

The impact of nominal anglicisms on the morphology of modern spoken German

Jaime Hunt

BA (Hons) German, MApp Ling (TESOL)
University of Newcastle, Australia

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School of Humanities and Social Science at the University of Newcastle, Australia.

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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Abbreviations

ADJ = adjective

ADSV = *Allgemeiner Deutscher Sprachverein* ‘General German Language Society’

dem. = demonstrative

DH = *Deutsch Heute* ‘German Today’ (corpus)

f / fem. = feminine

gen. = genitive case

LCE = Lexical Conceptual Equivalent

LMP = Last Member Principle

m / masc. = masculine

m-rule = morphological rule

n / neut. = neuter

N = noun

neg. art. = negative article

NGP = natural Gender Principle

NP = noun phrase

pl. = plural

poss. pro. = possessive pronoun

p-rule = phonological rule

RR = Rightmost Rule

RVGI = Regional Variants of German 1 (corpus)

sc-rule = subcategorisation rule

SDS = *Stiftung Deutsche Sprache* ‘German Language Foundation’

s-rule = semantic rule

V = verb

VDS = *Verein Deutsche Sprache* ‘German Language Society’

Abstract

This is a project in the field of language contact and evaluates the influence of English on the German language. To my knowledge, it is the first study to investigate the integration of anglicisms into spontaneous spoken German. The purpose of the research is twofold. On the one hand, it aims to contribute to the understanding of the mechanisms for gender and plurality marking. On the other hand, by examining whether anglicisms conform to the patterns of German grammar or, conversely, exert an influence on German grammar, the study addresses the central language-identity nexus in sociolinguistics. In other words, the overarching question guiding the present investigation is whether English is exerting a significant influence on German.

Chapter 1. Anglicisms: Definition and background

1.1 Thesis outline and statement of purpose

From the first known borrowings in the early Middle Ages to the present day, the influence that English has on German has been the subject of much research and debate. English loans (in any language) are known as anglicisms, a term which has seldom had an agreed upon definition in the literature on English-German language contact. Most research on anglicisms in German centres on those appearing either in the printed media (Burmasova 2010; Götzeler 2008; Langer 1996; Onysko 2007; Plümer 2000; K. Viereck 1980; Yang 1990) or in dictionaries (Busse 1993; Chan 2005). These studies examine the following three key areas:

1. The history of English-German language contact and the number of anglicisms in German today;
2. The domains in which anglicisms occur; and
3. The integration of anglicisms into German morphological, graphemic and phonological systems.

The present study adds to this body of research by examining nominal anglicisms in spoken German. More specifically, the aim of the thesis is to explore whether the marking of gender and plurality on anglicisms conforms to the patterns observed for the native German lexicon. Doing so will help to evaluate how significant an impact the English language has on German. I shall attempt to demonstrate that English does not have a significant effect on German, particularly on the spoken form. The focus is on spoken language because this indicates the deepest level of penetration of English. Many anglicisms are found in advertising and the print media that do not necessarily reflect the use of language in common spoken German.

Evidence from my data set of nominal anglicisms derived from spontaneous spoken German suggests that the number of anglicism types is small. However, the number of tokens may give the impression that there are many more anglicisms in German than there actually are. That is, there may be many tokens, but only few types of anglicisms. The anglicisms that I include in my data set are direct borrowings and pseudo-loans only, in other words, the nouns most likely to be recognised as being foreign. These anglicisms follow the patterns of gender and pluralisation in the native lexicon without making any significant changes to it.

Because grammatical gender has no single clearly dominant paradigm in German, it provides a promising area to examine for the effects of anglicisms. I propose a simpler system of predicting the gender of anglicisms as a response to the complicated and at times idiosyncratic rules offered in the research literature thus far. This system involves three groups: morphologically complex nouns, nouns with pseudo-suffixes¹ and simplex nouns. The morphologically complex nominal anglicisms follow the gender patterns apparent in the general lexicon. Anglicisms with pseudo-suffixes tend to behave as if they were also morphologically complex. The simplex anglicisms present a more complicated case. If a simplex anglicism has a human referent or a higher animate referent, its gender matches that of the referent. The simplex nouns with inanimate referents are an issue. There is no clear principle to account for the gender of inanimate simplex anglicisms except for the principle of lexical-conceptual equivalence, in particular, the existence of multiple lexical-conceptual equivalents of the same gender. However, what constitutes an equivalent is still unclear as there is no suitable theory of synonymy regarding this. If the gender of an anglicism is not straightforward, i.e. if not based on suffixation or pseudo-suffixation, it is most likely synonymy that determines its gender.

¹ Augst (1979) coined the term *pseudo-suffix* to describe the non-segmentable, non-derivational word-final sequences *-en*, *-er*, *-el* and *-e* that occur on nouns.

Plurality is also a promising domain to examine for the effects of anglicisms in German because it too lacks a clearly dominant paradigm. As the present study shows, English has a minimal effect on pluralisation in German. The -s plural marker, occurring with the majority of, but not all, nominal anglicisms in German is part of the native pluralisation process. A defined group of nouns including onomatopoeia, people's names and abbreviations take -s as a plural allomorph. Most anglicisms, treated as loanwords, appear within this category. Any increase in the number of anglicisms in German expands this category. However, the increase overall is still small.

Based on the findings here, future research such as on the gender of neologisms (not just anglicisms) and their pluralisation, specifically of simplex nouns, would provide a clearer picture on the processes of gender assignment and pluralisation. Research on Russian borrowings, for example, as they occurred in former East Germany, or French loans in boarder areas with France in the west could shed more light on gender assignment by investigating whether the loans from these languages retained their gender upon entering German.

The remainder of Chapter 1 discusses the historical and theoretical framework for this study. It shows that the English language has been affecting German for centuries, but never as intensively as in the past 60 years. Authors such as Betz (1936, 1944, 1959) have provided frameworks for classifying anglicisms in German. However, in this study, I adopt the clearer and simpler terminology utilised by Carstensen and Busse (2001) and Görlach (1994, 2005). This means I analyse only direct loans and pseudo-loans and ignore what other authors may consider as anglicisms, such as loan translations. Anglicisms appear mostly in technical

language and domains related to leisure. Most become integrated both into the German morphological and phonological systems, so much so that over time they are no longer recognisable as having a foreign origin.

Chapter 2 discusses the sociolinguistic background i.e. the attitude to foreign words, and specifically anglicisms, that are expressed by public figures and the general public. It examines the factors leading to language purism in Germany amongst certain individuals or groups and provides a summary of various estimates on the number of anglicisms present in German. The major concerns of modern language critics are also addressed.

Chapter 3 introduces my data set of nominal anglicisms for the present study and describes the method of its creation from corpora of spontaneous spoken German made available from the *Bayerisches Archiv für Sprachsignale* ('Bavarian Archive for Speech Signals') and the *Institut für Deutsche Sprache* ('Institute for German language').

Chapter 4 gives a brief description of gender marking in German. It details various approaches and studies on the gender of nouns in German based on morphology, phonology and semantics. It also investigates proposed hypotheses relating to the gender of native nouns and nominal anglicisms.

Chapter 5 shows the results from the analysis of the anglicisms marked for gender in my data set and compares these with the studies discussed in Chapter 4. Of particular significance are the comparisons with the findings of research that has investigated the gender of anglicisms as they appear in the German print media and on television. Morphological complexity, the presence of pseudo-suffixes and the existence of multiple lexical-conceptual equivalents

sharing the same gender are shown to play a part in how German speakers determine the gender of nominal anglicisms.

Chapter 6 first describes plurality in German and proceeds to discuss various theoretical approaches to the pluralisation of native nouns and loanwords. Two perspectives, a schema model and a Dual-Mechanism model, are detailed, along with approaches explaining the occurrences of the -s plural allomorph.

Chapter 7 presents the plural anglicisms in my data set and compares the patterns of pluralisation with the findings from other studies on anglicisms and the German lexicon as a whole. In addition, the chapter discusses the role of the plural marker -s both on anglicisms and on the German lexicon from various standpoints.

Chapter 8 summarises the findings presented in this thesis and relates them back to the question of whether English is a threat to the German language.

1.2 Anglicisms in German

The term *anglicism* in the context of German has both narrow and wide definitions. In the narrow sense, *anglicism* refers to all English words or phrases that appear in German, whereas in the wide sense it refers to German words and phrases modelled on English expressions as well (Busse 1993; Langer 1996; Stickel 1984). Although the term initially applied to words coined specifically within the United Kingdom, nowadays *anglicism* refers

to the influence from any dialect of English, regardless of which English-speaking country a particular term or phrase comes from.²

Anglicisms have been categorised in various ways. The most popular divisions draw on Betz (1936, 1944, 1959), who developed a taxonomy to describe loans in Old High German. Since then, several authors (Barbour & Stevenson 1990; Busse & Görlach 2002; Carstensen 1965; Clyne 1984; Glahn 2002; Haugen 1950; W. Viereck 1980; Weinreich 1964; Yang 1990) have adapted some or all of Betz's terms and applied them to describe the modern influence of English on German. As a result, each author has his or her own definitions and categories. Among the classifications of the researchers mentioned above, Carstensen and Busse's (2001) seems superior because of its simplicity in comparison to the previously-offered taxonomies. They propose the following categories:

1. Direct loans (*aus engl. x* 'from English *x*'), where *x* is an English sign that is taken on in German, e.g. *Job* from the English *job*;
2. Indirect loans (*nach engl. x* 'after (the model of) *x*'), where the English model *x* is reproduced using German elements and is no longer recognisable as English, e.g. *Erste Dame* from the English *First Lady*; and
3. Pseudo-loans³ (*zu engl. x* '(related) to English *x*'), where *x* is an English sign that is recognisable as the starting point of the borrowing, but is morphologically or semantically changed in German, e.g. *Twen* from the English *twenty* for someone in their twenties (Carstensen & Busse 2001:59).

² For discussion of the varied sources of the anglicisms *cogeneration/co-generation*, *snowmobile*, *kiwi* and *quality of life*, see Galinsky (1991).

³ *Pseudo-loans*, when referring to English, may also be called *pseudo-anglicisms*, or more colloquially *pseudo-English*.

Here, there are only three categories and there are no vague subclasses to complicate the discussion of whether a lexical item is an anglicism. Indirect loans, such as loan translations or semantic loans (where a native term takes on an English meaning) are not always recognisable to the average German speaker as loans. Only if they are identified by German speakers as loans can this affect their morphological marking, that is, in accordance with the rules for such loans. In addition, it is often too difficult to determine the etymology of some terms traditionally classified as indirect loans. Therefore, indirect loans are outside the scope of the present investigation.

Carstensen and Busse acknowledge that the category of direct loans has fuzzy boundaries, especially when describing terms such as *Dressman* ‘male fashion model’.⁴ At first glance, this seems to fit into the category of direct loans. The root morphemes *dress* and *man* do indeed appear in English, but there is no compound word *dressman* in English. Therefore, technically, words such as *Dressman* should fall into the category of pseudo-loans. Whatever the case may be, it is clear that direct loans and pseudo-loans are the two categories comprised of words that are most clearly recognisable as having an English origin. Since which of these two categories a nominal anglicism belongs to is inconsequential to the analysis of the noun’s gender or pluralisation, no distinction is made between direct loans and pseudo-loans for the purpose of the present study. In other words, I adopt Görlach’s definition of an anglicism:

An anglicism is a word or idiom that is recognizably English in its form (spelling, pronunciation, morphology, or at least one of the three), but is accepted as an item in the vocabulary of the receptor language (Görlach 1994:224).

⁴ All translations in this thesis are my own, unless otherwise stated.

The aim of the present research is to analyse the gender assignment and pluralisation patterns on forms in spontaneous spoken German that are recognisably English loans. Hence, the nominal anglicisms must be free from any native word material that may influence assignment of these grammatical categories.

1.3 English-German language contact

Throughout the modern era, the rise of Britain as a world power has been one of the main reasons for the number of anglicisms appearing in German. More recently, as the United States has been arguably the world's dominant country financially and culturally since the end of World War II, it is only logical that German borrows so many terms from the main language of that country. In this section, I will briefly discuss some of the reasons why German borrows English vocabulary.

Firstly, English exerts a certain level of prestige amongst German speakers (Barbour & Stevenson 1990). According to Dixon (1997), the prestige of the donor language's culture is the main reason why any language borrows from another. Because of the prestige associated with the Anglo-American culture, anglicisms are stylistically attractive in German. Using anglicisms in German gives the speaker an air of sophistication, worldliness, education and modernity (Barbe 2004; Clyne 1995; Schäfer 2002; Steffens 2003; Yang 1990). Anglicisms also provide the user with a certain amount of linguistic swagger (Hoberg 2006). Additionally, the use of anglicisms may also tighten the sense of cohesion with a particular social group (Steffens 2003). Onysko (2004:62) exemplifies this point with some of the vocabulary exclusive to snowboarders to indicate a sense of inclusiveness: *Nose* 'front end of a snowboard', *Grab* 'a trick where the snowboarder grabs the board', *Powder* 'fine snow',

Racer ‘snowboard specially designed for racing’, *Kicker* ‘small ski-jumping hill’ and *Freerider* ‘someone who participates in “extreme snowboarding”’.

Various authors (Barbe 2004; Clyne 1995; Langer 1996; Schäfer 2002) list three further reasons for using anglicisms in German, which include the addition of local colour, linguistic economy or brevity, and variation of expression. Adding local colour is one of the most obvious functions of anglicisms. Plümer (2000:259) defines this as using the names of either institutions within an English-speaking country (e.g. *College*, *Buckingham Palace*), cultural characteristics (e.g. *the Queen*) or political phenomena particular to that speech community (e.g. *Welfare State*). Furthermore, she adds, when appearing in the written media, the use of such anglicisms provides a sense of the typical atmosphere of the country being reported on.

Precision and brevity are two other qualities of anglicisms that make their use attractive. This is particularly important in journalism, where the maximum effect using minimal text space is desirable. Often, English words (particularly nouns) are shorter than their German counterparts are. Using an anglicism in a written text might prove to be an economical choice particularly when a longer German word, or even explanation, would otherwise be needed. Langer (1996:78-79) illustrates this with the (somewhat exaggerated) example nouns in Table 1. His first three examples are translations of the anglicisms provided. However, the remaining examples in the Table are explanations of the anglicisms. They are not equivalents as such.

Anglicism	German equivalent
Crash	<i>Zusammenstoß</i>
Single	<i>Alleinstehende Person</i>
Airline	<i>Flugverkehrsgesellschaft</i>
Outplacement	<i>Entlassung einer Führungskraft unter gleichzeitiger Vermittlung an ein anderes Unternehmen</i>
Interview	<i>Befragung einer Person zu einer bestimmten Sache, die von einem Journalisten vorgenommen wird</i>

Table 1: Brevity of nominal anglicisms when compared to suggested German equivalents, adapted from Langer (1996:78-79)

A further reason why anglicisms often feature in German is that they add variety of expression. There is a consensus (Grote 2002; Onysko 2004; Plümer 2000; Schäfer 2002; Yang 1990) that anglicisms provide a great number of synonyms (or at least near-synonyms) to German words. This is especially important in the print media, as it is stylistically unfavourable to repeat certain terms or phrases a number of times. Yang (1990) provides various examples to illustrate that alternating between the German term and an anglicism provides variety whilst having the same referent. The first example, from issue 40 of the newsmagazine *Der Spiegel* from 1950, shows the alternation between *Baby* ‘baby’ and *Säugling* ‘baby’: “...in dem ein vier Wochen altes Baby lag. Die rechte Hüfte des Säuglings war...” ‘...in which a four-week old *baby* lay. The right hip of the *baby* was...’ (Yang 1990:127). The next example, from of the same magazine, this time from issue 23 from 1970, demonstrates the alternation between the native German noun *Mannschaft* ‘team’ and the anglicism *Team* ‘team’: “An die Stelle der altväterlichen Mannschaft ist das Team getreten” ‘The *team* took the old fatherly *team*’s place” (Yang 1990:127).

Dixon (1997) provides a further reason why anglicisms appear in German, or more generally, why one language borrows from another. He claims that whenever one culture (A) encounters another culture (B) and finds artefacts, customs and activities that it lacks and therefore adopts, culture A is likely to borrow their labels as well. This is also the case for Germany.

As the English-speaking world (mostly because of the United States) is seen as culturally and socially dominant, many new inventions and activities originating there are borrowed or adopted along with their English labels into German. Grote (2002) also suggests the speed at which this process occurs has an influence on the number of adopted lexical items. He claims that innovations happen so quickly that the German language does not have enough time to meet the needs of naming them using native word material.

When an anglicism is borrowed into German, its range of meanings is not always maintained. In some cases, a degree of semantic narrowing occurs. Barbour and Stevenson (1990:260) cite the anglicism *Shop* as an example. They claim that this anglicism does not have the same referent in German that it does in English. Instead, it has a much narrower meaning. They claim *Shop* refers to a small establishment that has for sale expensive luxurious items (e.g. high-end fashion). Here, they add that the English borrowing *Shop* in German fulfils a similar function as the French borrowing *boutique* does in English. Onysko (2007:53) provides a further example of semantic narrowing. He maintains that in German the anglicism *City* refers specifically to the centre of a city ('downtown') and not to a city as a whole.

The opposite of semantic narrowing, semantic extension, also occurs when certain anglicisms enter German. *Start* (Onysko 2007:53) and *Gangway* (Carstensen & Busse 2001:64) are two examples of this phenomenon, whereby anglicisms take on further meaning not associated with the original term in the source language. According to Onysko, *Start* in German has extended its meaning to include the take-off or departure of an aeroplane or rocket. In English, *Gangway* refers to the steps or stairway leading to a ship. The meaning of this term in German has extended to include also the steps or ramp leading to an aeroplane. Both of these examples show an extension to the original meaning. In some cases, the meanings are

still related. The meaning of some loanwords in German may be extended so much that they no longer exhibit any relation to the original English meaning. Barbour and Stevenson (1990:260) claim that the German meaning of the anglicism *Splitting* is unknown in English. In German, this term refers specifically to the division of the combined income of a married couple in order that the husband and wife each pay tax on half of that combined income. As the above examples demonstrate, the borrowing of certain terms from one language into another does not necessarily mean that the meanings these terms are polysemous with are borrowed too.⁵

As noted above, the main cause for the borrowing of anglicisms into German is the increase in global importance of Britain, then the United States. This influence has not always existed and it has not always been consistent. The following provides an overview of the different periods of influence that the English-speaking world has had on German.

Stiven (1936), Carstensen (1965), and Viereck (1980) are some of the principal sources on the discussion of English linguistic contact with German. Stiven provides an account of anglicisms of the earliest known instances while Carstensen and Viereck concentrate on the period after 1945. Most recent publications, such as Glahn (2002), Götzeler (2008) Onysko (2007) and Yang (1990), study anglicisms that have entered German since the end of World War II, the point after which English has had the most influence. These recent publications utilise the mass media as a main source of anglicisms to study.

Focussing on the written language, Onysko and Yang analyse the use of anglicisms in the popular newsmagazine *Der Spiegel*. Yang provides a diachronic analysis of anglicisms,

⁵ For examples of semantic narrowing or extension in other languages, see Winford (2003).

comparing sample issues from 1950 through to 1980. Onysko, on the other hand, provides a synchronic analysis of anglicisms from all the issues published in the year 2000. Götzeler compares the 1991, 2001 and 2004 editions from the two newspapers *Ostsee-Zeitung* and *Badische Zeitung* for differences between the use of anglicisms in the former German Democratic Republic and the Federal Republic of Germany. Glahn (2002) is the first to analyse both the scripted and spontaneous spoken language in television programs. Until that point, the research on anglicisms was predominately on the printed word.

The earliest English-German contact occurred because of the Anglo-Saxon missions in the German cities of Fulda and Mainz in the 8th century AD. The first known instances of linguistic influence of that time were *gotspell* from the Anglo-Saxon *gōdspell* ‘good news’ and *der heilago geist* ‘the holy spirit’ (Busse 2008; Hilgendorf 2007; Viereck 1986). According to Hilgendorf, the region around the city of Cologne was an important centre for English-German commercial and religious contact, and thus the place for language contact, from approximately 1000 to 1300 AD. After the economic decline of that region, English-German economic activity moved to cities within the Hanseatic League in the north of Germany. The trade that occurred during this period resulted in the borrowing of anglicisms related to this activity. These include *Boot* ‘boat’, *Lotse* ‘lodesman, pilot or steersman on a boat’ and *Dock* ‘dock’. Viereck (1986:107) states that these borrowings were first used in Low German, the language of the northern parts of Germany, and only later spread to High German.

Overall, the impact that English had on German until the mid 17th century was minimal. Hilgendorf (2007) estimates that up to 31 English terms entered German during this period. However, estimates vary widely, given a lack of agreement as to what constitutes an

anglicism. Some lists of anglicisms from the period include not only nonce words (Palmer 1960), but also words from the New World, such as *Opossum*, *Raccoon*, *Tomahawk* and *Powwow* (Palmer 1950:5). These terms, according to the Oxford English Dictionary Online, are all of Native American origin and therefore they entered German via English.⁶ Thus, they may not technically be classified as anglicisms.

Busse (2008) and Hilgendorf (2007) provide comprehensive summaries of the remaining centuries leading up to the 20th century. They divide the English linguistic and cultural influence on German into five major periods. The first period is that of the English Civil Wars (1642-1651) and the execution of King Charles I (1649). These political events aroused a great deal of interest amongst German scholars and German society in general. Writings on the political turmoil beleaguering England at the time appeared in German literature and pamphlets, which were popular amongst large portions of the public. Because a number of terms related to the English political system did not exist in German, authors of the day coined new terms to express the necessary concepts. Consequently, a great number of borrowings during this period are in the domain of politics. They include the loan translations *Oberhaus* 'Upper House', *Unterhaus* 'Lower House', *Hochverrat* 'high treason' and the direct borrowing *Bill* 'bill' (Viereck 1986:107).

The next period of borrowing occurred during the English Enlightenment in the 18th century when England and Germany united politically through the accession of the members of the German House of Hannover to the English throne. This led to not only an influx of German terms into English (Stanforth 2009), but also of English terms into German (Busse 2008). There was a rise in translations into German of travel reports and English literature, such as

⁶ This is part of the general problem in defining the term *anglicism* - whether to include words borrowed via English from a third language or not.

the works of Addison, Pope and Swift. The German author and critic Johann Christoph Gottsched (1700-1766) was an influential translator of such literature during this period. He published periodicals based on the British model and, through these, introduced into German such anglicisms as *Bombast* ‘bombast’, *Elfe* ‘elf’ and *sentimental* ‘sentimental’ (Viereck 1986:108).

The next major period of English influence occurred in the 19th century during the English Industrial Revolution. England’s success in the areas of railways, shipbuilding and steel and textile production led to the introduction of anglicisms such as the loan translations *Dampfmaschine* ‘steam engine’ and *Bessemerstahl* ‘Bessemer steel’, and the direct borrowings *Lokomotive* ‘locomotive’, *Klipper* ‘clipper ship’, and *Corduroi* (shortened to *Kord*) ‘corduroy’ (Busse 2008:39). However, it was not only the names of the products of the industrial revolution that entered German. The German people once again became interested in British politics during this period and terms such as *Demonstration* ‘demonstration’ and *Strike* ‘strike’ (later integrated orthographically to *Streik*) entered the language. The verb *boykottieren* was derived from the noun *Boykott* ‘boycott’ also in this period.

By this time, the English language had also established itself as a language of education and had surpassed French as the language of prestige. Borrowings from high society such as *Gentleman* ‘gentleman’, *Club* ‘club’, *Bar* ‘bar’, *Whiskey* ‘whiskey’, *Cocktail* ‘cocktail’ (Hilgendorf 2007:134) and vocabulary from sports, including football, golf, horse-riding and tennis, reflect this influence (Busse 2008). The loanwords from this and previous periods still occur in German today. However, they are hardly recognisable as borrowings because they are so well integrated. Examples of this include *fesch* ‘fetching’, *Keks* ‘biscuit’ and *Schal* ‘scarf, shawl’ (Busse 2008:39).

At the end of the 19th century, the number of borrowings from English was still relatively small. This changed so dramatically in the 20th century that Busse (2008:39-40) divides the century into four periods of influence:

1. Pre-World War I: This period is marked by an increase in the number of anglicisms until the outbreak of World War I;
2. From World War I to World War II: The rate of borrowing reduced rapidly shortly after World War I, only to escalate again until the end of World War II;
3. Post-World War II: In (West) Germany there was a sharp increase in anglicisms immediately after the war and especially during the economic boom of the 1960s; and
4. Post-Reunification: Anglo-American influence has intensified even further since the 1990s.

The number of anglicisms in German is set to grow because English is becoming more popular as a language of education and scientific research publication in Germany (Busse 2008; Hilgendorf 2007). More and more academic journals are being published in English and some are changing their titles from German to English in order to appeal to a wider community (Hilgendorf 2007). Related to this is the number of students now studying English at school and university. In the academic year 2004-2005, 77.7% of pupils attending school studied English (Hilgendorf 2007:135) and English has been an alternative medium of instruction in tertiary education since the 1990s. The increasing exposure of younger generations to English in educational institutions may lead to a growing openness towards, and understanding of, English influence. It is conceivable that if English is part of daily life, people are more willing to use words borrowed or derived from English in their native language. This increase in exposure to English is, at least in part, responsible for the number

of anglicisms entering German. However, the influence of English is strong in some areas, while weak in others. I discuss these different areas of influence in the following section.

1.4 Domains in which anglicisms occur

Anglicisms occur unevenly throughout a range of semantic domains in German. Various authors (Augustyn 2006; Barbe 2004; Clyne 1995; Glahn 2002; Grote 2002; Schäfer 2002; Schlick 2002; Steffens 2003) list a number of such domains. The most common domains and examples from the aforementioned literature appear in Table 2. As can be seen in the Table, all of the domains seem to fall into two broad categories: (a) technical terminology and (b) what Steffens (2003:5) refers to as *Spaßgesellschaft* ‘leisure society’.

Grouping	Domain	Examples
(a) Technical terminology	Advertising	<i>We kehrt for you</i> ‘We sweep for you’, <i>Saturday Night Feger</i> ‘Saturday Night Sweeper’ (advertising slogans in Barbe 2004:29); <i>Bestseller</i> , <i>Image</i> , <i>Look</i> , <i>Trend</i> (Clyne 1995:204)
	Computing, Electronics, Technology	<i>Web</i> , <i>Server</i> , <i>Internet</i> , <i>Homepage</i> (Barbe 2004:29-30); <i>Receiver</i> , <i>Software</i> , <i>Hardware</i> (Grote 2002:55); <i>Onlinebanking</i> ‘online-banking’ (Steffens 2003:5)
	Business, Finance	<i>Know-How</i> , <i>Boss</i> , <i>Leasing</i> , <i>Manager</i> (Clyne 1995:204); <i>Dress for Success</i> , <i>Coaching</i> (Barbe 2004:30); <i>Handout</i> (Schlick 2002:3); <i>Eventmarketing</i> (Steffens 2003:6)
(b) <i>Spaßgesellschaft</i> ‘leisure society’ terminology	Sport	<i>Training</i> , <i>Bodybuilding</i> , <i>Basketball</i> (Grote 2002:55); <i>Outdoorsport</i> (Steffens 2003:6); <i>Handicap</i> , <i>Comeback</i> , <i>Sprint</i> (Clyne 1995:204)
	Clothing, Fashion, Cosmetics	<i>Leisure Wear</i> , <i>Boots</i> (Schlick 2002:5-6); <i>Eye-Shadow</i> ‘eye shadow’, <i>Jeans</i> , <i>Make-up</i> , <i>Deodorant</i> (Grote 2002:53); <i>After-Shave</i> ‘aftershave’, <i>Hair tint</i> , <i>Spray</i> (Clyne 1995:205)
	Leisure, Entertainment	<i>Bungee-Jumping</i> , <i>Gameshow</i> ‘game show’, <i>Talkshow</i> ‘talk show’, <i>Horrorfilm</i> ‘horror film’ (Grote 2002:55); <i>Pay-TV</i> (Steffens 2003:6); <i>Evergreen</i> ‘golden oldie, old favourite (song)’, <i>Hitparade</i> ‘hit parade’ (Clyne 1995:204)

Table 2: Examples of domains in which anglicisms occur in German, organised into two the broad groupings of *technical terminology* and Steffens’ (2003:5) *Spaßgesellschaft* ‘leisure society’ terminology.

Two other areas that show influence of English are politics and law. However, the use of anglicisms in these domains is not as widespread as in other others. Debus (1984) claims that politicians often exploit the vagueness of some anglicisms in parliamentary debates. He gives the example of the anglicism *Korruption* ‘corruption’, which at first did not have the same negative connotations as the German equivalent, *Bestechung* ‘corruption, bribery’ and was used to the benefit of politicians. In regards to the domain of law, Clyne (1995) claims that it shows little, if any, influence by English because the legal systems between Germany and Britain or the United States are independent of each other. Broadly speaking this may be true. However, Hilgendorf (2007) provides a further refinement of this statement by claiming that the domain of domestic law within Germany has very few anglicisms, but international law and business law have a much greater number of anglicisms due to closer contact with abroad.

Colloquial anglicisms occur in great number in journalism and youth language, where they often have a vague yet exotic meaning and exert a level of prestige. Here, in particular youth language and colloquial German, anglicisms are part of the spoken medium rather than the written one, making it difficult to determine their abundance and integration. Furthermore, because they occur mostly in the spoken medium, these anglicisms may only be short-lived and may not appear in dictionaries (Debus 1984).

Glahn (2002), in his study of anglicisms on television, observed that the semantic domains relating to leisure activities, sport and music have the highest frequency of anglicisms. Glahn counted 625 types (lexemes) and 1146 tokens of direct borrowings appearing in 18 hours of

prime-time television and divided them by eight different program types. Table 3 is a summary of Glahn's observations:

Program type	Types	Tokens	Distribution of total anglicisms in corpus
advertisements	152	357	31.1%
sport	138	259	22.6%
music	86	155	13.5%
politics or finance	103	120	10.5%
talk	52	94	8.2%
children	37	81	7.1%
(scientific) information	29	43	3.8%
serial	28	37	3.2%
TOTAL	625	1146	100%

Table 3: The number of anglicisms according to television program type. Adapted from Glahn (2002).

Busse (2008) argues that the actual influence of English terms is not as great as commonly perceived. He contends that anglicisms are not part of the core vocabulary of German, thus their impact is still minimal. He further argues that the distinction between technical and colloquial language use is important. The majority of anglicisms are restricted to technical and specialist domains and have a very precise meaning. The anglicisms that are not in everyday use are only partially integrated into German. They also appear in written language only, not in everyday spoken discourse, and are part of neutral style. Here, he observes, anglicisms have a similar role to Greco-Latinisms. How anglicisms become integrated into German is the topic of the following sections.

1.5 The integration of anglicisms

There are three different levels of integration for anglicisms: morphological, graphemic and phonological. The longer an anglicism has been in German, the more likely it is to be integrated on all three of these levels. Thus, the older an anglicism is, the less likely it is to be

recognised as foreign. Some anglicisms, such as *Boot* ‘boat’, *Streik* ‘strike’ and *Keks* ‘biscuit’, have been part of German now for so long that they can no longer be recognised as anglicisms by most native speakers (W. Viereck 1980). Morphological integration of anglicisms involves following the system of inflection on nouns, verbs and adjectives. Graphemic integration involves the replacement of English orthography with German (this process was more frequent with earlier borrowings, e.g. *tränieren* ‘to train’, which is now spelled *trainieren*). With increasing awareness of English pronunciation on the part of German native speakers, phonological integration of anglicisms is declining. However, graphemic and phonological integration of anglicisms is outside the focus of the present study and will not be discussed further here. The following sections will outline how anglicisms integrate into German on these three levels.

1.5.1 Morphological integration

According to Götzeler (2008), the majority of anglicisms easily become morphologically integrated in German. To be integrated into German grammar, nominal anglicisms must receive inflection for case, gender and number (Onysko 2007). Case marking takes place without any substantial differences to the native lexicon, whereas gender and number marking is a more complex issue. The following is a summary of the key points. Every noun in German must have grammatical gender: masculine, feminine or neuter. Three major factors influence the gender of anglicisms. The important difference is whether a noun is derived, appears to be derived, or is non-derived. For complex nouns,⁷ morphology is a central factor in gender assignment. For example, nouns with the suffix *-er* are masculine. Semantics also plays a (lesser) role. For example, in anglicisms denoting humans or higher animates, grammatical gender matches the biological gender of their referent (Köpcke &

⁷ By “complex nouns”, I mean nouns with derivational inflection and not compounds. If I discuss compounds, I refer to them separately as compounds.

Zubin 1984; Zubin & Köpcke 1986). Thus, *Lady* ‘lady’ is feminine and *Dressman* ‘male fashion model’ is masculine. However, animacy is only relevant for simplex nouns. It does not affect the gender of complex nouns. For those non-derived simplex nouns with inanimate reference and no pseudo-suffixes, the existence of lexical-conceptual equivalents (LCEs) which share the same gender in German is an important factor affecting gender assignment. For example, *Airline* ‘airline’ is feminine, as are its LCEs *Fluggesellschaft* and *Fluglinie*. Although the gender of an LCE does not always clearly determine the gender of an anglicism and is therefore dismissed as an unreliable predictor of gender by Onysko (2007), there is some correlation between the two in a significant number of cases. (See 4.7.3 and 5.5.4 for discussion of LCEs.)

The pluralisation of anglicisms is a complex area, particularly in relation to the plural marker *-s*. Most anglicisms take this plural marker in German, creating the impression that *-s* is spreading at the expense of the other plural markers *-e*, *-(e)n*, *-Ø*, umlaut + *-Ø*, umlaut + *-e* and umlaut + *-er* (Janda 1990). However, although the use of *-s* is increasing, it is only because the number of anglicisms entering German is increasing. Davies and Langer (2006) report cases where *-s* is an alternative plural marker on native nouns such as *Onkel* (+ *-Ø/-s*) ‘uncle’ and *Jung* (+ *-e/-s*) ‘boy, youth’ but the use of *-s* on these nouns is considered non-standard. However, the authors do not attribute this morphological marking to influence from English. Instead, they agree that *-s* is a plural marker common in northern dialects. In addition, some analysts (Clahsen, Rothweiler, Woest & Marcus 1992; Clahsen, Sonnenstuhl & Blevins 2003; Marcus, Brinkmann, Clahsen, Wiese & Pinker 1995) propose that *-s* is the default plural marker in German and that this is unrelated to the influence of English. Most anglicisms belong to a special class of nouns in German that take *-s*. This class includes words such as onomatopoeia, acronyms and other peripheral items. Therefore, the growing

number of anglicisms could be responsible for the expansion of a pre-existing class of nouns taking this plural allomorph.

In order to provide a more detailed background to anglicisms in German, the following provides a summary of how non-nominal anglicisms become integrated into German. In German, the inflection of adjectival anglicisms (along with native adjectives) depends on the position in which they occur. Adjectives in the predicative position are uninflected, for example, the native adjective *blau* ‘blue’ remains uninflected in *das Kleid ist blau* ‘the dress is blue’ or the anglicism *cool* ‘cool’ in *die Musik ist cool* ‘the music is cool’. However, when placed in the attributive position, the adjective has a suffix so that it agrees in case, number and gender with the head noun. Thus, both *blau* and *cool* have the suffix *-e* in *das blau-e Kleid* ‘the blue dress’ and *die cool-e Musik* ‘the cool music’.

Participial adjectives in the attributive position also agree in case, number and gender with the head of the noun phrase in which they appear as Onysko (2009:63) demonstrates with *boomende* ‘booming’, *recycelte* ‘recycled’, *gepiercte* ‘pierced’ and *ausgepowerte* ‘exhausted’. However, generally, phonological restrictions prohibit the inflection of adjectives ending in a vowel (Moraldo 2008). This rule applies not only to anglicisms, but also to native adjectives such as *rosa* ‘pink’, *türkis* ‘turquoise’ and *lila* ‘purple’,⁸ as well as the colloquial terms *klasse* ‘brilliant, great’ and *spitze* ‘super, great’. Onysko identifies four adjectival anglicisms in his corpus that are not inflected because they end in a vowel sound: *busy* ‘busy’, *happy* ‘happy’, *sexy* ‘sexy’ and *trendy* ‘trendy’. Busse and Görlach (2002:24) mention the existence of the competing forms of *trendy* and *trendig* (where a German suffix deriving adjectives from nouns, *-ig*, replaces the English *-y*), for example, in *die trendigen*

⁸ Eisenberg (2006:130) notes the addition of the suffixes *-(e)n* and *-farben* ‘-coloured’ as means of allowing such adjectives to take the declensional suffixes (in the following cases *-es*), e.g. *ein türkis-enes Hemd* ‘a turquoise shirt’, and *ein türkis-farbenes Hemd* ‘a turquoise-coloured shirt’.

Klamotten ‘the trendy clothes’, which indicates a high level of integration. Adjectives can be derived from nouns by using other native endings as well, as seen in *film-isch* ‘cinematic’, *trainier-bar* ‘trainable’ and *stress-frei* ‘stress-free’ (Onysko 2009:64).

When a verbal anglicism integrates into German, it does so by inflecting regularly in the infinitive and taking regular suffixes indicating tense, person, number (Onysko 2009) and mood. Earlier verbal loans took the morpheme *-ieren* in the infinitive, for example, *boykott-ieren* ‘to boycott’ (Busse & Görlach 2002:25). Modern verbal anglicisms take the morpheme *-en* when in the infinitive, for example, *surf-en* ‘to surf’. They fit the inflectional paradigm for the indicative mood, as illustrated in Table 4.

