup>h</sup>)e/ø</i> ( <i>n</i> )	Pl. in <i>-(e)n</i> ( <i>n</i> )	Total non- weak ( <i>n</i> )	Non-weak (%)	Total tokens ( <i>n</i> )
<i>Hahn</i>	0	27	1	4	1	33	31	107
<i>Herzog</i>	0	86	14	9	0	109	27	397
<i>Leichnam</i>	0	106	10	20	0	136	60	228
<i>Schelm</i>	0	21	0	5	0	26	26	100
<i>Schmerz</i>	16	339	36	1	0	392	32	1,213

As we saw in the previous section, all nouns in this group except *Schmerz* are completely strong by the 17<sup>th</sup> century, with rare exceptions. Up to that point, non-weak inflection in the singular appears to have been driven primarily by the absence of preceding determiners and attributive adjectives (unprecedentedness), and in some cases also by frequent use as a title. In both numbers, the syllable structure and stress pattern of the token and other prosodic factors may have been conducive to non-weak inflection at times, particularly in cases where the token has no ending at all.

*Herzog*, *Leichnam*, and *Schmerz* are all very frequently unprecedented, more so than any noun in Group 1 except *Herr* (tables 4.27 and 4.28). The proportion of tokens without determiner and attributive adjective lies above 30% for all three of these nouns, both in the singular and in the whole paradigm; in the case of *Herzog*, 45% of all tokens, and 46% of all singular tokens, are unprecedented. Only one other noun in this study — *Friede/n*, in Group 3b — is unprecedented more often than *Herzog*. For *Herzog* and *Schmerz*, there is a statistically significant correlation of unprecedentedness — defined as the absence of preceding elements of any kind — with non-weak inflection in the singular oblique forms in the first six periods (table 6.13), at least when verse tokens are included in the data. In the prose texts alone, the association holds for *Herzog*, but not for *Schmerz* (though the PR remains elevated); however, as noted in 3.1, *Schmerz* occurs mainly in verse texts (only about a quarter of all tokens of *Schmerz* are in prose texts). In the case of *Leichnam*, there is no correlation due to the overall preponderance of non-weak forms; in fact, non-weak inflection occurs at a slightly higher rate among preceded tokens than among unprecedented ones (35/47, or 74%, unprecedented versus 81/96, or 84%, preceded).

*Herzog* is not only the second most frequently unprecedented of the nouns under investigation here, but also the most frequent in the function of title; 39% of all tokens of *Herzog* are titles, versus only 32% for *Graf* and 30% for *Herr*. Again, the association with non-weak inflection is significant (table 6.14), and it strengthens when we exclude verse tokens.

The stress pattern and syllable structure of the word may explain at least some of the 185 uninflected forms of *Herzog* and *Leichnam* in Periods 1–6, both singular and plural: both of these nouns are polysyllabic, have word-initial stress, and were once transparent compounds. Compounding may also have had some effect in the case of *Hahn*, which, as noted in 4.5.6.1, is the most frequently compounded of the nouns in Group 2; however, most *Hahn* compounds (22/26, or 85%) are found in periods in which the shift was already largely complete (7–10); all of the oblique singular compounds in Periods 1–6 have the expected weak ending *-(e)n*.



In verse texts, in some instances, constraints of rhyme and meter may have influenced the writer's decision to leave the token uninflected, particularly in the case of *Schmerz*, which occurs primarily in poetry. In prose texts, about two-thirds of all tokens, both singular and plural, end in *-(e)n* (218/334, or 65%); in verse texts, by contrast, less than half of all tokens (400/879, or 46%) have this marker, and the ending *-ø* is in the majority, accounting for just over half of all tokens (444/879, or 51%). Among tokens in forms other than the nominative singular, too, the proportion of tokens ending in *-(e)n* is larger in prose (206/278, or 75%) than in verse texts (396/708, or 56%), while that of tokens ending in *-ø* is considerably larger in verse (286/708, or 40%) than in prose (only 40/278, or 14%). *Schmerz* is frequently paired in rhyming couplets with the neuter noun *Herz* 'heart', which in MHG ended in *-(e)n* in the dative and genitive singular but in later periods most often has *-(e)* in the dative and *-e(n)s* in the genitive; as a neuter noun, it has always had the same form in the accusative as in the nominative (*Herz*, without ending).

Table 6.13. Group 2: Association of non-weak inflection with unprecedentedness in the oblique singular forms (Periods 1–6)

	Prose and verse	Prose only
<i>Herzog</i>	$\chi^2(1) = 82.88$	$\chi^2(1) = 86.73$
	$p < .001$	$p < .001$
	PR = 5.63	PR = 10.41
	95% CI [3.29, 9.65]	95% CI [4.52, 24.00]
<i>Schmerz</i>	$\chi^2(1) = 32.64$	—
	$p < .001$	$p = .24$ (Fisher's exact)
	PR = 2.42	PR = 4.63
	95% CI [1.86, 3.14]	95% CI [2.50, 8.54]

Table 6.14. *Herzog*: Association of non-weak inflection with title function in the oblique singular forms (Periods 1–6)

	Prose and verse	Prose only
Title (all)	$\chi^2(1) = 52.92$	$\chi^2(1) = 60.50$
	$p < .001$	$p < .001$
	PR = 4.41	PR = 11.47
	95% CI [2.50, 7.76]	95% CI [3.84, 34.22]
Title ("y" only; no "y")	$\chi^2(1) = 80.14$	$\chi^2(1) = 86.73$
	$p < .001$	$p < .001$
	PR = 5.24	PR = 10.41
	95% CI [3.15, 8.74]	95% CI [4.52, 23.99]

None of these factors, however, can account for the 16 uninflected simplex forms of *Hahn* and *Schelm* in the first six periods, most of which are in prose texts. Neither noun is unprecedented very often — 89% of all tokens of *Hahn* (95/107), including all but one of the 37 oblique singular tokens, are preceded by at least one element, as are 78% of all tokens of *Schelm* (28/31 oblique singular) — and neither is ever used as a title. In these cases, and also in the case of *Leichnam*, the frequent omission of *-(e)n* may have a phonetic explanation. All three of these nouns end in nasal consonants, while the other nouns in this group (*Herzog*, *Schmerz*) do not. In the modern language, in fast speech, word-final *-en* is commonly assimilated to a preceding stem-final nasal, and the two sounds merge, becoming a lengthened (in some cases, syllabic) version of the stem-final sonorant ([m], [n], or [ŋ]). Assuming that this phenomenon was also widespread in earlier periods, which seems likely (see also 1.1.1), the inflectional ending *-(e)n* in the oblique singular and plural forms of these three nouns would have been virtually inaudible in many cases. It is thus not surprising that it did not always find its way into the orthography.

The 16 nominative singular forms of *Schmerz* ending in *-(e)n* extend across almost all periods from the late 14<sup>th</sup> to the early 18<sup>th</sup> century. Like the nouns in Group 3a, which now end

in *-(e)n* in the nominative singular (see chapter 7), *Schmerz* is inanimate and occurs more frequently in the oblique cases — particularly in the accusative — than in the nominative; only 23% of all tokens, and 32% of all singular tokens, are in the nominative (versus 43%–58% overall and 48%–58% in the singular for *Hahn*, *Herzog*, and *Schelm*, and 53% overall and 60% in the singular, on average, in Group 1). Thus, the occasional presence of the innovative marker *-(e)n* in the nominative singular of *Schmerz* — a form which, if the frequency counts here are any indication, was overshadowed by oblique forms in the mind of the average speaker for most of the period under consideration — is to be expected. The four tokens in verse texts, all of which are in Period 6 (the early 17<sup>th</sup> century), may also have *-(e)n* for reasons having to do with rhyme and meter: two of these rhyme with dative singular forms of *Herz* (*im Herten / von meinem Herten*); all four are in poems that adhere to a strict metrical structure. All but three of the 12 prose tokens of *Schmerz* ending in *-(e)n* occur in texts in which the two nominative singular forms (*Schmerz* and *Schmerzen*) are used interchangeably; one text from Period 8 (Glorenz' *Eröffnetes Wunderbuch*) has exactly six of each. The remaining three tokens are all in different texts — Wickram's *Goldfaden* (Period 5), Buchholtz' *Herkules* (Period 6), and Bodmer's *Kritische Abhandlung von dem Wunderbaren in der Poesie* (Period 8) — and since there are no other nominative singular tokens of *Schmerz* in these texts, we have no way of knowing whether the form in *-(e)n* is the default for these writers or whether it was just a slip of the pen, so to speak.

As in Group 1, almost all genitive singular tokens ending in *-(e)(n)s* are preceded by determiners that also end in *-s* (overall, only 9/61 tokens, or 15%, are not, and this proportion is even smaller — 3/24 tokens, or 13% — in the first six periods), suggesting that in at least some instances, the writer may have added *-s* to the noun under the influence of the determiner. In the case of *Schmerz*, the marker *-(e)ns* may signal an incipient shift into Group 3.

### 6.3.2 *-e, -ø*

Nouns in Group 2 are apocopated in the singular in almost all instances (see table 6.15 for the whole corpus, and 6.16 for the distribution by period). The incidence of apocope appears at first glance to be lowest in the case of *Leichnam*. However, most unapocopated tokens of *Leichnam* are in Merswin (28/30); when we remove Merswin, the rate of apocope increases to 99% (139/141). The proportions are also misleading in the case of *Schelm*, which in the singular ends in *-e* only in the dative, and so in fact has an apocope rate of 100%.

The rate of apocope in this group remains elevated in all periods (table 6.16). Beginning in Period 7, the marker *-e* occurs only in the dative singular, where it is a strong case marker. Four out of six tokens ending in *-e* in Period 6 also have this function, including all three tokens of *Schelm*.

As in Group 1, the apocope (or lack thereof) in the singular is in many cases likely a symptom of regional variation; many, but not all, of the singular tokens ending in *-e* from the earlier periods — at least, those that are not in the dative — are in texts from further north. However, the apocope cuts across regional boundaries in this group, particularly in the case of *Leichnam*. Even Johannes Rothe (Period 2), who — as we saw in the previous chapter — apocopates in Group 1 in only two of 25 instances (both tokens of *Herr* used as titles), apocopates all but one singular token of *Leichnam* (11 *licham* versus only one *lichamme*); the other Group 2 nouns in the *Ritterspiegel* are consistently unapocopated (Rothe also has nine

tokens of *Herzog* and one of *Schmerz*). For this early 15<sup>th</sup>-century writer, at least, *Leichnam* seems to have already become a strong noun; he has no forms of *Leichnam* ending in *-(e)n*, and the *-e* on the sole unapocopated token should probably be categorized as a strong dative singular case ending.<sup>106</sup>

Table 6.15. Group 2: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	81	296	169	50	555		
<i>-e</i> (%)	1	5	18	6	5	7	6
<i>-ø</i> (%)	99	95	82	94	95	93	6

Table 6.16. Group 2. Distribution of *-e* and *-ø* in the singular, by period (all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1 (1350–1400)	<i>n</i> = 1 <i>-e</i> (%) 0 <i>-ø</i> (%) 100	13 8 92	51 55 45	0 — —	12 17 83
Period 2 (1400–1450)	<i>n</i> = 0 <i>-e</i> (%) — <i>-ø</i> (%) —	81 14 86	27 4 96	0 — —	15 20 80
Period 3 (1450–1500)	<i>n</i> = 1 <i>-e</i> (%) 0 <i>-ø</i> (%) 100	26 8 92	56 2 98	1 0 100	20 20 80
Period 4 (1500–1550)	<i>n</i> = 8 <i>-ø</i> (%) 100	26 100	2 100	1 100	23 100
Period 5 (1550–1600)	<i>n</i> = 4 <i>-ø</i> (%) 100	101 100	2 100	8 100	15 100
Period 6 (1600–1650)	<i>n</i> = 4 <i>-e</i> (%) 25 <i>-ø</i> (%) 75	7 0 100	8 0 100	10 30 70	34 6 94
Period 7 (1650–1700)	<i>n</i> = 3 <i>-e</i> (%) 0 <i>-ø</i> (%) 100	8 0 100	2 0 100	12 0 100	49 6 94
Period 8 (1700–1750)	<i>n</i> = 18 <i>-e</i> (%) 0 <i>-ø</i> (%) 100	2 0 100	2 0 100	1 0 100	80 6 94
Period 9 (1750–1800)	<i>n</i> = 18 <i>-e</i> (%) 0 <i>-ø</i> (%) 100	4 0 100	9 0 100	2 0 100	85 1 99
Period 10 (1800–1850)	<i>n</i> = 15 <i>-ø</i> (%) 100	21 100	4 100	13 100	115 100
Period 11 (1850–1900)	<i>n</i> = 9 <i>-e</i> (%) 0 <i>-ø</i> (%) 100	7 0 100	6 0 100	2 0 100	106 6 94

In the case of *Herzog*, use as a title may have contributed to the loss of *-e* in the earlier periods, before the shift was complete. 39% of all tokens of *Herzog* are titles (see 6.3.1.2), versus only 32% for *Graf* and 30% for *Herr*. In the first six periods, at least when verse tokens are

<sup>106</sup> The one token of *Leichnam* that does end in *-e* happens to be in the dative, but Rothe also has another dative singular token of *Leichnam* that ends in *-ø*, so it is not clear whether the *-e* should be interpreted as a case marker or as part of the noun stem.

included, title tokens of *Herzog* are significantly (1.15 times, 95% CI [1.06, 1.25]) more likely to be apocopated than non-title tokens ( $\chi^2(1) = 19.46, p = .001$ ). There is no association in the prose texts alone, where all but four singular tokens of *Herzog* are apocopated.

Direct address may have had some influence in the case of *Schelm*, which has the largest proportion of vocative tokens in Group 2 (11%, versus no more than 3% for any other noun). All six tokens of *Schelm* used in direct address are apocopated, including five in the first six periods. However, this is true of all singular tokens of *Schelm* ending in *-e/ø*, not just those with vocative function (as we saw above, the only singular tokens ending in *-e* are in the dative, where the *-e* clearly has the function of case marker), so the role of the factor “vocative” is unclear.

In the plural (table 6.17), *Herzog* and *Leichnam*, the two polysyllabic nouns and (former) compounds in this group, occur more frequently with *-ø* than with *-e*, while the other nouns only have *-e*. No doubt the syllable structure of these words has played some part here: the plural in *-e* adds an extra syllable to the word, whereas that in *-ø* does not. The marker *-e* (but not *-ø*) is sometimes combined with umlaut (one instance of *Herzog* and four of *Hahn*; see table 6.11).

Plural forms of *Leichnam* and *Herzog* ending in *-e* occur, as expected, mainly in the later periods.<sup>107</sup> Most tokens of *Leichnam* with *-e* (4/7) are in Periods 10 (Kleist) and 11 (Nietzsche); the remaining three tokens are in Middle German texts in Periods 1 (*Väterbuch*; one token) and 2 (Rothe; two tokens). The three plural forms of *Herzog* are found in Periods 6 (Fleming), 8 (Gottsched), and 10 (Tieck), respectively.

Table 6.17. Group 2: Distribution of *-e* and *-ø* in the plural (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>		
<i>n</i> =	4	9	20	5	1	Mean	SD
<i>-(<sup>˘</sup>)e</i> (%)	100	43	35	100	100	76	30
<i>-ø</i> (%)	0	57	65	0	0	24	30

## 6.4 Discussion

As we have seen, the marker *-(e)n* is extremely rare in the singular in Group 2. If, as Bybee and Paul argue (see 1.2.1), innovation occurs when speakers cannot access a word form because it is not sufficiently frequent, and repeated instances of innovation in the same form lead ultimately to replacement (and loss of the original form), it is not surprising that the singular forms of these nouns that originally ended in *-(e)n* have all been replaced by strong forms. In the plural, too, the loss of weak endings seems to have been the result of infrequent use, at least for *Hahn*, *Herzog*, and *Leichnam*, none of which occurs in the plural more than 10% of the time. *Schmerz*, which has retained its weak plural form, has the largest proportion of non-singular tokens in this group (including plural tokens and tokens with question marks in the number category, many of which may be plural), and also the largest proportion of *-(e)n* overall. While *Schelm* appears on the surface to be more frequent than *Schmerz* in the plural and almost as frequent in the combined non-singular number categories, almost half of all plural tokens of *Schelm* occur in Period 7, and many are in a single text (Grimmelshausen); when we remove

<sup>107</sup> For the diachronic distribution of tokens ending in *-e* in the rest of the group, see table 6.11.

Grimmelshausen from the data, the proportion of plural decreases to  $22/87 = 25\%$ , versus 29% for *Schmerz*.

The only form that *does* occur frequently in the singular on all five nouns in Group 2 — that ending in  $-\emptyset$ , which is found mainly in the nominative singular, but also in the oblique singular forms — has, as expected, become the base of the new strong singular paradigm. The frequent presence of  $-e/\emptyset$  outside the nominative singular in this group likely owes itself to several factors, including the absence of preceding elements in the noun phrase (*Herzog*, *Leichnam*, *Schmerz*), use as title (*Herzog*), the syllable structure and stress pattern of the token (*Herzog*, *Leichnam*, other nouns used as compound heads), constraints of rhyme and meter in verse texts (*Schmerz*), and in some cases, a nasal-final stem (*Leichnam*, *Schelm*, *Hahn*).

The nominative singular form, which has been retained and extended in this case, is not especially informative (1.2.3.1). MHG had several noun classes in which the nominative singular ended in either  $-e$  or  $-\emptyset$ , and the opposition  $-e : -\emptyset$  was frequently neutralized via apocope of final  $-e$  (see chapter 1), so that a speaker of MHG or ENHG would not reliably have been able to use this form to predict the remaining forms in the paradigm.

It is also not the case that either the nominative or the singular has a wider range of uses in this group than in any of the other groups of nouns (1.2.3.2), except perhaps in the sense that (as suggested in chapter 1), in the case of the animate nouns, the nominative has vocative function in addition to marking the subject and predicate nominative. This does not explain the shifts of the inanimate nouns *Leichnam* and *Schmerz*, however.

NM (1.2.2) correctly predicts the shifts of *Leichnam* and *Schmerz* out of the weak masculine class: as inanimate nouns, they had to leave the class to ensure its stability once the class had become linked with animacy. If we accept that final  $-e$  continued to be a class-defining property of the weak masculines in ENHG/NHG in combination with animacy, as D. Bittner argues (1991: 97), then NM also predicts the shifts of the animate nouns in this group (*Hahn*, *Herzog*, *Schelm*) and the somewhat unstable behavior of the nouns in Group 1b (e.g., *Mensch*, *Bär*), many of which are slowly becoming strong. However, it does not explain why the shift has attained completion in Group 2, but not in Group 1b, where the weak pattern is still largely intact: why should some animate nouns without  $-e$  have shifted so much earlier than others? In particular, it does not explain the preservation of the weak plural forms in the case of *Schmerz*: a mixed paradigm is unnatural/marked and should not be able to sustain itself, but *Schmerz* has shown no signs of adopting strong endings in the plural.<sup>108</sup>

Both of these phenomena are easily explained with reference to token frequency. The nouns in Group 1b have remained largely weak because they have been used regularly in both the nominative (with  $-e/\emptyset$ ) and oblique (with  $-(e)n$ ) singular forms throughout their development, while the weak form in  $-(e)n$  is virtually absent in the singular in Group 2 in all periods. The weak plural of *Schmerz* is frequent enough to have left a lasting impression in speakers' minds (its frequency is about the same as that of the regular weak nouns in Group 1a); by contrast, most nouns in Group 2 that have become strong in the plural are almost never used in the plural.

In the case of the inanimate nouns *Schmerz* and (especially) *Leichnam*, the high frequency of  $-e/\emptyset$  in the oblique singular forms seems to have made up for the comparatively low frequency of the nominative singular, enabling the preservation of the form in  $-\emptyset$  and inhibiting

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<sup>108</sup> Wurzel's (2000: 84) explanation — that the status of the genitive singular marker  $-s$  as a so-called “überstabiler Marker” has enabled it to spread into paradigms (like that of *Schmerz*) other than that in which it was originally found — presupposes that inflectional markers exist and develop independently of the words to which they are attached, which, as noted above (1.2.1; see also Hill 2020), is probably not the case.

the shift into Group 3, which has affected most other inanimate nouns in the language. *Leichnam* was especially prone to loss of endings in the oblique singular forms because of its syllable structure and stress pattern (it was once a compound), but also because of the nasal consonant at the end of the word, which would have merged with the ending *-(e)n* in many instances. As we will see in the next chapter, only two nouns in Group 3 (*Name/n* and *Brunnen*) have stem-final nasals, and neither is used very frequently in compounds; *Brunnen*, which does have the function of compound head with some regularity (in 14% of all instances), is also very often preceded by determiners ending in *-n* (*den, einen*), whose influence may have helped keep the *-(e)n* intact, even if the ending was not always audible.

*Schmerz*, the other inanimate noun in this group, does at times stray onto the path of the Group 3 nouns; it occurs both with *-(e)n* in the nominative singular and with *-(e)ns* in the genitive singular, though both forms are quite rare. This is expected, if we accept that low token frequency drives innovation, since the nominative singular of *Schmerz* is less frequent than that of most other nouns in this group, and the genitive singular is not very frequent at all. However, at the same time, it has *-e/ø* much more frequently than any of the nouns in Group 3, both in the nominative singular and in the oblique singular forms. Apparently, this has been enough to keep it from moving past the initial stages of the Group 3 shift.

In the case of *Schmerz*, the need to distinguish the singular and plural may also have helped to keep the singular forms in Group 2 territory. *Schmerz*, unlike most other nouns in Groups 2 and 3, is used regularly in both numbers. The weak plural form of *Schelm* may have been lost for similar reasons: the strong plural *Schelme*, with a syllabic *-e*, would have been easier to distinguish from a singular *Schelm* than the weak *Schelmen*, which in many cases would have sounded almost the same as *Schelm* on account of the stem-final nasal.

As in Group 1, there does seem to be a connection between apocope in the singular and non-weak inflection; again, though, since so many tokens are apocopated, it is impossible to tell whether the apocope in the nominative singular was the cause of the shift, as Bojunga suggests, or occurred as a consequence of it. In other words, did speakers notice (subconsciously) that the nominative singular no longer ended in *-e*, and then begin to produce strong oblique singular forms because they associated the presence of the ending *-ø* in the nominative singular with strong inflection? Or had they been producing strong oblique singular forms all along, and at some point they adjusted the nominative singular to match the rest of the paradigm? The latter sequence of events seems especially likely in the case of inanimate nouns like *Leichnam*, which are very infrequent in the nominative singular; it is easy to imagine a speaker using the strong form dat./acc. *den/dem leichnam* without ever having heard the nominative singular, and without knowing whether it ends in *-e* or not. In any case, the answer to this question likely varies from speaker to speaker, and to find it we would need considerably more data, preferably from parts of the German-speaking region in which apocope is not the norm.

We have just seen what happens to the weak masculine paradigm when the token frequency of *-e/ø* is extremely high, for whatever reason, and that of *-(e)n* extremely low. In the next chapter, we will explore the opposite extreme: high frequency of *-(e)n*, to the near exclusion of *-e/ø*.

## 7 Group 3

Group 3 comprises three subgroups:

In Group 3a are five nouns that have completed the Group 3 shift and now end in *-(e)n* in the nominative singular and *-(e)ns* in the genitive singular (*Bogen, Brunnen, Garten, Kasten, Schatten*); some (*Bogen, Garten, Kasten*) have also acquired umlaut in the plural (in the case of *Bogen* and *Kasten*, both unumlauted and unumlauted plural forms are possible in the modern language; the form without umlaut is preferred for *Bogen* in most cases, while that with umlaut is preferred for *Kasten*; see 3.2.3). All except *Kasten* are represented in the corpus with at least 300 tokens; *Garten*, with 662 tokens, is the most frequent in this subgroup.

The six nouns in Group 3b (*Buchstabe, Friede/n, Funke/n, Name/n, Schade/n, Wille/n*) have shifted in part, but most continue to exhibit variable inflection in the nominative and genitive singular forms (see 1.3.5.2). Many of these have very high token frequencies; *Buchstabe* and *Funke/n*, with only 100–200 tokens each, are exceptions here.

Finally, Group 3c contains three nouns (*Drache/n, Fels/en, Tropf/en*) that have split into doublets, one of which has followed the Group 3 path (*Drachen, Felsen, Tropfen*) and the other of which has either remained weak (*Drache*) or shifted into Group 2 (*Fels, Tropf*). *Fels/en* and *Tropf/en* are moderately frequent, with about 500 tokens each; *Drache/n* is less well represented. The only one of these nouns for which a semantic distinction is discernible in my corpus is *Tropf/en*; the use of *Drachen* denoting a kite is not represented in the corpus at all, and *Fels* and *Felsen* are used interchangeably, as far as I can tell (see 3.2.3). The three nouns in Group 3c will be addressed separately at the end of the chapter.

In Group 3 (including 3a, 3b, and the Group 3 doublets in 3c), the weak oblique singular form in *-(e)n* has been preserved (except in the very infrequent genitive singular) and has in some cases spread into the nominative singular, replacing the original nominative singular form ending in *-e* and becoming the base of a new strong paradigm. This is the opposite of what we saw in Group 2, where the weak oblique forms in *-(e)n* had almost all been replaced by innovative forms built on a base ending in *-ø*. Assuming that high token frequency renders forms more resistant to analogical change, while low token frequency leads to loss and replacement, we expect oblique forms ending in *-(e)n* to be very frequent overall in this group (particularly in the dative and accusative, where the original forms have been preserved), and forms ending in *-e/ø* to be very infrequent.

This is, by and large, what we find in the data (see figures 7.1–7.3). Most of these nouns are more frequent in the dative and/or accusative than in the nominative in both numbers, and most have considerably more *-(e)n* than *-e/ø*, including in the nominative singular. Even when no individual oblique case outweighs the nominative, usually the combined oblique cases do, which cannot be said of any of the regular nouns in Group 1. *Funke/n* is an exception in this regard.

### 7.1 Groups 3a and 3b

#### 7.1.1 Number

Here, as in the other groups that we have looked at so far, the singular is the dominant number. Most nouns in Groups 3a and 3b have at least 70%–80% singular; *Friede/n* and *Wille/n*

almost never occur in the plural (see tables 7.1 [3a] and 7.3 [3b] for the whole data set, and 7.2 [3a] and 7.4 [3b] for the diachronic breakdown).

Only two nouns in these subgroups, *Buchstabe* and *Funke/n*, have more plural than singular tokens. The abundance of plural tokens is expected in these cases, since both words refer to entities that normally occur in groups. In the case of *Funke/n*, the number distribution varies depending on whether the noun is used literally or figuratively: when it denotes a spark in the literal sense of ‘small piece of burning matter’, it occurs more frequently in the plural than in

### Group 3a

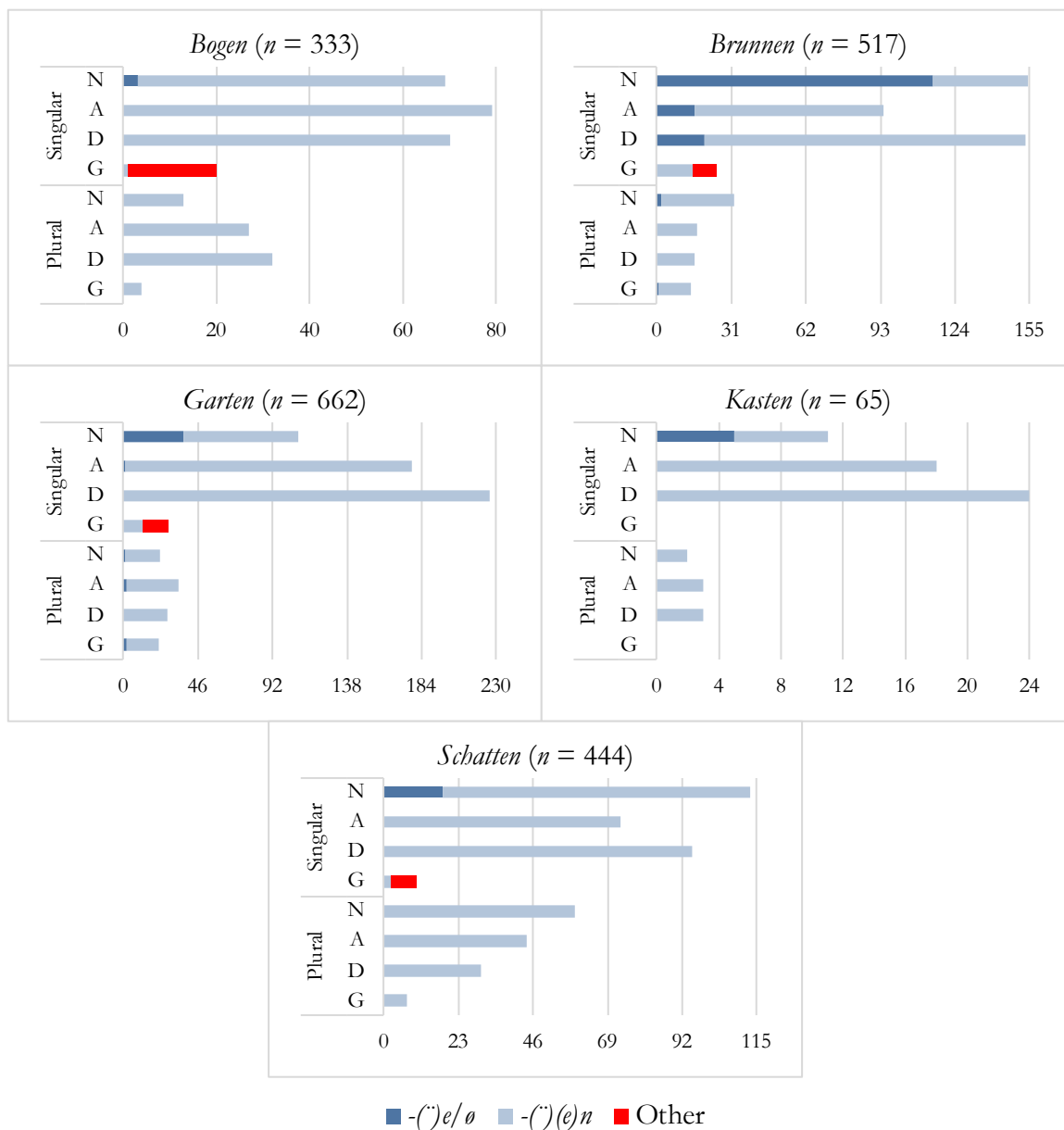


Figure 7.1. Group 3a: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values (-e/ø, -(e)n, other markers) in each form. The values for -e/ø and -(e)n include tokens with umlaut; for the distribution of plural tokens with and without umlaut, see tables 4.24, 4.25, and 7.22.



the singular (78% of the 56 tokens with literal meaning are plural), but when it is used figuratively, the opposite is true (54% of the 57 figurative tokens are singular). Thus, in the prose texts (tables 7.3a and 7.4a in appendix C), where — paradoxically — the majority of tokens are figurative, the singular is the more frequent number (59% singular versus 38% plural). In the case of *Buchstabe*, the plural remains the dominant number even when verse texts are excluded.

### Group 3b

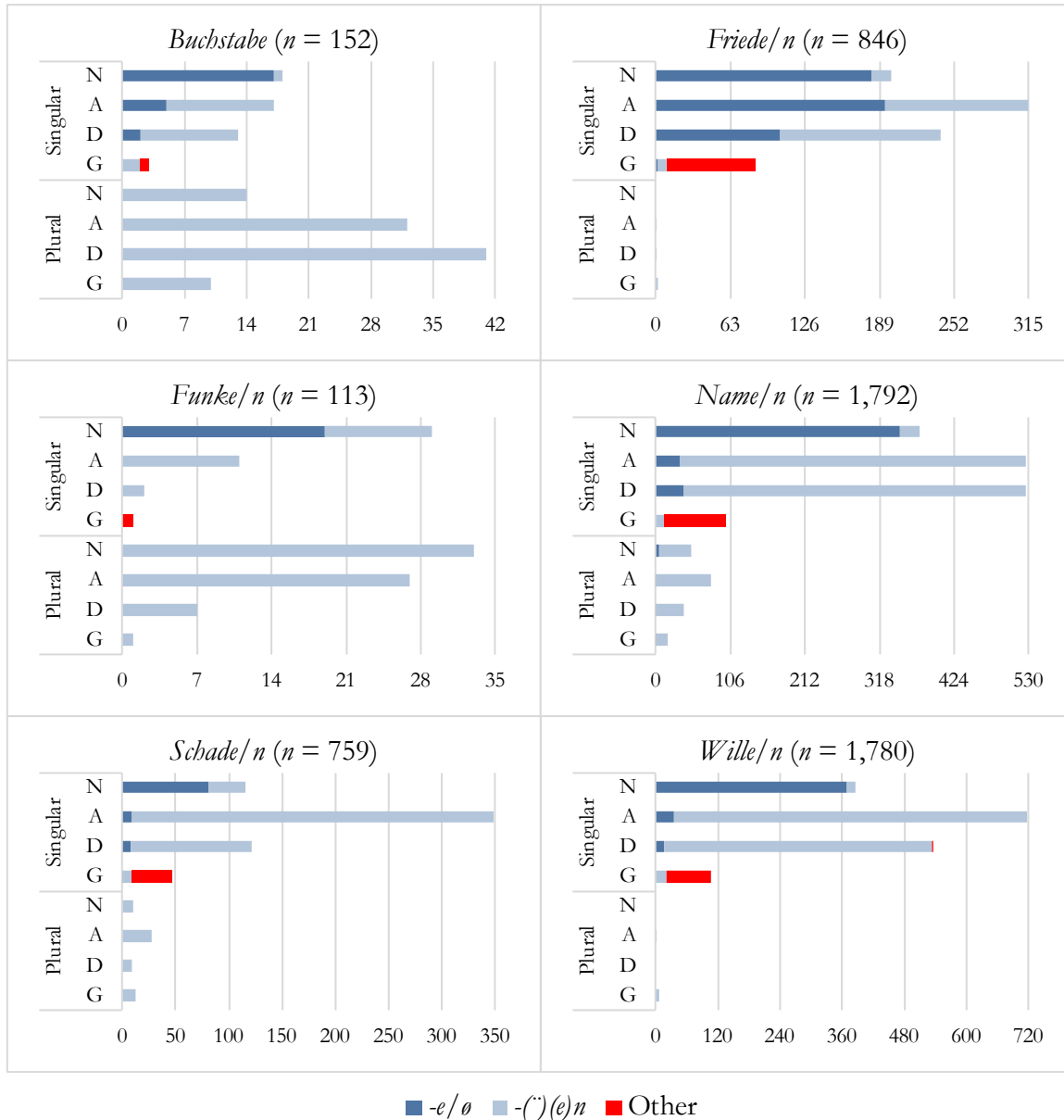


Figure 7.2. Group 3b: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(\cdot)(e)n$ , other markers) in each form. The values for  $-(e)n$  include tokens with umlaut; for the distribution of plural tokens with and without umlaut, see tables 4.24, 4.25, and 7.23.

*Schatten* has somewhat less singular than the other singular-dominant nouns in Groups 3a and 3b, but only when verse tokens are included in the data; in the prose texts (tables 7.1a and

7.2a in appendix C), it is more closely aligned with the rest of the group (78% singular versus 22% plural).

### Group 3c

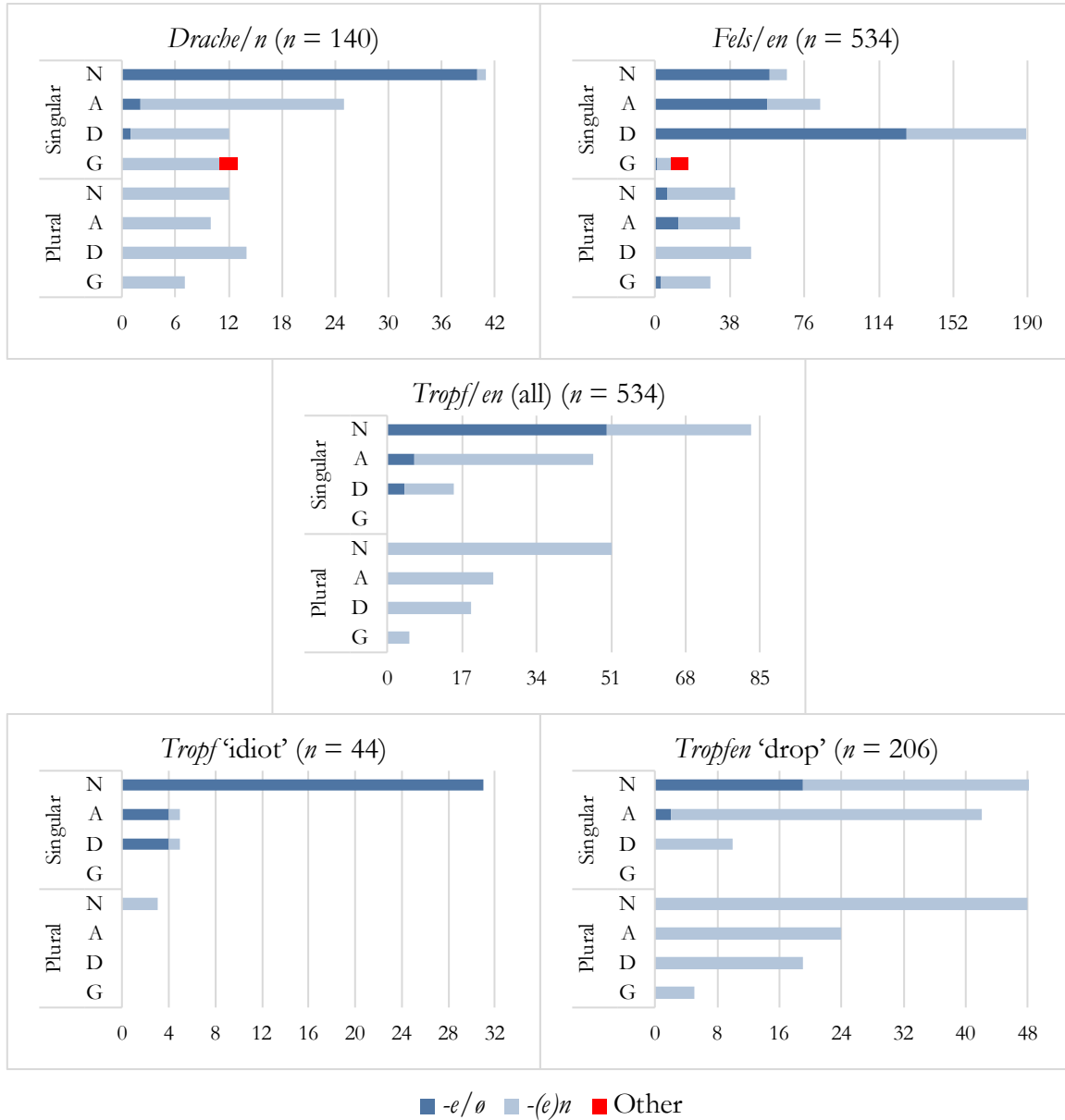


Figure 7.3. Group 3c: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form.

Table 7.1. Group 3a: Number distribution (all periods; all four cases)

<i>n</i> =	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>	Mean	SD
Sg. (%)	72	83	82	83	66	77	7
Pl. (%)	26	17	16	14	32	21	7
? (%)	2	1	2	3	2	2	1

Table 7.2. Group 3a: Number distribution, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	12	57	59	0	3
(1350–1400)	Singular (%)	83	79	90	—	100
	Plural (%)	8	21	8	—	0
	? (%)	8	0	2	—	0
Period 2	<i>n</i> =	20	33	54	2	7
(1400–1450)	Singular (%)	60	94	65	100	100
	Plural (%)	35	6	31	0	0
	? (%)	5	0	4	0	0
Period 3	<i>n</i> =	19	101	46	1	15
(1450–1500)	Singular (%)	63	88	85	100	73
	Plural (%)	37	12	13	0	13
	? (%)	0	0	2	0	13
Period 4	<i>n</i> =	7	37	28	14	9
(1500–1550)	Singular (%)	57	78	89	93	100
	Plural (%)	43	16	4	7	0
	? (%)	0	5	7	0	0
Period 5	<i>n</i> =	9	30	84	11	11
(1550–1600)	Singular (%)	<b>33</b>	90	86	64	100
	Plural (%)	<b>67</b>	10	13	27	0
	? (%)	0	0	1	9	0
Period 6	<i>n</i> =	129	64	79	6	55
(1600–1650)	Singular (%)	76	78	70	67	76
	Plural (%)	22	20	27	17	15
	? (%)	2	2	4	17	9
Period 7	<i>n</i> =	22	62	79	12	44
(1650–1700)	Singular (%)	77	87	86	83	86
	Plural (%)	23	13	14	17	11
	? (%)	0	0	0	0	2
Period 8	<i>n</i> =	20	46	43	3	82
(1700–1750)	Singular (%)	75	70	60	100	52
	Plural (%)	25	30	40	0	46
	? (%)	0	0	0	0	1
Period 9	<i>n</i> =	31	16	46	5	73
(1750–1800)	Singular (%)	74	88	91	100	60
	Plural (%)	23	6	9	0	38
	? (%)	3	6	0	0	1
Period 10	<i>n</i> =	38	28	87	5	64
(1800–1850)	Singular (%)	71	75	89	100	67
	Plural (%)	26	25	11	0	33
	? (%)	3	0	0	0	0
Period 11	<i>n</i> =	26	43	57	6	81
(1850–1900)	Singular (%)	69	79	93	67	52
	Plural (%)	23	21	7	33	47
	? (%)	8	0	0	0	1

Note: Bold formatting is used wherever the percentage of plural tokens is greater than or equal to that of singular tokens.

The proportion of tokens with question marks in the number category is small in both subgroups; it is greatest in the case of *Schade/n*, which, as noted above, is frequently unprecedented.

In Group 3a, the singular remains dominant in all periods (table 7.2), accounting in most cases for more than 70% (often more than 80%) of all tokens. Even *Schatten* is singular at least 70% of the time in all periods through Period 7; the plural does not become especially frequent

Table 7.3. Group 3b: Number distribution (all periods; all four cases)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	152	846	113	1,792	761	1,780		
Sg. (%)	33	99.5	38	85	69	98.8	78	23
Pl. (%)	65	0.5	61	11	9	0.4	16	23
? (%)	1	0	1	3	22	0.8	5	8

Table 7.4. Group 3b: Number distribution, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	9	62	2	160	68	350
(1350–1400)	Singular (%)	<b>33</b>	100	<b>50</b>	70	88	99
	Plural (%)	<b>67</b>	0	<b>50</b>	23	4	0
	? (%)	0	0	0	7	7	1
Period 2	<i>n</i> =	5	138	1	117	195	232
(1400–1450)	Singular (%)	<b>40</b>	100	100	80	78	100
	Plural (%)	<b>60</b>	0	0	12	15	0
	? (%)	0	0	0	8	7	0
Period 3	<i>n</i> =	14	86	6	240	117	264
(1450–1500)	Singular (%)	<b>36</b>	100	<b>0</b>	90	95	98
	Plural (%)	<b>64</b>	0	<b>100</b>	8	1	0
	? (%)	0	0	0	2	4	2
Period 4	<i>n</i> =	14	71	3	201	127	189
(1500–1550)	Singular (%)	64	100	<b>0</b>	89	87	99
	Plural (%)	36	0	<b>100</b>	6	10	0
	? (%)	0	0	0	5	3	1
Period 5	<i>n</i> =	4	93	1	304	123	168
(1550–1600)	Singular (%)	75	98	<b>0</b>	89	84	97
	Plural (%)	25	2	<b>100</b>	7	11	2
	? (%)	0	0	0	4	5	1
Period 6	<i>n</i> =	25	117	3	171	34	135
(1600–1650)	Singular (%)	<b>20</b>	100	<b>0</b>	88	85	99
	Plural (%)	<b>80</b>	0	<b>100</b>	7	6	1
	? (%)	0	0	0	5	9	0
Period 7	<i>n</i> =	22	59	12	158	32	112
(1650–1700)	Singular (%)	<b>27</b>	100	<b>42</b>	94	97	98
	Plural (%)	<b>68</b>	0	<b>58</b>	5	3	1
	? (%)	5	0	0	1	0	0
Period 8	<i>n</i> =	11	35	6	123	39	75
(1700–1750)	Singular (%)	55	100	<b>33</b>	76	92	99
	Plural (%)	45	0	<b>67</b>	23	5	1
	? (%)	0	0	0	1	3	0
Period 9	<i>n</i> =	30	67	28	116	7	61
(1750–1800)	Singular (%)	<b>13</b>	100	<b>43</b>	85	100	100
	Plural (%)	<b>87</b>	0	<b>57</b>	15	0	0
Period 10	<i>n</i> =	11	43	30	96	8	76
(1800–1850)	Singular (%)	<b>27</b>	100	<b>40</b>	86	100	100
	Plural (%)	<b>73</b>	0	<b>60</b>	14	0	0
Period 11	<i>n</i> =	7	75	21	106	8	118
(1850–1900)	Singular (%)	71	99	<b>48</b>	79	75	100
	Plural (%)	29	1	<b>48</b>	19	25	0
	? (%)	0	0	5	2	0	0

Note: Bold formatting is used wherever the percentage of plural tokens is greater than or equal to that of singular tokens.

until the 18<sup>th</sup> century, and in the prose texts (table 7.2a in appendix C), its frequency diminishes again in the 19<sup>th</sup> century. Only in one instance — *Bogen* in Period 5, where there are only nine tokens — are there more plural than singular tokens.

In Group 3b, too, except in the cases of *Buchstabe* and *Funke/n*, the proportion of singular tokens is consistently above 70%, and in most cases much larger (table 7.4).

The low token frequency of the plural forms in this group suggests that — as in Group 2 — these forms were probably not very entrenched in speakers' minds and may have been difficult to access. Thus, some innovation is expected in the plural, and as we will see in 7.1.3, it comes in the form of umlaut.

### 7.1.2 Case

For most nouns in Groups 3a and 3b, the case distribution is exactly the reverse of that in Group 1. Here, the most frequent case (in both numbers) is usually not the nominative, but rather the dative or the accusative, and often, both of these cases are more frequent than the nominative (see tables 7.5–7.8 for Group 3a, and 7.9–7.12 for Group 3b). In the singular, these are the forms that have been preserved, while the less frequent nominative and genitive have both proven vulnerable to replacement. *Brunnen*, *Schatten*, and *Funke/n*, the three nouns in this group whose referents are most animate,<sup>109</sup> have somewhat more nominative than the others; the proportion of nominative is especially high in the case of *Funke/n*, where the nominative singular form ending in *-e* still exists in the modern language as an alternate form (see 1.3.5.2; the preservation of *-e* in the rest of Group 3b will be addressed in 7.1.3 below). As in other groups, the genitive is poorly represented in both numbers; the numbers for *Friede/n* and *Wille/n* in the plural are likely not representative, since the total number of tokens is so small in these cases.

In the case of *Buchstabe*, the dative and accusative dominate in the plural (tables 7.11–7.12), but not in the singular (tables 7.9–7.10). Even in the singular, though, the proportion of nominative tokens only slightly exceeds that of accusative tokens, and collectively, the oblique cases outweigh the nominative here by a substantial margin.

Almost all of these nouns occur more frequently in the nominative in verse than they do in prose, as expected; when we exclude the verse tokens (tables 7.5a–7.12a in appendix C), the proportion of nominative drops in both numbers for all nouns except *Bogen* and *Buchstabe*, for which it remains about the same. In the prose texts, *Brunnen* and *Schatten* look more like the rest of Group 3a: the nominative slides back into second place for both nouns, while either the dative (*Brunnen*) or the accusative (*Schatten*) moves into the top position. In the case of *Funke/n*, which — particularly in the singular — has considerably more nominative than accusative in the combined prose and verse texts (table 7.6), the proportion of accusative is about the same as that of nominative in the prose texts alone (in both numbers): in the singular, we find 14 nominative and 13 accusative tokens; in the plural, where *Funke/n* is most frequent (see 7.1.1), the accusative is in the majority (five nominative versus six accusative).

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<sup>109</sup> As noted in 3.2.3, fountains and springs (*Brunnen*), which dispense running water, and sparks (*Funken*) and shadows (*Schatten*), which can move of their own accord, are more animate than the other nouns in Group 3.

Table 7.5. Group 3a: Case distribution in the singular (all periods)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	239	427	545	54	293	Mean	SD
N (%)	29	36	20	20	39	29	8
A (%)	33	22	33	33	25	29	5
D (%)	29	36	41	44	32	37	6
G (%)	8	6	5	0	3	5	3
? (%)	0	0	1	2	1	1	1

Table 7.6. Group 3a: Case distribution in the singular, by period

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	10	45	53	0	3
(1350–1400)	Nom. (%)	10	47	28	—	<b>67</b>
	Obl. (%)	90	53	72	—	33
Period 2	<i>n</i> =	12	31	35	2	7
(1400–1450)	Nom. (%)	8	48	20	100	<b>57</b>
	Obl. (%)	92	52	80	0	43
Period 3	<i>n</i> =	12	89	39	1	11
(1450–1500)	Nom. (%)	17	20	36	0	<b>55</b>
	Obl. (%)	83	80	62	100	45
	? (%)	0	0	3	0	0
Period 4	<i>n</i> =	4	29	25	13	9
(1500–1550)	Nom. (%)	25	28	24	23	22
	Obl. (%)	75	72	76	77	78
Period 5	<i>n</i> =	3	27	72	7	11
(1550–1600)	Nom. (%)	0	37	8	14	45
	Obl. (%)	100	63	92	86	55
Period 6	<i>n</i> =	98	50	55	4	42
(1600–1650)	Nom. (%)	39	30	9	50	26
	Obl. (%)	61	70	91	50	74
Period 7	<i>n</i> =	17	54	68	10	38
(1650–1700)	Nom. (%)	24	52	19	20	39
	Obl. (%)	76	48	81	80	61
Period 8	<i>n</i> =	15	32	26	3	43
(1700–1750)	Nom. (%)	33	38	27	0	37
	Obl. (%)	67	63	69	100	63
	? (%)	0	0	4	0	0
Period 9	<i>n</i> =	23	14	42	5	44
(1750–1800)	Nom. (%)	30	36	19	0	36
	Obl. (%)	70	64	81	100	64
Period 10	<i>n</i> =	27	21	77	5	43
(1800–1850)	Nom. (%)	15	38	29	20	42
	Obl. (%)	85	62	71	80	58
Period 11	<i>n</i> =	18	34	53	4	42
(1850–1900)	Nom. (%)	33	38	9	0	43
	Obl. (%)	67	62	91	100	57

Note: Bold formatting is used wherever the proportion of nominative tokens is greater than or equal to that of oblique tokens.

Table 7.7. Group 3a: Case distribution in the plural (all periods)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	86	86	107	9	143	Mean	SD
N (%)	15	37	21	22	41	27	10
A (%)	31	20	32	33	31	30	5
D (%)	37	19	25	33	21	27	7
G (%)	5	16	21	0	5	9	8
? (%)	12	8	1	11	0	6	5

Table 7.8. Group 3a: Case distribution in the plural, by period

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	1	12	5	0	0
(1350–1400)	Nom. (%)	0	0	40	—	—
	Obl. (%)	100	75	60	—	—
	? (%)	0	25	0	—	—
Period 2	<i>n</i> =	7	2	17	0	0
(1400–1450)	Nom. (%)	0	0	18	—	—
	Obl. (%)	100	100	82	—	—
Period 3	<i>n</i> =	7	12	6	0	2
(1450–1500)	Nom. (%)	0	17	0	—	<b>100</b>
	Obl. (%)	100	75	100	—	<b>0</b>
	? (%)	0	8	0	—	0
Period 4	<i>n</i> =	3	6	1	1	0
(1500–1550)	Nom. (%)	0	33	0	0	—
	Obl. (%)	100	67	100	100	—
Period 5	<i>n</i> =	6	3	11	3	0
(1550–1600)	Nom. (%)	0	<b>33</b>	27	0	—
	Obl. (%)	100	<b>67</b>	73	100	—
Period 6	<i>n</i> =	29	13	21	1	8
(1600–1650)	Nom. (%)	24	38	24	0	<b>63</b>
	Obl. (%)	76	62	76	100	<b>38</b>
Period 7	<i>n</i> =	5	8	11	2	5
(1650–1700)	Nom. (%)	20	<b>75</b>	0	<b>50</b>	<b>60</b>
	Obl. (%)	80	<b>25</b>	91	<b>50</b>	<b>40</b>
	? (%)	0	0	9	0	0
Period 8	<i>n</i> =	5	14	17	0	38
(1700–1750)	Nom. (%)	0	21	18	—	39
	Obl. (%)	100	79	82	—	61
Period 9	<i>n</i> =	7	1	4	0	28
(1750–1800)	Nom. (%)	14	0	25	—	32
	Obl. (%)	86	100	75	—	68
Period 10	<i>n</i> =	10	7	10	0	21
(1800–1850)	Nom. (%)	30	<b>86</b>	40	—	29
	Obl. (%)	70	<b>14</b>	60	—	71
Period 11	<i>n</i> =	6	9	4	2	38
(1850–1900)	Nom. (%)	17	<b>89</b>	<b>50</b>	<b>50</b>	<b>50</b>
	Obl. (%)	83	<b>11</b>	<b>50</b>	<b>50</b>	<b>50</b>

Note: Bold formatting is used wherever the proportion of nominative tokens is greater than or equal to that of oblique tokens.

Table 7.9. Group 3b: Case distribution in the singular (all periods)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	51	842	43	1,530	655	1,759		
N (%)	35	24	67	25	18	22	32	17
A (%)	33	37	26	34	53	41	37	8
D (%)	25	29	5	34	18	30	24	10
G (%)	6	10	2	7	7	6	6	2
? (%)	0	1	0	0	4	1	1	1

Table 7.10. Group 3b: Case distribution in the singular, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	3	62	1	112	60	345
(1350–1400)	Nom. (%)	33	21	<b>100</b>	38	20	21
	Obl. (%)	67	79	<b>0</b>	63	80	79
Period 2	<i>n</i> =	2	138	1	94	153	231
(1400–1450)	Nom. (%)	<b>50</b>	16	0	41	17	20
	Obl. (%)	<b>50</b>	83	100	59	83	80
	?	0	1	0	0	0	0
Period 3	<i>n</i> =	5	86	0	216	111	259
(1450–1500)	Nom. (%)	20	36	—	16	24	13
	Obl. (%)	80	63	—	84	75	87
	?	0	1	—	0	1	0
Period 4	<i>n</i> =	9	71	0	178	111	188
(1500–1550)	Nom. (%)	11	14	—	17	9	16
	Obl. (%)	89	86	—	83	89	84
	?	0	0	—	0	2	0
Period 5	<i>n</i> =	3	91	0	272	103	163
(1550–1600)	Nom. (%)	33	14	—	14	17	23
	Obl. (%)	67	86	—	85	83	77
Period 6	<i>n</i> =	5	117	0	150	29	133
(1600–1650)	Nom. (%)	20	21	—	31	24	16
	Obl. (%)	80	79	—	69	76	84
Period 7	<i>n</i> =	6	59	5	148	31	110
(1650–1700)	Nom. (%)	<b>50</b>	22	<b>60</b>	30	23	23
	Obl. (%)	<b>50</b>	78	<b>40</b>	70	74	77
	?	0	0	0	0	3	0
Period 8	<i>n</i> =	6	35	2	94	36	74
(1700–1750)	Nom. (%)	33	23	<b>100</b>	17	8	31
	Obl. (%)	67	77	<b>0</b>	83	92	69
Period 9	<i>n</i> =	4	67	12	99	7	61
(1750–1800)	Nom. (%)	<b>75</b>	31	<b>75</b>	28	43	25
	Obl. (%)	<b>25</b>	69	<b>25</b>	72	57	75
Period 10	<i>n</i> =	3	43	12	83	8	76
(1800–1850)	Nom. (%)	<b>67</b>	35	<b>75</b>	24	25	33
	Obl. (%)	<b>33</b>	65	<b>25</b>	76	75	67
Period 11	<i>n</i> =	5	74	10	84	6	118
(1850–1900)	Nom. (%)	40	39	<b>50</b>	42	17	47
	Obl. (%)	60	61	<b>50</b>	58	83	51
	?	0	0	0	0	0	2

Note: Bold formatting is used wherever the proportion of nominative tokens is greater than or equal to that of oblique tokens.