Pronoun	Native Verb: <i>lachen</i> ‘to laugh’			Anglicism: <i>checken</i> ‘to check’		
	Present	Past	Past participle	Present	Past	Past participle
<i>ich</i> [1st sg]	<i>lache</i>	<i>lachte</i>		<i>checke</i>	<i>checkte</i>	
<i>du</i> [2nd sg]	<i>lachst</i>	<i>lachtest</i>		<i>checkst</i>	<i>checktest</i>	
<i>er</i> [3rd sg]	<i>lacht</i>	<i>lachte</i>	<i>gelacht</i>	<i>checkt</i>	<i>checkte</i>	<i>gecheckt</i>
<i>ihr</i> [2nd pl]	<i>lacht</i>	<i>lachtet</i>		<i>checkt</i>	<i>checktet</i>	
<i>sie</i> [3rd pl]	<i>lachen</i>	<i>lachten</i>		<i>checken</i>	<i>checkten</i>	

Table 4: Conjugation of regular verbs in the indicative mood with sample pronouns: comparison of native verbs and verbal anglicisms

The creation of the past participle form of verbal anglicisms with more than one constituent is somewhat problematic. In German, the past participle on regular verbs is usually formed by adding the *ge-* *-(e)t* circumfix to the verb stem, for example, *lachen* → *ge-lach-t* ‘laughed’. For regular verbs with a separable verbal prefix such as *ein-*, *-ge-* is inserted between the verbal prefix and the stem as in *ein-atmen* → *ein-ge-atm-et* ‘breathed’. With verbs consisting of a non-separable prefix and a stem, the prefix *ge-* is omitted, for example, *erhitzen* ‘heat’ → *erhitzt* (Busse & Görlach 2002; Moraldo 2008). An issue involving some verbal anglicisms lies in determining whether they have a separable or inseparable prefix. Moraldo (2008:122)

gives the typical examples of *layouten* ‘to lay something out’, *forwarden* ‘to forward something’ and *outsourcen* ‘to outsource something’. There are three possible analyses for such verbs - no prefix, separable prefix and inseparable prefix. If analysed without a prefix, the past participle forms would be *ge-layoutet*, *ge-forwardet* and *ge-outsourct*. If analysed with a separable prefix, the forms would be *lay-ge-outet*, *for-ge-wardet* and *out-ge-sourct*. If analysed with an inseparable prefix, the past participle forms would be *layoutet*, *forwardet* and *outsourct*. Native speakers appear to make idiosyncratic choices in such circumstances, but an analysis of these verbs as regular appears to be preferable.

Another common verbal anglicism used to illustrate this situation is *downloaden* ‘to download’. According to the *Duden* (2001), the past participle form is *downgeloadet*. However, a search made on *Google.de* on December 10, 2010 yielded far more hits for *gedownloadet* (126,000) than for *downgeloadet* (41,200). In this case, the translation *herunterladen* ‘to download’ provides a solution to this problem because there is only one possible way to form its (irregular) past participle - *heruntergeladen*. This problem of whether a verb has a separable prefix or inseparable prefix is not restricted to anglicisms. Eisenberg (1999) describes the same problem involving many native German verbs as well, which involves nominal or verbal roots as the first element, for example, *bausparen* ‘to save through a building society’, *schutzimpfen* ‘to inoculate’, *kunststopfen* ‘to mend invisibly’ and *bauchlanden* ‘to belly-land’, etc.

Onysko (2009:69-70) makes the point that some past participle forms of verbal anglicisms in written German have the English suffix *-ed*. He states that this does not affect the pronunciation of the verb because, due to devoicing of final consonants in German, this suffix has the same pronunciation as the German participial suffix *-(e)t*. However, when written, the

-ed participial suffix adds an air of exoticism. Onysko claims that in some instances, English past participles used attributively are borrowed in their original form and are not the result of derivation within German, for example, *die oldfashioned Quengler* ‘the old-fashioned whiners’ and *von stonewashed Jeanshemden* ‘of stonewashed denim shirts’. He even suggests that because these particular participial adjectives are not inflected, they could be analysed as borrowed whole structures.

The integration of adverbial anglicisms in German is straightforward. As adverbs represent a small class of words in German, it is not surprising that only a few adverbial anglicisms have entered the language. Onysko (2007:266) mentions observing four anglicisms functioning as adverbs in his corpus: *nonstop* ‘nonstop’, *live* ‘live’, *online* ‘online’, *offline* ‘offline’, exemplified in the following sentences:

(128) *Strecken bis zu 100000 Kilometern lassen sich so nonstop zurücklegen...* (31/115)

[Distances up to 10,000 kilometers can be thus covered nonstop...]

(132) *Der Regionalsender Südwest 3 übertrug live.* (5/127)

[The regional TV station *Südwest 3* broadcast live.]

(133)... *will online vieles anders machen als offline...* (45/170)

[... wants to make a lot of things online different from offline...]

1.5.2 Graphemic Integration

Anglicisms are easily integrated into the German graphemic system because English and German share an almost identical alphabet. English does not contain any modified letters, which also aids this integration. All nominal anglicisms in German are capitalised, as are native nouns, except in situations where they are treated as code-switches or direct quotations. Graphemes appearing only in German and not in English (i.e. /ä/, /ö/, /ü/ and /ß/)

rarely appear in anglicisms and they are restricted to older loans, for example, *Quäker* ‘Quaker’, *dränieren* ‘to drain’ and the obsolete form *tränieren*, now spelled *trainieren* ‘to train’ (Busse & Görlach 2002:23). Borrowings that are more recent retain their original spelling (Götzeler 2008). In fact, the orthography of an anglicism often signifies its age. Earlier borrowings were pronounced as they were spelled. The result was often a pronunciation different to that of the English original. As examples, Busse and Görlach explain that the nouns *Puck* ‘puck’ and *Humbug* ‘humbug’ were borrowed in their written forms first. While having the pronunciation [pʌk] and [hʌmbʌg] in Standard English, their pronunciation in German reflects the German vowels represented by the letter <u>. This meant that these words were, and still are, pronounced [pʊk] and [hʊmbʊg] (2002:22).

Viereck (1986) mentions that nativised spellings co-exist with the English spelling in a number of cases. However, the spellings he provides have since become obsolete. The phenomenon is still worth mentioning as it gives insight into how anglicisms are integrated. Viereck states that *Computer* ‘computer’ and the nativised form *Komputer* coexist, as do *Go-cart* and *Go-kart* ‘go-cart’. However, the variants following German orthography are much less common than their original English counterparts are. Viereck also explains that there is a modern tendency for nativised anglicisms to return to their original English spelling. He cites the examples of *Zigarette* → *Cigarette* ‘cigarette’ and *Zentrum* → *Centrum* ‘centre’ (1986:114). He mentions the past trend of changing <sh> to <sch> in word-initial position. However, he goes on to mention that this no longer occurs and new anglicisms beginning with the <sh> digraph retain their English spelling. Similarly, Viereck states that the integrated forms of *Tripp* ‘trip’ and *Stopp* ‘stop’ co-exist with their English spellings. In accordance with the orthography reforms of 1996 (amended in 2006), *Tripp* and *Stopp* are the preferred variants. However, the *Duden* (2001) lists *Trip* and *Stopp* as the preferred variants.

A *Google.de*⁹ internet search reveals that the English spelling dominates. There are 20,700 hits for *der Tripp*, 345,000 for *der Trip*; 246,000 hits for *der Stop* and 123,000 for *der Stopp*.

In addition to the former replacement of word-initial <c> with <k> and <sh> with <sch>, word-final <ss> was replaced with <ß> in words such as *Busineß* ‘business’, *Miß* ‘Miss, young woman’, *Streß* ‘stress’ and *Dreß* ‘collection of (sport)clothing, outfit’ (Viereck 1986:114). However, orthography reform ‘outlawed’ the latter. The reforms also abolished the *-ies* plural of nouns ending in *-y*, most of which are anglicisms. Now, all nouns ending with *-y* are supposed to be pluralised by the means of *-s*, for example, *Babys* ‘babies’, *Partys* ‘parties’, *Shantys* ‘shanties’ (Busse & Görlach 2002).¹⁰ (For further discussion on the pluralisation of nominal anglicisms ending in *-y*, see Götzeler (2008).)

Another type of orthographical assimilation occurs in the various forms of verbs that contain a single consonant after a stressed short vowel. In such verbs, the consonant is doubled (Onysko 2007). For example, the English verb *scan* takes a second *n* and the suffix *-en* to form the infinitive *scannen*. This doubling is evident in all forms of the verb: *er scannt* ‘he scans’, *ich scanne* ‘I scan’, *wir scannen* ‘we scan’, etc.

1.5.3 Phonological Integration

German orthography reflects German pronunciation much more closely than English orthography reflects English pronunciation. Thus, a discussion of orthography of anglicisms in German is incomplete without a discussion of German pronunciation of anglicisms. Busse

⁹ December 8, 2010

¹⁰ However, a *Google.de* search (conducted February 22, 2011) indicates that the graphemically integrated variants, although less common, are still in use. The search yielded the following hits per variant: *Streß/Stress* 1,200,000/11,500,000; *Busineß/Business* 36,900/410,000,000; *Miß/Miss* 642,000/19,600,000; *Dreß/Dress* 38,400/13,100,000; *Babies/Babys* 5,580,000/17,600,000; and *Shanties/Shantys* 84,600/ 657,000. The exception to the pattern is *Parties/Partys* 7,570,000/ 6,670,000.

and Görlach (2002) provide a comprehensive summary of the phonological integration of English loans. They state that various factors influence the pronunciation of anglicisms. These include the age of the loan, its popularity, whether the word entered German in a spoken or written form and social factors.

According to Busse and Görlach (2002:20), the more recent the loan is the closer to the original its pronunciation is. Conversely, the older the anglicism, the more likely it is to adhere to the phonological inventory of German. This means that the phonemes of older loans were replaced with their nearest German equivalents at the time of borrowing. There were various interpretations of what the nearest equivalents were. Busse and Görlach (2002:21) state that the (American) English /ɑ/ was replaced with either /a/ or /o/, leading to spelling variants such as *baxen* and *boxen* ‘to box’ (the latter replacing the former over time). Some phonetic variation still exists in other anglicisms. Other examples include the substitution of the English /ð/ in *Motherboard* with /s/ or /z/, or the English /w/ in *Website* with /v/.

If a loanword first appeared in German in the written form, its pronunciation usually reflects this written form. This is more common in older loans. Over time, the pronunciation of some older borrowings became closer to the English. Busse and Görlach give the example of *Clown*. Originally it was pronounced [klo:n], but as contact with native-English speakers increased, the German pronunciation changed to [klaun]. Further examples of changes currently underway include *Sound* [zaunt] → [saund] (i.e. the English pronunciation), and the anglicism *Spot* [spot] ‘commercial’ is no longer homophonous with the German *Spott* [ʃpot] ‘derision’ (Busse & Görlach 2002:22).

Sociolinguistic factors also influence the pronunciation of anglicisms in German. The education and age of the speakers are the most influential of these. Generally, younger and more educated people pronounce anglicisms more closely to the original than older and less educated people. Closely connected with this is the speaker's knowledge of and exposure to English. The local dialect of the speaker also has an influence on the pronunciation of anglicisms. For example, Busse and Görlach (2002:22) claim the contrast that English has between /p/ and /b/, or between /s/ and /z/, does not occur in some dialects. This may then transfer to the pronunciation of anglicisms. The combination of these factors, in addition to the fact that some speakers prefer a more English native-like pronunciation, means that the pronunciation of anglicisms varies across the population.

Chapter 2. The social response to anglicisms

The influence that English has on German is a sociopolitically important issue that is frequently discussed in the German media. However, the perspective given is often one-sided. Language critics of German (e.g. Drosdowski 1997; Hoberg 2000; Paulwitz & Micko 2000; Pogarell 1998, 2001; Pogarell & Schröder 2000; Zimmer 1997, 2006) and language societies such as the *Verein Deutsche Sprache (VDS)* ‘German Language Society’ and the *Stiftung Deutsche Sprache (SDS)* ‘German Language Foundation’ claim that there is an overwhelming number of anglicisms, that anglicisms replace German words and that anglicisms do not integrate into the morphological or phonological systems of German. This chapter will outline briefly the history of language criticism in Germany and then will proceed to investigate the opinions held by people in the public sphere, language societies and laypeople. It will also demonstrate that there is a mismatch between the opinions of language critics and those of the general public and that the attitude towards anglicisms by the majority of German speakers remains neutral.

2.1 The past response to foreign influence

In this section, I provide a summary of the reaction towards the influence of foreign languages upon German, based on Pfalzgraf (2009). The attitudes of language critics have reflected the changes in the status of German over time. The first language society in Germany, the *Fruchtbringende Gesellschaft* ‘Fruit-bearing Society’ was established in 1617 when German was not yet a standardised language. It had neither the prestige of French, Italian or Spanish, nor the historical status of Hebrew, Latin or Ancient Greek. As a result, language purism at that time sought to not only rid German of foreign words, but also to establish “correct” syntax. The general focus at the time was the removal of French and Latin elements, and the avoidance of the fashionable mixing of these languages with German. The

culture and language of France were admired and French was the language of the aristocracy and the court. However, purists wanted to rid German of French influence.

The next period in language purism was the early 18th century, the Age of Enlightenment. At this time, the aim of language societies was to replace Latin with German as the language of science. However, at the same time, the upper classes and the educated were increasingly using French. As a result, there was a sense that the German language was decaying. To counter this, the purists recommended that foreign words be avoided as well as “rude, obscene, indecent and colloquial expressions” (Pfalzgraf 2009:146).

From the late 18th to the early 19th centuries, High German became the written language in all domains and was spoken (or at least understood) by people in all German-speaking areas. There was a feeling of linguistic unity among the German-speaking population, although political divisions still existed. During this period, German speakers wanted to distinguish themselves from the French, thus forming a strong link between the German language and German national identity.¹¹ Foreign languages, and more importantly foreign cultures, were considered a threat to the burgeoning German identity and the idea of a one-nation state. Proponents of the Enlightenment felt that foreign words were incomprehensible to many people and would lead to the downfall of German. Additionally, there was a shift in the view of those who felt the strongest about language. During the early 19th century, academics began to express their opinions on language, whereas before these opinions were confined to the aristocracy (Pfalzgraf 2009). However, these academics were not linguists and they focussed their critique on the German language as a symbol of German national identity.

¹¹ For further information on the relationship between identity and language, see Gardt (2006) and Joseph (2004)

2.2 The past response to anglicisms - *Allgemeiner Deutscher Sprachverein* (*ADSV*) 'General German Language Society'

At the time of the founding of the German Empire in 1871, the main source of foreign words was French. During this time, the language purism movement successfully replaced a large number of French words with native German nouns and loan translations. According to Busse and Görlach (2002), most of these terms related to the domains of the railway system, the postal system and civil engineering. As this period progressed and English politics and economics became popular topics of public discussion in Germany, the target of language criticism shifted from French to English influence. Although the first recorded mention of anglicisms is by Kinderling (1795), in which he listed 20 anglicisms to be either removed or integrated into German, the work that has received the most attention is by Dunger (1899), a founding member of the *ADSV*. The hunt for foreign words became widespread in this period, supported by the efforts of the *ADSV*. In accordance with the cultural and nationalistic purism of the day, the *ADSV*'s aims were

to encourage the purification of the German language from unnecessary foreign elements; to cultivate the preservation and restoration of the true spirit and the genuine character of the German language; and thus to strengthen the national awareness of the German people (Herman Riegel, from the first issue of the *ADSV*'s periodical, translated by Pfalzgraf 2009:154).

The society equated language change with language decay and scorned those who used foreign words. The members of the *ADSV* felt that removing foreign words was a matter of national education. They attempted to distinguish between “good” and “bad” borrowings. However, the members of the society could not firmly establish the criteria to guide the replacement of undesirable words. The *ADSV* rejoiced at the outbreak of World War I because they asserted that the war would cleanse the German language. During the 1920s and

1930s, the society adapted its views to align itself with the nationalistic-chauvinistic opinion current at the time. However, the National Socialist Party did not agree with the ideology of the *ADSV* and it discontinued the society's activities in 1940.

2.3 The current response to anglicisms - public figures and language societies

Little public expression of language purism occurred from the 1940s until shortly after the reunification of German in 1990. According to Pfalzgraf (2006, 2009), the bringing together of the Federal Republic and the Democratic Republic of Germany, which had been separated for over 40 years, was an event that caused Germans to re-evaluate their national identity and for the nation to search for a new political role in Europe and the world. As identity and language are interrelated, part of this re-evaluation of identity involved Germans paying more attention to their language. In his discourse analysis of the publications of four language organisations, 14 language critics and 26 linguists, Pfalzgraf reports a feeling of animosity towards anglicisms and the American culture they represent. He mentions the renewed interest, still current today, in introducing legislation to protect German. Recent advocates for this legislation include the President of the German Federal Parliament, Norbert Lammer, the Vice-President, Wolfgang Thierse, the Minister of Justice, Sabine Leutheusser-Schnarrenberger, and Monika Grütters from the Committee of the Bundestag for Culture and Media, Friedrich Rothenspieler from the Bavarian Ministry of Sciences and Michael Kretschmer from the CSU/CDU Parliamentary Group of the Bundestag (Maidt-Zinke 2011). Despite this renewed enthusiasm for language criticism, there is no language purity law in place in Germany.

The fact that these politicians come from differing areas of the political spectrum shows that right-wing minority groups are not the only ones who oppose anglicisms. Many members of the public also express negative attitudes towards the influence of English. These negative attitudes may originate from a strong sense of what is native and what is foreign in the vocabulary. The activities of language societies, protectionists and purists could have brought about this heightened sensitivity. At present, the large number of personal websites and letters to the editor containing language critical discourse suggests that the centuries-long movement to strengthen the German language has had an effect on the perceptions of the German public.

Notably, in the current discourse there is a lack of concern about foreign words in general. Only anglicisms are the target of current language criticism. This is despite the fact that, according to Körner (2004), there are more foreign words from languages other than English in German today. The language critics often refer to these anglicisms as “*Sprachverfall*” ‘language decay’, “*widerliche Seuche*” ‘obnoxious pestilence’, “*Angeberei*” ‘showing-off’ and “*Imponiergehabe*” ‘display’ (Hoberg 2000:312-313). Paulwitz and Micko (2000:11ff) refer to anglicisms as “*Mißgeburt[en]*” ‘monstrosit[ies]’, as “*zerstörerisch*” ‘destructive’, “*einfalllos*” ‘unimaginative’, “*anbiedernd*” ‘currying favour’, “*überheblich*” ‘arrogant’ and “*verschleiern*” ‘concealing’ something. Zimmer (1997:23ff) refers to pseudo-anglicisms as “*verstümmelte Wörter*” ‘mutilated words’ and “*Wortbastarden*” ‘word bastards’ that are responsible for the *Pidginisierung* ‘pidginisation’ of German.

The most current expression of criticism towards anglicisms targets a lay audience. Those who voice their opinion against anglicisms in the public domain are seldom linguists, but rather journalists, lawyers, politicians, talk show hosts, writers and other public figures.

Pfalzgraf (2009) maintains that the current criticism aimed at anglicisms stems from a certain cultural ideology, as well as from matters of style and aesthetics. He remarks that there is a fear of (American) English language taking over, and that a perceived threat to the German language is a threat to the German national psyche and identity. Pfalzgraf (2003a, 2003b, 2006) claims that the cause of this is the loss of self-confidence as a nation due to the Nazi dictatorship and World War II and the fact that people wish to distance themselves from that era. There are in some cases expressions of nationalistic chauvinism, which link certain language critics and organisations with right-wing ideologies.¹² However, this is not the case with all language critics.

In fact, a common trait in the publications of language critics and organisations is that despite the fact that in their prescriptive nature they criticise the use of anglicisms and call for their eradication, they often make statements disassociating themselves from any accusation of right-wing extremism. For example, after dedicating almost an entire page of his book to the denunciation of anglicisms, Schneider (2007:11-12) claims that “*Jede Deutschtümelei, jede Hexenjagd auf Anglizismen wäre weltfremd, hinterwäldlerisch und einfach albern*” (‘All German racist jingoism, all witch-hunting of anglicisms would be naive, parochial and simply absurd’). Similarly, the SDS states “*Wir sind keine Puristen, keine Fremdwortjäger, keine Bildstürmer*” (‘We are no purists, no hunters of foreign words, no iconoclasts’) (*Aktion ‚Lebendiges Deutsch‘* 2005).

Modern language critics such as Schneider (2007:52) label users of anglicisms “*Anglomanen*” ‘Anglo-maniacs’ and language societies such the VDS and SDS label them “*Sprachpanscher*” ‘language adulterators’ (*VDS in Kürze*) or even “*Schimpansen*”

¹² See Pfalzgraf (2003a, 2003b, 2006) for detailed discussion of right-wing extremist groups and language purism.

‘chimpanzees’ (*1.000 Gründe für die deutsche Sprache* 2010). Language critics claim that people use anglicisms because they are careless or thoughtless, or want to be fashionable, to appear intelligent or to impress others (see Pfalzgraf 2006:308 for an overview). Pfalzgraf reports that some language critics accuse advertising companies of a conspiracy against the public, claiming that these companies use anglicisms to dazzle and confuse people, turning them into mindless consumers. However, language societies often fail to acknowledge that native terms can also fulfil these purposes.

Certain metaphors occur frequently in the discourse on anglicism use. They are often metaphors involving water such that anglicisms are depicted as flooding or inundating German and that the tide of anglicisms is rising or swelling, such as in: “*Der Zustrom englischer Begriffe, der in den vergangenen Jahren stark angeschwollen ist...*” (‘The stream of English terms, which has swelled sharply in the past years...’ (Paulwitz & Micko 2000:11)) and “*Eine riesige Welle von Englischen Fremdwörtern*” (‘A giant wave of English foreign words’) and an “*ungeheure Flut von Anglizismen*” (‘monstrous flood of anglicisms’ (Drosdowski 1997:74)). The German language is described as being in a state of “*Sprachverfall*” (‘language decline’ (Hoberg 2000:312)), and it is “*Anglomanie*” (‘Anglo-mania’ (Schneider 2007:11)) which leads to the “deformation of the German ‘language of culture’” (Dieter 2006:148). Pogarell (1998:5-6) suggests that Germans are committing “*sprachlichen Selbstmord durch Ertränken in Anglizismen...*” (‘linguistic suicide by drowning in anglicisms’) and that they allow for “*die Sprache Goethes vor die Hunde gehen*” (‘the language of Goethe to go to the dogs’).

Dieter (2006:141), who uses the term *Denglisch* to describe a “hotchpotch of German (Deutsch) and English words”, creates the metaphor of illness by referring to the language of

global marketing as “BSE”, his abbreviation for Bad Simple English in reference to bovine spongiform encephalopathy. Many language critics see anglicisms entering German as an “*Infiltration angloamerikanischer Wörter*” (‘infiltration of Anglo-American words’ (Fink 1997:116)). Language societies say that people should “... *der Anglisierung der deutschen Sprache entgegenzutreten*” (‘fight against the anglicisation of the German language’ (*VDS in Kürze*)), for example, by suggesting that “*Man attackiert, diskriminiert oder boykottiert Personen oder Institutionen*” (‘One attacks, discriminates or boycotts people or institutions’).

The most influential language protection society today is the *Verein Deutsche Sprache*. According to its website, the *VDS* is the largest of the modern language societies, with 32,000 members in 110 countries (*VDS in Kürze*). Most of the members on the society’s advisory board are academics, but few of them are linguists. The society strives for the preservation of German because language has a strong relation to culture and heritage. It expresses strong opinions about what it considers poor use of German in general and particularly about the use of anglicisms. Anglicisms are considered distasteful, destructive and dangerous to German. The society claims that the causes for the use of anglicisms include the linguistic, cultural and political indifference among the German people, and the political and cultural dominance of the United States. The society also claims that the German people are too willing to adopt American values and display a lack of loyalty to the German language and culture. The sole target is American culture and linguistic influence, rather than other English-speaking countries, such as Australia, Canada or Britain.

On the one hand, a common opinion among language critics is that some form of borrowing is necessary, especially when denoting new concepts and they are willing to accept some degree of direct borrowing. On the other hand, introducing a direct English loan is often

perceived as a linguistic offence when it replaces a German term. However, not all language critics subscribe to such a view. Paulwitz and Micko (2000:9-11) reject almost all influences of English, which they label *Engleutsch*. They use this term to refer to “*überflüssige und schädliche Anglisierungsangriffe auf die deutsche Sprache*” ‘superfluous and corruptive attacks of anglicisation on the German language’ (2000:4). The term denotes:

1. English words that are in their original English form (e.g. *Audit* ‘audit’, *Ghostwriter* ‘ghost writer’, *Message* ‘message’);
2. English words that have been partially integrated in German (e.g. *managen* ‘to manage’, *timen* ‘to time’);
3. Mixtures of English and German words (*BahnCard* ‘a railways discount card’, *Outeinwurf* ‘throw in [football terminology]’, *Laserdrucker* ‘laser printer’);
4. Loan translations of English idioms (*Sinn machen* ‘to make sense’, *einmal mehr* ‘once more’); and
5. Pseudo-English (*Twen* ‘someone in their twenties’, *Showmaster* ‘television show host’, *Dressman* ‘male fashion model’).

Such language critics do not examine their own assumptions. They claim that they are capable of distinguishing the desirable from the undesirable in the lexicon. For example, the *SDS* calls for the replacement of English words in German only when they are “*überflüssig, hässlich oder nicht allgemein verständlich*” ‘superfluous, ugly or not generally understandable’ (*Aktion ‚Lebendiges Deutsch‘* 2005). Pogarell and Schröder (2000:10) hold a similar view: “*Gegen sinnvolle Übernahmen und Bereicherungen haben wir natürlich nichts einzuwenden*” (‘Naturally, we have no objection to sensible adoption and enrichment’). They and others (e.g. Drosdowski 1997; Hoberg 2000; Schneider 2007; Zimmer 1997) state

that languages always change and take on elements from other languages, but they claim to know when the amount of borrowing reaches a certain saturation point, for example:

Nicht alle, aber sehr viele Fremdwörter sind schlichtweg vollkommen überflüssig, sie erfüllen keine notwendige oder wünschenswerte kommunikative Funktion. ‘Not all, but very many foreign words are completely and utterly superfluous, they fulfil no necessary or desirable communicative function’ (Pogarell 1998:32).

Schneider (2007:12) encourages people to:

... unterscheiden zwischen schönen, praktischen Importen... und solchen, die ein pseudo-kosmopolitisches Imponiergefasel sind... ‘decide between beautiful, practical imports... and those which are a pseudo-cosmopolitan drivel to impress...’

The *VDS* holds a similar view in that it declares itself a tempered organisation. It states that it accepts some “useful” anglicisms (e.g. *Slang* ‘slang’, *Interview* ‘interview’, *Trainer* ‘trainer’) but declares others (e.g. *Event* ‘event’, *Highlight* ‘highlight’, *Outfit* ‘outfit’) “unnecessary” (*VDS in Kürze*). Pfalzgraf (2006) mentions the information on this site is contradictory because the *VDS* later includes terms such as *Slang*, *Interview* and *Trainer* in their list of words to be banned. The criteria for the distinction between “good” and “bad” anglicisms in all of the above cases are unclear and arbitrary. There are no clear guidelines presented in the publications of language critics. Therefore, it appears that individual taste is the sole deciding factor in determining the “usefulness” of an anglicism.

Language protection societies are not the only ones who hold views as those presented above. Subtle puristic tendencies also appear in the publications of some linguists. Pfalzgraf (2006) reviewed 38 publications discussing anglicisms by 26 linguists from 1989 onwards. The

majority of linguists who discuss this topic are committed to descriptivism and are not at all interested in the language care and purism cause. They view the influence of English on German as natural change and believe there is no use in trying to prevent it.

However, Pfalzgraf (2006) lists five linguists whose comments, he claims, belong to the discourse of linguistic purism. According to Pfalzgraf, the linguists who express a puristic opinion focus their critique on style and aesthetics. He mentions that in her 1996 dissertation, Bohmann (1996) refers to anglicisms as *Worthülse* ‘word-husks’, meaning that they lack content and are used in an insincere and frivolous way of communicating. She also shares the opinion of Broder Carstensen, who claims there is a “flood of foreign words” that are “permeating” from English into German (Carstensen 1986). More extreme sentiments appear in Fink (1997). He refers to the mixture resulting from the influence of American English as *Germerican*, a combination of *German* and *American* (Fink 1997:12), because it includes the word “Germ” - a reference to the metaphor that anglicisms are a virus infecting the German language. He also considers there to be a “swarm of anglicisms” and “an infiltration of Anglo-American loanwords”.

Drosdowski (1997) calls for the eradication of foreign words when they are used for manipulative purposes, such as in advertising and politics, or for decorative purposes to appear intellectual. He criticises the thoughtless adoption of English terms and the parrot-like imitation of English practised in the mass media. He declares that that leads to an atrocious gibberish. However, he fails to acknowledge that the language of the media and advertising is often deliberately controversial and attention grabbing, regardless of whether anglicisms are used. The media and advertising industries do this with not only foreign words, but also native ones.

In the sections above, I have traced the origins and the nature of the general attitudes towards anglicisms expressed in the public sphere by politicians, media personalities, academics and some linguists. In the following sections, I will investigate some of the most common criticisms of anglicisms in German today. I will discuss the difficulty in determining the number of anglicisms in German and whether German is indeed being “flooded” with them. In addition to this, I will discuss the criticisms that anglicisms cause native words to fall out of use, that they do not integrate into German and that anglicisms are incomprehensible.

2.3.1 The number of anglicisms

The most common opinion of language critics is that there are too many anglicisms in German. Wilss (2001), Hoberg (2000), Drosdowski (1997), Zimmer (1997) and Schneider (2007) are similar in that they list many anglicisms at the beginning of their writing (sometimes over two pages of words) without any indication of source or frequency. Pseudo-anglicisms often feature in such lists, and in particular, anglicisms that are the title of certain products or part of particular events or advertising campaigns. Such words are not part of the general lexicon. Pogarell and Schröder (2000:8) give the example “*Christmas Free and Easy Set*”. A search for “*Christmas Free and Easy Set*” on *Google.de*¹³ yielded only one hit, which was for the book by the two authors. This suggests that this is not a very common phrase. Zimmer (1997:22-23) includes “*Popchor-Night*” ‘Pop-choir Night’, which refers to the name of a particular event where a choir sang popular songs. He also refers to “*Funny-Land*” the name of a childcare/play centre. Critics such as Pogarell and Schröder (2000) and Zimmer (1997) still focus on these anglicisms, despite the fact that many of them are used only for

¹³ February 16, 2011

one special occasion or are trademarked names and as such never become part of the core lexicon.

Hoberg (2000:311) gives an exaggerated example of the anglicisms which may appear in everyday life:

Wir schlüpfen morgens easy in unseren Slip, unser T-Shirt oder unseren Body, breakfasten bei McDonald's, lunchen im nächsten Fast-food, holen uns Bier im Sixpack und zu unserer Verschönerung eine Moisture Cream im Body Shop, gehen zum Hair Stylist, informieren uns am Service Point, fahren mit unseren Kids im InterCity, sitzen am Computer, am Scanner oder am Laptop, betätigen uns als Online-Surfer, bezahlen für unsere CityCalls, RegioCalls oder GermanCalls - und die Jungen unter uns finden das meist cool oder die älteren meist nicht o.k.

'In the morning, we easily slip into our briefs, our T-shirt or our bodysuit, breakfast at McDonald's, lunch in the nearest fast food restaurant, get ourselves some beer in a six-pack and some moisturising cream at Body Shop to make ourselves beautiful, go to the hair stylist, receive information at the Service Point, catch the InterCity (train) with our kids, sit at the computer, at the scanner or at the laptop, be an online surfer, pay for our CityCalls, RegioCalls or GermanCalls - and the young ones amongst us mostly find that cool or the older ones mostly not o.k.'

In this text of 84 words, 27 (32%) are anglicisms. This gives the impression that anglicisms occur in everyday life in great number. However, Hoberg does not mention how often such words appear (i.e. the token frequency), giving a misleading impression of the impact of anglicisms. Furthermore, Hoberg does not take into account that many terms such as *McDonald's*, *Body Shop*, *Service Point*, *CityCalls*, *RegioCalls*, *GermanCalls*, and so on, refer to either the names of businesses or their specific products. *McDonald's* and *Body Shop* are the names of foreign-owned franchised businesses. *Service Point* is the information counter unique to the German Railway *Deutsche Bahn AG*, a joint stock company. The telephone

company *Deutsche Telekom AG* used to label their calling rates as *CityCalls*, *RegioCalls* and *GermanCalls*. Although they do indicate some penetration of English into German, they are not generic terms in the German language. They are proper nouns with specific reference.

Busse (1993), Kettemann (2003), Langer (1996), Onysko (2007) and Plümer (2000) indicate that between 0.6% and 3.5% of the German lexicon has an English origin. Kinderling (1795) was the first to tally the number of anglicisms in German. His list contained only 20 items. Dunger's (1899) publication listed 148. Ten years later, in his second publication on the topic, he listed 900 (Dunger 1909). Studies that are more recent cite a much higher number. Kettemann (2003) estimates that approximately 1% of German's 500,000-word lexicon is based on English. Using the *Anglizismen-Wörterbuch (AWb)* (Carstensen & Busse 2001) as a starting point, Kettemann calculated that there are up to 5,000 anglicisms in total. This number is similar to Plümer's (2000) 0.6%, Onysko's (2007) 1% and Langer's (1996) 1% observed in their studies of anglicisms in the news media.

Kirkness (2001) estimated that 63% of words entering German between 1966 and 1997 were Greco-Latinisms, and that 11% were anglicisms. Körner (2004) analysed the *Duden: Herkunftswörterbuch* of 2001, which documents the etymology of words entering German between the 8th and 20th centuries. He notes that out of 16,781 words in the dictionary, 68.75% were of German and 31.25% of foreign origin. The language providing the largest number of words (12.1%) was Latin. French had 8.5%, Low German had 3.2% and English had 3%.

Busse (1993) offers another account of the number of anglicisms in German. He analysed the anglicisms in the editions of the *Duden* spelling dictionary from 1880 to 1986. In the first

edition, 1.36% of the 28,300 headwords were labelled “from English” or were partial loan translations. By 1986, that number had grown to 3.46% from 108,100 lexemes or 2% if single lexemes (that is, no partial loan translations) are included. Although the results of these analyses above vary, they all indicate a small number of anglicism types in German.

However, it is impossible to determine the exact number of anglicisms in German accurately using a corpus or any collection of language data because of several factors, such as the following:

1. The publication or collection date of sources is restrictive. Dictionaries are limited in that they contain words up to the time of publication only, and may be updated infrequently. Similarly, corpora contain words up to the date of collection only. However, online editions or sources may be subject to more frequent updates, mitigating this problem;
2. Language in the public sphere is different to language used in private. Many anglicisms appear only in specialist domains, or in certain fields such as in advertising (Busse 1999; Glahn 2002), but people rarely use the same vocabulary as that used in advertisements (Kettemann 2002). A study to determine the number of anglicisms in German would have to contain data from all domains and both public and private spheres. Only then could we consider whether some anglicisms are part of everyday German;
3. Some anglicisms may only be popular for a limited time, never appearing in dictionaries; and
4. The term *anglicism* has various definitions. The exact definition of *anglicism* is contentious and affects the number of anglicisms included in any given study.

My data set also indicated a minimal impact of anglicisms on the German lexicon. My data set derives from a combination of three corpora of spontaneous speech from the *Bayerisches Archiv für Sprachsignale* ‘Bavarian Archive for Speech Signals’ and the *Institut für deutsche Sprache* ‘Institute for German Language’. It contains nominal anglicisms with discernable gender and plural marking in the nominative and accusative cases. These nouns constitute 0.7% of all word types, 0.3% of all word tokens or an estimated 2% of all noun tokens. (See Chapter 3 for a detailed description of my data set analysed in this study.) However, there are some points to note when considering this figure. First, I included nominal anglicisms only in this study because these constitute the most common word class of anglicism (Glahn 2002; Langer 1996; Onysko 2007; Plümer 2000). Second, I excluded loan translations because they contain no English word material. I included partial translations only if the head element in the compound noun is of English origin. This means the totals presented here may be smaller than the ones presented in studies that include these noun types and include all word classes of anglicism.

The difference in spelling conventions when compiling my data set influences the number of items. The *Deutsch Heute* corpus follows the spelling reform rules introduced in 1997, whereas the *Regional Variation of German I* and *Hempels’ Sofa* corpora follow the pre-reform rules. The result is that some words appear as two words under the new rules (e.g. *Rad fahren* ‘to ride a bicycle’) but appear as one word under the old rules (e.g. *radfahren* ‘to ride a bicycle’). Furthermore, because the corpora contain spontaneous spoken data only, they include performance-related features that affect the word count, such as false starts:

AAC1_IV_k [248]: *das ist ja ich weiß nicht das gibt’s glaub ich in jeder Stadt* ‘that is yeah I don’t know there is one I think in every town’ (*Deutsch Heute Corpus*)

and repetitions used for emphasis:

GSK6_IV [503]: *ja ja ja ja ja* ‘yes yes yes yes yes’ (*Deutsch Heute Corpus*).

Busse (2008) claims that it is impossible to make statements pertaining to the number of anglicisms in the whole language. However, as the studies mentioned above indicate, the frequency of nominal anglicisms in everyday spoken German is still minimal.

The number of anglicisms may appear to be greater than it actually is. The first reason for this relates to the frequency of some words. For example, the singular root *Computer* ‘computer’¹⁴ appears 614 times in my data set of anglicisms. The fact that *Computer* has so many tokens may give the impression that there are many more anglicism types in German than there actually are.

Another reason that anglicisms may seem numerous is that there is a difference between the ‘prestige’ of spoken and written German. People pay more attention to the prestige of written language and may have conservative opinions towards it (Linell 2005). This means that when someone reads a newspaper or a magazine and sees anglicisms written on the page in front of them, it could be a further cause for them to think that German is being “flooded” with anglicisms. This may also occur with written advertising, shop signs and product labels. Anglicisms feature more heavily in these contexts, and because people are exposed to these contexts frequently, this gives an exaggerated impression that anglicisms are a large part of the language. Because language critics see anglicisms in the written form (very rarely do language critics refer to the use of anglicisms in spoken language), they pay more attention to them than they would have in the spoken language.