Table 7.11. Group 3b: Case distribution in the plural (all periods)

<i>n</i> =	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
N (%)	14	0	48	25	15	0	17	16
A (%)	32	25	39	39	40	14	32	10
D (%)	41	25	10	20	13	0	18	9
G (%)	10	50	1	8	19	86	29	31
? (%)	3	0	1	8	12	0	4	5

Table 7.12. Group 3b: Case distribution in the plural, by period

	<i>n</i> =	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1 (1350–1400)	<i>n</i> =	6	0	1	37	3	0
	Nom. (%)	17	—	0	32	0	—
	Obl. (%)	83	—	100	59	100	—
	?	0	—	0	8	0	—
Period 2 (1400–1450)	<i>n</i> =	3	0	0	14	29	0
	Nom. (%)	0	—	—	7	31	—
	Obl. (%)	67	—	—	93	62	—
	?	33	—	—	0	7	—
Period 3 (1450–1500)	<i>n</i> =	9	0	6	20	1	0
	Nom. (%)	11	—	<b>50</b>	25	0	—
	Obl. (%)	89	—	<b>50</b>	60	100	—
	?	0	—	0	15	0	—
Period 4 (1500–1550)	<i>n</i> =	5	0	3	13	13	0
	Nom. (%)	20	—	<b>67</b>	23	0	—
	Obl. (%)	80	—	<b>33</b>	62	100	—
	?	0	—	0	15	0	—
Period 5 (1550–1600)	<i>n</i> =	1	2	1	21	14	4
	Nom. (%)	0	0	0	24	7	0
	Obl. (%)	100	100	100	76	93	100
Period 6 (1600–1650)	<i>n</i> =	20	0	3	12	2	2
	Nom. (%)	20	—	33	42	0	0
	Obl. (%)	75	—	67	58	100	100
	?	5	—	0	0	0	0
Period 7 (1650–1700)	<i>n</i> =	15	0	7	8	1	1
	Nom. (%)	0	—	29	13	0	<b>100</b>
	Obl. (%)	100	—	71	88	100	<b>0</b>
Period 8 (1700–1750)	<i>n</i> =	5	0	4	28	2	1
	Nom. (%)	20	—	<b>50</b>	25	0	0
	Obl. (%)	80	—	<b>50</b>	75	100	100
Period 9 (1750–1800)	<i>n</i> =	26	0	16	17	0	0
	Nom. (%)	19	—	<b>63</b>	6	—	—
	Obl. (%)	81	—	<b>31</b>	94	—	—
	?	0	—	6	0	—	—
Period 10 (1800–1850)	<i>n</i> =	8	0	18	13	0	0
	Nom. (%)	13	—	<b>50</b>	38	—	—
	Obl. (%)	88	—	<b>50</b>	62	—	—
Period 11 (1850–1900)	<i>n</i> =	2	1	10	20	2	0
	Nom. (%)	0	0	40	30	0	—
	Obl. (%)	100	100	60	70	100	—

Note: Bold formatting is used wherever the proportion of nominative tokens is greater than or equal to that of oblique tokens.

Case question marks are quite common in the plural in this group, but not in the singular. While these nouns are no more frequently unpreceded in the plural than the other nouns in this study, all of them except *Funke/n* are very frequently the objects of prepositions (table 4.37), many of which have variable case in ENHG.

The case distribution remains more or less stable across all periods, both in the singular (tables 7.6 [3a] and 7.10 [3b]) and in the plural (tables 7.8 [3a] and 7.12 [3b]); tokens in the oblique cases are consistently in the majority, while the nominative — which is no longer weak in the singular — is not very frequent at all. The nominative outweighs the oblique cases only for the more animate *Funke/n*, *Brunne/n*, and *Schatten/n*; for *Buchstabe* (in the singular only); and in cases where the sample size is very small (fewer than 10 tokens). Nominative singular forms of *Brunnen* are especially common in Periods 1 and 2 — where they occur mainly in travel reports (Mandeville, Schiltberger) in the context “In place X, there is a fountain/well/source called...”, but also in allegorical texts in which the fountain/well/source is a metaphor for something more abstract — and in Period 7, where most are in verse texts. In the cases of *Schatten* and *Funke/n*, whose referents are higher up on the animacy scale, the proportion of nominative singular tokens is consistently elevated.

In Period 11, *Wille/n* occurs with uncharacteristically high frequency in the nominative singular. Almost all of the 56 nominative singular forms of *Wille/n* in this period (39, or about 70%) are in Nietzsche’s *Also sprach Zarathustra*, where the *Wille* is somewhat more animate than usual; all but one of the remaining tokens are in verse texts.

### 7.1.3 Inflectional Marker

#### 7.1.3.1 *-e/ø*, *-(e)n*, Other

##### Group 3a: Singular

In Group 3a, the ending *-(e)n* has a clear majority in the singular, whether we look at the entire data set (table 7.13) or at the 11 time periods individually (table 7.15), and whether or not we include verse tokens (for the prose data, see tables 7.13a and 7.15a in appendix C). The very infrequent form ending in *-e/ø*, which — if we accept that low token frequency can weaken a form’s representation in our minds, making it more difficult to retrieve — was probably not readily accessible for most speakers prior to the shift, no longer exists anywhere in this subgroup; it has been supplanted by the much more frequent form in *-(e)n* in the only slot in the paradigm in which it did once occur (the nominative singular).

Table 7.13. Group 3a: Distribution of *-e/ø* and *-(e)n* in the singular (all periods; all four cases)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	239	427	545	54	293	Mean	SD
<i>-e/ø</i>	1	36	7	9	6	12	12
<i>-(e)n</i>	91	62	90	91	91	85	11
Other	8	2	3	0	3	3	3

The only noun in Group 3a that has *-e/ø* more than 10% of the time is *Brunnen*, which, as we have seen, occurs more frequently in the nominative singular than other nouns in this group.

*Brunnen* also loses its *-(e)n* in the oblique singular forms fairly regularly in the earlier periods; this phenomenon is rare in the rest of Group 3a and, in the case of *Brunnen*, can probably be attributed to the interaction of the stem-final nasal with the inflectional marker (compare *Leichnam*, *Schelm*, and *Hahn* in Group 2; see 6.3.1.2).

For all nouns except *Brunnen*, the proportion of nominative singular is considerably larger than that of *-e/ø*, which alerts us to the presence of other markers — specifically, *-(e)n* — in the nominative singular (table 7.12). In the case of *Brunnen*, though, the equivalent percentages are misleading. *Brunnen* does very often have the expected ending *-e/ø* in the nominative singular, especially in the earlier periods, but nominative singular forms of *Brunnen* ending in *-(e)n* are also common. About 25% of all nominative singular forms of *Brunnen* end in *-(e)n*, and at the same time, about 26% of all tokens with the markers *-e/ø* are in forms other than the nominative singular.

Table 7.14. Group 3a: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	333	517	662	65	444	Mean	SD
N. Sg. (%)	21	30	16	17	25	22	5
<i>-e/ø</i> (%)	1	30	7	8	4	10	10

Note: The values for *-e/ø* include tokens in all four cases.

In general, as expected, the proportion of *-e/ø* in the singular decreases over time, while that of *-(e)n* either increases (as the *-(e)n* spreads into the nominative singular) or remains constant (table 7.13).<sup>110</sup> *Bogen* and *Garten* both have *-(e)n* in the nominative singular already in Period 1; *Brunnen* and *Schatten* adopt it in Period 2; and *Kasten*, which is infrequent in the first three periods, has it for the first time in Period 4 (see table 4.17 in chapter 4).<sup>111</sup> However, *-(e)n* remains rare in the nominative singular of all nouns in this subgroup until the 17<sup>th</sup> century. In the earlier periods, the proportion of *-e/ø* is greatest for *Schatten* and *Brunnen*, whose referents are the most animate; even in these cases, though, it declines over time, and from Period 9 onward, the endings *-e/ø* occur only in verse texts. *Schatten* is completely shifted in the nominative singular by the early 16<sup>th</sup> century (Period 4) except in verse texts, while the *-e/ø* form of *Brunnen* holds out in prose until the early 18<sup>th</sup> century. *Bogen*, *Garten*, and *Kasten* have all completed the shift in the nominative singular in both prose and verse by the mid-17<sup>th</sup> century.

Parallel to the decline of *-e/ø*, we observe a gradual increase in the frequency of markers other than *-e/ø* and *-(e)n*, and particularly *-(e)ns* in the genitive singular (the strong marker *-(e)s*, without *-n-*, does not occur in Group 3a). These markers are entirely absent in the first period, but by the end of the 19<sup>th</sup> century, all nouns in this subgroup have them except *Kasten*, which is not attested in the genitive singular at all (see table 7.16, and compare table 4.23). The ending *-(e)ns* occurs first on *Bogen* in Period 2; the next noun to adopt it is *Schatten* in Period 4,

<sup>110</sup> The inflectional marker values presented in table 7.13 include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison; in this group, this value is generally larger than that for *-e/ø*, since the nominative singular frequently ends in *-(e)n* rather than the expected *-e/ø*. Bold formatting is used wherever (contrary to expectation) the proportion of *-e/ø* exceeds that of *-(e)n*.

<sup>111</sup> As noted in 1.1.2, nominative singular forms of *Bogen* (in the compound *swibogen*) and *Brunnen* ending in *-(e)n* are attested already in MHG (Klein et al. 2018: 89).

Table 7.15. Group 3a: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1 (1350–1400)	<i>n</i> =	10	45	53	0	3
	Nom. Sg. (%)	10	47	28	—	67
	<i>-e/ø</i> (%)	0	<b>56</b>	26	—	<b>67</b>
	<i>-(e)n</i> (%)	100	<b>44</b>	74	—	<b>33</b>
Period 2 (1400–1450)	<i>n</i> =	12	31	35	2	7
	Nom. Sg. (%)	8	48	20	100	57
	<i>-e/ø</i> (%)	8	<b>52</b>	14	<b>100</b>	43
	<i>-(e)n</i> (%)	83	<b>48</b>	86	<b>0</b>	57
	Other (%)	8	0	0	0	0
Period 3 (1450–1500)	<i>n</i> =	12	89	39	1	11
	Nom. Sg. (%)	17	20	36	0	55
	<i>-e/ø</i> (%)	0	26	26	0	45
	<i>-(e)n</i> (%)	92	74	74	100	55
	Other (%)	8	0	0	0	0
Period 4 (1500–1550)	<i>n</i> =	4	29	25	13	9
	Nom. Sg. (%)	25	28	24	23	22
	<i>-e/ø</i> (%)	25	31	20	15	0
	<i>-(e)n</i> (%)	75	69	80	85	78
	Other (%)	0	0	0	0	22
Period 5 (1550–1600)	<i>n</i> =	3	27	72	7	11
	Nom. Sg. (%)	0	37	8	14	45
	<i>-e/ø</i> (%)	0	22	4	0	9
	<i>-(e)n</i> (%)	100	78	96	100	91
Period 6 (1600–1650)	<i>n</i> =	98	50	55	4	42
	Nom. Sg. (%)	39	30	9	50	26
	<i>-e/ø</i> (%)	1	24	4	25	5
	<i>-(e)n</i> (%)	86	72	91	75	93
	Other (%)	13	4	5	0	2
Period 7 (1650–1700)	<i>n</i> =	17	54	68	10	38
	Nom. Sg. (%)	24	52	19	20	39
	<i>-e/ø</i> (%)	0	<b>74</b>	0	0	0
	<i>-(e)n</i> (%)	100	<b>22</b>	99	100	97
	Other (%)	0	4	1	0	3
Period 8 (1700–1750)	<i>n</i> =	15	32	26	3	43
	Nom. Sg. (%)	33	38	27	0	37
	<i>-e/ø</i> (%)	0	28	0	0	7
	<i>-(e)n</i> (%)	100	69	96	100	88
	Other (%)	0	3	4	0	5
Period 9 (1750–1800)	<i>n</i> =	23	14	42	5	44
	Nom. Sg. (%)	30	36	19	0	36
	<i>-e/ø</i> (%)	0	7	0	0	0
	<i>-(e)n</i> (%)	91	79	95	100	100
	Other (%)	9	14	5	0	0
Period 10 (1800–1850)	<i>n</i> =	27	21	77	5	43
	Nom. Sg. (%)	15	38	29	20	42
	<i>-e/ø</i> (%)	0	10	0	0	0
	<i>-(e)n</i> (%)	96	90	92	100	98
	Other (%)	4	0	8	0	2
Period 11 (1850–1900)	<i>n</i> =	18	34	53	4	42
	Nom. Sg. (%)	33	38	9	0	43
	<i>-e/ø</i> (%)	0	26	0	0	5
	<i>-(e)n</i> (%)	94	65	94	100	93
	Other (%)	6	7	6	0	2

followed by *Garten* and *Brunnen* in Period 6. *Bogen* is not only the first to acquire the strong marker *-s*, but also the first to relinquish the weak marker *-(e)n*; the last genitive singular tokens of *Bogen* ending in *-(e)n* are found already in Period 3. *Brunnen*, the last to adopt the strong form, is also the last to lose the weak form; it continues to have *-(e)n* in the genitive singular into the 18<sup>th</sup> century (Period 8), by which time the rest of the group has completed the shift into the strong declension.

Table 7.16. Group 3a: Distribution of inflectional markers in the genitive singular, by period

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	0	0	2	0	0
(1350–1400)	<i>-(e)n</i> (%)	—	—	100	—	—
Period 2	<i>n</i> =	1	0	1	0	0
(1400–1450)	<i>-(e)n</i> (%)	0	—	100	—	—
	<i>-(e)ns</i> (%)	100	—	0	—	—
Period 3	<i>n</i> =	2	13	3	0	1
(1450–1500)	<i>-(e)n</i> (%)	50	100	100	—	100
	<i>-(e)ns</i> (%)	50	0	0	—	0
Period 4	<i>n</i> =	0	1	1	0	2
(1500–1550)	<i>-(e)n</i> (%)	—	100	100	—	0
	<i>-(e)ns</i> (%)	—	0	0	—	100
Period 5	<i>n</i> =	0	0	1	0	0
(1550–1600)	<i>-(e)n</i> (%)	—	—	100	—	—
Period 6	<i>n</i> =	13	2	6	0	2
(1600–1650)	<i>-(e)n</i> (%)	0	0	50	—	50
	<i>-(e)ns</i> (%)	100	100	50	—	50
Period 7	<i>n</i> =	0	2	2	0	1
(1650–1700)	<i>-(e)n</i> (%)	—	0	50	—	0
	<i>-(e)ns</i> (%)	—	100	50	—	100
Period 8	<i>n</i> =	0	2	1	0	2
(1700–1750)	<i>-(e)n</i> (%)	—	50	0	—	0
	<i>-(e)ns</i> (%)	—	50	100	—	100
Period 9	<i>n</i> =	2	2	2	0	0
(1750–1800)	<i>-(e)ns</i> (%)	100	100	100	—	—
Period 10	<i>n</i> =	1	0	6	0	1
(1800–1850)	<i>-(e)ns</i> (%)	100	—	100	—	100
Period 11	<i>n</i> =	1	3	3	0	1
(1850–1900)	<i>-(e)ns</i> (%)	100	100	100	—	100

### Group 3b: Singular

In Group 3b, where the nominative singular form ending in *-e* still exists in the modern language, the proportion of *-e/ø* is more substantial across the board (see table 7.17 for the whole corpus and 7.20 for the breakdown by period); it is smallest for *Schade/n*, which, as we have seen, has shifted further than the other nouns in this subgroup. Even here, though, *-(e)n* is consistently in the majority, except in the case of the formerly strong noun *Friede/n*. The two values are very close for *Buchstabe* and *Funke/n*, which occur more frequently in the nominative singular than the other nouns in Group 3b.

All of these nouns except *Funke/n* sometimes have *-e/ø* in forms other than the nominative singular, so that the proportion of *-e/ø* is generally a bit higher than, or about the

same as, that of nominative singular tokens, despite the occurrence of *-(e)n* in the nominative singular (table 7.18). The discrepancy is greatest in the case of *Friede/n*, which is often strong in the earliest periods.

Turning to the diachronic data (table 7.20), we see that of the six nouns in Group 3b, *Name/n*, *Schade/n* and *Wille/n* are most consistent in their inflectional behavior; with the exception of *Wille/n* in Period 11, all have more *-(e)n* than *-e/ø* throughout the time period of interest, indicating that for the average speaker, the lexical strength of the oblique forms ending in *-(e)n* was likely greater than that of forms ending in *-e/ø* at all stages (which explains the incursion of *-(e)n* into the nominative singular). The proportions for *Wille/n* in Period 11 are likely not representative, since tokens ending in *-e*, like those in the nominative singular (see 7.1.2), are found mainly in Nietzsche (where the *Wille* often assumes animate qualities) and in poetry.

All three of these nouns begin their shift into the strong declension very early; they all exhibit inflection typical of Group 3 from Period 1 onward, and in some cases, we may need to travel even further back in time to find the starting point of the shift.<sup>112</sup> In the first period, *Schade/n* already has both *-(e)n* in the nominative and *-(e)ns* in the genitive; *Name/n* has *-(e)n* in the nominative, but only regular weak forms in the genitive (*-(e)ns* does not appear until Period 3); and *Wille/n* has *-(e)ns* in the genitive, but only *-e/ø* in the nominative (forms in *-(e)n* appear in Period 2). In the genitive, the weak ending *-(e)n* has largely disappeared on all three nouns by the late 17<sup>th</sup> century and is completely gone by the early 18<sup>th</sup> century. Alongside the hybrid marker *-(e)ns*, these nouns also have *-(e)s* in the genitive singular from time to time, but only infrequently (see table 7.18); in some of these instances, there may be a nasal bar missing.

At no point do nominative singular forms of *Name/n* and *Wille/n* ending in *-(e)n* outnumber those ending in *-e/ø*; tokens ending in *-e/ø* are always in the majority, while those ending in *-(e)n* are scarce throughout (see table 7.19). This is not the case with *Schade/n*, where nominative singular tokens ending in *-(e)n* are more frequent than those ending in *-e/ø* in most periods beginning with Period 5, and tokens ending in *-e/ø* disappear from the corpus completely in the 18<sup>th</sup> century. Thus, it is not surprising that in the modern language, the nominative singular form ending in *-e* is preferred for *Name/n* and *Wille/n*, but not for *Schade/n*. (*Name/n* and *Wille/n* are also slightly more frequent in the nominative singular than *Schade/n* overall and in the first two periods; see tables 7.9 and 7.10).

The remaining nouns in this group (*Friede/n*, *Funke/n*, *Buchstabe*) are more variable. Over the course of the period under investigation, we see *Friede/n* develop from a strong noun with *-e/ø* in the nominative and *-(e)s* in the genitive into a somewhat regular weak masculine noun, and from there into the quasi-strong noun that we know today, with alternate nominative singular forms and *-(e)ns* in the genitive (see tables 7.19–7.21). However, except in the first period, where it is completely strong, it never aligns itself decisively with any particular inflectional class, instead bouncing around among different paradigm types; not until Period 10 does the variation limit itself to the nominative singular. Dative and accusative singular forms ending in *-e/ø* (*Friede*, *Fried*) continue to appear into the late 19<sup>th</sup> century, though they are mostly confined to verse texts; the *-e* on the two instances of *Friede/n* in the dative singular in Periods 7 and 8 should probably be analyzed as a strong case marker.

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<sup>112</sup> Klein et al. (2018: 89) cite nominative singular forms ending in *-(e)n* for *Name/n* and *Schade/n*, but not for *Wille/n*; their corpus has no strong or mixed genitive singular forms (ending in *-(e)(n)s*) of any former weak masculine noun.

Table 7.17. Group 3b: Distribution of *-e/ø* and *-(e)n* in the singular (all periods; all four cases)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>		
<i>n</i> =	51	842	43	1,530	655	1,759	Mean	SD
<i>-e/ø</i> (%)	47	58	44	27	16	24	36	15
<i>-(e)n</i> (%)	51	33	53	67	78	71	59	15
Other (%)	2	9	2	6	6	5	6	2

Table 7.18. Group 3b: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>		
<i>n</i> =	152	846	113	1,792	759	1,780	Mean	SD
N. Sg. (%)	12	24	26	21	15	22	21	3
<i>-e/ø</i> (%)	16	58	17	25	14	24	27	16

Note: The values for *-e/ø* include tokens in all four cases.

Table 7.19. Group 3b: Distribution of *-e/ø* and *-(e)n* in the nominative singular, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1 (1350–1400)	<i>n</i> =	1	13	1	42	12	72
	<i>-e/ø</i> (%)	100	100	100	95	92	100
	<i>-(e)n</i> (%)	0	0	0	5	8	0
Period 2 (1400–1450)	<i>n</i> =	1	22	0	39	26	46
	<i>-e/ø</i> (%)	100	95	—	100	88	91
	<i>-(e)n</i> (%)	0	5	—	0	12	9
Period 3 (1450–1500)	<i>n</i> =	1	31	0	34	27	34
	<i>-e/ø</i> (%)	100	100	—	79	89	94
	<i>-(e)n</i> (%)	0	0	—	21	11	6
Period 4 (1500–1550)	<i>n</i> =	1	10	0	31	10	31
	<i>-e/ø</i> (%)	100	100	—	90	70	94
	<i>-(e)n</i> (%)	0	0	—	10	30	6
Period 5 (1550–1600)	<i>n</i> =	1	13	0	39	18	37
	<i>-e/ø</i> (%)	100	85	—	79	39	86
	<i>-(e)n</i> (%)	0	15	—	21	61	14
Period 6 (1600–1650)	<i>n</i> =	1	24	0	46	7	21
	<i>-e/ø</i> (%)	100	100	—	100	57	100
	<i>-(e)n</i> (%)	0	0	—	0	43	0
Period 7 (1650–1700)	<i>n</i> =	3	13	3	45	7	26
	<i>-e/ø</i> (%)	100	85	67	98	43	85
	<i>-(e)n</i> (%)	0	15	33	0	57	15
Period 8 (1700–1750)	<i>n</i> =	2	8	2	16	3	23
	<i>-e/ø</i> (%)	100	88	50	81	67	96
	<i>-(e)n</i> (%)	0	12	50	19	33	4
Period 9 (1750–1800)	<i>n</i> =	3	21	9	28	3	15
	<i>-e/ø</i> (%)	100	90	67	100	0	100
	<i>-(e)n</i> (%)	0	10	33	0	100	0
Period 10 (1800–1850)	<i>n</i> =	2	15	9	20	2	25
	<i>-e/ø</i> (%)	50	73	67	95	0	100
	<i>-(e)n</i> (%)	50	27	33	5	100	0
Period 11 (1850–1900)	<i>n</i> =	2	29	5	35	1	56
	<i>-e/ø</i> (%)	100	83	60	89	0	100
	<i>-(e)n</i> (%)	0	17	40	11	100	0

Table 7.20. Group 3b. Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1 (1350–1400)	<i>n</i> =	3	62	1	112	60	345
	Nom. Sg. (%)	33	21	100	38	20	21
	<i>-e/ø</i> (%)	<b>100</b>	<b>90</b>	<b>100</b>	43	22	21
	<i>-(e)n</i> (%)	<b>0</b>	<b>0</b>	<b>0</b>	57	75	78
	Other (%)	0	10	0	0	3	1
Period 2 (1400–1450)	<i>n</i> =	2	138	1	94	153	231
	Nom. Sg. (%)	50	16	0	41	17	20
	<i>-e/ø</i> (%)	<b>50</b>	<b>81</b>	0	48	17	21
	<i>-(e)n</i> (%)	<b>50</b>	<b>13</b>	100	52	75	76
	Other (%)	0	6	0	0	8	3
Period 3 (1450–1500)	<i>n</i> =	5	86	0	216	111	259
	Nom. Sg. (%)	20	36	—	16	24	13
	<i>-e/ø</i> (%)	<b>80</b>	<b>70</b>	—	20	32	15
	<i>-(e)n</i> (%)	<b>20</b>	<b>19</b>	—	77	63	78
	Other (%)	0	12	—	3	5	7
Period 4 (1500–1550)	<i>n</i> =	9	71	0	178	110	188
	Nom. Sg. (%)	11	14	—	17	9	16
	<i>-e/ø</i> (%)	22	<b>77</b>	—	23	8	20
	<i>-(e)n</i> (%)	78	<b>18</b>	—	72	87	77
	Other (%)	0	4	—	5	5	3
Period 5 (1550–1600)	<i>n</i> =	3	91	0	272	103	163
	Nom. Sg. (%)	33	14	—	14	17	23
	<i>-e/ø</i> (%)	<b>33</b>	<b>56</b>	—	20	11	30
	<i>-(e)n</i> (%)	<b>33</b>	<b>37</b>	—	69	80	63
	Other (%)	33	7	—	11	10	7
Period 6 (1600–1650)	<i>n</i> =	5	117	0	150	29	133
	Nom. Sg. (%)	20	21	—	31	24	16
	<i>-e/ø</i> (%)	20	42	—	32	14	17
	<i>-(e)n</i> (%)	80	43	—	57	83	77
	Other (%)	0	15	—	11	3	7
Period 7 (1650–1700)	<i>n</i> =	6	59	5	148	31	110
	Nom. Sg. (%)	50	22	60	30	23	23
	<i>-e/ø</i> (%)	<b>67</b>	46	40	33	10	21
	<i>-(e)n</i> (%)	<b>33</b>	49	60	57	90	74
	Other (%)	0	5	0	10	0	5
Period 8 (1700–1750)	<i>n</i> =	6	35	2	94	36	74
	Nom. Sg. (%)	33	23	100	17	8	31
	<i>-e/ø</i> (%)	33	37	<b>50</b>	14	6	30
	<i>-(e)n</i> (%)	67	57	<b>50</b>	83	86	65
	Other (%)	0	6	0	3	8	5
Period 9 (1750–1800)	<i>n</i> =	4	67	12	99	7	61
	Nom. Sg. (%)	75	31	75	28	43	25
	<i>-e/ø</i> (%)	<b>75</b>	39	<b>50</b>	28	0	25
	<i>-(e)n</i> (%)	<b>25</b>	52	<b>42</b>	70	100	66
	Other (%)	0	9	8	2	0	10
Period 10 (1800–1850)	<i>n</i> =	3	43	12	83	8	76
	Nom. Sg. (%)	67	35	75	24	25	33
	<i>-e/ø</i> (%)	33	26	<b>50</b>	23	0	37
	<i>-(e)n</i> (%)	67	63	<b>50</b>	71	100	50
	Other (%)	0	12	0	6	0	13
Period 11 (1850–1900)	<i>n</i> =	5	74	10	84	6	118
	Nom. Sg. (%)	40	39	50	42	17	47
	<i>-e/ø</i> (%)	40	36	30	37	0	<b>54</b>
	<i>-(e)n</i> (%)	60	53	70	60	100	<b>38</b>
	Other (%)	0	11	0	4	0	8

*Note:* The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison. Bold formatting is used wherever (contrary to expectation) the proportion of *-e/ø* exceeds that of *-(e)n*.



In the nominative singular of *Friede/n* (table 7.19), *-e/ø* is prevalent throughout, but *-(e)n* becomes increasingly frequent in the later periods. The difference between the two values is smaller here than with *Name/n* and *Wille/n*, which most often end in *-e* rather than *-(e)n* in the modern language; in the case of *Friede/n*, as noted in 1.5.3.2, the two nominative singular forms are considered equally acceptable today.

*Buchstabe* and *Funke/n*, which are not especially frequent in the singular, also exhibit considerable variation. As noted in 7.1, both nouns are used more in the nominative singular than other nouns in Group 3b, so it is not surprising that the percentage of *-e/ø* is high in many periods for both nouns (tables 7.17 and 7.20). However, *Funke/n* only has these markers in the nominative singular, whereas *Buchstabe* also has them quite often in the dative and accusative singular. At the same time, the ending *-(e)n* in the nominative singular is common on *Funke/n*, but rare in the case of *Buchstabe*, which only has it once. This explains why, as we see in tables 7.18 and 7.20, the proportion of nominative singular tokens (given in the second row of each block in table 7.20) is frequently lower than that of tokens ending in *-e/ø* for *Buchstabe*, but higher for *Funke/n*.

In both cases, the shift into the strong declension begins quite late; the ending *-(e)n* does not appear in the nominative singular of *Funke/n* until Period 7, and *Buchstabe*, which almost never has this marker, does not adopt it until Period 10 (table 7.19). As in the case of *Friede/n*, the proportion of *-(e)n* in the nominative singular of *Funke/n* is larger in most periods than the corresponding values for *Buchstabe*, *Name/n*, and *Wille/n*, which are most commonly used in the form with *-e* today; the two nominative singular forms of *Funke/n* are largely interchangeable in the modern language.

In the genitive singular (table 7.21), *Buchstabe* has the ending *-(e)ns* for the first time in Period 5. *Funke/n* appears not to have it until Period 9, but we cannot be certain of this, since the genitive singular of *Funke/n* is not attested before Period 9.

*Funke/n* occurs only twice in the singular through Period 6, both times with regular weak endings; beginning in Period 7, it inflects as in the modern language: *-e/ø* (usually *-e*) and *-(e)n* alternate in the nominative, while the genitive ends in *-(e)ns* and the dative and accusative in *-(e)n*. *Buchstabe* is quite variable in the earlier periods, but except for one dative singular token in *-ø* in Period 7 and the aforementioned nominative singular form in *-(e)n* in Period 10, it behaves much like a regular weak masculine noun from Period 6 onward.

### Groups 3a and 3b: Plural

In the plural, endings other than *-(e)n* are rare in Group 3 (tables 7.22 and 7.23), just as they are in Group 1. In Group 3a, the endings *-e/ø* occur most frequently on *Brunnen* (in Periods 1 and 7) and *Garten* (in Period 7), both of which — as noted above in 3.2.3 and 4.4.4 — occasionally have strong plural forms ending in *-e/ø*, usually with umlaut. In Group 3b, only *Name/n* has *-e/ø* in the plural.

The combination of *-(e)n* and umlaut in the plural emerges very early (see, again, tables 7.22 and 7.23, and compare table 4.25). *Garten* and *Schade/n* have it already in the first period, and both swing back and forth between *-(e)n* and *-¨(e)n* for four centuries before settling on the umlauted form in the 18<sup>th</sup> century. *Bogen*, *Brunnen*, and *Kasten* also have *-¨(e)n* on occasion, but the umlaut never catches on in these cases; *Bogen* and *Kasten* still have alternate plural forms with and without umlaut in the modern language (see 3.2.3), and the umlauted plural *Brünnen*

has died out altogether. The other nouns in this group with unlautable vowels — *Schatten*, *Buchstabe*, *Funke/n*, and *Name/n* — never acquire umlaut in the plural, for reasons which will be explored below.

### Non-Weak Inflection

In Group 3, as we see in table 7.24, non-weak inflection occurs mainly in the nominative and genitive singular and in the plural. For most nouns in this group, these are the least frequent forms in the paradigm, the forms which are presumably least prominent in speakers' minds and thus most difficult to access. The proportion of non-weak (innovative) tokens is generally smaller here than in Group 2, where more of the original weak forms have been replaced (more slots in the paradigm have been affected); there, in most instances, seven out of eight forms have been rebuilt (all but the nominative singular), versus only two in this group (or at most six, in cases where the plural has acquired umlaut).

The nominative singular marker *-(e)n* is found on all nouns in Group 3, mainly in the later periods. It is less common in Group 3b, whose members still end in *-e* in some cases in the modern language, than in Group 3a, where the form in *-e* no longer exists. In the early stages of the shift, its presence can be attributed to the low token frequency of the nominative singular (see 7.1.1 and 7.1.2). If the data presented here are at all representative, speakers of MHG/ENHG had only limited exposure to the existing form ending in *-e/ø* and, in many cases, may not have been able to retrieve it; under these circumstances, they would have needed to create a new form to fill the nominative singular slot in the paradigm.

The variation that we find in the genitive singular and in the plural is likely also attributable to the low token frequency of these forms. In the genitive singular, innovative forms are common in all groups of nouns, including the regular Group 1 (see 5.3.1.2). In the plural, given a masculine accusative or dative singular form ending in *-en*, speakers of MHG had only one option, *-en* (or, in those rare cases in which final *-e* was not lost after *-n-*, *-ene*; see [3] in 1.1.1). However, the class of strong nouns with umlaut in the plural (*gast*) was exactly the same in the singular as that without umlaut (*tac*), so it is not surprising that in cases where the plural was very infrequent, speakers would have extended the umlaut to nouns that ordinarily did not have it, including nouns that originally belonged to the weak declension. The umlaut may have served the purpose of number differentiation in some instances, or its presence may just reflect speaker uncertainty.

In the accusative and dative singular, strong forms ending in *-e/ø* are more common in Group 3b than in Group 3a, and particularly in the case of the formerly strong noun *Friede/n*. In Group 3a, only *Brunnen* and *Garten* have them (*Garten* only once, in a compound and rhyming couplet), while in Group 3b, they occur on all nouns except *Funke/n*. These strong tokens are concentrated in the earlier periods (385/463 tokens, or 83%, are in Periods 1–5), and most (322/463, or 70%) are in verse texts, so that in many cases, the rhyme and meter likely provided the impetus for the omission of the weak ending.

In the earlier periods, the strong accusative and dative singular forms of *Friede/n* and *Buchstabe*, and the genitive singular forms of *Friede/n* ending in *-(e)s*, are expected, since both nouns have their origins in strong inflectional classes. Once *Buchstabe* had joined the weak declension, its stress pattern and syllable structure — which it shares with *Leichnam* and *Herzog*

in Group 2 — may have made it more prone to loss of endings than it would otherwise have been.

In the case of *Wille/n*, there is a strong correlation between the presence of non-weak markers in the oblique singular forms and use of the token as a compound head: tokens that are compounds are 3.8 times (95% CI [2.80, 5.25]) more likely to exhibit non-weak inflection than those that are not ( $\chi^2(1) = 69.50, p < .001$ ). The association is even stronger in the first six periods, where non-weak endings are 5.14 times (95% CI [3.55, 7.44]) more likely to occur on compounds than on simplex tokens ( $\chi^2(1) = 78.84, p < .001$ ). It weakens somewhat when we remove verse tokens from the data, but remains significant; in the prose texts, the PR values decrease to 2.54 for all 11 periods (95% CI [1.59, 4.10],  $\chi^2(1) = 14.85, p < .001$ ) and to 3.77 for

Table 7.21. Group 3b: Distribution of inflectional markers in the genitive singular, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	0	6	0	2	2	16
(1350–1400)	<i>-(e)n</i> (%)	—	0	—	100	0	88
	<i>-(e)ns</i> (%)	—	0	—	0	100	13
	<i>-(e)s</i> (%)	—	100	—	0	0	0
Period 2	<i>n</i> =	0	11	0	1	16	9
(1400–1450)	<i>-e/ø</i> (%)	—	18	—	0	0	0
	<i>-(e)n</i> (%)	—	9	—	100	25	11
	<i>-(e)ns</i> (%)	—	9	—	0	75	89
	<i>-(e)s</i> (%)	—	64	—	0	0	0
Period 3	<i>n</i> =	1	15	0	8	8	20
(1450–1500)	<i>-e/ø</i> (%)	0	0	—	0	13	0
	<i>-(e)n</i> (%)	100	33	—	25	25	15
	<i>-(e)ns</i> (%)	0	0	—	75	63	75
	<i>-(e)s</i> (%)	0	67	—	0	0	10
Period 4	<i>n</i> =	1	3	0	12	6	5
(1500–1550)	<i>-(e)n</i> (%)	100	0	—	25	17	0
	<i>-(e)ns</i> (%)	0	0	—	75	83	100
	<i>-(e)s</i> (%)	0	100	—	0	0	0
Period 5	<i>n</i> =	10	6	0	31	11	12
(1550–1600)	<i>-(e)n</i> (%)	0	0	—	3	9	8
	<i>-(e)ns</i> (%)	100	67	—	97	82	92
	<i>-(e)s</i> (%)	0	33	—	0	9	0
Period 6	<i>n</i> =	0	19	0	18	1	9
(1600–1650)	<i>-(e)n</i> (%)	—	5	—	11	0	0
	<i>-(e)ns</i> (%)	—	32	—	89	100	100
	<i>-(e)s</i> (%)	—	63	—	0	0	0
Period 7	<i>n</i> =	0	3	0	15	0	7
(1650–1700)	<i>-(e)n</i> (%)	—	0	—	0	—	14
	<i>-(e)ns</i> (%)	—	100	—	100	—	86
Period 8	<i>n</i> =	0	2	0	3	3	4
(1700–1750)	<i>-(e)ns</i> (%)	—	100	—	67	100	100
	<i>-(e)s</i> (%)	—	0	—	33	0	0
Period 9	<i>n</i> =	0	6	1	2	0	6
(1750–1800)	<i>-(e)ns</i> (%)	—	100	100	100	—	100
Period 10	<i>n</i> =	0	5	0	5	0	10
(1800–1850)	<i>-(e)ns</i> (%)	—	100	—	100	—	100
Period 11	<i>n</i> =	0	8	0	3	0	9
(1850–1900)	<i>-(e)ns</i> (%)	—	100	—	100	—	100

Periods 1–6 (95% CI [2.07, 6.86];  $p < .001$  [Fisher’s exact]). Of the 52 oblique singular tokens of *Wille/n* with the endings  $-e/\emptyset$ , 30 (58%) are compounds. The compound *Mutwill(e)* ‘wantonness’ is especially well represented among uninflected oblique singular *Wille/n* compounds, accounting for 90% of all instances (27/30); we thus have confirmation that, as the Grimms (*DWB*) claim, this compound is “gerne stark flectiert” (see #8 in 3.2.3).

All but one of the remaining (simplex) tokens of *Wille/n* that do not end in  $-(e)n$  in the dative and accusative singular have the marker  $-e$ , and most are in the citation form or in appositive structures in which they are only loosely linked to the verb.

Table 7.22. Group 3a: Distribution of  $-e/\emptyset$  and  $-(e)n$  (with and without umlaut) in the plural, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	1	12	5	0	0
(1350–1400)	$-e/\emptyset$ (%)	0	<b>8</b>	0	—	—
	$-(e)n$ (%)	100	92	80	—	—
	$-\ddot{(e)}n$ (%)	0	0	20	—	—
Period 2	<i>n</i> =	7	2	17	0	0
(1400–1450)	$-(e)n$ (%)	100	100	65	—	—
	$-\ddot{(e)}n$ (%)	0	0	35	—	—
Period 3	<i>n</i> =	7	12	6	0	2
(1450–1500)	$-(e)n$ (%)	100	83	83	—	100
	$-\ddot{(e)}n$ (%)	0	17	17	—	0
Period 4	<i>n</i> =	3	6	1	1	0
(1500–1550)	$-(e)n$ (%)	100	100	0	100	—
	$-\ddot{(e)}n$ (%)	0	0	100	0	—
Period 5	<i>n</i> =	6	3	11	3	0
(1550–1600)	$-e/\emptyset$ (%)	0	0	<b>18</b>	0	—
	$-(e)n$ (%)	100	100	45	0	—
	$-\ddot{(e)}n$ (%)	0	0	36	100	—
Period 6	<i>n</i> =	29	13	21	1	8
(1600–1650)	$-(e)n$ (%)	55	85	10	0	100
	$-\ddot{(e)}n$ (%)	45	15	90	100	0
Period 7	<i>n</i> =	5	8	11	2	5
(1650–1700)	$-e/\emptyset$ (%)	0	<b>25*</b>	<b>27*</b>	0	0
	$-(e)n$ (%)	100	75	27	100	100
	$-\ddot{(e)}n$ (%)	0	0	45	0	0
Period 8	<i>n</i> =	5	14	17	0	38
(1700–1750)	$-(e)n$ (%)	80	93	6	—	100
	$-\ddot{(e)}n$ (%)	20	7	94	—	0
Period 9	<i>n</i> =	7	1	4	0	28
(1750–1800)	$-(e)n$ (%)	100	100	0	—	100
	$-\ddot{(e)}n$ (%)	0	0	100	—	0
Period 10	<i>n</i> =	10	7	10	0	21
(1800–1850)	$-(e)n$ (%)	100	100	0	—	100
	$-\ddot{(e)}n$ (%)	0	0	100	—	0
Period 11	<i>n</i> =	6	9	4	2	38
(1850–1900)	$-(e)n$ (%)	100	100	0	100	100
	$-\ddot{(e)}n$ (%)	0	0	100	0	0

Note: The asterisks (\*) in the  $-e/\emptyset$  row in Period 7 indicate the presence of umlaut on all tokens. All instances of the unexpected marker  $-e/\emptyset$  are marked in boldface.

Compounding also appears to induce loss of  $-(e)n$  in the case of *Brunnen*, at least in the later periods. The association is statistically significant for the whole corpus, but not for the first

six periods: compounded tokens are 2.9 times (95% CI [1.77, 4.83]) more likely to have non-weak endings than simplex ones ( $\chi^2(1) = 16.10, p < .001$ ). Of the 37 uninflected oblique singular tokens of *Brunnen*, 14 (38%) are compounds. Most of these compounded tokens are in poetry, though, in contexts in which the meter demands a form with fewer syllables, and of the two that do occur in prose texts, one may be a proper noun: “Inn dem aber erfure ich, das er der bischoff vonn Bamberg ghenn Goppingenn zum **Saurbrun**, inn das wildtbadt gerittenn wahr [...]” (Götz, Period 7). In any event, since they are concentrated in the later periods, they are unlikely to have contributed to the shift.

Table 7.23. Group 3b: Distribution of *-e/ø* and *-(e)n* (with and without umlaut) in the plural, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	6	0	1	37	3	0
(1350–1400)	<i>-e/ø</i> (%)	0	—	0	<b>38</b>	0	—
	<i>-(e)n</i> (%)	100	—	100	62	33	—
	<i>-¨(e)n</i> (%)	0	—	0	0	67	—
Period 2	<i>n</i> =	3	0	0	14	29	0
(1400–1450)	<i>-(e)n</i> (%)	100	—	—	100	14	—
	<i>-¨(e)n</i> (%)	0	—	—	0	86	—
Period 3	<i>n</i> =	9	0	6	20	1	0
(1450–1500)	<i>-(e)n</i> (%)	100	—	100	100	0	—
	<i>-¨(e)n</i> (%)	0	—	0	0	100	—
Period 4	<i>n</i> =	5	0	3	13	13	0
(1500–1550)	<i>-e/ø</i> (%)	0	—	0	8	0	—
	<i>-(e)n</i> (%)	100	—	100	92	15	—
	<i>-¨(e)n</i> (%)	0	—	0	0	85	—
Period 5	<i>n</i> =	1	2	1	21	14	4
(1550–1600)	<i>-(e)n</i> (%)	100	100	100	100	0	100
	<i>-¨(e)n</i> (%)	0	0	0	0	100	0
Period 6	<i>n</i> =	20	0	3	12	2	2
(1600–1650)	<i>-(e)n</i> (%)	100	—	100	100	50	100
	<i>-¨(e)n</i> (%)	0	—	0	0	50	0
Period 7	<i>n</i> =	15	0	7	8	1	1
(1650–1700)	<i>-(e)n</i> (%)	100	—	100	100	100	100
Period 8	<i>n</i> =	5	0	4	28	2	1
(1700–1750)	<i>-(e)n</i> (%)	100	—	100	100	0	100
	<i>-¨(e)n</i> (%)	0	—	0	0	100	0
Period 9	<i>n</i> =	26	0	16	17	0	0
(1750–1800)	<i>-(e)n</i> (%)	100	—	100	100	—	—
Period 10	<i>n</i> =	8	0	18	13	0	0
(1800–1850)	<i>-(e)n</i> (%)	100	—	100	100	—	—
Period 11	<i>n</i> =	2	1	10	20	2	0
(1850–1900)	<i>-(e)n</i> (%)	100	100	100	100	0	—
	<i>-¨(e)n</i> (%)	0	0	0	0	100	—

Note: All instances of the unexpected marker *-e/ø* are marked in boldface.

The more likely culprit in this case — and also in that of *Name/n*, which, like *Brunnen*, frequently has *-e/ø* in the oblique singular forms — is the stem-final nasal, which would have merged with the weak inflectional marker in many instances (compare *Hahn*, *Leichnam*, and *Schelm* in Group 2; see 6.3.1.2 and 6.4). Rhyming couplets, metrical constraints, and compounding can account for many, but not all, of the uninflected oblique singular tokens of these two nouns; even after we have eliminated all the verse tokens and compounds, we are left

with three tokens of *Brunnen* and six of *Name/n*, all in Periods 1 and 2, for which there is no other plausible explanation. Unlike the uninflected simplex tokens of *Wille/n*, most of which end in *-e*, all of these tokens end in *-ø* (*prunn*, *nam*).

Table 7.24. Groups 3a and 3b: Distribution of non-weak (innovative) tokens (all periods)

Grp	Noun	N. Sg. in <i>-(e)n</i> ( <i>n</i> )	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Gen. Sg. in <i>-(e)(n)s</i> ( <i>n</i> )	Pl. in <i>-(' )e/ø</i> ( <i>n</i> )	Pl. in <i>-'(e)n</i> ( <i>n</i> )	Other ( <i>n</i> )	Total non- weak ( <i>n</i> )	Non- weak (%)	Total tokens ( <i>n</i> )
3a	<i>Bogen</i>	66	0	19	0	14	0	99	30	333
	<i>Brunnen</i>	39	37	10	3	5	0	94	18	517
	<i>Garten</i>	71	1	16	5	71	0	164	25	662
	<i>Kasten</i>	6	0	0	0	4	0	10	15	65
	<i>Schatten</i>	95	0	8	0	0	1	104	23	444
3b	<i>Buchstabe</i>	1	7	1	0	0	0	9	6	152
	<i>Friede/n</i>	17	303	75	0	0	0	395	47	846
	<i>Funke/n</i>	10	0	1	0	0	0	11	10	113
	<i>Name/n</i>	29	73	89	15	0	0	206	11	1,792
	<i>Schade/n</i>	35	23	38	0	58	0	154	20	761
	<i>Wille/n</i>	18	52	87	0	0	1	158	9	1,780

In the cases of *Name/n* and *Wille/n*, in addition to the factors already mentioned, unprecedentedness may have contributed to the loss of endings: among uninflected oblique singular tokens of *Name/n*, 45% (33/73) are unprecedented, and the proportion of unprecedented tokens is even larger in the case of *Wille/n* (32/52, or 62%). The association is not significant, though (*Name/n*:  $\chi^2(1) = 0.23, p = .64$ ; *Wille/n*:  $\chi^2(1) = 2.41, p = .12$ ), and in any case, neither noun is frequent enough in the plural to necessitate number differentiation.

*Schade/n* has *-e/ø* in the oblique singular forms in 23 instances, all in Periods 1–5. Most of these (19, or 83%) are in verse texts, where loss of inflectional markers is common generally. However, there may also have been interference from the adverbial nominative singular *schad/e*, which was already quite frequent in the earlier periods (see 3.2.3). About half (12/23, or 52%) of these tokens are unprecedented, but *Schade/n*, like *Wille/n* and *Name/n*, is not used in the plural very much, so that it is unlikely that speakers would have omitted the ending solely for the purpose of avoiding number ambiguity.

In Group 3, a new conditioning factor comes into play which was largely absent in the first two groups: all nouns in Groups 3a and 3b except *Funke/n* are prepositional objects at least 31% of the time, and in some cases, prepositional objects account for more than half (*Garten*, *Kasten*) or nearly half (*Wille/n*) of all tokens (table 7.25). As noted in 4.5.7, the factor “prepositional object” is expected to correlate with weak rather than non-weak inflection in the oblique singular forms, and to strengthen the form ending in *-(e)n*. No noun in Group 1 has this function more than 17% of the time, and even the inanimate *Leichnam* (21%) in Group 2 does not come close to the levels we find in Group 3.<sup>113</sup>

In the first six periods, for many of these nouns, there is a statistically significant association of prepositional objects with the presence of the weak ending *-(e)n* in the oblique

<sup>113</sup> *Schmerz* does, with 33% prepositional objects. However, unlike the other nouns in Group 2, it sometimes behaves like a Group 3 noun (nom. sg. *Schmerzen*, gen. sg. *Schmerzens*) (see 3.3.2).

singular forms (table 7.26); the association is particularly strong for *Bogen*, *Friede/n*, *Name/n*, and *Wille/n*, and strengthens further when verse tokens are excluded.

However, even in those cases where the association is not significant (*Brunnen*, *Garten*, *Schatten*, *Buchstabe*), the proportion of *-(e)n* is generally larger among prepositional objects than among tokens with other functions, indicating an effect of some kind, if a small one. The presence of a preposition does seem to protect the ending to some degree, and may act as a counterbalance to the various factors driving non-weak inflection (compounding, unprecedentedness, etc.).

Table 7.25. Groups 3a and 3b: Prepositional objects as a percentage of all tokens

Group	Noun	Prep. objects ( <i>n</i> )	Prep. objects (%)	Total tokens ( <i>n</i> )
3a	<i>Bogen</i>	130	39	<b>333</b>
	<i>Brunnen</i>	218	42	<b>517</b>
	<i>Garten</i>	376	57	<b>662</b>
	<i>Kasten</i>	37	57	<b>65</b>
	<i>Schatten</i>	160	36	<b>444</b>
3b	<i>Buchstabe</i>	66	43	<b>152</b>
	<i>Friede/n</i>	265	31	<b>846</b>
	<i>Funke/n</i>	10	9	<b>113</b>
	<i>Name/n</i>	627	35	<b>1,792</b>
	<i>Schade/n</i>	238	31	<b>759</b>
	<i>Wille/n</i>	855	48	<b>1,780</b>

### 7.1.3.2 *-e*, *-ø*

As we have seen, tokens ending in *-e/ø* are scarce in Group 3a except in the case of *Brunnen*; thus, the loss (apocope) of *-e* is not likely to have affected the development of nouns in this subgroup. In the few instances where these markers do occur in the singular, forms without final *-e* (e.g., *bog*, *brunn*, *gart*) are generally more common, as in Groups 1 and 2 (see table 7.27 for the whole corpus, and table 7.28 for the breakdown by period). *Schatten* has more *-e* than the other nouns in this subgroup; in the later periods, all unshifted nominative singular tokens of *Schatten* end in *-e* rather than *-ø* (*Schatte*, rather than *Schatt*).

In Group 3a, most of the apocope in the earlier periods is likely regional; apocopated tokens occur mainly in texts from further south, while unapocopated tokens are limited to texts from the north, except in verse. In the later periods, *Brunnen* is usually apocopated, while *Schatten* is not; the other nouns no longer have *-e/ø* at all beginning in Period 7.

In Group 3b (see tables 7.29–7.30), *-e* is more prominent throughout; these nouns — particularly the four most frequent ones, *Friede/n*, *Name/n*, *Schade/n*, and *Wille/n* — end in *-e* regularly in almost all texts, not just in those from the Middle German region, where unapocopated forms are expected. In the earlier periods, *Buchstabe* and *Funke/n* have *-e* only in texts from further north. For all nouns in this group except *Schade/n*, forms in *-e* become more numerous in the 18<sup>th</sup> century.

*Funke/n*, which does not occur very frequently at all in the periods in which apocope is most widespread, has the lowest rate of apocope in this subgroup, while *Buchstabe* and *Schade/n* have the highest. *Buchstabe* did not have *-e* to begin with, and is in any case more susceptible to apocope as a compound with secondarily stressed head. *Schade/n* occurs frequently in emphatic

positions in the sentence even when it is not functioning as an adverb/interjection; frequent exposure to the adverb *schad(e)*, which is apocopated consistently through Period 6, may have influenced speakers' inflection of the nominative singular, which is only slightly more frequent (the nominative singular occurs in 116 instances overall, while the adverb occurs in 71).<sup>114</sup>

Table 7.26. Association of prepositional objects with the presence of *-(e)n* in the oblique singular forms of nouns in Groups 3a and 3b (Periods 1–6)

	Prose and verse	Prose only
<i>Bogen</i>	$\chi^2$ (1) = <b>12.70</b> $p$ < <b>.001</b> PR = <b>1.37</b> 95% CI [ <b>1.16, 1.60</b> ]	$\chi^2$ (1) = <b>15.16</b> $p$ < <b>.001</b> PR = <b>1.77</b> 95% CI [ <b>1.29, 2.41</b> ]
<i>Brunnen</i>	$p$ = 1 (Fisher's exact) PR = 1.01 95% CI [0.90, 1.12]	$p$ = 1 (Fisher's exact) PR = 1.01 95% CI [0.91, 1.12]
<i>Garten</i>	$p$ = .01 (Fisher's exact) PR = 1.04 95% CI [0.98, 1.11]	$p$ = .08 (Fisher's exact) PR = 1.06 95% CI [0.98, 1.14]
<i>Kasten</i>	All tokens end in <i>-(e)n</i> .	All tokens end in <i>-(e)n</i> .
<i>Schatten</i>	$p$ = .03 (Fisher's exact) PR = 1.21 95% CI [1.00, 1.46]	$p$ = 1 (Fisher's exact) PR = 1.13 95% CI [0.89, 1.42]
<i>Buchstabe</i>	$p$ = .62 (Fisher's exact) PR = 1.28 95% CI [0.71, 2.29]	All tokens end in <i>-(e)n</i> .
<i>Friede/n</i>	$\chi^2$ (1) = <b>15.23</b> $p$ < <b>.001</b> PR = <b>1.78</b> 95% CI [ <b>1.33, 2.39</b> ]	$\chi^2$ (1) = <b>17.83</b> $p$ < <b>.001</b> PR = <b>2.11</b> 95% CI [ <b>1.48, 3.01</b> ]
<i>Funke/n</i>	All tokens end in <i>-(e)n</i> .	All tokens end in <i>-(e)n</i> .
<i>Name/n</i>	$\chi^2$ (1) = <b>21.08</b> $p$ < <b>.001</b> PR = <b>1.15</b> 95% CI [ <b>1.08, 1.23</b> ]	$\chi^2$ (1) = <b>46.50</b> $p$ < <b>.001</b> PR = <b>1.29</b> 95% CI [ <b>1.20, 1.39</b> ]
<i>Schade/n</i>	$\chi^2$ (1) = <b>4.70</b> $p$ = <b>.03</b> PR = <b>1.11</b> 95% CI [ <b>1.02, 1.21</b> ]	$\chi^2$ (1) = <b>7.13</b> $p$ = <b>.008</b> PR = <b>1.16</b> 95% CI [ <b>1.05, 1.29</b> ]
<i>Wille/n</i>	$\chi^2$ (1) = <b>92.22</b> $p$ < <b>.001</b> PR = <b>1.21</b> 95% CI [ <b>1.16, 1.28</b> ]	$\chi^2$ (1) = <b>81.55</b> $p$ < <b>.001</b> PR = <b>1.23</b> 95% CI [ <b>1.15, 1.31</b> ]

Note: Statistically significant results are marked in boldface.

In the plural, as we saw in 7.1.3.1, only *Brunnen*, *Garten*, and *Name/n* end in *-e/ø*. Of the markers *-e* and *-ø*, *-e* is by far the more common (table 7.31). Forms of *Brunnen* and *Garten* ending in *-e* are concentrated in 17<sup>th</sup>-century poetry (Lohenstein, Silesius, Gryphius, Greiffenberg), and most have umlaut; only one, a token of *Brunnen* in Period 1 (*brunne*; *Minneburg*), does not. *Brunnen* ends in *-ø* in only one instance, also in 17<sup>th</sup>-century verse; like the other strong plural tokens from this period, it has umlaut, and here the *-e* seems to have been omitted for metrical reasons: “Saffirener Himmel/ Goldglänzende Sonne// Smaragdene Erden

<sup>114</sup> As noted in 3.2.3, adverbial tokens of *Schade/n* are not included in the token count.



voll Rosen Rubin// ganz silberne Flüsse/ Krystallene **Brünn**// Sabäisches Lüfftlein der Frölichkeit Krone [...]” (Greiffenberg, Period 7). There are only two plural tokens of *Garten* with the marker *-ø*: the compound *weingartt* appears twice in the plural in Götz’ memoirs (Period 5). *Name/n* has *-e* in the plural only in Merswin (Period 1) on the animate compounds *wibesnamme*, *mannes namme*, and *froewennamme* (14 instances); the sole plural token of *Name/n* ending in *-ø* is found in Bletz (Period 4) in a rhyming couplet (*vilerley nam : zam*).

Table 7.27. Group 3a: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	3	152	39	5	18	Mean	SD
<i>-e</i> (%)	0	16	23	20	65	25	21
<i>-ø</i> (%)	100	84	77	80	35	75	21

Table 7.28. Group 3a: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1 (1350–1400)	<i>n</i> =	0	25	14	0	2
	<i>-e</i> (%)	—	48	29	—	50
	<i>-ø</i> (%)	—	52	71	—	50
Period 2 (1400–1450)	<i>n</i> =	1	16	5	2	3
	<i>-e</i> (%)	0	19	20	50	100
	<i>-ø</i> (%)	100	81	80	50	0
Period 3 (1450–1500)	<i>n</i> =	0	23	10	0	5
	<i>-e</i> (%)	—	26	30	—	40
	<i>-ø</i> (%)	—	74	70	—	60
Period 4 (1500–1550)	<i>n</i> =	1	9	5	2	0
	<i>-ø</i> (%)	100	100	100	100	—
Period 5 (1550–1600)	<i>n</i> =	0	6	3	0	1
	<i>-ø</i> (%)	—	100	100	—	100
Period 6 (1600–1650)	<i>n</i> =	1	12	2	1	2
	<i>-e</i> (%)	0	8	50	0	0
	<i>-ø</i> (%)	100	92	50	100	100
Period 7 (1650–1700)	<i>n</i> =	0	40	0	0	0
	<i>-e</i> (%)	—	3	—	—	—
	<i>-ø</i> (%)	—	98	—	—	—
Period 8 (1700–1750)	<i>n</i> =	0	9	0	0	3
	<i>-e</i> (%)	—	0	—	—	100
	<i>-ø</i> (%)	—	100	—	—	0
Period 9 (1750–1800)	<i>n</i> =	0	1	0	0	0
	<i>-ø</i> (%)	—	100	—	—	—
Period 10 (1800–1850)	<i>n</i> =	0	2	0	0	0
	<i>-e</i> (%)	—	50	—	—	—
	<i>-ø</i> (%)	—	50	—	—	—
Period 11 (1850–1900)	<i>n</i> =	0	9	0	0	2
	<i>-e</i> (%)	—	11	—	—	100
	<i>-ø</i> (%)	—	89	—	—	0

Table 7.29. Group 3b: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>		
<i>n</i> =	24	487	19	419	104	423	Mean	SD
<i>-e</i> (%)	29	43	84	47	26	53	50	19
<i>-ø</i> (%)	71	57	16	53	74	47	50	19

Table 7.30. Group 3b: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	3	56	1	48	13	74
(1350–1400)	<i>-e</i> (%)	0	46	100	48	31	66
	<i>-ø</i> (%)	100	54	0	52	69	34
Period 2	<i>n</i> =	1	112	0	45	26	48
(1400–1450)	<i>-e</i> (%)	100	52	—	60	50	54
	<i>-ø</i> (%)	0	48	—	40	50	46
Period 3	<i>n</i> =	4	60	0	43	36	40
(1450–1500)	<i>-e</i> (%)	0	10	—	26	6	25
	<i>-ø</i> (%)	100	90	—	74	94	75
Period 4	<i>n</i> =	2	55	0	41	9	38
(1500–1550)	<i>-e</i> (%)	0	11	—	5	22	8
	<i>-ø</i> (%)	100	89	—	95	78	92
Period 5	<i>n</i> =	1	51	0	54	11	49
(1550–1600)	<i>-e</i> (%)	0	6	—	7	0	8
	<i>-ø</i> (%)	100	94	—	93	100	92
Period 6	<i>n</i> =	1	49	0	48	4	22
(1600–1650)	<i>-e</i> (%)	0	67	—	35	100	23
	<i>-ø</i> (%)	100	33	—	65	0	77
Period 7	<i>n</i> =	4	27	2	49	3	23
(1650–1700)	<i>-e</i> (%)	25	48	0	65	33	35
	<i>-ø</i> (%)	75	52	100	35	67	65
Period 8	<i>n</i> =	2	13	1	13	2	22
(1700–1750)	<i>-e</i> (%)	0	62	100	69	50	86
	<i>-ø</i> (%)	100	38	0	31	50	14
Period 9	<i>n</i> =	3	26	6	28	0	15
(1750–1800)	<i>-e</i> (%)	100	81	83	93	—	93
	<i>-ø</i> (%)	0	19	17	7	—	7
Period 10	<i>n</i> =	1	11	6	19	0	28
(1800–1850)	<i>-e</i> (%)	0	82	100	95	—	79
	<i>-ø</i> (%)	100	18	0	5	—	21
Period 11	<i>n</i> =	2	27	3	31	0	64
(1850–1900)	<i>-e</i> (%)	100	89	100	87	—	98
	<i>-ø</i> (%)	0	11	0	13	—	2

Table 7.31. Groups 3a and 3b: Distribution of *-e* and *-ø* in the plural (all four cases)

	<i>Brunnen</i>	<i>Garten</i>	<i>Name/n</i>
<i>n</i> =	3	5	15
<i>-e</i> (%)	67	60	88
<i>-ø</i> (%)	33	40	13

*Note:* Only *Brunnen* and *Garten* have umlaut with *-e/ø* in the plural (*Brünne* [1x], *Brünn* [1x], *Gärte* [3x]); all other tokens have unumlauted stem vowels (*brunne* [1x], *namme* [14x], *nam* [1x], *gartt* [2x]). The 14 tokens of *namme* and the two of *gartt* are in prose texts; all the others are in verse. There is no corresponding table in appendix C.

## 7.2 Group 3c

### 7.2.1 *Drache/n*

With respect to number and case, *Drache/n*, which is always animate in the corpus, behaves (not suprisingly) much like the regular nouns in Group 1: overall, and in most periods, it occurs mainly in the singular (see table 7.32) and in the nominative case (see table 7.33), but the oblique singular and plural forms are also fairly well represented, ensuring the retention of the weak pattern. Oblique forms are more common in the plural than in the singular. The proportion of plural tokens is about the same as our Group 1a benchmark (34% here versus 31% in Group 1a); that of nominative singular tokens is lower than the benchmark (45% here versus 60% in Group 1a), but still well above the mean values for Groups 3a (29%) and 3b (32%). In this respect, the animate *Drache* ‘dragon’ is strikingly similar to *Löwe* (Group 1a): both are animate, but their referents bear little resemblance to humans, and both are used more often in the oblique cases than the nouns in Group 1 with human or human-like referents.

*Drache/n* is consistently weak in both numbers except for two accusative singular forms ending in *-ø* in Periods 2 and 7, respectively; a dative singular form ending in *-e* in Period 7; two genitive singular tokens ending in *-(e)ns*, also in Period 7; and one nominative singular token ending in *-(e)n* in Period 11 (table 7.34). All of these non-weak tokens are in verse texts. One of the uninflected accusative singular tokens, in Wernicke (Period 7), is unprecedented and in a binomial expression (“Am Himmel zeigt man **Drach'** und Bähr”); the other is in a poem of Oswald (Period 2) in which every line has exactly six syllables (“Den **trak** den feint er stach”). The *-e* on the dative singular form, also in Wernicke, may be a strong case ending, but the form may also have assimilated to the word *Höhle*, with which it is juxtaposed: “Dem **Drache** gleichet seine Höhle;/ Ihr Leib ist falsch, wie ihre Seele.”) The nominative singular form ending in *-(e)n* is paired with *Rachen* ‘jaw’ in a rhyming couplet: “Warte nur, du Satansrachen:/ heute Nacht, du kleiner **Drachen**” (Dehmel, Period 11).

The genitive singular forms, both in Lohenstein (Period 7), can be explained in the same way as most similar tokens in Group 1: they are preceded by definite determiners ending in *-s* (*des Drachens, dieses Drachens*).

Table 7.32. *Drache/n*: Number distribution

Period	Singular (%)	Plural (%)	? (%)	Total ( <i>n</i> )
1	45	45	9	11
2	83	17	0	6
3	46	46	8	13
4	75	25	0	16
5	69	31	0	26
6	50	50	0	10
7	75	25	0	24
8	50	50	0	6
9	56	44	0	9
10	43	57	0	7
11	92	8	0	12
<b>All</b>	<b>65</b>	<b>34</b>	<b>1</b>	<b>140</b>

Table 7.33. *Drache/n*: Case distribution

Period	Singular			Plural			
	Nom. (%)	Obl. (%)	Total (n)	Nom. (%)	Obl. (%)	? (%)	Total (n)
1	40	60	5	60	40	0	5
2	40	60	5	0	100	0	1
3	17	83	6	33	50	17	6
4	33	67	12	0	100	0	4
5	50	50	18	25	75	0	8
6	60	40	5	60	40	0	5
7	33	67	18	17	83	0	6
8	67	33	3	0	100	0	3
9	40	60	5	0	100	0	4
10	67	33	3	25	75	0	4
11	73	27	11	0	100	0	1
All	45	55	91	26	65	9	47

Table 7.34. *Drache/n*: Distribution of *-e/ø* and *-(e)n* (all four cases)

Period	Singular					Plural	
	Nom. Sg. (%)	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	Other (%)	Total (n)	<i>-(e)n</i> (%)	Total (n)
1	40	40	60	0	5	100	5
2	40	60	40	0	5	100	1
3	17	17	83	0	6	100	6
4	33	33	67	0	12	100	4
5	50	50	50	0	18	100	8
6	60	60	40	0	5	100	5
7	33	44	44	11	18	100	6
8	67	67	33	0	3	100	3
9	40	40	60	0	5	100	4
10	67	67	33	0	3	100	4
11	73	64	36	0	11	100	1
All	45	47	51	2	91	100	47

Note: The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the second column for comparison; here, as in Group 1a, this value is generally about the same as the proportion of singular tokens ending in *-e/ø*.

Among tokens ending in *-e/ø* (table 7.35) as in Group 1a, apocopated forms (e.g., *drach*) are in the majority in the earlier periods; prior to the 17<sup>th</sup> century, we find only one token ending in *-e*: *drake*, in a verse text in Period 2 (Wittenwiler) that has a strict metrical structure (“Daz was ein **drake** also hön”).<sup>115</sup> The marker *-e* becomes increasingly common beginning in the 17<sup>th</sup> century, and from Period 8 onward, apocopated forms are found only in poetry.

<sup>115</sup> Wittenwiler also uses the apocopated form **drak** when the meter requires it: “Ich forcht, ein **drak** scholt kumen her [...]”

Table 7.35. *Drache/n*: Distribution of *-e* and *-ø* in the singular

Period	<i>-e</i> (%)	<i>-ø</i> (%)	Total ( <i>n</i> )
1	0	100	2
2	33	67	3
3	0	100	1
4	0	100	1
5	0	100	9
6	33	67	3
7	38	63	8
8	100	0	2
9	100	0	2
10	0	100	2
11	100	0	7
<b>All</b>	<b>36</b>	<b>64</b>	<b>43</b>

### 7.2.2 *Fels/en*

Like most other inanimate nouns in Groups 2 and 3, the formerly strong *Fels/en* (< OHG *felis*) occurs mainly in the singular (table 7.36) and in the oblique cases (table 7.37). Among cases, the dative is especially frequent, accounting for 53% of all tokens in the singular and 30% in the plural.

Table 7.36. *Fels/en*: Number distribution

Period	Singular (%)	Plural (%)	? (%)	Total ( <i>n</i> )
1	84	16	0	164
2	100	0	0	9
3	81	19	0	16
4	43	57	0	7
5	78	22	0	27
6	37	51	12	51
7	73	21	6	48
8	45	52	3	64
9	48	50	2	58
10	69	31	0	45
11	76	24	0	45
<b>All</b>	<b>67</b>	<b>31</b>	<b>2</b>	<b>534</b>

The proportion of plural tokens exceeds the mean values for Groups 3a (21%) and 3b (16%). If, as suggested in chapter 4, the pivot for the shift into the OHG/MHG weak declension was the dative plural (this is the form that was preserved and extended into the oblique singular and remaining plural forms), the somewhat elevated plural value is expected. In any case, most plural tokens of *Fels/en* occur in verse texts (106/153); in the prose texts, the number distribution looks more like that of the other Group 3 nouns (see table 7.36a in appendix C).

The distribution of inflectional markers (table 7.38) looks much like that of the nouns in Group 2, at least in the singular; the ending *-e/ø* occurs frequently in the oblique singular forms as well as in the nominative, so that the proportion of *-e/ø* is higher than that of nominative singular tokens throughout. Like *Leichnam* and *Friede/n*, *Fels/en* is still largely strong in the first

few periods (see, again, table 7.38): In Period 1, Merswin usually has *fels* in the nominative singular (7x), *fels* (33x) (occasionally *felse* [2x]) in the accusative singular, *felse* in the dative singular (88x), *felses* in the genitive singular (2x), and *felse* in the plural except in the dative; however, he also has two instances of the weak *felsen* in the dative singular. The *Minneburg* has only strong forms (one genitive singular *felses* and two plural *felse/velse*), while Mandeville has only weak forms (one *felssen* in the accusative singular, one *felsen* in the dative singular, and one *velsen* in the plural). Only strong forms are attested in Period 2; weak forms enter the scene again in Period 3, and from that point onward, strong and weak forms coexist in the singular, while the weak ending *-(e)n* dominates in the plural. Thus, *Fels/en* is quite unstable throughout.

Table 7.37. *Fels/en*: Case distribution

Period	Singular			Plural		
	Nom. (%)	Obl. (%)	Total (n)	Nom. (%)	Obl. (%)	Total (n)
1	5	95	137	19	81	27
2	33	67	9	—	—	0
3	8	92	13	33	67	3
4	0	100	3	50	50	4
5	24	76	21	17	83	6
6	32	68	19	12	88	26
7	37	63	35	30	70	10
8	21	79	29	33	67	33
9	25	75	28	34	66	29
10	32	68	31	21	79	14
11	26	74	34	18	82	11
<b>All</b>	<b>19</b>	<b>81</b>	<b>359</b>	<b>25</b>	<b>75</b>	<b>163</b>

Among tokens ending in *-e/ø*, the ending *-e* occurs only in the dative singular and in the plural, except for two accusative singular tokens in Merswin which are likely anomalous, and three nominative singular tokens in poems of Greiffenberg (Period 7), where the syllabic *-e* completes the metrical structure of the line. All but four tokens ending in *-e* are in Merswin. Given that *Fels/en* was strong in OHG and did not end in *-o* (> MHG *-e*), the low frequency of *-e* is not surprising.

The nominative singular *Felsen* appears for the first time in Period 6 (Klaj) and persists into the modern language, though *Fels* remains prevalent in the later periods (*Felsen* occurs no more than three times in any given period).

In the genitive singular (table 7.39), only *-(e)s* occurs through Period 4; the weak form in *-(e)n* emerges in Period 5, while the hybrid *-(e)ns* is first attested in Period 6. *-(e)s* dies out in the early 17<sup>th</sup> century, leaving the other endings to compete with one another. The weak *Felsen* continues to occur at least until the late 18<sup>th</sup> century. The marker *-ø* is attested once in the early 19<sup>th</sup> century, in an Eichendorff poem whose lines have eight syllables each: “Und so wollen wir uns teilen,/ Eines **Fels** verschiedne Quellen,/ Bleiben so auf hundert Meilen/ Ewig redliche Gesellen!”

The low token frequency of the nominative singular (and the high frequency of the oblique singular forms, particularly the dative) can explain how the marker *-(e)n* ended up in the nominative singular once *Fels/en* had (partly) shifted into the weak declension; the original nominative singular form was likely not very prominent in speakers’ minds at any stage, while the oblique form in *-(e)n* did have sufficient lexical strength to sustain itself. However, the shift

into the weak declension never attained completion. The strong Group 2 doublet in the modern language (nom. sg. *Fels*, gen. sg. *Felses*) is likely not the result of a shift at all, but rather the direct descendant of the OHG strong noun *felis*.

The *Fels/Felsen* split must have occurred sometime in the late 19<sup>th</sup> or early 20<sup>th</sup> century (see 3.2.3); there is no evidence of it in the corpus.

Table 7.38. *Fels/en*: Distribution of *-e/ø* and *-(e)n* (all four cases)

Period	Singular					Plural		
	Nom. Sg. (%)	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	Other (%)	Total (n)	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	Total (n)
1	5	95	3	2	137	70	30	27
2	33	100	0	0	9	—	—	0
3	8	31	62	8	13	67	33	3
4	0	33	67	0	3	0	100	4
5	24	48	52	0	21	0	100	6
6	32	42	47	11	19	0	100	26
7	37	63	37	0	35	10	90	10
8	21	31	62	7	29	0	100	33
9	25	39	61	0	28	0	100	29
10	32	71	26	3	31	0	100	14
11	26	59	41	0	34	0	100	11
<b>All</b>	<b>19</b>	<b>68.5</b>	<b>29</b>	<b>2.5</b>	<b>359</b>	<b>13</b>	<b>87</b>	<b>163</b>

*Note:* The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the second column for comparison. Here, as in Group 2, the proportion of *-e/ø* is consistently greater than that of nominative singular tokens (the markers *-e/ø* are not limited to the nominative singular form, but occur regularly in the oblique singular forms, as well).

Table 7.39. *Fels/en*: Distribution of inflectional markers in the genitive singular

Period	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	<i>-(e)ns</i> (%)	<i>-(e)s</i> (%)	Total (n)
1	0	0	0	100	3
2	—	—	—	—	0
3	0	0	0	100	1
4	—	—	—	—	0
5	0	100	0	0	1
6	0	33	33	33	3
7	0	100	0	0	2
8	0	0	100	0	2
9	0	100	0	0	3
10	50	0	50	0	2
11	—	—	—	—	0
<b>All</b>	<b>6</b>	<b>41</b>	<b>24</b>	<b>29</b>	<b>17</b>

### 7.2.3 *Tropfen*

*Tropfen*, by contrast, shows a clear split in all categories (number, case, and inflectional marker) in all periods beginning with the fourth, in which the animate usage is first attested. The animate *Tropf* ‘idiot’ behaves like a Group 2 noun throughout, whereas the inanimate *Tropfen* ‘drop’, which has animate qualities (see 3.2.3), resembles the more animate of the Group 3 nouns, particularly *Brunnen* and *Funke/n*.

The animate doublet, which has a strong plural in the modern language (*die Tröpfe*), is rarely used in the plural. By contrast, the inanimate *Tropfen*, which still has its original weak plural form (*die Tropfen*), occurs in the plural in about half of all instances; where there is one drop of liquid, there are often others nearby (tables 7.40–7.41). In several periods, however, the singular (usually the oblique form) is considerably more frequent than the plural, which explains why *Tropfen* has not followed the Group 4 path and become feminine.

The animate *Tropf*, which has retained its original nominative singular form (apart from the loss of *-e*) but become strong in all other forms, is used mainly in the nominative in both numbers; in the plural, only the nominative is attested. The inanimate *Tropfen*, which has lost its weak nominative singular ending in *-e/ø*, also occurs frequently in the nominative — and in this respect, it resembles *Brunnen* and *Funke/n* — but here the oblique cases are better represented, particularly the accusative (see table 7.42–7.43). The oblique cases are especially prominent in the prose texts (tables 7.42a–7.43a in appendix C), where the case distribution in the singular looks more like that of the typical Group 3 noun. When verse tokens are excluded, the proportion of nominative in the singular drops to 30%, while that of accusative increases to 63%; the nominative remains in the majority in the plural. Neither doublet ever occurs in the genitive singular, a slot in which, in both cases, the original weak form has been replaced by strong forms ending in *-s*: *Tropf(e)s* (animate), *Tropfens* (inanimate).

In the singular (tables 7.44–7.45), *Tropf* ‘idiot’ almost always ends in *-e/ø* (usually *-ø*; the marker *-e* only occurs once as a strong case marker in the dative in Period 10), and the proportion of *-e/ø* is consistently either larger than or the same as that of nominative singular tokens. *Tropfen* ‘drop’ occurs mainly with *-en*, and here the proportion of *-e/ø* is smaller than that of nominative singular in all periods following the emergence of the animate doublet.

Neither doublet has anything other than *-(e)n* in the plural. The strong plural *Tröpfe* is not attested in the corpus; the animate *Tropf* occurs only three times in the plural, all in Period 6 (and all in one text: Andreae’s *Chymische Hochzeit*). The shift was not yet complete at this stage.

While the animate *Tropf* is always apocopated in the singular (as mentioned earlier in this section, the only instance of *-e* is in the dative and is probably a strong case ending), *Tropfen* — on those rare occasions when it does not end in *-(e)n* — more commonly ends in *-e* (tables 7.46–7.47). Assuming that apocope triggered the shift of the Group 2 nouns into the strong declension, which we cannot prove definitively, it makes sense that the animate doublet should have followed the Group 2 path, but not the inanimate one, which was apocopated less frequently.

Table 7.40. *Tropf/en*: Number distribution (all periods; all four cases)

	<i>Tropfen</i> (all)	<i>Tropf</i> ‘idiot’	<i>Tropfen</i> ‘drop’
<i>n</i> =	250	44	206
Sg. (%)	58	93	50
Pl. (%)	41	7	49
? (%)	1	0	1



Table 7.41. *Tropf/en*: Number distribution, by period (all four cases)

		<i>Tropf/en</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
Period 1	<i>n</i> =	8	0	8
(1350–1400)	Singular (%)	63	—	63
	Plural (%)	38	—	38
Period 2	<i>n</i> =	8	0	8
(1400–1450)	Singular (%)	75	—	75
	Plural (%)	25	—	25
Period 3	<i>n</i> =	5	0	5
(1450–1500)	Singular (%)	20	—	20
	Plural (%)	80	—	80
Period 4	<i>n</i> =	6	1	5
(1500–1550)	Singular (%)	100	100	100
	Plural (%)	0	0	0
Period 5	<i>n</i> =	11	5	6
(1550–1600)	Singular (%)	64	100	33
	Plural (%)	36	0	67
Period 6	<i>n</i> =	20	6	14
(1600–1650)	Singular (%)	35	50	29
	Plural (%)	65	50	71
Period 7	<i>n</i> =	34	17	17
(1650–1700)	Singular (%)	85	100	71
	Plural (%)	15	0	29
Period 8	<i>n</i> =	31	1	30
(1700–1750)	Singular (%)	32	100	30
	Plural (%)	65	0	67
	? (%)	3	0	3
Period 9	<i>n</i> =	27	4	23
(1750–1800)	Singular (%)	63	100	57
	Plural (%)	37	0	43
Period 10	<i>n</i> =	62	7	55
(1800–1850)	Singular (%)	50	100	44
	Plural (%)	48	0	55
	? (%)	2	0	2
Period 11	<i>n</i> =	38	3	35
(1850–1900)	Singular (%)	66	100	63
	Plural (%)	34	0	37

Table 7.42. *Tropf/en*: Case distribution (all periods)

	Singular			Plural		
	<i>Tropf/en</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'	<i>Tropf/en</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
<i>n</i> =	145	41	104	103	3	100
N (%)	57	76	50	50	100	48
A (%)	32	12	40	23	0	24
D (%)	10	12	10	18	0	19
G (%)	0	0	0	5	0	5
? (%)	0	0	0	4	0	4

Table 7.43. *Tropfen*: Case distribution, by period

		Singular			Plural		
		<i>Tropfen</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'	<i>Tropfen</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
Period 1	<i>n</i> =	5	0	5	3	0	3
(1350–1400)	Nom. (%)	0	—	0	33	—	33
	Obl. (%)	100	—	100	67	—	67
Period 2	<i>n</i> =	6	0	6	2	0	2
(1400–1450)	Nom. (%)	33	—	33	50	—	50
	Obl. (%)	67	—	67	50	—	50
Period 3	<i>n</i> =	1	0	1	4	0	4
(1450–1500)	Nom. (%)	100	—	100	75	—	75
	Obl. (%)	0	—	0	25	—	25
Period 4	<i>n</i> =	6	1	5	0	0	0
(1500–1550)	Nom. (%)	67	100	60	—	—	—
	Obl. (%)	33	0	40	—	—	—
Period 5	<i>n</i> =	7	5	2	4	0	4
(1550–1600)	Nom. (%)	71	80	50	75	—	75
	Obl. (%)	29	20	50	0	—	0
	? (%)	0	0	0	25	—	25
Period 6	<i>n</i> =	7	3	4	13	3	10
(1600–1650)	Nom. (%)	43	67	25	69	100	60
	Obl. (%)	57	33	75	23	0	30
	? (%)	0	0	0	8	0	10
Period 7	<i>n</i> =	29	17	12	5	0	5
(1650–1700)	Nom. (%)	72	82	58	20	—	20
	Obl. (%)	28	18	42	60	—	60
	? (%)	0	0	0	20	—	20
Period 8	<i>n</i> =	10	1	9	20	0	20
(1700–1750)	Nom. (%)	30	100	22	40	—	40
	Obl. (%)	70	0	78	60	—	60
Period 9	<i>n</i> =	17	4	13	10	0	10
(1750–1800)	Nom. (%)	53	50	54	40	—	40
	Obl. (%)	47	50	46	60	—	60
Period 10	<i>n</i> =	31	7	24	30	0	30
(1800–1850)	Nom. (%)	61	57	63	57	—	57
	Obl. (%)	39	43	38	43	—	43
Period 11	<i>n</i> =	25	3	22	13	0	13
(1850–1900)	Nom. (%)	64	100	59	31	—	31
	Obl. (%)	36	0	41	69	—	69

Table 7.44. *Tropfen*: Distribution of *-e/ø* and *-(e)n* in the singular (all periods; all four cases)

	<i>Tropfen</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
<i>n</i> =	145	41	104
<i>-e/ø</i> (%)	41	95	20
<i>-(e)n</i> (%)	59	5	80
Other (%)	0	0	0

Table 7.45. *Tropf/en*: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Tropf/en</i> (all)	<i>Tropf</i> ‘idiot’	<i>Tropfen</i> ‘drop’
Period 1 (1350–1400)	<i>n</i> =	5	0	5
	Nom. Sg. (%)	0	—	0
	<i>-e/ø</i> (%)	40	—	40
	<i>-(e)n</i> (%)	60	—	60
Period 2 (1400–1450)	<i>n</i> =	6	0	6
	Nom. Sg. (%)	33	—	33
	<i>-e/ø</i> (%)	33	—	33
	<i>-(e)n</i> (%)	67	—	67
Period 3 (1450–1500)	<i>n</i> =	1	0	1
	Nom. Sg. (%)	100	—	100
	<i>-e/ø</i> (%)	100	—	100
Period 4 (1500–1550)	<i>n</i> =	6	1	5
	Nom. Sg. (%)	67	100	60
	<i>-e/ø</i> (%)	50	100	40
	<i>-(e)n</i> (%)	50	0	60
Period 5 (1550–1600)	<i>n</i> =	7	5	2
	Nom. Sg. (%)	71	80	50
	<i>-e/ø</i> (%)	57	80	0
	<i>-(e)n</i> (%)	43	20	100
Period 6 (1600–1650)	<i>n</i> =	7	3	4
	Nom. Sg. (%)	43	67	25
	<i>-e/ø</i> (%)	43	100	0
	<i>-(e)n</i> (%)	57	0	100
Period 7 (1650–1700)	<i>n</i> =	29	17	12
	Nom. Sg. (%)	72	82	58
	<i>-e/ø</i> (%)	72	94	42
	<i>-(e)n</i> (%)	28	6	58
Period 8 (1700–1750)	<i>n</i> =	10	1	9
	Nom. Sg. (%)	30	100	22
	<i>-e/ø</i> (%)	20	100	11
	<i>-(e)n</i> (%)	80	0	89
Period 9 (1750–1800)	<i>n</i> =	17	4	13
	Nom. Sg. (%)	53	50	54
	<i>-e/ø</i> (%)	41	100	23
	<i>-(e)n</i> (%)	59	0	77
Period 10 (1800–1850)	<i>n</i> =	31	7	24
	Nom. Sg. (%)	61	57	63
	<i>-e/ø</i> (%)	32	100	13
	<i>-(e)n</i> (%)	68	0	88
Period 11 (1850–1900)	<i>n</i> =	25	3	22
	Nom. Sg. (%)	64	100	59
	<i>-e/ø</i> (%)	20	100	9
	<i>-(e)n</i> (%)	80	0	91

*Note:* The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison. This value is generally lower than that of tokens in *-e/ø* in the case of the animate *Tropf* (where *-e/ø* is often found in forms other than the nominative singular), but higher in the case of the inanimate *Tropfen* (where the nominative singular frequently ends in *-(e)n* rather than *-e/ø*).

Table 7.46. *Tropfen*: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Tropfen</i> (all)	<i>Tropfen</i> ‘idiot’	<i>Tropfen</i> ‘drop’
<i>n</i> =	60	39	21
<i>-e</i> (%)	23	3	62
<i>-ø</i> (%)	77	97	38

Table 7.47. *Tropfen*: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

	<i>Tropfen</i> (all)	<i>Tropfen</i> ‘idiot’	<i>Tropfen</i> ‘drop’
Period 1	<i>n</i> = 2	0	2
(1350–1400)	<i>-e</i> (%) 100	—	100
Period 2	<i>n</i> = 2	0	2
(1400–1450)	<i>-e</i> (%) 100	—	100
Period 3	<i>n</i> = 1	0	1
(1450–1500)	<i>-e</i> (%) 100	—	100
Period 4	<i>n</i> = 3	1	2
(1500–1550)	<i>-ø</i> (%) 100	100	100
Period 5	<i>n</i> = 4	4	0
(1550–1600)	<i>-ø</i> (%) 100	100	—
Period 6	<i>n</i> = 3	3	0
(1600–1650)	<i>-ø</i> (%) 100	100	—
Period 7	<i>n</i> = 21	16	5
(1650–1700)	<i>-e</i> (%) 10	0	40
	<i>-ø</i> (%) 90	100	60
Period 8	<i>n</i> = 2	1	1
(1700–1750)	<i>-ø</i> (%) 100	100	100
Period 9	<i>n</i> = 7	4	3
(1750–1800)	<i>-e</i> (%) 43	0	100
	<i>-ø</i> (%) 57	100	0
Period 10	<i>n</i> = 10	7	3
(1800–1850)	<i>-e</i> (%) 20	14	33
	<i>-ø</i> (%) 80	86	67
Period 11	<i>n</i> = 5	3	2
(1850–1900)	<i>-e</i> (%) 40	0	100
	<i>-ø</i> (%) 60	100	0

### 7.3 Discussion

In Groups 3a (including the inanimate *Tropfen*) and 3b, as in Group 2, the MHG weak forms that were very infrequent — and thus, presumably, not readily accessible — have all been replaced by strong forms, either wholly (Group 3a) or in part (Group 3b); this has occurred in the nominative and genitive singular, which now end in *-(e)n* and *-(e)ns*, respectively, and in some cases also in the plural, which often has umlaut (*Garten*, *Schaden*, *Kasten* [almost always], and *Bogen* [occasionally]). In the plural, replacement may have occurred even in cases where there is no umlaut: strong nouns with stems ending in *-en* have the same plural marker as weak nouns (both end in *-en*), both in MHG and in NHG, so the novel form would have been the same as the existing form in these cases.

At the same time, the accusative and dative singular — the forms that have survived and (individually or perhaps, in some cases, in tandem) become the base of the restructured paradigm — are usually the most frequent.

The morphological categories represented in these forms — accusative, dative, singular — have the same range of uses in Group 3 as in all the other groups of (former) weak masculine nouns (1.2.3.2). These forms were also not particularly informative prior to the shift (1.2.3.1); in MHG, forms of a masculine noun ending in *-(e)n* in the dative or accusative singular could belong to at least two different paradigm types: the weak class or the strong *tac* class. While it is possible that the base of the new paradigm is the more informative weak genitive singular (which, like the accusative and dative singular, ended in *-(e)n* in MHG), rather than the accusative or dative, this seems unlikely given that the genitive singular is extremely rare and has itself been replaced.

Within the framework of NM (1.2.2), it makes sense that the inanimate nouns in Group 3 did not follow the Group 2 trajectory, since they were apocopated less frequently than the nouns in Group 2 (they were not affected by the first of the three “anfressende Vorgänge”). However, they could have joined the class of strong/mixed feminine nouns ending in *-e*, like the nouns in Group 4. As noted in 1.2.2, D. Bittner (1991), in her account of the weak masculine nouns, never explains why this did not occur. (The causes of the Group 4 shift are addressed in the next chapter.)

Finally, none of the alternative theories we have considered offers a satisfactory explanation for the different rates at which the shift has proceeded in Groups 3a and 3b: why did some nouns complete the shift centuries ago, while others are still shifting in the modern language? Here, too, token frequency can account for the discrepancy. In Group 3b, where the original nominative singular form ending in *-e* has survived into the modern language alongside the innovative form in *-(e)n*,<sup>116</sup> the proportion of *-e/ø* is generally a bit larger than in Group 3a, but rarely reaches the level we find in Groups 1 and 2 (so that these nouns could not remain weak or follow the Group 2 trajectory); only the formerly strong nouns *Friede/n* and *Fels/en* and the animate *Drache* and *Tropf* ‘idiot’ have *-e/ø* values comparable to those in the first two groups. For most nouns in Group 3b, as in Group 3a, the tendency at first seems to have been toward replacement of the nominative singular and adoption of the oblique form in *-(e)n* as the base of the paradigm: most nouns in Group 3 (both 3a and 3b) acquire *-(e)n* in the nominative singular very early, usually either long before or at the same time as the emergence of the strong ending *-(e)ns* in the genitive singular (compare tables 4.17 and 4.23). However, in Group 3b (but not in Group 3a), the original nominative singular in *-e* has been kept alive by frequent use.

Wurzel (1984b; NM) demonstrates, using the example of *Funke/n*, that the very unnatural mixed paradigm with *-e* in the nominative singular (*Funke*) and *-ens* in the genitive singular (*Funkens*), which we find in the modern language in Group 3b, is unstable, and that it is gradually stabilizing itself via the shift of *Funke* to *Funken* in the nominative singular. However, his account presupposes that the shift of the genitive singular preceded that of the nominative singular, which my data show not to have been the case. Further, it does not explain why the unstable mixed paradigm appears to have prevailed in some cases (*Buchstabe*, *Wille/n*, *Name/n*, *Glaube/n*), but not in others (*Schade/n*, *Gedanke/n*, *Haufe/n*, *Same/n*). Here, again, token frequency offers a convincing explanation: the nouns in Group 3b for which the nominative singular in *-e* is preferred today (*Buchstabe*, *Wille/n*, *Name/n*) and for which the two nominative singular variants alternate freely (*Funke/n*, *Friede/n*) all have more *-e/ø* than *Schade/n*, which usually ends in *-(e)n* in the nominative singular in the modern language.

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<sup>116</sup> Except in the case of *Buchstabe*, which only has *-e* today and is still, for all intents and purposes, a regular weak noun (the *-s* in the genitive singular is optional); see 1.3.5.2.

The proportion of *-e/ø* is not all that much greater for *Wille/n* (24%) than for *Schade/n* (16%), though, and here there is likely at least one other factor at work. As we have seen, both nouns have taken on additional functions in the course of their development: *Wille/n* has become (part of) a preposition (*um ... willen*), while *Schade/n* also exists as an adjective/adverb (*schade*). Once these other uses had become established in the lexicon, given a choice between a nominative singular form ending in *-(e)n* and one ending in *-e*, speakers may have increasingly opted for the variant whose shape least resembled that of the word in its new function: *Schaden* versus *schade*, *Wille* versus *willen*.

The umlaut in the plural may have been introduced for the purpose of number differentiation, as Bojunga, Molz, and others have suggested (see 1.3.1–1.3.2); however, this seems unlikely. The three nouns in Group 3 that regularly have umlaut in the plural (*Garten*, *Kasten*, *Schade/n*) are extremely infrequent in the plural, so that number differentiation probably would not have been necessary most of the time in these cases; on the other hand, the nouns that *do* occur regularly in both numbers (*Bogen*, *Schatten*, *Buchstabe*, *Funke/n*, *Tropfen* ‘drop’) either have not acquired umlaut at all (*Schatten*, *Buchstabe*, *Funke/n*, *Tropfen*) or have acquired it only partially (*Bogen*). Instead, the appearance of umlaut — like that of *-(e)ns* in the genitive singular in Group 1 — likely owes itself to speakers’ uncertainty in the face of competing rules for constructing a form which had not left a lasting impression in their memories — in this case, the plural form.

Why have *Buchstabe* and *Funke/n*, both of which are more frequent in the plural than in the singular, not become feminine, like the nouns in Group 4? *Funke/n*, as we have seen, is more common in the singular when used figuratively, and the figurative usage accounts for the majority of tokens in the prose texts, which are likely more representative of ordinary language use than the verse texts. *Buchstabe*, though, almost never occurs in the singular, and probably the only reason it is still masculine today is that, despite the final *-e*, speakers have continued to associate it with the masculine *Stab*, which I assume *is* relatively frequent in the singular.

In the next section, we explore the trajectories of the fourth and final group of nouns, many of which are used mainly in the plural, like *Buchstabe* and *Funke/n*, but which — unlike these two nouns — have not been able to resist the pull into the mixed feminine class.

## 8 Group 4

Group 4 is the most problematic and (as we see in figure 8.1) least homogeneous of the four groups. It is problematic in part because — as mentioned in 2.2 and 3.1 — most of the nouns which have followed this path are not very frequent at all and thus difficult to track down; the six nouns which I have included here are the six most frequent in the corpus. *Schlange* is the most common of these; *Backe*, *Schnecke*, and *Grille* occur less than 100 times each, while *Rebe* and *Fahne* are somewhat better represented, but still less frequent than one might like. The statistics presented for these nouns — particularly *Backe*, *Schnecke*, and *Grille* — should therefore be taken with a large grain of salt.

In this group, the accusative, dative, and genitive singular have all lost the final *-n* characteristic of the weak declension (*Backen* → *Backe*), and the gender has changed from masculine to feminine. All of the other forms (the nominative singular and all the plural forms) have remained the same, except for the gender shift. Thus, we expect the plural to be more frequent than the singular, assuming that the gender changed because these nouns did not occur very frequently in combination with determiners that were clearly marked for gender (which are found only in the singular), so that speakers did not have many opportunities to form an association with masculine gender. The combination [masculine determiner + noun ending in *-e*] likely was not frequent enough — i.e., did not have sufficient lexical strength — to withstand the forces exerted by the much more type-frequent MHG strong (later mixed) feminine pattern, which had *-e* in all singular forms (cf. the paradigm of MHG *gēbe* in 1.1.1, [3]). Among singular forms, we expect the nominative to be more frequent than the oblique forms, since the form in *-e* has been preserved, while the oblique form in *-n* has been lost.

### 8.1 Number

On the surface, only half of these nouns — *Backe*, *Grille*, and *Rebe* — appear to behave as expected, in the sense that they are more frequent in the plural than in the singular (see figure 8.1 and tables 8.1 [for the whole corpus] and 8.2 [for the diachronic data]). The number distribution for the other nouns — *Fahne*, *Schlange*, and *Schnecke* — more closely resembles that in Group 1a (cf. our benchmark of 66% singular and 31% plural; see table 5.29 at the end of chapter 5). When verse tokens are removed from the data, the proportion of plural tokens increases slightly for *Schlange* (to 47%), but still falls short of the 50% mark, while in the case of *Fahne*, it *decreases* to 18%; the plural values for the other nouns either remain about the same or, as in the case of *Grille*, increase significantly (see tables 8.1a–8.2a in appendix C).

As noted in 3.2.4, inanimate *Schnecken* are overrepresented in the corpus — nearly half of all tokens of *Schnecke* (15/37, or 41%) denote spiral staircases and musical instruments, both of which, not surprisingly, occur primarily in the singular (only one of these tokens is plural). They are concentrated in Periods 5 and 6, where, as we see in table 4.2, the proportion of singular tokens is greatest. The animate snails are plural in half of all instances (10/20); one additional snail has a question mark in the number category and is probably the first member of a compound (“**Schneckhen** hauß”). The singular snails are all in poetry and (except in the fables of Hagedorn) are for the most part limited to similes and metaphors, e.g., “gleich wie ain langsam Schneck” (Fischart, Period 5).

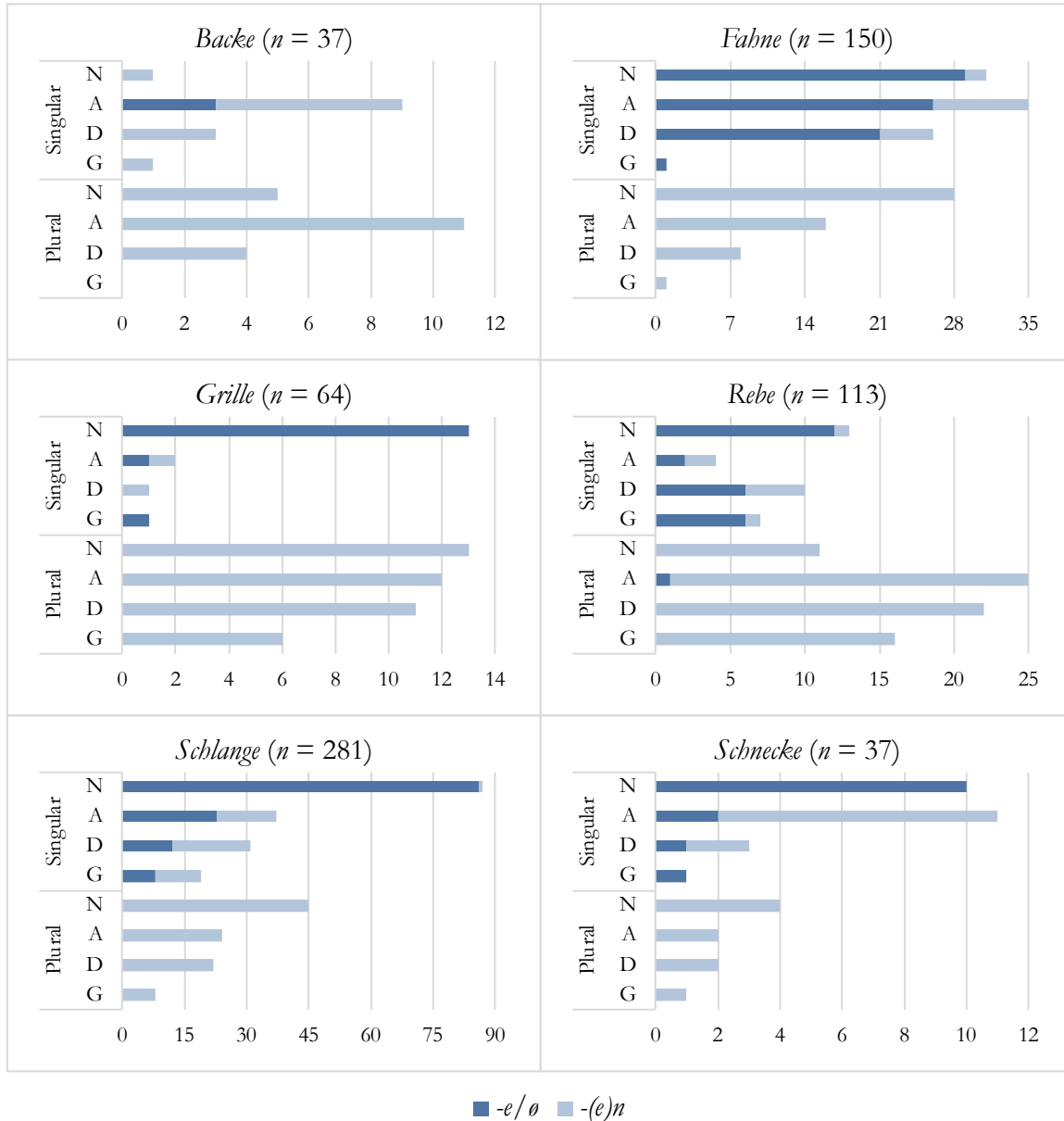


Figure 8.1. Group 4: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ ) in each form.

In the case of *Schlange*, too, the majority of singular tokens (122/175, or 70%) are found in verse texts, where Biblical references and metaphorical language are common; Ruoff's *Adam und Heva*, the source of most *Schlangen* in Period 6, is composed in rhyming verse (and features a talking snake), and in Period 7, where the proportion of singular tokens is especially large, most tokens (25/29, or 86%) are in verse texts (more than half are in Lohenstein's *Epicharis*) and used metaphorically. References to the serpent in the Garden of Eden and to other symbolic snakes are also abundant in philosophical prose texts in the later periods (Bodmer, Nietzsche, Gottsched, Hegel); when these texts are omitted, the proportion of singular in the prose texts (table 8.1a) drops to 45% (38/84).



Table 8.1. Group 4: Number distribution (all periods; all four cases)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>		
<i>n</i> =	37	150	64	113	281	37	Mean	SD
Sg. (%)	41	62	27	30	62	68	48	16
Pl. (%)	57	37	73	66	37	30	50	16
? (%)	0	1	0	4	1	3	1	1

Table 8.2. Group 4: Number distribution, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1 (1350–1400)	<i>n</i> =	1	2	0	7	13	0
	Singular (%)	<b>100</b>	<b>100</b>	—	<b>86</b>	31	—
	Plural (%)	<b>0</b>	<b>0</b>	—	<b>14</b>	69	—
Period 2 (1400–1450)	<i>n</i> =	3	9	1	15	10	2
	Singular (%)	<b>100</b>	<b>89</b>	0	33	20	<b>50</b>
	Plural (%)	<b>0</b>	<b>0</b>	100	67	80	<b>50</b>
	? (%)	0	11	0	0	0	0
Period 3 (1450–1500)	<i>n</i> =	8	9	1	11	45	1
	Singular (%)	38	<b>89</b>	<b>100</b>	<b>45</b>	<b>67</b>	0
	Plural (%)	50	<b>11</b>	<b>0</b>	<b>45</b>	<b>33</b>	100
	? (%)	13	0	0	9	0	0
Period 4 (1500–1550)	<i>n</i> =	2	6	3	4	24	2
	Singular (%)	0	<b>67</b>	<b>100</b>	0	<b>71</b>	<b>50</b>
	Plural (%)	100	<b>33</b>	<b>0</b>	75	<b>25</b>	<b>50</b>
	? (%)	0	0	0	25	4	0
Period 5 (1550–1600)	<i>n</i> =	1	9	2	5	47	9
	Singular (%)	<b>100</b>	<b>100</b>	0	0	<b>68</b>	<b>78</b>
	Plural (%)	<b>0</b>	<b>0</b>	100	80	<b>32</b>	<b>11</b>
	? (%)	0	0	0	20	0	11
Period 6 (1600–1650)	<i>n</i> =	2	28	1	13	25	10
	Singular (%)	0	39	0	0	<b>52</b>	<b>90</b>
	Plural (%)	100	57	100	92	<b>48</b>	<b>10</b>
	? (%)	0	4	0	8	0	0
Period 7 (1650–1700)	<i>n</i> =	4	11	19	3	36	7
	Singular (%)	<b>75</b>	<b>82</b>	0	33	<b>81</b>	43
	? (%)	<b>25</b>	<b>18</b>	100	67	<b>19</b>	57
Period 8 (1700–1750)	<i>n</i> =	4	10	9	11	26	4
	Singular (%)	<b>50</b>	20	22	0	<b>50</b>	<b>50</b>
	Plural (%)	<b>50</b>	80	78	100	<b>46</b>	<b>50</b>
	? (%)	0	0	0	0	4	0
Period 9 (1750–1800)	<i>n</i> =	5	13	9	14	16	1
	Singular (%)	0	77	22	21	<b>63</b>	<b>100</b>
	Plural (%)	100	<b>23</b>	78	79	<b>38</b>	<b>0</b>
Period 10 (1800–1850)	<i>n</i> =	2	20	11	15	18	0
	Singular (%)	0	<b>55</b>	<b>64</b>	47	<b>67</b>	—
	Plural (%)	100	<b>45</b>	<b>36</b>	53	<b>33</b>	—
Period 11 (1850–1900)	<i>n</i> =	5	33	8	15	21	1
	Singular (%)	40	<b>58</b>	25	47	<b>57</b>	<b>100</b>
	Plural (%)	60	<b>42</b>	75	53	<b>43</b>	<b>0</b>

Note: Bold formatting is used wherever the proportion of singular tokens is greater than or equal to that of plural tokens.

Metaphorical and Biblical (singular) snakes also occur somewhat regularly in other prose texts, however, and were/are likely common in everyday language, so that frequency in the plural alone cannot account for the gender shift. An alternative (or supplementary) explanation is also needed for *Fahne*, for which the singular seems to be the norm throughout and becomes *more* — not less — prominent when we exclude verse tokens (though prose tokens account for only a small fraction — 16% — of all tokens of *Fahne*, so that the values for the prose texts may not be representative). The causes of these changes will be explored further in 8.4.1.2 and 8.5.

While *Backe* does have more plural than singular overall, the singular is somewhat better represented in this case than one might expect for a noun in Group 4. In many of the individual periods, it is the more frequent of the two numbers, though the sample sizes are very small throughout. As noted in chapter 3, *Backe* frequently has the meaning ‘lower jaw’; the referent is not always clear in the earlier periods, but at least nine of 14 singular tokens of *Backe* (64%) likely denote the lower jaw, including three forms of the compound *Kinnbacken*.<sup>117</sup> These tokens are concentrated in periods in which the singular is in the majority (1, 2, 7, 8). Of the tokens that clearly denote a cheek, most (17/24, or 71%) are plural.

*Grille* and *Rebe* are well-behaved throughout (the plural is more frequent than the singular), except in five instances, in three of which (*Grille* in Periods 3 and 4, *Rebe* in Period 1) the sample contains fewer than 10 tokens. In Period 4, all three singular tokens of *Grille* are in a fable of Hans Sachs in which one of the characters is a cricket; in Period 10, almost all singular tokens are in poems of Annette von Droste-Hülshoff (5/7). In the case of *Rebe*, the proportion of plural tokens exceeds that of singular tokens everywhere except in Periods 1 and 3, where most singular tokens (3/6 in Period 1 and 4/5 in Period 3) occur in the Biblical context of Noah’s attempts to make wine from a (singular) grapevine.

## 8.2 Case

The case distribution in Group 4 is very uneven in both numbers, as we see in tables 8.3–8.6. On average, the nominative is most frequent, both in the singular (table 8.3) and in the plural (table 8.5; note the mean values in the second-last column of each table). However, the oblique cases are also well represented in this group, particularly in the case of *Backe*, which appears in the accusative in more than half of all instances. When verse texts are excluded, the proportion of oblique tokens increases for all nouns (see tables 8.3a–8.6a in appendix C).

In the singular, in most periods (table 8.4), the inanimate *Backe*, *Fahne*, and *Rebe* are more frequent in the oblique cases than in the nominative, while the opposite is true of the more animate *Grille* and *Schlange*. *Schnecke*, which is often inanimate, swings back and forth.

In the plural, the case distribution by period is more variable (table 8.6). *Backe* and *Rebe* are still mostly oblique, as in the singular, but *Fahne* has more nominative in the plural than in the singular, while *Grille* and *Schlange* have more oblique tokens. In the plural, *Grille* is inanimate (denoting a whim or fancy) in 32/46 instances (71%); the plural *Schlangen* are usually literal rather than metaphorical and presented from the perspective of humans, who look upon them as objects to be feared, fought with, consumed as food, and so forth. *Grille*, *Schlange*, and *Schnecke* all appear somewhat frequently in partitive expressions following words such as

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<sup>117</sup> *Kinnbacken* also occurs three times in the plural, but in two of these three instances, it refers to loose jaw bones that have been dug out of the ground for scientific study, rather than to the jaw of a living human.

*voll(er)* and *allerlei*, as well as numerals and other expressions of quantity (*viel*). As noted in 2.2, these words usually govern the genitive in the earlier periods, but the usage shifts in the course of ENHG, and since the nouns that follow them are usually unprecedented, the case is often unclear — hence the elevated values in the question-mark category in these instances.

Table 8.3. Group 4: Case distribution in the singular (all periods)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<i>n</i> =	15	92	17	34	174	25		
N (%)	7	33	76	38	50	40	41	21
A (%)	60	38	12	12	21	44	31	18
D (%)	20	28	6	29	18	12	19	8
G (%)	7	1	6	21	11	4	8	6
? (%)	7	0	0	0	0	0	1	2

Table 8.4. Group 4: Case distribution in the singular, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	1	2	0	6	4	0
(1350–1400)	Nom. (%)	0	50	—	0	75	—
	Obl. (%)	100	50	—	100	25	—
Period 2	<i>n</i> =	3	8	0	5	2	1
(1400–1450)	Nom. (%)	0	50	—	40	0	100
	Obl. (%)	100	50	—	60	100	0
Period 3	<i>n</i> =	3	8	1	5	30	0
(1450–1500)	Nom. (%)	0	0	0	40	47	—
	Obl. (%)	100	100	100	60	53	—
Period 4	<i>n</i> =	0	4	3	0	17	1
(1500–1550)	Nom. (%)	—	75	67	—	53	0
	Obl. (%)	—	25	33	—	47	100
Period 5	<i>n</i> =	1	9	0	0	32	7
(1550–1600)	Nom. (%)	0	22	—	—	56	57
	Obl. (%)	100	78	—	—	44	43
Period 6	<i>n</i> =	0	11	0	0	13	9
(1600–1650)	Nom. (%)	—	18	—	—	54	0
	Obl. (%)	—	82	—	—	46	100
Period 7	<i>n</i> =	3	9	0	1	29	3
(1650–1700)	Nom. (%)	0	0	—	0	55	33
	Obl. (%)	100	100	—	100	45	67
Period 8	<i>n</i> =	2	2	2	0	13	2
(1700–1750)	Nom. (%)	50	0	100	—	15	100
	Obl. (%)	50	100	0	—	85	0
Period 9	<i>n</i> =	0	10	2	3	10	1
(1750–1800)	Nom. (%)	—	40	100	67	50	100
	Obl. (%)	—	60	0	33	50	0
Period 10	<i>n</i> =	0	11	7	7	12	0
(1800–1850)	Nom. (%)	—	55	71	57	50	—
	Obl. (%)	—	45	29	43	50	—
Period 11	<i>n</i> =	2	19	2	7	12	1
(1850–1900)	Nom. (%)	0	47	100	43	58	100
	Obl. (%)	100	53	0	57	42	0

Table 8.5. Group 4: Case distribution in the plural (all periods)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>		
<i>n</i> =	21	55	47	75	105	11	Mean	SD
N (%)	24	51	28	15	43	36	33	12
A (%)	52	29	26	33	23	18	30	11
D (%)	19	15	23	29	21	18	21	5
G (%)	0	2	13	21	8	9	9	7
? (%)	5	4	11	0	6	18	7	6

Table 8.6. Group 4: Case distribution in the plural, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	0	0	0	1	9	0
(1350–1400)	Nom. (%)	—	—	—	0	33	—
	Obl. (%)	—	—	—	100	44	—
	?	—	—	—	0	22	—
Period 2	<i>n</i> =	0	0	1	10	8	1
(1400–1450)	Nom. (%)	—	—	0	10	25	0
	Obl. (%)	—	—	100	90	63	100
	?	—	—	0	0	13	0
Period 3	<i>n</i> =	4	1	0	5	15	1
(1450–1500)	Nom. (%)	50	0	—	0	13	100
	Obl. (%)	50	100	—	100	80	0
	?	0	0	—	0	7	0
Period 4	<i>n</i> =	2	2	0	3	6	1
(1500–1550)	Nom. (%)	0	0	—	33	17	100
	Obl. (%)	100	100	—	33	83	0
	?	0	0	—	33	0	0
Period 5	<i>n</i> =	0	0	2	4	15	1
(1550–1600)	Nom. (%)	—	—	50	50	40	0
	Obl. (%)	—	—	0	50	53	0
	?	—	—	50	0	7	100
Period 6	<i>n</i> =	2	16	1	12	12	1
(1600–1650)	Nom. (%)	50	63	0	8	75	0
	Obl. (%)	50	31	100	92	17	100
	?	0	6	0	0	8	0
Period 7	<i>n</i> =	1	2	19	2	7	4
(1650–1700)	Nom. (%)	0	50	16	0	43	50
	Obl. (%)	100	50	79	100	57	50
	?	0	0	5	0	0	0
Period 8	<i>n</i> =	2	8	7	11	12	2
(1700–1750)	Nom. (%)	50	0	57	18	50	0
	Obl. (%)	50	100	43	82	50	100
Period 9	<i>n</i> =	5	3	7	11	6	0
(1750–1800)	Nom. (%)	0	33	0	27	67	—
	Obl. (%)	100	67	100	73	33	—
Period 10	<i>n</i> =	2	9	4	8	6	0
(1800–1850)	Nom. (%)	0	89	100	13	50	—
	Obl. (%)	100	11	0	88	50	—
Period 11	<i>n</i> =	3	14	6	8	9	0
(1850–1900)	Nom. (%)	33	57	17	0	67	—
	Obl. (%)	67	43	83	100	33	—

### 8.3 Gender

As we see in tables 8.7 (whole data set) and 8.7 (diachronic data), all nouns in this group have masculine gender at least some of the time, though the feminine — which ultimately wins out — is generally more common. Overall (table 8.7), *Schnecke*, which occurs 10 times (all masculine) with the meaning ‘spiral staircase’, has the largest proportion of masculine tokens overall; for *Backe*, which is still masculine today in many southern dialects, the proportion of masculine tokens is only slightly less. Unlike the other nouns in this group, *Fahne* has neuter gender in a few instances alongside the expected masculine and feminine: there are three neuter *Fahnen* in Period 4, and one (in poetry and deliberately archaic) in Period 8.