¹⁴ *Computer* ultimately comes from Latin and many other anglicisms are Greco-Latinisms from the point of view of English. However, *Computer* is considered an anglicism in German because it comes via English and has retained its English pronunciation.

2.3.2 The replacement of native words

Another view that many language critics and lay commentators hold is that the greater the number of anglicisms German takes on, the greater the number of native words ousted or forgotten. As a result, many self-appointed language protectors such as Pogarell and Schröder (2000) list anglicisms with suggested native equivalents. Some of these equivalents are not truly synonymous, though. For example, Paulwitz and Micko (2000:44) claim that the adjective *cool* ‘cool’ is displacing as many as 18 words:

kühl, ruhig, nüchtern, gelassen, gleichmütig, entspannt, lässig, nervenstark, kaltschnäuzig, besonnen, beherrscht, überlegen, spannend, aufregend, toll, stark, geil, spitze.

However, they fail to acknowledge that *cool* has a meaning beyond their suggested synonyms. They also fail to provide any evidence to support their claim that these words are falling out of use or indeed, if they are dropping out of use, whether the loan *cool* is associated with this loss.

Other suggested replacements are unsuitable. Niehr (2002:6-7) demonstrated this when he substituted the anglicism *Kids* ‘kids’ with *Kinder* ‘children’, *Kleine* ‘little ones’, *Jugendliche* ‘adolescents’, *Gören* ‘brats’ and *Rangen* ‘hoodlums’, as recommended by the VDS. Niehr inserted each of these into an article from the *Frankfurter Allgemeine Zeitung* newspaper (dated 08.12.1998) about how small, cheap and compact hi-fi systems have replaced large, bulky and old-fashioned ones. He took the example sentence “*Die Kids in der Familie haben nur noch wenig Sinn für HiFi der behäbigen Art*” and replaced *Kids* as suggested, creating the sentences in (1):

- (1) a. The children in the family do not know much about bulky hi-fis.
- b. The little ones in the family do not know much about bulky hi-fis.

- c. The adolescents in the family do not know much about bulky hi-fis.
- d. The brats in the family do not know much about bulky hi-fis.
- e. The hoodlums in the family do not know much about bulky hi-fis.

Not all of these suggestions are absolute synonyms for the term often used in advertising to refer to children or teenagers. The limited examples above of *cool* and *kids* demonstrate that anglicisms do not simplify the German lexicon by replacing groups of native words. Instead, they can add to the vocabulary and provide further shades of meaning. A language is not a finite receptacle. When a new word enters a language, it does not mean that an existing word must be removed in order to create space for it. The language critics who claim that anglicisms are replacing existing words fail to acknowledge this.

2.3.3 Anglicisms and integration

As discussed in Section 1.5, almost all anglicisms integrate into the morphological system of German. This is also true for the phonological system. The critics' opinion to the contrary has no supporting evidence. As a proponent of such an opinion, Pogarell (1998:30-31) holds the view that German has lost the ability to integrate foreign words. He also claims that "*Englische Ausdrücke werde so englisch wie möglich ausgesprochen und geschrieben*" ('English expressions are pronounced and written in as English a manner as possible') and expresses the opinion that only seldom does the German grammar show areas of stability, such as in the conjugation of verbs. However, there is no evidence to support this claim. In fact, Eisenberg (1999) refutes this and maintains that the majority of Germans pronounce anglicisms with a German accent, thus showing the phonological integration of those anglicisms. Zimmer (1997:23) claims that English words in German sentences cause confusion in regard to their pronunciation because one has to switch between English and German pronunciation, which Zimmer calls "Code-Mixing". However, it is difficult to

imagine that the average German speaker would know the “proper” English pronunciations (also, which particular English accent?). Further, there is no reason given why someone would want to pronounce anglicisms in an English way.

2.3.4 Anglicisms and incomprehensibility

A further claim that language critics such as Paulwitz and Micko (2000), Drosdowski (1997), Pogarell (1998) and Pogarell and Schröder (2000) make is that anglicisms impede understanding. As with many opinions voiced by language critics, the evidence provided is anecdotal or based on personal experience only. Pogarell and Schröder undertook a survey to support their view that anglicisms in product instructions for electronic goods cannot be understood. For their survey, the authors chose 12 people and asked them to name the part of a particular electronic device at which they were pointing.¹⁵ They claim that only four of the 12 knew the correct word *Display* ‘display’ as used in the instructions. Their conclusion was that the anglicism should not be used in operation instructions because people do not know the term.

This is poor support for their point of view for various reasons. First, the sample size of 12 people recruited on site at a university is too small to make any generalisations. Second, they relied on the participants’ productive use of language, not comprehension. The participants may have understood the word *Display* had they seen it in written form. Third, three people had no idea of what to call the display and five of the 12 showed hesitation in labelling it with an English or German term, e.g. “*Ich glaube Anzeigefeld oder so ähnlich*” ‘I think display panel or something like that’ (Pogarell & Schröder 2000:188). What this does indicate is that the question of whether this item has an English name is irrelevant. Instead, it indicates that a

¹⁵ The authors do not state what electronic device they used.

display on an electronic device belongs to a domain of specialist/technical terminology that was unfamiliar to the participants.

Hofmann (2002) undertook a much larger survey to provide evidence that anglicisms are incomprehensible to average people. He enlisted 620 participants and asked them to provide the meanings for a sample of 16 nominal anglicisms taken from the *Süddeutsche Zeitung* and to state whether they considered the nouns useful, unnecessary or incomprehensible. Hofmann's main conclusion is that an average of 20% of the population does not understand even common anglicisms. He pointed out that the more educated the participants were, the more they understood the anglicisms. In addition, the younger participants understood the test anglicisms more than the older participants did. The proportion of younger and more educated groups who were of the opinion that anglicisms were useful was larger than the proportion of the older or less educated groups.

There are many issues with Hofmann's survey. First, he presented the anglicisms to the participants in isolation. Not including the context in which the nouns appeared may have limited the comprehension of lesser-known or unfamiliar terms. This is especially true in the cases where a definition of the anglicism appears within the same sentence in the original text, for example "*Vor sechs Wochen hat er sich ein Kickboard gekauft, eine Art moderner Tretroller*" 'Six weeks ago he bought himself a *kickboard*, a kind of modern scooter'¹⁶ (Hofmann 2002:239). Some participants may have not understood the noun *Kickboard* because it was presented in isolation, and thus they may have expressed a negative opinion of it. However, had the nouns been presented in context, certain clues (and in this case, the

¹⁶ The noun *Kickboard* in German most commonly refers to a modern kind of scooter. It may also refer to the foam board used as a flotation device while swimming, but this meaning is less common.

definition) would have indicated their meaning. Thus, the participants would have been less inclined to express a negative attitude.

A further issue with the survey is that not all participants may have known all anglicisms simply because they are from a semantic domain unfamiliar to them. This is unrelated to the foreign origin of the nouns. For example, Hofmann claims that 40% of the people in the 15-20 age group did not know what a *Park and Ride* was. He attributes this lack of knowledge to the fact that the phrase is an anglicism. However, what the issue may be here is that people of that age may have never been exposed to, or needed to know of the concept of a *Park and Ride*. It is easily imaginable that people under the age of 18 (i.e. the youngest age one can hold a driver's licence in Germany), may have never needed to know or use a car park designed for commuters with a connection with public transport.

Lack of conceptual knowledge could also explain Hofmann's findings for the oldest age group who participated in the survey. Hofmann claims that the knowledge of anglicisms in the list by people over 60 is "*erschreckend gering*" 'shockingly low' (2002:242). He does not consider that people of that age group may not need to know what *E-Commerce* 'electronic commerce' or *Homebanking* '(electronic) home banking' are, or what a *Green Card* 'temporary work permit for foreigners' or *Kickboard* are. Their daily lives may not involve such concepts, regardless of whether they are expressed in English or German.

Hofmann noted a strong correlation between the education of the participants and their understanding of anglicisms. Hofmann seems to conclude that the more English people know the more anglicisms they know. However, this may not be the case necessarily. It could simply mean that the more education someone has, the more likely their lifestyles will lead

them to encounter aspects of modern and popular culture (the domains from which the sample anglicisms derive). Furthermore, the more educated somebody is, the greater their general vocabulary is likely to be.

Hofmann's survey is a poor indicator of anglicism comprehensibility. There is nothing intrinsically difficult about acquiring new vocabulary, regardless of whichever language the word in question comes from. The inability of some speakers to understand a word out of context is unrelated to the word's origin and does not mean it cannot be learned. In addition, it would be impossible to claim that every native noun in the German language is familiar to all German speakers and that they are able to provide a definition for every single one, especially for specialist or technical terminology (Hoberg 2006). As Barbour (2001) states, people continue learning new vocabulary throughout their lives. Thus, anglicisms can be learned as well as native terms.

2.3.5 Use of evidence in language critical discourse

One of the many features publications by language critics have in common is that they contain a majority of anecdotal evidence, personal stories and unreferenced statistics. They do not include substantiated claims or balanced views. For example, Hoberg (2000:308) provides an anecdote of being in an aeroplane that had just landed at six o'clock in the evening. His complaint is that the German-speaking flight attendant,¹⁷ who made an announcement in English then in German, said *good night* in both languages. In German, the use of *good night* is usually restricted to when someone is about to go to bed for the night and should not be said at 6 pm. Hoberg claims that this is evidence of English influencing

¹⁷ He uses the anglicism "*Stewardess*".

German. However, this example could be analysed in terms of register, a style of language use typical of the aviation profession, rather than in terms of language change.

The studies that report findings of negative attitudes towards the influence of English among German speakers are methodologically very weak. For example, Pogarell and Schröder (2000:16) claim that

Jede Umfrage zeigt, dass die Mehrheit der deutschsprechenden Menschen die Anglisierung nicht will, nur eine sehr kleine Minderheit findet die Wortmischerei gut. ‘Every survey shows that the majority of German-speaking people do not want anglicisation, only a small minority finds the mixing of words good.’

It is not clear to which surveys they refer. As a result, such statements do not form part of an academic discussion of attitudes. In a similar vein, Schneider (2007:11) asserts that “*Rund 60 Prozent der Deutschen können gar nicht Englisch*” (‘About 60 percent of Germans speak/understand no English at all’) and “*So jedenfalls eine typische Antwort auf eine repräsentative Umfrage*” (‘At least that is what a typical answer to a representative survey is’). Schneider provides no indication of how “representative” the sample of people who participated in the survey was or any other details at all. This use of unreferenced statistical data combined with anecdotal evidence is typical of language-critical discourse. Because of this, the views expressed in such publications cannot be considered representative of the average German-speaker. Alongside these studies on the attitudes towards anglicisms, some impartial ones do exist and these are discussed in the following section.

2.4 The current response to anglicisms - the general public

Corr (2003), Schmidlin (2008) and Stickel and Volz (1999) offer a more academic approach to the study of the attitudes of German-speakers towards anglicisms.

In Corr's (2003) survey, participants expressed their attitudes towards a collection of anglicisms from a printed magazine on computing technology in German. The results of this survey show no clear preference among the respondents for or against the use of anglicisms. Corr (2003) placed a webpage questionnaire on university websites and she recruited her subjects by sending them a message by e-mail with a link to it. This method of collecting information, although certainly quick and convenient, limits the range of informants since not everyone has access to the internet and an e-mail account. She does not disclose which particular university websites she used or how she obtained access to the participant's e-mails. Corr (2003) asked for the informants' age, education level, gender and knowledge of English. She also asked for the informants' opinion about anglicisms, giving example attitudes to choose from and provided the opportunity for the respondents to express themselves in an open-ended question. She provided a whole text containing anglicisms, but did not provide a list of these anglicisms. Instead, the informants were to (a) identify the anglicisms in the text, (b) state whether the anglicisms make the article easier to understand, and (c) state if they did not understand any of them. In addition, the informants were to identify which anglicisms they personally use and whether using German equivalents would alter their understanding of the text.

The results are not indicative of the feelings of the German-speaking population of Germany as Corr did not employ random sampling and only received 50 valid responses. Corr's most populous age group fell in the 31-40 category. The method of recruitment, via the internet,

may have influenced this result. In sum, the respondents generally agreed that languages change over time and borrowing is part of that change, and expressed neither strongly positive nor negative attitude towards anglicisms.

Schmidlin (2008) also undertook a survey on language attitudes using an internet questionnaire. The respondents to this survey showed a more positive opinion towards anglicisms compared to those in Corr's (2003) survey. Schmidlin's survey has an advantage over Corr's because Schmidlin presents her results divided into regions within Germany, Austria and the German-speaking area of Switzerland. Similar to Corr (2003), Schmidlin (2008) does not use a representative sample.

Of the 88 questions in total, Schmidlin (2008:257) asked two questions directly about the use of anglicisms in Standard German. They were as follows:

1. *Finden Sie, dass im Deutschen immer mehr englische Wörter verwendet werden?* (Bsp. «Zeitlos schönes Design mit natürlichem Touch») 'Do you think that more and more English words are being used in German? (e.g. "Timeless beautiful design with natural touch")'; and
2. *Finden Sie, dass der Gebrauch von englischen Wörtern im Deutschen vermieden werden sollte?* 'Do you think that the use of English words in German should be avoided?'

The respondents provided their answers on a scale from 1 to 4 ('no', 'mostly disagree', 'mostly agree' and 'yes'). 'No' had a value of 1 and 'yes' had a value of 4.

Schmidlin does not provide averages for each country individually, but she states that values for all countries in answer to the first question lie on average between 3.41 and 3.56 out of

four. In other words, most respondents were of the opinion that the number of anglicisms in German is increasing. Schmidlin states that the German respondents overall expressed the strongest agreement with the question. Interestingly, the responses varied across regions within Germany. Table 5 shows the results of her survey, divided between areas within Germany and Austria, and the German-speaking area of Switzerland.

Value out of 4, increasing	Increase in anglicisms (Question 1)
↓ 3.25	Austria - west
↓	Austria - east
↓	Germany - northeast
↓	Switzerland
↓	Germany - central-west
↓	Germany - south-west
↓ 3.5	Germany - northwest
↓	Germany - southeast
↓	Austria - central
↓	Austria - southeast
↓ 3.79	Germany - central-east

Table 5: Agreement that the number of anglicisms is increasing, based on region. Adapted from Schmidlin (2008:258).

The responses from Germany are in bold. Key: 1=no, 2=mostly disagree, 3=mostly agree, 4=yes

The respondents from the central-eastern area of Germany (the states of Thuringia, Saxony and some parts of Saxony-Anhalt, which were all part of the former German Democratic Republic) felt the strongest among all respondents that the number of anglicisms is increasing, giving a value of 3.79 out of 4. In contrast, respondents from the other former GDR states of Mecklenburg-Vorpommern, Brandenburg, Berlin and the remaining parts of Saxony-Anhalt (grouped together as ‘Germany - northeast’), believed to a lesser degree than respondents from other areas in Germany that the number of anglicisms is increasing. However, the difference is still within a small range of values.

Among all the respondents, the ones from the central-east area of Germany also expressed the strongest opinion that anglicisms should be avoided, as the figures in Table 6 illustrate. However, a value of 2.9 out of four suggests that this belief is moderate rather than strong. Out of all respondents, the ones from the northwest of Germany expressed the least opposition to anglicisms as indicated by the value of 1.86.

Value out of 4, increasing	Avoid the use of anglicisms (Question 2)
↓ 1.86	Germany - northwest
↓	Austria - west
↓	Austria - central
↓	Germany - northeast
↓	Germany - central-west
↓	Switzerland
↓	Austria - east
↓	Germany - southeast
↓	Germany - south-west
↓	Austria - southeast
↓ 2.91	Germany - central-east

Table 6: Agreement that anglicisms should be avoided, based on region. Adapted from Schmidlin (2008:259).

The responses from Germany are in bold. Key: 1=no, 2=mostly disagree, 3=mostly agree, 4=yes

In general, the respondents from the central-eastern area of Germany expressed the most negative opinions towards anglicisms. Although all of this area belonged to the former East Germany, there are no grounds for a generalisation that people from the former GDR are more negative in their attitudes towards anglicisms than former West Germans are. Some of the former East German districts are included in the northeast area in Schmidlin's study and, as Table 5 and Table 6 suggest, respondents from this part of Germany displayed positive attitudes. Schmidlin's geographic division is problematic because she also included the city of Berlin in the northeast area, which may have affected the results. She proposes that because Berlin is an urban area, its inhabitants would be more open to anglicisms than the other states, which are less densely populated. Furthermore, she did not differentiate between East and West Berlin, so people who grew up in West Berlin, but live in the geographical

East (according to Schmidlin's geographical division of the country) may have expressed different attitudes towards anglicisms than people who grew up in East Berlin.

For the purposes of the present study, the main issue is that Schmidlin does not present the exact scores for each country or area within Germany. Instead, she provides only the lowest and the highest values (with an additional value given in Table 5) and positions the areas, without the actual scores, on a continuum between the two. Therefore, averages for Germany as a whole country, separate to the others, cannot be calculated, nor can all the different regions within Germany be compared with each other individually.

In sum, despite its methodological weaknesses, the results from Schmidlin's survey clearly showed that people across Germany agreed strongly that there is a growing number of anglicisms in German. However, there was only a moderate agreement that they should be avoided.

Stickel and Volz (1999) report on a survey of over 2,000 participants about attitudes towards the German language. The survey included participants from all areas of Germany, aged 18 to over 60, and from all education backgrounds and social strata. Stickel and Volz concluded from this survey that the general population is neither for nor against the use of anglicisms. Instead, the results showed that under half of the sample thought that the language changes they had experienced recently were either bad or very bad. When asked to give examples of the changes, most of those who reported a dislike for the changes cited the general concept of anglicisms or gave specific examples of anglicisms. This dislike did not stem from lack of comprehension or the perception of anglicisms as disturbing. Instead, it stems from a

judgement of the perceived motives of the people who use them and their symbolic quality of “foreignness”.

Records of positive attitudes towards anglicisms are rare. Busse (2008) draws attention to the comments of German journalist and author Klaus Harpprecht (2002). In his acceptance speech for a media prize for language cultivation, Harpprecht refers to anglicisms as having enriched the German language. Busse quotes the section in which this comment appears as an example of a positive attitude towards anglicisms. However, what he does not comment on is Harpprecht’s use of language, which Pfalzgraf (Pfalzgraf 2006, 2009) would label as negative and puristic. Harpprecht uses the metaphor of water common to language critics and calls the current influence of English a “*Welle der Anglizismen... die uns derzeit überflutet*” (‘wave of anglicisms that is flooding us at the moment’ (Harpprecht 2002:96)). He also states that the German language “endured” the “overgrowth” of French in the past, and suggests that German will do the same with English (2002:96). Although he has a positive attitude towards foreign language influence, Harpprecht describes it in terms used by language critics who disapprove of anglicisms.

In sum, a division exists in the modern response towards anglicisms. The German public is aware of the publicised debate over anglicisms. However, the majority of it does not express overt negative opinions towards them. The most vocal group is the language critics, with their claims that anglicisms are destroying the German language, and thus the German culture. However, this group is in the minority.

2.5 Conclusion

The movement to free the German language from foreign influences has a long history. Language societies, public figures and purists have been active and vocal about the state of the language for a long time. It appears that, when it comes to the lexicon, their work has heightened the public's sensitivity to foreign words and has brought about changes in the use of anglicism in some domains. Evidence that the purist movement has had some success is that in 2010, the German Minister for Transport, Peter Ramsauer, prohibited the use of 111 anglicisms in his ministry, according to *Spiegel Online* (mmq/dapd 2010). In an article by Fischer (2010) in the same magazine, Ramsauer is quoted as saying the he wants to remove the “*unnötige Anglizismen*” (‘unnecessary anglicisms’) such as *Flipchart* ‘flip chart’, *Beamer* ‘data projector’, *E-Mail* ‘e-mail’ and *Team* ‘team’, which he refers to as “*kauderwelsch*” (‘gibberish’) and replace them with *Tafelschreibblock*, *Datenprojektor*, *elektronische Nachricht* and *Gruppe*. His decision also includes changing the anglicisms used by the German Railway *Deutsche Bahn*, which, as a company, has been heavily criticised by many language critics (e.g. Drosdowski 1997; Pogarell & Schröder 2000; Zimmer 1997).

However, there seems to be no need for such a reaction. The number of anglicisms in the German language is overall small, although some domains have more of them than others do. In linguistic terms, German is not endangered. There are over 100 million native speakers of German and approximately 20 million people learn it as an additional language (Eisenberg 2006). The current response to anglicisms has political and cultural underpinnings. The language critics mentioned in this chapter have in common a prescriptive nature. They comment on the anglicisation of German and criticise general changes in the language. They do not seem to acknowledge that language change is an unstoppable phenomenon. Anglicisms are not simply empty words permeating German like a virus. They fill an obvious

gap in the lexicon, even if that gap is a stylistic one. All evidence points to the fact that the impact of anglicisms on German has been small. Despite the fact that language-critics have expressed negative views within the public sphere and voices in defence of anglicisms are few, the majority of the German population seem to have expressed an equal amount of negative and positive opinion towards anglicisms.

Chapter 3. The corpora

In this chapter, I will describe the corpora that provided the anglicisms for this study and the process of identifying and refining my data set of nominal anglicisms. The corpora, two of which were obtained from the *Bayerisches Archiv für Sprachsignale* (Bavarian Archive for Speech Signals) and one from the *Institut für deutsche Sprache* (Institute for German Language), are of everyday spontaneous spoken German. Combined, the three corpora contain speech samples from over 4,700 participants, with 66,381 word types (lexemes) and 2,169,178 word tokens. The participants ranged in age from 9 to over 90 and were from Germany, Austria, Liechtenstein, Luxembourg and the German-speaking areas in Switzerland, northern Italy and eastern Belgium.

An important feature of this thesis is the analysis of spoken language data. As noted in Chapter 1, most studies of anglicisms have focused on the language of magazines or newspapers. Such written language is under the influence of various factors that may affect the frequency and use of anglicisms. These factors include adherence to the standard or journalistic styles, or the more careful selection of words and the editing process. Therefore, as Onysko (2007) states, written language appearing in the print media is more deliberate and monitored than spontaneous spoken language. Additionally, an inherent characteristic of many written genres is that they contain much higher frequencies of otherwise extremely low frequency terms, especially within technical documents (Busse 2008).¹⁸ Analysing spontaneous spoken language reduces these factors. Because of its primary nature, people are more likely to encounter spoken language much more frequently and in greater quantity than written language. As Linell (2005:19) notes, spoken language is the “dominant channel of

¹⁸ For a discussion regarding the difference in spoken and written language contact in Scandinavian languages, see Graedler and Kvaran (2010), and Svavarsdottir, Paatola and Sandøy (2010), who indicate a large difference between the number of anglicisms in spoken discourse when compared to written texts.

communication” in both people’s professional and private lives, and as such, is the basis upon which written language is dependent. As a further consequence of the primacy of spoken language, evidence from written language is of lesser evidentiary value when studying the effect of loanwords on a language. Studying anglicisms in spoken German therefore provides a better representation of the influence that English has on German.

3.1 *Bayerisches Archiv für Sprachsignale*

Founded in 1995, the BAS is part of the Institute of Phonetics and Speech Processing at the Ludwig-Maximilian-University of Munich. The BAS creates digital databases of spoken German for research and commercial purposes. The main goal of collecting and processing data is to develop a “complete phonetic theory of spoken German” (Schiel 1995:5). With a combination of public and private funding, the BAS has collected a large assortment of corpora of read and spontaneous speech, two of which feature in this study.

3.1.1 Corpus 1 - Regional Variants of German 1 (RVG1)

The RVG1 project documented the variation in spoken German across Germany, Austria and the areas in Switzerland and northern Italy where German is spoken. The project, undertaken between 1995 and 1998, played a role in the development of speech recognition systems and speech synthesis. The corpus used in this project contains 12,451 word types and 125,411 word tokens from 498 participants who each gave a one-minute spontaneous monologue about their work activities of the previous week. To achieve naturally occurring speech, the participants were to speak as if they were talking to someone from their own region. The register of dialects in König (1989) was used as a guide in dividing the dialect areas. However, the dialects König mentions that were no longer spoken were deleted, areas with small populations were merged with larger ones and very large areas were subdivided. As a

result, nine main dialect regions, divided into 36 sub-regions (see Table 7 and Figure 1), appear in the corpus. The number of the participants in the corpus is representative of the population density of the various areas studied.

RGV – cluster	Name of dialect region	Inhabitants / percent
A	1. Niederfränkisch	
A2	Niederrheinisch	7.95
B	2. Westniederdeutsch	
B1	Schleswigisch	0.98
B2	Holsteinisch	3.67
B3	Nordniedersächsisch	4.31
B4	Westfälisch	4.77
B5	Ostfälisch	4.22
C	3. Ostniederdeutsch	
C1	Mecklenburgisch	1.93
C2	Märkisch, Nordmärkisch, Mittelmärkisch, Südmärkisch	1.87
C3	Brandenburgisch	3.66
D	4. Westmitteledeutsch	
D1	Mittelfränkisch	2.43
D2	Moselfränkisch	1.11
D3	Rheinfränkisch	1.14
D4	Hessisch	6.30
D5	Pfälzisch	2.70
D6	Ripuarisch	4.98
E	5. Ostmitteledeutsch	
E1	Thüringisch	3.64
E2	Obersächsisch	7.86
F	6. Alemannisch	
F2	Niederalemannisch	2.31
F3	Hochalemannisch	2.84
F4	Höchstalemannisch	1.90
F5	Schwäbisch	5.62
G	7. Ostfränkisch	
G1	Ostfränkisch	5.21
H	8. Südfränkisch	
H1	Südfränkisch	2.86
I	9. Bairisch-Österreichisch	
I1	Nordbairisch	1.53
I2	Mittelbairisch, Nordösterreichisch	3.83
I3	Südbairisch, Südösterreichisch	8.42
I4	Tirolisch	1.95

Table 7: Distribution of participants in RVG1 corpus (Burger 1998:2)

Offices in seven locations served as recording sites. Of the participants, 57% were male and 43% female. Table 8 shows the distribution of participants by age. The majority (89%) of the participants had completed a high school degree (see Table 9) and were recruited mostly from

universities or academic sites. Students, “academics” or professors formed 63% of the sample (Burger 1998).

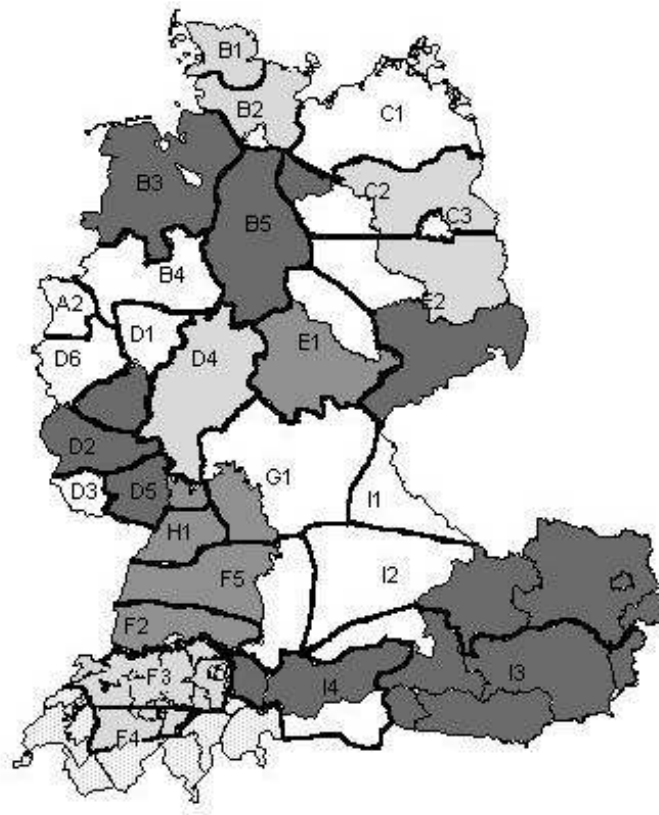


Figure 1: The German-speaking regions included in the RVG 1 corpus.
Heavy lines indicate dialect clusters, the shaded areas show federal states (Burger 1998:2)

Age	Distribution / Percent
9 – 20	8%
21 – 25	37%
26 – 30	29%
31 – 35	11%
36 – 40	4%
41 – 45	2%
46 – 50	2%
50 – 55	3%
56- 60	2%
Over 60	2%

Table 8: Distribution of participants’ ages and their percentages in the RVG 1 corpus (Burger 1998:5)

Educational Level ¹⁹	Percent / Speaker
Abitur	86%
Fachabitur	3%
Mittlere Reife	7%
Hauptschulabschluss	2%
Volksschule	2%

Table 9: Educational level of the participants in the RVG 1 corpus in percent (Burger 1998:5)

The RVG1 corpus forms part of the present study because it contains spontaneous spoken language collected from a broad geographical area. The project, of which the RVG1 corpus is a part, did not specifically focus on the occurrence of anglicisms. In view of this, its use in the present study has some disadvantages. When analysing the influence of a foreign language, not only regional variation, but also social variation as a function of education, occupation, gender and age should come into consideration. The RVG1 corpus is not representative of the language use of the entire German-speaking society because it contains a disproportionate number of participants who are well educated. In addition, the age groups 21-25 and 26-30, at 27% and 29% of the speakers respectively, are overrepresented in the corpus, reflecting again the university and “academic” recruitment locations. On the other hand, the study has slightly more male than female participants (57% male to 43% female). The age range in general, from 9 to over 60, is broad.

¹⁹ *Abitur* – Examinations undertaken at the end of secondary grammar school in order to obtain entrance to higher education

Fachabitur – Similar to the *Abitur* but with a more vocational focus, generally allowing only allowing access to a university of applied sciences

Mittlere Reife – A school leaving certificate obtained after attending five years of secondary school, similar to the British O Levels

Hauptschulabschluss – A school-leaving certificate obtained after attending a *Hauptschule*, a secondary school designed for less academically inclined pupils.

Volksschule – primary or elementary school

3.1.2 Corpus 2 - Hempels' Sofa

The second BAS corpus which I have used takes its name from the German saying “*wie bei Hempels unter'm Sofa*” ‘like at the Hempels’ under the sofa’, meaning something that is untidy, “not dirty, just in its everyday state when one is not expecting visitors” (Draxler 2003:2). The relaxed nature of the spontaneous monologues allows for the collection of as natural speech as possible.

In 2003, the 3,909 participants were recruited by distributing information sheets in a large company, by newspaper advertisements or by using a snowball approach.²⁰ The data collection took place in Germany, Austria and the German-speaking area of Switzerland. The participants telephoned an automated recording program and explained what they had done in the previous hour. They had up to one minute to speak.

The participants were chosen based on age, gender and region, defined by the various federal states or countries (see Table 10).

Dialect area	Participants	Dialect area	Participants
Austria	24	Nordrhein-Westfalen	678
Brandenburg	97	OTHER	75
Berlin	167	Rheinland-Pfalz	194
Baden-Württemberg	431	Schleswig-Holstein	82
Bayern	814	Saarland	47
Bremen	22	Sachsen	223
Hessen	328	Sachsen-Anhalt	95
Hamburg	50	Switzerland	7
Mecklenburg-Vorpommern	70	Thüringen	85
Niedersachsen	354	UNKNOWN	66

Table 10: Dialect areas by federal states/countries in the Hempels' Sofa corpus (Draxler & Schiel 2002:2)

²⁰ Participants were encouraged to recruit their acquaintances to take part in the project.

The corpus contains 12,117 types and 224,002 tokens of words. Of the participants, 50.7% were male, 49.2% female and 0.1% of unknown gender. Their ages ranged from 10 to 95 years (see Table 11). As the figures in the table show, for the Hempels' Sofa corpus the sample is more evenly distributed across age categories than for the RVG1 corpus.

Age	Distribution / Percent
10 – 20	15%
21 – 25	15%
26 – 30	16%
31 – 35	12%
36 – 40	8%
41 – 45	8%
46 – 50	7%
50 – 55	6%
56- 60	6%
Over 60	6%
UNKNOWN	2%

Table 11: Distribution of participants by age group in the Hempels' Sofa corpus

Draxler and Schiel (2002) determined the participant's dialect area by asking him/her to name the federal state in which he/she first went to school and by asking the participant to which dialect region he/she belonged.

The three methods of recruitment led to a wide-ranging group of participants. Nonetheless, without information on their education and occupational status, it is not possible to determine how representative the group is. In terms of analysing the corpus for use of anglicisms, it would have been beneficial to include educational status to determine whether this influences the use of anglicisms.

3.2 *Institut für Deutsche Sprache*

Founded in 1964, the IDS researches and documents modern German language in use. It works with project groups, individual researchers and tertiary institutions, and it is funded by the government, private donations, and its own activities and estates. The IDS contains a library, language archive, documentation, machine-readable text collections and language databanks.

3.2.1 *Corpus 3 - Deutsch Heute Corpus*

The institute's *Deutsch Heute* 'German Today' project is the largest corpus used in the present study, with a total of 41,821 word types (lexemes) and 1,819,765 word tokens. The creation of the corpus was part of an investigation into differences in Standard German in areas in Europe where German is an official language, and an examination of whether dictionaries and grammars reflect actual usage. The project involves participants from 130 locations throughout Germany, Austria, the German-speaking area of Switzerland, as well as Liechtenstein, Luxembourg and in eastern Belgium and South Tyrol, where German is spoken. These locations encompass all areas where German is an officially recognised language, including both densely and sparsely populated areas.

The participants form two age groups, 16-20 and 50-60 years. They were born and had spent most of their lives in the town of the recording, and had at least one parent from the area. All participants were in the process of completing or had already completed their *Abitur* (secondary school certificate). The younger participants were from grammar high schools (*Gymnasien*) and the older participants were from adult education centres (*Volkshochschulen*).

The corpus contains transcriptions of interviews with 315 participants (159 from the younger group, 156 from the older group). The participants in the interviews spoke about their language attitudes, described their own language variety and use and talked about general topics, such as what they did in their spare time. The project was on the analysis of regional variation of Standard German speech, not the use of anglicisms. The project coordinators targeted educated participants in order to obtain samples in the standard varieties of German (e.g. Austrian German, Swiss German, etc.), since the more educated the speaker, the more standard their language use tends to become (Barbour 2005). This fact may affect the frequency of anglicisms, meaning that the corpus is unrepresentative of the entire German-speaking society in this regard.

The fact that regional variations of Standard German (in terms of vocabulary, grammar and particularly pronunciation) was under investigation may have implications for the present study. When participants are put into situations requiring them to speak the standard language (such as in a recorded interview situation), it forces the participants, either consciously, or subconsciously, to pay more attention to their speech than they would in relaxed or informal situations. This may be a shortcoming when analysing language use, as when someone pays attention to their speech, they may be less likely to use anglicisms, preferring more formal, native, vocabulary instead. In addition, situations obliging the participants to speak Standard German may cause some participants to speak in a dialect that is not native to them. For example, if someone speaks Low German as a native language, Standard German would be a second language to him/her.

3.3 Retrieval of Data

In order to create a data set of anglicisms for the present study from the above corpora, I first compiled a word frequency list of all three corpora, using the program AntConc 3.2.1w (Windows) 2007. From these lists, all possible nominal anglicisms were identified, both in singular and plural forms, using the *Anglizismen-Wörterbuch* (Carstensen & Busse 2001) and *A Dictionary of European Anglicisms* (Görlach 2005) as references to create a data set. Not all anglicisms in my data set were to be found in these sources. In the cases where I thought a lexeme was an anglicism but it was not listed in the source, I consulted the *Kluge Etymologisches Wörterbuch* (1989) and *Duden* (2001) to confirm its origin. Some anglicisms are not in any of the above-mentioned books. However, if they were identifiable using the criteria outlined in Chapter 1, they were included in the analysis. My data set contains singular nominal anglicisms for the gender analysis and plural anglicisms for the pluralisation analysis. The details of this data set are below.

3.3.1 The anglicisms in the gender analysis

The words selected for the gender analysis are each a nominal anglicism whose gender is clearly discernable. A noun's gender is clearly discernable when it appears with the definite article in the nominative or accusative case, or with the indefinite article in the accusative case and/or with an adjective that indicates gender. The masculine and neuter genders are not distinguishable in the genitive and dative cases and the indefinite article does not distinguish masculine from neuter in the nominative. For example, the genitive phrases *des netten Mannes* (gen. masc.) 'of the nice man' and *des netten Hauses* (gen. neut.) 'of the nice house' utilise the same definite article and adjectival ending. This also applies in the dative, for example, *dem netten Mann* (dat. masc.) 'to the nice man' and *dem netten Haus* (dat. neut.) 'to the nice house'. Although the gender of feminine nouns in the genitive and dative cases is

distinguishable from the gender of non-feminine nouns, feminine nouns in the genitive and dative were excluded from the analysis to prevent any disproportionate representation (see Section 4.1).

Compound nouns in German are right-headed and the head element determines the gender of the noun. Compounds whose heads are anglicisms are treated in the present data set as simple nouns. For example, *Job* ‘job’, *Ferienjob* ‘holiday job’, *Teilzeitjob* ‘part-time job’ and *Zweitjob* ‘second job’ appear in the corpus as the type *Job* only. If there are two compound nouns with the same head, they are treated as one type. If a compound noun appears with an anglicism as its head without the simple form, the compound is kept as is. Furthermore, variation in spelling is observable in the corpus. For example, *E-Mail* ‘e-mail’ has as variants *Email*, *E-Mail*, *E-mail* and the shortened form *Mail*.²¹ I have included all the variants under one type, the standard spelling *E-Mail*. (See Appendix A for the nominal anglicisms in singular form in my data set.)