The diachronic distribution of gender values is given in table 8.8. *Rebe* and *Schlange* are feminine already in Period 1; *Rebe*, which had feminine gender in OHG (see 3.2.4), is still a feminine noun at this point, while in the case of *Schlange*, the masculine and feminine compete with one another. *Schnecke* does not occur with clear gender marking until Period 4, where it is feminine. The first feminine token of *Fahne* appears in the early 15<sup>th</sup> century, but the masculine remains dominant until the 17<sup>th</sup> century; in the 16<sup>th</sup> century, apart from three instances of neuter gender, all forms of *Fahne* are masculine. *Backe* is the last to come on board, in Period 11.

For all of these nouns — even those that are more frequent in the singular than in the plural (*Fahne*, *Schlange*, *Schnecke*) — a substantial share of tokens (usually about half or more) have unknown gender, both overall and in most of the individual periods. Crucially, the proportion of tokens with question marks in the gender category generally exceeds that of plural tokens (this is true for all nouns except *Grille*; compare tables 8.1 and 8.7), indicating the absence of gender marking in the singular as well as in the plural. Even when speakers did encounter the singular forms of these nouns, they were not always reminded of the gender; in other words, encounters with the singular forms would have strengthened the impressions left by the noun forms, but not always the association with masculine gender. In all, there are 59 singular tokens in Group 4 that have unknown gender (see table 4.8 in chapter 4), including three of *Backe*, 14 of *Fahne*, 32 of *Schlange*, seven of *Schnecke*, and two of *Rebe*; about a third of these (22/59) are unpreceded, while most of the remaining tokens (32/37) are preceded by forms of *ein*, *kein*, and possessive determiners (*mein*, *dein*, *unser*, etc.), which in ENHG often end in - $\emptyset$  in the nominative singular, even when they are feminine.

Table 8.7. Group 4: Gender distribution (all periods; all four cases; singular and plural)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>		
<i>n</i> =	37	150	64	113	281	37	Mean	SD
m. (%)	24	17	6	6	9	27	15	8
f. (%)	5	31	20	22	42	22	24	11
n. (%)	0	3	0	0	0	0	0	1
? (%)	70	49	73	72	49	51	61	11

Table 8.8. Group 4: Gender distribution, by period (all four cases; singular and plural)

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	1	2	0	7	13	0
(1350–1400)	m. (%)	100	100	—	0	23	—
	f. (%)	0	0	—	86	8	—
	? (%)	0	0	—	14	69	—
Period 2	<i>n</i> =	3	9	1	15	10	2
(1400–1450)	m. (%)	33	33	0	20	0	0
	f. (%)	0	11	0	7	20	0
	? (%)	67	56	100	73	80	100
Period 3	<i>n</i> =	8	9	1	11	45	1
(1450–1500)	m. (%)	25	78	100	36	20	0
	f. (%)	0	0	0	0	31	0
	? (%)	75	22	0	64	49	100
Period 4	<i>n</i> =	2	6	3	4	24	2
(1500–1550)	m. (%)	0	17	100	0	13	0
	f. (%)	0	0	0	0	29	50
	n. (%)	0	50	0	0	0	0
	? (%)	100	33	0	100	58	50
Period 5	<i>n</i> =	1	9	2	5	47	9
(1550–1600)	m. (%)	100	67	0	0	19	0
	f. (%)	0	0	0	0	28	11
	? (%)	0	33	100	100	53	89
Period 6	<i>n</i> =	2	28	1	13	25	10
(1600–1650)	m. (%)	0	18	0	0	0	90
	f. (%)	0	18	0	0	48	0
	? (%)	100	64	100	100	52	10
Period 7	<i>n</i> =	4	11	19	3	36	7
(1650–1700)	m. (%)	75	27	0	0	0	14
	f. (%)	0	18	0	33	64	29
	? (%)	25	55	100	67	36	57
Period 8	<i>n</i> =	4	10	9	11	26	4
(1700–1750)	m. (%)	25	0	0	0	0	0
	f. (%)	0	10	22	0	50	50
	n. (%)	0	10	0	0	0	0
	? (%)	75	80	78	100	50	50
Period 9	<i>n</i> =	5	13	9	14	16	1
(1750–1800)	f. (%)	0	77	22	21	56	100
	? (%)	100	23	78	79	44	0
Period 10	<i>n</i> =	2	20	11	15	18	0
(1800–1850)	f. (%)	0	50	64	47	67	—
	? (%)	100	50	36	53	33	—
Period 11	<i>n</i> =	5	33	8	15	21	1
(1850–1900)	f. (%)	40	58	25	47	57	100
	? (%)	60	42	75	53	43	0

## 8.4 Inflectional Marker

### 8.4.1 *-e/ø, -(e)n*

In Group 4, in general, the markers *-e/ø* are prevalent in the singular, while *-(e)n* dominates in the plural, accounting — as in Groups 1 and 3 — for nearly 100% of all tokens (table 8.9). In other words, the forms that have been preserved — the (nominative) singular ending in *-e* and the plural ending in *-(e)n* — are, as expected, very frequent throughout, and the token frequency of these forms generally exceeds that of the singular forms ending in *-(e)n* (the weak oblique forms), which have been lost. *Backe* and *Schnecke*, which are frequently singular and inanimate (and thus more often oblique), have less *-e/ø* than the other nouns in this group. Overall (see the bottom three rows of table 8.9), *-(e)n* is more common than *-e/ø*, except in the case of *Fahne*, for which the two markers are about evenly distributed. No noun in this group ever has markers other than *-e/ø* or *-(e)n* in any form.

The most common form of non-weak (innovative) inflection in Group 4 is loss of *-(e)n* in the oblique singular forms (table 8.12); however, *-(e)n* is also sometimes lost in the plural, and there are a few instances of *-(e)n* in the nominative singular.

Table 8.9. Group 4: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<b>Sg., n =</b>	15	93	17	34	174	25		
<i>-e/ø</i> (%)	20	83	88	76	74	56	66	23
<i>-(e)n</i> (%)	80	17	12	24	26	44	34	23
<b>Pl., n =</b>	21	55	47	75	105	11		
<i>-e/ø</i> (%)	0	0	2	1	1	9	2	3
<i>-(e)n</i> (%)	100	100	98	99	99	91	98	3
<b>All, n =</b>	37	150	64	113	281	37		
<i>-e/ø</i> (%)	8	51	25	24	46	41	33	15
<i>-(e)n</i> (%)	92	49	75	76	54	59	67	15

Table 8.10. Group 4: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<i>n</i> =	37	150	64	113	281	37		
N. Sg. (%)	3	21	20	12	31	27	19	9
<i>-e/ø</i> (%)	8	51	25	24	46	41	33	15

Note: The values for *-e/ø* include tokens in all four cases.

In the singular, the distribution of *-e/ø* and *-(e)n* remains largely the same across all periods (table 8.11); *Backe* has more *-(e)n* than *-e/ø* throughout, except in Periods 1 and 11, while for the other nouns, *-e/ø* is usually in the majority. Most of these nouns seem to have finished shifting in the 18<sup>th</sup> century; from Period 9 onward, all singular tokens of these nouns end in *-e/ø*.

The *-e/ø* in the singular is not all in the nominative, where this marker is expected in the weak paradigm, nor are the markers *-e/ø* limited in the non-nominative singular forms to tokens that are clearly marked feminine (which suggests that in some instances, the loss of the weak ending *-(e)n* may predate the gender shift). The proportion of singular tokens ending in *-e/ø* is greater than that of nominative singular tokens both overall (table 8.10) and in many of the

individual periods (table 8.11). At the same time, the marker *-(e)n* in the oblique forms is not confined to masculine tokens; all nouns except *Backe* and *Grille* are feminine and weak in the oblique singular forms at least once. Weak inflection paired with feminine gender is most common in the case of *Schlange*, for which 30 of 70 feminine oblique singular forms (43%) are weak. *Rebe* has two weak feminine tokens in the singular, while *Fahne* and *Schnecke* have one each.

Most uninflected oblique singular tokens (62/114, or 54%) are feminine and occur in the later periods (Periods 8–11); by this time, the shifts were largely complete, and the oblique forms ending in *-e* had become established as standard. However, many, including 14 masculine tokens (13 of *Fahne* and one of *Backe*) and 10 tokens of unknown gender (six of *Fahne*, three of *Schlange*, and one of *Schnecke*), are found in periods in which the shift was still in progress — i.e., in which we continue to find weak tokens ending in *-(e)n* in the oblique singular forms. Uninflected oblique singular tokens with masculine or unknown gender are most common in the cases of *Fahne* and *Schlange*; among non-nominative feminine tokens ending in *-e/ø*, all nouns in Group 4 are represented except *Grille* and *Backe* (*Rebe* [six tokens], *Schlange* [13 tokens], *Schnecke* [three tokens], *Fahne* [six tokens]).

Almost all uninflected oblique singular tokens in Periods 1–7, including those that are feminine, appear in verse texts, and in many cases, constraints of rhyme and meter are likely at least partly responsible for the lack of ending. *Fahne* (: *gan, han, man, verlan*) and *Schlange* (: *bang, gsang, lange*) occur regularly in rhyming couplets, and the meter is generally quite rigid. The four uninflected tokens of *Schnecke* in this category (two feminine in Period 7 [Lohenstein] and one feminine and one with unknown gender in Period 5 [Fischart]) may also have lost their endings for metrical reasons.

However, the omission of *-(e)n* in the oblique singular forms is not limited to poetry; in the earlier periods, *Rebe*, *Fahne*, and *Schlange* are also sometimes left uninflected in prose texts (*Fahne* once, *Schlange* twice, and *Rebe* four times). *Rebe*, as noted in 3.2.4, was both strong and weak in OHG, so here the early strong forms are to be expected. Five out of six uninflected singular tokens of *Rebe* are from Period 1; the sixth is from Period 7, at which point *Rebe* seems to have completed the gender shift.

*Fahne* and *Schlange*, like *Schelm*, *Leichnam*, and *Hahn* in Group 2 and *Brunnen* and *Name/n* in Group 3, both have stems ending in a nasal. This may account for at least some of the 22 oblique singular tokens of *Fahne* and 10 of *Schlange* ending in *-ø* in Periods 1–7 — particularly those that are masculine or have unknown gender, but some weak feminine tokens may have been affected, as well. It may also explain in part why these two nouns have lost their *-(e)n* in the oblique singular forms, and their membership in the weak declension, even though, in both cases, both the nominative singular and at least one of the oblique singular forms are well represented (see tables 8.3 and 8.4). Even when speakers of MHG/ENHG did produce weak oblique forms of *Fahne* and *Schlange* ending in *-(e)n*, their interlocutors may not always have detected the ending, and may have processed these tokens as strong forms ending in *-ø*.

In addition to losing their weak inflectional markers in the oblique singular forms, many of the nouns in Group 4 occasionally have *-(e)n* in the nominative singular (table 8.12). *Fahne* has it in two instances, both in Götz' memoirs (Period 5), and *Schlange*, *Backe*, and *Rebe* have it in one instance each, in Periods 7, 8, and 3, respectively. In table 8.11, we see that in all of these cases except *Schlange* in Period 7 (where most singular non-nominative tokens end in *-e/ø*), the proportion of nominative singular tokens exceeds that of singular tokens ending in *-e/ø*. Two out of five of these tokens are clearly marked for masculine gender:



vnd wahr der spieß weiß vnd schwartz gemallt, **der fannenn** auch weiß vnd schwartz (Götz, Period 5)

Do nw **derselb wild reben** in einen guoten weingarten gepflantz wardt (Schedel, Period 3)

Two lack clear gender markers (in the first example, the token has no accompanying determiner at all; in the second example, the determiner *ein* accompanies several nouns, some of which are neuter):

Du hast ein langenn spieß, vnd ein grossenn fahnenn darann, reitt mit dorthin zu jhenem hauffenn, bis daz des reichs **fannenn** der adler vonn Kostentz herrauß khombtt (Götz, Period 5)

denn bald siehet solches als wie ein Horn, Hirn-Schädel, **Kinn-Backen**, Schulter-Blat oder Rück-Grad aus; (Behrens, Period 8)

Finally, the token of *Schlange* is feminine; the determiner preceding it is not clearly marked for gender (*ein*), but the resumptive relative pronoun does have a feminine marker (*die*):

ist doch die Welt nichts als ein **Schlangen**/ die da voller Giff (Abraham a Sancta Clara, Period 7)

Unlike the nouns in Group 1, then, many of these nouns have at times wandered onto the Group 3 trajectory, though they never have *-(e)ns* in the genitive singular. Notably, with the exception of *Schnecke*, which is poorly represented in the corpus, the only noun in Group 4 that never has *-(e)n* in the nominative singular is *Grille*, for which the proportion of nominative tokens in the singular (76%) is higher than for any other noun in this study except the animate *Tropf* (also 76%). The remaining nouns in Group 4 (*Backe*, *Fahne*, *Rebe*, *Schlange*) have no more than 50% nominative in the singular, and most have considerably less, as we see in table 8.3. In the case of *Grille*, the high token frequency of the nominative relative to the other singular forms has likely prevented it from being replaced.

Non-weak inflection is rare in the plural in Group 4; all tokens but four end in *-(e)n*. The four that do not (see table 8.11) all have the marker *-ø*. In Period 5, we find one token each of *Schlange*, *Schnecke*, and *Grille*, all in Ruoff's play about Adam and Eve (Period 5) in the same long list of nouns: "Frösch, krott und spinn, ouch ratz und müss/ **schlang**, würm und flöch, ouch unbeyss, lüss,/ egechs, **gerill**, wäntel und **schnäck**,/ otter, wisel und die höwschräck!" Some of these nouns have plural markers and others do not, likely for metrical reasons; in the case of *Schlange*, again, the nasal may have contributed. In Period 1 (in the *Schachzabelbuch*), *Rebe* occurs once with *-ø* in the plural as the head of the compound *weinreb*; as we have seen, tokens that are compound heads tend to be more susceptible to loss of endings than those that are not.

Table 8.11. Group 4: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	1	2	0	6	4	0
(1350–1400)	Nom. Sg. (%)	0	50	—	0	75	—
	<i>-e/ø</i> (%)	100	100	—	83	75	—
	<i>-(e)n</i> (%)	0	0	—	17	25	—
Period 2	<i>n</i> =	3	8	0	5	2	1
(1400–1450)	Nom. Sg. (%)	0	50	—	40	0	100
	<i>-e/ø</i> (%)	0	88	—	40	0	100
	<i>-(e)n</i> (%)	100	13	—	60	100	0
Period 3	<i>n</i> =	3	8	1	5	30	0
(1450–1500)	Nom. Sg. (%)	0	0	0	40	47	—
	<i>-e/ø</i> (%)	0	88	0	20	50	—
	<i>-(e)n</i> (%)	100	13	100	80	50	—
Period 4	<i>n</i> =	0	4	3	0	17	1
(1500–1550)	Nom. Sg. (%)	—	75	67	—	53	0
	<i>-e/ø</i> (%)	—	100	67	—	65	0
	<i>-(e)n</i> (%)	—	0	33	—	35	100
Period 5	<i>n</i> =	1	9	0	0	32	7
(1550–1600)	Nom. Sg. (%)	0	22	—	—	56	57
	<i>-e/ø</i> (%)	0	0	—	—	63	86
	<i>-(e)n</i> (%)	100	100	—	—	38	14
Period 6	<i>n</i> =	0	11	0	0	13	9
(1600–1650)	Nom. Sg. (%)	—	18	—	—	54	0
	<i>-e/ø</i> (%)	—	64	—	—	77	0
	<i>-(e)n</i> (%)	—	36	—	—	23	100
Period 7	<i>n</i> =	3	9	0	1	29	3
(1650–1700)	Nom. Sg. (%)	0	0	—	0	55	33
	<i>-e/ø</i> (%)	0	89	—	100	79	100
	<i>-(e)n</i> (%)	100	11	—	0	21	0
Period 8	<i>n</i> =	2	2	2	0	13	2
(1700–1750)	Nom. Sg. (%)	50	0	100	—	15	100
	<i>-e/ø</i> (%)	0	100	100	—	100	100
	<i>-(e)n</i> (%)	100	0	0	—	0	0
Period 9	<i>n</i> =	0	10	2	3	10	1
(1750–1800)	Nom. Sg. (%)	—	40	100	67	50	100
	<i>-e/ø</i> (%)	—	100	100	100	100	100
Period 10	<i>n</i> =	0	11	7	7	12	0
(1800–1850)	Nom. Sg. (%)	—	55	71	57	50	—
	<i>-e/ø</i> (%)	—	100	100	100	100	—
Period 11	<i>n</i> =	2	19	2	7	12	1
(1850–1900)	Nom. Sg. (%)	0	47	100	43	58	100
	<i>-e/ø</i> (%)	100	100	100	100	100	100

Note: The inflectional marker values presented here include tokens in all four cases, as well as those marked “?” in the case category. The proportion of nominative singular tokens is given in the top row of each block for comparison.

Table 8.12. Group 4: Distribution of non-weak (innovative) tokens (all periods)

Noun	N. Sg. in <i>-(e)n</i> ( <i>n</i> )	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Pl. in <i>-ø</i> ( <i>n</i> )	Total non-weak ( <i>n</i> )	Non-weak (%)	Total tokens ( <i>n</i> )
<i>Backe</i>	1	3	0	4	11	37
<i>Fahne</i>	2	48	0	50	33	150
<i>Grille</i>	0	2	1	3	5	64
<i>Rebe</i>	1	14	1	16	14	113
<i>Schlange</i>	1	43	1	45	16	281
<i>Schnecke</i>	0	4	1	5	14	37

### 8.4.2 -e, -ø

Given that all nouns in Group 4 now end in *-e* in all four singular forms, it is not surprising that the percentage of *-e* in the singular is higher here than in the other groups (see table 8.13 for the entire data set, and table 8.14 for the breakdown by period). It is lowest for *Schnecke*, which rarely occurs in the singular in the later periods.

Table 8.13. Group 4: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<i>n</i> =	3	77	15	26	129	14		
<i>-e</i> (%)	67	51	87	62	47	36	58	16
<i>-ø</i> (%)	33	49	13	38	53	64	42	16

Table 8.14. Group 4: Distribution of *-e* and *-ø* in the singular, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1 (1350–1400)	<i>n</i> =	1	2	0	5	3	0
	<i>-e</i> (%)	0	0	—	0	67	—
	<i>-ø</i> (%)	100	100	—	100	33	—
Period 2 (1400–1450)	<i>n</i> =	0	7	0	2	0	1
	<i>-e</i> (%)	—	0	—	0	—	0
	<i>-ø</i> (%)	—	100	—	100	—	100
Period 3 (1450–1500)	<i>n</i> =	0	7	0	1	15	0
	<i>-e</i> (%)	—	0	—	0	7	—
	<i>-ø</i> (%)	—	100	—	100	93	—
Period 4 (1500–1550)	<i>n</i> =	0	4	2	0	11	0
	<i>-e</i> (%)	—	0	0	—	0	—
	<i>-ø</i> (%)	—	100	100	—	100	—
Period 5 (1550–1600)	<i>n</i> =	0	0	0	0	20	6
	<i>-e</i> (%)	—	—	—	—	0	0
	<i>-ø</i> (%)	—	—	—	—	100	100
Period 6 (1600–1650)	<i>n</i> =	0	7	0	0	10	0
	<i>-e</i> (%)	—	57	—	—	40	—
	<i>-ø</i> (%)	—	43	—	—	60	—
Period 7 (1650–1700)	<i>n</i> =	0	8	0	1	23	3
	<i>-e</i> (%)	—	0	—	100	52	33
	<i>-ø</i> (%)	—	100	—	0	48	67
Period 8 (1700–1750)	<i>n</i> =	0	2	2	0	13	2
	<i>-e</i> (%)	—	50	100	—	92	100
	<i>-ø</i> (%)	—	50	0	—	8	0
Period 9 (1750–1800)	<i>n</i> =	0	10	2	3	10	1
	<i>-e</i> (%)	—	80	100	100	80	100
	<i>-ø</i> (%)	—	20	0	0	20	0
Period 10 (1800–1850)	<i>n</i> =	0	11	7	7	12	0
	<i>-e</i> (%)	—	73	100	86	75	—
	<i>-ø</i> (%)	—	27	0	14	25	—
Period 11 (1850–1900)	<i>n</i> =	2	19	2	7	12	1
	<i>-e</i> (%)	100	95	100	86	100	100
	<i>-ø</i> (%)	0	5	0	14	0	0

Here, as in Group 1a, the proportion of tokens ending in *-e* increases over time, while that of apocopated tokens decreases (table 8.13). Until Period 6, all tokens are apocopated except in the case of *Schlange*, which has some forms ending in *-e* in the first three periods.

As in Group 1a, the apocope is likely regional in most instances in the earlier periods; *Fahne* was already apocopated in most cases in MHG because of the stem-final nasal (see 1.1.1). (*Schlange* was not, according to Lexer, but the final *-g* [k] may still have been pronounced at this stage; it is not pronounced in the modern standard language). The *-e* in this group was likely restored following standardization by analogy with other feminine nouns that ended in *-e*.

The nouns in Group 4 never have *-e/ø* in the plural.

## 8.5 Discussion

It has been suggested in the literature (see 1.3.3) that nouns in Group 4 are, in general, more frequent in the plural than in the singular, the assumption being that if the singular forms were very infrequent, speakers would not be able to recall them and would reconstruct them according to the more type-frequent mixed feminine paradigm, which also has *-(e)n* in the plural. This has turned out to be the case for *Grille*, *Rebe*, and *Backe*, but not for the remaining nouns in this group.

Even when the singular is the dominant number, though, the plural is generally more prominent here than in the other groups of nouns. The values for *Fahne* and *Schlange*, both of which occur in the plural in 37% of all instances, are above the Group 1a mean of 31%, and when the 17 inanimate tokens of *Schnecke*, which are likely not representative (all but one are in the same two texts), are excluded, the proportion of plural tokens increases to 50% (10/20).

In addition, as we have seen, many of these nouns (and their accompanying determiners/adjectives) frequently lack clear gender markers in the singular as well as in the plural, so that not all instances of use in the singular would have strengthened the association with masculine gender.

However, this is true of most other nouns in the study, as well (see table 4.8), and the plural values for *Fahne* and *Schlange* are comparable to those of many nouns in Groups 1 and 2 (and also *Buchstabe* and *Funke/n* in Group 3b), so that the question remains why *Fahne* and *Schlange* did not either remain weak or become strong like *Schelm*, and conversely, why these other nouns in Groups 1, 2, and 3b did not become feminine.

*Buchstabe* and *Funke/n*, both of which are used mainly in the plural, have already been addressed above; see 7.4.

*Fahne* could not have remained weak because, unlike most nouns in Group 1, it almost never has *-(e)n* in the oblique singular forms, even in the earlier periods. It could, however, have followed the Group 2 path, and considering how often it is masculine and apocopated, it is surprising that it did not. In this case, the combination of stem-final nasal and moderate frequency in the plural may have furthered the gender shift. In the plural, *Fahne* is used mainly in the nominative and accusative, where accompanying determiners have the same form as in the feminine singular. If the ending were frequently omitted in the plural due to the nasal — which seems likely, although there is no evidence of this in the orthography — speakers might infer that the singular form was feminine. This may also have happened with *Schlange*, which, like *Fahne*, is not as frequent in the plural as expected (so that low token frequency in the singular does not suffice to explain the gender shift), but more so than most nouns in Group 1a. The weak

plural forms of these nouns were likely frequent enough in spite of the nasal to keep them stable and prevent them from being replaced by strong forms. Number differentiation may also have been a contributing factor here: both nouns are frequent enough in both numbers that it would make sense to keep the plural and singular distinct.

If the gender shift occurred in part because of the interaction of a stem-final nasal with the ending *-(e)n* in the plural, then we also have an explanation for why *Schmerz* did *not* become feminine, despite being very frequent in the plural: the sequence *die Schmerz* would not have been possible in any form.

Why has this not happened in the case of *Schelm*, though, which is even more frequent in the plural than *Fahne* and *Schlange*? *Schelm* and all the Group 1 nouns that have more than about 30% plural are animate, and denote male human beings or animals perceived as male by default (*Affe*, *Bär*). In these cases, the natural gender of the (perceived) referent has likely taken precedence, overriding other factors (including token frequency) that might have favored a gender shift. *Fahne* and *Schlange* have had no such anchor to keep them masculine.

In any case, of the possible explanations that we have considered, the usage-based approach seems — in this group, as in the other groups of nouns — to handle the data most effectively. The forms that have been retained (the plural and nominative singular) are neither more informative (1.2.3.1), nor are the semantics of the relevant morphological categories more general (1.2.3.2), than in Groups 1, 2, and 3. As we have seen, the only form in the weak paradigm from which the other forms can reliably be predicted is the genitive singular, which has been lost in this case. NM does not offer a satisfactory explanation for the divergence of Groups 3 and 4 (see 7.4); token frequency at least explains why the *-(e)n* has been preserved in the singular in Group 3, but not in Group 4, where singular forms ending in *-(e)n* are not very frequent at all in the earlier periods.

## 9 Conclusion and Outlook

As Köpcke (1995) has shown, the modern German (NHG) class of weak masculine nouns is organized around two prototypes. Both have the property [+*menschlich*] (they denote human beings), and both are polysyllabic; the first prototype ends in *-e* and is stressed on the penultimate syllable (*Matrose*), while the second is stressed on the final syllable (*Student*). The second prototype can be viewed as a variant of the first, from which it differs only in the presence/absence of final *-e*; it exists mainly to account for the behavior of borrowed nouns with stressed suffixes (*-ant*, *-ent*, *-ist*, etc.), most of which entered the language long after the first prototype had established itself.

Neither of these prototypes existed yet in MHG; while most weak masculine nouns did already end in *-e* and have penultimate stress, only about half were animate. The other half denoted inanimate objects and abstract concepts of various kinds.

How did these prototypes (in particular, the first one) come to define the class?

I have argued, on the basis of data from my own corpus of German texts written between 1350 and 1900, that a usage-based theory with token frequency at its core is ideally suited to answer this question, and to explain the divergent paths of the nouns that have left the class (those in Groups 2, 3, and 4). The relative frequencies of different forms in the paradigm can explain not only why the NHG weak masculine nouns are still weak today (Group 1), but also why, in each of the other groups of nouns, a different form (or forms) has survived and become the base of the new paradigm.

In these pages, we have accompanied 37 current and former members of the weak masculine class, most of which are represented in the corpus with at least 100 tokens, on their journey from MHG into the modern language. We have compared the token frequencies of these nouns in different slots in the paradigm at different stages of their development, noting that in most cases, the forms that have been preserved — and (in Groups 2, 3, and 4) around which the paradigm has been rebuilt — are significantly more frequent than those that have been replaced by non-weak forms.

We have seen, further, that alternative theories of base selection in analogical change which do not rely on token frequency either do not predict the correct outcome (speaker confidence) or do not seem to apply in this case (semantic generality), and that the account of the weak masculines proposed by D. Bittner (1991) within the framework of Natural Morphology can explain only some, but not all, of the changes that have occurred.

We began, in chapter 1, by exploring the cognitive effects of token frequency and their role in analogical change. Following Paul (1920) and Bybee (2010), we defined analogy as a cognitive processing mechanism whereby the speaker, not being able to recall an inflected form, generates a new form in its place. The new form may be the same as the existing form, or it may be different; if enough speakers create the same innovative form often enough, that form may supplant the original form completely, bringing about a change in the inflectional class membership of the affected word. If the existing form is very frequent, its chances of being replaced in this way are greatly reduced: the more often we encounter a word form, the greater the likelihood that we will be able to access it when we need it. By the same token, forms that are very infrequent are more difficult to access, and thus vulnerable to loss and replacement.

Following an overview of the corpus and data set in chapters 2–4, we established in chapter 5 that the preservation of the full weak pattern requires a number distribution of about 66% singular : 31% plural, and, in the singular, a case distribution of about 60% nominative :

40% oblique (with *-e/ø* in the nominative and *-(e)n* in the oblique forms), maintained more or less continuously. Most nouns in Group 1, and particularly those in Group 1a (e.g., *Knabe*), meet this benchmark. Thus, the nominative is the most frequent case in this group of animate nouns, as suggested in the literature; however, the oblique forms — particularly the dative and accusative — also occur frequently enough that early speakers would have had enough information to situate these nouns in the weak declension. In Group 1b (e.g., *Bär*), where endings are frequently omitted in the oblique forms due to various extramorphological (e.g., prosodic) conditioning factors (they are frequently unpreceded, used as titles and/or in direct address, etc.), many nouns are now showing signs of shifting into Group 2; *Herr* and *Mensch*, which are extremely frequent in all forms, have not been affected. Nouns in both subgroups (1a and 1b) occasionally have the innovative markers *-(e)s* and *-(e)ns* in the genitive singular, which is the least frequent of the singular forms.

In chapter 6, we found that in Group 2 (e.g., *Schelm*) — where, in most cases, the only part of the original weak paradigm that has been preserved is the nominative singular — the number distribution deviates sharply from the Group 1a benchmark. On average, these nouns occur in the plural in only 18% of all instances, versus 31% in Group 1a, and three out of five nouns in this group (*Hahn*, *Herzog*, *Leichnam*) have no more than 10% plural tokens. The mixed noun *Schmerz*, which still ends in *-(e)n* in the plural in the modern language, has a plural value closer to the Group 1a benchmark: 29% of all tokens are plural, and if even half of the 163 tokens of *Schmerz* with question marks in the number category are plural, which seems likely, this figure increases to at least 35%. In the singular, the nominative is not always the most frequent case (though it is usually well represented); however, in Group 1b, many nouns in Group 2 regularly lose their weak endings in the oblique forms for extramorphological reasons, so that the proportion of tokens ending in *-e/ø* is consistently much higher than in Group 1a (83% on average). As in Group 1, the genitive singular, which now has the strong marker *-(e)s*, is the least frequent of the four singular forms.

The corpus data do not provide a clear answer to the question whether, as Bojunga and others have claimed, the Group 2 shift was set in motion by the apocope of final *-e* in the (nominative) singular. The five nouns in Group 2 do seem to lose their final *-e* in the singular more often than those in the other groups; however, most texts in the corpus come from the southern part of German-speaking region, where all words in the language are affected by *e*-apocope (and not just nouns that are becoming strong). In order to establish a definitive link between apocope and strong inflection, we would need considerably more data from the Middle German region, where loss of *-e* is not the norm.

In chapter 7, we looked at the inanimate nouns in Group 3 (e.g., *Garten*, *Friede/n*), which have retained their original weak forms in the dative and accusative singular, but lost most other forms to the strong declension. Like the nouns in Group 2, these nouns were found (with the exceptions of *Buchstabe* and *Funke/n* in Group 3b) to be much more frequent in the singular than in the plural; the average proportion of plural tokens (21% in Group 3a and 16% in Group 3b) is comparable to that in Group 2, and much lower than the Group 1a benchmark value of 31%. Here, however, the case distribution in the singular is the reverse of that in Group 2: the dative and/or accusative are most frequent, while the nominative, which now ends in *-(e)n* for most nouns at least some of the time, is very infrequent throughout. Again, the genitive singular, which has lost its weak endings, is poorly represented.

In Group 3b, where the nominative singular form ending in *-e* still exists in the modern language alongside that ending in *-(e)n*, the proportion of nominative tokens in the singular lies

above the Group 3a mean of 29% (*Buchstabe, Funke/n*), and/or the weak ending *-(e)n* is somewhat regularly omitted in the oblique singular forms under the influence of various extramorphological conditioning factors (*Buchstabe, Name/n, Wille/n*). In the case of *Schade/n*, which patterns with Group 3a, the nominative singular ending in *-e* is extremely rare in the modern language.

Of the three nouns in Group 3c, only one, *Tropfen*, shows a clear semantic split in the corpus. As expected, the animate doublet (*Tropf*), which is almost never used in the oblique singular forms, patterns with Group 2, while the inanimate one (*Tropfen*) patterns with Group 3a.

Finally, in Group 4 (e.g., *Backe*) (chapter 8), the plural, which has been preserved, is more frequent than the singular in many instances (*Backe, Grille, Rebe*), and comfortably above the Group 1a benchmark in any case: on average, 50% of all tokens of these nouns are plural, versus only 31% in Group 1a, and all nouns but *Schnecke* occur at least 37% of the time in the plural. In the singular, too, as expected, the nominative is often the most frequent case (*Grille, Rebe, Schlange*), or nearly tied with the accusative (*Fahne, Schnecke*). However, the results are not as conclusive here as in the other groups of nouns. It seems likely that many of these nouns, particularly the less frequent ones and those that continued to fluctuate until very late (*Backe, Schnecke*), were pulled into the mixed feminine class by association with more frequent inanimate nouns that had already shifted.

In general, the changes that have affected the weak masculine nouns have likely been driven by words of moderate to high frequency, such as those included in this study, while the less frequent nouns have been assigned to their respective groups on the basis of their resemblance to these more frequent nouns in meaning, phonological shape, syllable structure, etc.

The frequency data in the case, number, and inflectional marker categories are largely consistent across all 11 of the 50-year time periods represented in the corpus. However, they are most informative in the earlier periods, prior to the standardization of the language. Standardization brought with it an increase in prescriptivist activity, and beginning at least in the 17<sup>th</sup> century, we must take into account the possibility that speakers might have been influenced in their inflectional behavior by linguistic (and in some cases, religious and political) authorities who sought to dictate to them how they should use the language. Prescriptivist efforts are especially likely to have influenced the more recent development of several nouns in Group 3b which occur frequently in educational and official contexts (e.g., schools, churches, official documents), including *Name/n, Buchstabe, Friede/n, and Glaube/n*. As we have seen, *Name/n* usually ends in *-e* rather than *-en* in the modern language even though its frequency profile closely matches that of the nouns in Group 3a, and *Buchstabe* has remained mostly weak and masculine despite being very frequent in the plural; prescriptivism may account for these unexpected results, at least to some extent.

In the later periods, and perhaps sooner, we must also factor in the influence of the new prototype, which was presumably fully formed and active by at least the 17<sup>th</sup> century (most inanimate nouns had left the class by then). The prototype no doubt had a hand in ensuring that the nouns in Group 1 continued to follow the weak pattern even after the restructuring had largely run its course. It was also likely the driving force behind the later attraction into the weak masculine class of nouns that were strong in MHG, such as *helt* ‘hero’ in Group 1b (NHG *Held*): like the nouns that make up the core of the class today, most of these nouns are animate.

Thus, by and large, the data confirm the vague claims that we find in the literature about the frequency of the weak masculine nouns: the animate nouns that have remained weak (Group



1) are, in fact, most frequent in the nominative case, while the inanimate nouns that now have *-en* in the nominative singular (Group 3) are generally more frequent in the dative or accusative than in the nominative. Among former weak masculines that are now feminine (Group 4), the plural is often more frequent than the singular.

However, the picture of the weak masculines presented here is complex and cannot be reduced to a simple dichotomy of nominative and oblique, singular and plural, animate and inanimate. Many of these nouns — even those that have not split into two separate lexemes, like *Tropf/en* — occupy more than one position in the animacy hierarchy (e.g., *Hahn*), and polysemy is common among inanimate nouns and nouns denoting lower life forms, too; in some cases (e.g., *Backe*, *Schnecke*), it affects the number distribution. Some nouns that are primarily inanimate but that denote objects that are often in motion or that have moving components (e.g., *Brunnen*, *Funke/n*, *Schatten*) are used more in the nominative than other inanimate nouns.

At the same time, nouns in all groups, but especially those in Group 2, are susceptible to extramorphologically induced loss of *-(e)n* in the oblique singular forms. Many are frequently unpreceded, or have either very heavy (e.g., in direct address) or secondary (e.g., as titles and in compounds) stress, or have stems ending in nasals; in some cases (e.g., *Herzog*, *Schelm*), at least two of these factors seem to have contributed to the loss of endings. The affected oblique singular tokens may strengthen the representation of the form ending in  $-\emptyset$  in speakers' minds as much as nominative singular tokens do. These forms are not innovative, precisely: speakers produce them not because they cannot access the corresponding forms ending in *-(e)n*, but because there are compelling reasons to omit the ending (e.g., to avoid number ambiguity), or because of phonetic phenomena that render the ending inaudible. In particular, the role of stem-final nasals in the development of the weak masculines has been underemphasized in the literature.

This study has focused on weak masculine nouns that have been in the language at least since MHG, and has largely ignored the substantial group of nouns that have entered the class since that time, including those with the stressed foreign suffixes *-ent*, *-ant*, *-ist*, etc., which fall under Köpcke's second prototype, and which make up the majority of weak masculine nouns in the modern language. Many of these nouns — both animate and inanimate — are now showing signs of shifting into Group 2 (see 1.3.1, and also Kusová 2014, 117–141). Unlike the nouns featured in this study, most weak masculine nouns with foreign suffixes are not very frequent at all. I suspect that — in keeping with dual-route models of morphological processing (see, e.g., Schreuder and Baayen 1995; Burani and Thornton 2003) — it has been the frequency of the suffix combined with inflectional markers, rather than that of whole inflected forms, which has kept these nouns anchored in the weak masculine class.

As a possible next step, one might conduct another corpus study similar to this one, spanning the period from MHG to the present, to measure the token frequencies of these loan words in different slots in the paradigm: When were they borrowed, and how were they classified upon entering the language? Has their inflectional behavior fluctuated at all since they were borrowed, and if so, what appears to have caused the fluctuations? In particular, are animate nouns more stable than inanimate nouns? If in these cases it is the stressed suffix that speakers associate with the weak inflectional pattern, rather than the whole lexical item, then one would expect the semantic properties of the word not to have any effect on inflection.

The German weak masculine nouns have spent the past millennium engaged in a constant struggle to survive, and sadly,<sup>118</sup> it seems unlikely that they will prevail. Even the most stable of nouns currently classified as weak (animate nouns ending in *-e* and in foreign suffixes) are gradually succumbing to the pressures of the strong declension (see 1.3.5, and also Kusová 2014). A quick Google search for the phrases “den Affe” (103), “einen Affe” (85), “den Bote” (110), “einen Bote” (81), “den Zeuge” (153), “einen Zeuge” turned up about 100 results for each phrase; many of these examples appear to have been generated by non-native speakers and bots, but more than a few are legitimate instances of language use by native speakers:

In a newspaper article about how to recover money from the bank:  
Oder man schaltet einen **Zeuge** ein, der den Inhalt des Schreibens kennt, das Schreiben persönlich bei der Bank abgibt und sich den Empfang quittieren lässt.<sup>119</sup>

In another newspaper article about a trial:  
Für den **Zeuge** eine Situation, die ihn länger nachdenken ließ, “denn ich kenne mich mit Gerichten überhaupt nicht aus.”<sup>120</sup>

On a lawyer’s website:  
Wenn aber die Zeit drängt, weil die Ausschlussfrist von 12 Monaten fast abgelaufen ist und die Entfernung für einen Einwurf durch einen **Bote** in den Hausbriefkasten zu groß ist, dann bietet sich das Einschreiben-Einwurf an.<sup>121</sup>

On the website of an online shop, in the section about returns:  
Bitte kontaktieren Sie den **Bote**, um das Abholen vorzubestellen oder bringen Sie die Schachtel direkt zum DHL Punkt.<sup>122</sup>

On a joke site:  
Nur keiner der drei wollte derjenige sein, der den Korken entfernen sollte. Es wurde dann entschieden, einen **Affe** darauf zu trainieren, den Korken zu entfernen.<sup>123</sup>

In an article about interior decoration:  
Insbesondere ein Protagonist war zwischen intensiv grünen Palmen- und Farnblättern zu sehen - der Affe. „Den **Affe** gibt es gerade als Dekofigur, als Druckmotiv, als Kerze, als Schale“, zählt die Trendanalystin Gabriela Kaiser nur einige Möglichkeiten auf.<sup>124</sup>

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<sup>118</sup> This is not a prescriptivist sentiment, but rather a genuine expression of sadness at the likely demise of a class of nouns to which I (an animate being with the feature [+*menschlich*]) have grown deeply attached while working on this project.

<sup>119</sup> <https://www.deutsche-handwerks-zeitung.de/kontogebuehren-so-fordern-sie-geld-von-der-bank-zurueck-189829/>

<sup>120</sup> <https://www.schwarzwaelder-bote.de/inhalt.jungingen-zeuge-will-die-aussage-lieber-verweigern.cd964b2f-bb7c-4103-bea4-93ddc41a4ea8.html>

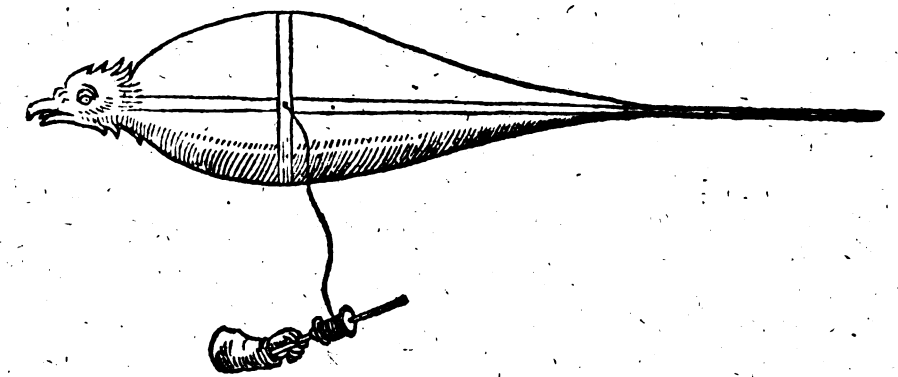
<sup>121</sup> <https://www.andre-anwalt.de/rechtsgebiete/mietrecht-und-weg/>

<sup>122</sup> <https://estore.beretta.com/de-at/utility/faq/ruckgaben#accordion-9f29da6a97-item-d320b17e24>

<sup>123</sup> <https://www.hahaha.de/witze/stichworte/affe/>

<sup>124</sup> <https://www.ems-vechte-surfer.de/nachrichten/der-affe-im-dschungel-als-trendwelt-343494.html>

In a few centuries, most of the remaining weak masculine nouns — with the possible exceptions of the extremely frequent *Herr* and *Mensch* — will likely have shifted into Group 2. In Group 3b, *Buchstabe* and *Funke/n*, both of which are very frequent in the plural, may yet become feminine, while *Name/n*, *Wille/n*, and *Friede/n* will likely remain frozen with *-e* in the nominative singular, *-(e)n* in the dative and accusative singular, and *-(e)ns* in the genitive singular, assuming the genitive case still exists at all. The nominative singular form *Schade* is already extinct for most speakers and will probably disappear altogether.



The dragon-kite in Harsdörffer's and Schwenter's *Deliciae Physico-Mathematicae* (1636: 472)

## Bibliography

- Albright, Adam. 2002. *The identification of bases in morphological paradigms*. PhD diss, University of California, Los Angeles.  
<https://web.mit.edu/albright/www/papers/AlbrightDiss.html>.
- . 2003. “Base selection in analogical change in Yiddish.” In *Proceedings of the twenty-eighth annual meeting of the Berkeley Linguistics Society*, edited by Julie Larson and Mary Paster, 1–13. Berkeley: Berkeley Linguistics Society.
- . 2008. “Explaining universal tendencies and language particulars in analogical change.” Chap. 7 in *Linguistic universals and language change*, edited by Jeff Good, 144–181. Oxford: Oxford Univ. Press.
- . 2010. “Base-driven leveling in Yiddish verb paradigms.” *Nat lang linguist theory* 28: 475–537.
- Auer, Peter, and Robert W. Murray, eds. 2015. *Hermann Paul’s Principles of language history revisited: Translations and reflections*. Berlin: De Gruyter.
- Augst, Gerhard. 1975. “Zum Pluralsystem.” In *Untersuchungen zum Morpheminventar der deutschen Gegenwartssprache*, 5–70. Tübingen: Narr.
- Augustin, Hagen. 2012. “‘Autor’, ‘Doktor’, ‘Friede’, ‘Funke’ — Problemfälle der Flexion.” In *Grammatische Stolpersteine digital: Festschrift für Bruno Strecker zum 65. Geburtstag*, edited by Roman Schneider and Marek Konopka, 71–82. Mannheim: Institut für Deutsche Sprache.
- Balling, Laura Winther, and R. Harald Baayen. 2008. “Morphological effects in auditory word recognition: Evidence from Danish.” *Language and cognitive processes* 23 (7–8): 1159–1190.
- Baayen, R. Harald, James M. McQueen, Ton Dijkstra, and Robert Schreuder. 2003. “Frequency effects in regular inflectional morphology: Revisiting Dutch plurals.” In *Morphological structure in language processing*, edited by R. Harald Baayen and Robert Schreuder, 355–390.
- Baayen, R. Harald, Lee H. Wurm, and Joanna Aycok. 2007. “Lexical dynamics for low-frequency complex words: A regression study across tasks and modalities.” *The Mental Lexicon* 2 (3): 419–463.
- Bech, G. 1963. “Zur Morphologie der deutschen Substantive.” *Lingua* 12: 177–189.
- Becker, Thomas. 1994. “Die Erklärung von Sprachwandel durch Sprachverwendung am Beispiel der deutschen Substantivflexion.” In *Funktionale Untersuchungen zur deutschen Nominal- und Verbalmorphologie*, edited by Klaus-Michael Köpcke, 45–63. Tübingen: Niemeyer.
- Beeler, Madison S. 1958. “Remarks on the German noun inflection.” *Language learning: A journal of research in language studies* 8: 39–45.
- Behaghel, Otto. (1886) 1958. *Die deutsche Sprache*, 13th ed. Halle: Niemeyer.
- Bittner, Andreas. 1988. “Reguläre Irregularitäten.” *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 41 (4): 416–425.
- . 1996. *Starke ‘schwache’ Verben, schwache ‘starke’ Verben: Deutsche Verbflexion und Natürlichkeit*. Tübingen: Stauffenburg.
- Bittner, Dagmar. 1987. “Die sogenannten schwachen Maskulina des Deutschen — ihre besondere Stellung im nhd. Deklinationssystem.” In *Linguistische Studien: Studien zur*

- Morphologie und Phonologie II*, edited by Wolfgang U. Wurzel, 33–53. Berlin: Akademie.
- . 1991. *Von starken Feminina und schwachen Maskulina. Die neuhochdeutsche Substantivflexion — Eine Systemanalyse im Rahmen der natürlichen Morphologie*. PhD diss, Universität Jena.
- . 1994. “Die Bedeutung der Genusklassifikation für die Organisation der deutschen Substantivflexion.” In *Funktionale Untersuchungen zur deutschen Nominal- und Verbmorphologie*, edited by Klaus-Michael Köpcke, 65–80. Tübingen: Niemeyer.
- Bojunga, Klaudius Hermann. 1890. *Die Entwicklung der nhd. Substantivflexion, ihrem inneren Zusammenhange nach in Umrissen dargestellt*. PhD diss, Universität Leipzig.
- Brezina, Vaclav. 2018. *Statistics in corpus linguistics: A practical guide*. Cambridge: Cambridge Univ. Press.
- Burani, Cristina and Anna M. Thornton. 2003. “The interplay of root, suffix and whole-word frequency in processing derived words.” In *Morphological structure in language processing*, edited by R. Harald Baayen and Robert Schreuder, 157–207. Berlin: De Gruyter.
- Bybee, Joan. 1980. “Morphophonemic change from inside and outside the paradigm.” *Lingua* 50: 45–59.
- . 1985. *Morphology: A study of the relation between meaning and form*. Amsterdam: Benjamins.
- . 1988. “Morphology as lexical organization.” In *Theoretical morphology: Approaches in modern linguistics*, edited by Michael Hammond and Michael Noonan, 119–141. San Diego: Academic Press.
- . 1995. “Diachronic and typological properties of morphology and their implications for representation.” In *Morphological aspects of language processing*, edited by Laurie Beth Feldman, 225–246. Hillsdale: Erlbaum.
- . 2006. “From usage to grammar: The mind’s response to repetition.” *Language* 82 (4): 711–733.
- . 2007. *Frequency of use and the organization of language*. Oxford: Oxford Univ. Press.
- . 2010. *Language, usage and cognition*. Cambridge: Cambridge Univ. Press.
- Durrell, Martin. 1977. “Zur morphologischen Struktur der deutschen Nominalgruppe.” *Deutsch als Fremdsprache* 1 (14): 44–52.
- . 1990. “German noun inflexions: Synchrony and diachrony.” *German Life and Letters* 43 (2): 113–124.
- Fertig, David. 1999. “Analogical ‘leveling’ from outside the paradigm: Stem-vowel changes in the German modals.” *Diachronica* 16 (2): 233–260.
- . 2013. *Analogy and morphological change*. Edinburgh: Edinburgh Univ. Press.
- . 2016. “Mechanisms of paradigm leveling and the role of universal preferences in morphophonological change.” *Diachronica* 33 (4): 423–460.
- . 2019. “Morphological change through phonological analogy: 2<sup>nd</sup> person singular -s → -st and related developments in Germanic.” *Journal of Germanic Linguistics* 31 (1): 1–42.
- Garrett, Andrew. 2008. “Paradigmatic uniformity and markedness.” Chap. 6 in *Linguistic universals and language change*, edited by Jeff Good, 125–143. Oxford: Oxford Univ. Press.
- Gortzitza, W. O. 1843. “Die neuhochdeutsche Substantiv-Deklination. Erster Abschnitt.” In *Einladungsschrift zu der öffentlichen Prüfung der Schüler am 28. und 29. September und*

- zur feierlichen Entlassung der Abiturienten am 29. September Nachmittags im Königl. Gymnasium zu Lyk, 3–32. Lyk: Gedruckt im typographischen Institute.
- . 1854. “Die neuhochdeutsche schwache Substantiv-Deklination.” In *Archiv für das Studium der neueren Sprachen und Literaturen*, vol. 16, edited by Ludwig Herrig, 408–431. Braunschweig: Westermann.
- . 1866. “Die neuhochdeutsche Substantiv-Deklination. Dritter Abschnitt.” N.p.
- Granlund, Sonia, Joanna Kolak, Virve Vihman, Felix Engelmann, Elena V.M. Lieven, Julian M. Pine, Anna L. Theakston, and Ben Ambridge. 2019. Language-general and language-specific phenomena in the acquisition of inflectional noun morphology: A cross-linguistic elicited-production study of Polish, Finnish and Estonian. *Journal of memory and language* 107: 169–194.
- Greenberg, Joseph H. 1966. *Language universals, with special reference to feature hierarchies*. The Hague: Mouton.
- Harnisch, Rüdiger. 1988. “Natürliche Morphologie und morphologische Ökonomie.” *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 41 (4): 426–437.
- Harsdörffer, Georg Philipp, and Daniel Schwenter. 1636. *Deliciae Physico-Mathematicae, oder Mathematische und Philosophische Erquickstunden*, vol. 1. Nuremberg: Dümmler. [https://books.google.com/books?id=XW\\_W-eGhg8AC&printsec=frontcover&source=gbv\\_book\\_other\\_versions\\_r&cad=3#v=onepage&q&f=false](https://books.google.com/books?id=XW_W-eGhg8AC&printsec=frontcover&source=gbv_book_other_versions_r&cad=3#v=onepage&q&f=false).
- Hermodsson, Lars. 1968. “Die Deklination der deutschen Substantiva.” *Moderna Språk* 62 (2): 144–155.
- Hill, Eugen. 2007. “Proportionale Analogie, paradigmatischer Ausgleich und Formerweiterung: Ein Beitrag zur Typologie des morphologischen Wandels.” *Diachronica* 24 (1): 81–118.
- . 2020. “Analogy in inflectional change: Modification or whole-word replacement?” *Language* 96 (1): e38–e58.
- Indefrey, Peter. 2002. *Listen und Regeln: Erwerb und Repräsentation der schwachen Substantivdeklinaton des Deutschen*. PhD diss, Heinrich-Heine-Universität Düsseldorf.
- Joeres, Rolf. 1996. “‘Der Friede’ oder ‘der Frieden’: ein Normproblem der Substantivflexion.” *Sprachwissenschaft* 21: 301–336.
- . 2003. “Noch einmal: *Der Friede* oder *der Frieden*?” *Sprachwissenschaft* 28 (2): 231–238.
- Jørgensen, Peter. 1969. “Zur Darstellung der deutschen Substantivflexion.” *Moderna Språk* 63 (2): 126–136.
- Kapatsinski, Vsevolod. 2010. “What is it I am writing? Lexical frequency effects in spelling Russian prefixes: Uncertainty and competition in an apparently regular system.” *Corpus linguistics and linguistic theory* 6 (2): 157–215.
- Kern, Peter Christoph, and Herta Zutt. 1977. *Geschichte des deutschen Flexionssystems*. Tübingen: Niemeyer.
- König, Werner. 1978. *dtv-Atlas Deutsche Sprache*. Munich: Deutscher Taschenbuch Verlag.
- Köpcke, Klaus-Michael. 1995. “Die Klassifikation der schwachen Maskulina in der deutschen Gegenwartssprache: Ein Beispiel für die Leistung der Prototypentheorie.” *Zeitschrift für Sprachwissenschaft* 14 (2): 159–180.
- . 2000a. “Chaos und Ordnung — Zur semantischen Remotivierung einer Deklinationssklasse im Übergang vom Mhd. zum Nhd.” In *Angemessene Strukturen*:

- Systemorganisation in Phonologie, Morphologie und Syntax*, edited by Andreas Bittner, Dagmar Bittner, and Klaus-Michael Köpcke, 107–122. Hildesheim: Olms.
- . 2000b. “Starkes, Schwaches und Gemischtes in der Substantivflexion des Deutschen: Was weiß der Sprecher über die Deklinationsparadigmen?” In *Deutsche Grammatik in Theorie und Praxis*, edited by Rolf Thieroff et al., 155–170. Tübingen: Niemeyer.
- . 2005. “‘Die Prinzessin küsst den Prinz’ — Fehler oder gelebter Sprachwandel?” *Didaktik Deutsch* 18: 67–83.
- Kusová, Jana. 2014. *Morphologische Varianz der peripheren Substantivparadigmen im geschriebenen Gegenwartsdeutsch: schwache Maskulina, starke Feminina und gemischte Substantive*. Vienna: Praesens.
- Lambrecht, Knud. 1984. “Formulaicity, frame semantics, and pragmatics in German binomial expressions.” *Language* 60 (4): 753–796.
- Lindgren, Kaj B. 1954. “Mhd. Genitivformen auf *-ens*.” *Suomalaisen Tiedeakatemia Toimituksia [Annales Academiae Scientiarum Fennicae] B* 84: 667–672.
- Ljungerud, Ivar. 1955. *Zur Nominalflexion in der deutschen Literatursprache nach 1900*. Lund: Gleerup.
- Lõo, Kaidi, Juhani Järvi, and R. Harald Baayen. 2018. “Whole-word frequency and inflectional paradigm size facilitate Estonian case-inflected noun processing.” *Cognition* 175: 20–25.
- Luke, Steven G., and Kiel Christianson. 2011. “Stem and whole-word frequency effects in the processing of inflected verbs in and out of a sentence context.” *Language and cognitive processes* 26 (8): 1,173–1,192.
- Mańczak, Witold. 1958a. “Tendances générales des changements analogiques.” *Lingua* 7: 298–325.
- . 1958b. “Tendances générales des changements analogiques II.” *Lingua* 7: 387–420.
- . 1963. “Tendances générales du développement morphologique.” *Lingua* 12: 19–38.
- Marko, Ernest. 1972. “Beitrag zum Deklinationssystem des deutschen Substantivs.” *Deutsch als Fremdsprache* 9 (6): 359–364.
- Mayerthaler, Willi. 1981. *Morphologische Natürlichkeit*. Wiesbaden: Athenaion.
- Molz, Hermann. 1902. “Die Substantivflexion seit mittelhochdeutscher Zeit. 1. Teil: Masculina.” *Beiträge zur Geschichte der deutschen Sprache und Literatur* 27 (2): 209–342.
- Nordmeyer, George. 1961. “Zur Bildung des Genitivs Singular im heutigen Deutsch.” *The German Quarterly* 34 (3): 277–281.
- Nübling, Damaris. 2008. “Was tun mit Flexionsklassen? Deklinationen und ihr Wandel im Deutschen und seinen Dialekten.” *Zeitschrift für Dialektologie und Linguistik* 75 (3): 282–330.
- Pahre, Robert. 1985. “The break-up of the German weak declension.” *Leuvense Bijdragen* 74: 53–62.
- Paul, Hermann. (1920) 1937. *Prinzipien der Sprachgeschichte*, 5th ed. Halle: Niemeyer.
- Paulfranz, Alexandra. 2013. *Kasusmarkierungen der Gegenwartssprache in deutschen Lokal- und Regionalzeitungen*. Bamberg: Bamberg Univ. Press.
- Pavlov, Vladimir. 1995. *Die Deklination der Substantive im Deutschen: Synchronie und Diachronie*. Frankfurt a. M.: Peter Lang.
- Rettig, Wolfgang. 1972. *Sprachsystem und Sprachnorm in der deutschen Substantivflexion*. Tübingen: Narr.

- Rohdenburg, Günter. 1988. "Flexionsangleichung von Substantiven an attributive Adjektive und verwandte Erscheinungen im Nordniedersächsischen." In *Linguistik Parisette: Akten des 22. Linguistischen Kolloquiums, Paris 1987*, edited by Heinrich Weber and Ryszard Zuber, 277–288. Tübingen: Niemeyer.
- . 1989. "Prosodische Einflüsse in der Morphologie: Zur Variation von Kurz- und Langformen bei Feminina im Nordniedersächsischen." In *Sprechen und Hören: Akten des 23. Linguistischen Kolloquiums, Berlin 1988*, edited by Norbert Reiter, 59–71. Tübingen: Niemeyer.
- Rosch, Eleanor. 1978. "Principles of categorization." Chap. 2 in *Cognition and categorization*, edited by Barbara B. Lloyd and Eleanor Rosch, 27–48. Hillsdale: Erlbaum.
- Sandberg, Bengt. 2000. "Zur Distribution *Friede – Frieden* nach semanto-syntaktischen Variablen." *Sprachwissenschaft* 25 (2): 119–142.
- Schäfer, Roland. 2019. "Prototype-driven alternations: The case of German weak nouns." *Corpus linguistics and linguistic theory* 15 (2): 383–418.
- Schlurhoff, Michael. 1974. "Flexionsklassen von Substantiven und ihre Häufigkeitsverteilung." *Linguistische Berichte* 31: 19–30.
- Schreuder, Robert, and R. Harald Baayen. 1995. "Modeling morphological processing." In *Morphological aspects of language processing*, edited by Laurie B. Feldman, 131–154. Hove: Erlbaum.
- Schulz, Matthias. 2007. *Deutscher Wortschatz im 17. Jahrhundert: Methodologische Studien zu Korpus- und Lexikologie und Lexikographie von historischem Wortschatz*. Tübingen: Niemeyer.
- Schulze, Werner. 1955. *Wustmann: Sprachdummheiten*, 13th ed. Berlin: De Gruyter.
- Steche, Theodor. 1927. *Die neuhochdeutsche Wortbiegung unter besonderer Berücksichtigung der Sprachentwicklung im 19. Jahrhundert. Erster Teil: Die Wortklassen – Die Beugung*. Breslau: Hirt.
- Sütterlin, Ludwig. 1887. *Geschichte der Nomina Agentis im Germanischen*. Strasbourg: Trübner.
- Thieroff, Rolf. 2003. "Die Bedienung des Automaten durch den Mensch. Deklination der schwachen Maskulina als Zweifelsfall." *Linguistik online* 16 (4). <https://bop.unibe.ch/linguistik-online/article/view/798>.
- Tiersma, Peter Meijes. 1982. "Local and general markedness." *Language* 58 (4): 832–849.
- Vennemann, Theo. 1972. "Rule inversion." *Lingua* 29: 209–242.
- Watkins, Calvert. 1962. *Indo-European origins of the Celtic verb*. Dublin: Dublin Institute for Advanced Studies.
- Wessén, Elias. 1914. *Zur Geschichte der germanischen n-Deklination*. Uppsala: Akademische Buchdruckerei.
- Wiese, Bernd. 2000. "Warum Flexionsklassen? Über die deutsche Substantivflexion." In *Deutsche Grammatik in Theorie und Praxis*, edited by Rolf Thieroff, Matthias Tamrat, Nanna Fuhrhop, and Oliver Teuber, 139–153. Tübingen: Niemeyer.
- Wurzel, Wolfgang U. 1984a. *Flexionsmorphologie und Natürlichkeit: Ein Beitrag zur morphologischen Theoriebildung*. Vol. 21 of *Studia Grammatica*, edited by Wolfgang Motsch and Jürgen Kunze. Berlin: Akademie.
- . 1984b. "Deutsch der Funke zu der Funken: Ein Fall für natürliche Morphologie." In *Forschungen zur deutschen Grammatik — Ergebnisse und Perspektiven. Referate der Arbeitstagung der Sektion Grammatik der Germanistenkommission DDR-VRP vom 6. bis 8. 11. 1984 in Berlin*, 129–145. Berlin: Akademie.



- . 1994a. “Gibt es im Deutschen noch eine einheitliche Substantivflexion? oder: Auf welche Weise ist die deutsche Substantivflexion möglichst angemessen zu erfassen?” In *Funktionale Untersuchungen zur deutschen Nominal- und Verbalmorphologie*, edited by Klaus-Michael Köpcke, 29–44. Tübingen: Niemeyer.
- . 1994b. “Skizze der natürlichen Morphologie.” *Papiere zur Linguistik* 50: 23–50.
- . 2000. “Flexionsparadigma, Flexionsformen und Markiertheitsabbau.” *Papiere zur Linguistik* 62/63 (1–2): 75–87.
- Wustmann, Gustav. 1892. *Allerhand Sprachdummheiten. Kleine deutsche Grammatik des Zweifelhafte, des Falschen und des Häßlichen. Ein Hilfsbuch für alle die sich öffentlich der deutschen Sprache bedienen*. Leipzig: Grunow.
- Zubin, David A., and Klaus-Michael Köpcke. 1984. *Natural classification in language: A study of the German gender system*. Buffalo Cognitive Science Report no. 2.

#### Reference Works:

- Adelung, Johann Christoph. 1782. *Deutsche Sprachlehre*. Vienna: Johann Thomas Edlen von Trattner.
- Braune, Wilhelm. 1975. *Althochdeutsche Grammatik*, 13th ed. Edited by Hans Eggers. Tübingen: Niemeyer.
- Duden. 2001. *Richtiges und gutes Deutsch: Wörterbuch der sprachlichen Zweifelsfälle*, 5th ed. Vol. 9 of *Der Duden in 12 Bänden*. Mannheim: Dudenverlag.
- Duden. 2009. *Die Grammatik*, 8th ed. Vol. 4 of *Der Duden in 12 Bänden*. Mannheim: Dudenverlag.
- Ebert, Robert Peter, Oskar Reichmann, Hans-Joachim Solms, and Klaus-Peter Wegera. 1993. *Frühneuhochdeutsche Grammatik*. Edited by Oskar Reichmann and Klaus-Peter Wegera. Tübingen: Niemeyer.
- Eisenberg, Peter. 1989. *Grundriß der deutschen Grammatik*. Stuttgart: Metzler.
- . 2013. *Das Wort*. Vol. 1 of *Grundriß der deutschen Grammatik*, 4th ed. Stuttgart: Metzler.
- Engel, Ulrich. 1988. *Deutsche Grammatik*. Heidelberg: Groos.
- Erben, Johannes. 1972. *Deutsche Grammatik: Ein Abriss*. Munich: Hueber.
- Griesbach, Heinz, and Dora Schulz. 1960. *Grammatik der deutschen Sprache*. Munich: Hueber.
- Grimm, Jacob. 1870. *Deutsche Grammatik. Erster Theil*. 2nd ed. Berlin: Dümmler.
- Heidolph, Karl Erich, Walter Flämig, Rudolph Motsch, et al.<sup>125</sup> 1981. *Grundzüge einer deutschen Grammatik*. Berlin: Akademie.
- Helbig, Gerhard, and Joachim Buscha. 2001. *Deutsche Grammatik: Ein Handbuch für den Ausländerunterricht*. Munich: Klett-Langenscheidt.
- Hentschel, Elke, and Harald Weydt. 2003. *Handbuch der deutschen Grammatik*, 3rd ed. Berlin: De Gruyter.
- Jung, Walter. 1984. *Grammatik der deutschen Sprache*. Leipzig: Bibliographisches Institut Leipzig.
- Klein, Thomas, Hans-Joachim Solms, and Klaus-Peter Wegera. 2018. *Mittelhochdeutsche Grammatik. Teil II: Flexionsmorphologie*. Tübingen: Niemeyer.

<sup>125</sup> The “al.” in this case is an anonymous “Autorenkollektiv.”

- Kehrein, Joseph. 1854. *Grammatik der deutschen Sprache des fünfzehnten bis siebenzehnten Jahrhunderts. Erster Teil: Laut- und Flexionslehre*. Leipzig: Wigand.
- Michels, Victor. 1979. *Mittelhochdeutsche Grammatik*, 5th ed. Heidelberg: Winter.
- Paul, Hermann. 1917. *Flexionslehre*. Vol. 2 of *Deutsche Grammatik*. Halle: Niemeyer.
- . (1881) 2007. *Mittelhochdeutsche Grammatik*, 25th ed. Tübingen: Niemeyer.
- Schottelius, Justus Georg. (1663) 1967. *Ausführliche Arbeit Von der Teutschen HauptSprache. I. Teil*. Edited by Wolfgang Hecht. Tübingen: Niemeyer.
- Schützeichel, Rudolf. 1969. *Althochdeutsches Wörterbuch*. Tübingen: Niemeyer.
- Sütterlin, Ludwig. 1924. *Neuhochdeutsche Grammatik mit besonderer Berücksichtigung der neuhochdeutschen Mundarten*. Munich: Beck.
- Wahrig. 2003. *Fehlerfreies und gutes Deutsch: Das zuverlässige Nachschlagewerk zur Klärung sprachlicher Zweifelsfälle*. Gütersloh: Wissen Media Verlag.
- Wegera, Klaus-Peter. 1987. *Flexion der Substantive*. Vol. 3 of *Grammatik des Frühneuhochdeutschen*, edited by Werner Besch, Hugo Moser, and Hugo Stopp. Heidelberg: Winter.
- Weinhold, Karl. 1883. *Mittelhochdeutsche Grammatik*, 2nd ed. Paderborn: Schöningh.
- Wilmanns, W[ilhelm]. 1896. *Deutsche Grammatik: Gotisch, Alt-, Mittel- und Neuhochdeutsch. Zweite Abteilung: Wortbildung*. Strasbourg: Trübner.
- . 1909. *Deutsche Grammatik: Gotisch, Alt-, Mittel- und Neuhochdeutsch. Dritte Abteilung: Flexion. 2. Hälfte: Nomen und Pronomen*. Strasbourg: Trübner.
- Zifonun, Gisela, Ludger Hoffmann, and Bruno Strecker. 1997. *Grammatik der deutschen Sprache. Band 1*. Berlin: De Gruyter.

#### Dictionaries Consulted Online:

- Benecke, Georg Friedrich, Wilhelm Müller, Friedrich Zarncke. *Mittelhochdeutsches Wörterbuch*. <https://woerterbuchnetz.de/?sigle=BMZ#0>.
- Digitales Wörterbuch der deutschen Sprache*. <https://www.dwds.de>.
- Duden*. <https://www.duden.de>.
- Grimm, Jacob, and Wilhelm Grimm. *Deutsches Wörterbuch*. <https://woerterbuchnetz.de/?sigle=DWB#0>.
- Lexer, Matthias, et al. *Mittelhochdeutsches Handwörterbuch*. <https://woerterbuchnetz.de/?sigle=Lexer&lemid=LA00001&mode=Vernetzung&hitlist=&patternlist=&mainmode=#1>.
- Reichmann, Oskar, et al. *Frühneuhochdeutsches Wörterbuch*. <https://fwb-online.de>.

# Appendix A: Texts in Corpus

## Period 1 (1350–1400)

### Prose

- Title/Author: Rulmann Merswin, *Das Buch von den neun Felsen*.  
Dialect/Region: Upper German (Strasbourg)  
Words: 30,594  
Source: Schmidt, Carl, ed. 1859. *Das Buch von den neun Felsen von dem Strassburger Bürger Rulman Merswin*. 1352., 1–88. Leipzig: Hirzel.
- Title/Author: Jacobus de Cessolis, *Das Schachzabelbuch*.  
Dialect/Region: Upper German (exact place of origin unknown)  
Words: 30,994  
Source: Schmidt, Gerard F., ed. 1961. *Das Schachzabelbuch des Jacobus de Cessolis, O. P. in mittelhoch-deutscher Prosa-Übersetzung*, 25–119. Berlin: Erich Schmidt Verlag.
- Title/Author: Heinrich von Langenstein, *Erchantnuzz der Sund*.  
Dialect/Region: Upper German (Austria)  
Words: 30,690  
Source: Rudolf, Rainer, ed. 1969. *Heinrich von Langenstein, Erchantnuzz der Sund, nach österreichischen Handschriften*, 51–200. Berlin: Erich Schmidt Verlag.
- Title/Author: John Mandeville / Michael Velser, *Sir John Mandevilles Reisebeschreibung*.  
Dialect/Region: Upper German (South Tirol)  
Words: 30,896  
Source: Morrall, Eric John, ed. 1974. *Sir John Mandevilles Reisebeschreibung, in deutscher Übersetzung von Michel Velser*, 1–89. Berlin: Akademie.
- Title/Author: *St. Georgener Prediger*.  
Dialect/Region: Mostly Upper German (Freiburg/Karlsruhe), but contains some sermons in a Middle German dialect  
Words: 30,795  
Source: Rieder, Karl, ed. 1908. *Der sogenannte St. Georgener Prediger aus der Freiburger und der Karlsruher Handschrift*, 1–64. Berlin: Weidmannsche Buchhandlung.

### Verse

- Title/Author: *Das Väterbuch*.  
Dialect/Region: Middle German (Middle Franconian (?); exact place of origin unknown)  
Words: 30,719  
Source: Reissenberger, Karl. 1914. *Das Väterbuch*. Vol. 22 of *Deutsche Texte des Mittelalters*, 1–87. Berlin: Weidmannsche Buchhandlung.
- Title/Author: Heinrich Kaufringer, *Gedichte*.  
Dialect/Region: Upper German (Augsburg)  
Words: 30,721  
Source: Euling, Karl, ed. 1888. *Heinrich Kaufringers Gedichte*, 1–157. Tübingen: Litterarischer Verein.

Title/Author: *Die Minneburg.*  
Dialect/Region: Upper/Middle German (Würzburg; Cologne; Prague)  
Words: 30,892 (complete text)  
Source: Electronic<sup>126</sup> (Digitales Mittelhochdeutsches Textarchiv):  
<http://www.mhdwb-online.de/Etexte/PDF/MINNEB.pdf>.  
Pyritz, Hans, ed. 1950. *Die Minneburg. Nach der Heidelberger Pergamenthandschrift (CPG. 455) unter Heranziehung der Kölner Handschrift und der Donaueschinger und Prager Fragmente*. Vol. 43 of *Deutsche Texte des Mittelalters*. Berlin: Weidmannsche Buchhandlung.

Title/Author: Heinrich der Teichner, *Gedichte*.  
Dialect/Region: Upper German (Vienna)  
Words: 30,726  
Source: Electronic (Digitales Mittelhochdeutsches Textarchiv):  
<http://www.mhdwb-online.de/Etexte/PDF/Teichn.pdf>.  
Niewöhner, Heinrich, ed. 1956. *Die Gedichte Heinrichs des Teichners, Band 3*. Vol. 48 of *Deutsche Texte des Mittelalters*. Berlin: Akademie.

Title/Author: *Der Große oder Wernigeroder Alexander.*  
Dialect/Region: Upper German (Alemannic; exact place of origin unknown)  
Words: 30,682  
Source: Electronic (TITUS): [http://titus.uni-frankfurt.de/texte/etcs/germ/mhd/a\\_wernig/a\\_wer.htm](http://titus.uni-frankfurt.de/texte/etcs/germ/mhd/a_wernig/a_wer.htm).  
Guth, Gustav, ed. 1908. *Der Grosse Alexander aus der Wernigeroder Handschrift*. Vol. 13 of *Deutsche Texte des Mittelalters*. Berlin: Weidmannsche Buchhandlung.

## Period 2 (1400–1450)

### Prose

Title/Author: Hans Schiltberger, *Reisebuch*.  
Dialect/Region: Upper German (Nuremberg)  
Words: 37,362  
Source: Electronic (Wikisource):  
[https://de.wikisource.org/wiki/Hans\\_Schiltbergers\\_Reisebuch\\_nach\\_der\\_Nürnberg\\_Handschrift](https://de.wikisource.org/wiki/Hans_Schiltbergers_Reisebuch_nach_der_Nürnberg_Handschrift).  
Langmantel, Valentin, ed. 1885. *Hans Schiltbergers Reisebuch nach der Nürnberger Handschrift*. Tübingen: Litterarischer Verein in Stuttgart.

Title/Author: Meister Ingold, *Das püchlin/ von dem guldin spil*.  
Dialect/Region: Upper German (Strasbourg)  
Words: 29,052  
Source: Electronic (Bibliotheca Augustana):  
[https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Ingold/ing\\_sp00.html](https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Ingold/ing_sp00.html).  
Schröder, Edward, ed. 1882. *Das goldene Spiel von Meister Ingold*. Vol. 3 of *Elsässische Litteraturdenkmäler aus dem XIV-XVII Jahrhundert*. Strasbourg: Trübner.

Title/Author: Johannes von Saaz/Tepl, *Der Ackermann aus Böhmen*.  
Dialect/Region: Middle German (West Bohemia)  
Words: 10,293 (complete text)  
Source: Electronic (Bibliotheca Augustana):  
[https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Tepl/tep\\_tod.html](https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Tepl/tep_tod.html).  
Jungbluth, Günther, ed. 1969. *Johannes von Saaz, Der Ackermann aus Böhmen*. Vol. 1 of *Germanische Bibliothek, 4. Reihe: Texte*. Heidelberg: Winter.

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<sup>126</sup> For texts found on the internet, the original source underlying the digitized text is cited below the URL(s) in cases where this information was available.

- Title/Author: Helene Kottanerin, *Denkwürdigkeiten*.  
Dialect/Region: Upper German (Vienna)  
Words: 14,322 (complete text)  
Source: Electronic (Bonner Frühneuhochdeutschkorpus):  
<https://korpora.zim.uni-duisburg-essen.de/FnhdC/doc/113.html>. (URL is no longer active)  
Mollay, Karl, ed. 1971. *Die Denkwürdigkeiten der Helene Kottanerin*. Vol. 2 of *Wiener Neudrucke*.
- Title/Author: Nikolaus von Kues, *Auslegung über den Pater Noster*.  
Dialect/Region: Middle German (Cologne); some Upper German  
Words: 1,141 (complete text)  
Source: Electronic (Bibliotheca Augustana):  
[https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Nikolaus/nik\\_ausl.html](https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Nikolaus/nik_ausl.html).  
Jungandreas, Wolfgang, ed. 1982. *Die Auslegung über den Pater noster her Nicolas von Cusa Cardinal vnd piscoff zw Brixen*.
- Title/Author: *Basler Chroniken*.  
Dialect/Region: Upper German (Basel, Switzerland)  
Words: 29,333  
Source: Electronic (archive.org):  
<https://archive.org/details/baslerchroniken00basegoog/page/n3/mode/2up?view=theater>.  
Bernoulli, August, ed. 1890. *Basler Chroniken. Vierter Band*. Leipzig: Hirzel.
- Title/Author: *Chronik des Bamberger Immunitätenstreites*.  
Dialect/Region: Upper German (Bamberg)  
Words: 53,256  
Source: Electronic (archive.org): <https://archive.org/details/chronikendersta00unkngoog/page/n78/mode/2up>.  
Chroust, Anton, ed. 1907. *Chroniken der Stadt Bamberg. Erste Hälfte. Chronik des Bamberger Immunitätenstreites von 1430-1435 mit einem Urkundenanhang*. Leipzig: Quelle & Meyer.

## Verse

- Title/Author: Heinrich Wittenwiler, *Der Ring*.  
Dialect/Region: Upper German (Constance?)  
Words: 56,212  
Source: Electronic (Bibliotheca Augustana):  
[http://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Wittenwiler/wit\\_rin0.html](http://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Wittenwiler/wit_rin0.html).  
Wießner, Edmund, ed. 1931. *Heinrich Wittenwilers Ring*. Leipzig: Reclam.
- Title/Author: Oswald von Wolkenstein, *Lieder*.  
Dialect/Region: Upper German (Tirol)  
Words: 42,156 (complete text)  
Source: Electronic (Oswald von Wolkenstein-Gesellschaft): <http://wolkenstein-gesellschaft.com/texte>.  
Klein, Karl Kurt, ed. 1987. *Die Lieder Oswalds von Wolkenstein*. Tübingen: Niemeyer.
- Title/Author: Johannes Rothe, *Der Ritterspiegel*.  
Dialect/Region: Middle German (Eisenach)  
Words: 22,894 (complete text)  
Source: Neumann, Hans, ed. 1936. *Johannes Rothe: Der Ritterspiegel*. Halle: Niemeyer.
- Title/Author: *Sociabilis*.  
Dialect/Region: Upper German (Swabia)  
Words: 3,609 (complete text)  
Source: Electronic (Wikisource): <https://de.wikisource.org/wiki/Sociabilis>.  
Fischer, Hanns, ed. 1966. *Die deutsche Märendichtung des 15. Jahrhunderts*. Munich: Beck.

Title/Author: *Eine mittelhochdeutsche Alexiuslegende.*  
Dialect/Region: Middle German (Trier)  
Words: 1,616 (complete text)  
Source: Electronic (Universität Gießen): <http://www.uni-giessen.de/gloning/tx/alexiusk.htm>.  
Rosenfeld, Hans-Friedrich, ed. 1966. *Eine mittelhochdeutsche Alexiuslegende (K)*. In *Festschrift Walter Baetke dargebracht zu seinem 80. Geburtstag am 28. März 1964*, edited by Kurt Rudolph, Rolf Heller, and Ernst Walter, 284–297. Weimar: Bohlau.

## Period 3 (1450–1500)

### Prose

Title/Author: Albrecht von Eyb, *Das Ehebüchlein*.  
Dialect/Region: Upper German (Bavarian; exact place of origin unknown)  
Words: 30,668  
Source: Electronic (Bibliotheca Augustana):  
[https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Eyb/eyb\\_eh00.html](https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Eyb/eyb_eh00.html).  
Herrmann, Max, ed. 1890. *Deutsche Schriften des Albrecht von Eyb. Erster Band: Das Ehebüchlein*. Berlin: Weidmannsche Buchhandlung.

Title/Author: *Stretlinger Chronik*.  
Dialect/Region: Upper German (Schwyz/Basel)  
Words: 30,666  
Source: Baechtold, Jakob, ed. 1877. *Die Stretlinger Chronik: Ein Beitrag zur Sagen- und Legendengeschichte der Schweiz aus dem XV. Jahrhundert*, 1–120. Frauenfeld: Huber.

Title/Author: *Buch der Beispiele der alten Weisen*.  
Dialect/Region: Upper German (exact place of origin unknown)  
Words: 30,568  
Source: Holland, Wilhelm Ludwig, ed. 1860. *Buch der Beispiele der alten Weisen um 1480*, 1–74. Stuttgart: Litterarischer Verein.

Title/Author: *Eine Augsburger Sittenlehre*.  
Dialect/Region: Upper German (Augsburg)  
Words: 30,641  
Source: Electronic (Bibliotheca Augustana):  
[https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Lehre/ler\\_intr.html](https://www.hs-augsburg.de/~harsch/germanica/Chronologie/15Jh/Lehre/ler_intr.html).  
Text follows the edition printed in 1476 in Augsburg by Johannes Bämli.

Title/Author: Hartmann Schedel, *Weltchronik*.  
Dialect/Region: Upper German (Nuremberg)  
Words: 30,951  
Source: Electronic (Wikisource): [https://de.wikisource.org/wiki/Schedel'sche\\_Weltchronik](https://de.wikisource.org/wiki/Schedel'sche_Weltchronik).  
Text follows the edition printed in Nuremberg in 1493.

### Verse

Title/Author: Sebastian Brant, *Das Narrenschiff*.  
Dialect/Region: Upper German (Strasbourg/Basel)  
Words: 31,387  
Source: Electronic (Wikisource): [https://de.wikisource.org/wiki/Doctor\\_Brants\\_Narrenschiff](https://de.wikisource.org/wiki/Doctor_Brants_Narrenschiff).  
Text follows the edition printed in 1499 in Basel by Johann Bergmann de Olpe.

Title/Author: Hans Folz, *Meisterlieder*.  
Dialect/Region: Upper German (Nuremberg)  
Words: 30,875  
Source: Mayer, August, ed. 1908. *Die Meisterlieder des Hans Folz aus der Münchener Originalhandschrift und der Weimarer Handschrift Q. 566, mit Ergänzungen aus anderen Quellen*. Vol. 12 of *Deutsche Texte des Mittelalters*, 8–160. Berlin: Weidmannsche Buchhandlung.

Title/Author: Michel Beheim, *Gedichte*.  
Dialect/Region: Upper German (Austria; exact place of origin unknown)  
Words: 30,797  
Source: Gille, Hans Hermann Karl, ed. 1968. *Die Gedichte des Michel Beheim: Nach der Heidelberger Hs. cpg 334 unter Heranziehung der Heidelberger Hs. cpg 312 und der Münchener Hs. cgm 291 sowie sämtlicher Teilhandschriften*. Vol. 60 of *Deutsche Texte des Mittelalters*, 3–153. Berlin: Akademie.

Title/Author: *Die Pilgerfahrt des träumenden Mönchs*.<sup>127</sup>  
Dialect/Region: Middle German (Cologne; one manuscript is of Rhenish-Franconian origin)  
Words: 30,664  
Source: Electronic: <http://www.mhdwb-online.de/Etexte/PDF/PILGERF.pdf>  
Bömer, Aloys, ed. 1915. *Die Pilgerfahrt des träumenden Mönchs. Aus der Berleberger Handschrift*. Vol. 25 of *Deutsche Texte des Mittelalters*. Berlin: Weidmannsche Buchhandlung.

Title/Author: Ulrich Füetrer, *Das Buch der Abenteurer*.  
Dialect/Region: Upper German (Bavarian; exact place of origin unknown)  
Words: 30,752  
Source: Thoelen, Heinz, ed. 1997. *Ulrich Füetrer, Das Buch der Abenteurer. Nach der Handschrift A (Cgm. 1 der Bayerischen Staatsbibliothek)*, vol. 1, 9–153. Göppingen: Kümmerle.

## Period 4 (1500–1550)

### Prose

Title/Author: Ulrich von Hutten, *Gesprächsbüchlein*.  
Dialect/Region: Middle German (Hessen?)  
Words: 32,925  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Hutten,+Ulrich+von/Dialoge/Gesprächbüchlein>.  
Mettke, Heinz, ed. 1972. *Deutsche Schriften*, vol. 1, 1–188. Leipzig: VEB Bibliographisches Institut.

Title/Author: Johann Eberlin von Günzburg, *15 Bundsgenossen*.  
Dialect/Region: Upper German (Basel)  
Words: 30,624  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Eberlin+von+Günzburg,+Johann/Sammlung+von+Flugschriften/15+Bundsgenossen>.  
Enders, Ludwig, ed. 1896–1902. *Johann Eberlin von Günzburg: Sämtliche Schriften*. Halle: Niemeyer.

Title/Author: Hermann Bote, *Dil Ulenspiegel*.  
Dialect/Region: Upper German (Strasbourg)  
Words: 30,483  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Bote,+Hermann/Schwanksammlung/Dil+Ulenspiegel>.  
Lindow, Wolfgang, ed. 1978. *Ein kurzweilig Lesen von Dil Ulenspiegel. Nach dem Druck von 1515 mit 87 Holzschnitten*. Stuttgart: Reclam.

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<sup>127</sup> The manuscripts on which this text is based may stem from the first half of the 15<sup>th</sup> century (Period 2); see Bömer 1915: vi, xiii.

Title/Author: Martin Luther, treatises: *An den christlichen Adel deutscher Nation von des christlichen Standes Besserung* (entire text, 27,422 words); *Von der Freiheit eines Christenmenschen* (3,127 words).  
Dialect/Region: Middle German (Wittenberg)  
Words: 30,549  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Luther,+Martin/Traktate>.  
*D. Martin Luthers Werke, kritische Gesamtausgabe*, vols. 6 (1888) and 7 (1897). Weimar: Böhlau.

Title/Author: *Bambergische Peinliche Halsgerichtsordnung (Constitutio Criminalis Bambergensis)*  
Dialect/Region: Upper German (Bamberg)  
Words: 30,836  
Source: Electronic (Deutsches Rechtswörterbuch):  
<http://drw-www.adw.uni-heidelberg.de/drqedit/cgi/zeige?sigle=BambHalsGO.%201507>.  
Text follows the edition printed in 1507 in Bamberg by Hanns Pfeyll.

## Verse

Title/Author: Hans Sachs, *Geistliche und weltliche Lieder*.  
Dialect/Region: Upper German (Nuremberg)  
Words: 31,814  
Source: Electronic (Zeno):  
<http://www.zeno.org/Literatur/M/Sachs,+Hans/Gedichte/Geistliche+und+weltliche+Lieder>.  
Goedeke, Karl, ed. 1870. *Hans Sachs: Dichtungen. Erster Theil: Geistliche und weltliche Lieder*. Leipzig: Brockhaus.

Title/Author: Sixt Birck, dramas: *Susanna* (complete text, 8,372 words); *Zorobabel* (complete text, 6,172 words); *Ezechias* (complete text, 2,697 words); *Judith* (15,246 words).  
Dialect/Region: Upper German (Augsburg?)  
Words: 32,487  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Birck,+Sixt/Dramen>.  
Brauneck, Manfred, ed. 1969, 1976, 1980. *Sixt Birck: Sämtliche Dramen*. Berlin: De Gruyter.

Title/Author: Zacharias Bletz, *Das Antichristdrama*.  
Dialect/Region: Upper German (Lucerne)  
Words: 32,602 (complete text)  
Source: Reuschel, Karl. 1906. *Die deutschen Weltgerichtsspiele des Mittelalters und der Reformationszeit: Eine literarhistorische Untersuchung. Nebst dem Abdruck des Luzerner "Antichrist" von 1549, 207–238*. Leipzig: Avenarius.

Title/Author: Thomas Murner, *Von dem großen lutherischen Narren*.  
Dialect/Region: Upper German (Alsace? Switzerland?)  
Words: 29,332  
Source: Electronic (Zeno):  
<http://www.zeno.org/Literatur/M/Murner,+Thomas/Satirische+Dichtung/Von+dem+großen+lutherischen+Narren>.  
Schultz, Franz, ed. 1918. *Thomas Murners Deutsche Schriften mit den Holzschnitten der Erstdrucke, Band 9*. Strasbourg: Trübner.

Title/Author: Georg Wickram, dramas: *Das Narrengießen* (complete text, 7,423 words); *Der verlorene Sohn* (complete text, 19,253 words).  
Dialect/Region: Upper German (Strasbourg/Colmar)  
Words: 26,676  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Wickram,+Georg/Dramen>.  
Bolte, Johannes, ed. 1903. *Georg Wickram: Werke*. Tübingen: Litterarischer Verein. (*Das Narrengießen*)  
Roloff, Hans-Gert, ed. 1971. *Georg Wickram: Sämtliche Werke*. Berlin: De Gruyter. (*Der verlorene Sohn*)

Title/Author: Georg Wickram, *Losbuch*.  
Dialect/Region: Upper German (Strasbourg/Colmar)  
Words: 5,908  
Source: Roloff, Hans-Gert, ed. 2003. *Georg Wickram: Sämtliche Werke*, vol. 9, 1–182. Berlin: De Gruyter.



## Period 5 (1550–1600)

### Prose

Title/Author: Georg Wickram, *Der Goldtfaden*.  
Dialect/Region: Upper German (Colmar/Strasbourg)  
Words: 30,781  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Wickram,+Georg/Romane/Der+Goldtfaden>. Bolte, Johannes, ed. *Georg Wickram, Werke*. Tübingen: Litterarischer Verein.

Title/Author: *Das Volksbuch von Dr. Faust*.  
Dialect/Region: Upper German (Nuremberg?)  
Words: 33,457  
Source: Electronic (Bibliotheca Augustana): [http://www.hs-augsburg.de/~harsch/germanica/Chronologie/16Jh/Faustus/fau\\_df0.html](http://www.hs-augsburg.de/~harsch/germanica/Chronologie/16Jh/Faustus/fau_df0.html). Haile, H. G., ed. *Das Faustbuch nach der Wolfenbüttler Handschrift*. Berlin: Winter.

Title/Author: Götz von Berlichingen, *Mein Gottfriden von Berlichingen zw Hornberg vhedt vnd handlungen*  
Dialect/Region: Upper German (Swabian/Franconian; exact place of origin unknown)  
Words: 30,646  
Source: Electronic (Wikisource): [https://de.wikisource.org/wiki/Mein\\_Fehd\\_und\\_Handlungen](https://de.wikisource.org/wiki/Mein_Fehd_und_Handlungen). Ulmschneider, Helgard, ed. 1981. *Götz von Berlichingen: Mein Fehd und Handlungen*. Sigmaringen: Thorbecke.

Title/Author: Froben Christoph von Zimmern, *Zimmerische Chronik*.  
Dialect/Region: Upper German (Swabian; exact place of origin unknown)  
Words: 30,651  
Source: Electronic (Wikisource): [https://de.wikisource.org/wiki/Zimmerische\\_Chronik#Band\\_1](https://de.wikisource.org/wiki/Zimmerische_Chronik#Band_1). Barack, Karl August, ed. 1881. *Froben Christoph von Zimmern, Zimmerische Chronik*, 2nd ed. Freiburg: Mohr.

Title/Author: *Amberger Gesatzbuch*.  
Dialect/Region: Upper German (Amberg)  
Words: 28,238  
Source: Electronic (Deutsches Rechtswörterbuch): <http://drw-www.adw.uni-heidelberg.de/drqedit/cgi/zeige?index=siglen&term=amberggesatzb.%201554&lastterm=bambdomstiftordn.+1488>. Text follows the edition printed in 1554 in Amberg by Wolff Güldenmundt.

### Verse

Title/Author: Georg Hager, *Meisterlieder*.  
Dialect/Region: Upper German (Nuremberg)  
Words: 30,852  
Source: Bell, Clair Hayden. 1947. *Georg Hager: A Meistersinger of Nürnberg, 1552–1634. Part Two: Georg Hager's Texts*. Berkeley: University of California Press. 12–160.

Title/Author: Jakob Ayrer, dramas: *Tragedia Thesei* (complete text, 18,146 words); *Comedia von zweyen Brüdern auss Syracusa* (complete text, 7,746 words); *Comedia von der schönen Sidea* (complete text, 8,614 words).  
Dialect/Region: Upper German (Bavarian; exact place of origin unknown)  
Words: 34,506  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Ayrer,+Jakob/Dramen>. Keller, Adalbert von, ed. 1865. *Jakob Ayrer: Dramen*. Stuttgart: Litterarischer Verein.

- Title/Author: Johann Fischart: *Kleinere Dichtungen* (complete collection, 13,593 words); *Geistliche Lieder* (complete collection, 14,602 words); *Das Glückhafft Schiff von Zürich* (2,645 words).
- Dialect/Region: Upper German (Strasbourg)
- Words: 30,840
- Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Fischart,+Johann/Gedichte/Kleinere+Dichtungen>  
<http://www.zeno.org/Literatur/M/Fischart,+Johann/Gedichte/Geistliche+Lieder>  
<http://www.zeno.org/Literatur/M/Fischart,+Johann/Verserzählung/Das+Glückhafft+Schiff+von+Zürich>  
 Hauffen, Adolf, ed. 1895. *Johann Fischart: Werke. Eine Auswahl. Teil 1*. Stuttgart: Union Deutsche Verlagsgesellschaft.  
 Wackernagel, Philipp. 1874. *Das deutsche Kirchenlied von der ältesten Zeit bis zu Anfang des XVII. Jahrhunderts*. Leipzig: Teubner.
- Title/Author: Jakob Ruoff, *Adam und Heva*.
- Dialect/Region: Upper German (Zürich)
- Words: 35,302
- Source: Electronic (Zeno): [http://www.zeno.org/Literatur/M/Ruoff+\(Ruff\),+Jakob/Drama/Adam+und+Heva](http://www.zeno.org/Literatur/M/Ruoff+(Ruff),+Jakob/Drama/Adam+und+Heva).  
 Kottinger, Hermann Markus. 1848. *Jacob Ruff: Adam und Heva*. Quedlinburg: Basse.
- Title/Author: Jos Murer, dramas: *Der jungen Mannen Spiegel* (complete text, 9,434 words); *Absolom* (complete text, 17,593 words).
- Dialect/Region: Upper German (Zürich)
- Words: 27,027
- Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Murer,+Jos/Dramen>.  
 Roloff, Hans-Gert, ed. 1974. *Jos Murer: Sämtliche Dramen*. Berlin: De Gruyter.

## Period 6 (1600–1650)<sup>128</sup>

### Prose

- Title/Author: Philipp von Zesen, *Die adriatische Rosemund*.
- Words: 30,470
- Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Zesen,+Philipp+von/Romane/Adriatische+Rosemund>.  
 Jellinek, Max Hermann, ed. 1899. *Philipp von Zesen: Adriatische Rosenmund. 1645*. Halle: Niemeyer, 1899.
- Title/Author: Andreas Heinrich Buchholtz, *Des Christlichen Teutschen Groß-Fürsten Herkules und der Böhmischen Königlichen Fräulein Valiska Wunder-Geschichte*.
- Words: 30,678
- Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Buchholtz,+Andreas+Heinrich/Roman/Des+Christliche+Teutschen+Herkules+%5B...%5D+Wunder-Geschichte>.  
 Buchholtz, Andreas Heinrich. 1660. *Des Christlichen Teutschen Groß-Fürsten Herkules und der Böhmischen Königlichen Fräulein Valiska Wunder-Geschichte: in 8 Bücher und 2 Teile abgefasst u. allen Gott- u. Tugendliebenden Seelen zur Christ- u. ehrlichen Ergetzlichkeit ans Licht gestellt*. Braunschweig: Ziller.  
 The text appears to have been composed between 1639 and 1647.

<sup>128</sup> From Period 6 onward, information about dialect/region is no longer provided, since many texts no longer exhibit dialect-specific linguistic features.

Title/Author: Johann Valentin Andreae, *Chymische Hochzeit: Christiani Rosencreütz*.  
Words: 30,055  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Andreae,+Johann+Valentin/Roman/Die+chymische+Hochzeit%3A+Christiani+Rosencreutz+anno+1459>.  
Maack, Ferdinand, ed. 1913. *Chymische Hochzeit: Christiani Rosencreütz anno 1459. Nach der zu Strassburg bei Lazari Zetzners seel. Erben im Jahre 1616 erschienenen Ausgabe originalgetreu neugedruckt*. Berlin: Barsdorf.

Title/Author: Johann Rist, dramas: *Irenaromachia* (complete text, 14,438 words); *Perseus* (18,526 words).  
Words: 32,964  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Rist,+Johann/Dramen>.  
Mannack, Eberhard, ed. 1972. *Johann Rist: Sämtliche Werke*. Berlin: De Gruyter.

Title/Author: Johannes Kepler, *Außzug auß der Vralten Messe Kunst Archimedis*.  
Words: 32,687  
Source: Electronic (Deutsches Textarchiv): [http://www.deutschestextarchiv.de/book/show/kepler\\_messekunst\\_1616](http://www.deutschestextarchiv.de/book/show/kepler_messekunst_1616).  
Text is a diplomatic transcription of the first printed edition from 1616.

## Verse

Title/Author: Friedrich Spee, *Trutznachtigall*.  
Words: 31,112  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Spee,+Friedrich/Gedichte/Trutznachtigall>.  
Arlt, Gustave Otto, ed. 1936. *Friedrich Spee, Trutznachtigall*. Halle: Niemeyer.  
Rosenfeld, Emmy, ed. 1968. *Friedrich Spee, Sämtliche Schriften, Band 2*. Munich: Kösel.

Title/Author: Martin Opitz, *Weltliche Dichtungen*.  
Words: 31,271  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Opitz,+Martin/Gedichte>.  
Oesterley, H., ed. 1889. *Martin Opitz: Weltliche und geistliche Dichtung*. Berlin: Spemann.  
Tittmann, Julius, ed. 1869. *Martin Opitz: Ausgewählte Dichtungen*. Leipzig: Brockhaus.

Title/Author: Johann Klaj / Georg Philipp Harsdörffer / Sigmund von Birken, *Gedichte*.  
Words: 32,852  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Klaj,+Johann/Gedichte>.  
Wiedemann, Conrad, ed. 1965. *Johann Klaj: Redeoratorien und "Lobrede der Teutschen Poeterey"*. Tübingen: Niemeyer.  
Wiedemann, Conrad, ed. 1968. *Johann Klaj: Friedensdichtungen und kleinere poetische Schriften*. Tübingen: Niemeyer.

Title/Author: Paul Fleming, *Poetische Wälder*.  
Words: 30,926  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Fleming,+Paul/Gedichte/Deutsche+Gedichte>.  
Lappenberg, J[ohann] M[artin], ed. 1865. *Paul Flemings Deutsche Gedichte*. Stuttgart: Litterarischer Verein.

Title/Author: Georg Rodolf Weckherlin, *Gedichte*.  
Words: 31,751  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Weckherlin,+Georg+Rodolf/Gedichte/Gedichte>.  
Goedecke, Karl, ed. 1873. *Georg Rodolf Weckherlin: Gedichte*. Leipzig: Brockhaus.

## Period 7 (1650–1700)

### Prose

Title/Author: Heinrich Anselm von Ziegler und Kliphausen, *Die asiatische Banise. Oder das blutig – doch mutige Pegu.*  
Words: 30,596  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Ziegler+und+Kliphausen,+Heinrich+Anselm+von/Roman/Die+asiatische+Banise?hl=kliphausen>.  
Ziegler und Kliphausen, Heinrich Anselm von. (1689) 1965. *Die Asiatische Banise. Oder das blutig – doch mutige Pegu*. Munich: Winkler.

Title/Author: Abraham a Sancta Clara, *Mercks Wienn.*  
Words: 30,694  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Abraham+a+Sancta+Clara/Satirischer+Traktat/Mercks+Wienn>.  
Abraham a Sancta Clara. (1680) 1983. *Mercks Wienn*. Tübingen: Niemeyer.

Title/Author: Johann Beer, *Die teutschen Winter-Nächte.*  
Words: 30,986  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Beer,+Johann/Romane/Teutsche+Winter-Nächte>.  
Beer, Johann. (1682) 1963. *Die teutschen Winter-Nächte & Die kurzweiligen Sommer-Täge*, edited by Richard Alewyn. Frankfurt a. M.: Insel.

Title/Author: Christian Weise, *Die drei ärgsten Erznarren in der ganzen Welt.*  
Words: 31,755  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Weise,+Christian/Romane/Die+drei+ärgsten+Erznarren+in+der+ganzen+Welt>.  
Weise, Christian. (1673) 1878. *Die drei ärgsten Erznarren in der ganzen Welt*. Halle: Niemeyer.

Title/Author: Hans Jakob Christoffel von Grimmelshausen, *Der abenteuerliche Simplicissimus.*  
Words: 30,651  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Grimmelshausen,+Hans+Jakob+Christoffel+von/Romane/Der+abenteuerliche+Simplicissimus+Teutsch>.  
Borchardt, Hans Heinrich, ed. 1921. *Grimmelshausens Werke in vier Teilen, Band 1*. Berlin: Bong.

### Verse

Title/Author: Andreas Gryphius, dramas: *Catharina von Georgien* (complete text, 24,155 words); *Leo Armenius* (8,169 words).  
Words: 32,324  
Source: Electronic (Projekt Gutenberg): <https://www.projekt-gutenberg.org/gryphius/catharin/catharin.html>  
<https://www.projekt-gutenberg.org/gryphius/armenius/armenius.html>  
Gryphius, Andreas. (1657) 1995. *Catharina von Georgien*. Stuttgart: Reclam.  
Gryphius, Andreas. (1650) 1996. *Leo Armenius*. Stuttgart: Reclam.

- Title/Author: Christian Wernicke, *Überschriften in zehn Büchern*.  
 Words: 30,825  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Wernicke,+Christian/Gedichte/Überschriften+in+zehn+Büchern>.  
 Pechel, Rudolf, ed. 1909. *Christian Wernicke: Epigramme*. Berlin: Mayer & Müller.  
 Förster, Karl, ed. 1838. *Auserlesene Gedichte von Christian Hoffmann von Hoffmannswaldau, Daniel Caspar von Lohenstein, Christian Wernicke, Friedrich Rudolf Frhr. von Canitz, Christian Weise, Johann von Besser, Heinrich Mühlpforth, Benjamin Neukirch, Johann Michael Moscherosch und Nicolaus Peucker*. Leipzig: Brockhaus.
- Title/Author: Catharina Regina von Greiffenberg, *Geistliche Sonnette, Lieder und Gedichte*.  
 Words: 30,567  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Greiffenberg,+Catharina+Regina+von/Gedichte/Geistliche+Sonnette,+Lieder+und+Gedichte>.  
 Greiffenberg, Catharina Regina von. 1662. *Geistliche Sonnette / Lieder und Gedichte / zu Gottseeligem Zeitvertreib*. Nuremberg: Endters.
- Title/Author: Angelus Silesius (Johannes Scheffler), *Heilige Seelenlust oder geistliche Hirtenlieder*.  
 Words: 30,483  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Angelus+Silesius/Gedichte/Heilige+Seelenlust+oder+geistliche+Hirtenlieder>.  
 Held, Hans Ludwig, ed. 1952. *Angelus Silesius: Sämtliche poetische Werke in drei Bänden. Band 2-3*. Munich: Hanser.
- Title/Author: Daniel Casper von Lohenstein, *Epicharis*.  
 Words: 32,618  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Lohenstein,+Daniel+Casper+von/Dramen/Epicharis>.  
 Just, Klaus Günther, ed. 1955. *Daniel Casper von Lohenstein: Römische Trauerspiele*. Stuttgart: Hiersemann.

## Period 8 (1700–1750)

### Prose

- Title/Author: Andreas Glorez, *Eröffnetes Wunderbuch*.  
 Words: 30,404  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Glorez,+Andreas/Werk/Eröffnetes+Wunderbuch>.  
 Glorez, Andreas. (1700) 1979. *Des Mährischen Albertus Magnus, Andreas Glorez, Klostergeistlicher und Naturkundiger, Eröffnetes Wunderbuch von Wassersalben, s. g. zauberischen Krankheiten, Wunderkuren, wie sie die heilige Schrift lehrt und mit gar gering geachteten Sachen, magischer Kraft und Signatur der Erdgewächse und Kräuter, Egyptischen Geheimnissen, Verpflanzung der Krankheiten in Thiere und Bäume, Glücksruthen auf die in der Erde verborgenen Metalle, sympathetischen Pulvern, Erforschung der Krankheiten durch den urin, und andern merkwürdigen Geheimnissen aus handschriftl. Klosterschätzen*. Freiburg im Breisgau: Aurum.

- Title/Author: Johann Jacob Bodmer, *Critische Abhandlung von dem Wunderbaren in der Poesie und dessen Verbindung mit dem Wahrscheinlichen*.  
 Words: 30,676  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Bodmer,+Johann+Jacob/Theoretische+Schrift/Kritische+Abhandlung+von+dem+Wunderbaren+in+der+Poesie>.  
 Bodmer, Johann Jacob. (1740) 1966. *Critische Abhandlung von dem Wunderbaren in der Poesie und dessen Verbindung mit dem Wahrscheinlichen. In einer Vertheidigung des Gedichtes Joh. Miltons von dem verlohrnen Paradiese; Der beygefüget ist Joseph Addisons Abhandlung von den Schoenheiten in demselben Gedichte*. Stuttgart: Metzler.
- Title/Author: Christian Fürchtegott Gellert, dramas: *Die Betschwester* (complete text, 18,371 words); *Die zärtlichen Schwestern* (14,409 words).  
 Words: 32,780  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Gellert,+Christian+Fürchtegott/Dramen>.  
 Honnefelder, Gottfried, ed. 1979. *Christian Fürchtegott Gellert: Werke, Band 1 und 2*. Frankfurt a. M.: Insel.
- Title/Author: Johann Christoph Gottsched, *Versuch einer critischen Dichtkunst*.  
 Words: 30,997  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Gottsched,+Johann+Christoph/Theoretische+Schriften/Versuch+einer+critischen+Dichtkunst>.  
 Birke, Joachim, and P. M. Mitchell, eds. 1968–1987. *Johann Christoph Gottsched: Ausgewählte Werke*, vols. 6.1–6.2. Berlin: De Gruyter.
- Title/Author: Georg Henning Behrens, *Hercynia Curiosa oder Curiöser Hartz-Wald*.  
 Words: 31,100  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Behrens,+Georg+Henning/Werk/Hercynia+Curiosa+oder+Curiöser+Hartz-Wald>.  
 Behrens, Georg Henning. (1703). 1899. *Hercynia Curiosa oder Curiöser Hartz-Wald, Das ist Sonderbahre Beschreibung u. Verzeichnis Derer Curiösen Hölen, Seen, Brunnen, Bergen, und vielen andern an- und auff dem Hartz vorhandenen Denckwürdigen Sachen mit unterschiedenen Nützlichen und Ergetzlichen Medicinischen, Phisicalischen, und Historischen Anmerkungen denen Liebhabern solcher Curiositäten zur Lust heraus gegeben von D. Georg Henning Behrens, Physico Ordin. Subordin. in Nordhausen*. N.p.: Ebert.

## Verse

- Title/Author: Friedrich von Hagedorn, *Fabeln und Erzählungen*.  
 Words: 30,548  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Hagedorn,+Friedrich+von/Gedichte/Fabeln+und+Erzählungen>.  
*Friedrich von Hagedorn: Sämmtliche poetische werke*. n.d. Leipzig: Reclam.
- Title/Author: Christiane Mariane von Ziegler, *Versuch in gebundener Schreib-Art*.  
 Words: 31,700  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Ziegler,+Christiana+Mariana+von/Gedichte/Versuch+in+gebundener+Schreib-Art>.  
 Ziegler, Christiane Mariane von. 1728. *Versuch in gebundener Schreib-Art*. Leipzig: Braun.  
 Ziegler, Christiane Mariane von. 1739. *Vermischte Schriften in gebundener und ungebundener Rede*. Göttingen: Universitets-Buchhandlung [sic].
- Title/Author: Johann Christoph Gottsched, *Oden*.  
 Words: 30,625  
 Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Gottsched,+Johann+Christoph/Gedichte/Gedichte/Oden>.  
 Birke, Joachim, ed. 1968. *Johann Christoph Gottsched: Ausgewählte Werke. Band 1: Gedichte und Gedichtübertragungen*. Berlin: De Gruyter.

Title/Author: Albrecht von Haller, *Versuch Schweizerischer Gedichte*.  
Words: 30,759  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Haller,+Albrecht+von/Gedichte/Versuch+Schweizerischer+Gedichte>.  
Hirzel, Ludwig, ed. 1882. *Albrecht von Haller: Gedichte*. Frauenfeld: Huber.

Title/Author: Barthold Heinrich Brockes, *Irdisches Vergnügen in Gott*.  
Words: 31,123  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Brockes,+Barthold+Heinrich/Gedichte/Irdisches+Vergnügen+in+Gott>.  
Brockes, Barthold Heinrich. (1738) 1965. *Auszug der vornehmsten Gedichte aus dem Irdischen Vergnügen in Gott*. Stuttgart: Metzler.  
Stenzel, Jürgen. 1969. *Gedichte 1700–1770*. Vol. 5 of *Deutsche Lyrik von den Anfängen bis zur Gegenwart in 10 Bänden*, edited by Walter Killy. Munich: Deutscher Taschenbuch Verlag.

## Period 9 (1750–1800)

### Prose

Title/Author: August Wilhelm Iffland, dramas: *Verbrechen aus Ehrsucht* (complete text, 21,569 words); *Die Jäger* (10,996 words).  
Words: 32,565  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Iffland,+August+Wilhelm/Dramen>.  
Iffland, August Wilhelm. (1784) 1843. *Verbrechen aus Ehrsucht*. In *Theater*. Vienna: Klang.  
Iffland, August Wilhelm. (1785) 1976. *Die Jäger*, edited by Jürg Mathes. Stuttgart: Reclam.

Title/Author: Johann Wolfgang von Goethe, *Die Leiden des jungen Werther*.  
Words: 30,670  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Goethe,+Johann+Wolfgang/Romane/Die+Leiden+des+jungen+Werther>.  
Trunz, Erich, ed. 1948. *Goethes Werke. Hamburger Ausgabe in 14 Bänden*. Hamburg: Wegener.

Title/Author: Johann Gottfried Herder, *Abhandlung über den Ursprung der Sprache*.  
Words: 30,640  
Source: Online (Project Gutenberg): <https://www.projekt-gutenberg.org/herder/sprache/index.html>.  
Herder, Johann Gottfried. (1772) 1997. *Abhandlung über den Ursprung der Sprache*. Stuttgart: Reclam.

Title/Author: Georg Forster, *Ansichten vom Niederrhein, von Brabant, Flandern, Holland, England und Frankreich*.  
Words: 30,690  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Forster,+Georg/Reisebeschreibung/Ansichten+vom+Niederrhein,+von+Brabant,+Flandern,+Holland,+England+und+Frankreich>.  
Steiner, Gerhard, ed. 1971. *Georg Forster: Werke in vier Bänden*. Leipzig: Insel.

Title/Author: Immanuel Kant. *Kritik der reinen Vernunft*.  
Words: 30,884  
Source: Electronic (Project Gutenberg): <https://www.gutenberg.org/cache/epub/6343/pg6343-images.html>.

## Verse

- Title/Author: Johann Wolfgang von Goethe: *Gedichte* (27,418 words); *Die Laune des Verliebten* (5,202 words).  
Words: 32,620  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Goethe,+Johann+Wolfgang/Gedichte>.  
<http://www.zeno.org/Literatur/M/Goethe,+Johann+Wolfgang/Dramen/Die+Laune+des+Verliebten>.  
Seidel, Siegfried, ed. 1960. *Johann Wolfgang von Goethe: Berliner Ausgabe. Poetische Werke*. Berlin: Aufbau.
- Title/Author: Christoph Martin Wieland, *Oberon*.  
Words: 30,744  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Wieland,+Christoph+Martin/Verserzählungen/Oberon>.  
Martini, Fritz, and Hans Werner Seiffert, eds. 1964. *Christoph Martin Wieland: Werke*. Munich: Hanser.
- Title/Author: Christian Friedrich Daniel Schubart, *Gedichte*.  
Words: 30,982  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Schubart,+Christian+Friedrich+Daniel/Gedichte>.  
Hauff, Gustav, ed. n.d. *Christian Friedrich Daniel Schubart: Gedichte. Historisch-kritische Ausgabe*. Leipzig: Reclam.
- Title/Author: Gottfried August Bürger, *Gedichte*.  
Words: 30,805  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Bürger,+Gottfried+August/Gedichte>.  
Cosentius Ernst, ed. 1914. *Bürgers Gedichte in zwei Teilen. Teil 1: Gedichte 1789*, 2nd ed. Berlin: Bong.
- Title/Author: Friedrich Schiller, *Gedichte*.  
Words: 30,641  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Schiller,+Friedrich/Gedichte>.  
Fricke, Gerhard, and Herbert G. Göpfert, eds. 1962. *Friedrich Schiller: Sämtliche Werke. Auf Grund der Originaldrucke*, vols. 1–5, 3rd ed. Munich: Hanser.