3.3.2 The anglicisms in the pluralisation analysis

My data set includes all the plural anglicisms in the three corpora. Syntactic analysis determined the case and gender of each anglicism. Analysing the syntactic context in which an anglicism appears is important in determining whether a given occurrence is singular or plural. For example, nouns ending in *-er* typically take the *-Ø* plural marker. *Computer* takes *-Ø* and therefore does not change form between the singular and plural. Syntactic and morphological clues such as the plural definite article *die* and verb forms (e.g. *sind* ‘are’) indicate plurality of the noun, for example, *der Computer ist schwarz* ‘the computer is black’ versus *die Computer sind schwarz* ‘the computers are black’.

²¹ To my knowledge, there is no separate anglicism *Mail* referring to postal mail.

Only plural nouns in the nominative and accusative cases appear in my data set. The rationale behind this was to make the plural analysis comparable to the gender marking analysis. Another reason for the exclusion of the other cases is that almost all plural nouns in the dative case end in *-(e)n*. Thus, excluding nouns in the dative gives a clearer picture of the variations in plural marking. It should further be noted that there are two exceptions to the rule of adding *-(e)n* to plural nouns in the dative. The first is that nouns ending in a full vowel take the plural allomorph *-s* in all cases, including the dative. The second exception concerns the nouns which take the plural allomorph *-(e)n* in the nominative and accusative. These nouns do not take a further *-(e)n* in the dative plural. Such nouns in the dative, along with those in the genitive, are not included in my data set. This is exemplified in Table 12.

Singular	Nominative Plural	Dative Plural	Gloss
<i>der Stift</i>	<i>die Stift-e</i>	<i>den Stift-en</i>	‘pens’
<i>das Schaf</i>	<i>die Schaf-e</i>	<i>den Schaf-en</i>	‘sheep’
<i>die Tasche</i>	<i>die Tasche-n</i>	<i>die Tasche-n</i>	‘bags’
<i>das Auto</i>	<i>die Auto-s</i>	<i>den Auto-s</i>	‘cars’

Table 12: Nouns in the singular and plural forms in both nominative and dative cases

I also excluded certain types of nouns from the plural analysis. The first type involves compound nouns. In German, plural markers appear only on the head of a compound noun, that is, the right-most element, for example, the *-s* added to *Vokabeltests* ‘vocabulary tests’. Therefore, each compound noun appearing in my data set has an anglicism as its head. Compound nouns that have an anglicism in any position other than the head are not included in my data set. For example, nouns such as *Folkloregruppen* ‘folklore groups’ are compounds with an anglicism as the initial element and a native noun in the head position. In this case,

the native plural marker (here, *-n*) attaches to the native noun (*-gruppe* ‘group’). This type of noun was excluded from my data set.

The second restriction relates to variations in spelling of compound nouns. Similar to the treatment of the nouns in singular form, spelling variations of the same plural word form are listed as one type (e.g. *E-Mails* and *Emails* appear as *E-mails* only). If a plural lexeme appears by itself and as the head of a compound noun, it and all its compounds are treated as one type. For example, *Partys* ‘parties’ is included in my data set as one type. All compounds which use this lexeme as its head, such as *Hauspartys* ‘house parties’, *Dorfpartys* ‘village parties’ and *Spontanpartys* ‘spontaneous parties’ and so on, are included within the one type. The native German elements in compound nouns such as these do not interfere with the pluralisation of the anglicism element. I did this to avoid multiple inclusions of the one type. (See Appendix B for nominal anglicisms in plural form in my data set.)

3.3.3 My data set of nominal anglicisms

Although the three corpora, *Regional Variants of German 1*, *Hempels’ Sofa* and *Deutsch Heute*, contain data obtained from all of the areas within Europe where German is recognised as an official language, I use only data from participants from Germany in the present study. This is because, as mentioned in Chapter 2, the other countries may not have been under the influence of language purists and language protection societies to the same degree that Germany has been. This means that the total number of word types from which I obtained my anglicism data set is 46,844 and the number of word tokens is 1,185,080. I derived 330 nominal anglicism types (199 in singular form and 131 in plural form) and 1,726 nominal anglicism tokens (1,108 singular, 618 plural). This data set is analysed in detail in terms of gender marking in Chapter 5 and in terms of plural marking in Chapter 7. However, the

actual analysis of each is preceded by general theoretical considerations in Chapter 4 and Chapter 6.

Chapter 4. Gender Marking in German

Providing explanations for the gender of nouns in German is not straightforward. Dictionaries and grammar books for learners of German document various well-known patterns. However, these are only guidelines and contain many exceptions. In order to clarify this issue, and in response to the general view that the gender of nouns is arbitrary, a number of authors have proposed theories providing simplified accounts of this system. In this chapter, I review some of these attempts at explaining the gender of nouns in German. I discuss hypotheses involving phonological, morphological and semantic factors (Köpcke 1982; Köpcke & Zubin 1984; Zubin & Köpcke 1981, 1986), rules based on semantics, and principles of gender tally and gender eclipse (Steinmetz 1986, 2001, 2006). In addition, I discuss an analysis of the gender of nominal anglicisms within German which incorporates rules based on semantics, morphology and phonology (Onysko 2007). In Chapter 5, I test these proposed rules on my data set of nominal anglicisms appearing in spoken German.

All nouns in German have masculine, feminine or neuter grammatical gender. Basic factors affecting gender include whether a noun:

- (a) is morphologically complex or simplex;
- (b) is simplex, but appears to be morphologically complex; or
- (c) belongs to a human/higher animate class or a lower animate/inanimate class.

In order to evaluate the various proposals explaining the gender of nouns in German, an understanding of the gender marking system is essential. In the following section, I provide an overview of the features of the German gender marking system that are relevant to the present study.

4.1 The expression of gender within the noun phrase

In German noun phrases (NPs) in the nominative case, which consist of a definite article followed by a noun, masculine nouns take the article *der*, feminine nouns take the article *die*, and neuter nouns take the article *das*. The following examples demonstrate this.

(2) a. *der Wagen* ‘the car’

b. *die Milch* ‘the milk’

c. *das Brot* ‘the bread’.

In (2), the form of the definite article indicates gender. If the NP contains an adjective and no article, the adjective shows agreement in gender with the head of the NP by the use of suffixes, as in (3).

(3) a. *rot-er Wagen* ‘red car’

b. *frisch-e Milch* ‘fresh milk’

c. *knusprig-es Brot* ‘crusty bread’

In these cases, the adjectival suffix *-er* indicates masculine, *-e* indicates feminine and *-es* indicates neuter gender. However, gender is not consistently marked in all variants of the NP. If the NP appears without a definite article or adjective, the gender of the noun is not always apparent. Example (4) shows phrases with the possessive pronoun *mein* ‘my’ in the determiner position.

(4) a. *mein Wagen* ‘my car’

b. *mein-e Milch* ‘my milk’

c. *mein Brot* ‘my bread’

The feminine NP is the only one that has overt gender marking here, namely the *-e* in *meine* (4b). There is a zero marker on the possessive determiner for the masculine and neuter gender nouns. Thus, the gender of the nouns *Wagen* and *Brot* is not obvious in such NPs. However, if an adjective follows the possessive determiner, a suffix on the adjective in the masculine

and neuter phrases and on both the determiner and adjective in feminine phrases indicates gender, as in (5).

- (5) a. *mein rot-er Wagen* ‘my red car’
b. *mein-e frisch-e Milch* ‘my fresh milk’
c. *mein knusprig-es Brot* ‘my crusty bread’

Other elements that appear in the determiner position and are also marked for gender in the same way as *mein* include demonstratives, the negative article *kein* ‘no’ and the indefinite pronoun *welch* ‘which (one)’.

In phrases where a definite article and an adjective appear together, the adjective always takes the suffix *-e*. In these cases, the definite article indicates gender, as in (6).

- (6) a. *der rot-e Wagen* ‘the red car’
b. *die frisch-e Milch* ‘the fresh milk’
c. *das knusprig-e Brot* ‘the crusty bread’.

I have presented here only the basic information on the realisation of gender in the NP in German. See Borgert and Nyhan (1991), Eisenberg (1989), Fox (2005) and Fagan (2009) for detailed information.

4.2 Gender in morphologically complex nouns

There is an exceptionless principle within German that morphologically complex nouns take the gender of the rightmost morpheme that has gender specification. Köpcke and Zubin (1984:28) refer to this as the Last Member Principle (LMP). Because the rightmost morpheme with gender specification is the head of the complex noun, I refer to this as the Rightmost Rule (RR). A considerable number of German suffixes are specified for gender as

a part of their lexical entries. Table 13 lists a selection of suffixes with lexically specified genders.

Gender	Suffix	Example
masc.	<i>-ant*</i>	<i>Fabrikant</i> ‘manufacturer’
	<i>-er</i>	<i>Fahrer</i> ‘driver’
	<i>-eur*</i>	<i>Friseur</i> ‘hairdresser, barber’
	<i>-ler</i>	<i>Sportler</i> ‘sportsman’
	<i>-ling</i>	<i>Sträfling</i> ‘prisoner’
	<i>-ner</i>	<i>Schaffner</i> ‘conductor’
fem.	<i>-e</i>	<i>Liege</i> ‘day-bed, sofa bed’
	<i>-ei</i>	<i>Gärtnerei</i> ‘nursery’
	<i>-erei</i>	<i>Fahrerei</i> ‘[tedious] travelling’
	<i>-heit</i>	<i>Menschheit</i> ‘humanity’
	<i>-igkeit</i>	<i>Genauigkeit</i> ‘exactness’
	<i>-in</i>	<i>Ärztin</i> ‘doctor (f)’
	<i>-ität*</i>	<i>Universität</i> ‘university’
	<i>-keit</i>	<i>Sauberkeit</i> ‘cleanliness’
	<i>-schaft</i>	<i>Leidenschaft</i> ‘passion’
neut.	<i>-ung</i>	<i>Drohung</i> ‘threat’
	<i>-chen</i>	<i>Pünktchen</i> ‘[little] point’
	<i>-ing*</i>	<i>Shopping</i> ‘shopping’
	<i>-lein</i>	<i>Bächlein</i> ‘[little] brook’
	<i>-ment*</i>	<i>Appartement</i> ‘apartment’

Table 13: Selection of nominal suffixes and their genders. Adapted from Fox (2005:140-143).

Suffixes marked with an asterisk are foreign and appear mostly with foreign roots.

As indicated in Table 13, all nouns with the final morpheme *-ung* are feminine, such as *Vorlesung* ‘lecture’, *Tagung* ‘conference’ and *Verschlechterung* ‘aggravation’. Likewise, all nouns ending in *-chen* or *-lein* are neuter regardless of the natural gender of the referent. Examples of this include the well-cited cases of *das Mädchen* ‘girl’ and *das Fräulein* ‘young woman’. While both referring to young female humans, these nouns are neuter for morphological reasons. The productive diminutive suffixes *-chen* and *-lein*, usually in combination with umlaut vowel-fronting in the nominal stem vowel (the stressed vowel if the

stem is polysyllabic), form neuter nouns. They may be attached to animate or inanimate nominal stems. (Nouns ending in *-e* or *-en* drop these endings before adding *-chen* or *-lein*.) Therefore, it is possible to use neuter nouns to refer to male and female humans. For example, *das Männchen* ‘the little man’ and *das Jüngchen* ‘the little boy’ both refer to male humans but are of grammatically neuter gender. The RR applies to foreign words as well. For example, the noun *Organisation* ‘organisation, managing’ is feminine because the suffix *-ation* has that gender. It also applies to noun + noun compounds, and nominalised adjectives, such as the following examples from Kunkel-Razum and Münzberg (2005:164-165):

1. Noun + noun compound:

<i>das Haus</i>	+	<i>die Tür</i>	=	<i>die Haustür</i>
‘the house’ (neut.)	+	‘the door’ (fem.)	=	‘the front door’ (fem.)
<i>[12 Meilen]</i>	+	<i>die Zone</i>	=	<i>die 12-Meilen-Zone</i>
‘12 miles’ (pl.)	+	‘the zone’ (fem.)	=	‘the 12-mile zone’ (fem.)

2. Adjective + derivational suffix:

<i>schön</i>	+	<i>die -heit</i>	=	<i>die Schönheit</i>
‘beautiful’	+	derivational nominal suffix (fem.)	=	‘beauty’ (fem.)

Some suffixes also lack a specified gender in their lexical entries, for example:

<i>-nis</i>	<i>Erlaubnis</i> (f) ‘permission’ from <i>erlauben</i> ‘to permit’ (V)
	<i>Geheimnis</i> (n) ‘secret’ from <i>geheim</i> ‘confidential, secret’ (ADJ)
<i>-tum</i>	<i>Reichtum</i> (m) ‘wealth’ from <i>reich</i> ‘rich’ (ADJ)
	<i>Wachstum</i> (n) ‘growth’ from <i>wachsen</i> ‘to grow’ (V)

There is one situation where a prefix determines the gender of a complex noun. This is with deverbal nouns, which are formed by attaching the neuter prefix *ge-* to verbal roots: e.g. *Gehäuse* ‘housing, casing’ is derived from the verbal root *haus-* ‘dwell, live’, *Gedränge* ‘crowding, crushing, jostling’ is derived from *dräng-* ‘push, rush, surge’ and *Gebell* ‘barking’ is derived from *bell-* ‘bark’. Verbal roots do not have a gender specification. Consequently, the only morpheme with a gender specification in this particular type of complex word is the

neuter prefix *ge-*. As such, it determines the gender of the complex nominal. However, this is not an exception to the RR, as *ge-* is the rightmost morpheme with a gender specification.

4.3 Gender in morphologically simplex nouns

In this section, I will discuss the role pseudo-suffixes may play in determining the gender of simplex nouns denoting inanimates. I will also discuss the role that the Natural Gender Principle (NGP) plays in determining the gender of simplex nouns denoting humans and higher animates. This principle applies to livestock or game only when it is commercially important to determine the sex of the animal. For other simplex nouns, there are no straightforward explanations, only idiosyncratic ones that authors such as Köpcke (1982) and Steinmetz (1986) offer.

4.3.1 Simplex nouns and pseudo-suffixes

Despite the fact that pseudo-suffixes are not actually separable affixes, it appears that the gender of many words can be accounted for if these are treated as actual suffixes. Some other pseudo-suffixes, such as *-or* in *der Motor* ‘motor’,²² *-a* in *die Kamera* ‘camera’ and *-ma* in *das Klima* ‘climate’²³ appear to determine the gender of those nouns. Given that the final syllables on these nouns are not in fact separable suffixes, the Rightmost Rule does not operate directly to determine the gender of these nouns denoting inanimates. Rather, it operates by extension.

²² *-or* is a segmentable masculine suffix on agentive loans, e.g. *Direktor* ‘director’, *Katalysator* ‘catalyst, catalytic converter’, *Reformator* ‘reformer’. However, it is not a suffix in the case of *Motor*.

²³ Kunkel-Razum & Münzberg (2005:165, 167) list *-a* as a feminine ending (e.g. *Pizza* ‘pizza’ *Aula* ‘auditorium’) and *-ma* as a neuter ending (e.g. *Dogma* ‘dogma’, *Thema* ‘topic’). However, these are not segmentable suffixes and appear only on loanwords.

4.3.2 Simplex nouns and the Natural Gender Principle

Köpcke & Zubin (1984) propose that the NGP determines the gender of nouns denoting human beings and higher animates. This principle stipulates that the noun is grammatically feminine if there is a feminine referent, neuter if the noun refers to a generic/non-gender specific child and is masculine as default. The NGP does not apply to nouns with suffixes which denote grammatical gender, e.g. as in the case with *-chen* and *-lein* suffixes mentioned in 4.2. For example, nouns denoting male humans are grammatically masculine, indicated here by the masculine form of the definite article, *der* in (7):

- (7) *der Mann* ‘the man’
 der Junge ‘the boy’
 der Sohn ‘the son’
 der Bruder ‘the brother’.

Similarly, nouns denoting female humans are grammatically feminine; indicated here by the feminine form of the definite article, *die* in (8):

- (8) *die Frau* ‘the woman’
 die Mutter ‘the mother’
 die Tochter ‘the daughter’
 die Schwester ‘the sister’.

Simplex nouns denoting professions or occupations are masculine, for example, *der Arzt* ‘doctor’, *der Koch* ‘cook’ and *der Chef* ‘boss’. These nouns refer either specifically to males in those roles or non-specifically to people in general if the individual referent is not known. In the latter case, the masculine form acts as a default. In other words, nouns such as *Vater* ‘father’, *Bruder* ‘brother’ and *Sohn* ‘son’ necessarily exclude female referents in all cases, whereas *Arzt*, *Koch* and *Chef* allow for female referents in highly limited circumstances. The

addition of the feminine suffix *-in* (and usually umlaut) creates *Ärzt-in* ‘doctor’, *Köch-in* ‘cook’ and *Chef-in* ‘boss’ which specifically have known female referents in those roles.²⁴ These nouns are then feminine in accordance with the RR. The RR, not semantics, also determines the gender of nouns denoting professions traditionally associated with females. For example, *Stripper* ‘stripper’ (derived from the verb *strippen* ‘to strip’) is masculine because it has the agentive *-er* suffix. The female equivalent *Stripperin* ‘stripper’, on its part, also adheres to the RR and is feminine due to the *-in* suffix.

Pseudo-suffixes have no effect on the gender of simplex forms referring to humans and higher animates. Examples of these include *Mutter* ‘mother’, *Tochter* ‘daughter’, *Schwester* ‘sister’, *Bruder* ‘brother’, and *Junge* ‘boy’. The first three are feminine because they refer to female humans, despite the fact that they appear to be morphologically complex and end in *-er*. In these cases, the *-er* in the final position does not have masculine gender because it is not a segmentable morpheme. Similarly, the word-final *-er* in *Bruder* and *-e* in *Junge* are not morphemes. These simplex nouns are masculine because they denote male humans.

However, the NGP does not apply to all simplex nouns denoting humans and higher animates. Zubin and Köpcke (2009:253) list five examples where the grammatical and biological gender of human animate referents differ in relation to adult female humans. One example is *das Weib*, which is an obsolete term for ‘wife’ and is now a derogatory term for ‘woman’. Zubin and Köpcke list further examples involving this “natural gender problem”, such as *Groupie*, *Girlie*, *Modell* and *Supergirl* (253-255). These nouns refer to female humans but they are grammatically neuter. Nouns referring specifically to children are neuter as well, e.g. *das Kind* ‘child’. Zubin and Köpcke (2009:252) give four neuter nouns that refer

²⁴ The addition of (umlaut) + *-in* also creates agentive nouns specifically referring to females, e.g. *Fahrer-in* ‘driver’, *Leser-in* ‘reader’ and *Spieler-in* ‘player’. The Rightmost Rule also applies here, as *-in* is specified with feminine gender.

to children in a pejorative sense (*Gör, Balg, Wurm, Ding*) and add that these terms are used to refer to girls more often than boys. Some feminine nouns also denote male humans, but only those specifically within the gay community. For example, Zubin and Köpcke (250-251) refer to the anglicism *Queen* as well as the native nouns *Schwuchtel, Trine, Transe, Klunte* and *Tunte*, which are feminine nouns referring to effeminate men or gay men in drag.²⁵

Zubin and Köpcke (1986) analysed the relationship between the grammatical gender of non-human animates and folk taxonomy. They established that the economic value of animals plays a role in their grammatical gender. They noted that generic terms for animals with economic use are neuter, for example, *das Rind* ‘head of cattle’ and *das Pferd* ‘horse’. Biological and grammatical gender correlate when a gender-based division is important for farming purposes. For example, *Bulle* ‘bull’ is masculine and *Kuh* ‘cow’ is feminine, *Hengst* ‘stallion’ is masculine and *Stute* ‘mare’ is feminine. Because biological gender is less important for the young of livestock, the words for the offspring are grammatically neuter, e.g. *das Kalb* ‘calf’ and *das Fohlen* ‘foal’. However, the nouns referring to young humans are also neuter. It may be that the nouns referring to the young of all higher animates are neuter.

The class of lower animates/inanimates includes animals that are small or non-exploitable. In these cases, grammatical gender does not align with biological gender. For example, the fact that the grammatical gender of the generic term *Maus* ‘mouse’ is feminine but of *Fuchs* ‘fox’ is masculine suggests that the NGP does not apply to simplex nouns denoting those animals that are not used for the benefit of humans.

²⁵ See also Zubin and Köpcke (2009), and Köpcke, Panther and Zubin (2010) for further discussion on the differences between natural and grammatical gender, especially in relation to the anaphoric use of feminine pronouns referring to grammatically neuter nouns.

For inanimate nouns, there are some generalisations motivated by semantic patterns that relate to gender. For example, the names of mountain chains are all masculine as are the names of cars. However, most semantic domains have exceptions. There is the generalisation that all rivers within German-speaking areas are feminine, but the *Rhein* ‘Rhine’ is masculine. Below, I will discuss various proposals that semantics, as well as morphology and phonology have a role in determining the gender of nouns in German.

4.4 The relationship between gender, morphology, phonology and semantics

Recent discussions of the gender of nouns in German almost invariably refer to the research undertaken by Zubin and Köpcke (1981, 1986) and Köpcke and Zubin (1984), which draws on the research detailed in Köpcke (1982). In 1981, Zubin and Köpcke proposed that the gender of German nouns is more systematic than generally supposed, and that it is influenced by morphology and phonology and, to a lesser degree, semantics. This claim derives from Köpcke’s (1982) study of monosyllabic uninflected singular nouns in German. Köpcke studied this kind of noun because they do not have affixes determining gender (such as those in Table 13 on page 79). Köpcke’s list of nouns derives from Hirsch-Wierzbicka (1971), who, as part of his study, identified the nouns in the 1967 Leipzig edition of the *Rechtschreibung Duden* spelling dictionary. Köpcke then compared this list with the Mannheim edition of the same dictionary, and, ignoring words that were specifically East German, compiled a list of 1,466 nouns. He in fact, as he states, analysed 1,466 instances of gender. This was because he counted nouns that had more than one gender twice (no noun had three genders), regardless of whether the difference in gender signalled a difference in meaning (such as *der See* ‘lake’ and *die See* ‘sea’), or not (as in *der/das Gong* ‘gong’). He included foreign words because they also have gender and often have German pronunciation.

In his analysis, Köpcke (1982) described a complex series of patterns in terms of “rules” that account for the gender of approximately 90% of nouns on his list.²⁶ There are three types of his rules: semantic, morphological and phonological (s-rules, m-rules and p-rules). (For a detailed list of the rules that Köpcke postulates, see Appendix E.)

4.4.1 Semantic rules

Some of the 15 semantic rules Köpcke includes are widely accepted and appear in Kunkel-Razum and Münzberg (2005) and in reference texts for learners of German. One such rule is semantic rule (4) that states that nouns referring to alcoholic drinks are masculine, as illustrated by *der Wein* ‘wine’, *der Schnaps* ‘spirits, schnapps’, *der Sekt* ‘sparkling wine’ (Köpcke 1982:72). Nevertheless, such semantic rules almost invariably contain exceptions. In this case, the exceptions that Köpcke points out are *Bier* ‘beer’ and *Bräu* ‘brew’, which are both neuter.²⁷

Most of Köpcke’s (1982) semantic rules have no independent support from semantic theory. Therefore, they are simply unsupported patterns identified by the author in his own corpus. However, in later research, Köpcke and Zubin (1984) and Zubin and Köpcke (1984, 1986) draw upon psycholinguistic research (Rosch 1973, 1977; Rosch, Mervis, Gray, Johnson & Boyes-Braem 1976) to postulate that superordinate nouns are neuter. Underlying this formulation is the assumption that neuter nouns refer to entities with fewer distinguishable characteristics than entities referred to by masculine or feminine nouns. Rosch (1973, 1977) proposed that these nouns are distinguishable from basic level nouns because they do not have many identifiable and differentiating characteristics. Basic level terms, on the other

²⁶ Köpcke (1982:114) illustrates that 10.1% of his corpus (148 lexemes) do not have the gender predicted by his rules, and that 0.7% (the 10 lexemes *Ern* (m) ‘hallway in a Franconian style’, *Ernst* (m) ‘seriousness’, *Germ* (m/f) ‘yeast’, *Harm* (m) ‘grief’, *Heu* (n) ‘hay’, *Lärm* (m) ‘noise, fuss’, *Pas* (m) ‘dance step’, *Perm* (n) ‘Permian’, *Scharm* (m) ‘charm’, *Scheu* (f) ‘shyness’) have no applicable rules whatsoever.

²⁷ The masculine *der Bräu* is used in Southern Germany and Austria and means *brewery*.

hand, do. Cruse (1986) and Lyons (1981) also argue for this distinction. Rosch's superordinate level and basic level correspond to life form (or kind) level and generic level, respectively, in Cruse's folk taxonomy hierarchy. Lyons (1981) seems to express the distinction between basic level and superordinate terms more clearly. He proposes the template "X and other (kinds of) Ys" (1981:292), where X equates to Rosch's *basic level term* and Y to her *superordinate*. Thus, using the examples given first by Rosch (1973, 1977) and then Zubin and Köpcke (1986), it is possible to say "plums and other (kinds of) fruit" and "bronze and other (kinds of) metal". According to this pattern, *plum* and *bronze* are basic level terms, and *fruit* and *metal* are superordinates.²⁸ This is how Zubin and Köpcke explain why the superordinate nouns *Obst* 'fruit' and *Metal* 'metal' are neuter and their hyponyms plum (*Pflaume*) and bronze (*Bronze*) are feminine.

4.4.2 Morphological rules

Köpcke's five m-rules operate on regularities observed in the plural morphology for the nouns in his corpus. For example, Köpcke observed that nouns with a consonant-vowel-consonant (CVC) structure that take the *-(e)n* plural are feminine. The rule determining this is illustrated thus: morphological rule (4) $[[C_0^4 V C_0^4]_{\text{Nom}} (e)n]_{\text{Pl}} \rightarrow f$,²⁹ e.g. *die Qual* → *die Qualen* 'torment, agony/agonies', *die Bank* → *die Banken* 'banks' (1982:80). However, there is no independent support for morphological rules of this nature. General morphological theory does not have rules with this structure, indicating that Köpcke's phonological rules are idiosyncratic to his examples. A further point of critique for the five morphological rules he

²⁸ There are issues with Lyons's formula because it can work on more than one level. For example, it is possible to say "mirabelles and other kinds of plums" on one level below "plums and other kinds of fruit". However, on the highest level (here, fruit) in this taxonomy, Lyons's formula corresponds to Rosch's *basic noun/superordinate noun* definitions.

²⁹ The numbers in sub- and superscript indicate the minimum and maximum number of consonants that may appear in that position. For example, C_0^4 means between 0 and 4 consonants, so *Qual* has the structure $[C^2 V C^1]$ or $[CC V C]$.

postulates is that only the one exemplified above determines a single gender. The remaining four rules determine either masculine or neuter, or masculine or feminine gender.

The semantic and morphological rules alone are insufficient in determining the gender of all nouns (partly because of the numerous exceptions to each rule). For example, Köpcke posited five morphological rules, but only one (the one illustrated above) determines a single gender. The other rules predict two genders. An example of this is expressed in morphological rule (5) $[[C_0^3 V C_0^4]_{\text{Nom s}}]_{\text{Pl}} \rightarrow \text{m/n}$ (Köpcke 1982:80). Here, monosyllabic nouns that have the structure given and which take the plural marker *-s* are either masculine or neuter (see Section 4.5 for further discussion).

4.4.3 Phonological rules

As with the morphological rules, Köpcke's 24 phonological rules lack independent support. Phonology generally does not have rules with the structure that Köpcke proposes. His phonological rules appear in three subsets: structural rules (6), main rules (16) and stand-by rules (2). Structural rules stem from configurations of initial consonants (I), the length of the nucleus (N), and the final consonant (F). A typical structural rule has the following form: structural rule (1) $[I_2 I_1 N F_1 F_2] \rightarrow \text{m}$, e.g. *der Flachs* 'flax', *der Klotz* 'block [of wood]', *der Schwund* 'decrease' (Köpcke 1982:84). This means that if a noun has up to two initial consonants ($I_1 I_2$), a nucleus (N) and up to two final consonants ($F_1 F_2$), the gender of the noun is masculine. Phonological processes do not refer to this kind of template, which again indicates the idiosyncratic nature of these rules.

The subset labelled 'main rules' itself contains three subsets. In each subset, it is the onset, the nucleus or the coda that is analysed. For example, onset rule (1a) $[/dr/ Y] \rightarrow \text{m}$, e.g. *der*

Druck ‘pressure’ (Köpcke 1982:88) illustrates the fact that when a monosyllabic noun has the onset /dr/ followed by any possible phoneme (Y), the noun is masculine. The nucleus rule (1a) [X /a:/ Y] → m/n, e.g. *das Gas* ‘gas’, *das Lab* ‘rennet’ (Köpcke 1982:94), dictates that monosyllabic nouns with a nucleus /a:/ and any type of onset (X) or coda (Y) are either masculine or neuter. The coda rule (3) [X Nasal (C) (C)] → m, e.g. *der Krampf* ‘cramp’, *der Stamm* ‘[tree] trunk’ (Köpcke 1982:99), dictates that if a nasal phoneme (/m/, /n/, or /ŋ/) appears in the coda of a monosyllabic noun, the noun will be masculine regardless of the type of onset or nucleus. In this case X symbolises any onset-nucleus combination.

Finally, the stand-by rules concern the relationship between onset and nucleus, nucleus and coda, and onset and coda. These are relevant for only a few nouns, for example stand-by-rule (2) [X V_{-long} Stop C] → m, e.g. *der Witz* ‘joke’, *der Knopf* ‘button’ (Köpcke 1982:103). Here, if a noun contains a short vowel followed by a stop, the noun is masculine regardless of the onset.

Köpcke and Zubin (1983) undertook an experiment to test the validity of nine of the 24 p-rules postulated in Köpcke (1982). However, the results were not conclusive. Their experiment involved only 10 respondents from northern Germany, 6 female and 4 male, with an average age of 27. The respondents were asked to choose the more suitable gender for 44 nonce words, which the researchers read aloud along with a choice of two genders.³⁰ Köpcke and Zubin systematically alternated the gender options between m/f, m/n and f/n. Each choice involved the predicted gender of the nonce word and a randomly chosen alternative. The test words were presented in isolation, which ruled out lexical-conceptual equivalence from accounting for gender. The participants’ responses matched those predicted by Köpcke and

³⁰ They avoided providing all three genders because doing so in pilot studies confused the participants. Köpcke and Zubin (1983) state this was probably due to overloading the participants with choices.

Zubin's phonological rules in 65-80% of the cases. Köpcke and Zubin do not motivate the selection of only nine of a possible 24 phonological rules.³¹ Such flaws in the methodology greatly reduce the value of the experiment.

One could argue that the fact that the respondents all came from northern Germany may have influenced the results because some nouns have different genders depending on the regional dialect of the speaker. A well-known example of regional gender variation is *Butter* 'butter', which is feminine in the north and masculine in the south of Germany. However, Mills (1986) reported similar findings in an extension of this experiment with 30 participants aged 20-25 in southern Germany. It should be noted that Mills undertook the experiment differently than Köpcke and Zubin. Instead of reading the test items aloud, she gave her participants a sheet of paper with the two versions of the same words, but written with different genders. Therefore, the experiment was not purely phonological like the original. Nevertheless, the mode of the elicitation task does not appear to have affected the results.

Wegener (1995) also tested the same phonological rules in an experiment with 37 students aged 23 in Germany and received similar results. However, she altered the experiment slightly by not providing any gender in the prompt question. Instead, after giving the prompt "*Ich sehe etwas, das heißt Schett*" 'I see something, that (thing) is called *Schett*'.³² She asked the respondents to use the nonce word in a question, ensuring use of the definite article, e.g. "*Wo ist der/die/das Schett*" 'Where is the *Schett*?' (Wegener 1995:82). This made little difference to the outcomes of the experiment. However, as Corbett (1991) argues, data achieved in experimental situations such as those just mentioned may not necessarily reflect what occurs in natural situations and further research may be necessary to refine the results.

³¹ See Wegener (1995) for a more detailed criticism of Köpcke and Zubin's (1983) experiment in the context of the acquisition of German nouns and their gender by children and non-native speakers.

³² In cases such as these, *das* does not specify neuter gender; instead, it acts as a generic article.

As is the case with his morphological rules, many (11 from 24) of Köpcke's (1982) phonological rules do not determine a single gender. Instead, they determine two genders. For example, the nucleus rule $[X V_{+long} Y] \rightarrow m/n$ excludes only one of three genders, leaving unclear whether a certain noun following this rule is masculine or neuter. Therefore, using these phonological rules alone cannot accurately predict the gender of any monosyllabic neologism. Furthermore, he provides no evidence from phonological theory in order to support his proposed phonological rules. Therefore, there is little reason to pursue phonology as a determinant of gender to monosyllabic German nouns.

The long and complicated list of rules with the many exceptions that Köpcke has proposed makes it difficult to predict the gender of neologisms. Köpcke lists 15 semantic, 5 morphological and 24 phonological rules determining the gender of uninflected monosyllabic nouns. Despite the number and different types of rules, Köpcke is still unable to account for the gender of over 10% (158 lexemes) of his corpus (Köpcke 1982:169ff.).

Köpcke's analysis focuses on monosyllabic nouns. Therefore, it would be difficult to use his method to predict the gender of polysyllabic neologisms and anglicisms, unless the gender-determining element is a monosyllabic noun within a compound. Even a combination of Köpcke's rules and the knowledge of suffixes with specific gender would not help in predicting the gender of many anglicisms, since most native gender-determining affixes do not attach to nominal anglicisms. Furthermore, he does not appear to have formed his rules using independently based criteria. He does not refer to semantic or phonological theory in order to provide support for his gender-determining rules. Still, Köpcke's (1982) analysis appears to be the most comprehensive of all other work on gender in German. An additional

strength of Köpcke's work is that, unlike some authors, such as Steinmetz (1986, 2001, 2006), he reports all his data from a list of nouns, not just small sets of examples.

4.5 Gender tally

Köpcke (1982) noted that the many rules he proposed fail to determine a clear single gender of nouns. In other words, a rule may assign two or more genders to a noun, or several rules may assign different genders. For example, multiple rules determining more than one gender may apply to three nouns within the semantic domain of water surfaces/plains: *Teich* 'pond', *Sumpf* 'marsh, swamp' and *Au* 'floodplain'. The rules that Köpcke posited which could apply to these nouns are:

der Teich:

semantic rule (15) water surfaces/plain = m/f

morphological rule (3) $[[C_0^3 \vee C_0^4]_{\text{Nom}} \text{ə}]_{\text{Pl}} = \text{m/n}$

phonological rule: structure rule (6) $[X \vee \vee F_1] = \text{m/n}$

phonological rule: onset rule (6) $[/t/ Y] = \text{m/n}$

der Sumpf:

semantic rule (15) water surfaces/plain = m/f

morphological rule (2) $[[C_0^3 \vee_{+\text{umlaut}} C_0^4]_{\text{Nom}} \text{ə}]_{\text{Pl}} = \text{m/f}$

phonological rule: coda rule (3) $[X \text{ Nasal } (C) (C)] = \text{m}$

die Au

semantic rule (15) water surfaces/plain = m/f

morphological rule (4) $[[C_0^3 \vee C_0^4]_{\text{Nom}} (\text{ə})\text{n}]_{\text{Pl}} = \text{f}$

Steinmetz (1986) uses these multiple rules assigning multiple genders to propose the theory of *gender tally* to resolve gender competition among monosyllabic and polysyllabic nouns. According to this principle, the noun takes the gender that is allocated most often by the “rules”. For example, in the case of *der Teich* above, all four rules determining masculine apply, one that determines feminine and three that determine neuter apply. Because four rules determining masculine apply (i.e. the highest number of times), the noun is masculine. *Sumpf* has three rules determining masculine that apply and two that determine feminine, thus it is masculine. *Au* has two rules that determine feminine and one that determines masculine, and so it is feminine. If one combines Steinmetz’s gender tally principle with Köpcke’s gender rules, one gets the following results:

der Teich:

semantic rule (15) water surfaces/plain = m/f

morphological rule (3) $[[C_0^3 V C_0^4]_{\text{Nom } \text{ə}}]_{\text{Pl}} = \text{m/n}$

phonological rule: structure rule (6) $[X VV F_1] = \text{m/n}$

phonological rule: onset rule (6) $[/t/ Y] = \text{m/n}$

4m 1f 3n = m

der Sumpf:

semantic rule (15) water surfaces/plain = m/f

morphological rule (2) $[[C_0^3 V_{+\text{umlaut}} C_0^4]_{\text{Nom } \text{ə}}]_{\text{Pl}} = \text{m/f}$

phonological rule: coda rule (3) $[X \text{ Nasal } (C) (C)] = \text{m}$

3m 2f 0n = m

die Au

semantic rule (15) water surfaces/plain = m/f

m-rule (4) $[[C_0^3 \vee C_0^4]_{\text{Nom}} (\text{ə})n]_{\text{Pl}} = f$

1m 2f Øn = f

This seems a suitable way of resolving this issue³³ if two or more genders have unequal weightings. If two or more genders have the same value, then Steinmetz's hypothesis of gender eclipsis determines the gender of the noun. The principle of gender eclipsis involves a hierarchy of masculine>feminine>neuter (m>f>n) and determines that the noun has the gender that has the highest ranking. Steinmetz demonstrates this hierarchy by using the example of *Frucht* 'fruit'. The first rule that applies is his phonological rule *-ucht = f*. The second rule that applies to this noun is Köpcke and Zubin's (1983, 1984) s-rule *superordinate = n*. Steinmetz (1986:183) illustrates these rules thus:

Frucht
-ucht = f
superordinate = n

Øm 1f 1n = f

The result is that both feminine and neuter have a value of one. Since feminine ranks higher than neuter, this noun is feminine.