## Period 10 (1800–1850)

### Prose

- Title/Author: Heinrich von Kleist, *Gesammelte kleine Werke*.  
Words: 30,497  
Source: Electronic (Project Gutenberg): <http://www.gutenberg.org/cache/epub/6645/pg6645-images.html>.
- Title/Author: E. T. A. Hoffmann, *Die Elixiere des Teufels*.  
Words: 30,583  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Hoffmann,+E.+T.+A./Romane/Die+Elixiere+des+Teufels>.  
Hoffmann, E. T. A. (1815) 1963. *Poetische Werke in sechs Bänden*, vol. 2. Berlin: Aufbau.
- Title/Author: Ludwig Tieck, *Vittoria Accorombona*.  
Words: 30,417  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Tieck,+Ludwig/Romane/Vittoria+Accorombona>.  
Thalmann, Marianne, ed. 1963. *Ludwig Tieck: Werke in vier Bänden. Nach dem Text der »Schriften« von 1828-1854, unter Berücksichtigung der Erstdrucke*. Munich: Winkler.



Title/Author: Georg Büchner, dramas: *Dantons Tod* (complete text, 19,921 words); *Leonce und Leona* (complete text, 8,730 words); *Woyzeck* (3,518 words).  
Words: 32,169  
Source: Electronic (Zeno):  
<http://www.zeno.org/Literatur/M/Büchner,+Georg/Dramen/Dantons+Tod> (*Dantons Tod*)  
<http://www.zeno.org/Literatur/M/Büchner,+Georg/Dramen/Leonce+und+Lena> (*Leonce und Leona*)  
Electronic (Project Gutenberg): <http://www.gutenberg.org/cache/epub/5322/pg5322.html> (*Woyzeck*)  
Bergemann, Fritz, ed. 1979. *Georg Büchner: Werke und Briefe*, 13th ed. Frankfurt a. M.: Insel.

Title/Author: Georg Wilhelm Friedrich Hegel, *Vorlesungen über die Geschichte der Philosophie*.  
Words: 30,579  
Source: Electronic (Zeno):  
<http://www.zeno.org/Philosophie/M/Hegel,+Georg+Wilhelm+Friedrich/Vorlesungen+über+die+Geschichte+der+Philosophie>.  
Moldenhauer, Eva, and Karl Markus Michel, eds. 1979. *Georg Wilhelm Friedrich Hegel: Werke in zwanzig Bänden. Auf der Grundlage der Werke von 1832-1845 neu edierte Ausgabe*. Frankfurt a. M.: Suhrkamp.

## Verse

Title/Author: Annette von Droste-Hülshoff, *Gedichte*.  
Words: 30,816  
Source: Electronic (Project Gutenberg): <https://www.projekt-gutenberg.org/droste/1844/index.html>.  
Schneider, Reinhold, ed. 1948. *Annette von Droste Hülshoff: Gesammelte Werke. Band II: Gedichte*. Vaduz: Liechtensteinverlag.

Title/Author: Heinrich Heine: *Deutschland. Ein Wintermärchen* (complete collection, 10,736 words); *Buch der Lieder* (20,045 words).  
Words: 30,781  
Source: Electronic (Project Gutenberg):  
<http://www.gutenberg.org/cache/epub/6079/pg6079-images.html>  
<http://www.gutenberg.org/cache/epub/3498/pg3498.html>

Title/Author: Friedrich Hebbel, *Gedichte*.  
Words: 11,081  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Hebbel,+Friedrich/Gedichte>.  
Werner, Richard Maria, ed. 1911. *Friedrich Hebbel: Sämtliche Werke. Historisch-kritische Ausgabe. 1. Abteilung: Werke*. Berlin: Behr.

Title/Author: Eduard Mörike, *Gedichte*.  
Words: 20,723  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Mörike,+Eduard/Gedichte>.  
Unger, Helga, and Benno von Wiese, eds. 1967. *Eduard Mörike: Sämtliche Werke in zwei Bänden*, vol. 1. Munich: Winkler.

Title/Author: Joseph von Eichendorff, *Gedichte*.  
Words: 30,627  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Eichendorff,+Joseph+von/Gedichte>.  
Hillach, Ansgar, ed. 1970. *Joseph von Eichendorff: Werke. Nach den Ausgaben letzter Hand unter Hinzuziehung der Erstdrucke*. Munich: Winkler.

Title/Author: Ernst Schulze: *Poetisches Tagebuch* (complete collection, 21,306 words); *Reise durch das Weserthal* (complete collection, 1,366 words); *Psyche, ein griechisches Märchen in sieben Büchern* (7,840 words).  
Words: 30,512  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Schulze,+Ernst/Gedichte>.  
*Ernst Schulze: Sämtliche poetische Schriften*, vols. 3–4. 1819–1820. Leipzig: Brockhaus.

## Period 11 (1850–1900)

### Prose

- Title/Author: Wilhelmine Schröder-Devrient (?), *Aus den Memoiren einer Sängerin*.<sup>129</sup>  
Words: 30,571  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Schröder-Devrient,+Wilhelmine/Roman/Aus+den+Memoiren+einer+Sängerin>.  
Englisch, Paul, ed. 1970. *Wilhelmine Schröder-Devrient: Aus den Memoiren einer Sängerin. Ungekürzte Originalfassung*. Munich: Rogner & Bernhard.
- Title/Author: Friedrich Nietzsche, *Also sprach Zarathustra*.  
Words: 30,553  
Source: Electronic (Project Gutenberg): <http://www.gutenberg.org/cache/epub/7205/pg7205.html>.
- Title/Author: Frank Wedekind, dramas: *Frühlings Erwachen* (complete text, 18,818 words); *Erdgeist* (13,339 words).  
Words: 32,157  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Wedekind,+Frank/Dramen>.  
Hahn, Manfred, ed. 1969. Frank Wedekind: *Werke in drei Bänden*. Berlin: Aufbau.
- Title/Author: Heinrich Heine, *Zur Geschichte der Religion und Philosophie in Deutschland*.  
Words: 30,643  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Heine,+Heinrich/Essays+I%3A+Über+Deutschland/Zur+Geschichte+der+Religion+und+Philosophie+in+Deutschland>.  
Kaufmann, Hans, ed. 1972. *Heinrich Heine: Werke und Briefe in zehn Bänden*, 2nd ed. Berlin: Aufbau.
- Title/Author: Theodor Fontane, *Effi Briest*.  
Words: 30,594  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Fontane,+Theodor/Romane/Effi+Briest?hl=effi+briest>.  
Goldammer, Peter, Gotthard Erler, Anita Golz, and Jürgen Jahn, eds. 1973. *Theodor Fontane: Romane und Erzählungen in acht Bänden*, vol. 7, 2nd ed.. Berlin: Aufbau.

### Verse

- Title/Author: Arno Holz, *Buch der Zeit*.  
Words: 30,939  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Holz,+Arno/Gedichte/Buch+der+Zeit>.  
Holz, Arno. 1892. *Buch der Zeit. Lieder eines Modernen.*, 2nd ed. Berlin: Fontane.
- Title/Author: Felix Dahn, *Balladen*.  
Words: 30,671  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Dahn,+Felix/Gedichte/Balladen>.  
*Felix Dahn: Gesammelte Werke. Erzählende und poetische Schriften, Zweite Reihe, Band 5: Gedichte und Balladen (Auswahl)*. 1912. Leipzig: Breitkopf and Härtel.

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<sup>129</sup> The authorship of this text is uncertain. It is an erotic novel, which I did not realize when I selected it. However, it falls squarely within this period (it was likely composed between 1868 and 1875) and, regardless of who wrote it and for what purpose, can be considered a genuine specimen of late 19<sup>th</sup>-century German prose.

Title/Author: Ludwig Eichrodt, *Leben und Liebe*.  
Words: 30,500  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Eichrodt,+Ludwig/Gedichte/Leben+und+Liebe>.  
Eichrodt, Ludwig. 1856. *Leben und Liebe*. Frankfurt a. M.: Keller.

Title/Author: Richard Fedor Leopold Dehmel: *Erlösungen* (complete collection, 22,320 words); *Aber die Liebe*.  
*Ein Ehemanns und Menschenbuch* (8,628 words).  
Words: 30,948  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Dehmel,+Richard+Fedor+Leopold/Gedichte>.  
Dehmel, Richard. 1891. *Erlösungen*. Stuttgart: Göschen.  
Dehmel, Richard. *Aber die Liebe. Ein Ehemanns- und Menschenbuch*. Munich: Albert.

Title/Author: Paul Heyse, *Gedichte*.  
Words: 30,551  
Source: Electronic (Zeno): <http://www.zeno.org/Literatur/M/Heyse,+Paul/Gedichte>.  
Heyse, Paul. (n.d.) 1991. *Paul Heyse: Gesammelte Werke, 3 Reihen in 15 Bänden*. Hildesheim: Georg Olms.

## Appendix B: Contingency Tables (Chapter 4)

Table 4.31a. Effects on apocope (whole data set)

		All periods			Periods 1–6 only		
Association with $-\emptyset$		$-\emptyset$	$-e$	Row totals	$-\emptyset$	$-e$	Row totals
Unprec. (A)	Unpreceded	3,709	563	<b>4,272</b>	2,421	408	<b>2,829</b>
	Preceded	7,038	1,965	<b>9,003</b>	4,384	1,378	<b>5,762</b>
Unprec. (B)	Unpreceded	4,358	683	<b>5,041</b>	2,837	494	<b>3,331</b>
	Preceded	6,389	1,845	<b>8,234</b>	3,968	1,292	<b>5,260</b>
Title (A)	+ Title	2,273	168	<b>2,441</b>	1,473	166	<b>1,639</b>
	– Title	8,474	2,360	<b>10,834</b>	5,332	1,620	<b>6,952</b>
Title (B)	+ Title	1,759	137	<b>1,896</b>	1,134	135	<b>1,269</b>
	– Title	8,988	2,391	<b>11,379</b>	5,671	1,651	<b>7,322</b>
Comp. (A)	+ Compound	689	150	<b>839</b>	444	98	<b>542</b>
	– Compound	10,058	2,378	<b>12,436</b>	6,361	1,688	<b>8,049</b>
Comp. (B)	+ Compound	1,110	201	<b>1,311</b>	801	143	<b>944</b>
	– Compound	9,637	2,327	<b>11,964</b>	6,004	1,643	<b>7,647</b>
Vocative	+ Vocative	2,292	220	<b>2,512</b>	1,474	160	<b>1,634</b>
	– Vocative	8,455	2,308	<b>10,763</b>	5,331	1,626	<b>6,957</b>
<b>Column totals</b>		<b>10,747</b>	<b>2,528</b>	<b>13,275</b>	<b>6,805</b>	<b>1,786</b>	<b>8,591</b>

Association with $-e$		$-e$	$-\emptyset$	Row totals	$-e$	$-\emptyset$	Row totals
Prep. (A)	+ Prep.	220	607	<b>827</b>	178	356	<b>534</b>
	– Prep.	170	766	<b>936</b>	105	471	<b>576</b>
	<b>Col. totals</b>	<b>390</b>	<b>1,373</b>	<b>1,763</b>	<b>283</b>	<b>827</b>	<b>1,110</b>
Prep. (B)	+ Prep.	130	533	<b>663</b>	88	319	<b>407</b>
	– Prep.	170	742	<b>912</b>	105	457	<b>562</b>
	<b>Col. totals</b>	<b>300</b>	<b>1,275</b>	<b>1,575</b>	<b>193</b>	<b>776</b>	<b>969</b>

*Note:* The totals in the bottom table (prepositional objects) include only oblique tokens, since prepositional objects are never in the nominative case. The results do not change significantly when nominative tokens are included in the group of non-prepositional-objects. In the upper table, the column totals are the same in all categories; they are given only once at the bottom of the table.

Table 4.32a. Effects on apocope (prose texts only)

		All periods			Periods 1–6 only		
Association with <i>-ø</i>		<i>-ø</i>	<i>-e</i>	Row totals	<i>-ø</i>	<i>-e</i>	Row totals
Unprec. (A)	Unpreceded	1,502	334	<b>1,836</b>	937	277	<b>1,214</b>
	Preceded	3,938	1,250	<b>5,188</b>	2,501	1,020	<b>3,521</b>
Unprec. (B)	Unpreceded	1,842	380	<b>2,222</b>	1,155	317	<b>1,472</b>
	Preceded	3,598	1,204	<b>4,802</b>	2,283	980	<b>3,263</b>
Title (A)	+ Title	1,512	141	<b>1,653</b>	943	141	<b>1,084</b>
	– Title	3,928	1,443	<b>5,371</b>	2,495	1,156	<b>3,651</b>
Title (B)	+ Title	1,083	118	<b>1,201</b>	666	118	<b>784</b>
	– Title	4,357	1,466	<b>5,823</b>	2,772	1,179	<b>3,951</b>
Comp. (A)	+ Compound	372	102	<b>474</b>	302	72	<b>374</b>
	– Compound	5,068	1,482	<b>6,550</b>	3,136	1,225	<b>4,361</b>
Comp. (B)	+ Compound	664	141	<b>805</b>	557	105	<b>662</b>
	– Compound	4,776	1,443	<b>6,219</b>	2,881	1,192	<b>4,073</b>
Vocative	+ Vocative	819	85	<b>904</b>	425	81	<b>506</b>
	– Vocative	4,621	1,499	<b>6,120</b>	3,013	1,216	<b>4,229</b>
<b>Column totals</b>		<b>5,440</b>	<b>1,584</b>	<b>7,024</b>	<b>3,438</b>	<b>1,297</b>	<b>4,735</b>

Association with <i>-e</i>		<i>-e</i>	<i>-ø</i>	Row totals	<i>-e</i>	<i>-ø</i>	Row totals
Prep. (A)	+ Prep.	152	233	<b>385</b>	136	174	<b>310</b>
	– Prep.	88	280	<b>368</b>	62	199	<b>261</b>
	<b>Col. totals</b>	<b>240</b>	<b>513</b>	<b>753</b>	<b>198</b>	<b>373</b>	<b>571</b>
Prep. (B)	+ Prep.	62	202	<b>264</b>	46	145	<b>191</b>
	– Prep.	88	269	<b>357</b>	62	189	<b>251</b>
	<b>Col. totals</b>	<b>150</b>	<b>471</b>	<b>621</b>	<b>108</b>	<b>334</b>	<b>442</b>

*Note:* The totals in the bottom table (prepositional objects) include only oblique tokens, since prepositional objects are never in the nominative case. The results do not change significantly when nominative tokens are included in the group of non-prepositional-objects. In the upper table, the column totals are the same in all categories; they are given only once at the bottom of the table.

Table 4.33a. Effects on non-weak inflection (whole data set)

		All periods			Periods 1–6 only		
Association with non-weak inflection		Non-weak	Weak	Row totals	Non-weak	Weak	Row totals
Unprec. (A)	Unpreceded	842	1,450	<b>2,292</b>	592	1,096	<b>1,688</b>
	Preceded	1,366	8,090	<b>9,456</b>	778	5,530	<b>6,308</b>
Unprec. (B)	Unpreceded	958	1,766	<b>2,724</b>	662	1,344	<b>2,006</b>
	Preceded	1,250	7,774	<b>9,024</b>	708	5,282	<b>5,990</b>
Title (A)	+ Title	286	761	<b>1,047</b>	230	530	<b>760</b>
	– Title	1,922	8,779	<b>10,701</b>	1,140	6,096	<b>7,236</b>
Title (B)	+ Title	247	280	<b>527</b>	208	220	<b>428</b>
	– Title	1,961	9,260	<b>11,221</b>	1,162	6,406	<b>7,568</b>
Comp. (A)	+ Compound	183	702	<b>885</b>	105	450	<b>555</b>
	– Compound	2,025	8,838	<b>10,863</b>	1,265	6,176	<b>7,441</b>
Comp. (B)	+ Compound	398	805	<b>1,203</b>	280	542	<b>822</b>
	– Compound	1,810	8,735	<b>10,545</b>	1,090	6,084	<b>7,174</b>
<b>Column totals</b>		<b>2,208</b>	<b>9,540</b>	<b>11,748</b>	<b>1,370</b>	<b>6,626</b>	<b>7,996</b>

Association with weak inflection		Weak	Non-weak	Row totals	Weak	Non-weak	Row totals
Prep. (A)	+ Prep.	3,883	839	<b>4,722</b>	2,655	542	<b>3,197</b>
	– Prep.	5,657	1,369	<b>7,026</b>	3,971	828	<b>4,799</b>
	<b>Col. totals</b>	<b>9,540</b>	<b>2,208</b>	<b>11,748</b>	<b>6,626</b>	<b>1,370</b>	<b>7,996</b>
Prep. (B)	+ Prep.	3,801	675	<b>4,476</b>	2,626	415	<b>3,041</b>
	– Prep.	5,644	1,336	<b>6,980</b>	3,967	808	<b>4,775</b>
	<b>Col. totals</b>	<b>9,445</b>	<b>2,011</b>	<b>11,456</b>	<b>6,593</b>	<b>1,223</b>	<b>7,816</b>

Note: In the upper table, the column totals are the same in all categories; they are given only once at the bottom of the table.

Table 4.34a. Effects on non-weak inflection (prose texts only)

		All periods			Periods 1–6 only		
Association with non-weak inflection		Non-weak	Weak	Row totals	Non-weak	Weak	Row totals
Unprec. (A)	Unpreceded	403	875	<b>1,278</b>	316	705	<b>1,021</b>
	Preceded	638	5,279	<b>5,917</b>	426	3,603	<b>4,029</b>
Unprec. (B)	Unpreceded	435	1,089	<b>1,524</b>	343	880	<b>1,223</b>
	Preceded	606	5,065	<b>5,671</b>	399	3,428	<b>3,827</b>
Title (A)	+ Title	241	681	<b>922</b>	194	469	<b>663</b>
	– Title	800	5,473	<b>6,273</b>	548	3,839	<b>4,387</b>
Title (B)	+ Title	211	248	<b>459</b>	177	200	<b>377</b>
	– Title	830	5,906	<b>6,736</b>	565	4,108	<b>4,673</b>
Comp. (A)	+ Compound	87	528	<b>615</b>	57	382	<b>439</b>
	– Compound	954	5,626	<b>6,580</b>	685	3,926	<b>4,611</b>
Comp. (B)	+ Compound	237	622	<b>859</b>	180	465	<b>645</b>
	– Compound	804	5,532	<b>6,336</b>	562	3,843	<b>4,405</b>
<b>Column totals</b>		<b>1,041</b>	<b>6,154</b>	<b>7,195</b>	<b>742</b>	<b>4,308</b>	<b>5,050</b>

Association with weak inflection		Weak	Non-weak	Row totals	Weak	Non-weak	Row totals
Prep. (A)	+ Prep.	2,532	389	<b>2,921</b>	1,773	310	<b>2,083</b>
	– Prep.	3,622	652	<b>4,274</b>	2,535	432	<b>2,967</b>
	<b>Col. totals</b>	<b>6,154</b>	<b>1,041</b>	<b>7,195</b>	<b>4,308</b>	<b>742</b>	<b>5,050</b>
Prep. (B)	+ Prep.	2,497	268	<b>2,765</b>	1,762	191	<b>1,953</b>
	– Prep.	3,617	636	<b>4,253</b>	2,533	420	<b>2,953</b>
	<b>Col. totals</b>	<b>6,114</b>	<b>904</b>	<b>7,018</b>	<b>4,295</b>	<b>611</b>	<b>4,906</b>

Note: In the upper table, the column totals are the same in all categories; they are given only once at the bottom of the table.

## Appendix C: Distribution Tables for the Prose Data (Chapters 5–8)

### Group 1 (Chapter 5)

#### Group 1a

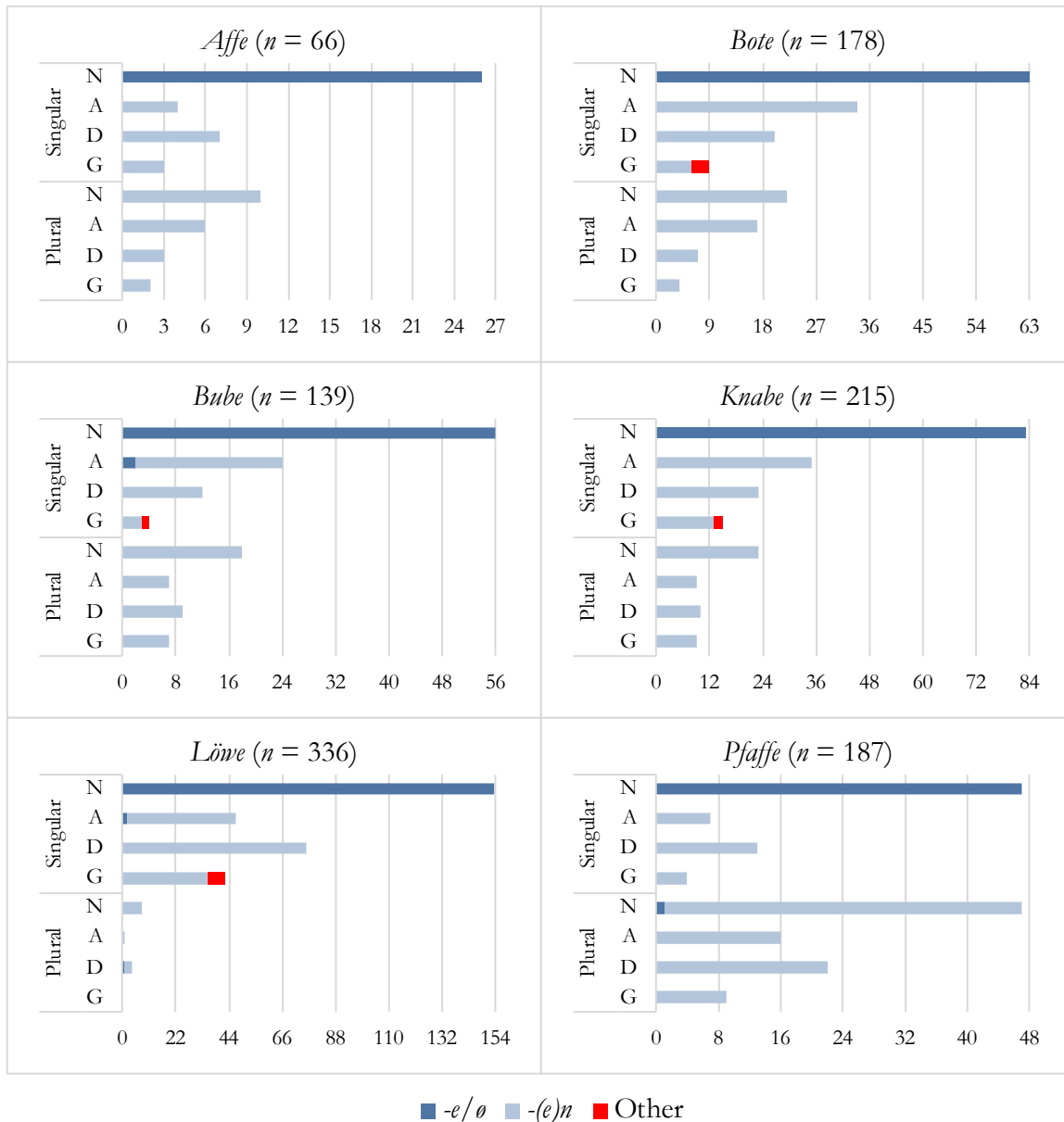


Figure 5.1a. Group 1a: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form.



## Group 1b

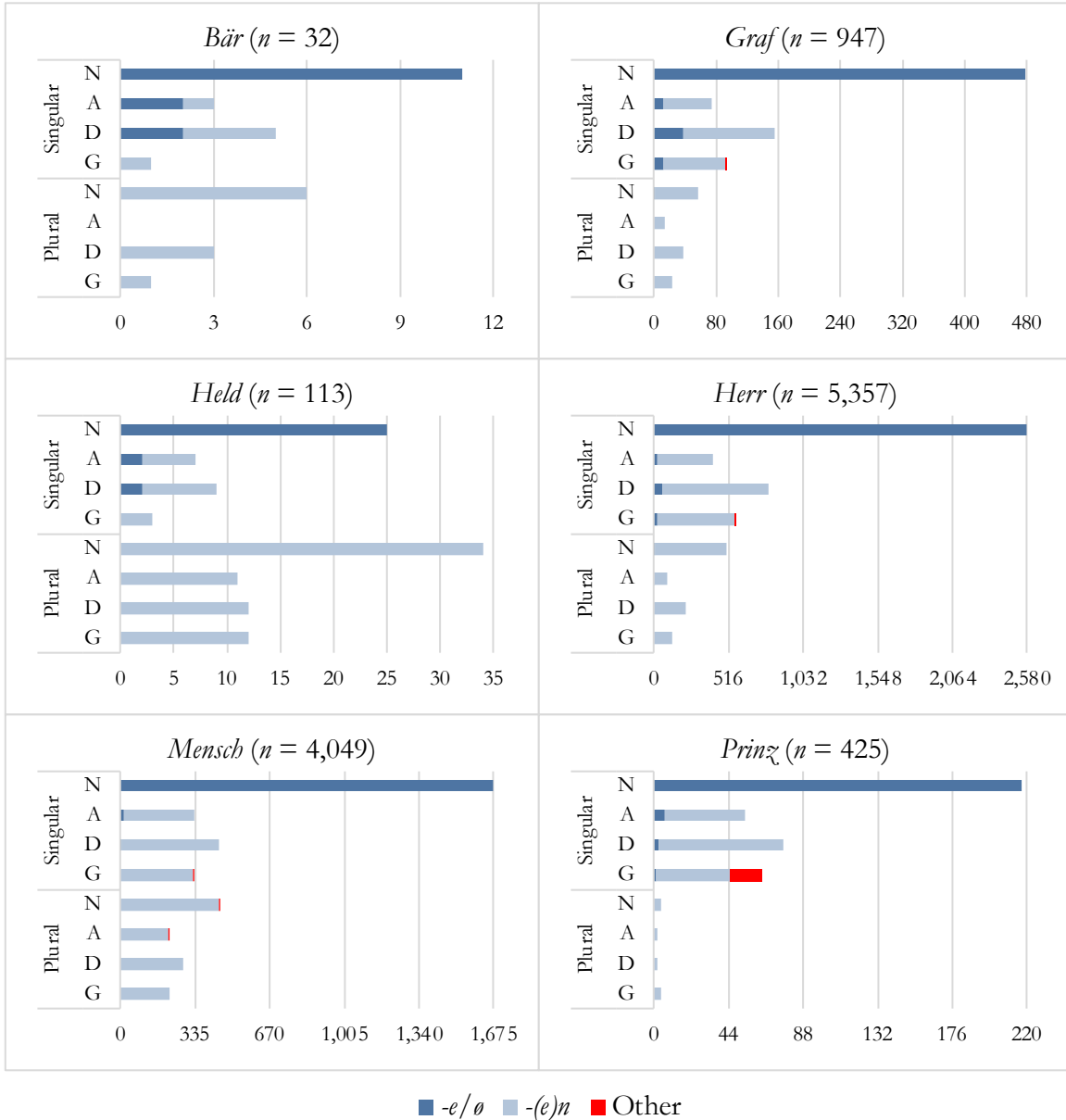


Figure 5.2a. Group 1b: Total frequency of each noun, by form. The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form.

Table 5.1a. Group 1a: Number distribution (all periods; all four cases)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>		
<i>n</i> =	66	178	139	215	336	187	Mean	SD
Sg. (%)	61	71	69	73	95	39	68	17
Pl. (%)	35	29	31	25	5	57	30	15
? (%)	5	1	0	2	1	4	2	2

Table 5.2a. Group 1a: Number distribution, by period (all four cases)

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	2	27	0	0	8	17
(1350–1400)	Singular (%)	50	52	—	—	75	18
	Plural (%)	50	44	—	—	25	76
	? (%)	0	4	—	—	0	6
Period 2	<i>n</i> =	3	63	12	10	10	11
(1400–1450)	Singular (%)	67	78	83	70	60	45
	Plural (%)	33	22	17	30	40	55
Period 3	<i>n</i> =	10	26	1	10	164	1
(1450–1500)	Singular (%)	50	62	0	80	98	100
	Plural (%)	40	38	100	20	1	0
	? (%)	10	0	0	0	1	0
Period 4	<i>n</i> =	1	7	16	4	1	147
(1500–1550)	Singular (%)	100	29	19	50	0	38
	Plural (%)	0	71	81	50	100	57
	? (%)	0	0	0	0	0	5
Period 5	<i>n</i> =	18	2	51	38	86	3
(1550–1600)	Singular (%)	61	100	88	63	98	33
	Plural (%)	28	0	12	26	1	67
	? (%)	11	0	0	11	1	0
Period 6	<i>n</i> =	0	13	13	63	25	3
(1600–1650)	Singular (%)	—	77	38	73	88	67
	Plural (%)	—	23	62	27	12	33
Period 7	<i>n</i> =	5	35	15	23	10	2
(1650–1700)	Singular (%)	60	80	73	78	90	100
	Plural (%)	40	20	27	22	10	0
Period 8	<i>n</i> =	6	0	2	21	5	0
(1700–1750)	Singular (%)	33	—	50	86	60	—
	Plural (%)	67	—	50	14	40	—
Period 9	<i>n</i> =	5	1	10	15	7	1
(1750–1800)	Singular (%)	80	100	90	67	100	100
	Plural (%)	20	0	10	33	0	0
Period 10	<i>n</i> =	7	3	17	21	4	2
(1800–1850)	Singular (%)	86	100	65	95	100	50
	Plural (%)	14	0	35	5	0	50
Period 11	<i>n</i> =	9	1	2	10	16	0
(1850–1900)	Singular (%)	56	100	50	40	100	—
	Plural (%)	44	0	50	60	0	—

Table 5.3a. Group 1b: Number distribution (all periods; all four cases)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>		
<i>n</i> =	32	947	113	5,357	4,049	425	Mean	SD
Sg. (%)	63	85	39	82	69	97	72	19
Pl. (%)	34	15	61	18	30	3	27	18
? (%)	3	0	0	0	1	0	1	1

Table 5.4a. Group 1b: Number distribution, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	5	0	873	1,416	0
(1350–1400)	Singular (%)	—	0	—	94	74	—
	Plural (%)	—	100	—	6	25	—
	? (%)	—	0	—	0	1	—
Period 2	<i>n</i> =	2	185	0	1,184	199	3
(1400–1450)	Singular (%)	50	85	—	62	80	100
	Plural (%)	50	15	—	38	20	0
Period 3	<i>n</i> =	3	0	1	521	505	0
(1450–1500)	Singular (%)	0	—	0	94	62	—
	Plural (%)	100	—	100	6	36	—
	? (%)	0	—	0	0	1	—
Period 4	<i>n</i> =	1	38	1	192	147	0
(1500–1550)	Singular (%)	0	95	0	68	50	—
	Plural (%)	0	5	100	30	44	—
	? (%)	100	0	0	2	6	—
Period 5	<i>n</i> =	5	487	4	878	83	1
(1550–1600)	Singular (%)	40	79	75	81	59	100
	Plural (%)	60	21	25	18	39	0
	? (%)	0	0	0	0	2	0
Period 6	<i>n</i> =	1	0	45	402	171	72
(1600–1650)	Singular (%)	100	—	20	81	57	93
	Plural (%)	0	—	80	19	42	6
	? (%)	0	—	0	0	1	1
Period 7	<i>n</i> =	5	30	7	320	206	315
(1650–1700)	Singular (%)	80	93	29	86	67	99
	Plural (%)	20	3	29	14	32	1
	? (%)	0	3	43	0	1	0
Period 8	<i>n</i> =	2	7	27	388	385	7
(1700–1750)	Singular (%)	50	86	44	96	65	57
	Plural (%)	50	14	56	4	34	43
	? (%)	0	0	0	0	1	0
Period 9	<i>n</i> =	9	16	5	190	425	2
(1750–1800)	Singular (%)	89	100	40	93	72	100
	Plural (%)	11	0	60	7	28	0
Period 10	<i>n</i> =	0	135	9	259	250	21
(1800–1850)	Singular (%)	—	96	44	82	66	90
	Plural (%)	—	4	56	18	34	10
Period 11	<i>n</i> =	4	44	17	150	262	4
(1850–1900)	Singular (%)	75	98	71	84	66	100
	Plural (%)	25	2	29	16	34	0

Table 5.5a. Group 1a: Case distribution in the singular (all periods)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>		
<i>n</i> =	40	126	96	157	318	72	Mean	SD
N (%)	65	50	58	53	48	65	57	7
A (%)	10	27	25	22	15	10	18	7
D (%)	18	16	13	15	24	18	17	4
G (%)	8	7	4	10	13	6	8	3
? (%)	0	0	0	1	0	1	0	1

Table 5.6a. Group 1a: Case distribution in the singular, by period

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	1	14	0	0	6	3
(1350–1400)	Nom. (%)	0	50	—	—	33	100
	Obl. (%)	100	50	—	—	67	0
Period 2	<i>n</i> =	2	49	10	7	6	5
(1400–1450)	Nom. (%)	100	51	70	43	33	40
	Obl. (%)	0	49	30	57	67	60
Period 3	<i>n</i> =	5	16	0	8	161	1
(1450–1500)	Nom. (%)	20	56	—	50	50	0
	Obl. (%)	80	44	—	50	50	100
Period 4	<i>n</i> =	1	2	3	2	0	56
(1500–1550)	Nom. (%)	100	50	67	50	—	68
	Obl. (%)	0	50	33	50	—	32
Period 5	<i>n</i> =	11	2	45	24	84	1
(1550–1600)	Nom. (%)	64	0	49	50	44	0
	Obl. (%)	36	100	51	50	56	100
Period 6	<i>n</i> =	0	10	5	46	22	2
(1600–1650)	Nom. (%)	—	30	60	52	45	50
	Obl. (%)	—	70	40	48	55	50
Period 7	<i>n</i> =	3	28	11	18	9	2
(1650–1700)	Nom. (%)	67	54	45	67	78	50
	Obl. (%)	33	46	55	33	22	50
Period 8	<i>n</i> =	2	0	1	18	3	0
(1700–1750)	Nom. (%)	50	—	100	11	67	—
	Obl. (%)	50	—	0	89	33	—
Period 9	<i>n</i> =	4	1	9	10	7	1
(1750–1800)	Nom. (%)	100	100	78	90	29	100
	Obl. (%)	0	0	22	10	71	0
Period 10	<i>n</i> =	6	3	11	20	4	1
(1800–1850)	Nom. (%)	67	33	73	65	100	100
	Obl. (%)	33	67	27	35	0	0
Period 11	<i>n</i> =	5	1	1	4	16	0
(1850–1900)	Nom. (%)	80	100	100	75	38	—
	Obl. (%)	20	0	0	25	63	—

Table 5.7a. Group 1b: Case distribution in the singular (all periods)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>		
<i>n</i> =	64	956	414	7,364	4,064	524	Mean	SD
N (%)	64	62	72	65	62	59	64	4
A (%)	22	9	11	9	12	12	12	4
D (%)	9	18	9	15	14	16	13	3
G (%)	5	11	7	11	12	14	10	3
? (%)	0	0	0	0.3	0.2	0	0	0

Table 5.8a. Group 1b: Case distribution in the singular, by period

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	0	0	819	1,053	0
(1350–1400)	Nom. (%)	—	—	—	49	73	—
	Obl. (%)	—	—	—	51	27	—
Period 2	<i>n</i> =	1	158	0	729	159	3
(1400–1450)	Nom. (%)	0	57	—	50	68	67
	Obl. (%)	100	43	—	50	32	33
Period 3	<i>n</i> =	0	0	0	490	315	0
(1450–1500)	Nom. (%)	—	—	—	60	43	—
	Obl. (%)	—	—	—	38	57	—
	?	—	—	—	2	0	—
Period 4	<i>n</i> =	0	36	0	130	73	0
(1500–1550)	Nom. (%)	—	69	—	55	62	—
	Obl. (%)	—	31	—	45	38	—
Period 5	<i>n</i> =	2	384	3	715	49	1
(1550–1600)	Nom. (%)	0	58	67	54	51	0
	Obl. (%)	100	42	33	46	49	100
Period 6	<i>n</i> =	1	0	9	325	97	67
(1600–1650)	Nom. (%)	100	—	56	71	43	58
	Obl. (%)	0	—	44	29	55	42
	?	0	—	0	0	2	0
Period 7	<i>n</i> =	4	28	2	276	139	311
(1650–1700)	Nom. (%)	50	79	100	71	55	50
	Obl. (%)	50	21	0	29	45	50
Period 8	<i>n</i> =	1	6	12	372	251	4
(1700–1750)	Nom. (%)	0	67	33	63	37	50
	Obl. (%)	100	33	67	37	63	50
Period 9	<i>n</i> =	8	16	2	176	307	2
(1750–1800)	Nom. (%)	75	56	50	80	59	100
	Obl. (%)	25	44	50	20	41	0
Period 10	<i>n</i> =	0	130	4	212	166	19
(1800–1850)	Nom. (%)	—	59	75	74	69	74
	Obl. (%)	—	41	25	26	31	26
Period 11	<i>n</i> =	3	43	12	126	173	4
(1850–1900)	Nom. (%)	67	65	67	83	46	100
	Obl. (%)	33	35	33	17	53	0
	?	0	0	0	1	1	0

Table 5.9a. Group 1a: Case distribution in the plural (all periods)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>		
<i>n</i> =	23	51	43	54	16	107	Mean	SD
N (%)	43	43	42	43	50	44	44	3
A (%)	26	33	16	17	6	15	19	9
D (%)	13	14	21	19	25	21	19	4
G (%)	9	8	16	17	0	8	10	6
? (%)	9	2	5	6	19	12	9	6

Table 5.10a. Group 1a: Case distribution in the plural, by period

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	1	12	0	0	2	13
(1350–1400)	Nom. (%)	100	67	—	—	50	46
	Obl. (%)	0	33	—	—	0	54
	? (%)	0	0	—	—	50	0
Period 2	<i>n</i> =	1	14	2	3	4	6
(1400–1450)	Nom. (%)	0	50	0	0	50	67
	Obl. (%)	100	50	100	100	25	0
	? (%)	0	0	0	0	25	33
Period 3	<i>n</i> =	4	10	1	2	2	0
(1450–1500)	Nom. (%)	0	10	0	50	50	—
	Obl. (%)	100	90	100	50	50	—
Period 4	<i>n</i> =	0	5	13	2	1	84
(1500–1550)	Nom. (%)	—	40	31	50	0	43
	Obl. (%)	—	60	69	50	100	49
	? (%)	—	0	0	0	0	8
Period 5	<i>n</i> =	5	0	6	10	1	2
(1550–1600)	Nom. (%)	60	—	17	10	100	50
	Obl. (%)	40	—	83	80	0	50
	? (%)	0	—	0	10	0	0
Period 6	<i>n</i> =	0	3	8	17	3	1
(1600–1650)	Nom. (%)	—	67	63	53	67	0
	Obl. (%)	—	33	38	47	0	100
	? (%)	—	0	0	0	33	0
Period 7	<i>n</i> =	2	7	4	5	1	0
(1650–1700)	Nom. (%)	50	29	75	80	0	—
	Obl. (%)	50	71	25	20	100	—
Period 8	<i>n</i> =	4	0	1	3	2	0
(1700–1750)	Nom. (%)	75	—	0	33	50	—
	Obl. (%)	0	—	100	67	50	—
	? (%)	25	—	0	0	0	—
Period 9	<i>n</i> =	1	0	1	5	0	0
(1750–1800)	Nom. (%)	0	—	100	60	—	—
	Obl. (%)	100	—	0	40	—	—
Period 10	<i>n</i> =	1	0	6	1	0	1
(1800–1850)	Nom. (%)	0	—	67	100	—	0
	Obl. (%)	100	—	33	0	—	100
Period 11	<i>n</i> =	4	0	1	6	0	0
(1850–1900)	Nom. (%)	50	—	0	33	—	—
	Obl. (%)	50	—	100	67	—	—

Table 5.11a. Group 1b: Case distribution in the plural (all periods)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>	Mean	SD
<i>n</i> =	11	144	69	975	1,234	13		
N (%)	55	39	49	52	36	31	44	9
A (%)	0	10	16	10	18	15	11	6
D (%)	27	26	17	23	23	15	22	4
G (%)	9	17	17	13	18	31	17	7
? (%)	9	8	0	3	6	8	6	3

Table 5.12a. Group 1b: Case distribution in the plural, by period

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	5	0	54	355	0
(1350–1400)	Nom. (%)	—	40	—	48	48	—
	Obl. (%)	—	60	—	52	43	—
	? (%)	—	0	—	0	9	—
Period 2	<i>n</i> =	1	27	0	452	40	0
(1400–1450)	Nom. (%)	100	41	—	53	23	—
	Obl. (%)	0	52	—	45	75	—
	? (%)	0	7	—	2	3	—
Period 3	<i>n</i> =	3	0	1	30	184	0
(1450–1500)	Nom. (%)	33	—	100	40	36	—
	Obl. (%)	33	—	0	53	59	—
	? (%)	33	—	0	7	4	—
Period 4	<i>n</i> =	0	2	1	58	65	0
(1500–1550)	Nom. (%)	—	0	0	45	20	—
	Obl. (%)	—	100	100	55	80	—
Period 5	<i>n</i> =	3	102	1	160	32	0
(1550–1600)	Nom. (%)	100	40	100	41	16	—
	Obl. (%)	0	54	0	53	78	—
	? (%)	0	6	0	6	6	—
Period 6	<i>n</i> =	0	0	36	76	72	4
(1600–1650)	Nom. (%)	—	—	56	58	32	25
	Obl. (%)	—	—	44	41	68	75
	? (%)	—	—	0	1	0	0
Period 7	<i>n</i> =	1	1	2	44	65	4
(1650–1700)	Nom. (%)	100	0	50	68	42	0
	Obl. (%)	0	100	50	32	57	100
	? (%)	0	0	0	0	2	0
Period 8	<i>n</i> =	1	1	15	16	130	3
(1700–1750)	Nom. (%)	0	0	20	50	28	67
	Obl. (%)	100	100	80	50	72	33
Period 9	<i>n</i> =	1	0	3	14	118	0
(1750–1800)	Nom. (%)	0	—	67	57	34	—
	Obl. (%)	100	—	33	43	64	—
	? (%)	0	—	0	0	2	—
Period 10	<i>n</i> =	0	5	5	47	84	2
(1800–1850)	Nom. (%)	—	40	60	68	37	50
	Obl. (%)	—	60	40	32	63	50
Period 11	<i>n</i> =	1	1	5	24	89	0
(1850–1900)	Nom. (%)	0	0	60	58	27	—
	Obl. (%)	100	100	40	42	71	—
	? (%)	0	0	0	0	2	—

Table 5.13a. Group 1a: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<b>Sg., n =</b>	40	126	96	157	318	72		
<i>-e/ø</i> (%)	65	50	60	53	49	67	57	7
<i>-(e)n</i> (%)	35	48	39	46	49	33	42	6
Other (%)	0	2	1	1	2	0	1	1
<b>Pl., n =</b>	23	51	43	54	16	107		
<i>-e/ø</i> (%)	0	0	0	0	6	1	1	2
<i>-(e)n</i> (%)	100	100	100	100	94	99	99	2
<b>All, n =</b>	66	178	139	215	336	187		
<i>-e/ø</i> (%)	39	35	42	39	46	26	38	6
<i>-(e)n</i> (%)	61	63	58	60	51	74	61	7
Other (%)	0	2	1	1	2	0	1	1

Table 5.14a. Group 1b: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>	Mean	SD
<b>Sg., n =</b>	20	801	44	4,370	2,782	411		
<i>-e/ø</i> (%)	75	67	66	62	61	55	64	6
<i>-(e)n</i> (%)	25	33	34	38	39	40	35	5
Other (%)	0	0	0	0	0	5	1	2
<b>Pl., n =</b>	11	144	69	975	1,234	13		
<i>-e/ø</i> (%)	0	1	0	1	0	0	0	0
<i>-(e)n</i> (%)	100	99	100	99	100	100	100	0
<b>All, n =</b>	32	947	113	5,357	4,049	425		
<i>-e/ø</i> (%)	47	57	26	51	42	53	46	10
<i>-(e)n</i> (%)	53	43	74	49	58	42	53	11
Other (%)	0	0	0	0	0	4	1	2

Table 5.15a. Group 1a: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<i>n</i> =	66	178	139	215	336	187		
N. Sg. (%)	39	35	40	39	46	25	37	6
<i>-e/ø</i> (%)	39	35	42	39	46	26	38	6

Table 5.16a. Group 1b: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>	Mean	SD
<i>n</i> =	32	947	113	5,357	4,049	425		
N. Sg. (%)	34	50	22	48	41	51	41	10
<i>-e/ø</i> (%)	47	57	26	51	42	53	46	10



Table 5.17a. Group 1a: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	1	14	0	0	6	3
(1350–1400)	Nom. Sg. (%)	0	50	—	—	33	100
	<i>-e/ø</i> (%)	0	50	—	—	33	100
	<i>-(e)n</i> (%)	100	50	—	—	33	0
	Other (%)	0	0	—	—	33	0
Period 2	<i>n</i> =	2	49	10	7	6	5
(1400–1450)	Nom. Sg. (%)	100	51	70	43	33	40
	<i>-e/ø</i> (%)	100	51	70	43	67	40
	<i>-(e)n</i> (%)	0	49	30	57	33	60
Period 3	<i>n</i> =	5	16	0	8	161	1
(1450–1500)	Nom. Sg. (%)	20	56	—	50	50	0
	<i>-e/ø</i> (%)	20	56	—	50	50	0
	<i>-(e)n</i> (%)	80	44	—	50	50	100
Period 4	<i>n</i> =	1	2	3	2	0	56
(1500–1550)	Nom. Sg. (%)	100	50	67	50	—	68
	<i>-e/ø</i> (%)	100	50	67	50	—	70
	<i>-(e)n</i> (%)	0	50	33	50	—	30
Period 5	<i>n</i> =	11	2	45	24	84	1
(1550–1600)	Nom. Sg. (%)	64	0	49	50	44	0
	<i>-e/ø</i> (%)	64	0	49	50	44	0
	<i>-(e)n</i> (%)	36	100	51	50	52	100
	Other (%)	0	0	0	0	4	0
Period 6	<i>n</i> =	0	10	5	46	22	2
(1600–1650)	Nom. Sg. (%)	—	30	60	52	45	50
	<i>-e/ø</i> (%)	—	30	60	52	45	50
	<i>-(e)n</i> (%)	—	70	20	48	55	50
	Other (%)	—	0	20	0	0	0
Period 7	<i>n</i> =	3	28	11	18	9	2
(1650–1700)	Nom. Sg. (%)	67	54	45	67	78	50
	<i>-e/ø</i> (%)	67	54	64	67	78	50
	<i>-(e)n</i> (%)	33	36	36	28	0	50
	Other (%)	0	11	0	6	22	0
Period 8	<i>n</i> =	2	0	1	18	3	0
(1700–1750)	Nom. Sg. (%)	50	—	100	11	67	—
	<i>-e/ø</i> (%)	50	—	100	11	67	—
	<i>-(e)n</i> (%)	50	—	0	83	33	—
	Other (%)	0	—	0	6	0	—
Period 9	<i>n</i> =	4	1	9	10	7	1
(1750–1800)	Nom. Sg. (%)	100	100	78	90	29	100
	<i>-e/ø</i> (%)	100	100	78	90	29	100
	<i>-(e)n</i> (%)	0	0	22	10	71	0
Period 10	<i>n</i> =	6	3	11	20	4	1
(1800–1850)	Nom. Sg. (%)	67	33	73	65	100	100
	<i>-e/ø</i> (%)	67	33	73	65	100	100
	<i>-(e)n</i> (%)	33	67	27	35	0	0
Period 11	<i>n</i> =	5	1	1	4	16	0
(1850–1900)	Nom. Sg. (%)	80	100	100	75	38	—
	<i>-e/ø</i> (%)	80	100	100	75	38	—
	<i>-(e)n</i> (%)	20	0	0	25	63	—

Table 5.18a. Group 1b: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	0	0	819	1,053	0
(1350–1400)	Nom. Sg. (%)	—	—	—	49	73	—
	<i>-e/ø</i> (%)	—	—	—	49	73	—
	<i>-(e)n</i> (%)	—	—	—	51	26	—
	Other (%)	—	—	—	0	0.2	—
Period 2	<i>n</i> =	1	158	0	729	159	3
(1400–1450)	Nom. Sg. (%)	0	57	—	50	68	67
	<i>-e/ø</i> (%)	0	68	—	53	69	67
	<i>-(e)n</i> (%)	100	32	—	47	31	33
	Other (%)	0	0	—	0	0.6	0
Period 3	<i>n</i> =	0	0	0	490	315	0
(1450–1500)	Nom. Sg. (%)	—	—	—	60	43	—
	<i>-e/ø</i> (%)	—	—	—	63	43	—
	<i>-(e)n</i> (%)	—	—	—	37	57	—
Period 4	<i>n</i> =	0	36	0	130	73	0
(1500–1550)	Nom. Sg. (%)	—	69	—	55	62	—
	<i>-e/ø</i> (%)	—	72	—	59	63	—
	<i>-(e)n</i> (%)	—	28	—	41	36	—
	Other (%)	—	0	—	0	1	—
Period 5	<i>n</i> =	2	384	3	715	49	1
(1550–1600)	Nom. Sg. (%)	0	58	67	54	51	0
	<i>-e/ø</i> (%)	0	69	67	61	55	0
	<i>-(e)n</i> (%)	100	31	33	39	45	100
	Other (%)	0	1	0	0.4	0	0
Period 6	<i>n</i> =	1	0	9	325	97	67
(1600–1650)	Nom. Sg. (%)	100	—	56	71	43	58
	<i>-e/ø</i> (%)	100	—	78	72	48	58
	<i>-(e)n</i> (%)	0	—	22	28	51	40
	Other (%)	0	—	0	0	1	1
Period 7	<i>n</i> =	4	28	2	276	139	311
(1650–1700)	Nom. Sg. (%)	50	79	100	71	55	50
	<i>-e/ø</i> (%)	100	79	100	72	55	52
	<i>-(e)n</i> (%)	0	21	0	28	44	42
	Other (%)	0	0	0	0.4	0.7	6
Period 8	<i>n</i> =	1	6	12	372	251	4
(1700–1750)	Nom. Sg. (%)	0	67	33	63	37	50
	<i>-e/ø</i> (%)	0	83	33	71	37	75
	<i>-(e)n</i> (%)	100	17	67	29	63	25
	Other (%)	0	0	0	0.3	0.4	0
Period 9	<i>n</i> =	8	16	2	176	307	2
(1750–1800)	Nom. Sg. (%)	75	56	50	80	59	100
	<i>-e/ø</i> (%)	88	56	50	80	59	100
	<i>-(e)n</i> (%)	13	44	50	20	41	0
Period 10	<i>n</i> =	0	130	4	212	166	19
(1800–1850)	Nom. Sg. (%)	—	59	75	74	69	74
	<i>-e/ø</i> (%)	—	59	75	74	70	74
	<i>-(e)n</i> (%)	—	41	25	26	30	26
Period 11	<i>n</i> =	3	43	12	126	173	4
(1850–1900)	Nom. Sg. (%)	67	65	67	83	46	100
	<i>-e/ø</i> (%)	100	65	83	84	51	100
	<i>-(e)n</i> (%)	0	35	17	16	49	0

Table 5.19a. Group 1b: Distribution of *-e/ø* and *-(e)n* in the plural, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	5	0	54	355	0
(1350–1400)	<i>-e/ø</i> (%)	—	0	—	0	0	—
	<i>-(e)n</i> (%)	—	100	—	100	100	—
Period 2	<i>n</i> =	1	27	0	452	40	0
(1400–1450)	<i>-e/ø</i> (%)	0	4	—	1	0	—
	<i>-(e)n</i> (%)	100	96	—	99	100	—
Period 3	<i>n</i> =	3	0	1	30	184	0
(1450–1500)	<i>-e/ø</i> (%)	0	—	0	0	0	—
	<i>-(e)n</i> (%)	100	—	100	100	100	—
Period 4	<i>n</i> =	0	2	1	58	65	0
(1500–1550)	<i>-(e)n</i> (%)	—	100	100	100	100	—
Period 5	<i>n</i> =	3	102	1	160	32	0
(1550–1600)	<i>-(e)n</i> (%)	100	100	100	100	100	—
Period 6	<i>n</i> =	0	0	36	76	72	4
(1600–1650)	<i>-(e)n</i> (%)	—	—	100	100	100	100
Period 7	<i>n</i> =	1	1	2	44	65	4
(1650–1700)	<i>-e/ø</i> (%)	0	0	0	2	0	0
	<i>-(e)n</i> (%)	100	100	100	98	97	100
	Other (%)	0	0	0	0	3	0
Period 8	<i>n</i> =	1	1	15	16	130	3
(1700–1750)	<i>-(e)n</i> (%)	100	100	100	100	100	100
Period 9	<i>n</i> =	1	0	3	14	118	0
(1750–1800)	<i>-(e)n</i> (%)	100	—	100	100	100	—
Period 10	<i>n</i> =	0	5	5	47	84	2
(1800–1850)	<i>-(e)n</i> (%)	—	100	100	100	100	100
Period 11	<i>n</i> =	1	1	5	24	89	0
(1850–1900)	<i>-(e)n</i> (%)	100	100	100	100	100	—

Table 5.20a. Group 1: Distribution of non-weak (innovative) tokens (all periods)

Group	Noun	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Gen. Sg. in <i>-(e)(n)s</i> ( <i>n</i> )	Pl. in <i>-(<sup>c</sup>)e/ø</i> ( <i>n</i> )	Pl. in <i>-er</i> ( <i>n</i> )	Total non- weak ( <i>n</i> )	Non-weak (%)	Total tokens ( <i>n</i> )
1a	<i>Affe</i>	0	0	0	0	0	0	66
	<i>Bote</i>	0	3	0	0	3	2	178
	<i>Bube</i>	2	1	0	0	3	2	139
	<i>Knabe</i>	0	2	0	0	2	1	215
	<i>Löwe</i>	2	7	1	0	10	3	336
	<i>Pfaffe</i>	1	0	1	0	2	1	187
1b	<i>Bär</i>	4	0	0	0	4	14	29
	<i>Graf</i>	61	2	1	0	64	7	947
	<i>Held</i>	4	0	0	0	4	4	113
	<i>Herr</i>	113	5	6	0	124	2	5,357
	<i>Mensch</i>	18	7	0	2	27	1	4,049
	<i>Prinz</i>	10	19	0	0	29	7	425

Table 5.24a. Group 1a: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>	Mean	SD
<i>n</i> =	26	63	58	83	155	48		
<i>-e</i> (%)	58	19	26	45	11	4	27	19
<i>-ø</i> (%)	42	81	74	55	89	96	73	19

Table 5.25a. Group 1a: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Affe</i>	<i>Bote</i>	<i>Bube</i>	<i>Knabe</i>	<i>Löwe</i>	<i>Pfaffe</i>
Period 1	<i>n</i> =	0	7	0	0	2	3
(1350–1400)	<i>-e</i> (%)	—	0	—	—	0	33
	<i>-ø</i> (%)	—	100	—	—	100	67
Period 2	<i>n</i> =	2	25	7	3	4	2
(1400–1450)	<i>-e</i> (%)	50	0	0	0	0	0
	<i>-ø</i> (%)	50	100	100	100	100	100
Period 3	<i>n</i> =	1	9	0	4	81	0
(1450–1500)	<i>-e</i> (%)	0	11	—	0	0	—
	<i>-ø</i> (%)	100	89	—	100	100	—
Period 4	<i>n</i> =	1	1	2	1	0	39
(1500–1550)	<i>-e</i> (%)	0	0	50	0	—	0
	<i>-ø</i> (%)	100	100	50	100	—	100
Period 5	<i>n</i> =	7	0	22	12	37	0
(1550–1600)	<i>-ø</i> (%)	100	—	100	100	100	—
Period 6	<i>n</i> =	0	3	3	24	10	1
(1600–1650)	<i>-e</i> (%)	—	100	100	17	60	0
	<i>-ø</i> (%)	—	0	0	83	40	100
Period 7	<i>n</i> =	2	15	7	12	7	1
(1650–1700)	<i>-e</i> (%)	100	33	0	50	0	0
	<i>-ø</i> (%)	0	67	100	50	100	100
Period 8	<i>n</i> =	1	0	1	2	2	0
(1700–1750)	<i>-e</i> (%)	100	—	100	100	50	—
	<i>-ø</i> (%)	0	—	0	0	50	—
Period 9	<i>n</i> =	4	1	7	9	2	1
(1750–1800)	<i>-e</i> (%)	100	100	100	100	100	100
Period 10	<i>n</i> =	4	1	8	13	4	1
(1800–1850)	<i>-e</i> (%)	75	100	25	100	50	0
	<i>-ø</i> (%)	25	0	75	0	50	100
Period 11	<i>n</i> =	4	1	1	3	6	0
(1850–1900)	<i>-e</i> (%)	100	100	100	100	100	—

Table 5.26a. Group 1b: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>		
<i>n</i> =	15	538	29	2,705	1,693	227	Mean	SD
<i>-e</i> (%)	0	23	0	15	24	0	10	11
<i>-ø</i> (%)	100	77	100	85	76	100	90	11

Table 5.27a. Group 1b: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Bär</i>	<i>Graf</i>	<i>Held</i>	<i>Herr</i>	<i>Mensch</i>	<i>Prinz</i>
Period 1	<i>n</i> =	0	0	0	403	773	0
(1350–1400)	<i>-e</i> (%)	—	—	—	57	49	—
	<i>-ø</i> (%)	—	—	—	43	51	—
Period 2	<i>n</i> =	0	107	0	386	109	2
(1400–1450)	<i>-e</i> (%)	—	17	—	42	19	0
	<i>-ø</i> (%)	—	83	—	58	81	100
Period 3	<i>n</i> =	0	0	0	308	135	0
(1450–1500)	<i>-e</i> (%)	—	—	—	5	1	—
	<i>-ø</i> (%)	—	—	—	95	99	—
Period 4	<i>n</i> =	0	26	0	77	46	0
(1500–1550)	<i>-e</i> (%)	—	8	—	3	0	—
	<i>-ø</i> (%)	—	92	—	97	100	—
Period 5	<i>n</i> =	0	264	2	433	27	0
(1550–1600)	<i>-e</i> (%)	—	39	0	0	0	—
	<i>-ø</i> (%)	—	61	100	100	100	—
Period 6	<i>n</i> =	1	0	7	233	47	39
(1600–1650)	<i>-e</i> (%)	0	—	0	0	9	0
	<i>-ø</i> (%)	100	—	100	100	91	100
Period 7	<i>n</i> =	4	22	2	199	77	163
(1650–1700)	<i>-e</i> (%)	0	5	0	0	3	0
	<i>-ø</i> (%)	100	95	100	100	97	100
Period 8	<i>n</i> =	0	5	4	263	93	3
(1700–1750)	<i>-ø</i> (%)	—	100	100	100	100	100
Period 9	<i>n</i> =	7	9	1	140	181	2
(1750–1800)	<i>-ø</i> (%)	100	100	100	100	100	100
Period 10	<i>n</i> =	0	77	3	157	116	14
(1800–1850)	<i>-ø</i> (%)	—	100	100	100	100	100
Period 11	<i>n</i> =	3	28	10	106	89	4
(1850–1900)	<i>-ø</i> (%)	100	100	100	100	100	100

## Group 2 (Chapter 6)

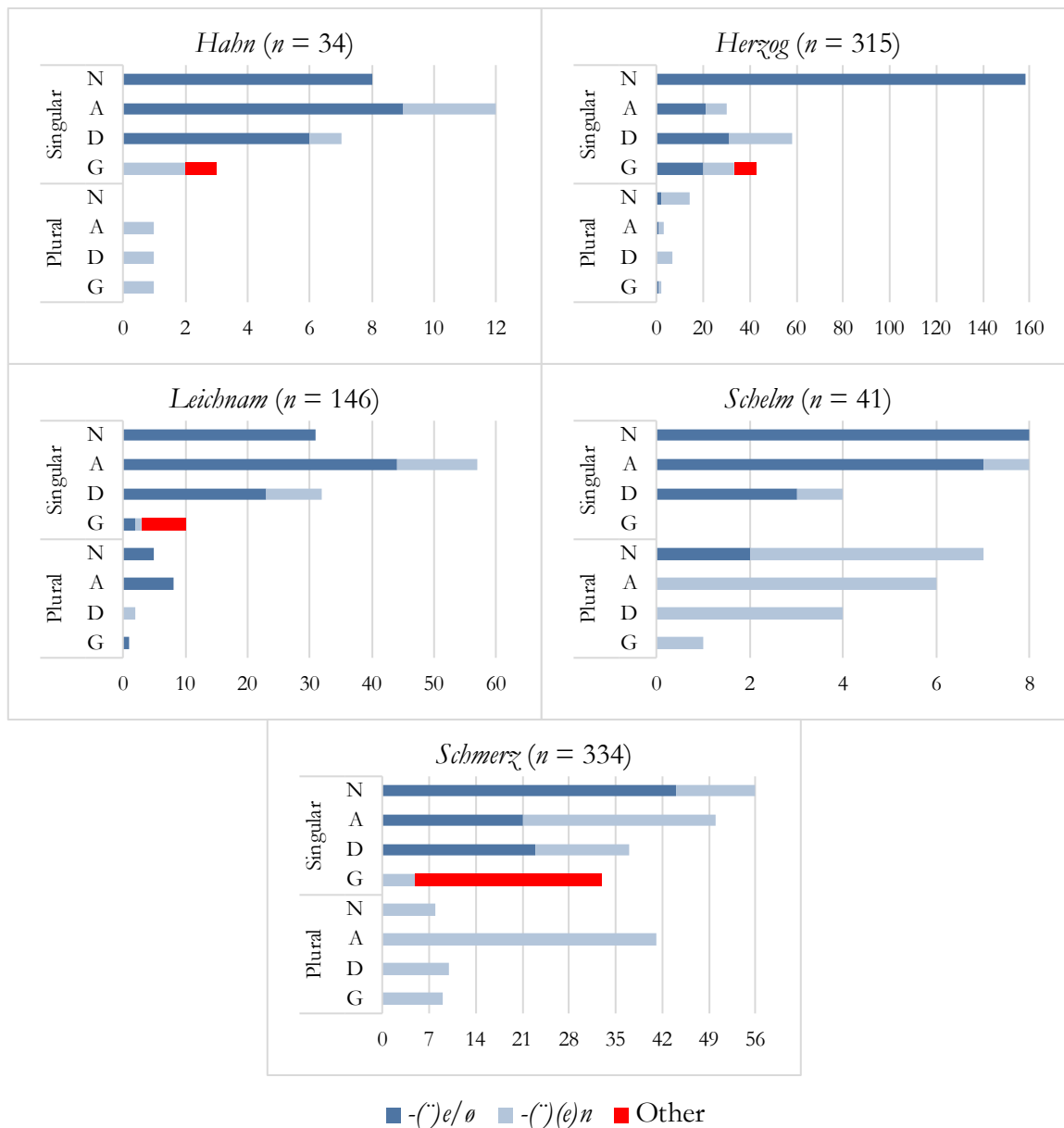


Figure 6.1a. Group 2: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form. The values for  $-e/\emptyset$  and  $-(e)n$  include tokens with umlaut; for the distribution of plural tokens with and without umlaut, see table 6.11a.

Table 6.1a. Group 2: Number distribution (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	34	315	146	41	334		
Sg. (%)	88	92	89	49	53	74	19
Pl. (%)	9	8	11	44	21	74	19
? (%)	3	0	0	7	26	19	13

Table 6.2a. Group 2: Number distribution, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	1	18	67	0	17
(1350–1400)	Singular (%)	100	78	100	—	65
	Plural (%)	0	22	0	—	6
	? (%)	0	0	0	—	29
Period 2	<i>n</i> =	1	84	15	0	2
(1400–1450)	Singular (%)	0	94	93	—	100
	Plural (%)	0	6	7	—	0
	? (%)	100	0	0	—	0
Period 3	<i>n</i> =	2	20	34	0	53
(1450–1500)	Singular (%)	50	95	94	—	40
	Plural (%)	0	5	6	—	6
	? (%)	50	0	0	—	55
Period 4	<i>n</i> =	9	19	0	1	6
(1500–1550)	Singular (%)	89	100	—	100	83
	Plural (%)	11	0	—	0	0
	? (%)	0	0	—	0	17
Period 5	<i>n</i> =	4	129	1	3	18
(1550–1600)	Singular (%)	75	90	100	0	61
	Plural (%)	25	10	0	0	17
	? (%)	0	0	0	100	22
Period 6	<i>n</i> =	2	2	13	7	26
(1600–1650)	Singular (%)	100	100	38	71	23
	Plural (%)	0	0	62	29	27
	? (%)	0	0	0	0	50
Period 7	<i>n</i> =	4	4	0	27	24
(1650–1700)	Singular (%)	75	100	—	48	38
	Plural (%)	25	0	—	52	33
	? (%)	0	0	—	0	29
Period 8	<i>n</i> =	6	4	1	0	92
(1700–1750)	Singular (%)	100	50	100	—	36
	Plural (%)	0	50	0	—	62
	? (%)	0	0	0	—	2
Period 9	<i>n</i> =	0	1	1	1	27
(1750–1800)	Singular (%)	—	100	100	0	63
	Plural (%)	—	0	0	100	37
Period 10	<i>n</i> =	3	31	4	2	36
(1800–1850)	Singular (%)	100	97	75	50	92
	Plural (%)	0	3	25	50	8
Period 11	<i>n</i> =	3	3	10	0	33
(1850–1900)	Singular (%)	100	100	60	—	85
	Plural (%)	0	0	40	—	15

Table 6.3a. Group 2: Case distribution in the singular (all periods)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	30	289	130	20	176		
N (%)	27	55	24	40	32	35	11
A (%)	40	10	44	40	28	33	12
D (%)	23	20	25	20	21	22	2
G (%)	10	15	8	0	19	10	6
? (%)	0	0	0	0	0	0	0

Table 6.4a. Group 2: Case distribution in the singular, by period

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	1	14	67	0	11
(1350–1400)	Nom. (%)	0	50	28	—	73
	Obl. (%)	100	50	72	—	27
Period 2	<i>n</i> =	0	79	14	0	2
(1400–1450)	Nom. (%)	—	51	14	—	50
	Obl. (%)	—	49	86	—	50
Period 3	<i>n</i> =	1	19	32	0	21
(1450–1500)	Nom. (%)	0	53	19	—	24
	Obl. (%)	100	47	81	—	76
Period 4	<i>n</i> =	8	19	0	1	5
(1500–1550)	Nom. (%)	13	84	—	100	0
	Obl. (%)	88	16	—	0	100
Period 5	<i>n</i> =	3	116	1	0	11
(1550–1600)	Nom. (%)	33	56	100	—	9
	Obl. (%)	67	44	0	—	91
Period 6	<i>n</i> =	2	2	5	5	6
(1600–1650)	Nom. (%)	50	100	0	0	50
	Obl. (%)	50	0	100	100	50
Period 7	<i>n</i> =	3	4	0	13	9
(1650–1700)	Nom. (%)	100	75	—	54	22
	Obl. (%)	0	25	—	46	78
Period 8	<i>n</i> =	6	2	1	0	33
(1700–1750)	Nom. (%)	17	100	0	—	42
	Obl. (%)	83	0	100	—	58
Period 9	<i>n</i> =	0	1	1	0	17
(1750–1800)	Nom. (%)	—	0	100	—	29
	Obl. (%)	—	100	0	—	71
Period 10	<i>n</i> =	3	30	3	1	33
(1800–1850)	Nom. (%)	0	40	33	0	24
	Obl. (%)	100	60	67	100	76
Period 11	<i>n</i> =	3	3	6	0	28
(1850–1900)	Nom. (%)	33	33	17	—	32
	Obl. (%)	67	67	83	—	68

Table 6.5a. Group 2: Case distribution in the plural (all periods)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>		
<i>n</i> =	3	26	16	18	70	Mean	SD
N (%)	0	54	31	39	11	27	19
A (%)	33	12	50	33	59	37	16
D (%)	33	27	13	22	14	22	8
G (%)	33	8	6	6	13	13	10
? (%)	0	0	0	0	3	1	1



Table 6.6a. Group 2: Case distribution in the plural, by period

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	0	4	0	0	1
(1350–1400)	Nom. (%)	—	25	—	—	0
	Obl. (%)	—	75	—	—	100
Period 2	<i>n</i> =	0	5	1	0	0
(1400–1450)	Nom. (%)	—	80	100	—	—
	Obl. (%)	—	20	0	—	—
Period 3	<i>n</i> =	0	1	2	0	3
(1450–1500)	Nom. (%)	—	0	0	—	33
	Obl. (%)	—	100	100	—	67
Period 4	<i>n</i> =	1	0	0	0	0
(1500–1550)	Nom. (%)	0	—	—	—	—
	Obl. (%)	100	—	—	—	—
Period 5	<i>n</i> =	1	13	0	0	3
(1550–1600)	Nom. (%)	0	62	—	—	0
	Obl. (%)	100	38	—	—	100
Period 6	<i>n</i> =	0	0	8	2	7
(1600–1650)	Nom. (%)	—	—	38	50	14
	Obl. (%)	—	—	63	50	86
Period 7	<i>n</i> =	1	0	0	14	8
(1650–1700)	Nom. (%)	0	—	—	29	13
	Obl. (%)	100	—	—	71	88
Period 8	<i>n</i> =	0	2	0	0	57
(1700–1750)	Nom. (%)	—	50	—	—	5
	Obl. (%)	—	50	—	—	95
Period 9	<i>n</i> =	0	0	0	1	10
(1750–1800)	Nom. (%)	—	—	—	100	10
	Obl. (%)	—	—	—	0	90
Period 10	<i>n</i> =	0	1	1	1	3
(1800–1850)	Nom. (%)	—	0	0	100	67
	Obl. (%)	—	100	100	0	33
Period 11	<i>n</i> =	0	0	4	0	5
(1850–1900)	Nom. (%)	—	—	25	—	0
	Obl. (%)	—	—	75	—	100

Table 6.7a. Group 2: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<b>Sg., <i>n</i> =</b>	30	289	130	20	176		
<i>-e/ø</i> (%)	77	80	77	90	50	75	13
<i>-(e)n</i> (%)	20	17	18	10	34	20	8
Other (%)	3	3	5	0	16	6	5
<b>Pl., <i>n</i> =</b>	3	26	16	18	70		
<i>-e/ø</i> (%)	0	15	88	11	0	23	33
<i>-(e)n</i> (%)	100	85	13	89	100	77	33
<b>All, <i>n</i> =</b>	0	0	0	0	0	0	0
<i>-e/ø</i> (%)	34	315	146	41	334		
<i>-(e)n</i> (%)	68	74	78	49	26	59	19
Other (%)	29	23	17	51	65	37	18

Table 6.8a. Group 2: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	34	315	146	41	334		
N. Sg. (%)	24	50	21	20	17	26	12
<i>-e/ø</i> (%)	68	74	78	49	26	59	19

[Table 6.9a is on the next page.]

Table 6.10a. Group 2: Distribution of inflectional markers in the genitive singular, by period

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1 (1350–1400)	<i>n</i> = 0	2	3	0	1
	<i>-e/ø</i> (%)	—	100	67	0
	<i>-(e)n</i> (%)	—	0	33	0
	<i>-(e)ns</i> (%)	—	0	0	100
Period 2 (1400–1450)	<i>n</i> = 0	11	5	0	0
	<i>-e/ø</i> (%)	—	45	0	—
	<i>-(e)n</i> (%)	—	55	0	—
	<i>-(e)s</i> (%)	—	0	100	—
Period 3 (1450–1500)	<i>n</i> = 1	4	2	0	8
	<i>-(e)n</i> (%)	100	100	0	63
	<i>-(e)ns</i> (%)	0	0	0	38
	<i>-(e)s</i> (%)	0	0	100	0
Period 4 (1500–1550)	<i>n</i> = 0	0	0	0	1
	<i>-(e)ns</i> (%)	—	—	—	100
Period 5 (1550–1600)	<i>n</i> = 0	16	0	0	4
	<i>-e/ø</i> (%)	—	81	—	0
	<i>-(e)n</i> (%)	—	19	—	0
	<i>-(e)ns</i> (%)	—	0	—	100
Period 7 (1650–1700)	<i>n</i> = 0	0	0	0	3
	<i>-(e)ns</i> (%)	—	—	—	100
Period 8 (1700–1750)	<i>n</i> = 1	0	0	0	2
	<i>-(e)n</i> (%)	100	—	—	0
	<i>-(e)ns</i> (%)	0	—	—	100
Period 9 (1750–1800)	<i>n</i> = 0	0	0	0	6
	<i>-(e)ns</i> (%)	—	—	—	67
	<i>-(e)s</i> (%)	—	—	—	33
Period 10 (1800–1850)	<i>n</i> = 1	9	0	0	5
	<i>-(e)s</i> (%)	100	100	—	100
Period 11 (1850–1900)	<i>n</i> = 0	1	0	0	3
	<i>-(e)s</i> (%)	—	100	—	100

Note: There are no tokens in Period 6.

Table 6.9a. Group 2: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1 (1350–1400)	<i>n</i> =	1	14	67	0	11
	Nom. Sg. (%)	0	50	28	—	73
	<i>-e/ø</i> (%)	100	79	67	—	55
	<i>-(e)n</i> (%)	0	21	33	—	36
	Other (%)	0	0	0	—	9
Period 2 (1400–1450)	<i>n</i> =	0	79	14	0	2
	Nom. Sg. (%)	—	51	14	—	50
	<i>-e/ø</i> (%)	—	76	57	—	50
	<i>-(e)n</i> (%)	—	24	7	—	50
	Other (%)	—	0	36	—	0
Period 3 (1450–1500)	<i>n</i> =	1	19	32	0	21
	Nom. Sg. (%)	0	53	19	—	24
	<i>-e/ø</i> (%)	0	53	94	—	19
	<i>-(e)n</i> (%)	100	47	0	—	67
	Other (%)	0	0	6	—	14
Period 4 (1500–1550)	<i>n</i> =	8	19	0	1	5
	Nom. Sg. (%)	13	84	—	100	0
	<i>-e/ø</i> (%)	75	95	—	100	0
	<i>-(e)n</i> (%)	25	5	—	0	80
	Other (%)	0	0	—	0	20
Period 5 (1550–1600)	<i>n</i> =	3	116	1	0	11
	Nom. Sg. (%)	33	56	100	—	9
	<i>-e/ø</i> (%)	67	85	100	—	0
	<i>-(e)n</i> (%)	33	15	0	—	64
	Other (%)	0	0	0	—	36
Period 6 (1600–1650)	<i>n</i> =	2	2	5	5	6
	Nom. Sg. (%)	50	100	0	0	50
	<i>-e/ø</i> (%)	50	100	100	100	33
	<i>-(e)n</i> (%)	50	0	0	0	67
	Other (%)	—	—	—	—	—
Period 7 (1650–1700)	<i>n</i> =	3	4	0	13	9
	Nom. Sg. (%)	100	75	—	54	22
	<i>-e/ø</i> (%)	100	100	—	85	22
	<i>-(e)n</i> (%)	0	0	—	15	44
	Other (%)	0	0	—	0	33
Period 8 (1700–1750)	<i>n</i> =	6	2	1	0	33
	Nom. Sg. (%)	17	100	0	—	42
	<i>-e/ø</i> (%)	83	100	100	—	27
	<i>-(e)n</i> (%)	17	0	0	—	67
	Other (%)	0	0	0	—	6
Period 9 (1750–1800)	<i>n</i> =	0	1	1	0	17
	Nom. Sg. (%)	—	0	100	—	29
	<i>-e/ø</i> (%)	—	100	100	—	65
	<i>-(e)n</i> (%)	—	0	0	—	0
	Other (%)	—	0	0	—	35
Period 10 (1800–1850)	<i>n</i> =	3	30	3	1	33
	Nom. Sg. (%)	0	40	33	0	24
	<i>-e/ø</i> (%)	67	70	100	100	85
	<i>-(e)n</i> (%)	0	0	0	0	0
	Other (%)	33	30	0	0	15
Period 11 (1850–1900)	<i>n</i> =	3	3	6	0	28
	Nom. Sg. (%)	33	33	17	—	32
	<i>-e/ø</i> (%)	100	67	100	—	89
	<i>-(e)n</i> (%)	0	0	0	—	0
	Other (%)	0	33	0	—	11

Table 6.11a. Group 2: Distribution of *-e/ø* and *-(e)n* in the plural, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	0	4	0	0	1
(1350–1400)	<i>-(e)n</i> (%)	—	100	—	—	100
Period 2	<i>n</i> =	0	5	1	0	0
(1400–1450)	<i>-e/ø</i> (%)	—	40	100	—	—
	<i>-(e)n</i> (%)	—	60	0	—	—
Period 3	<i>n</i> =	0	1	2	0	3
(1450–1500)	<i>-e/ø</i> (%)	—	0	100	—	0
	<i>-(e)n</i> (%)	—	100	0	—	100
Period 4	<i>n</i> =	1	0	0	0	0
(1500–1550)	<i>-(e)n</i> (%)	100	—	—	—	—
Period 5	<i>n</i> =	1	13	0	0	3
(1550–1600)	<i>-(e)n</i> (%)	100	100	—	100	100
Period 6	<i>n</i> =	0	0	8	2	7
(1600–1650)	<i>-e/ø</i> (%)	—	—	88	50	0
	<i>-(e)n</i> (%)	—	—	13	50	100
Period 7	<i>n</i> =	1	0	0	14	8
(1650–1700)	<i>-(e)n</i> (%)	100	—	—	100	100
Period 8	<i>n</i> =	0	2	0	0	57
(1700–1750)	<i>-e/ø</i> (%)	—	50	—	—	0
	<i>-(e)n</i> (%)	—	50	—	—	100
Period 9	<i>n</i> =	0	0	0	1	10
(1750–1800)	<i>-(e)n</i> (%)	—	—	—	100	100
Period 10	<i>n</i> =	0	1	1	1	3
(1800–1850)	<i>-e/ø</i> (%)	—	100*	100	100	0
	<i>-(e)n</i> (%)	—	0	0	0	100
Period 11	<i>n</i> =	0	0	4	0	5
(1850–1900)	<i>-e/ø</i> (%)	—	—	75	—	0
	<i>-(e)n</i> (%)	—	—	25	—	100

Note: The asterisk in Period 10 indicates the presence of umlaut.

Table 6.12a. Group 2: Distribution of non-weak (innovative) tokens (all periods)

Noun	N. Sg. in <i>-(e)n</i> ( <i>n</i> )	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Gen. Sg. in <i>-(e)(n)s</i> ( <i>n</i> )	Pl. in <i>-(<sup>~</sup>)e/ø</i> ( <i>n</i> )	Total non- weak ( <i>n</i> )	Non-weak (%)	Total tokens ( <i>n</i> )
<i>Hahn</i>	0	15	1	0	16	47	34
<i>Herzog</i>	0	72	10	4	86	27	315
<i>Leichnam</i>	0	69	7	14	90	62	146
<i>Schelm</i>	0	10	0	2	12	29	41
<i>Schmerz</i>	12	44	28	0	84	25	334

Table 6.15a. Group 2: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>	Mean	SD
<i>n</i> =	23	230	100	18	88		
<i>-e</i> (%)	4	2	28	17	6	11	10
<i>-ø</i> (%)	96	98	72	83	94	89	10

Table 6.16a. Group 2. Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>
Period 1	<i>n</i> =	1	11	45	0	6
(1350–1400)	<i>-e</i> (%)	0	0	62	—	0
	<i>-ø</i> (%)	100	100	38	—	100
Period 2	<i>n</i> =	0	60	8	0	1
(1400–1450)	<i>-e</i> (%)	—	3	0	—	0
	<i>-ø</i> (%)	—	97	100	—	100
Period 3	<i>n</i> =	0	10	30	0	4
(1450–1500)	<i>-e</i> (%)	—	20	0	—	25
	<i>-ø</i> (%)	—	80	100	—	75
Period 4	<i>n</i> =	6	18	0	1	0
(1500–1550)	<i>-ø</i> (%)	100	100	—	100	—
Period 5	<i>n</i> =	2	99	1	0	0
(1550–1600)	<i>-ø</i> (%)	100	100	100	—	—
Period 6	<i>n</i> =	1	2	5	5	2
(1600–1650)	<i>-e</i> (%)	100	0	0	60	0
	<i>-ø</i> (%)	0	100	100	40	100
Period 7	<i>n</i> =	3	4	0	11	2
(1650–1700)	<i>-ø</i> (%)	100	100	—	100	100
Period 8	<i>n</i> =	5	2	1	0	9
(1700–1750)	<i>-e</i> (%)	0	0	0	—	11
	<i>-ø</i> (%)	100	100	100	—	89
Period 9	<i>n</i> =	0	1	1	0	11
(1750–1800)	<i>-ø</i> (%)	—	100	100	—	100
Period 10	<i>n</i> =	2	21	3	1	28
(1800–1850)	<i>-ø</i> (%)	100	100	100	100	100
Period 11	<i>n</i> =	3	2	6	0	25
(1850–1900)	<i>-e</i> (%)	0	0	0	—	12
	<i>-ø</i> (%)	100	100	100	—	88

Table 6.17a. Group 2: Distribution of *-e* and *-ø* in the plural (all periods; all four cases)

	<i>Hahn</i>	<i>Herzog</i>	<i>Leichnam</i>	<i>Schelm</i>	<i>Schmerz</i>		
<i>n</i> =	0	4	14	2	0	Mean	SD
<i>-e</i> (%)	—	50	29	100	—	36	37
<i>-ø</i> (%)	—	50	71	0	—	24	31

Group 3 (Chapter 7)

Group 3a

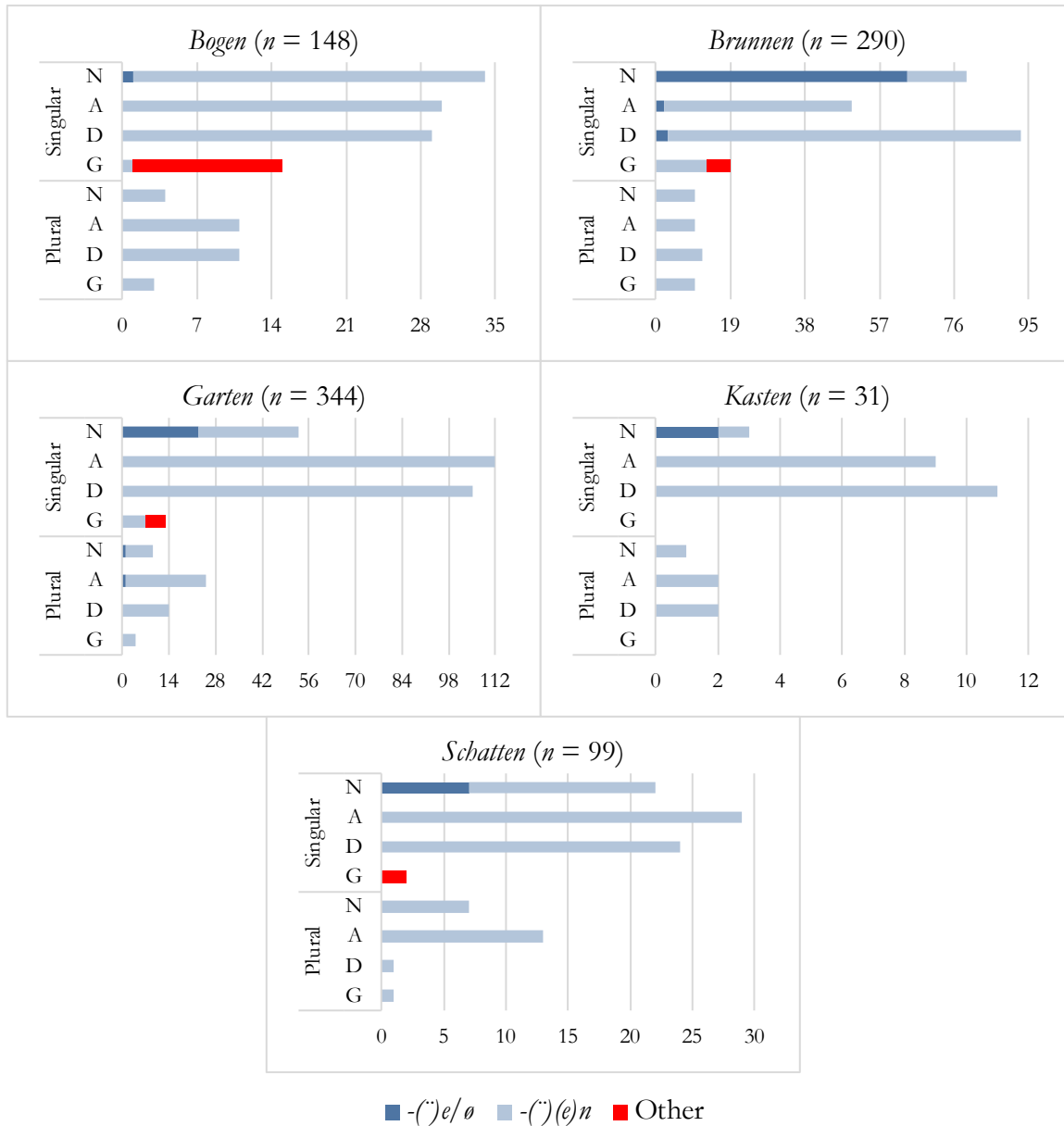


Figure 7.1a. Group 3a: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form. The values for  $-e/\emptyset$  and  $-(e)n$  include tokens with umlaut; for the distribution of plural tokens with and without umlaut, see tables 4.24a and 4.25a.

### Group 3b

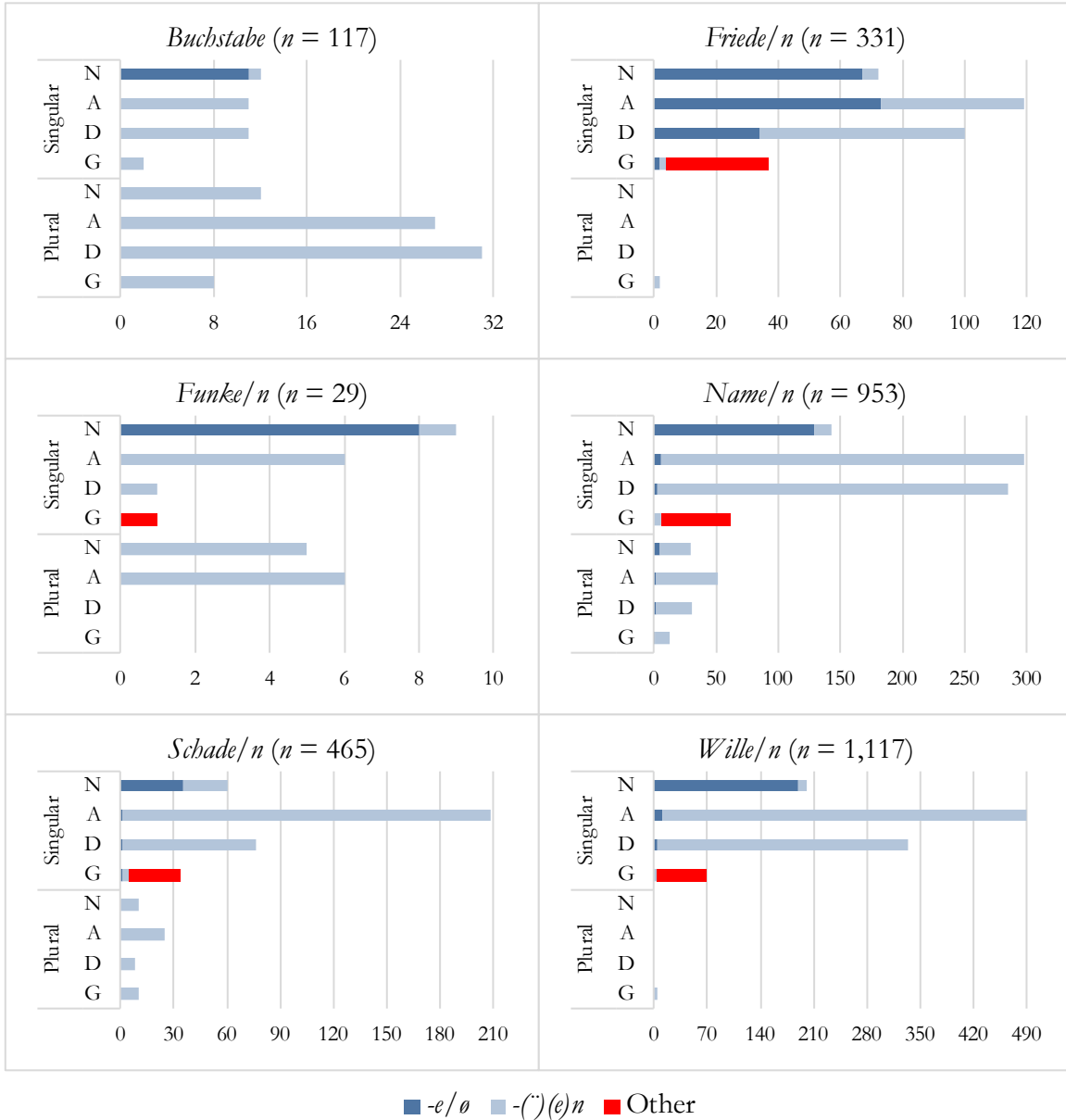


Figure 7.2a. Group 3b: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(\text{'})e)n$ , other markers) in each form. The values for  $-(e)n$  include tokens with umlaut; for the distribution of plural tokens with and without umlaut, see tables 4.24a and 4.25a.

### Group 3c

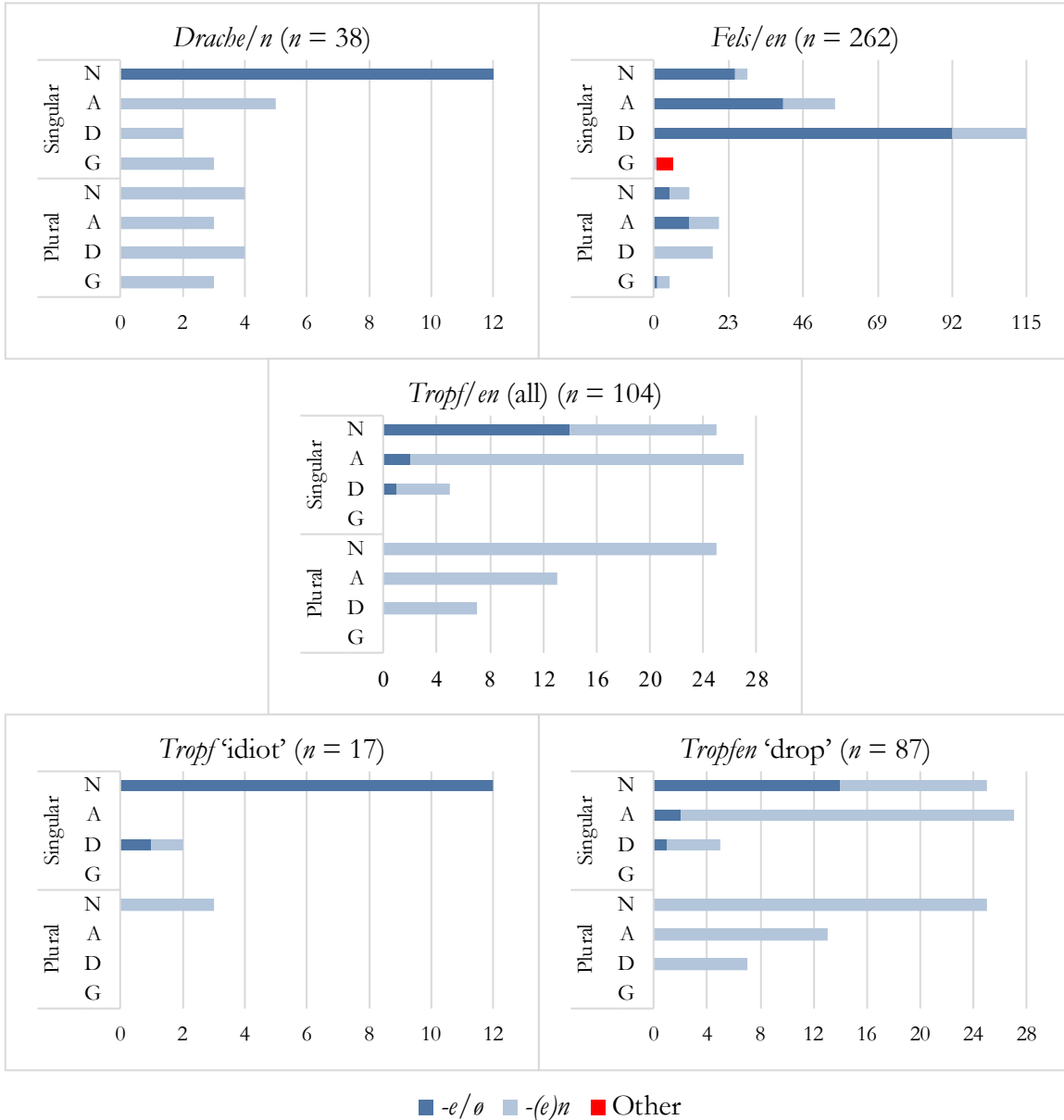


Figure 7.3a. Group 3c: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values ( $-e/\emptyset$ ,  $-(e)n$ , other markers) in each form.

Table 7.1a. Group 3a: Number distribution (all periods; all four cases)

<i>n</i> =	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>	Mean	SD
Sg. (%)	74	83	83	77	78	79	4
Pl. (%)	25	17	15	19	22	20	4
? (%)	1	0	1	3	0	1	1



Table 7.2a. Group 3a: Number distribution, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	3	50	41	0	2
(1350–1400)	Singular (%)	100	80	93	—	100
	Plural (%)	0	20	7	—	0
Period 2	<i>n</i> =	10	26	43	1	5
(1400–1450)	Singular (%)	80	92	56	100	100
	Plural (%)	10	8	40	0	0
	? (%)	10	0	5	0	0
Period 3	<i>n</i> =	13	82	43	0	7
(1450–1500)	Singular (%)	54	88	84	—	86
	Plural (%)	46	12	14	—	14
	? (%)	0	0	2	—	0
Period 4	<i>n</i> =	3	6	6	4	6
(1500–1550)	Singular (%)	67	83	67	100	100
	Plural (%)	33	17	17	0	0
	? (%)	0	0	17	0	0
Period 5	<i>n</i> =	5	13	52	8	0
(1550–1600)	Singular (%)	20	85	79	50	—
	Plural (%)	80	15	19	38	—
	? (%)	0	0	2	13	—
Period 6	<i>n</i> =	79	33	31	4	5
(1600–1650)	Singular (%)	80	97	97	75	100
	Plural (%)	19	3	3	25	0
	? (%)	1	0	0	0	0
Period 7	<i>n</i> =	10	12	51	8	10
(1650–1700)	Singular (%)	60	92	94	75	100
	Plural (%)	40	8	6	25	0
Period 8	<i>n</i> =	5	34	12	1	11
(1700–1750)	Singular (%)	100	62	75	100	55
	Plural (%)	0	38	25	0	45
Period 9	<i>n</i> =	6	11	17	1	19
(1750–1800)	Singular (%)	50	82	94	100	53
	Plural (%)	50	9	6	0	47
	? (%)	0	9	0	0	0
Period 10	<i>n</i> =	4	6	27	2	18
(1800–1850)	Singular (%)	75	67	85	100	83
	Plural (%)	25	33	15	0	17
Period 11	<i>n</i> =	10	17	21	2	16
(1850–1900)	Singular (%)	80	65	90	100	75
	Plural (%)	20	35	10	0	25

Table 7.3a. Group 3b: Number distribution (all periods; all four cases)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>		
<i>n</i> =	117	331	29	953	463	1,117	Mean	SD
Sg. (%)	31	99	59	83	85	99	85	15
Pl. (%)	68	1	38	14	13	0	13	14
? (%)	1	0	3	3	2	1	2	1

Table 7.4a. Group 3b: Number distribution, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	4	29	0	90	20	217
(1350–1400)	Singular (%)	25	100	—	52	85	98
	Plural (%)	75	0	—	36	15	0
	? (%)	0	0	—	12	0	2
Period 2	<i>n</i> =	5	82	0	86	115	184
(1400–1450)	Singular (%)	40	100	—	78	72	100
	Plural (%)	60	0	—	12	23	0
	? (%)	0	0	—	10	4	0
Period 3	<i>n</i> =	8	32	0	158	55	143
(1450–1500)	Singular (%)	25	100	—	93	100	97
	Plural (%)	75	0	—	7	0	0
	? (%)	0	0	—	0	0	3
Period 4	<i>n</i> =	11	26	1	79	97	101
(1500–1550)	Singular (%)	64	100	0	96	86	99
	Plural (%)	36	0	100	3	12	0
	? (%)	0	0	0	1	2	1
Period 5	<i>n</i> =	2	31	1	129	83	88
(1550–1600)	Singular (%)	100	94	0	84	81	94
	Plural (%)	0	6	100	11	16	5
	? (%)	0	0	0	5	4	1
Period 6	<i>n</i> =	18	70	0	59	20	100
(1600–1650)	Singular (%)	17	100	—	88	90	100
	Plural (%)	83	0	—	10	5	0
	? (%)	0	0	—	2	5	0
Period 7	<i>n</i> =	14	24	3	87	24	59
(1650–1700)	Singular (%)	21	100	67	92	96	98
	Plural (%)	71	0	33	8	4	2
	? (%)	7	0	0	0	0	0
Period 8	<i>n</i> =	10	5	3	88	34	43
(1700–1750)	Singular (%)	50	100	0	80	94	98
	Plural (%)	50	0	100	20	6	2
Period 9	<i>n</i> =	30	12	11	49	3	33
(1750–1800)	Singular (%)	13	100	64	73	100	100
	Plural (%)	87	0	36	27	0	0
Period 10	<i>n</i> =	8	5	7	60	6	54
(1800–1850)	Singular (%)	25	100	100	87	100	100
	Plural (%)	75	0	0	13	0	0
Period 11	<i>n</i> =	7	15	3	68	6	95
(1850–1900)	Singular (%)	71	100	33	76	83	100
	Plural (%)	29	0	33	21	17	0
	? (%)	0	0	33	3	0	0

Table 7.5a. Group 3a: Case distribution in the singular (all periods)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	109	241	286	24	77	Mean	SD
N (%)	31	33	19	13	29	25	8
A (%)	28	21	39	38	38	33	7
D (%)	27	39	37	46	31	36	7
G (%)	14	8	5	0	3	6	5
? (%)	1	0	1	4	0	1	2

Table 7.6a. Group 3a: Case distribution in the singular, by period

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	3	40	38	0	2
(1350–1400)	Nom. (%)	0	48	32	—	50
	Obl. (%)	100	53	68	—	50
Period 2	<i>n</i> =	8	24	24	1	5
(1400–1450)	Nom. (%)	13	46	17	100	60
	Obl. (%)	88	54	83	0	40
Period 3	<i>n</i> =	7	72	36	0	6
(1450–1500)	Nom. (%)	14	18	36	—	50
	Obl. (%)	86	82	61	—	50
	? (%)	0	0	3	—	0
Period 4	<i>n</i> =	2	5	4	4	6
(1500–1550)	Nom. (%)	0	60	25	0	17
	Obl. (%)	100	40	75	100	83
Period 5	<i>n</i> =	1	11	41	4	0
(1550–1600)	Nom. (%)	0	55	5	0	—
	Obl. (%)	100	45	95	100	—
Period 6	<i>n</i> =	63	32	30	3	5
(1600–1650)	Nom. (%)	40	28	10	67	0
	Obl. (%)	60	72	90	33	100
Period 7	<i>n</i> =	6	11	48	6	10
(1650–1700)	Nom. (%)	17	36	10	0	30
	Obl. (%)	83	64	90	100	70
Period 8	<i>n</i> =	5	21	9	1	6
(1700–1750)	Nom. (%)	40	24	11	0	17
	Obl. (%)	60	76	89	100	83
Period 9	<i>n</i> =	3	9	16	1	10
(1750–1800)	Nom. (%)	33	44	19	0	10
	Obl. (%)	67	56	81	100	90
Period 10	<i>n</i> =	3	4	23	2	15
(1800–1850)	Nom. (%)	33	25	26	0	33
	Obl. (%)	67	75	74	100	67
Period 11	<i>n</i> =	8	11	19	2	12
(1850–1900)	Nom. (%)	25	27	16	0	33
	Obl. (%)	75	73	84	100	67

Table 7.7a. Group 3a: Case distribution in the plural (all periods)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	37	48	53	6	22	Mean	SD
N (%)	11	21	17	17	32	19	7
A (%)	30	21	47	33	59	38	14
D (%)	30	25	26	33	5	24	10
G (%)	8	21	8	0	5	8	7
? (%)	22	13	2	17	0	11	8

Table 7.8a. Group 3a: Case distribution in the plural, by period

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	0	10	3	0	0
(1350–1400)	Nom. (%)	—	0	0	—	—
	Obl. (%)	—	70	100	—	—
	? (%)	—	30	0	—	—
Period 2	<i>n</i> =	1	2	17	0	0
(1400–1450)	Nom. (%)	0	0	18	—	—
	Obl. (%)	100	100	82	—	—
Period 3	<i>n</i> =	6	10	6	0	1
(1450–1500)	Nom. (%)	0	0	0	—	100
	Obl. (%)	100	90	100	—	0
	? (%)	0	10	0	—	0
Period 4	<i>n</i> =	1	1	1	0	0
(1500–1550)	Nom. (%)	0	0	0	—	—
	Obl. (%)	100	100	100	—	—
Period 5	<i>n</i> =	4	2	10	3	0
(1550–1600)	Nom. (%)	0	50	30	0	—
	Obl. (%)	100	50	70	100	—
Period 6	<i>n</i> =	15	1	1	1	0
(1600–1650)	Nom. (%)	13	0	0	0	—
	Obl. (%)	87	100	100	100	—
Period 7	<i>n</i> =	4	1	3	2	0
(1650–1700)	Nom. (%)	25	100	0	50	—
	Obl. (%)	75	0	67	50	—
	? (%)	0	0	33	0	—
Period 8	<i>n</i> =	0	13	3	0	5
(1700–1750)	Nom. (%)	—	23	0	—	40
	Obl. (%)	—	77	100	—	60
Period 9	<i>n</i> =	3	1	1	0	9
(1750–1800)	Nom. (%)	0	0	0	—	33
	Obl. (%)	100	100	100	—	67
Period 10	<i>n</i> =	1	2	4	0	3
(1800–1850)	Nom. (%)	100	50	0	—	0
	Obl. (%)	0	50	100	—	100
Period 11	<i>n</i> =	2	6	2	0	4
(1850–1900)	Nom. (%)	0	83	50	—	25
	Obl. (%)	100	17	50	—	75

Table 7.9a. Group 3b: Case distribution in the singular (all periods)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	36	329	17	788	392	1,101		
N (%)	33	22	53	18	15	18	25	14
A (%)	31	36	35	38	53	44	41	7
D (%)	31	30	6	36	19	30	24	11
G (%)	6	11	6	8	9	6	8	2
? (%)	0	0	0	0.1	4	1	1	1

Table 7.10a. Group 3b: Case distribution in the singular, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	1	29	0	47	17	212
(1350–1400)	Nom. (%)	100	28	—	26	24	16
	Obl. (%)	0	72	—	74	76	84
Period 2	<i>n</i> =	2	82	0	67	83	184
(1400–1450)	Nom. (%)	50	20	—	40	16	20
	Obl. (%)	50	80	—	60	84	79
	?	0	0	—	0	0	1
Period 3	<i>n</i> =	2	32	0	147	55	139
(1450–1500)	Nom. (%)	50	31	—	14	29	14
	Obl. (%)	50	69	—	86	69	86
	?	0	0	—	0	2	0
Period 4	<i>n</i> =	7	26	0	76	83	100
(1500–1550)	Nom. (%)	0	12	—	12	5	7
	Obl. (%)	100	88	—	88	93	93
	?	0	0	—	0	2	0
Period 5	<i>n</i> =	2	29	0	109	67	83
(1550–1600)	Nom. (%)	50	14	—	17	18	18
	Obl. (%)	50	86	—	82	82	82
Period 6	<i>n</i> =	3	70	0	52	18	100
(1600–1650)	Nom. (%)	0	19	—	13	11	7
	Obl. (%)	100	81	—	87	89	93
Period 7	<i>n</i> =	3	24	2	80	23	58
(1650–1700)	Nom. (%)	33	21	0	11	17	17
	Obl. (%)	67	79	100	89	78	83
	?	0	0	0	0	4	0
Period 8	<i>n</i> =	5	5	0	70	32	42
(1700–1750)	Nom. (%)	20	20	—	4	6	19
	Obl. (%)	80	80	—	96	94	81
Period 9	<i>n</i> =	4	12	7	36	3	33
(1750–1800)	Nom. (%)	75	25	57	17	33	27
	Obl. (%)	25	75	43	83	67	73
Period 10	<i>n</i> =	2	5	7	52	6	54
(1800–1850)	Nom. (%)	50	20	71	27	17	26
	Obl. (%)	50	80	29	73	83	74
Period 11	<i>n</i> =	5	15	1	52	5	95
(1850–1900)	Nom. (%)	40	53	0	33	20	43
	Obl. (%)	60	47	100	67	80	55
	?	0	0	0	0	0	2

Table 7.11a. Group 3b: Case distribution in the plural (all periods)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	80	2	11	135	60	5		
N (%)	15	0	45	22	17	0	17	17
A (%)	34	0	55	38	42	0	27	23
D (%)	39	0	0	23	13	0	7	9
G (%)	10	100	0	10	17	100	45	45
? (%)	3	0	0	0	12	0	2	5

Table 7.12a. Group 3b: Case distribution in the plural, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	3	0	0	32	3	0
(1350–1400)	Nom. (%)	33	—	—	31	0	—
	Obl. (%)	67	—	—	63	100	—
	?	0	—	—	6	0	—
Period 2	<i>n</i> =	3	0	0	10	27	0
(1400–1450)	Nom. (%)	0	—	—	0	33	—
	Obl. (%)	67	—	—	100	59	—
	?	33	—	—	0	7	—
Period 3	<i>n</i> =	6	0	0	11	0	0
(1450–1500)	Nom. (%)	0	—	—	18	—	—
	Obl. (%)	100	—	—	64	—	—
	?	0	—	—	18	—	—
Period 4	<i>n</i> =	4	0	1	2	12	0
(1500–1550)	Nom. (%)	25	—	100	0	0	—
	Obl. (%)	75	—	0	100	100	—
Period 5	<i>n</i> =	0	2	1	14	13	4
(1550–1600)	Nom. (%)	—	0	0	29	8	0
	Obl. (%)	—	100	100	71	92	100
Period 6	<i>n</i> =	15	0	0	6	1	0
(1600–1650)	Nom. (%)	27	—	—	17	0	—
	Obl. (%)	73	—	—	83	100	—
Period 7	<i>n</i> =	10	0	1	7	1	1
(1650–1700)	Nom. (%)	0	—	0	14	0	100
	Obl. (%)	100	—	100	86	100	0
Period 8	<i>n</i> =	5	0	3	18	2	1
(1700–1750)	Nom. (%)	20	—	67	22	0	0
	Obl. (%)	80	—	33	78	100	100
Period 9	<i>n</i> =	26	0	4	13	0	0
(1750–1800)	Nom. (%)	19	—	25	8	—	—
	Obl. (%)	81	—	75	92	—	—
Period 10	<i>n</i> =	6	0	0	8	0	0
(1800–1850)	Nom. (%)	0	—	—	38	—	—
	Obl. (%)	100	—	—	63	—	—
Period 11	<i>n</i> =	2	0	1	14	1	0
(1850–1900)	Nom. (%)	0	—	100	29	0	—
	Obl. (%)	100	—	0	71	100	—

Table 7.13a. Group 3a: Distribution of *-e/ø* and *-(e)n* in the singular (all periods; all four cases)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	109	241	286	24	77	Mean	SD
<i>-e/ø</i>	1	29	8	8	9	11	9
<i>-(e)n</i>	86	69	90	92	88	85	8
Other	13	2	2	0	3	4	5

Table 7.14a. Group 3a: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>		
<i>n</i> =	14	290	344	31	99	Mean	SD
N. Sg. (%)	23	27	15	10	22	20	6
<i>-e/ø</i> (%)	1	24	8	6	7	9	8

Table 7.15a. Group 3a: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1 (1350–1400)	<i>n</i> =	3	40	38	0	2
	Nom. Sg. (%)	0	48	32	—	50
	<i>-e/ø</i> (%)	0	55	29	—	50
	<i>-(e)n</i> (%)	100	45	71	—	50
Period 2 (1400–1450)	<i>n</i> =	8	24	24	1	5
	Nom. Sg. (%)	13	46	17	100	60
	<i>-e/ø</i> (%)	13	46	4	100	60
	<i>-(e)n</i> (%)	75	54	96	0	40
	Other (%)	13	0	0	0	0
Period 3 (1450–1500)	<i>n</i> =	7	72	36	0	6
	Nom. Sg. (%)	14	18	36	—	50
	<i>-e/ø</i> (%)	0	18	25	—	50
	<i>-(e)n</i> (%)	86	82	75	—	50
	Other (%)	14	0	0	—	0
Period 4 (1500–1550)	<i>n</i> =	2	5	4	4	6
	Nom. Sg. (%)	0	60	25	0	17
	<i>-e/ø</i> (%)	0	60	0	0	0
	<i>-(e)n</i> (%)	100	40	100	100	83
	Other (%)	0	0	0	0	17
Period 5 (1550–1600)	<i>n</i> =	1	11	41	4	0
	Nom. Sg. (%)	0	55	5	0	—
	<i>-e/ø</i> (%)	0	45	2	0	—
	<i>-(e)n</i> (%)	100	55	98	100	—
Period 6 (1600–1650)	<i>n</i> =	63	32	30	3	5
	Nom. Sg. (%)	40	28	10	67	0
	<i>-e/ø</i> (%)	0	25	7	33	0
	<i>-(e)n</i> (%)	83	69	87	67	100
	Other (%)	17	6	7	0	0
Period 7 (1650–1700)	<i>n</i> =	6	11	48	6	10
	Nom. Sg. (%)	17	36	10	0	30
	<i>-e/ø</i> (%)	0	36	0	0	0
	<i>-(e)n</i> (%)	100	45	98	100	100
	Other (%)	0	18	2	0	0
Period 8 (1700–1750)	<i>n</i> =	5	21	9	1	6
	Nom. Sg. (%)	40	24	11	0	17
	<i>-e/ø</i> (%)	0	14	0	0	0
	<i>-(e)n</i> (%)	100	81	100	100	100
	Other (%)	0	5	0	0	0
Period 9 (1750–1800)	<i>n</i> =	3	9	16	1	10
	Nom. Sg. (%)	33	44	19	0	10
	<i>-e/ø</i> (%)	0	0	0	0	0
	<i>-(e)n</i> (%)	100	89	100	100	100
	Other (%)	0	11	0	0	0
Period 10 (1800–1850)	<i>n</i> =	3	4	23	2	15
	Nom. Sg. (%)	33	25	26	0	33
	<i>-e/ø</i> (%)	0	0	0	0	0
	<i>-(e)n</i> (%)	100	100	87	100	93
	Other (%)	0	0	13	0	7
Period 11 (1850–1900)	<i>n</i> =	8	11	19	2	12
	Nom. Sg. (%)	25	27	16	0	33
	<i>-e/ø</i> (%)	0	0	0	0	0
	<i>-(e)n</i> (%)	88	100	100	100	100
	Other (%)	13	7	0	0	0

Table 7.16a. Group 3a: Distribution of inflectional markers in the genitive singular, by period

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	0	0	2	0	0
(1350–1400)	<i>-(e)n</i> (%)	—	—	100	—	—
Period 2	<i>n</i> =	1	0	0	0	0
(1400–1450)	<i>-(e)ns</i> (%)	100	—	—	—	—
Period 3	<i>n</i> =	2	12	3	0	0
(1450–1500)	<i>-(e)n</i> (%)	50	100	100	—	—
	<i>-(e)ns</i> (%)	50	0	0	—	—
Period 4	<i>n</i> =	0	0	0	0	1
(1500–1550)	<i>-(e)ns</i> (%)	—	—	—	—	100
Period 6	<i>n</i> =	11	2	5	0	0
(1600–1650)	<i>-(e)n</i> (%)	0	0	60	—	—
	<i>-(e)ns</i> (%)	100	100	40	—	—
Period 7	<i>n</i> =	0	2	2	0	0
(1650–1700)	<i>-(e)n</i> (%)	—	0	50	—	—
	<i>-(e)ns</i> (%)	—	100	50	—	—
Period 8	<i>n</i> =	0	2	0	0	0
(1700–1750)	<i>-(e)n</i> (%)	—	50	—	—	—
	<i>-(e)ns</i> (%)	—	50	—	—	—
Period 9	<i>n</i> =	0	1	0	0	0
(1750–1800)	<i>-(e)ns</i> (%)	—	100	—	—	—
Period 10	<i>n</i> =	0	0	3	0	1
(1800–1850)	<i>-(e)ns</i> (%)	—	—	100	—	100
Period 11	<i>n</i> =	1	0	0	0	0
(1850–1900)	<i>-(e)ns</i> (%)	100	—	—	—	—

Note: There are no tokens in Period 5.