4.6 Default gender and semantic rules

Steinmetz (1986, 2001, 2006) proposes further rules to account for the gender of exceptions to previous gender rules. These rules are based on semantics and morphology, and the

³³ For an investigation into the gender of German nouns, in particular for a method of solving gender conflict using Optimality Theory, see Rice (2006).

hypothesis that masculine is the default gender. These proposals are less predictive than his hypotheses involving gender tally and gender eclipse. Steinmetz groups gender rules into two types, those based on form and those based on meaning. Within the category of rules based on form, he combines Köpcke's (1982) morphological and phonological rules and labels them m-rules. He refers to the rules based on meaning as s-rules, or semantic rules, and introduces yet another category - subcategorisation rules (sc-rules), which operate as a subset of rules within semantic rules. For example, he contends that no rules determine the gender of the categories of fruit or flowers and expresses this as *fruit* = $\emptyset$ and *flower* = $\emptyset$. His sc-rule of *tropical* = *feminine* applies to nouns within the domain of fruit. Therefore, this sc-rule determines the feminine gender of the tropical fruit *Ananas* 'pineapple'. Likewise, within the domain of flowers, the sc-rule = *er* = *el* = *f* determines feminine gender of nouns such as *Primel* 'primula'. Steinmetz (1986:193, 198) illustrates these rules thus:

Ananas 'pineapple'

fruit = $\emptyset$

SC: trop. = f

$\emptyset_m$ 1f $\emptyset_n$ = f

Primel 'primula'

flower = $\emptyset$

SC: = er = el = f

$\emptyset_m$ 1f $\emptyset_n$ = f

However, in introducing these subcategorisation rules, he has not reduced the number of complex rules that Köpcke proposes. He also has three sets of rules, as shown in Table 14.

Köpcke (1982)	Steinmetz (1986)
m-rules	m-rules
s-rules	s-rules
p-rules	sc-rules

Table 14: Categories of gender rules by Köpcke (1982) and Steinmetz (1986)

Based on the results of Köpcke's (1982) study, Steinmetz (1986) proposes that there is a default gender among inanimate nouns. In Steinmetz's view, a noun is masculine unless there are reasons for it to be feminine or neuter. This hypothesis, therefore, accounts for the number of nouns that are masculine when no obvious rules apply. Consequently, the process of explaining the gender of nouns is simpler because only rules determining feminine or neuter need to be established. He uses the example of *Apfel* 'apple' to illustrate his point. Here, all three genders have an equal value of zero. The noun is masculine by default because no gender rules apply. Steinmetz's (1986:193) illustration of this is:

Apfel

fruit = $\emptyset$

$\emptyset_m \emptyset_f \emptyset_n = m$

Steinmetz proposes that m-rules often take precedence over s-rules. However, he does not clearly indicate when they do or what determines this. He illustrates the point with the rule *superordinate nouns* = *n*. He explains that some superordinate nouns (such as *die Waffe* 'weapon', *die Pflanze* 'plant' and *die Frucht* 'fruit') are not neuter. In these particular cases, he claims that the rule based on morphological shape, *-e* = *f*, determines the feminine gender of *Waffe* and *Pflanze*, and his rule *-ucht* = *f* determines the feminine gender of *Frucht*. He remarks that there is some flexibility in these rules but he fails to recognise that a "rule" cannot be "flexible".

On the surface, Steinmetz's rules provide a systematic method of explaining the gender of nouns in German. However, there are many problems with his hypotheses. Firstly, Steinmetz proposes his own semantic labels for domains but he does not give clear definitions of these

domains. For example, he provides the semantic rules *flower* = $\emptyset$ and *shrub* = $\emptyset$. He does not provide a clear way of determining the difference between those two domains, i.e. it is difficult to determine into which category certain plants would be placed. He lists *Rose* ‘rose’ and *Flieder* ‘lilac’ as types of shrub, but both could also easily be listed as a type of flower. Secondly, he does not present his hypothesis as a comprehensively specified set of rules. Because of this lack of specification, the theory is not falsifiable. Thirdly, whereas Zubin and Köpcke base their theory on a list of 1,466 monosyllabic nouns, Steinmetz does not refer to a data set of his own, yet includes mono- and polysyllabic nouns (e.g. *Frucht* ‘fruit’, *Waffe* ‘weapon’ and *Harmonika* ‘harmonica’). He incorporates findings from Zubin and Köpcke, but these authors have only identified tendencies and do not claim to have a theory. Fourthly, by providing only a small number of rules with limited examples, he does not allow independent testing of his hypotheses. For example, when analysing the gender of words for clothing, he uses subcategories that lack any independent motivation, such as the sc-rule *primary midriff* = *n*. This rule applies to only three from 17 examples of clothing listed. Of these three, two may be discounted as they are either obsolete or near obsolete (*Wams* ‘doublet, jerkin’ a medieval precursor to the vest, and *Mieder* ‘bodice, girdle’, used mostly in traditional costumes or in the modern form of *Miederhose*, underpants for women to shape the body). This leaves only *Hemd* ‘shirt’ in this subcategory. In other words, Steinmetz has posited a rule that relates to only one noun in this domain in current use.

Similarly, the gender of only one noun from nine in his list of words for musical instruments is explainable with his s-rule *musical instrument* = *n*. That example is *das Banjo*, which is labelled an anglicism in *Duden* (2001). Morphology/phonology can explain the genders of the other examples. He demonstrates this in his own examples (Steinmetz 1986:197):

(Musik) instrument -ment = n superordinate = n	<i>Klavier</i> ‘piano’ -ier = n mus. inst. = n	<i>Harmonika</i> mus. instr. = n SC: -a = f
Øm Øf 2n = n	Øm Øf 2n = n	Øm 1f 1n = f
 <i>Harfe</i> ‘harp’ -e = f mus. instr. = n.	 <i>Glocke</i> ‘bell’ -e = f mus. instr. = n	 <i>Trommel</i> ‘drum’ mus. instr. = n SC: er, el = f
Øm 1f 1n = f	Øm 1f 1n = f	Øm 1f 1n = n
 <i>Orgel</i> ‘organ’ mus. instr. = n SC: er, el = f	 <i>Zither</i> mus. instr. = n SC: er, el = f	 <i>Klapper</i> ‘rattle’ mus. instr. = n SC: er, el = f
Øm 1f 1n = f	Øm 1f 1n = f	Øm 1f 1n = f
 <i>Banjo</i> ‘banjo’ mus. instr. = n		
Øm Øf 1n = n		

The same kinds of issues arise with his analysis of words for flowers and shrubs. In these cases, morpho-phonological rules determine the gender of most of the nouns, thus weakening the justification for his postulated s-rules or sc-rules.

Steinmetz’s semantic groups are too broad and ill-defined. It is not possible to form a theory with the poorly defined semantic rules he posits. For example, in demonstrating his sc-rule of *tropical fruit* = f (1986:193), Steinmetz lists only *Orange* ‘orange’, *Mango* ‘mango’, *Dattel* ‘date’ and *Ananas* ‘pineapple’. Many would also disagree with his assumption that oranges

are tropical fruits. Without clear parameters of what falls within this domain, that is, without giving a clear definition of what he classifies as a tropical fruit, it is not possible to have a theory regarding it.

A further example of a poorly-defined rule is the semantic subcategorisation rule of *superordinates of designation = n*.³⁴ Later referred to as *improper superordinates* (Steinmetz 2001, 2006), nouns in this category do not have a strict set of hyponyms. His improper superordinates include such nouns as *das Unkraut* ‘weed(s)’. They do not have any particular hyponyms; any herbaceous plant deemed undesirable can be a hyponym of the improper superordinate “weed”. Other examples of nouns in this category are *das Chaos* ‘chaos’, *das Pfand* ‘security, pledge’, *das Ziel* ‘goal’ and *das Paradies* ‘paradise’. Steinmetz (2001:220) states that this semantic category is “largely psychological and estimative”. In terms of creating a predictive theory, semantic categories such as this are variable and therefore insufficient for creating a rule to predict the gender of nouns.

Steinmetz (2006:1434) adds *functional hollows = n* to his list of postulated rules. He defines a functional hollow as:

... a disk or ... a complete or partial enclosure, whereby the hollow portions thereof are functional in that they are criteria for defining the object in classification.

He gives only five examples for this category: *Rad* ‘wheel’, *Joch* ‘yoke’, *Gesicht* ‘face’, *Ohr* ‘ear’ and *Ei* ‘egg’. Once again, he does not consider morphological or phonological reasons for these nouns to be neuter. For example, from a morphological point of view, *Gesicht* is

³⁴ Furthermore, it is unclear why Steinmetz introduces such a subcategorisation rule at all when Köpcke (1982), and Köpcke and Zubin (1984) list superordinate nouns as neuter.

neuter because it is a deverbal noun with the *Ge-* prefix, derived from *sehen* ‘to see’. Furthermore, it is doubtful whether many would consider a human face to fall into the category of *functional hollows*. It does not allow for non-human faces, either. For example, it would be difficult to describe a dog’s face with a protruding snout as being in the shape of a disk, or a complete or partial enclosure. Steinmetz acknowledges that this is only a tentative rule and that it requires large-scale psycholinguistic research (similar to that mentioned in Section 4.4) to determine its validity as a rule. This also applies to his semantic rules in general.

Steinmetz (1986) argues that his approach reduces the number of rules regarding gender. This does not seem to be the case. Steinmetz has in fact proposed additional semantic rules to explain the gender of only a few words. In sum, Steinmetz’s s-rules are descriptive and subjective since they do not have their origin in psycholinguistics or semantic theory. Although his principles of gender tally and gender eclipse seem to be the most sound among all of his propositions, the hypothesis that masculine is the default gender appears to have influenced the interpretation of research findings in the field the most. Steinmetz’s propositions regarding the gender of nouns in German lack independent evidence, they are not predictive and they rely too heavily upon personal interpretation. When it comes to the task of determining the gender of neologisms, Steinmetz does not provide a predictive theory. With an approach labelled “unusual” (Corbett 1991:85), Steinmetz claims to provide an understanding of how the gender system works at a deeper level. However, without enough supporting data, his ideas cannot go beyond mere speculation. In the following section, I will outline an account by Onysko (2007), who applies the rules posited by Steinmetz to nominal anglicisms.

4.7 Onysko's analysis of the gender of nominal anglicisms

Onysko's (2007) account of the gender of anglicisms incorporates Steinmetz's (1986, 2001, 2006) semantic rules and Bittner's (2001) semantic generalisations about gender (see 4.7.1 and 4.7.2), which Onysko labels "semantic primitives". Onysko also minimises the role that lexical-conceptual equivalence plays in the gender of nominal anglicisms and postulates a phonological rule that specifically explains the gender of certain anglicisms.

Unlike Steinmetz (1986, 2001, 2006), Onysko (2007) uses a corpus to provide an account of the gender of anglicisms. He analysed 1017 nominal anglicisms marked for gender in the news magazine *Der Spiegel* from the year 2000. When analysing a corpus drawn from the print media it is important to remember that it cannot be representative of a language as a whole. *Der Spiegel* targets educated readers and is taken to be an authority on the use of modern written German. The language in the magazine is very different from unmonitored, natural, spoken German. *Der Spiegel* "potentially reflects and sets trends in current language use" (Onysko 2009:61) and is "characterised by its inventiveness and strife [sic] for originality" (2009:60). Such differences between spoken and written language should be taken into account when examining corpora of this sort.

In the following, I will evaluate Onysko's analysis of the role that s-rules and semantic generalisations play in the gender of anglicisms. I will also investigate the value of lexical-conceptual equivalence and argue that his postulated phonological rule is unnecessary.

4.7.1 Steinmetz's semantic rules applied to the gender of anglicisms

Onysko relies on Steinmetz's semantic rules to explain the gender of anglicisms in German. This approach invariably leads to the same ambiguities and lack of predictivity discussed in

regards to Steinmetz's analyses of native nouns (Section 4.6). For example, he asserts that Steinmetz's rule *cruciform objects, mesh-like structures* = *n* determines the gender of *Grid* 'grid', *Internet* 'internet', *Net* 'net' and *Web* 'web'. However, there is no psycholinguistic evidence, or evidence from semantics that people see the *Internet* or the *Web* as belonging to this semantic domain. Instead, lexical-conceptual equivalence may provide the gender of these terms. *Grid* is neuter as are its LCEs *Flächenraster*, *Gitter*, *Gitternetz* and *Netz*. *Web* and *Net* are used interchangeably with *Internet*, which is neuter, as is its lexical-conceptual equivalent *Netz*.

Similarly, Onysko provides little evidence when postulating the semantic rule *institutions* = *n*. He provides only one example, *das College*. This noun appears three times in the corpus with that gender. However, he has not acknowledged whether it appears three times within the same article, or in different articles. There is no evidence that other institutions are neuter when only one particular type of institution appears in this corpus. As with Steinmetz's analysis, he does not present his results as a clearly defined set of patterns that allow for the prediction of gender of nominal anglicisms.

4.7.2 Bittner's semantic generalisations applied to the gender of anglicisms

Bittner's (2001) semantic generalisations play a key role in Onysko's analysis of the gender of anglicisms, especially in his explanation of gender variation in some nouns. However, as I will demonstrate, they do not belong in an analysis of the gender of anglicisms because they are only concerned with the derived native lexicon, and as such are hypotheses about the gender of suffixes.

Bittner proposes that derived nouns in German have a certain “prototypical character” depending on how they are derived. She identified within the German lexicon “a relatively clear pattern of feminine: abstract, masculine: individuable/concrete, and neuter: collective/continuative” (Bittner 2001:8). Bittner agrees with Corbett (1991) that all the feminine suffixes *-heit/-keit*, *-schaft*, *-ung*, *-ei*, *-ik*, *-ion*, *-ie*, etc., (except for the suffix *-in* which denotes biological gender in animates) derive abstract nouns. In addition, she states that the suffixes that derive masculine nouns (*-er*, *-ling*, *-ist*, *-or*, *-ent/-ant*, *-erich/-ian/-ikus*, etc.) form individuable and concrete nouns (the majority of which are agentive, the rest being instrumentals), and that conversion from verbal and adjectival bases and affixation with *-nis* form neuter continuative nouns.³⁵ A summary of this information is in Table 15.

Gender	Masculine	Feminine	Neuter
Proto-typical character	individuable and concrete nouns	abstract nouns	continuatives
Feature	<i>-er</i> , <i>-ling</i> , <i>-ist</i> , <i>-or</i> , <i>-ent/-ant</i> , <i>-erich/-ian/-ikus</i>	<i>-heit/-keit</i> , <i>-schaft</i> , <i>-ung</i> , <i>-ei</i> , <i>-ik</i> , <i>-ion</i> , <i>-ie</i>	conversion, <i>-lein/-chen</i> , <i>-nis</i> , <i>-tum</i> , collective nouns with <i>Ge...(e)</i>

Table 15: Bittner’s (2001) semantic generalisations in German based on derived nouns

Bittner (2001:7-11) defines two kinds of continuative nouns. The first are those that denote unbounded wholes whose parts are also unbounded. She uses the example of air to illustrate her point, claiming that, to ordinary perceptions, a part of air is still air. It has exactly the same properties as the whole it comes from, that is, it is still unbounded and unlimited. The second definition of continuatives involves two kinds of nouns. The first kind are nouns that are formed with the prefix *ge-* (sometimes in combination with the suffix *-e*) and that involve some kind of continuous action, such as *das Gerede* ‘mindless, endless talking’ or *das*

³⁵ There are some exceptions to this that Bittner does not acknowledge. For example, *die Erlaub-nis* ‘permission’ (from *erlauben* ‘to allow’), *die Besorg-nis* ‘concern’ (from *besorgen* ‘buy, take care of’) and *die Erkennt-nis* ‘awareness, cognition’ (from *erkennen* ‘recognise, realise’) are nouns that are conversions with *-nis* but are not neuter.

Geschlafe ‘useless/boring sleeping’ (2001:10). The second kind of nouns are “pure nominalizations retaining the continuative character of the base” (2001:7) such as *das Laufen* ‘the running’ and *das Nachdenken* ‘the thinking about’. She states that the suffixes *-chen* and *-lein* form diminutives that are also neuter.

As seen in the previous analysis of Steinmetz (Section 4.6), establishing semantic generalisations that are based on the gender of inanimate nouns is questionable due to the fuzzy boundaries of some semantic categories. As with Steinmetz, Bittner does not provide clear definitions for particular terms she uses, for example, the terms *abstract* and *concrete*. Bittner claims that all feminine derived nouns are abstract. However, she offers *die Kleidung* ‘clothes’ as an example of such an abstract noun. “Clothes” are not abstract, nor are they comparable to such nouns as *Neuheit* ‘novelty’, *Leidenschaft* ‘passion’, or other nouns with the same suffix, such as *Beratung* ‘consultation’.

Bittner’s semantic generalisations mostly involve certain derivational suffixes (see Table 15). Therefore, she does not offer any additional explanation of gender beyond the RR or pseudo-suffix considerations. In addition, only few of these derivational suffixes appear on anglicisms, such as the agentive/instrumental *-er* derivational suffix. Such commonalities are insufficient to form broad conclusions. In order to explain the gender of nominal anglicisms, it is better to ignore such semantic generalisations and analyse the anglicisms on a morphological level.

Even though Bittner’s semantic generalisations are based on patterns in the derived native lexicon, Onysko uses a semantic “primitive” to explain the gender of certain simplex nouns with varied gender in his corpus. An example of one such noun is *E-Mail*. Onysko states that

there are 33 examples of *die E-Mail* and one example of *das E-Mail* in the corpus. He proposes that its direct translation *die elektronische Post* ‘the electronic post’ determined the feminine gender of *E-Mail*. He does not give the example in which the neuter noun appears. He asserts that the more prestigious feminine gender is more common in Standard German, whereas the neuter gender is more prevalent in the non-standard southern varieties.³⁶ Thus, the assumption is that the author who used *das E-Mail* was a speaker of such a dialect. However, he does not provide any evidence for this. Because *Der Spiegel*’s authors write in the standard language variety, he claims it is not surprising that they assign feminine gender to *E-Mail*. This, however, does not account for the one instance of neuter gender, as one would expect the magazine’s editorial staff to maintain the standard. Onysko claims that due to its “continuative nature” (Onysko 2007:177) and its existence in virtual reality, e-mail is much more abstract than regular mail and therefore is neuter. He does not acknowledge that *E-Mail* is not a conversion from a verb or adjective, nor is it a noun with a derivational suffix, both of which are important features of nouns in Bittner’s analysis. Thus, the semantic generalisation cannot apply and his explanation is tenuous and unsupported. The paucity of instances of *E-Mail* with neuter gender makes it difficult for Onysko’s hypothesis to be convincing.

A further semantic generalisation that Onysko uses is that of zero conversion. Despite the fact that Bittner (2001) clearly states that her semantic considerations apply only to words derived in German, Onysko uses zero conversion to explain the gender of anglicisms such as *das Chill-Out* ‘the chill-out’, *das Crossover* ‘the cross-over’ and *das Know-How* ‘the know-how’. These nouns are not derived in German. They are indeed conversions in English from the verbs *to chill out*, *to cross over* and *to know how (to do something)*, but these verbs do not

³⁶ This appears in *Duden* (2001), where *das E-Mail* is marked as being typical for southern German and Austria.

have such root forms in German (e.g. **chill-outen*, **cross-overen* or **know-howen*). This suggests that the nominal forms entered German already as conversions and did not undergo any derivational processes in German. Therefore, Bittner's semantic generalisation cannot apply.

Further evidence is needed to support Onysko's discussion of gender variation in certain terms from his corpus. For example, he uses semantic generalisations to explain the variation between *der* and *das Cyberspace*, exemplified in the following. According to Onysko, *Cyberspace* is neuter if used in a general sense and masculine if used in a specific sense. *Cyberspace* is masculine in all but two instances in his corpus where it is neuter (he does not mention how frequently this form appears in total). Onysko claims the masculine variant *der Cyberspace* refers to a "bounded entity with instrumental function", exemplified in the quote:

Doch entwickelt sich der Cyberspace immer mehr zum Instrument der Opposition.

[However, cyberspace is developing more and more into an instrument of the opposition]. (Onysko 2007:175)

On the other hand, Onysko claims the neuter variant *das Cyberspace* refers to "an unbounded continuative medium and to a superordinate entity that is removed from earthly limitations", in the quotes:

Schließlich wirbt seine Ironie-Aktion für das Cyberspace als künstlerisches Medium.

[After all, his ironic deed promotes the cyberspace as an artistic medium]

and

“Ich habe in den letzten vier Jahren erlebt, wie das Cyberspace auf die Erde zurückgekommen ist“, meint Marcinowski,...

[“In the last four years I have experienced how cyberspace has returned to earth”, Marcinowski says,...] (Onysko 2007:175).

The different reasons that he offers for the gender variation involving these nouns are idiosyncratic interpretations.

At times, Onysko seems to fit words into pre-existing classes without exploring all possible reasons for the gender of the anglicisms in his corpus. In explaining the difference between *die Crew* ‘crew’ and *das Team* ‘team’, Onysko claims there is a shift of perspective from individual members of the collective to a superordinate conceptualisation of the entity as a whole. He identifies a *Crew* as being a collection of individuals. Therefore, the noun is feminine (according to his rule). On the other hand, he maintains that *Team* is a superordinate structure unifying a group, which also encompasses a whole sport and a social network. Thus, it is neuter. However, Onysko’s distinction between *Crew* and *Team* appears to be subjective. A search for the terms *Crew sind* ‘crew are’, *Crew ist* ‘crew is’, *Team sind* ‘team are’ and *Team ist* ‘team is’ on *Google.de* (carried out on December 12, 2010) does not support Onysko’s view. *Crew ist* returned 270,000 hits and *Crew sind* returned 57,000 hits. This may indicate that *Crew* emphasises the collection, not the individuals. Similarly, *Team ist* returned more hits (3,280,000) than *Team sind* (956,000).

In sum, Bittner’s semantic generalisations apply only to German nouns that have been derived in German using German suffixes or conversion from German roots. They do not apply to anglicisms.

4.7.3 The role of lexical-conceptual equivalence

Onysko holds the view that lexical-conceptual equivalence plays a minimal role in determining the gender of anglicisms in German and that factors such as semantic and morphological patterns are stronger. Lexical-conceptual equivalence applies when a borrowing “relates to the same conceptual nucleus as a German term” (Onysko 2007:179). For example, the anglicism *der Essay* has the same gender as the equivalent *der Aufsatz*. Onysko formulates this as the following rule: *gender of anglicism = gender of lexical-conceptual equivalent*.

Onysko (2007:160) asserts that the lexical-conceptual equivalence does not play a large role in determining the gender of anglicisms because:

1. “... the recognition of conceptual relations between English and German can depend on bilingual competence of a German speaker”;
2. “... as borrowings, anglicisms can represent novelties in the lexicon-conceptual array of the German lexicon”; and
3. “... an anglicism can evoke associations to a variety of German terms bearing different genders”.

He agrees with Corbett (1991) that lexical-conceptual equivalence is less important than commonly thought, and believes that native German speakers need a high degree of bilingualism for this rule to apply. However, this does not have to be the case. One does not need to be bilingual to acquire a new word (either a loanword or a neologism from within the native language) if it is provided in a suitable context.

Onysko also explains that lexical-conceptual equivalence is insufficient in determining the gender of anglicisms because (a) an LCE sometimes has a different gender to its anglicism

and thus cannot have determined its gender and (b) an anglicism may have multiple LCEs that have different genders to each other and to the anglicism. He provides the following examples in Table 16 to support his argument:

Anglicism	LCE
<i>der Chat</i>	<i>die Unterhaltung, das Gespräch</i>
<i>der Claim</i>	<i>die Aufforderung, der Anspruch, das Gebiet</i>
<i>der Deal</i>	<i>das Abkommen, die Vereinbarung, der Handel</i>
<i>der Slip</i>	<i>die Unterhose ‘underpants’</i>
<i>der Speed</i>	<i>die Geschwindigkeit</i>
<i>der Take</i>	<i>die Aufnahme</i>

Table 16: Nominal anglicisms in Onysko (2007:167-168) with possible lexical-conceptual equivalents of differing gender

He analyses each of these anglicisms using Steinmetz’s gender hierarchy. As no rules apply, he claims each anglicism here is masculine by default. An alternative explanation may lie in the convention overriding lexical-conceptual equivalence. Hickey (2000:623) states that in German “deverbal monosyllables are nearly always masculine” and that the addition of a prefix to the verb does not alter this because the root remains monosyllabic. Hickey (2000:656) provides a list of native examples, some of which are in Table 17.

Verb	Deverbative Noun
<i>knallen</i>	<i>der Knall</i> ‘blast’
<i>laufen</i>	<i>der Lauf</i> ‘run’
<i>gehen</i>	<i>der Gang</i> ‘walk’
<i>aufstehen</i>	<i>der Aufstand</i> ‘stand’
<i>versuchen</i>	<i>der Versuch</i> ‘try’
<i>durchblicken</i>	<i>der Durchblick</i> ‘understanding’

Table 17: The gender of deverbative nouns. Adapted from Hickey (2000:656).

The nouns in Table 16 have verbal forms (*chatten* ‘to chat’, *speeden* ‘to speed’, *dealen* ‘to deal’, etc.), and it is plausible that native speakers have analysed the nouns as belonging to the class of deverbal monosyllables. Therefore, these nouns are masculine. This argument is

stronger for some nouns than for others. For example, the nominal meaning of *Slip* ‘underpants, briefs’ is somewhat removed from the verbal meaning. However, both a verb form and a nominal form exist. The argument is much stronger and clearer for nouns such as *Chat*, *Claim*, *Deal* and *Take*. The question is whether the authors of articles in *Der Spiegel* realise that they are nominalised verbs and give them gender accordingly.

Some further examples Onysko provides to dismiss the influence of lexical-conceptual equivalence on the gender of anglicisms include *der Colt* - *die Pistole* ‘pistol’, *der Joint* - *die Zigarette* ‘cigarette’ and the abovementioned *der Slip* - *die Unterhose* ‘underpants’. Here, his analysis is lacking in depth. He does not consider other LCEs, such as the masculine LCEs of *Revolver* ‘revolver’ for *Colt*, and *Schlüpfer* for *Slip*. This lack of in-depth exploration of further possible LCEs is evident throughout his argument for dismissing the importance of lexical-conceptual equivalence. There could be alternative explanations for the gender of the nouns in the above examples. One reason the anglicisms here may be masculine is that they are monomorphemic nouns, which according to Köpcke (1982) are mostly masculine. Further, the issue might be that the anglicisms are masculine by default and that the equivalents he lists (*Pistole*, *Zigarette* and *Unterhose*) are feminine because they end in *-e*. These alternatives need to be considered in order to achieve a more comprehensive analysis.

Another example where Onysko disregards lexical-conceptual equivalence is in his semantic rule *collections of individuals = f*. He gives the following examples, all of which have an LCE with the same gender, as shown in Table 18:

Anglicism	LCE
<i>die Crew</i>	<i>die Besatzung, die Mannschaft</i>
<i>die Band</i> (music)	<i>die Gruppe, die Kapelle</i>
<i>die Family</i>	<i>die Familie</i>
<i>die Gang</i>	<i>die Bande</i>
<i>die Shopping-Mall</i>	<i>die Laden-, Einkaufsstrasse, die Promenade, die Ladenpassage, die Ladenreihe</i>
<i>die Taskforce</i>	<i>die Arbeitsgruppe, die Sondereinheit</i>

Table 18: Lexical-conceptual equivalents of Onysko's (2007) nominal anglicisms following his s-rule collections of individuals = f

Onysko's final argument against the strength of lexical-conceptual equivalence is that loanwords often fill gaps in the lexicon and thus they do not have LCEs that influence their gender. This is true for some, but not all, anglicisms. Besides, it is difficult to imagine that anglicisms do not fit into certain domains that could determine their gender, whether they be synonym LCEs, hyponym or superordinate LCEs.

Overall, as Onysko (2007) and Onysko, Callies & Ogiermann (2010) note, the most significant issue with lexical-conceptual equivalence as a determinant of gender of anglicisms is that it is difficult to ascertain which particular words can be considered equivalents. In order to have a clear theory relating to lexical-conceptual equivalence, it is necessary to have a definitive theory of synonymy. Cruse (2011) and Storjohann (2010) point out the difficulty of determining what may count as a synonym. Cruse suggests a continuum of synonymy, leading from "vanishingly rare" (Cruse 2011:143) absolute synonyms to near-synonyms and then further to non-synonyms. He concludes that further research is needed in this area to distinguish clearly the difference between these points. This problem may be further increased when one word is borrowed from one language into another. The issue here is that if there are varying degrees of synonymy, the question remains of how synonymous two words (in this case, one anglicism, the other a native German word) have to be to count as

LCEs. In other words, it is unclear from which point along the synonymy-continuum certain words count as LCEs. In order to offer a theory of lexical-conceptual equivalence in relation to the gender of anglicisms one would have to refer to psycholinguistic testing in this area.

4.7.4 A phonological rule

Onysko postulated the phonological rule *word final C+ [i, ɪ] = f*, which relates to such nouns as *die Beauty*, *die City* and *die Military*. However, his argument for this rule is unconvincing because other proposed mechanisms account for the feminine gender of such nouns. Although Onysko claims this rule applies to 13 anglicisms in his corpus, he does not take into account the more obvious reasons for their being feminine. All 13 of them have one or more feminine LCEs and they are phonologically similar with native nouns ending in the suffix *-ie*, which according to Kunkel-Razum and Münzberg (2005), is feminine. (The nominal anglicisms in question are in Table 19, with their feminine LCEs.) This demonstrates that lexical-conceptual equivalence and phonological similarity with existing German nouns ending in *-ie* is strongly linked to the gender of these anglicisms.

Anglicism	LCE
<i>die Beauty</i>	<i>die Schönheit</i>
<i>die City</i>	<i>die Innenstadt</i>
<i>die Comedy</i>	<i>die Komödie</i>
<i>die Community</i>	<i>die Gemeinde</i>
<i>die Company</i>	<i>die Firma</i>
<i>die Economy</i>	<i>die Wirtschaft</i>
<i>die Party</i> (politics)	<i>die Partei</i>
<i>die Society</i>	<i>die Gesellschaft</i>
<i>die Story</i>	<i>die Geschichte</i>
<i>die Identity</i>	<i>die Identität</i>
<i>die Lobby</i>	<i>die Eingangs-, Empfangshalle, die Rezeption</i>
<i>die Military</i>	<i>die Vielseitigkeitsprüfung</i> (three-day equestrian event)
<i>die Rallye</i>	<i>die Kundgebung</i> (political meeting), <i>Sternfahrt</i> (sport), <i>Markterholung</i> (economics)

Table 19: Lexical-conceptual equivalents of Onysko's (2007:163-164) nominal anglicisms with *word final C+ [i, ɪ]*

Onysko acknowledges the limitations of this phonological rule, providing the example of *das Handy*. He claims this noun is neuter due to gender trace³⁷ of its implied form, a mobile telephone (*Mobiltelefon*). He continues with other examples which do not follow the p-rule, such as the nouns denoting human beings *der Aussie*, *der Softie*, *der Yuppie*, stating that the $[i, I] = f$ has an agentive-diminutive function in these cases. In these cases, the rule *word-final* $C + [i, I] = f$ is secondary to the NGP.

Although he provides an explanation for all of the nominal anglicisms in his corpus, some of his explanations are less tenable than others. One such instance is when he reports on the difficulty of explaining the neuter gender of *das Movie* ‘motion picture, movie’. He lists a series of probable explanations and even refers to his own *Sprachgefühl* ‘feeling for language’ (Onysko 2007:173) to explain the gender of this noun. He claims that upon first consideration, one would assume *Movie* has the same gender as the older borrowing *der Film* from a lexical-conceptual equivalence standpoint (especially as the author of the *Der Spiegel* extract uses both nouns synonymously to provide lexical variation). Onysko suggests *Film* is masculine because of its concrete reference to a filmstrip, using Bittner’s (2001) semantic generalisation of *concrete = m*.

One could also assume *Movie* would be feminine due to Onysko’s own p-rule *word-final* $C + [i, I] = f$. Onysko proposes that *das Movie* falls under the category of *superordinate = n*, claiming that *das Movie* now refers to all types of film-like productions shown on a screen and not strictly to a film in the sense of a filmstrip used in the cinema. However, he provides

³⁷ The convention of gender trace dictates that the gender of reduced form is that of the full form or implied form. This is also what Chan (2005) refers to as the *Vollformregel* ‘full-form rule’ and applies to both borrowed nouns and the native lexicon. For example, the gender of *der Personalcomputer* ‘personal computer’ remains in the shortened form of *der PC*.

no support for the claim that *Movie* is a superordinate noun. Onysko's interpretation here simply refers to these particular instances in his corpus.

Overall, many of Onysko's rules are not predictive but descriptive and they are often unsupported by independent evidence. Using Steinmetz's unmotivated semantic rules along with Bittner's semantic generalisations, he is able to provide an explanation for the gender of each anglicism in his corpus. However, he does not fully explore alternative reasons that counter these "rules" and "primitives". It is unlikely that the factors that Onysko claims determine the gender of anglicisms in his corpus will be able to predict the gender of neologisms or borrowings in German.

4.8 Conclusion

In this chapter, I have provided an overview of the main factors determining gender of nouns in German. These factors may be illustrated by way of the hierarchy in Figure 2. In sum, if a noun is morphologically complex, it will follow the Rightmost Rule. If it is not morphologically complex, but its referent is necessarily of a specific gender whether the referent is known or unknown, the gender of the noun will match the sex of the referent. Otherwise, if it has a pseudo-suffix, it will most likely adhere to the Rightmost Rule. If the noun does not have a pseudo-suffix, the gender of the noun is not clearly predictable, apart from a tendency for nouns in this category to be masculine. In the case of anglicisms, lexical-conceptual equivalence may play a role in determining gender.

In the present chapter I have also reviewed Köpcke's (1982), Steinmetz's (1986, 2001, 2006) and Onysko's (2007) works with the aim of establishing whether they have predictive power. I have shown that these accounts are not formulated in such a way that their predictivity can

be tested. None of them has a clear delimited set of basic axioms, nor do any of them have clear limits on the number of types of rules. Consequently, it is not possible to evaluate their predictiveness. This has the further consequence that these accounts would not be classified as theories under most definitions of this term. In the next chapter, I will discuss whether the rules and hypotheses derived from the analyses of written language in the aforementioned literature have explanatory power when applied to my data set of nominal anglicisms extracted from a corpus of spoken modern German.

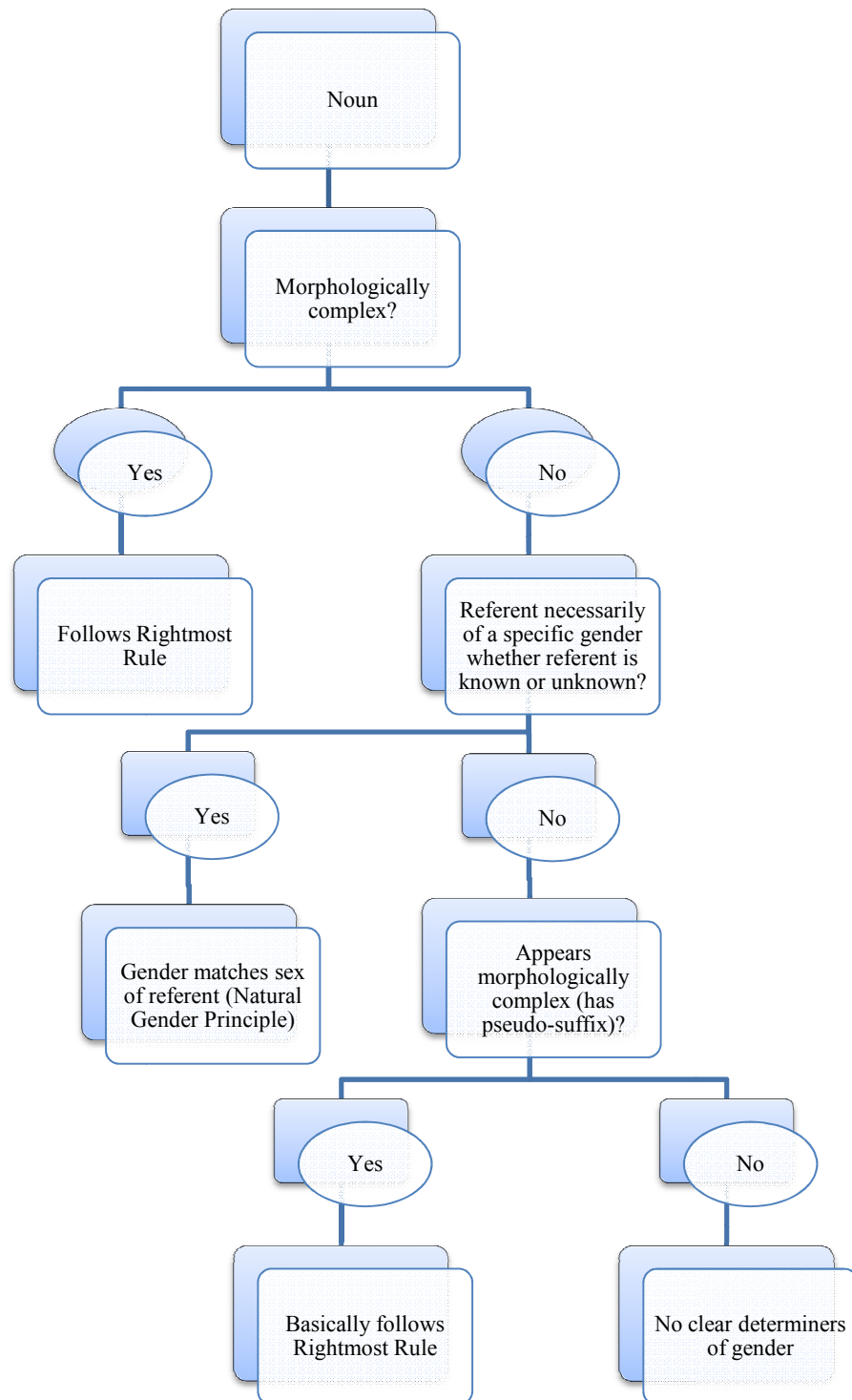


Figure 2: Hierarchy of factors determining gender of nouns in German

Chapter 5. Gender of anglicisms in German: Evidence from the present study

5.1 Introduction

This chapter has two aims. First, I provide a description of my data set of anglicisms under investigation and a comparison of this data to similar studies on anglicisms by Onysko (2007) and Glahn (2002).³⁸ As I will demonstrate, morphology and animacy are the most consistent predictors of the gender of anglicisms. Consequently, I present the anglicisms in terms of the following three categories:

1. morphologically complex nouns;
2. morphologically simplex nouns with pseudo-suffixes; and
3. simplex nouns.

I also examine the gender of anglicisms in terms of the following additional categories:

- (a) animacy;
- (b) monosyllabic nouns;
- (c) abbreviations in comparison with their full forms;
- (d) nouns and their lexical-conceptual equivalents; as well as
- (e) variation in gender of nouns.

The second aim of this chapter is to discuss the results of applying to my data set the principles and rules discussed in the previous chapter. This discussion focuses on patterns concerning morphology (as described by Köpcke 1982; Köpcke & Zubin 1984; and Zubin & Köpcke 1981; Zubin & Köpcke 1984, 1986), Onysko's (2007) phonological rule and the convention of gender trace, and Steinmetz's (1986, 2001, 2006) gender tally, gender eclipsis

³⁸ There is a difference in size between my data set and Onysko's data set on the one hand, and Glahn's on the other. Glahn's is so small that the chance of getting skewed results is quite high. My data set and Onysko's data set are approximately the same size and match more closely to each other than either does to Glahn.

and default gender. The results of the tests indicate that morphology and animacy, not semantics, are the best predictors of the gender of anglicisms in the corpus. Masculine as default did prove significant. The concept of lexical-conceptual equivalence is uncertain and requires further research. It is doubtful that the rest of the factors identified in the aforementioned studies are significant.

5.2 General Results

There are 199 nominal anglicism types (lexemes) in my data set (see Appendix A). As Figure 3 shows, of these 199 lexemes, 98 are masculine, 55 are neuter, 30 are feminine and 16 appear in my data set with more than one gender (one of which, *CD* ‘CD’, appears with all three genders).

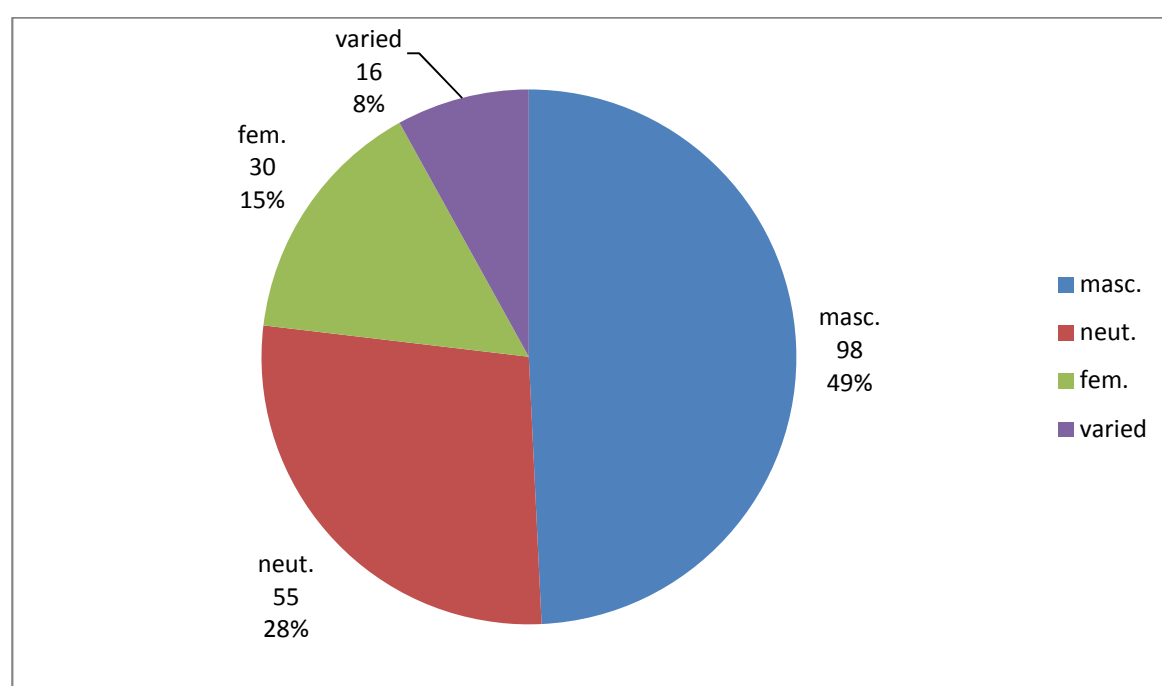


Figure 3: Distribution of gender of singular nominal anglicisms in my data set

This distribution of gender in my data is comparable to that of the nouns in Köpcke's (1982) study of monosyllabic nouns in German. In his list of 1,466 native and non-native monosyllabic nouns, 64% were masculine, 22% neuter and 14% feminine.³⁹

The data set of anglicisms from Onysko (2007) comprises 227 nominal anglicisms and that of Glahn (2002) contains 116 nominal anglicisms. Unfortunately, the authors do not provide information on the number of tokens, nor on the context in which the anglicisms are used. Information on the gender of the nouns is also very limited. Onysko provides the gender of only a few nouns and Glahn provides no gender at all.⁴⁰ Context is sometimes important to work out the meaning of a noun - if a root can have multiple meanings and these meanings have different genders, then context is needed to determine the meaning and the significance of the gender. For example, the anglicism *Boot* can have two unrelated meanings, depending on its gender (and pronunciation, which is irrelevant in written language). *Das Boot* is one of the oldest known anglicisms in German and has the meaning 'boat'. *Der Boot*, on the other hand, first appeared in the 20th century and refers to an item of footwear. The latter is usually found in the plural, *Boots*.

Context is also important in the discussion of animacy and of LCEs. For example, the noun *Single* has three genders that depend on meaning. One referent is animate and two are not: *Single* (m) refers to an unmarried person, *Single* (f) typically refers to a song from an album released individually and *Single* (n) refers to a game such as tennis between two players. For that reason, such nouns in Onysko's and Glahn's lists are not included in the discussion. In

³⁹ As stated in Section 4.4, Köpcke analysed nouns with two genders as two separate nouns. No nouns appeared in his corpus with all three genders.

⁴⁰ For the purposes of this analysis, I used *Duden* (2001) and *leo.org* to determine the gender of these anglicisms.

addition, to maintain a consistent analysis, nouns not appearing in the *Duden* (2001) or Carstensen and Busse (2001) were also excluded.

5.3 Group 1: Morphologically complex nouns

There are 32 morphologically complex singular nominal anglicisms in my data set.⁴¹ All noun types follow the Rightmost Rule whereby the noun takes the gender of the final morpheme that has gender specification. This applies to both animate and inanimate nouns. The morphemes appearing in my data set are illustrated with their genders in Table 20.

Gender	Morpheme	No. of types in data set	Examples
masc.	<i>-er</i>	17	<i>Browser</i> ‘browser’, <i>Killer</i> ‘killer’, <i>Rapper</i> ‘rapper’
	<i>-or</i>	1	<i>Reaktor</i> ‘reactor’
neut.	<i>-(ier)en</i>	3	<i>Trainieren</i> ‘training’, <i>Chatten</i> ‘chatting (online)’
	<i>-ing</i>	7	<i>Training</i> ‘training’, <i>Piercing</i> ‘piercing’
	<i>-ment</i>	1	<i>Management</i> ‘management’
fem.	<i>-ion</i>	3	<i>Action</i> ‘action’, <i>Supervision</i> ‘supervision’
	TOTAL	32	

Table 20: Morphemes with gender specification in my data set

Six morphologically complex nouns have animate referents listed in (9):

(9) *Keyboarder* ‘keyboardist’

Killer ‘killer’

Manager ‘manager’

⁴¹ By “morphologically complex”, I refer specifically to those nouns that have a root that exists independently in German. For example, the nominal anglicism *Killer* ‘killer’ is morphologically complex because the root *kill*-exists independently and forms the verb *killen* ‘to kill’. I checked for the independent root forms of each anglicism in *Duden* (2001), the websites *leo.org*, and the *Digitales Wörterbuch der deutschen Sprache* (*dws.de*). Some roots appeared also on *Google.de*, but did not appear in these sources. I did not consider these in my analysis.

Rapper ‘rapper’

Trainer ‘trainer’

Vorstopper ‘central defender [football]’

One token of the type *Trainer*, *Crosstrainer* ‘cross-trainer’, is not an animate noun. All other tokens and types are agentive nouns with the *-er* suffix, obeying the Rightmost Rule.

There are 72 morphologically complex nouns on Onysko’s list. All such nouns follow the RR except for *Holding* ‘holding company’. Nouns ending in the English suffix *-ing* are typically neuter, but *Holding* is feminine. This noun does not fall within the category of morphologically complex nouns or pseudo-suffixed nouns because it is a clipping of *Holdinggesellschaft* (f) ‘holding company’, which is feminine because it has the feminine nominal suffix *-schaft*. (See Section 5.5.2 for a discussion about the gender of abbreviations.) All of Glahn’s 23 morphologically complex nouns follow the Rightmost Rule. There is only one exception to the RR in all three data sets (the aforementioned *Holding*, in Onysko). This indicates that the RR is an accurate predictor of the gender of anglicisms.

5.4 Group 2: Nouns with pseudo-suffixes

In this section, I will provide two analyses on the nouns in my data set and the data sets of Onysko and Glahn that have pseudo-suffixes, i.e. those nouns that are not morphologically complex in German, but whose final syllables match phonologically to actual suffixes. In Analysis 1, I will examine the nouns solely from the point of view of the Rightmost Rule. This is to test whether nominal anglicisms that are not morphologically analysable behave as if they were. In Analysis 2, I will examine the same list of nouns from the viewpoint of

lexical-conceptual equivalence. I will then compare Analysis 1 with Analysis 2 in order to determine which of the two is more predictive of the gender of nominal anglicisms.

5.4.1 Analysis 1: Pseudo-suffixes and the Rightmost Rule

In my data set, 30 noun types have a pseudo-suffix, of which 23 (77%) appear to follow the Rightmost Rule. Examples of these nouns, the pseudo-suffixes and their genders are in Table 21.

Gender	Pseudo-suffix	No. of types	Example nouns
masc.	/er/	15	<i>Partner</i> ‘partner’, <i>Webmaster</i> ‘webmaster’, <i>Computer</i> ‘computer’
	/or/	3	<i>Bachelor</i> ‘bachelor degree’, <i>Error</i> ‘error’, <i>Humor</i> ‘humour’
	/us/	1	<i>Campus</i> ‘campus’
neut.	/ing/	3	<i>Meeting</i> ‘meeting’, <i>Feeling</i> ‘feeling’, <i>Aiming</i> ‘aiming’
	/al/	1	<i>Festival</i> ‘festival’

Table 21: Nouns with pseudo-suffixes appearing to follow the Rightmost Rule in my data set

One noun type not shown in the Table 21 presents a special case because it has an ending that is phonologically similar to that of a pseudo-suffix. *Community* ‘community’ does not have a pseudo-suffix in the written form. However, the final vowel sound of this noun is the same as the sound of the suffix *-ie*, which is feminine. Therefore, this noun type appears to be feminine due to the Rightmost Rule.

Of the six remaining noun types, three noun types do not appear to have gender determined by the Rightmost Rule. A further three have one token that does not match the gender determined by the Rightmost Rule. Three nouns types *Headquarter* ‘headquarters’, *Paper* ‘paper’ and *Pudding* ‘blancmange, custard’ do not appear to follow the Rightmost Rule. Although morphologically complex nouns ending in *-er* are masculine, *Headquarter* and

Paper are neuter (the gender of these nouns matches to their LCEs. See 5.4.2 for discussion). Morphologically complex nouns ending in *-ing* are neuter. However, *Pudding* is masculine.

The nouns types *Reader* and *Retainer* have one token each that does not follow the Rightmost Rule. *Reader* has three tokens in total. Two of these tokens follow the morphologically complex rule and are masculine. The token that does not adhere to this rule, and is feminine, as in the following excerpt:

“... habe gemerkt dass meine Adobe Reader eigentlich nicht richtig eingerichtet ist... habe den dann richtig eingerichtet”

‘... [I] noticed that my Adobe Reader was not set up properly... then set it up properly’
/HEMPEL/BLOCK34/SES3475 (Hempels’ Sofa Corpus)

In this excerpt, the possessive pronoun *mein* takes the adjective ending *-e*, which marks the noun *Reader* as feminine, illustrated in (10):

- (10) *mein-e* [poss. +fem.] *Adobe Reader*
‘my Adobe Reader’

However, within the same utterance, the speaker uses the masculine anaphoric pronoun *den* to refer to the antecedent *Reader*, as shown in (11):

- (11) *den* [masc.] *dann richtig eingerichtet*
‘set it up properly’

The noun *Retainer* has two tokens, one is masculine and one is feminine. The masculine noun adheres to the morphologically complex rule, whereas the feminine token does not. Both tokens in their context refer to an orthopaedic device for aligning teeth and appear in the same utterance as equivalents to the German feminine noun *die Zahnsperre*:

“... ich hatte mal eine feste Zahnsperre aber jetzt momentan nicht ach doch ich habe hier unten eine Retainer drinne...”

‘I had fixed (dental) braces but at the moment I don’t, oh, wait, I have a retainer here on the bottom [teeth]’

JTB2_IV [105-112] Deutsch Heute Corpus

The feminine gender of *Retainer* is clear from the feminine ending *-e* on the indefinite article *ein* in example (12):

(12) *hier unten ein-e* [fem.] *Retainer*

‘a retainer here on the bottom [teeth]’

In the second utterance, the second token is masculine.

“... ich habe einen Retainer also eine Zahnsperre hinter den Zähnen...”

‘... I have a retainer, so, braces behind my teeth...’

GSK_IV [18-19] Deutsch Heute Corpus

Masculine gender is shown by the ending *-en* on the indefinite article in Example (13):

(13) *ich habe ein-en*[masc.] *Retainer*

‘I have a retainer’

Exceptions such as those above are few and may simply be an indication of performance errors.

The third noun type with tokens that have more than one gender are the nouns ending in *-center* ‘centre’. There are three tokens of this type: *Shoppingcenter* ‘shopping centre’, *Assessment-Center* ‘assessment centre’ and *Fitnesscenter* ‘fitness centre, gym’. Of these three, *Fitnesscenter* is the only noun that appears in the data to follow the Rightmost Rule

and is masculine because of the /er/ ending. The other two nouns are neuter. (See 5.4.2 for an explanation of the other tokens' gender.)

There are nine nouns in Glahn's (2002) data set which have pseudo-suffixes. Four of these, *Monster* 'monster', *Poker* 'poker', *Power* 'power' and *Pudding* 'blancmange, custard', do not appear to follow the Rightmost Rule. Therefore, 55% of the nouns with pseudo-suffixes in his data set behave as if they were morphologically complex. In Onysko's (2007) data set, only 5 from 30 nouns with pseudo-suffixes do not follow the RR. These nouns are *Power*, *Poker*, *Center*, *Cover* 'cover' and *Business* 'business'. Therefore, 83% of the nouns with pseudo-suffixes in this data set behave as if they were morphologically complex.

I have shown in this section that the majority of the noun types in all three data sets that have a pseudo-suffix behave as if they were morphologically complex - their gender appears to be determined by the Rightmost Rule. In the next section, I will analyse the same group of nouns to see whether lexical-conceptual equivalence is more accurate in predicting the gender of pseudo-suffixed nominal anglicisms.

5.4.2 Analysis 2: Pseudo-suffixes and lexical-conceptual equivalence

An important factor in the gender assignment of a nominal anglicism is the existence of a lexical-conceptual equivalent in German. When analysing the potential influence LCEs⁴² have on the gender of an anglicism, it is important to remember that no complete theory of synonymy has been offered with which to test lexical-conceptual equivalence. This means that if a word is provided as an LCE to an anglicism, it may not have the identical meaning to

⁴² I obtained most LCEs in this analysis from *Duden* (2001) and Carstensen and Busse (2001). For nouns not in these sources, I consulted the English-German bilingual dictionary at *leo.org*. If a noun had multiple LCEs with varying meaning, I only included LCEs that have the same meaning of the anglicism in the context(s) in which it occurs in my data of spoken German.

the anglicism in all contexts. For example, the *Duden* (2001) offers *Vorwort* and *Leitartikel* as LCEs for the anglicism *Editorial*. However, while their meanings overlap, there are some differences. *Vorwort* is similar to a preface or a foreword and *Leitartikel* is a leading article or opinion piece in a newspaper or magazine.

Within these limitations, I investigated whether LCEs have a significant role in gender assignment, and in particular, whether they are a more accurate predictor of gender to nouns with pseudo-suffixes than the Rightmost Rule. In order to do this, I divided the nouns with pseudo-suffixes into the four categories (A-D), depending on their LCEs, presented in Table 22.

Category	Description
A	The anglicism does not have any LCEs
B	All LCEs have the same gender, and the anglicism also has that gender
C	The LCEs differ in gender and the anglicism shares gender with one of them
D	The anglicism does not share gender with any of its LCEs

Table 22: Categories of lexical-conceptual equivalents (LCEs)

The 30 noun types with pseudo-suffixes in my data set fit in the four LCE categories in Figure 4 thus:

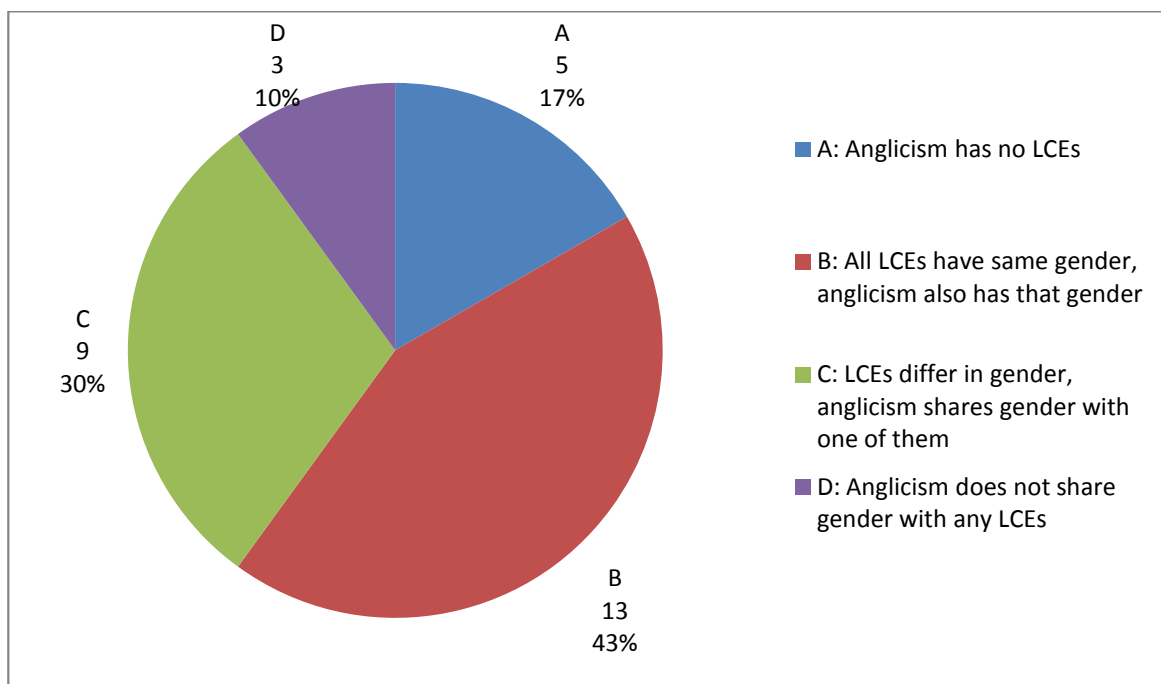


Figure 4: Distribution of lexical conceptual equivalents to nouns with pseudo-suffixes in my data set over four categories.

The nouns that are relevant for the present analysis are those in Categories C. The frequency of the LCE may also play a role in determining the gender of the anglicisms in Category C. In order to investigate this, I used the search engine *Google.de*⁴³ to obtain an approximation of how frequently each of the LCEs occurs in German.⁴⁴ For example, *Container* ‘container’ has the same gender as its most frequently occurring LCE, *Behälter*. However, *Headquarter* ‘headquarters’ does not have the same gender as its most frequently occurring LCE *Zentrale*. Table 23 lists the nouns with pseudo-suffixes in my data and the frequency of their LCEs.

⁴³ March 12, 2011

⁴⁴ I acknowledge that an internet search engine is not the most accurate tool of determining the frequency of certain nouns, specifically in spoken language, because it contains written data. However, it is likely that the internet contains a higher percentage of colloquial German than most other written sources. Furthermore, other sources of spoken data, such as the corpora of spoken German at the *IDS*, would not be beneficial because they are often too old (up to 40 years) to contain many recent anglicisms. However, *Google.de* is useful in giving a general indication of how frequently some nouns appear in German.

Noun	LCE plus # <i>Google.de</i> hits			
<i>Container</i> (m) 'container'	<i>Behälter</i> (m) 3,560,000	<i>Gefäß</i> (n) 800,000		
<i>Error</i> (m) 'error'	<i>Fehler</i> (m) 79,900,000	<i>Irrtum</i> (m) 2,350,000	<i>Versehen</i> (n) 7,890,000	
<i>Meeting</i> (n) 'meeting'	<i>Treffen</i> (n) 41,100,000	<i>Sitzung</i> (f) 6,000,000	<i>Besprechung</i> (f) 8,360,000	<i>Konferenz</i> (f) 38,500,000
<i>-player</i> (m) 'player'	<i>Gerät</i> (n) 28,000,000	<i>Spieler</i> (m) 31,200,000		
<i>Bachelor</i> * (m) 'bachelor's degree'	<i>Urkunde</i> (f) 1,510,000	<i>akadem. Grad</i> (m) 83,100	<i>Ehrendiplom</i> (n) 1,560	
<i>Headquarter</i> * (n) 'headquarters'	<i>Hauptquartier</i> (n) 603,000	<i>Zentrale</i> (f) 11,800,000		
<i>-center</i> (n/m) 'centre'	<i>Zentrum</i> (n) N/A			
<i>Reader</i> (m/f) 'reader'	<i>Leser</i> (m) N/A			
<i>Retainer</i> (m/f) 'retainer'	<i>Zahnspange</i> (f) N/A			

Table 23: Nouns with pseudo-suffixes in my data set in the LCE Category C.

The most frequent LCE is in bold. * indicates the gender of the anglicism does not match that of the most frequent LCE.

As can be seen from Table 23, the nouns *Error*, *Container*, *Meeting* and those ending in *-player* have the same gender as their most frequently occurring LCEs. It is the gender predicted by the Rightmost Rule as well. The nouns that have gender different to their most frequently occurring LCEs, *Headquarter* and *Bachelor*, also appear to follow the Rightmost Rule.

Of the three noun types with more than one gender in my data set, two tokens of the nouns ending in *-center* (*Shoppingcenter* and *Assessment Center*) have the same gender as their LCEs. The one other token, *Fitnesscenter*, appears to be masculine due to the RR. One token

of *Retainer* has the same gender as its LCE, *Zahnsperre*. The only other token of this noun follows the RR. One token of *Reader* is feminine and does not match the gender of its LCE. The other two tokens of this noun are masculine, following the RR. The nouns in Category D, *Flyer*, *Pudding* and *Campus* are not the same gender as their LCEs. *Flyer* and *Campus* behave as if morphologically analysable and thus have the gender determined by the pseudo-suffixes. *Pudding* does not. It is important to note that the number of tokens mentioned here is small and may not have implications for the lexicon as a whole. Furthermore, the case of *Pudding* is exceptional because it is not morphologically analysable.

In Glahn's data set, one noun with a pseudo-suffix, *Hamburger* 'hamburger', does not have any LCEs⁴⁵ and one noun does not match the gender of any LCEs - *Pudding*. The remaining seven (78%) nouns have the same gender as their LCEs. In Onysko's set of anglicisms with pseudo-suffixes, 22 (73%) have the same gender as all suitable LCEs. Four anglicisms (13%) in this data set fall into LCE Category C, that is, the anglicisms that have LCEs with differing gender, and the anglicism has the same gender as one of its LCEs. These anglicisms are listed in Table 24.

⁴⁵ However, this presents as an unusual case because it is difficult to determine whether the /er/ on this noun is indeed a suffix or a pseudo-suffix. The noun *Hamburg* exists as the name of a city in Germany, which forms the stem of the native noun *Hamburger* - an inhabitant of that city. However, as it is presented in Glahn, *Hamburger* is an anglicism referring to a kind of food and is thus not morphologically analysable (there is no verb *to hamburg*, in German, for example).

Noun	LCE plus # <i>Google.de</i> hits		
<i>Bestseller</i> (m) ‘bestseller’	<i>Erfolgsbuch</i> (n) 92,200	<i>Verkaufsschlager</i> (m) 657,000	
<i>Container</i> (m) ‘container’	<i>Behälter</i> (m) 3,560,000	<i>Gefäß</i> (n) 800,000	
<i>Business</i> (n) ‘business’	<i>Geschäft</i> (n) 71,300,000	<i>Handel</i> (m) 41,100,000	<i>Geschäftsleben</i> (n) 184,000
<i>Cover</i> (n) ‘cover’	<i>Hülle</i> (f) 3,410,000	<i>Titelblatt</i> (n) 5,090,000	<i>Titelbild</i> (n) 2,720,000

Table 24: Nouns with pseudo-suffixes in Onysko’s (2007) data set in the LCE Category C.

The most frequently occurring LCE is in bold. * indicates the gender of the anglicism does not match that of the most frequent LCE.

The nouns *Bestseller* and *Container* have the same gender as their most frequent LCEs. They also have the same gender as determined by the RR. *Business* and *Cover* have the same gender as their most frequent LCEs. There are four more nouns *Pullover* ‘pullover’, *Teenager* ‘teenager’, *Thriller* ‘thriller’ and *Laddism* ‘lad/laddish culture’ that have no clearly identifiable LCEs in the aforementioned sources. They constitute 13% of the nouns with pseudo-suffixes in Onysko’s data set. However, the gender of all these nouns can be explained by the Rightmost Rule. Because 73% of all nouns with pseudo-suffixes in Onysko’s data set have the same gender as their LCEs, it appears that lexical-conceptual equivalence is a reasonable predictor in the gender of anglicisms.

5.4.3 Comparison of Analyses 1 and 2

On average, over 75% of the nominal anglicisms with pseudo-suffixes in all three data sets behave as if they were morphologically complex. On the other hand, less than 66% of the same nouns have the same gender as their LCEs (LCE Category B). Less than 75% of these anglicisms have multiple LCEs of differing gender but have the same gender as their most common LCE (Category C). However, the data for this category is small. Less than 66% of

the anglicisms correspond to any LCE at all. This figure is highly problematic for two reasons. First, there are issues in determining what an LCE is. Second, if an LCE were a straightforward factor, then we would expect the frequency of individual LCEs to be important. If loans align to their ‘nearest’ equivalent in German, then surely frequency is a factor in determining ‘nearness’. The details of each analysis is summarised in Table 25.⁴⁶ The results of these analyses indicate that if a noun has a pseudo-suffix, it is likely to behave as though it is morphologically complex. Thus, its gender is more accurately predicted morphologically than when its LCEs are taken into consideration.

	My data set	Glahn	Onysko	Average
Analysis 1: Rightmost Rule				
Total types in data set	30	9	30	69
Types that appear to follow RR	23 (77%)	5 (55%)	25 (83%)	53 (77%)
Analysis 2 (a): LCE				
Total types in data set	30	9	30	69
Types in LCE B (loan and all LCEs share gender)	13 (43%)	7 (78%)	22 (73%)	42 (60%)
Analysis 2 (b): LCE				
Types in data set	6	-	4	10
Types in LCE C (loan shares gender with commonest LCE)	4 (66%)		3 (75%)	7 (70%)
Analysis 2 (c): LCE				
Types in data set	36	9	34	79
Types corresponding to any LCE at all (B + C)	17 (47%)	7 (78%)	25 (74%)	49 (62%)

Table 25: Percentage of nouns with pseudo-suffixes in each data set that appear to follow the Rightmost Rule or have the same gender as their LCEs

In this section, I have provided evidence that morphology is better than semantics as a predictor of gender in nouns with pseudo-suffixes. In the next section, I will analyse simplex nouns, which constitute the third major group of anglicisms appearing in my data set.

⁴⁶ All percentages in this, and subsequent tables, are rounded to the nearest whole number.

5.5 Group 3: Simplex nouns

There are 137 simplex nouns in singular form in my data set. I analysed these nouns for patterns relating to animacy, the gender of full forms (if abbreviated), the gender of monosyllabic nouns, lexical-conceptual equivalence and variation in gender. I include an analysis of the anglicisms in Onysko's (2007) and Glahn's (2002) data sets using similar criteria. Given that there are three genders in German, it is reasonable to say that a random assignment of gender to simplex nominal loans should give 33% for each of the three genders. However, as I will demonstrate below, there are significant departures from this and that gender assignment is not random. Table 26 presents a summary of these significant statistical variations. The factors in Part 1 of the Table have a predictability of 67% or more. This means that they are more than twice as likely than a true random estimation of one in three (33%) at predicting the gender of anglicisms. The factors in Part 2 accurately predict the gender of anglicisms in approximately half of cases. The factors in Part 3 of the Table are less likely to accurately predict the gender of anglicisms.

1. Variations 67% or greater (more than 2 x 33.3%)

<i>Factor</i>	<i>Predictor</i>
Animacy	100%
Types in LCE Category C, where loan shares gender with commonest LCE	76%
Masculine as default	67%

2. Variations 67% = 50% (= 33.3% + 16.65)

<i>Factor</i>	<i>Predictor</i>
LCEs excluding multiple LCEs (i.e. Categories A, B, D)	61%

3. Variations 49% or less

<i>Factor</i>	<i>Predictor</i>
All LCEs (Categories A-D)	48%
Gender trace	48%

Table 26: Statistical variations in gender of nominal anglicisms in my data set and the data sets of Onysko (2007) and Glahn (2002)

It is not evident how statistical significance would be determined from the factors in Table 26. It seems the factors in Part 1 of the table are probably significant. However, it seems unlikely that the factors in Part 3 of the table are significant, and it is unclear what the status of the factor in Part 2 is. I will discuss lexical-conceptual equivalence generally in Section 5.5.4, and the other factors in the table in Sections 5.5.1 to 5.5.5.

5.5.1 Animacy

Eight simplex nouns in singular form in my data set have animate referents, listed in Table 27.

Gender	Animate noun
masc.	<i>Cowboy</i> ‘cowboy’
	<i>Dad</i> ‘dad’
	<i>DJ</i> ‘DJ, disk jockey’
	<i>Fan</i> ‘fan’
	<i>Freak</i> ‘freak’
	<i>Teamkaptain</i> ‘team captain’
	<i>Touri</i> ‘tourist’
neut.	<i>Baby</i> ‘baby’

Table 27: The gender of animate simplex nouns in my data set

Only one noun in Table 27, *Baby*, is neuter. All the other nouns are masculine, the first two of which, *Cowboy* and *Dad*, specifically refer to male humans. Onysko (2007) provides nine animate simplex nouns in his data set: *Boss* ‘boss’, *Coach* ‘coach’, *Fan* ‘fan’, *Outcast* ‘outcast’, *Star* ‘star’, *Stuntman* ‘stuntman’, *Teenie* ‘teenager, teenybopper’, *Underdog* ‘underdog’ and *Baby* ‘baby’. All nouns are masculine except for *Baby*. Only *Stuntman* refers specifically to a male. Twelve simplex animate nouns appear in Glahn’s (2002) data set of anglicisms. Two of these nouns refer specifically to females (*Miss*, *Mom/Mum*) and are

feminine. Two refer to children (*Baby, Kid*) and are neuter. Eight nouns are masculine and one of them (*Playboy*) has specifically a male referent. From the analysis of all three data sets, it appears that simplex nominal anglicisms that have animate referents follow the pattern of animate nouns in the wider lexicon: i.e. they are feminine when they have a specifically feminine referent, neuter when they refer to children, and are otherwise masculine. In addition to the nouns discussed here, there are animate nouns in the RR and pseudo-suffix categories. Since the gender of these nouns is determined by the *-er* and *-or* (pseudo-) suffixes they are not listed here.

5.5.2 Gender trace

The analysis focused on 22 reduced forms/abbreviations in singular form. This number includes abbreviations from my data set, Onysko's and Glahn's. The forms are presented in Table 28. According to Onysko (2007), the convention of gender trace determines equivalence between the gender of abbreviations and their full forms. However, this is not consistently the case because seven items have a different gender to their full forms. There are three issues with gender trace as a predictor of the gender of anglicisms. The first issue is that the average German speaker may not know many of the full forms, thus eliminating the gender link between the two forms. The full forms of the nouns marked with an asterisk in Table 28 do not have a separate entry in the *Duden* (2001), suggesting that these nouns were borrowed in their abbreviated forms only.

The second issue is that gender trace accurately predicts less than half of the abbreviations in my data set, suggesting that gender trace alone cannot account for the gender of these anglicisms. A further issue regards the nouns in Category C in Table 28. Both of these abbreviations have varying gender. On the one hand, *LAN* has two genders corresponding

with those of its two full forms with different meanings. On the other hand, *Flat* has two genders, but only one full form and one meaning. Considering the abbreviations in all three data sets presented in the table, gender trace is not a reliable predictor for gender assignment of abbreviated anglicisms.

Reduced Form	Full Form	Reduction Type
(a)		
Comic ^(AO) (m)	<i>Comicstrip</i> (m)	Clipping
DJ (m)	<i>Diskjockey</i> (m) ‘disc jockey’	Acronym
PC ^(AO) (m)	<i>Personalcomputer</i> (m)	Acronym
Pulli (m)	<i>Pullover</i> (m)	Clipping + -i
Skip ^(OG) (m)	<i>Skipper</i> (m) ‘captain, master of a ship’	
Touri (m)	<i>Tourist</i> (m)	Clipping + -i
CD ^(AO, AG) (f)	<i>Compact Disk</i> (f)	Acronym
DVD* (f)	<i>Digital Versatile Disk</i> (f)	Acronym
Holding ^(OO) (f)	<i>Holding Company</i> (f)	Clipping
VIP ^(OO) (f)	<i>Very Important Person</i> (f)	Acronym
Klo (n)	<i>Wasserklosett</i> (n) ‘water closet’	Clipping
Bit* (n)	<i>Binary Digit</i> (n)	Blend
WC* (n)	<i>Water Closet</i> (n)	Acronym
(b)		
PDF* (m)	<i>Portable Document Format</i> (n)	Acronym
URL*(f)	<i>Uniform Resource Locator</i> (m)	Acronym
CD-ROM* ^(AO, AG) (f)	<i>Compact Disk Read Only Memory</i> (n)	Acronym
SMS* (f)	<i>Short Message Service</i> (m)	Acronym
DSL* (n)	<i>Digital Subscriber Line</i> (f)	Acronym
Modem* (n)	<i>Modulator Demodulator</i> (m)	Blend
Pay-TV* ^(OO) (n)	<i>Pay Television</i> (f)	Acronym
(c)		
Flat (f/n)	<i>Flatrate</i> (f) ⁴⁷	Clipping
LAN* (f/n)	<i>Local Area Network</i> (n), <i>Local Area Network Party</i> (f)	Acronym

Table 28: The gender of abbreviated forms in my data set

Key:

(a) gender of abbreviation matches gender of full forms

(b) gender of abbreviations does not match gender of full forms

(c) abbreviations with varying gender

^{AO} abbreviations also appearing Onysko (2007)

^{OO} abbreviations found only in Onysko

^{AG} abbreviations also appearing in Glahn (2002)

^{OG} abbreviations found only in Glahn

* have no separate entry in their full forms in the *Duden* (2001)

⁴⁷ The pronunciation of *Flatrate* is similar to English, i.e. the -e is phonologically zero.

5.5.3 Gender of monosyllabic simplex nouns - masculine as default

The majority of inanimate simplex noun types in my data set are monosyllabic ($n = 74$). Monosyllabic nouns are of interest to a study of nominal gender because they are not subject to the Rightmost Rule or the effect of pseudo-suffixes. Figure 5 indicates the distribution of gender within the monosyllabic simplex noun types in my data set.