Table 7.17a. Group 3b: Distribution of *-e/ø* and *-(e)n* in the singular (all periods; all four cases)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	36	329	17	788	392	1,101		
<i>-e/ø</i> (%)	31	54	47	18	10	19	29	18
<i>-(e)n</i> (%)	69	36	47	76	83	75	63	18
Other (%)	0	10	6	7	7	6	7	2

Table 7.18a. Group 3b: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	117	331	29	953	463	1,117		
N. Sg. (%)	10	22	31	15	13	18	20	6
<i>-e/ø</i> (%)	9	53	28	17	8	19	25	15



Table 7.19a. Group 3b: Distribution of *-e/ø* and *-(e)n* in the nominative singular, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	1	13	1	42	12	72
(1350–1400)	<i>-e/ø</i> (%)	100	100	100	95	92	100
	<i>-(e)n</i> (%)	0	0	0	5	8	0
Period 2	<i>n</i> =	1	22	0	39	26	46
(1400–1450)	<i>-e/ø</i> (%)	100	95	—	100	88	91
	<i>-(e)n</i> (%)	0	5	—	0	12	9
Period 3	<i>n</i> =	1	31	0	34	27	34
(1450–1500)	<i>-e/ø</i> (%)	100	100	—	79	89	94
	<i>-(e)n</i> (%)	0	0	—	21	11	6
Period 4	<i>n</i> =	1	10	0	31	10	31
(1500–1550)	<i>-e/ø</i> (%)	100	100	—	90	70	94
	<i>-(e)n</i> (%)	0	0	—	10	30	6
Period 5	<i>n</i> =	1	13	0	39	18	37
(1550–1600)	<i>-e/ø</i> (%)	100	85	—	79	39	86
	<i>-(e)n</i> (%)	0	15	—	21	61	14
Period 6	<i>n</i> =	1	24	0	46	7	21
(1600–1650)	<i>-e/ø</i> (%)	100	100	—	100	57	100
	<i>-(e)n</i> (%)	0	0	—	0	43	0
Period 7	<i>n</i> =	3	13	3	45	7	26
(1650–1700)	<i>-e/ø</i> (%)	100	85	67	98	43	85
	<i>-(e)n</i> (%)	0	15	33	0	57	15
Period 8	<i>n</i> =	2	8	2	16	3	23
(1700–1750)	<i>-e/ø</i> (%)	100	88	50	81	67	96
	<i>-(e)n</i> (%)	0	12	50	19	33	4
Period 9	<i>n</i> =	3	21	9	28	3	15
(1750–1800)	<i>-e/ø</i> (%)	100	90	67	100	0	100
	<i>-(e)n</i> (%)	0	10	33	0	100	0
Period 10	<i>n</i> =	2	15	9	20	2	25
(1800–1850)	<i>-e/ø</i> (%)	50	73	67	95	0	100
	<i>-(e)n</i> (%)	50	27	33	5	100	0
Period 11	<i>n</i> =	2	29	5	35	1	56
(1850–1900)	<i>-e/ø</i> (%)	100	83	60	89	0	100
	<i>-(e)n</i> (%)	0	17	40	11	100	0

Table 7.20a. Group 3b. Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1 (1350–1400)	<i>n</i> =	1	29	0	47	17	212
	Nom. Sg. (%)	100	28	—	26	24	16
	<i>-e/ø</i> (%)	100	86	—	34	29	16
	<i>-(e)n</i> (%)	0	0	—	66	65	83
	Other (%)	0	14	—	0	6	1
Period 2 (1400–1450)	<i>n</i> =	2	82	0	67	83	184
	Nom. Sg. (%)	50	20	—	40	16	20
	<i>-e/ø</i> (%)	50	73	—	46	13	20
	<i>-(e)n</i> (%)	50	22	—	54	76	77
	Other (%)	0	5	—	0	11	4
Period 3 (1450–1500)	<i>n</i> =	2	32	0	147	55	139
	Nom. Sg. (%)	50	31	—	14	29	14
	<i>-e/ø</i> (%)	50	78	—	9	25	13
	<i>-(e)n</i> (%)	50	9	—	87	65	82
	Other (%)	0	13	—	4	9	5
Period 4 (1500–1550)	<i>n</i> =	7	26	0	76	83	100
	Nom. Sg. (%)	0	12	—	12	5	7
	<i>-e/ø</i> (%)	0	62	—	11	4	12
	<i>-(e)n</i> (%)	100	31	—	82	92	85
	Other (%)	0	8	—	8	5	3
Period 5 (1550–1600)	<i>n</i> =	2	29	0	109	67	83
	Nom. Sg. (%)	50	14	—	17	18	18
	<i>-e/ø</i> (%)	50	21	—	16	6	17
	<i>-(e)n</i> (%)	50	66	—	63	84	75
	Other (%)	0	14	—	21	10	8
Period 6 (1600–1650)	<i>n</i> =	3	70	0	52	18	100
	Nom. Sg. (%)	0	19	—	13	11	7
	<i>-e/ø</i> (%)	0	31	—	13	0	7
	<i>-(e)n</i> (%)	100	50	—	77	94	84
	Other (%)	0	19	—	10	6	9
Period 7 (1650–1700)	<i>n</i> =	3	24	2	80	23	58
	Nom. Sg. (%)	33	21	0	11	17	17
	<i>-e/ø</i> (%)	33	42	0	10	4	12
	<i>-(e)n</i> (%)	67	54	100	81	96	83
	Other (%)	0	4	0	9	0	5
Period 8 (1700–1750)	<i>n</i> =	5	5	0	70	32	42
	Nom. Sg. (%)	20	20	—	4	6	19
	<i>-e/ø</i> (%)	20	40	—	4	3	19
	<i>-(e)n</i> (%)	80	60	—	93	91	71
	Other (%)	0	0	—	3	6	10
Period 9 (1750–1800)	<i>n</i> =	4	12	7	36	3	33
	Nom. Sg. (%)	75	25	57	17	33	27
	<i>-e/ø</i> (%)	75	25	57	17	0	27
	<i>-(e)n</i> (%)	25	75	29	81	100	55
	Other (%)	0	0	14	3	0	18
Period 10 (1800–1850)	<i>n</i> =	2	5	7	52	6	54
	Nom. Sg. (%)	50	20	71	27	17	26
	<i>-e/ø</i> (%)	0	20	57	25	0	30
	<i>-(e)n</i> (%)	100	60	43	67	100	56
	Other (%)	0	20	0	8	0	15
Period 11 (1850–1900)	<i>n</i> =	5	15	1	52	5	95
	Nom. Sg. (%)	40	53	0	33	20	43
	<i>-e/ø</i> (%)	40	47	0	31	0	49
	<i>-(e)n</i> (%)	60	53	100	67	100	41
	Other (%)	0	0	0	2	0	9

Table 7.21a. Group 3b: Distribution of inflectional markers in the genitive singular, by period

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	0	4	0	0	1	5
(1350–1400)	<i>-(e)n</i> (%)	—	0	—	—	0	60
	<i>-(e)ns</i> (%)	—	0	—	—	100	40
	<i>-(e)s</i> (%)	—	100	—	—	0	0
Period 2	<i>n</i> =	0	7	0	0	11	7
(1400–1450)	<i>-e/ø</i> (%)	—	29	—	—	0	0
	<i>-(e)n</i> (%)	—	14	—	—	18	0
	<i>-(e)ns</i> (%)	—	14	—	—	82	100
	<i>-(e)s</i> (%)	—	43	—	—	0	0
Period 3	<i>n</i> =	1	4	0	7	7	8
(1450–1500)	<i>-e/ø</i> (%)	0	0	—	0	14	0
	<i>-(e)n</i> (%)	100	0	—	14	14	13
	<i>-(e)ns</i> (%)	0	0	—	86	71	88
	<i>-(e)s</i> (%)	0	100	—	0	0	0
Period 4	<i>n</i> =	1	2	0	9	5	3
(1500–1550)	<i>-(e)n</i> (%)	100	0	—	33	20	0
	<i>-(e)ns</i> (%)	0	0	—	67	80	100
	<i>-(e)s</i> (%)	0	100	—	0	0	0
Period 5	<i>n</i> =	10	4	0	23	7	8
(1550–1600)	<i>-(e)n</i> (%)	—	0	—	0	0	13
	<i>-(e)ns</i> (%)	—	100	—	100	100	88
Period 6	<i>n</i> =	0	14	0	7	1	9
(1600–1650)	<i>-(e)n</i> (%)	—	7	—	29	0	0
	<i>-(e)ns</i> (%)	—	29	—	71	100	100
	<i>-(e)s</i> (%)	—	64	—	0	0	0
Period 7	<i>n</i> =	0	1	0	7	0	3
(1650–1700)	<i>-(e)ns</i> (%)	—	100	—	100	—	100
Period 8	<i>n</i> =	0	0	0	2	2	4
(1700–1750)	<i>-(e)ns</i> (%)	—	—	—	50	100	100
	<i>-(e)s</i> (%)	—	—	—	50	0	0
Period 9	<i>n</i> =	0	0	1	1	0	6
(1750–1800)	<i>-(e)ns</i> (%)	—	—	100	100	—	100
Period 10	<i>n</i> =	0	1	0	4	0	8
(1800–1850)	<i>-(e)ns</i> (%)	—	100	—	100	—	100
Period 11	<i>n</i> =	0	0	0	1	0	9
(1850–1900)	<i>-(e)ns</i> (%)	—	—	—	100	—	100

Table 7.22a. Group 3a: Distribution of *-e/ø* and *-(e)n* (with and without umlaut) in the plural, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	0	10	3	0	0
(1350–1400)	<i>-e/ø</i> (%)	—	0	0	—	—
	<i>-(e)n</i> (%)	—	100	67	—	—
	<i>-¨(e)n</i> (%)	—	0	33	—	—
Period 2	<i>n</i> =	1	2	17	0	0
(1400–1450)	<i>-(e)n</i> (%)	100	100	65	—	—
	<i>-¨(e)n</i> (%)	0	0	35	—	—
Period 3	<i>n</i> =	6	10	6	0	1
(1450–1500)	<i>-(e)n</i> (%)	100	80	83	—	100
	<i>-¨(e)n</i> (%)	0	20	17	—	0
Period 4	<i>n</i> =	1	1	1	0	0
(1500–1550)	<i>-(e)n</i> (%)	100	100	0	—	—
	<i>-¨(e)n</i> (%)	0	0	100	—	—
Period 5	<i>n</i> =	4	2	10	3	0
(1550–1600)	<i>-e/ø</i> (%)	0	0	20	0	—
	<i>-(e)n</i> (%)	100	100	50	0	—
	<i>-¨(e)n</i> (%)	0	0	30	100	—
Period 6	<i>n</i> =	15	1	1	1	0
(1600–1650)	<i>-(e)n</i> (%)	13	100	0	0	—
	<i>-¨(e)n</i> (%)	87	0	100	100	—
Period 7	<i>n</i> =	4	1	3	2	0
(1650–1700)	<i>-(e)n</i> (%)	100	100	100	100	—
Period 8	<i>n</i> =	0	13	3	0	5
(1700–1750)	<i>-(e)n</i> (%)	—	100	0	—	100
	<i>-¨(e)n</i> (%)	—	0	100	—	0
Period 9	<i>n</i> =	3	1	1	0	9
(1750–1800)	<i>-(e)n</i> (%)	100	100	0	—	100
	<i>-¨(e)n</i> (%)	0	0	100	—	0
Period 10	<i>n</i> =	1	2	4	0	3
(1800–1850)	<i>-(e)n</i> (%)	100	100	0	—	100
	<i>-¨(e)n</i> (%)	0	0	100	—	0
Period 11	<i>n</i> =	2	6	2	0	4
(1850–1900)	<i>-(e)n</i> (%)	100	100	0	—	100
	<i>-¨(e)n</i> (%)	0	0	100	—	0

Table 7.23a. Group 3b: Distribution of *-e/ø* and *-(e)n* (with and without umlaut) in the plural, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	3	0	0	32	3	0
(1350–1400)	<i>-e/ø</i> (%)	0	—	—	44	0	—
	<i>-(e)n</i> (%)	100	—	—	56	33	—
	<i>-¨(e)n</i> (%)	0	—	—	0	67	—
Period 2	<i>n</i> =	3	0	0	10	27	0
(1400–1450)	<i>-(e)n</i> (%)	100	—	—	100	11	—
	<i>-¨(e)n</i> (%)	0	—	—	0	89	—
Period 3	<i>n</i> =	6	0	0	11	0	0
(1450–1500)	<i>-(e)n</i> (%)	100	—	—	100	—	—
Period 4	<i>n</i> =	4	0	1	2	12	0
(1500–1550)	<i>-(e)n</i> (%)	100	—	100	100	8	—
	<i>-¨(e)n</i> (%)	0	—	0	0	92	—
Period 5	<i>n</i> =	0	2	1	14	13	4
(1550–1600)	<i>-(e)n</i> (%)	—	100	100	100	0	100
	<i>-¨(e)n</i> (%)	—	0	0	0	100	0
Period 6	<i>n</i> =	15	0	0	6	1	0
(1600–1650)	<i>-(e)n</i> (%)	100	—	—	100	100	—
Period 7	<i>n</i> =	10	0	1	7	1	1
(1650–1700)	<i>-(e)n</i> (%)	100	—	100	100	100	100
Period 8	<i>n</i> =	5	0	3	18	2	1
(1700–1750)	<i>-(e)n</i> (%)	100	—	100	100	0	100
	<i>-¨(e)n</i> (%)	0	—	0	0	100	0
Period 9	<i>n</i> =	26	0	4	13	0	0
(1750–1800)	<i>-(e)n</i> (%)	100	—	100	100	—	—
Period 10	<i>n</i> =	6	0	0	8	0	0
(1800–1850)	<i>-(e)n</i> (%)	100	—	—	100	—	—
Period 11	<i>n</i> =	2	0	1	14	1	0
(1850–1900)	<i>-(e)n</i> (%)	100	—	100	100	0	—
	<i>-¨(e)n</i> (%)	0	—	0	0	100	—

Table 7.24a. Groups 3a and 3b: Distribution of non-weak (innovative) tokens (all periods)

Grp	Noun	N. Sg. in <i>-(e)n</i> ( <i>n</i> )	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Gen. Sg. in <i>-(e)(n)s</i> ( <i>n</i> )	Pl. in <i>-¨(e)ø</i> ( <i>n</i> )	Pl. in <i>-¨(e)n</i> ( <i>n</i> )	Total non- weak ( <i>n</i> )	Non- weak (%)	Total tokens ( <i>n</i> )
3a	<i>Bogen</i>	33	0	14	0	13	<b>60</b>	<b>41</b>	<b>148</b>
	<i>Brunnen</i>	14	5	6	0	2	<b>27</b>	<b>9</b>	<b>290</b>
	<i>Garten</i>	30	0	6	2	23	<b>61</b>	<b>18</b>	<b>344</b>
	<i>Kasten</i>	1	0	0	0	4	<b>5</b>	<b>16</b>	<b>31</b>
	<i>Schatten</i>	15	0	2	0	0	<b>17</b>	<b>17</b>	<b>99</b>
3b	<i>Buchstabe</i>	1	0	0	0	0	<b>1</b>	<b>1</b>	<b>117</b>
	<i>Friede/n</i>	5	110	33	0	0	<b>148</b>	<b>45</b>	<b>331</b>
	<i>Funke/n</i>	1	0	1	0	0	<b>2</b>	<b>7</b>	<b>29</b>
	<i>Name/n</i>	14	9	55	14	0	<b>92</b>	<b>10</b>	<b>953</b>
	<i>Schade/n</i>	25	4	29	0	53	<b>111</b>	<b>24</b>	<b>465</b>
	<i>Wille/n</i>	11	15	65	0	0	<b>91</b>	<b>8</b>	<b>1,117</b>

Table 7.25a. Groups 3a and 3b: Prepositional objects as a percentage of all tokens

Group	Noun	Prep. objects ( <i>n</i> )	Prep. objects (%)	Total tokens ( <i>n</i> )
3a	<i>Bogen</i>	52	35	<b>148</b>
	<i>Brunnen</i>	134	46	<b>290</b>
	<i>Garten</i>	197	57	<b>344</b>
	<i>Kasten</i>	18	58	<b>31</b>
	<i>Schatten</i>	40	40	<b>99</b>
3b	<i>Buchstabe</i>	54	46	<b>117</b>
	<i>Friede/n</i>	113	34	<b>331</b>
	<i>Funke/n</i>	1	3	<b>29</b>
	<i>Name/n</i>	351	37	<b>953</b>
	<i>Schade/n</i>	144	31	<b>463</b>
	<i>Wille/n</i>	600	54	<b>1,117</b>

Table 7.27a. Group 3a: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>	Mean	SD
<i>n</i> =	1	69	24	2	7		
<i>-e</i> (%)	0	20	29	50	71	34	25
<i>-ø</i> (%)	100	80	71	50	29	66	25

Table 7.28a. Group 3a: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Bogen</i>	<i>Brunnen</i>	<i>Garten</i>	<i>Kasten</i>	<i>Schatten</i>
Period 1	<i>n</i> =	0	22	11	0	1
(1350–1400)	<i>-e</i> (%)	—	41	36	—	0
	<i>-ø</i> (%)	—	59	64	—	100
Period 2	<i>n</i> =	1	11	1	1	3
(1400–1450)	<i>-e</i> (%)	0	9	0	100	100
	<i>-ø</i> (%)	100	91	100	0	0
Period 3	<i>n</i> =	0	13	9	0	3
(1450–1500)	<i>-e</i> (%)	—	23	22	—	67
	<i>-ø</i> (%)	—	77	78	—	33
Period 4	<i>n</i> =	0	3	0	0	0
(1500–1550)	<i>-ø</i> (%)	—	100	—	—	—
Period 5	<i>n</i> =	0	5	1	0	0
(1550–1600)	<i>-ø</i> (%)	—	100	100	—	—
Period 6	<i>n</i> =	0	8	2	1	0
(1600–1650)	<i>-e</i> (%)	—	13	50	0	—
	<i>-ø</i> (%)	—	88	50	100	—
Period 7	<i>n</i> =	0	4	0	0	0
(1650–1700)	<i>-ø</i> (%)	—	100	—	—	—
Period 8	<i>n</i> =	0	3	0	0	0
(1700–1750)	<i>-ø</i> (%)	—	100	—	—	—

Note: There are no tokens in Periods 9–11.

Table 7.29a. Group 3b: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>	Mean	SD
<i>n</i> =	11	177	8	138	39	207		
<i>-e</i> (%)	64	43	100	63	31	66	60	24
<i>-ø</i> (%)	36	57	0	37	69	34	40	24

Table 7.30a. Group 3b: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Buchstabe</i>	<i>Friede/n</i>	<i>Funke/n</i>	<i>Name/n</i>	<i>Schade/n</i>	<i>Wille/n</i>
Period 1	<i>n</i> =	1	25	0	16	5	33
(1350–1400)	<i>-e</i> (%)	0	28	—	69	40	76
	<i>-ø</i> (%)	100	72	—	31	60	24
Period 2	<i>n</i> =	1	60	0	31	11	36
(1400–1450)	<i>-e</i> (%)	100	50	—	74	64	56
	<i>-ø</i> (%)	0	50	—	26	36	44
Period 3	<i>n</i> =	1	25	0	13	14	18
(1450–1500)	<i>-e</i> (%)	0	12	—	38	14	22
	<i>-ø</i> (%)	100	88	—	62	86	78
Period 4	<i>n</i> =	0	16	0	8	3	12
(1500–1550)	<i>-e</i> (%)	—	31	—	0	33	8
	<i>-ø</i> (%)	—	69	—	100	67	92
Period 5	<i>n</i> =	1	6	0	17	4	14
(1550–1600)	<i>-e</i> (%)	0	17	—	12	0	0
	<i>-ø</i> (%)	100	83	—	88	100	100
Period 6	<i>n</i> =	0	22	0	7	0	7
(1600–1650)	<i>-e</i> (%)	—	95	—	43	—	43
	<i>-ø</i> (%)	—	5	—	57	—	57
Period 7	<i>n</i> =	1	10	0	8	1	7
(1650–1700)	<i>-e</i> (%)	100	90	—	63	0	57
	<i>-ø</i> (%)	0	10	—	38	100	43
Period 8	<i>n</i> =	1	2	0	3	1	8
(1700–1750)	<i>-e</i> (%)	0	100	—	100	0	100
	<i>-ø</i> (%)	100	0	—	0	100	0
Period 9	<i>n</i> =	3	3	4	6	0	9
(1750–1800)	<i>-e</i> (%)	100	100	100	100	—	100
Period 10	<i>n</i> =	0	1	4	13	0	16
(1800–1850)	<i>-e</i> (%)	—	100	100	100	—	94
	<i>-ø</i> (%)	—	0	0	0	—	6
Period 11	<i>n</i> =	2	7	0	16	0	47
(1850–1900)	<i>-e</i> (%)	100	100	—	100	—	100

Table 7.32a. *Drache/n*: Number distribution

Period	Singular (%)	Plural (%)	Total ( <i>n</i> )
1	75	25	4
2	50	50	2
3	29	71	7
4	0	100	1
5	50	50	12
6	—	—	0
7	100	0	1
8	67	33	3
9	—	—	0
10	—	—	0
11	88	13	8
<b>All</b>	<b>58</b>	<b>42</b>	<b>38</b>

Table 7.33a. *Drache/n*: Case distribution

Period	Singular			Plural		
	Nom. (%)	Obl. (%)	Total (n)	Nom. (%)	Obl. (%)	Total (n)
1	33	67	3	0	100	1
2	0	100	1	0	100	1
3	0	100	2	40	60	5
4	—	—	0	0	100	1
5	67	33	6	33	67	6
6	—	—	0	—	—	0
7	100	0	1	—	—	0
8	100	0	2	0	100	1
9	—	—	0	—	—	0
10	—	—	0	—	—	0
11	57	43	7	0	100	1
<b>All</b>	<b>55</b>	<b>45</b>	<b>22</b>	<b>25</b>	<b>75</b>	<b>16</b>

Table 7.34a. *Drache/n*: Distribution of *-e/ø* and *-(e)n* (all four cases)

Period	Singular				Plural	
	Nom. Sg. (%)	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	Total (n)	<i>-(e)n</i> (%)	Total (n)
1	33	33	67	3	100	1
2	0	0	100	1	100	1
3	0	0	100	2	100	5
4	—	—	—	0	100	1
5	67	67	33	6	100	6
6	—	—	—	0	—	0
7	100	100	0	1	—	0
8	100	100	0	2	100	1
9	—	—	—	0	—	0
10	—	—	—	0	—	0
11	57	57	43	7	100	1
<b>All</b>	<b>55</b>	<b>55</b>	<b>45</b>	<b>22</b>	<b>100</b>	<b>16</b>

Table 7.35a. *Drache/n*: Distribution of *-e* and *-ø* in the singular

Period	<i>-e</i> (%)	<i>-ø</i> (%)	Total (n)
1	0	100	1
2	—	—	0
3	—	—	0
4	—	—	0
5	0	100	4
6	—	—	0
7	100	0	1
8	100	0	2
9	—	—	0
10	—	—	0
11	100	0	4
<b>All</b>	<b>58</b>	<b>42</b>	<b>12</b>

Table 7.36a. *Fels/en*: Number distribution

Period	Singular (%)	Plural (%)	Total (n)
1	84	16	161
2	100	0	7
3	80	20	5
4	—	—	0
5	79	21	14
6	33	67	3
7	82	18	11
8	64	36	36
9	40	60	10
10	86	14	7
11	63	38	8
<b>All</b>	<b>79</b>	<b>21</b>	<b>262</b>



Table 7.37a. *Fels/en*: Case distribution

Period	Singular			Plural		
	Nom. (%)	Obl. (%)	Total (n)	Nom. (%)	Obl. (%)	Total (n)
1	5	95	136	20	80	25
2	29	71	7	—	—	0
3	25	75	4	0	100	1
4	—	—	0	—	—	0
5	45	55	11	0	100	3
6	0	100	1	0	100	2
7	44	56	9	50	50	2
8	22	78	23	38	62	13
9	25	75	4	0	100	6
10	50	50	6	0	100	1
11	20	80	5	0	100	3
All	14	86	206	20	80	56

Table 7.38a. *Fels/en*: Distribution of *-e/ø* and *-(e)n*, by period (all four cases)

Period	Singular					Plural		
	Nom. Sg. (%)	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	Other (%)	Total (n)	<i>-e/ø</i> (%)	<i>-(e)n</i> (%)	Total (n)
1	5	96	3	1	136	68	32	25
2	29	100	0	0	7	—	—	0
3	25	50	50	0	4	0	100	1
4	—	—	—	—	0	—	—	0
5	45	45	55	0	11	0	100	3
6	0	0	100	0	1	0	100	2
7	44	22	78	0	9	50	50	2
8	22	17	74	9	23	0	100	13
9	25	25	75	0	4	0	100	6
10	50	67	17	17	6	0	100	1
11	20	40	60	0	5	0	100	3
All	14	76	22	2	206	32	68	56

Table 7.39a. *Fels/en*: Distribution of inflectional markers in the genitive singular, by period

Period	<i>-(e)n</i> (%)	<i>-(e)ns</i> (%)	<i>-(e)s</i> (%)	Total (n)
1	0	0	100	2
2	—	—	—	0
3	—	—	—	0
4	—	—	—	0
5	—	—	—	0
6	100	0	0	1
7	—	—	—	0
8	0	100	0	2
9	—	—	—	0
10	0	100	0	1
11	—	—	—	0
All	17	50	33	6

Table 7.40a. *Tropf/en*: Number distribution (all periods; all four cases)

	<i>Tropf/en</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
<i>n</i> =	104	17	87
Sg. (%)	55	82	49
Pl. (%)	44	18	49
? (%)	1	0	1

Table 7.41a. *Tropfen*: Number distribution, by period (all four cases)

		<i>Tropfen</i> (all)	<i>Tropfen</i> 'idiot'	<i>Tropfen</i> 'drop'
Period 1	<i>n</i> =	5	0	5
(1350–1400)	Singular (%)	100	—	100
	Plural (%)	0	—	0
Period 2	<i>n</i> =	5	0	5
(1400–1450)	Singular (%)	60	—	60
	Plural (%)	40	—	40
Period 3	<i>n</i> =	1	0	1
(1450–1500)	Singular (%)	0	—	0
	Plural (%)	100	—	100
Period 4	<i>n</i> =	1	0	1
(1500–1550)	Singular (%)	100	—	100
	Plural (%)	0	—	0
Period 5	<i>n</i> =	2	0	2
(1550–1600)	Singular (%)	0	—	0
	Plural (%)	100	—	100
Period 6	<i>n</i> =	10	5	5
(1600–1650)	Singular (%)	60	40	80
	Plural (%)	40	60	20
Period 7	<i>n</i> =	17	11	6
(1650–1700)	Singular (%)	94	100	83
	Plural (%)	6	0	17
Period 8	<i>n</i> =	14	0	14
(1700–1750)	Singular (%)	14	—	14
	Plural (%)	79	—	79
	? (%)	7	—	7
Period 9	<i>n</i> =	8	0	8
(1750–1800)	Singular (%)	75	—	75
	Plural (%)	25	—	25
Period 10	<i>n</i> =	25	0	25
(1800–1850)	Singular (%)	32	—	32
	Plural (%)	68	—	68
Period 11	<i>n</i> =	16	1	15
(1850–1900)	Singular (%)	56	100	53
	Plural (%)	25	0	25

Table 7.42a. *Tropfen*: Case distribution (all periods)

	Singular			Plural		
	<i>Tropfen</i> (all)	<i>Tropfen</i> 'idiot'	<i>Tropfen</i> 'drop'	<i>Tropfen</i> (all)	<i>Tropfen</i> 'idiot'	<i>Tropfen</i> 'drop'
<i>n</i> =	57	14	43	46	3	43
N (%)	44	86	30	54	100	51
A (%)	47	0	63	28	0	30
D (%)	9	14	7	15	0	16
G (%)	0	0	0	0	0	0
? (%)	0	0	0	2	0	2

Table 7.43a. *Tropfen*: Case distribution, by period

		Singular			Plural		
		<i>Tropfen</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'	<i>Tropfen</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
Period 1	<i>n</i> =	5	0	5	0	0	0
(1350–1400)	Nom. (%)	0	—	0	—	—	—
	Obl. (%)	100	—	100	—	—	—
Period 2	<i>n</i> =	3	0	3	2	0	2
(1400–1450)	Nom. (%)	0	—	0	50	—	50
	Obl. (%)	100	—	100	50	—	50
Period 3	<i>n</i> =	0	0	0	1	0	1
(1450–1500)	Nom. (%)	—	—	—	100	—	100
	Obl. (%)	—	—	—	0	—	0
Period 4	<i>n</i> =	1	0	1	0	0	0
(1500–1550)	Nom. (%)	100	—	100	—	—	—
	Obl. (%)	0	—	0	—	—	—
Period 5	<i>n</i> =	0	0	0	2	0	2
(1550–1600)	Nom. (%)	—	—	—	100	—	100
	Obl. (%)	—	—	—	0	—	0
Period 6	<i>n</i> =	2	4	2	3	1	3
(1600–1650)	Nom. (%)	50	25	50	100	0	100
	Obl. (%)	50	75	50	0	100	0
Period 7	<i>n</i> =	11	5	11	0	1	0
(1650–1700)	Nom. (%)	91	20	91	—	0	—
	Obl. (%)	9	80	9	—	100	—
Period 8	<i>n</i> =	0	2	0	11	0	11
(1700–1750)	Nom. (%)	—	0	—	45	—	45
	Obl. (%)	—	100	—	55	—	55
Period 9	<i>n</i> =	6	0	6	2	0	2
(1750–1800)	Nom. (%)	33	—	33	50	—	50
	Obl. (%)	67	—	67	50	—	50
Period 10	<i>n</i> =	8	0	8	17	0	17
(1800–1850)	Nom. (%)	38	—	38	59	—	59
	Obl. (%)	63	—	63	41	—	41
Period 11	<i>n</i> =	9	1	8	7	0	7
(1850–1900)	Nom. (%)	67	100	63	29	—	29
	Obl. (%)	33	0	38	71	—	71

Table 7.44a. *Tropfen*: Distribution of *-e/ø* and *-(e)n* in the singular (all periods; all four cases)

	<i>Tropfen</i> (all)	<i>Tropf</i> 'idiot'	<i>Tropfen</i> 'drop'
<i>n</i> =	57	14	43
<i>-e/ø</i> (%)	30	93	9
<i>-(e)n</i> (%)	70	7	91

Table 7.45a. *Tropfen*: Distribution of *-e/ø* and *-(e)n* in the singular, by period (all four cases)

		<i>Tropfen</i> (all)	<i>Tropfen</i> 'idiot'	<i>Tropfen</i> 'drop'
Period 1 (1350–1400)	<i>n</i> =	5	0	5
	Nom. Sg. (%)	0	—	0
	<i>-e/ø</i> (%)	40	—	40
	<i>-(e)n</i> (%)	60	—	60
Period 2 (1400–1450)	<i>n</i> =	3	0	3
	Nom. Sg. (%)	0	—	0
	<i>-(e)n</i> (%)	100	—	100
Period 4 (1500–1550)	<i>n</i> =	1	0	1
	Nom. Sg. (%)	100	—	100
	<i>-e/ø</i> (%)	100	—	100
Period 6 (1600–1650)	<i>n</i> =	6	2	4
	Nom. Sg. (%)	33	50	25
	<i>-e/ø</i> (%)	33	100	0
	<i>-(e)n</i> (%)	67	0	100
Period 7 (1650–1700)	<i>n</i> =	16	11	5
	Nom. Sg. (%)	69	91	20
	<i>-e/ø</i> (%)	63	91	0
	<i>-(e)n</i> (%)	38	9	100
Period 8 (1700–1750)	<i>n</i> =	2	0	2
	Nom. Sg. (%)	0	—	0
	<i>-(e)n</i> (%)	100	—	100
Period 9 (1750–1800)	<i>n</i> =	6	0	6
	Nom. Sg. (%)	33	—	33
	<i>-e/ø</i> (%)	17	—	17
	<i>-(e)n</i> (%)	83	—	83
Period 10 (1800–1850)	<i>n</i> =	8	0	8
	Nom. Sg. (%)	38	—	38
	<i>-(e)n</i> (%)	100	—	100
Period 11 (1850–1900)	<i>n</i> =	9	1	8
	Nom. Sg. (%)	67	100	63
	<i>-e/ø</i> (%)	11	100	0
	<i>-(e)n</i> (%)	89	0	100

Note: There are no tokens in Periods 3 and 5.

[Table 7.46a is on the next page.]

Table 7.47a. *Tropfen*: Distribution of *-e* and *-ø* in the singular, by period (all four cases)

		<i>Tropfen</i> (all)	<i>Tropfen</i> 'idiot'	<i>Tropfen</i> 'drop'
Period 1 (1350–1400)	<i>n</i> =	2	0	2
	<i>-e</i> (%)	100	—	100
Period 4 (1500–1550)	<i>n</i> =	1	0	1
	<i>-ø</i> (%)	100	—	100
Period 6 (1600–1650)	<i>n</i> =	2	2	0
	<i>-ø</i> (%)	100	100	—
Period 7 (1650–1700)	<i>n</i> =	10	10	0
	<i>-ø</i> (%)	100	100	—
Period 9 (1750–1800)	<i>n</i> =	1	0	1
	<i>-e</i> (%)	100	—	100
Period 11 (1850–1900)	<i>n</i> =	1	1	0
	<i>-ø</i> (%)	100	100	—

Note: There are no tokens in Periods 2, 3, 5, 8, and 10.

Table 7.46a. *Tropfen*: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Tropfen</i> (all)	<i>Tropfen</i> 'idiot'	<i>Tropfen</i> 'drop'
<i>n</i> =	17	13	4
<i>-e</i> (%)	18	0	50
<i>-ø</i> (%)	82	100	50

**Group 4 (Chapter 8)**

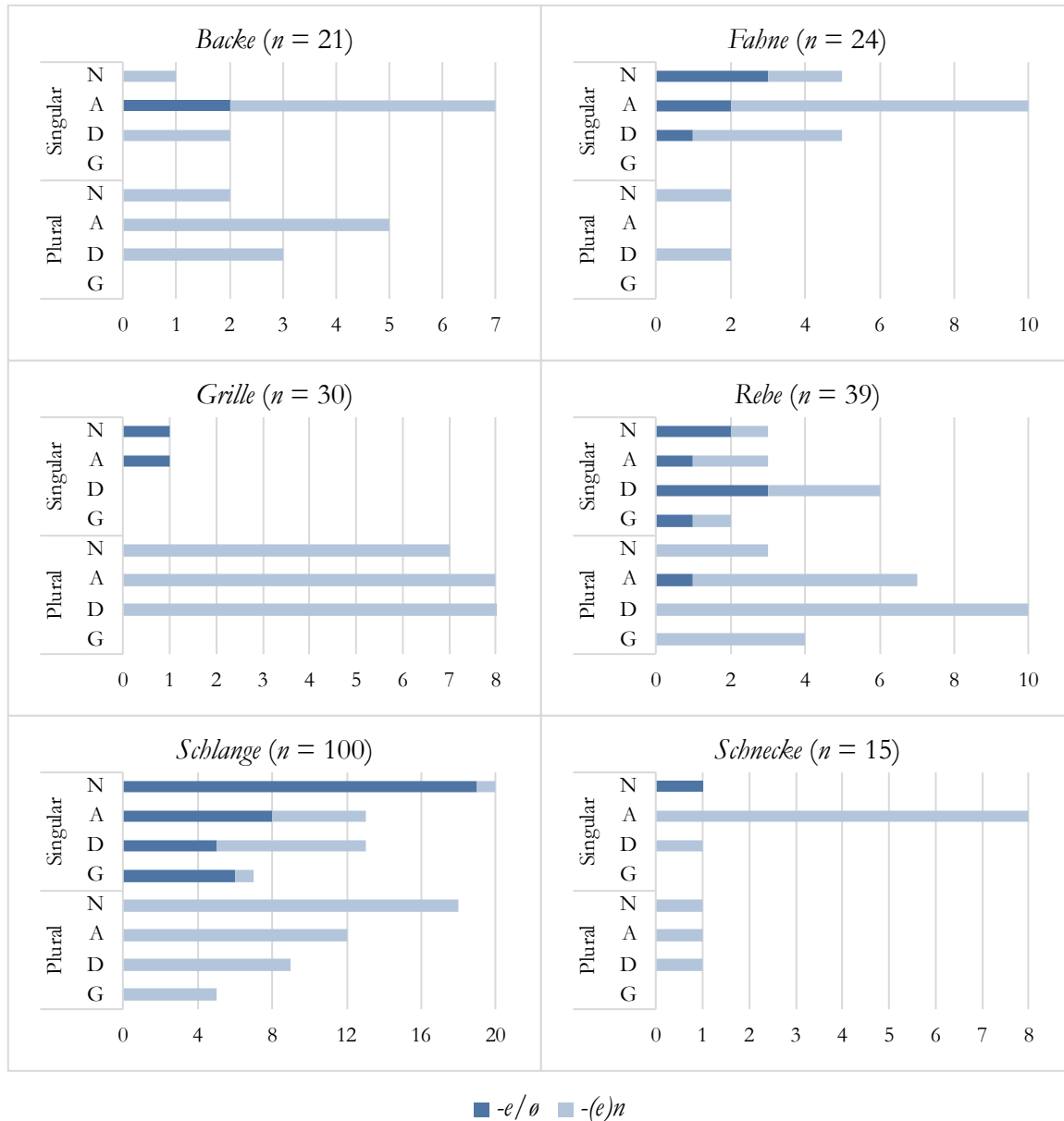


Figure 9.1. Group 4: Total frequency of each noun, by form (all periods; prose and verse). The colors indicate the distribution of inflectional marker values (*-e/ø*, *-(e)n*) in each form.

Table 8.1a. Group 4: Number distribution (all periods; all four cases)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>		
<i>n</i> =	21	24	30	39	100	15	Mean	SD
Sg. (%)	48	83	7	36	53	67	49	24
Pl. (%)	52	17	93	62	47	27	50	25
? (%)	0	0	0	0	0	7	1	2

Table 8.2a. Group 4: Number distribution, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1 (1350–1400)	<i>n</i> =	0	1	0	6	6	0
	Singular (%)	—	100	—	83	33	—
	Plural (%)	—	0	—	17	67	—
Period 2 (1400–1450)	<i>n</i> =	2	2	0	12	8	2
	Singular (%)	100	100	—	25	13	50
	Plural (%)	0	0	—	75	88	50
Period 3 (1450–1500)	<i>n</i> =	2	0	0	10	26	0
	Singular (%)	50	—	—	50	62	—
	Plural (%)	50	—	—	40	38	—
	? (%)	0	—	—	10	0	—
Period 4 (1500–1550)	<i>n</i> =	0	1	0	0	1	0
	Singular (%)	—	100	—	—	0	—
	Plural (%)	—	0	—	—	100	—
Period 5 (1550–1600)	<i>n</i> =	0	9	1	2	8	1
	Singular (%)	—	100	0	0	13	0
	Plural (%)	—	0	100	100	88	0
	? (%)	—	0	0	0	0	100
Period 6 (1600–1650)	<i>n</i> =	1	7	0	0	9	10
	Singular (%)	0	57	—	—	44	90
	Plural (%)	100	43	—	—	56	10
Period 7 (1650–1700)	<i>n</i> =	4	1	19	1	6	2
	Singular (%)	75	100	0	0	83	0
	? (%)	25	0	100	100	17	100
Period 8 (1700–1750)	<i>n</i> =	4	1	0	2	21	0
	Singular (%)	50	0	—	0	52	—
	Plural (%)	50	100	—	100	48	—
Period 9 (1750–1800)	<i>n</i> =	3	1	5	4	4	0
	Singular (%)	0	100	20	0	75	—
	Plural (%)	100	0	80	100	25	—
Period 10 (1800–1850)	<i>n</i> =	2	0	4	1	1	0
	Singular (%)	0	—	25	0	100	—
	Plural (%)	100	—	75	100	0	—
Period 11 (1850–1900)	<i>n</i> =	3	1	1	1	10	0
	Singular (%)	67	100	0	100	90	—
	Plural (%)	33	0	100	0	10	—

Table 8.3a. Group 4: Case distribution in the singular (all periods)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>		
<i>n</i> =	10	20	2	14	53	10	Mean	SD
N (%)	10	25	50	21	38	10	26	14
A (%)	70	50	50	21	25	80	49	21
D (%)	20	25	0	43	25	10	20	13
G (%)	0	0	0	14	13	0	5	6

Table 8.4a. Group 4: Case distribution in the singular, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	0	1	0	5	2	0
(1350–1400)	Nom. (%)	—	100	—	0	50	—
	Obl. (%)	—	0	—	100	50	—
Period 2	<i>n</i> =	2	2	0	3	1	1
(1400–1450)	Nom. (%)	0	0	—	33	0	100
	Obl. (%)	100	100	—	67	100	0
Period 3	<i>n</i> =	1	0	0	5	16	0
(1450–1500)	Nom. (%)	0	—	—	40	50	—
	Obl. (%)	100	—	—	60	50	—
Period 4	<i>n</i> =	0	1	0	0	0	0
(1500–1550)	Nom. (%)	—	100	—	—	—	—
	Obl. (%)	—	0	—	—	—	—
Period 5	<i>n</i> =	0	9	0	0	1	0
(1550–1600)	Nom. (%)	—	22	—	—	0	—
	Obl. (%)	—	78	—	—	100	—
Period 6	<i>n</i> =	0	4	0	0	4	9
(1600–1650)	Nom. (%)	—	25	—	—	25	0
	Obl. (%)	—	75	—	—	75	100
Period 7	<i>n</i> =	3	1	0	0	5	0
(1650–1700)	Nom. (%)	0	0	—	—	60	—
	Obl. (%)	100	100	—	—	40	—
Period 8	<i>n</i> =	2	0	0	0	11	0
(1700–1750)	Nom. (%)	50	—	—	—	18	—
	Obl. (%)	50	—	—	—	82	—
Period 9	<i>n</i> =	0	1	1	0	3	0
(1750–1800)	Nom. (%)	—	0	100	—	0	0
	Obl. (%)	—	100	0	—	100	0
Period 10	<i>n</i> =	0	0	1	0	1	0
(1800–1850)	Nom. (%)	—	—	0	—	100	—
	Obl. (%)	—	—	100	—	0	—
Period 11	<i>n</i> =	2	1	0	1	9	0
(1850–1900)	Nom. (%)	0	0	—	0	44	—
	Obl. (%)	100	100	—	100	56	—

Table 8.5a. Group 4: Case distribution in the plural (all periods)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>		
<i>n</i> =	11	4	28	24	47	4	Mean	SD
N (%)	18	50	25	13	38	25	28	13
A (%)	45	0	29	29	26	25	26	13
D (%)	27	50	32	42	19	25	33	10
G (%)	0	0	0	17	11	0	5	7
? (%)	9	0	14	0	6	25	9	9

Table 8.6a. Group 4: Case distribution in the plural, by period

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	0	0	0	1	4	0
(1350–1400)	Nom. (%)	—	—	—	0	25	—
	Obl. (%)	—	—	—	100	50	—
	?	—	—	—	0	25	—
Period 2	<i>n</i> =	0	0	0	9	7	1
(1400–1450)	Nom. (%)	—	—	—	11	29	0
	Obl. (%)	—	—	—	89	57	100
	?	—	—	—	0	14	0
Period 3	<i>n</i> =	1	0	0	4	10	0
(1450–1500)	Nom. (%)	100	—	—	0	0	—
	Obl. (%)	0	—	—	100	90	—
	?	0	—	—	0	10	—
Period 4	<i>n</i> =	0	0	0	0	1	0
(1500–1550)	Nom. (%)	—	—	—	—	0	—
	Obl. (%)	—	—	—	—	100	—
Period 5	<i>n</i> =	0	0	1	2	7	0
(1550–1600)	Nom. (%)	—	—	100	50	71	—
	Obl. (%)	—	—	0	50	29	—
Period 6	<i>n</i> =	1	3	0	0	5	1
(1600–1650)	Nom. (%)	0	67	—	—	60	0
	Obl. (%)	100	33	—	—	40	0
	?	0	0	—	—	0	100
Period 7	<i>n</i> =	1	0	19	1	1	2
(1650–1700)	Nom. (%)	0	—	16	0	100	50
	Obl. (%)	100	—	79	100	0	50
	?	0	—	5	0	0	0
Period 8	<i>n</i> =	2	1	0	2	10	0
(1700–1750)	Nom. (%)	50	0	—	50	50	—
	Obl. (%)	50	100	—	50	50	—
Period 9	<i>n</i> =	3	0	4	4	1	0
(1750–1800)	Nom. (%)	0	—	0	0	100	—
	Obl. (%)	100	—	100	100	0	—
Period 10	<i>n</i> =	2	0	3	1	0	0
(1800–1850)	Nom. (%)	0	—	100	0	—	—
	Obl. (%)	100	—	0	100	—	—
Period 11	<i>n</i> =	1	0	1	0	1	0
(1850–1900)	Nom. (%)	0	—	0	—	0	—
	Obl. (%)	100	—	100	—	100	—

Table 8.7a. Group 4: Gender distribution (all periods; all four cases; singular and plural)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<i>n</i> =	21	24	30	39	100	15		
m. (%)	29	54	0	18	7	60	28	22
f. (%)	10	8	7	15	38	0	13	12
n. (%)	0	4	0	0	0	0	1	2
? (%)	62	33	93	67	55	40	58	19



Table 8.8a. Group 4: Gender distribution, by period (all four cases; singular and plural)

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	<i>n</i> =	0	1	0	6	6	0
(1350–1400)	m. (%)	—	100	—	0	33	—
	f. (%)	—	0	—	83	0	—
	? (%)	—	0	—	17	67	—
Period 2	<i>n</i> =	2	2	0	12	8	2
(1400–1450)	m. (%)	50	50	—	25	0	0
	f. (%)	0	0	—	0	13	0
	? (%)	50	50	—	75	88	100
Period 3	<i>n</i> =	2	0	0	10	26	0
(1450–1500)	m. (%)	50	—	—	40	19	—
	f. (%)	0	—	—	0	23	—
	? (%)	50	—	—	60	58	—
Period 4	<i>n</i> =	0	1	0	0	1	0
(1500–1550)	n. (%)	—	100	—	—	0	—
	? (%)	—	0	—	—	100	—
Period 5	<i>n</i> =	0	9	1	2	8	1
(1550–1600)	m. (%)	—	67	0	0	0	0
	f. (%)	—	0	0	0	13	0
	? (%)	—	33	100	100	88	100
Period 6	<i>n</i> =	1	7	0	0	9	10
(1600–1650)	m. (%)	0	57	—	—	0	90
	f. (%)	0	0	—	—	44	0
	? (%)	100	43	—	—	56	10
Period 7	<i>n</i> =	4	1	19	1	6	2
(1650–1700)	m. (%)	75	100	0	0	0	0
	f. (%)	0	0	0	0	33	0
	? (%)	25	0	100	100	67	100
Period 8	<i>n</i> =	4	1	0	2	21	0
(1700–1750)	m. (%)	25	0	—	0	0	—
	f. (%)	0	0	—	0	52	—
	? (%)	75	100	—	100	48	—
Period 9	<i>n</i> =	3	1	5	4	4	0
(1750–1800)	f. (%)	0	100	20	0	75	—
	? (%)	100	0	80	100	25	—
Period 10	<i>n</i> =	2	0	4	1	1	0
(1800–1850)	f. (%)	0	—	25	0	100	—
	? (%)	100	—	75	100	0	—
Period 11	<i>n</i> =	3	1	1	1	10	0
(1850–1900)	f. (%)	67	100	0	100	90	—
	? (%)	33	0	100	0	10	—

[Tables 8.9a and 8.10a are on the next page, and table 8.11a is on page 311.]

Table 8.12a. Group 4: Distribution of non-weak (innovative) tokens (all periods)

Noun	N. Sg. in <i>-(e)n</i> ( <i>n</i> )	Obl. Sg. in <i>-e/ø</i> ( <i>n</i> )	Pl. in <i>-ø</i> ( <i>n</i> )	Total non-weak ( <i>n</i> )	Non-weak (%)	Total tokens ( <i>n</i> )
<i>Backe</i>	1	2	0	3	16	19
<i>Fahne</i>	2	3	0	5	21	24
<i>Grille</i>	0	1	0	1	3	30
<i>Rebe</i>	1	5	1	7	18	39
<i>Schlange</i>	1	19	0	20	20	100
<i>Schnecke</i>	0	0	0	0	0	15

Table 8.9a. Group 4: Distribution of *-e/ø* and *-(e)n* (all periods; all four cases)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<b>Sg., n =</b>	10	20	2	14	53	10		
<i>-e/ø</i> (%)	20	30	100	50	72	10	47	31
<i>-(e)n</i> (%)	80	70	0	50	28	90	53	31
<b>Pl., n =</b>	11	4	28	24	47	4		
<i>-e/ø</i> (%)	0	0	0	4	0	0	1	2
<i>-(e)n</i> (%)	100	100	100	96	100	100	99	2
<b>All, n =</b>	21	24	30	39	100	15		
<i>-e/ø</i> (%)	10	25	7	21	38	7	18	11
<i>-(e)n</i> (%)	90	75	93	79	62	93	82	11

Table 8.10a. Group 4: Nominative singular versus *-e/ø* as a percentage of all tokens (all periods)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<b>n =</b>	21	24	30	39	100	15		
N. Sg. (%)	5	21	3	8	20	100	26	34
<i>-e/ø</i> (%)	10	25	7	21	38	7	18	11

Table 8.13a. Group 4: Distribution of *-e* and *-ø* in the singular (all periods; all four cases)

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>	Mean	SD
<b>n =</b>	2	6	2	7	38	1		
<i>-e</i> (%)	100	33	100	14	71	0	53	40
<i>-ø</i> (%)	0	67	0	86	29	100	47	40

Table 8.14a. Group 4: Distribution of *-e* and *-ø* in the singular, by period

	<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1 (1350–1400)	<i>n</i> = 0	1	0	4	1	0
	<i>-e</i> (%)	—	0	—	100	—
	<i>-ø</i> (%)	—	100	—	0	—
Period 2 (1400–1450)	<i>n</i> = 0	1	0	1	0	1
	<i>-ø</i> (%)	—	100	—	100	100
Period 3 (1450–1500)	<i>n</i> = 0	0	0	1	8	0
	<i>-ø</i> (%)	—	—	—	100	—
Period 4 (1500–1550)	<i>n</i> = 0	1	0	0	0	0
	<i>-ø</i> (%)	—	100	—	—	—
Period 6 (1600–1650)	<i>n</i> = 0	1	0	0	2	0
	<i>-e</i> (%)	—	0	—	—	50
	<i>-ø</i> (%)	—	100	—	—	50
Period 7 (1650–1700)	<i>n</i> = 0	0	0	0	3	0
	<i>-e</i> (%)	—	—	—	—	33
	<i>-ø</i> (%)	—	—	—	—	67
Period 8 (1700–1750)	<i>n</i> = 0	0	0	0	11	0
	<i>-e</i> (%)	—	—	—	—	100
Period 9 (1750–1800)	<i>n</i> = 0	1	1	0	3	0
	<i>-e</i> (%)	—	100	100	—	100
Period 10 (1800–1850)	<i>n</i> = 0	0	1	0	1	0
	<i>-e</i> (%)	—	—	100	—	100
Period 11 (1850–1900)	<i>n</i> = 2	1	0	1	9	0
	<i>-e</i> (%)	100	100	—	100	100

Note: There are no tokens in Period 5.

Table 8.11a. Group 4: Distribution of  $-e/\emptyset$  and  $-(e)n$  in the singular, by period (all four cases)

		<i>Backe</i>	<i>Fahne</i>	<i>Grille</i>	<i>Rebe</i>	<i>Schlange</i>	<i>Schnecke</i>
Period 1	$n =$	0	1	0	5	2	0
(1350–1400)	Nom. Sg. (%)	—	100	—	0	50	—
	$-e/\emptyset$ (%)	—	100	—	80	50	—
	$-(e)n$ (%)	—	0	—	20	50	—
Period 2	$n =$	2	2	0	3	1	1
(1400–1450)	Nom. Sg. (%)	0	0	—	33	0	100
	$-e/\emptyset$ (%)	0	50	—	33	0	100
	$-(e)n$ (%)	100	50	—	67	100	0
Period 3	$n =$	1	0	0	5	16	0
(1450–1500)	Nom. Sg. (%)	0	—	—	40	50	—
	$-e/\emptyset$ (%)	0	—	—	20	50	—
	$-(e)n$ (%)	100	—	—	80	50	—
Period 4	$n =$	0	1	0	0	0	0
(1500–1550)	Nom. Sg. (%)	—	100	—	—	—	—
	$-e/\emptyset$ (%)	—	100	—	—	—	—
Period 5	$n =$	0	9	0	0	1	0
(1550–1600)	Nom. Sg. (%)	—	22	—	—	0	—
	$-(e)n$ (%)	—	100	—	—	100	—
Period 6	$n =$	0	4	0	0	4	9
(1600–1650)	Nom. Sg. (%)	—	25	—	—	25	0
	$-e/\emptyset$ (%)	—	25	—	—	50	0
	$-(e)n$ (%)	—	75	—	—	50	100
Period 7	$n =$	3	1	0	0	5	0
(1650–1700)	Nom. Sg. (%)	0	0	—	—	60	—
	$-e/\emptyset$ (%)	0	0	—	—	60	—
	$-(e)n$ (%)	100	100	—	—	40	—
Period 8	$n =$	2	0	0	0	11	0
(1700–1750)	Nom. Sg. (%)	50	—	—	—	18	—
	$-e/\emptyset$ (%)	0	—	—	—	100	—
	$-(e)n$ (%)	100	—	—	—	0	—
Period 9	$n =$	0	1	1	0	3	0
(1750–1800)	Nom. Sg. (%)	—	40	100	—	50	100
	$-e/\emptyset$ (%)	—	100	100	—	100	100
Period 10	$n =$	0	0	1	0	1	0
(1800–1850)	Nom. Sg. (%)	—	—	71	—	50	—
	$-e/\emptyset$ (%)	—	—	100	—	100	—
Period 11	$n =$	2	1	0	1	9	0
(1850–1900)	Nom. Sg. (%)	0	47	—	43	58	—
	$-e/\emptyset$ (%)	100	100	—	100	100	—