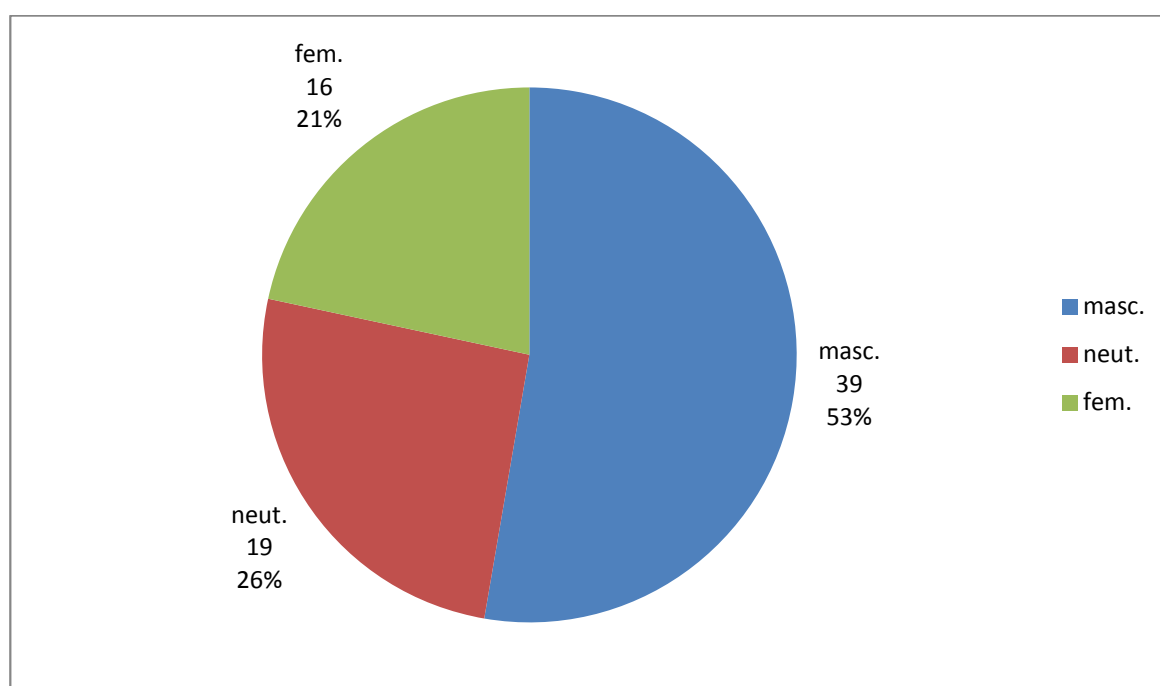


Figure 5: Gender distribution of inanimate simplex monosyllabic noun types in my data set

The majority of the monosyllabic simplex nouns in singular form in my data set are masculine. This is followed by neuter and then feminine nouns. Onysko lists 78 monosyllabic simplex nouns. The large majority of these nouns are masculine, with only a few nouns being feminine or neuter. The distribution of gender in his data is shown in Figure 6. The distribution of gender among monosyllabic simplex nouns in Glahn's list (see Figure 7) is comparable to the one in Figure 5 and Figure 6, whereby the majority of nouns are masculine,

followed by the neuter and feminine. The similarity of the distributions in all three data sets suggests that the principle of ‘masculine as default’ does have predictive value.

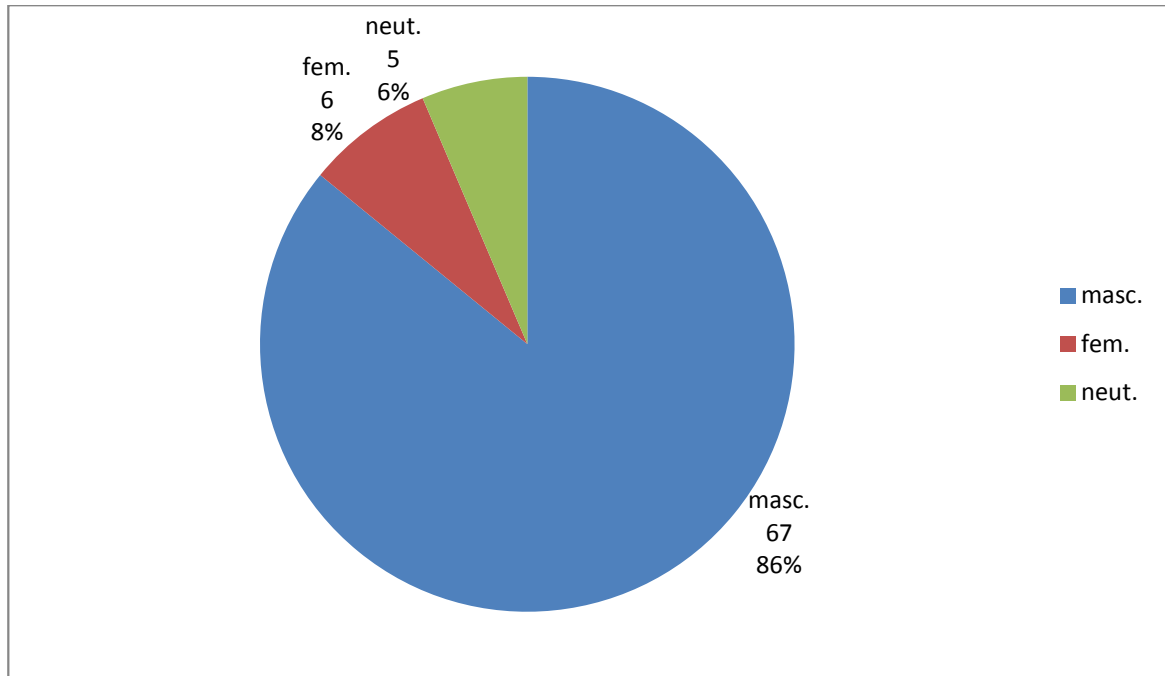


Figure 6: Gender distribution of inanimate simplex monosyllabic noun types in Onysko (2007)

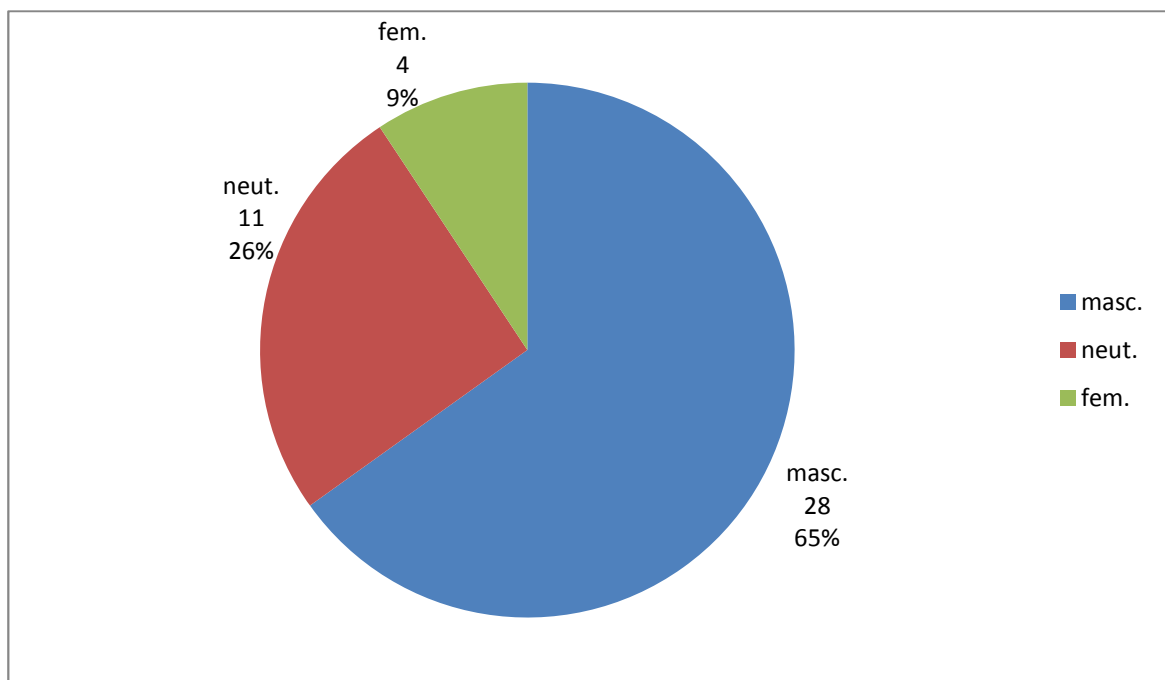


Figure 7: Gender distribution of inanimate simplex monosyllabic noun types in Glahn (2002)

5.5.4 Lexical-conceptual equivalence of inanimate anglicisms

In order to determine whether lexical-conceptual equivalence is significant in determining the gender of anglicisms, I analysed the simplex nouns in my data set. Excluded are nouns that are abbreviations and nouns that entered German before 1945.⁴⁸ Choosing this date as a starting point gives a more accurate picture of recent gender assignment processes. My data set for this analysis contains 54 nouns in singular form. I divided these nouns into the four different categories of LCEs (A-D), presented in Table 22. The distribution of LCEs to the four categories is illustrated in Figure 8.

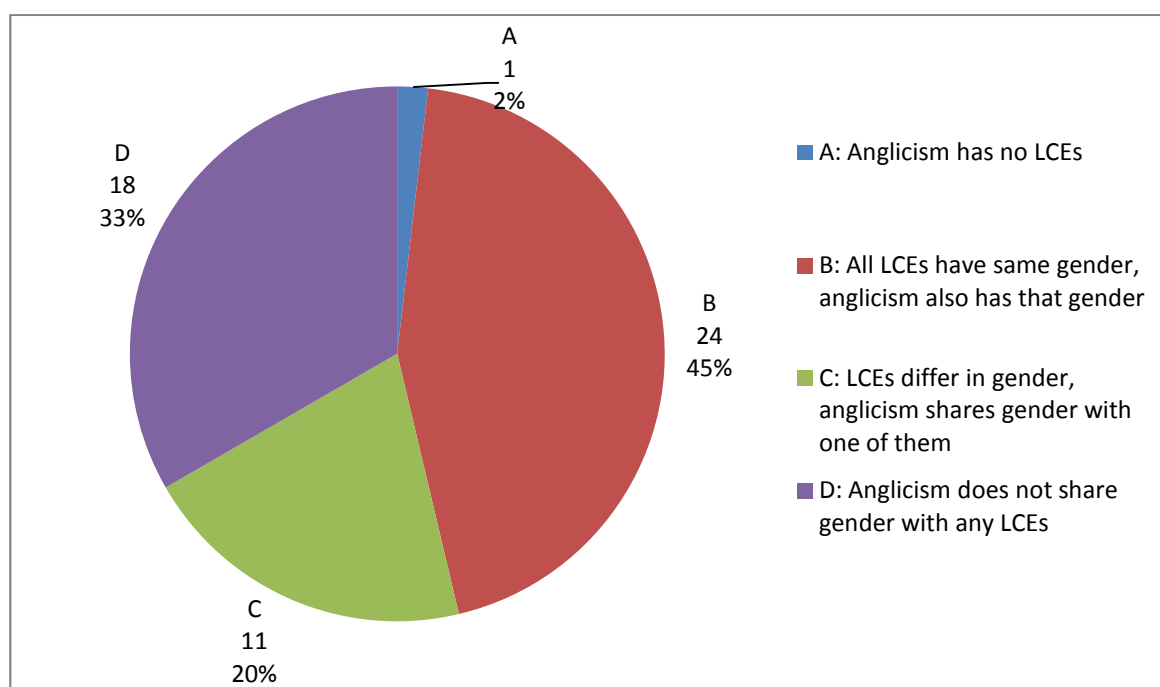


Figure 8: Distribution of lexical conceptual equivalents to simplex nouns over four categories in my data set

Figure 8 shows that the smallest category is A, which contains only one noun, *Rap*. This noun has the same masculine gender as other styles of music, such as *Jazz*, *Swing*, *Punk*, *Hip-Hop*

⁴⁸ I used Carstensen and Busse (2001) to determine the year each anglicisms entered German. I found some instances from sources dated pre-1945 using Google Books (<http://books.google.de/bkshp?hl=de&tab=wp>), but here I consider only the common usage that is registered in Carstensen and Busse.

and *Pop*. Thus, semantic analogy may account for the gender of this noun. The largest category is B with 24 of the 54 nouns having the same gender as all their LCEs. The second largest category in my data set, and the category most relevant for this study, is Category C. Approximately one-fifth of nouns in this analysis have LCEs that differ in gender, but share gender with one (or more) of them. One third of anglicisms here do not have any LCEs (Category D).

For seven of the eleven nouns in Category C, the most frequently occurring LCE has the same gender as the anglicism. Table 29 shows all of these nouns. The number of *Google.de*⁴⁹ hits is below each LCE. Four nouns within Category C do not have the same gender as their most frequently occurring LCEs. These are *Bodybag*, *Editorial*, *Flowchart* and *Stress*. A possible reason for *Bodybag* having the same gender as *Rucksack* (m) ‘backpack’ is that it is similar to a *Rucksack* in size and shape, and how it is worn. A *Bodybag* is essentially the same as a *Rucksack* but it has only one strap that goes over one shoulder and across the front of the body. *Tasche* ‘bag’ is a more general term and may have yielded more hits simply because this category is much broader. The most frequent LCEs are not a factor in determining gender of *Flowchart*, *Stress* or *Editorial* either. *Flowchart* is listed in the *Duden* (2001) as having both masculine and neuter gender. All LCEs of *Flowchart* are masculine or neuter.

⁴⁹ March 11, 2011

Noun	LCE plus # <i>Google.de</i> hits		
<i>Map</i> (f) 'map'	<i>Karte</i> (f) 90,400,000	<i>Plan</i> (m) 19,800,000	
<i>Jackpot</i> (m) 'jackpot'	<i>Gewinn</i> (m) 54,900,000	<i>Gewinnsumme</i> (f) 495,000	
<i>Script</i> (n) 'script'	<i>Drehbuch</i> (n) 19,300,000	<i>schriftl. Ausarbeitung</i> (f) 109,000	
<i>T-Shirt</i> (n) 't-shirt'	<i>Hemd</i> (n) 5,280,000	<i>Oberteil</i> (m/n) 2,530,000	
<i>Image</i> (n) 'image'	<i>Vorstellung</i> (f) 66,600,000	<i>Bild</i> (n) 311,000,000	
<i>Date</i> (n) 'date'	<i>Verabredung</i> (f) 377,000	<i>Treffen</i> (n) 41,100,000	
<i>Sound</i> (m) 'sound'	<i>Klang</i> (m) 8,940,000	<i>Klangwirkung</i> (f) 25,600	<i>musik. Stilrichtung</i> (f) 9,270
<i>Editorial</i> *(n) 'editorial'	<i>Vorwort</i> (n) 2,460,000	<i>Leitartikel</i> (m) 4,940,000	
<i>Bodybag</i> *(m) 'one-strap bag'	<i>Rucksack</i> (m) 4,580,000	<i>Tasche</i> (f) 17,600,000	
<i>Stress</i> *(m) 'stress'	<i>Belastung</i> (f) 3,800,000	<i>Spannung</i> (f) 9,500,000	<i>Spannungszustand</i> (m) 119,000
<i>Flowchart</i> *(n) 'flowchart'	<i>Ablauf-, Flussdiagramm</i> (n) 113,000/202,000	<i>Ablaufplan</i> (m) 663,000	<i>Ablaufschau-, Fließbild</i> (n) 986/64,3000

Table 29: Anglicisms in Category C with approximate frequency of their LCEs.

Nouns marked with an asterisk do not share gender with their most frequent LCEs. The most frequently occurring LCE is in bold.

The four LCE categories of the simplex nominal anglicisms in Onysko are given in Figure 9. Category A contains 9% of the simplex nouns. Category B, where all LCEs and the anglicism have the same gender, is the largest category. Category C (discussed below), where the LCEs differ in gender and the anglicism shares gender with one (or more) LCE(s), is the next largest category. Category D, where the anglicism does not share gender with any LCE, is the second-smallest category.

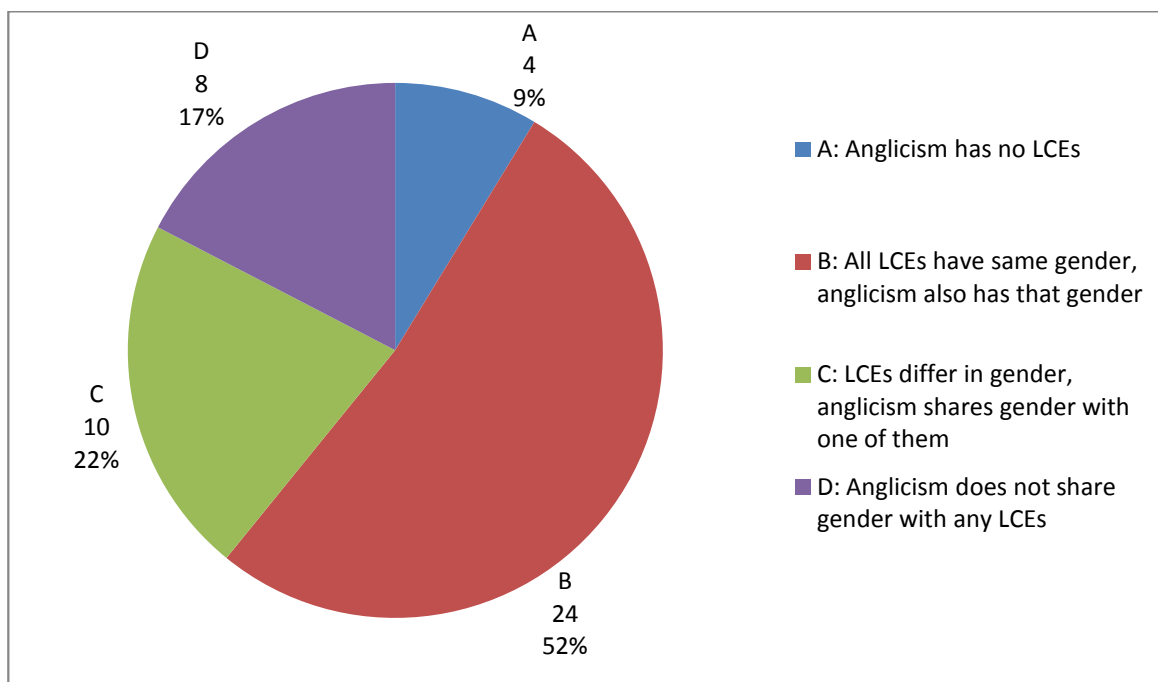


Figure 9: LCE categories of simplex anglicisms in Onysko (2007)

LCE Category C contains eleven nouns, three of which have the same gender as their most frequent LCE. These nouns and the frequency of their LCEs are listed in Table 30.

Noun	LCE plus # <i>Google.de</i> hits		
<i>Design</i> (n) 'design'	<i>Gestalt</i> (f) 4,300,000	<i>Muster</i> (n) 7,550,000	
<i>Image</i> (n) 'image'	<i>Vorstellung</i> (f) 66,600,000	<i>Bild</i> (n) 311,000,000	
<i>Sound</i> (m) 'sound'	<i>Klang</i> (m) 8,940,000	<i>Klangwirkung</i> (f) 25,600	<i>musik. Stilrichtung</i> (f) 9,270
<i>Deal</i> * (m) 'deal'	<i>Handel</i> (m) 41,000,000	<i>Geschäft</i> (n) 71,300,000	
<i>Hype</i> * (m) 'hype'	<i>Werbung</i> (f) 74,400,000	<i>Betrug</i> (m) 6,940,000	
<i>Comeback</i> * (n) 'comeback'	<i>Wiederaufreten</i> (n) 181,000	<i>Rückkehr</i> (f) 4,550,000	
<i>Chat</i> * (m) 'chat'	<i>Schwatz</i> (m) 64,600	<i>Plauderei</i> (f) 588,000	<i>Geplauder</i> (n) 960,000
<i>Flop</i> * (m) 'flop, failure'	<i>Misserfolg</i> (m) 435,000	<i>Pleite</i> (f) 15,600,000	<i>Reinfall</i> (m) 311,000
<i>Stress</i> * (m) 'stress'	<i>Belastung</i> (f) 3,800,000	<i>Spannung</i> (f) 9,500,000	<i>Spannungszustand</i> (m) 119,000
<i>Hoax</i> * (m) 'hoax'	<i>Falschmeldung</i> (f) 589,000	<i>Jux</i> (m) 520,000	<i>Zeitungssente</i> (f) 216,000
<i>Shuttle</i> * (m) '(space)shuttle'	<i>Raumfähre</i> (f) 383,000	<i>Raumtransporter</i> (m) 247,000	<i>Raumschiff</i> (n) 1,080,000

Table 30: Anglicisms in Category C in Onysko (2007) with approximate frequency of their LCEs.

Nouns marked with an asterisk do not share gender with their most frequent LCEs. The most frequently occurring LCEs are in bold.

In contrast to the nouns in Category C in my data set, only three of those in Onysko (*Design*, *Image* and *Sound*) have the same gender as their most frequently occurring LCEs.

The *Duden* (2001) lists (aggressive) *Werbung* '(aggressive) advertising' as a suitable equivalent to *Hype*. Searched as a phrase, this yields 77,500 hits. However, listed in the online bilingual German-English dictionary *leo.org* are other alternatives such as *Schwindel*

(m) (955,000 hits), *Medienrummel* (m) (66,700 hits), *Rummel* (m) (401,000 hits) and *Publicity* (f) (304,000 hits). The variety and number of these suggested equivalents highlight the need for a clear theory relating to lexical-conceptual equivalence. If the latter LCEs of *Hype* are considered, the gender of the anglicism is the same as the gender of the most frequent LCE, *Schwindel*. LCEs cannot account for the gender of *Comeback*, *Hoax* and *Shuttle*.

Similar to those in my data set, the simplex nouns in Glahn demonstrate the role that lexical-conceptual equivalence plays in the gender of anglicisms. The 24 nouns in this category appear in the proportions in LCE categories A - D shown in Figure 10.

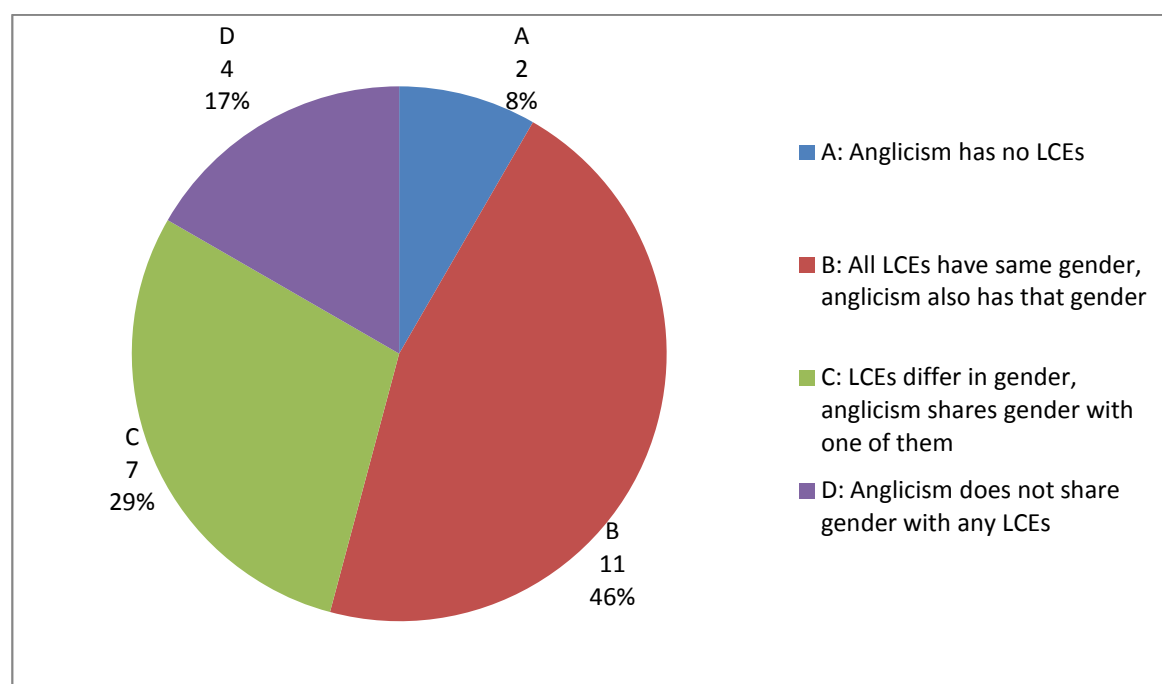


Figure 10: LCE categories of simplex anglicisms in Glahn (2002)

The two nouns in Category A, *Pop* and *Rock* are masculine and refer to music styles. The largest category, Category B, contains nearly half of the sample of simplex nouns. There are

seven nouns in Category C (see Table 31). Four of them support the hypothesis that the anglicism shares gender with the most frequent LCE. *T-Shirt* has two LCEs, one of which, according to the *Duden* (2001) can be either masculine or neuter. The neuter *das Oberteil* yields more hits than the masculine *der Oberteil* does.

Noun	LCE plus # <i>Google.de</i> hits		
<i>Date</i> (n)	<i>Verabredung</i> (f) 377,000	<i>Treffen</i> (n) 41,100,000	
<i>T-Shirt</i> (n) ‘t-shirt’	<i>Hemd</i> (n) 5,280,000	<i>Oberteil</i> (m/n) 2,530,000	
<i>Snack</i> (m)	<i>Imbiss</i> (m) 2,270,000	<i>Zwischenmahlzeit</i> (f) 173,000	<i>Appetithappen</i> (m) 298,000
<i>Sound</i> (m) ‘sound’	<i>Klang</i> (m) 8,940,000	<i>Klangwirkung</i> (f) 25,600	<i>musik. Stilrichtung</i> (f) 9,270
<i>Flop</i> * (m)	<i>Misserfolg</i> (m) 435,000	<i>Pleite</i> (f) 15,600,000	<i>Reinfall</i> (m) 311,000
<i>Stress</i> * (m)	<i>Belastung</i> (f) 3,800,000	<i>Spannung</i> (f) 9,500,000	<i>Spannungszustand</i> (m) 119,000
<i>Airbag</i> * (m)	<i>Prall-, Luftsack</i> (m) 119,000/2,800	<i>Luftkissen</i> (n) 854,000	

Table 31: Anglicisms in Category C in Glahn (2002) with approximate frequency of their LCEs.
Nouns marked with an asterisk do not share gender with their most frequent LCEs.

Three nouns in this category do not have the same gender as their most frequent LCEs. They are *Flop* ‘flop, failure’, *Stress* ‘stress’ and *Airbag* ‘air bag’. The first two have been discussed above. *Airbag*, on the other hand, is unusual in that the most frequently occurring LCE, *Luftkissen*, also has meaning beyond that of the anglicism, i.e. in this case a safety feature of a motor vehicle. *Luftkissen* can also mean (literally) an ‘air cushion’, such as on which a hovercraft glides. The direct translation of *Airbag*, *Luftsack*, is a more accurate description, and it has the same gender as *Airbag*.

An average of half of the simplex nominal anglicisms in the three data sets discussed above have the same gender as their LCEs (nouns in Category B). On average, half of the nouns that have LCEs of differing gender and share gender with at least one LCE (those in Category C) share gender with their most frequently occurring LCE. Therefore, this does not appear to be a highly significant predictor. This information is summarised in Table 32.

	My data set	Glahn	Onysko	Average
Total types in data set	54	24	46	41
Types in LCE Category B	24 (45%)	11 (46%)	24 (52%)	20 (48%)
Types in LCE Category C	11	7	11	10
Types in Cat. C matching most freq. LCE	7 (64%)	4 (57%)	3 (27%)	5 (48%)

Table 32: Percentage of simplex nouns in all three data sets in LCE categories B and C

Sameness of gender of multiple LCEs does appear to be a significant predictor of anglicism gender overall. In my data set, 12 nominal anglicisms have multiple LCEs of the same gender. The gender of these LCEs matches the gender of seven anglicisms (58%), in Table 33.

Anglicism	2+ LCEs with the same gender
Hardware (f)	<i>Computerkomponente</i> (f), <i>Gerätschaft</i> (f)
Message (f)	<i>Nachricht</i> (f), <i>Information</i> (f), <i>Aussage</i> (f)
Joystick (m)	<i>Steuerhebel</i> (m), <i>Steuerknüppel</i> (m)
Laptop (m)	<i>Rechner</i> (m), <i>kleiner, tragbarer Personalcomputer</i> (m)
Wischmop (m)	<i>Staubbesen</i> (m), <i>Schrubber</i> (m)
Internet (n)	<i>Netz</i> (n), <i>[internationales] Computernetzwerk</i> (n)
Handy (n)	<i>Mobiltelefon</i> (n), <i>Funktelefon</i> (n)
File* (m)	<i>Akte</i> (f), <i>Datei</i> (f)
Link* (m)	<i>Verknüpfung</i> (f), <i>Verbindung</i> (f)
Zwölferpack* (m)	<i>Behälter</i> (n), <i>Bündel</i> (n)
Feedback* (n)	<i>Rückmeldung</i> (f), <i>Reaktion</i> (f)
Layout* (n)	<i>Zusammenstellung</i> (f), <i>(Text- und Bild)Gestaltung</i> (f)

Table 33: The gender of anglicisms in my data set that have multiple LCEs of the same gender.
The anglicisms marked with an asterisk do not share gender with their LCEs.

In Onysko's (2007) data set, 10 nominal anglicisms have multiple LCEs of the same gender. The gender of the LCEs matches all anglicisms, giving a predictor of 100%, as shown in Table 34.

Anglicism	2+ LCEs with the same gender
Beat (m)	<i>Schlagrhythmus</i> (m), <i>Takt</i> (m)
Crash (m)	<i>Zusammenstoß</i> (m), <i>Zusammenbruch</i> (m)
Fight (m)	<i>(Box-)Kampf</i> (m), <i>Streit</i> (m)
Glamour (m)	<i>Glanz</i> (m), <i>Zauber</i> (m)
Laptop (m)	<i>Rechner</i> (m), <i>kleiner, tragbarer Personalcomputer</i> (m)
Smog (m)	<i>Gift-, Industrienebel</i> (m)
Spot (m)	<i>kurzer Werbetext</i> (m), <i>Werbefilm</i> (m)
Trash (m)	<i>Schund</i> (m), <i>Ramsch</i> (m)
Touch (m)	<i>Anstrich</i> (m), <i>Anflug</i> (m), <i>Hauch</i> (m)
Handy (n)	<i>Mobiltelefon</i> (n), <i>Funktelefon</i> (n)

Table 34: The gender of anglicisms in Onysko's (2007) data set that have multiple LCEs of the same gender.

In Glahn's (2002) data set, 7 nominal anglicisms have multiple LCEs of the same gender. The gender of the LCEs matches 5 anglicisms (70%), as shown in Table 35.

Anglicism	2+ LCEs with the same gender
Crash (m)	<i>Zusammenstoß</i> (m), <i>Zusammenbruch</i> (m)
Fight (m)	<i>(Box-)Kampf</i> (m), <i>Streit</i> (m)
Handy (n)	<i>Mobiltelefon</i> (n), <i>Funktelefon</i> (n)
Hattrick (m)	<i>(dreifacher) Sieg</i> (m), <i>Erfolg</i> (m)
Internet (n)	<i>Netz</i> (n), <i>[internationales] Computernetzwerk</i> (n)
Highlight* (n)	<i>Höhe-, Glanzpunkt</i> (m)
Base-Cap* (n)	<i>Kappe</i> (f), <i>Mütze</i> (f), <i>Haube</i> (f)

Table 35: The gender of anglicisms in Glahn's (2002) data set that have multiple LCEs of the same gender.

The anglicisms marked with an asterisk do not share gender with their LCEs.

On average across the three data sets, of all the nominal anglicisms that have multiple LCEs of the same gender, 76% have the same gender as their LCEs. This is shown in Table 36.

	My data set	Glahn	Onysko	Average
Anglicisms with multiple LCEs of the same gender	12	7	10	10
The gender of the anglicisms is the same as those LCEs	7 (58%)	5 (70%)	10 (100%)	7 (76%)

Table 36: Simplex anglicisms that are the same gender as their multiple LCEs (all of which have the same gender)

I have shown in this section that the interpretation of the statistics on the LCE factor is unclear. The statistics on LCEs generally do not favour treating this as a significant factor, as Onysko (2007) and Onysko et al. (2010) argue. However, the figures on multiple LCEs that share the same gender suggest that there is some sort of cumulative effect. Therefore, it appears that the LCE concept, or some component of this concept, is a predictor of gender assignment to loans. Perhaps a concept of “lexical domain” (e.g. if most/all nouns in a particular lexical domain are masculine, then loans into this domain will be assigned masculine) is relevant. However, this would require considerable further research into general theories of lexicon domains and their application to German.

In the above analyses, I have excluded those simplex nouns in my data set that are marked for more than one gender. I will analyse these nouns in the following section.

5.5.5 Gender Variation

A small number of the simplex types ($n = 8$) in my data set have more than one gender. This is illustrated in Table 37 along with the standard gender of the nouns, as found in *Duden* (2001), and the number of tokens of these nouns. The number of anglicisms in my data set is not large enough to allow for the formulation of consistent principles at the type level.

Noun Type	Standard Gender	Tokens and Gender
<i>Pub</i>	m/n	1m, 4n
<i>E-Mail</i>	f/n	40f, 2n
<i>Level</i>	m	1m, 2n
<i>Video</i>	n	16n, 2m
<i>Spot</i>	m	4m, 1f
<i>Chat</i>	m	1m, 1n
<i>Job</i>	m	61m, 1n
<i>Touch</i>	m	9m, 1n

Table 37: Simplex nominal anglicisms with more than one gender in my data set

None of the variations in Table 37 can be accounted for by the factors in Part 1 of Table 26.

5.6 Application of gender tally, gender eclipse, default hypothesis, phonological rule and semantic generalisations

In this section, I will use my data set of anglicisms in spoken German to test Steinmetz's (1986, 2001) principles of gender tally and gender eclipse, and his default hypothesis, Onysko's (2007) phonological rule and Bittner's (2001) semantic generalisations.

5.6.1 Steinmetz's Gender Tally and Gender Eclipse

Table 38 shows the results of a test involving Steinmetz's principles of gender tally and gender eclipse. The purpose of the test was to determine whether these principles influence the gender of anglicisms that share gender with at least one of multiple LCEs (Category C in Table 22 above). The result is that these principles may account for the gender assignment of half of the ten anglicisms in the list. The test shows that applying the principles of gender tally and gender eclipse to LCEs is not a very effective method of predicting the gender of anglicisms.

Noun	LCE	Steinmetz Tally/Eclipsis
<i>Bodybag</i> (m)	<i>Rucksack</i> (m), <i>Tasche</i> (f)	1m, 1f = m
<i>Flowchart</i> (n)	<i>Ablaufplan</i> (m), <i>Ablauf</i> -, <i>Flussdiagramm</i> (n), <i>Ablaufschau</i> -, <i>Fließbild</i> (n)	1m, 2n = n
<i>Jackpot</i> (m)	<i>Gewinn</i> (m), <i>Gewinnsumme</i> (f)	1m, 1f = m
<i>Stress</i> (m)	<i>Spannung</i> (m), <i>Spannungszustand</i> (m), <i>Belastung</i> (f)	2m, 1f = m
<i>T-Shirt</i> (n)	<i>Oberteil</i> (m/n), <i>Hemd</i> (n)	1m, 2n = n 1m, 1n = m
<i>Map</i> (f)	<i>Plan</i> (m), <i>Karte</i> (f)	1m, 1f = m
<i>Date</i> (n)	<i>Verabredung</i> (f), <i>Treffen</i> (n)	1f, 1n = f
<i>Editorial</i> (n)	<i>Leitartikel</i> (m), <i>Vorwort</i> (n)	1m, 1n = m
<i>Image</i> (n)	<i>Vorstellung</i> (f), <i>Bild</i> (n)	1f, 1n = f
<i>Script</i> (n)	<i>schriftliche Ausarbeitung</i> (f), <i>Drehbuch</i> (n)	1f, 1n = n

Table 38: Steinmetz’s principles of gender tally and gender eclipsis applied to the anglicisms in Categories C in my data set.

(See Section 5.5.4.) The nouns in bold do not follow these principles. The gender which could have been assigned had the principles applied is indicated in the right-hand column.

5.6.2 Onysko’s p-rule *word final C+ [i, ɪ] = f*

Onysko (2007) posits the *word final C+ [i, ɪ] = f*, which appears to have applied to six nouns in my data set, *City*, *Comedy*, *Community*, *Library*, *Party* and *Story*. However, as I mentioned in the discussion of his analysis (see Section 4.7.4), this rule is not required. Other independently proposed mechanisms, for example, lexical-conceptual equivalence and phonological similarity to the suffix *-ie*, account for the gender assignment of these nouns.

The two nouns *Pulli* ‘pullover’ and *Hobby* fit the phonological pattern, but are not feminine. *Pulli* is masculine. The neuter noun *Hobby*, according to Carstensen and Busse (2001), is neuter because it originally referred to a hobbyhorse, *Steckenpferd* (literally ‘stick horse’), which is neuter. In German, as in English, the term originally meant a children’s toy reminiscent of a *Pferd* ‘horse’, but over time, the meaning changed to include that of any enjoyable pastime. The noun *Handy*, as explained in Section 4.7.4, is neuter because it is a type of *Telefon* ‘telephone’, which is neuter.

The remaining nouns, *City*, *Comedy*, *Community*, *Library*, *Party* and *Story*, are feminine and fit Onysko's p-rule. However, like the majority of similar nouns in Onysko's corpus, they have feminine LCEs:

Anglicism	LCE
<i>City</i>	<i>die Stadt, die Stadtmitte</i>
<i>Comedy</i>	<i>die Komödie</i>
<i>Community</i>	<i>die Gemeinde, die Gemeinschaft</i>
<i>Library</i>	<i>die Bibliothek</i>
<i>Party</i>	<i>die Fete, die Feier</i>
<i>Story</i>	<i>die Geschichte, die Erzählung</i>

Table 39: Nominal anglicisms in my data set fitting Onysko's (2007) p-rule *word final C+ [i, ɪ] = f* which have feminine LCEs

Onysko's p-rule *word final C+ [i, ɪ] = f* is not necessary here because these nouns have such clear LCEs of the same gender. Furthermore, phonological similarity to native nouns ending in the suffix *-ie* may also explain the gender of the anglicisms. Native nouns with this suffix are feminine according to Kunkel-Razum and Münzberg (2005).

5.6.3 Bittner's semantic generalisations

Bittner's (2001) semantic generalisations apply to the derived lexicon and as such, they are hypotheses about the assignment of gender to suffixes. Therefore, these hypotheses, by extension, could also apply to borrowed suffixes. Seven neuter nouns in my data set have the suffix *-ing* and one has the suffix *-ment*. These are listed in (14):

(14) *Controlling* 'control, controlling'

Marketing 'marketing'

Planing 'planning'

Ranking 'ranking'

Training ‘training’

Wordprocessing ‘word processing’

Zungenpiercing ‘tongue piercing’

Management ‘management’

Although they are part of the German derivation process, the borrowed suffixes *-ing* and *-ment* are affixed only to foreign nouns in German. Both suffixes derive neuter nouns and according to Bittner, derived neuter nouns in German are collective or continuative. The nouns listed in (14) do not support her hypotheses because they are not collective or continuative. That is, they do not refer to individuals as a group, nor are they “unbounded wholes with unbounded parts” (Bittner 2001:11). Therefore, her semantic generalisations are not relevant to this study and do not play a role in predicting the gender of nominal anglicisms.

5.7 Conclusion

There are major issues for the rules and principles for gender assignment put forward by the authors mentioned in Chapter 4. These problems follow from the lack of predictivity and lack of independent support, particularly for semantic rules. The research mentioned previously by Zubin and Köpcke (1981; 1986), Köpcke and Zubin (1984), Köpcke (1982) and Onysko (2007) or Steinmetz (1986; 2001; 2006) offers insights into gender assignment for some of the nouns in my data set of nominal anglicisms in spoken German. However, it is impossible to make predictions relating to nouns entering the language by using their suggested methods.

Furthermore, the authors discussed here do not provide enough clear and consistent delineation in their propositions. They offer no definitive list of rules. Zubin and Köpcke

leave 10% of their list unexplained and provide many exceptions to the rules they propose. Steinmetz's dubious semantic and subcategorisation rules do not account for similar exceptions. Onysko adopts these rules and combines them with Bittner's semantic generalisations. However, this is not a legitimate extension of Bittner's analysis, as Bittner explicitly restricts her analysis to the derived lexicon. Onysko then enhances this combination with his own unusual idiosyncratic, and often questionable, semantic rules that lack independent support.

So far, analyses offered in this field have simply provided findings based on existing anglicisms and have not proposed any theories that may accurately predict the gender of neologisms or anglicisms in German. The results of the present study demonstrate the importance of two factors, above others, in the gender assignment to anglicisms. The data gathered for the present research suggests that morphology, particularly the Rightmost Rule, matters more than semantics in regards to the gender of inanimate nouns. The Rightmost Rule is the only rule that may form the basis of a possible model for the assignment of gender to anglicisms. The RR also extends to pseudo-suffixes, i.e. to nouns that appear to be morphologically complex but are in fact morphologically simplex. In addition to this, animacy and the masculine as default principle are significant predictors of gender to loans. Lexical-conceptual equivalence also plays a predictive role in determining the gender of an anglicism. However, it does not have 100% predictive power. If an anglicism has multiple LCEs sharing the same gender, it appears that the LCEs may have a predictive effect on the gender of the anglicism. Overall, based on the critical appraisal of previous research, and based on the findings of the present research, it may be concluded that a definitive theory regarding the gender of native and non-native nouns in German is yet to be formulated. A predictive theory for the gender for those anglicisms in German which do not follow the RR

or the Natural Gender Principle would rely on a definitive theory of lexical-conceptual equivalence. This, in turn, would rely on independent criteria for determining what a lexical-conceptual equivalent is. As no such theory of synonymy exists, no theory determining the gender of inanimate monosyllabic nominal anglicisms exists.

Chapter 6. The realisation of plurality in the German noun phrase:

Theoretical perspectives

In this chapter, I will summarise the German plural system, and provide a review and comparison of the different perspectives on this system. After a description of two views of the term *productivity* in regards to plural formation, I will focus on the discussion of plural formation models: a schema model (Köpcke, 1988, 1993, 1998) and an opposing mentalist Dual-Mechanism model (Marcus, Brinkmann, Clahsen, Wiese, & Pinker, 1995). The chapter will conclude with a discussion of the controversial plural suffix *-s*, which often appears on loanwords and neologisms and is claimed to be the default plural marker.

The German noun phrase is marked for number, either singular or plural. Plurality is shown by either or both suffixation and vowel mutation on the head of the NP, by choice of and suffixation on determiners, and by suffixation on attributive adjectives. As described in Chapter 2, a typical simple NP in German may contain the following elements: determiner, adjective and noun. The noun is the only compulsory element (unless the head is a pronoun, which then would replace the entire noun phrase). An illustration of a typical NP appears in (15), where the optional elements are in brackets.

$$(15) \quad \text{NP} \rightarrow (\text{Det}) (\text{Adj}) \text{N}$$

The following sections contain an illustration of plural marking on simple noun phrases with this pattern.

6.1 Plural marking on one-element NPs

There are eight plural allomorphs which appear with nouns in German, including the four suffixes *-(e)n*, *-e*, *-er*, *-s* and a phonetically empty marker *-Ø*, i.e. a zero morpheme. The other

plural allomorphs involve umlaut vowel mutation (fronting of a stem vowel). These are umlaut + $-\emptyset$, umlaut + $-e$ and umlaut + $-er$.

Gender plays a minor role in plural marking, with three of the plural markers ($-er$, $-\emptyset$ and umlaut + $-er$) not appearing with feminine nouns.⁵⁰ The full spectrum of plural markers appears with masculine and neuter nouns. Köpcke (1988) provides a comprehensive overview of the plural allomorphs in German, shown in Table 40.

Plural Allomorph	Masculine	Feminine	Neuter
$-e$	<i>Fisch, Fische</i> 'fish'	<i>Kenntnis, Kenntnisse</i> 'knowledge'	<i>Jahr, Jahre</i> 'year'
$-(e)n$	<i>Bauer, Bauern</i> 'farmer'	<i>Tür, Türen</i> 'door'	<i>Auge, Augen</i> 'eye'
$-er$	<i>Geist, Geister</i> 'ghost'	-	<i>Kind, Kinder</i> 'child'
$-s$	<i>Park, Parks</i> 'park'	<i>Mutti, Muttis</i> 'mum'	<i>Auto, Autos</i> 'car'
$-\emptyset$	<i>Adler, Adler</i> 'eagle'	-	<i>Fenster, Fenster</i> 'window'
umlaut + $-\emptyset$	<i>Bruder, Brüder</i> ⁵¹ 'brother'	<i>Tochter, Töchter</i> 'daughter'	<i>Kloster, Klöster</i> 'monastery'
umlaut + $-e$	<i>Sohn/Söhne</i> 'son'	<i>Kuh/Kühe</i> 'cow'	<i>Floß/Flöße</i> 'raft'
umlaut + $-er$	<i>Wald/Wälder</i> 'wood'	-	<i>Volk/Völker</i> 'people'

Table 40: Overview of plural allomorphs in German. Adapted from Köpcke (1988:307).

All nouns are in the nominative case.

The choice between $-n$ and $-en$ is phonologically conditioned. When a noun ends in a schwa or schwa + consonant pattern, such as in (16), the $-e$ is omitted in the plural form. This is to avoid the double schwa and schwa + consonant + schwa patterns in (17), which do not fit the

⁵⁰ For a detailed description of how gender and plurality are associated, see Köpcke (1982, 1993).

⁵¹ When fronting occurs on [u], [o] and [a], the following phonological changes occurs: [u] → [y] or [y:], [o] → [ø] or [œ], and [a] → [ɛ] or [ɛ:].

German phonological system (Köpcke, 1988). As a result, only *-n* is added, as in (18). Otherwise, in other environments, as in (19), the plural suffix is *-en*.

(16) *Auge* ‘eye’, *Bauer* ‘farmer’

(17) **Augeen*, *Bauern*

(18) *Augen*, *Bauern*

(19) *Last* → *Lasten* ‘loads’, *Tür* → *Türen* ‘doors’, *Held* → *Helden* ‘heroes’

There is no dominant plural marker in this system. Janda (1990) demonstrated this in his analysis of the 200 most common nouns in a collection of 60,000 words compiled by Pfeffer (1964). He determined that the most common plural was *-(e)n*, with 42% of nouns taking this suffix. The second most common plural marker is *-e* (23.5%), followed by umlaut + *-e* (11.5%), *-Ø* (9.5%), umlaut + *-er* (6.5%), then *-er* and umlaut + *-Ø* (both 3%). The least common plural marker is *-s*, which appears, according to Janda, on 1% of nouns in Standard German. This number rises to 3.5% if Non-Standard German plural forms are included, such as *Jung-s* and *Jung-ens* ‘boys, guys’, from the singular *Junge* (the Standard plural of which is *Jungen*). Table 41 has further examples of plural marking on count nouns.

Plural Marker	Frequency	Examples
-(e)n	42%	masc. <i>Mensch-en</i> ‘humans’, <i>Bauer-n</i> ‘farmers’ fem. <i>Frau-en</i> ‘women’, <i>Zeit-en</i> ‘times’, <i>Farbe-n</i> ‘colours’ neut. <i>Bett-en</i> ‘beds’, <i>Ende-n</i> ‘ends’
-e	23.5%	masc. <i>Tag-e</i> ‘days’, <i>Arm-e</i> ‘arms’ fem. <i>Kenntnis(s)-e</i> ‘pieces of knowledge’ neut. <i>Jahr-e</i> ‘years’, <i>Spiel-e</i> ‘games’
umlaut + -e	11.5%	masc. <i>Gründ-e</i> ‘reasons’ (sing. <i>Grund</i>) fem. <i>Händ-e</i> ‘hands’ (sing. <i>Hand</i>) neut. (unique) <i>Flöß-e</i> ‘rafts’ (sing. <i>Floß</i>)
-Ø	9.5%	masc. <i>Lehrer-Ø</i> ‘teachers’ fem. (unique) <i>Mark-Ø</i> ‘deutschmarks’ neut. <i>Leben-Ø</i> ‘lives’
umlaut + -Ø	3%	masc. <i>Väter-Ø</i> ‘fathers’ (sing. <i>Vater</i>) fem. <i>Mütter-Ø</i> ‘mothers’ (sing. <i>Mutter</i>) neut. (nearly unique) <i>Wässer-Ø</i> ‘waters’ (sing. <i>Wasser</i>)
-er	3%	masc. <i>Geist-er</i> ‘spirits’ neut. <i>Kind-er</i> ‘children’
umlaut + -er	6.5%	masc. <i>Männ-er</i> ‘men’ (sing. <i>Mann</i>) fem. (unique, facetious variant) <i>Märk-er</i> ‘deutschmarks’ (sing. <i>Mark</i>) neut. <i>Dörf-er</i> ‘villages’ (sing. <i>Dorf</i>)
-s (standard)	1%	neut. <i>Auto-s</i> ‘cars’, <i>Hobby-s</i> ‘hobbies’
-s (non-standard)	2.5%	masc. <i>Jung-s</i> ‘boys, lads, guys’ (children’s diminutive language) <i>Mutti-s</i> ‘mummies’

Table 41: Frequency of plural markers in German. Adapted from Janda (1990:142).

6.2 Plural marking in two-element NPs

Two-element NPs typically consist of a determiner and a noun or an adjective and a noun. Typical determiners include the negative article *kein* ‘no’, possessive pronouns and demonstratives. In addition to plural marking on the noun, the first element in two-element NPs takes the suffix *-e* to mark plurality (see Table 42).

Element 1	Element 2	Gloss
<i>keine</i> [neg. art.]	<i>Bücher</i> [pl. n.]	no books
<i>meine</i> [poss. pro.]	<i>Bücher</i> [pl. n.]	my books
<i>diese</i> [dem.]	<i>Bücher</i> [pl. n.]	these books
<i>gute</i> [adj.]	<i>Bücher</i> [pl. n.]	good books
<i>die</i> [def. art.]	<i>Bücher</i> [pl. n.]	the books

Table 42: Plural marking in two-element noun phrases

The exception to this is the definite article. As demonstrated in Table 43, the definite article occurring with plural nouns is always *die* in both the nominative and accusative cases. This is regardless of whichever gender the noun has.

	Masculine	Feminine	Neuter	Plural
Nominative	<i>der</i>	<i>die</i>	<i>das</i>	<i>die</i>
Accusative	<i>den</i>	<i>die</i>	<i>das</i>	<i>die</i>

Table 43: The definite article in the nominative and accusative cases

Hence, the noun phrase *die Bücher* ‘the books’ has not only the relevant plural allomorph (in this case umlaut + *-er*) of the plural form of the neuter noun *Buch* ‘book’, but it also has a change in the definite article: *das Buch* → *die Bücher* ‘the books’. Masculine nouns undergo the same process: *der Tisch* → *die Tische* ‘the tables’.

The plural feminine noun phrase of this type is different. The definite article with singular feminine nouns does not change form (*die* remains *die*). It only changes function from the singular to the plural. The plural form of the noun is the only indicator of plurality in such noun phrases, e.g. *die Kuh* ‘the cow’ → *die Kühe* ‘the cows’. There is no difference between the nominative and accusative cases here.

6.3 Plural marking in three-element NPs

When all three elements (determiner, adjective and noun) appear in a NP, the article remains *die*, as indicated in Table 42. The other determiners take *-e* and the adjective takes *-en* in both nominative and accusative cases.

Element 1	Element 2	Element 3	Gloss
<i>keine</i> [neg. art.]	<i>guten</i> [adj.]	<i>Bücher</i> [pl.]	no good books
<i>meine</i> [poss. pro.]	<i>guten</i> [adj.]	<i>Bücher</i> [pl.]	my good books
<i>diese</i> [dem.]	<i>guten</i> [adj.]	<i>Bücher</i> [pl.]	these good books
<i>die</i> [def. art]	<i>guten</i> [adj.]	<i>Bücher</i> [pl.]	the good books

Table 44: Plural marking in three-element noun phrases

6.4 The -s plural: a special case

Of all the plural allomorphs in German, *-s* has been a topic of academic debate. The controversy surrounding this plural suffix stems from the key role it plays in hypotheses regarding default plural marking and the wider debate over whether English is affecting the grammatical structure of German. Janda (1990:145-148) describes in detail the phonological and morphological environments in which it occurs, thus demonstrating the adaptability and flexibility of this plural allomorph. A summary of these environments follows.

Polysyllabic nouns ending with any vowel sound other than schwa always take the plural *-s* allomorph. Many of these polysyllabic nouns end in an unstressed full vowel. There are few examples of such nouns occurring in adult language:

Hali-s ‘horn sounds’

Juli-s ‘Julys’

*Juno-s*⁵² ‘Junes’ [bureaucratic]

Uhu-s ‘(eagle-) owls’⁵³

There are more examples in caretaker speech:

Hottehü-s ‘horsies’

Mutti-s ‘mommies’

Vati-s ‘daddies’

Wehweh-s ‘ouch-ouches, hurt places’

Oma-s ‘grammas’

Opa-s ‘grandpas’

Wau-wau-s ‘bow-wows’

The plural *-s* also occurs with at least one slang item ending in an unstressed full vowel: *Hallodri-s* ‘rogues, good-for-nothings’. It also occurs in the plural form of colour names such as *Lila-s* ‘lilacs’ and *Rosa-s* ‘pinks’.

According to Janda (1990), there are other nouns that occur in adult speech that take the *-s* plural marker and end in a stressed full vowel. These include *Hurra-s* ‘hurrahs, cheers’, *Hallo-s* ‘hellos, cheers’ and *Julei-s* ‘Julys’.

A much greater list of examples includes shortened nouns. The processes of clipping and abbreviation create nouns with an unstressed final full vowel, which is often *-i*. Regardless of their original pluralisation in their longer form, these nouns take the plural marker *-s*. The following are some examples that Janda provides (as well as the original form and its plural) from standard speech:

⁵² In order to avoid confusion, the forms *Juno* and *Julei* for the months *Juni* ‘June’ and *Juli* ‘July’ are also possible in bureaucratic language.

⁵³ The plural form *Uhue* is also possible, but rare. According to Wegener, *-s* has been the dominant plural marker since the nineteenth century.

Kombi-s ‘station(combination-)wagons’ (<*Kombi(nations)wagen(-Ø)*)

Nazi-s ‘National Socialists’ (<*Nationalsozialist(-en)*)

Dia-s ‘(photographic) slides’ (<*Diapositive(-e)*)

and from non-standard speech:

Ami-s ‘Yanks, Americans’ (<*Amerikaner(-Ø)*)

Krimi-s ‘whodunits, thrillers’ (<*Kriminal(-)roman(-e)/(-)film(-e)* ‘crime novel(s)/-movie(s)’

Uni-s ‘U’s, universities’ (<*Universität(-en)*)

The majority of names of letters in German end in a full vowel sound. This means that acronyms also often end on a stressed full vowel sound:

AG-s [a:’ge:s] ‘joint-stock companies’ (<*Aktiengesellschaft(-en)*)

PKW-s/Pkw-s [pe:ka:’ve:s] ‘cars’ (<*Personenkraftwagen((-Ø)* ‘person(al) vehicles’)

TH-s [te:’ha:s] ‘technical colleges’ (<*technische Hochschule(-n)*)

TU-s [te:’u:s] ‘technical universities’ (<*technische Universität(-en)*).

Most non-abbreviated nouns that take -s are loanwords. A large number of these ends in a stressed vowel (many of which are borrowed from French):

Menü-s ‘menus’

Etui-s ‘cases, containers’

Café-s ‘cafes’

or end in a stressed syllable with a nasalised vowel (also mostly from French):⁵⁴

Abonnement-s ‘subscriptions’

Balkon-s ‘balconies’

Parfum-s ‘perfumes’

⁵⁴ According to Fox (2005), when German borrows a French word with a nasalised vowel, that vowel remains nasalised, although German, unlike French, does not have phonemic nasalised vowels. Thus, such vowels give words a foreign feel. However, there are alternative forms of the examples given above. *Parfum* also has the nativised forms *Parfüm* → *Parfüme* ‘perfume(s)’. Similarly, *Balkon* has the alternative pronunciation ending in [n] and not a nasal vowel and has the plural form *Balkone*. Both of these examples have retained the stressed final vowel.

However, many other loanwords end with an unstressed vowel:

Baby-s ‘babies’ (this plural form is more common than the English original)

Oldie-s ‘oldies (songs)’

Sofa-s ‘sofas’

Janda holds the view that the *-s* plural has been generalised from these phonological environments to various morphological environments. The result of this is that the *-s* plural marker may now be added to monosyllabic nouns and sometimes to polysyllabic nouns ending in schwa.

Names and nominalisations normally take the *-s* plural marker. The categories that Janda (1990:147-148) gives include

1. Names of People:

- a. first and last names (when they stand for individual people), e.g. *Rudolf-s*, *Goethe-s*; and surnames when they refer to groups, such as the whole family, for example, *Barring-s*, *Meyer-s*, *Müller-s*
- b. the names of occupations which are used with the effect of a family name in colloquial speech, e.g. *Apotheker-s* ‘druggists (i.e. the druggist’s family)’, *Bürgermeister-s* ‘mayors (i.e. the mayor’s family)’ and *Professor-s* ‘professors (i.e. the professor’s family)’

2. Place names:

- a. countries (*Deutschland-s* ‘Germanys’)
- b. cities and towns (*Berlin-s*, *Düsseldorf-s*, *Kirchheim-s*)

3. Names of colours:

- a. *Blau-s* ‘blue(-colour)s’, *Gelb-s* ‘yellow(-colour)s’, *Grün-s* ‘green(-colour)s’;

4. Names of linguistic entities:

- a. plurals of letters (*A-s*, *B-s*, *C-s*)
- b. interjections and other linguistic entities (*Ach-s* ‘oh(dear)s’, *Pfui-s* ‘ughs, yucks’, *Aber-s* ‘buts’, *Entweder-s* ‘eithers’).

5. Nominalisations:

- a. participles (*Eingesandt-s* ‘send-ins, letters to the editor’) and adjectives *Hoch-s* ‘(meteorological) highs’ and *Tief-s* ‘(meteorological) lows’);
- b. nominalised phrases (*Drei-käse-hoch-s* ‘tiny tots’ (<‘three cheeses high’), *Guten-tag-s* ‘good-days [greeting]’, *Lebewohl-s* ‘fare-wells’, and *Vergiß-mein-nicht-s* ‘forget-me-nots’)

Janda concludes his list of occurrences of the *-s* plural marker in German with the largest group of all – loanwords. He starts with some examples of borrowings from Low German (e.g. *Decks* ‘decks’, *Haffs* ‘bays’ and *Wracks* ‘wrecks’) and provides a very large list of borrowings from English. These and the examples he provides from 11 other languages are too numerous to list here. In providing this inventory of when the *-s* plural marker is used, Janda demonstrates that it occurs in the widest variety of phonological and morphological environments of all the plural markers.

6.5 Productivity of plural forms

The occurrence of *-s* in such a wide variety of environments suggests that it is a productive plural marker in German. Janda (1990) and Jackendoff (2002) provide two interpretations of *productivity* in reference to plural morphology.⁵⁵ Janda takes the occurrence of allomorphs in the plural formation of neologisms and loanwords in German as a central consideration, whereas Jackendoff claims there is a distinction between regular and partially regular lexical

⁵⁵ For a more comprehensive discussion of morphological productivity, see Bauer (2001). However, for the purposes of this study, Janda’s (1990) and Jackendoff’s (2002) descriptions are sufficient.

rules, and demonstrates this distinction with English examples. Both interpretations involve a continuum ranging from *unproductive* through *partially productive* to *highly productive*, rather than a clear-cut dichotomy.

According to Janda (1990:144), the most productive plural allomorphs are *-(e)n*, *-e*, *-Ø* and *-s*. He considers *-er* and the plural markers containing umlaut (umlaut + *-er*, umlaut + *-e*, and umlaut + *-Ø*) to be semi-productive.⁵⁶ He states that *-(e)n*, *-e*, *-Ø* and *-s* are equally highly productive because they are associated with at least one highly productive nominal derivational suffix. Thus:

1. *-(e)n* almost always pluralises nouns ending in the agentive suffixes *-ent*, *-ist* and *-or* (for example, *Assist-ent-en* ‘assistants’, *Cembali-ist-en* ‘harpsichordists’ and *Reformat-or-en* ‘reformers’);
2. *-e* pluralises nouns ending with *-är* and *-ment* (for example, *Milliard-är-e* ‘billionaires’ and *Funde-ment-e* ‘foundations’);
3. *-Ø* marks the plural of nouns ending in *-er*, including loanwords (for example, *Comput-er* ‘computers’ and *Mach-er* ‘doers, movers and shakers’); and
4. A very wide variety of nouns, in particular loanwords, uses the plural marker *-s*.

Jackendoff (2002) offers an alternative analysis of productivity in relation to inflectional and derivational morphology. Using a model similar to the Dual-Mechanism model proposed by Clahsen (1999) and Marcus et al. (1995), he divides the rules related to morphology into productive and semi-productive lexical rules, claiming that productive morphology is regular and semi-productive morphology is only partially regular.

⁵⁶ Even though Janda also states that the *-er*, umlaut + *-er*, umlaut + *-e*, and umlaut *-Ø* sporadically spread to existing nouns, this occurs so rarely he considers them semi-productive with respect to their being used on neologisms and loanwords.

In Jackendoff's (2002) view, productive morphology refers to how the speaker derives and interprets new forms, and uses material (i.e. stems and affixes) stored in the long-term memory. Words are created by the combination of these stems and affixes. (However, their combination is restricted by phonology, semantics and syntax.) Jackendoff provides examples from English, stating the present participle (*-ing*) form is highly productive because it can be applied to any verb in the language, except modals. The past tense *-ed* form is also productive. However, he asserts it is less productive than the present participle because approximately 180 cases exist where an irregular verb form supplants it.

On the other hand, semi-productive morphology deals with only partial regularities. Therefore, the generalisations within this category do not apply universally. Jackendoff (2002:158) exemplifies this by using irregular English verbs that have a similar phonological structure but have an unpredictable past tense: *ring-rang* and *wring-wrung*; *spring-sprang* and *sting-stung*; as well as *drink-drank* and *swing-swung*. Then there are cases that are variable, such as *shrink-shrank/shrunk* and *stink-stank/stunk*. This class also contains examples that are part of the productive *-ed* system, but have homophones that are not. These include *hang-hanged* and *hang-hung*, *ring-ringed* (meaning to put a ring around) and *ring-rung*. Thus, there is no clear rule that could apply universally. The outputs of semi-productive rules must be committed to long-term memory, as they are not the product of combinatorial productive rules.

In sum, the German plural marker *-s* would be the most productive of the plural markers, as it easily fits the largest number of morphological combinations. The following section provides a description of competing models on the pluralisation in German and discusses two hypotheses on the *-s* plural marker.

6.6 Perspectives on plural formation

In this section, I will summarise two principal models on the formation of plural loanwords and neologisms in German. According to Köpcke's (1988) model, which relates to the whole lexicon, the speaker matches a noun to a schema in order to create an appropriate plural form. Within this schema model is a continuum from most to least productive with no clear point of distinction between the two extremes. The second model I will summarise is Marcus et al.'s (1995) Dual-Mechanism model. Within this model, which also applies to loanwords and neologisms, regular inflection is the default and irregular inflection is stored in the memory. This provides a clear point of distinction between unproductive and productive inflection, and has similarities with Janda's (1990) default hypothesis relating to frequency of plural allomorphs. Wegener (2005) offers a third view, which is that the *-s* plural allomorph temporarily applies to loanwords and neologisms before they become integrated into the German inflectional system.

6.6.1 Plural marking: the schema model

Köpcke's (1988, 1993, 1998) schema model adapts the previous Item-and-Process model of pluralisation, in which singular roots produce plural noun forms following a series of rules with many exceptions. Köpcke uses results from language acquisition data to conclude that single and plural forms in the lexicon appear in individual schemas. In order to create the plural form of a noun, a speaker needs to match that noun to a particular schema.

Köpcke's cue strength hypothesis is integral to this approach. He used "psychological principles of categorisation as in MacWhinney (1978), McDonald (1984, 1986), and Smith and Medin (1981)" (Köpcke 1988:315) in order to formulate the hypothesis that the more

perceived plural markers a noun has, the higher the noun's plural cue strength will be. Plural cue strength relates to the combination of the salience, type frequency, cue validity and iconicity of these perceived plural markers. *Salience* refers to the case in which a speaker can audibly distinguish a plural form. For example, suffixation with *-e* provides a further syllable, thus marking a noun for plurality. Type frequency and cue validity are related. *Type frequency* refers to how many nouns take that plural marker. *Cue validity*⁵⁷ refers to how probable it is for a noun to fall into a certain category based on certain features. For example, *-en* has high cue validity as a plural marker because few singular nouns in German end in this sound. In other words, if a noun ends in *-en*, it suggests strongly that the noun in question is in the plural form. Lastly, *iconicity* refers to the fact that the more syllables a noun has, the more likely it is to be perceived as plural.

Köpcke places the elements of plural marking in German in the following order (ranging from lowest cue strength to highest cue strength): umlaut, *-er*, *-e*, *-s* and *-(e)n*. This means that nouns appearing with an *-(e)n* suffix are more likely to be considered plural compared to all other nouns, as shown in Figure 11:

singular				plural
*	*	*	*	*
monosyllabic final stop	polysyllabic final <i>-er</i>	polysyllabic final <i>-e</i>	polysyllabic final <i>-er</i>	polysyllabic final <i>-en</i>
<i>der/das</i>	<i>der/das</i>	<i>die</i>	<i>die</i>	<i>die</i>

Figure 11: Continuum for plural schemas in German (Köpcke 1998:309)

⁵⁷ Köpcke (1988) notes that McDonald (1984, 1986) uses the term *reliability* instead of *cue validity*.

Singularity and plurality are at either end and cue strength for plurality increases from left to right. On the far left is the singular schema, nouns that are typically singular are monosyllabic, may have a final stop and are non-feminine. At the centre of the continuum is the schema where singularity and plurality overlap. Nouns appearing within this schema have equal cue strength for singularity and plurality because both singular and plural nouns may have these features. For example, *die Tasse* ‘the cup’ and *die Tische* ‘the tables’ are at the centre of Köpcke’s continuum. Both nouns are polysyllabic, have the article *die* and have a final schwa, but *die Tasse* is singular and *die Tische* is plural. At the far right of the continuum is the schema containing polysyllabic nouns with a final *-en* and the article *die*. Nouns with these features are typically plural. Köpcke does not include other plural markers such as umlaut and *-s* in this spectrum and does not provide any clear explanation for doing so. However, he posits that the appearance of a mutated vowel (e.g. as in *Leuchte* ‘lamp’) increases the cue strength for plurality. If an identical form without the vowel mutation exists (e.g. *Mutter* and *Mütter* ‘mother(s)’), the plural cue strength of the noun with the umlaut is higher.

Schemas placed on this continuum are relative to their positions and do not constitute absolute values. This makes it possible for a noun to be in the plural form even though it has higher cue strength as a singular. The reverse is also true. Köpcke demonstrates this with the examples *das Knie* ‘the knee’ and *die Drüse* ‘the gland’. *Das Knie* is singular, monosyllabic and has the article *das*. Although it does not have a final stop, these features place it at the left of the continuum (but not to the far left). Although *die Drüse* is also in the singular form, it contains features that, on other nouns, mark plurality. It has the article *die*, it is polysyllabic, has a final schwa and umlaut. It has higher cue strength as a plural than *das Knie* and appears to the right of the centre of the continuum, as shown in Figure 12:

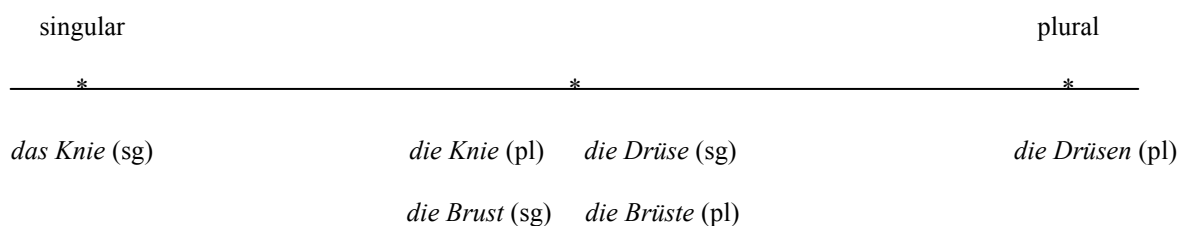


Figure 12: Placement of *Knie*, *Drüse* and *Brust* on Köpcke's (1988:332) schema continuum

The plural of *das Knie* [kni:] is *die Knie* [kni:ə]. It is also disyllabic and the article *die* is an additional indicator of plurality. It does not have high cue strength as a plural. Therefore, it is to the left of the centre of the continuum. On the other hand, the plural form of *die Drüse*, *die Drüsen*, has the highest cue strength possible. It has the article *die*, umlaut, the suffix *-(e)n* and it is polysyllabic. It is therefore on the far right of the continuum. The form *die Drüse* is singular although it has three plural indicators: the article *die*, umlaut and an *-e* ending. Therefore, this form appears to the right of centre.

These two examples do not demonstrate the full features of the schema. The singular and plural forms of *das Knie* are on the left half of the continuum, and *die Drüse* in singular and plural forms are on the right half of continuum. However, some nouns overlap at the centre. This is true for *die Brust* 'breast, chest' and *die Brüste* 'breasts, chests'. Because *die Brust* is monosyllabic, it sits on the left of the continuum. However, because it has the article *die*, it is not to the far left. The plural form contains the article *die* as well as umlaut and is polysyllabic. Thus, it is to the right of centre, but not to the far right because it does not have an *-en* ending.

Köpcke (1998) uses data derived from a series of experiments to support his cue strength hypothesis. However, most of these experiments involved only a small number of

participants. Köpcke mentions only one that involved a large number of participants, namely that of Baker and Derwing (1982), who reanalysed the responses of 120 children collected by Innes (1974). The other studies Köpcke mentions have only small numbers of participants (25 for Mugdan, 1977; and 7 for Clahsen, Rothweiler, Woest and Marcus, 1992). Furthermore, he does not mention the number of participants in the experiments by Berko (1958), and relies on the responses of his own child to confirm Veit's (1986) findings. In order to obtain accurate data, further research involving a larger number of participants is needed.

Köpcke (1988, 1998) does not rely only on the experiments of others to support his schema hypothesis. He refers in detail to his own experiment in which 40 subjects provided the plural form of 50 nonce words matching phonotactic patterns in German. In this experiment, the subjects heard the singular nonce words played on a cassette player and orally provided their plural form. A sample of the test words and responses is given in Table 45:

Singular	Plural
<i>die Schrenkung</i>	<i>die Schrenkungen, die Schrenkunge</i>
<i>das Poflein</i>	<i>die Poflein, die Pofleine, die Pofleins</i>
<i>der Knumpe</i>	<i>die Knumpen, die Knumpes, die Knumpe</i>
<i>die Maftie</i>	<i>die Maften, die Maftes</i>
<i>das Siero</i>	<i>die Sieros, die Sieren, die Siero</i>
<i>der Treika</i>	<i>die Treikas, die Treika, die Treiken</i>
<i>der Knaffel</i>	<i>die Knaffel, die Knäffel, die Knaffeln, die Knaffels</i>
<i>die Bachter</i>	<i>die Bachtern, die Bachter, die Bächter, die Bachters</i>
<i>das Trilchel</i>	<i>die Trilchel, die Trilcheln, die Trilchels</i>
<i>der Knolck</i>	<i>die Knolcke, die Knölcke, die Knolcks</i>
<i>die Luhr</i>	<i>die Luhren, die Luhrn, die Luhre, die Luhrs</i>
<i>das Flett</i>	<i>die Flette, die Fletten, die Fletts</i>

Table 45: Example nonce words and responses in Köpcke's (1988:310) experiment on plural markers

The results of this experiment (illustrated in Table 46) show that the subjects preferred *-(e)n*, *-Ø*, *-e* and *-s* to *-er* or umlaut as plural markers.

According to Köpcke (1988), there are certain structural environments in the native lexicon where umlaut is obligatory. These include masculine and neuter nouns that take *-er* (therefore these nouns are pluralised with umlaut + *-er*) and feminine nouns that take *-e* (and are therefore pluralised with umlaut + *-e*). However, the participants in Köpcke's experiment added umlaut to only one quarter of the test items where it is otherwise obligatory and pluralised the rest within this category with *-er* or *-e*.

	N	-e (u. + -e)	-Ø (u. + -Ø)	-er (u. + -er)	-(e)n	-s	Predicted
1. nouns with suffix							
a) masc. <i>-ling</i>	80	99%			1%		<i>-e</i>
b) fem. <i>-ung/-schaft</i>	160	3%			96%	1%	-(e)n
c) neut. <i>-chen</i>	80		90%			10%	-Ø
d) neut. <i>-lein</i>	80	19%	51%	3%	6%	20%	-Ø
2. nouns ending in schwa							
a) tot. masc./neut. <i>-e</i>	159		17%	4%	77%	2%	-(e)n
b) fem. <i>-e</i>	80		4%		94%	2%	-(e)n
3. nouns ending in a full vowel							
a) tot. masc./fem./neut. <i>-a/o/u/i</i>	319	1%	6%		20%	69%	-s
4. nouns with a pseudo-suffix							
a) tot. masc./neut. <i>-el</i>	159	3%	69% (1%)	1%	22%	6%	-Ø
b) tot. masc./neut.	160	1%	77% (1%)		16%	5%	-Ø
c) masc. <i>-en</i>	80	1%	91%		1%	4%	-Ø
d) fem. <i>-el</i>	80		28% (4%)	1%	59%	13%	-(e)n
e) fem. <i>-er</i>	80	1%	59% (1%)	3%	26%	8%	-(e)n
5. monosyllabic nouns							
a) masc.	160	59% (1%)		7% (7%)	21%	14%	<i>-e</i>
b) fem.	160	27% (1%)	1%	1%	66%	6%	-(e)n
c) neut.	160	40%	1%	14%	31%	14%	<i>-e</i>

Table 46: Results adapted from Köpcke's (1988:311) experiment on nonce plural nouns indicating underutilisation of plural allomorphs with umlaut.

The percentages in brackets indicate the proportion of umlaut use in addition to a particular suffix. The column on the far right indicates the predicted plural allomorph based on the real lexicon.

Similarly, umlaut is a possible part of the plural marking on masculine nouns that take *-e* in the plural. The participants pluralised these test items with umlaut + *-e* in only one tenth of cases. They used *-e* for the remainder of items. Umlaut appears once in an environment where it is otherwise excluded in the lexicon. These results are summarised in Table 47. Köpcke uses the results of this experiment to demonstrate that umlaut, as a plural marker, is only semi-productive.

	Mutable vowel	Umlaut used	Proportion
1. <i>environments in which umlaut is obligatory</i>			
(a) masc./neut. nouns, <i>-er</i> plural suffix	14	6	0.4
(b) feminine nouns, <i>-e</i> plural suffix	30	5	0.2
total	44	11	0.25
2. <i>environments in which umlaut is possible</i>			
masc. nouns, <i>-e</i> plural suffix	94	11	0.1
3. <i>environments in which umlaut is excluded</i>			
plural suffixes <i>-(e)n</i> , <i>-s</i> ; neut. nouns with plural suffix <i>-e</i> ; masc. nouns with suffix <i>-ling</i>	551	1	0

Table 47: Results for umlaut in combination with a suffixed plural marker, as shown in Köpcke (1988:313)

Köpcke had predicted that the test subjects would insert the $\emptyset$ plural allomorph to nouns ending in the pseudo-suffixes. Indeed, they gave almost all (91%) of the masculine nouns ending in *-en* the $\emptyset$ suffix. They gave fewer (77%) masculine and neuter nouns ending in *-er* the $\emptyset$ plural marker. The subjects gave the masculine and neuter nouns ending in *-el* the $\emptyset$ suffix the least often (69%) because *-el* is not a plural marker at all. Hence, there was a stronger perceived need to mark plurality overtly. Because nouns ending in *-en* and *-er* fit a plural schema, the nouns ending in these pseudo-suffixes were given the $\emptyset$ marker more

frequently than those ending in *-el*. In sum, the subjects pluralised nonce nouns of all genders using *-Ø* more frequently than any other plural marker.

Köpcke treats feminine nouns separately from the masculine and neuter nouns because the feminine nouns do not change their article when pluralised. Thus, he expected the results for the feminine nouns to be different to those for the masculine and neuter nouns. He gives four examples of nonce feminine nouns, with varying numbers of plural features. For example, Köpcke claims that in accordance with the real lexicon, the monosyllabic nonce word *die Luhr* is not possible as a plural (although he does not explicitly state why). The next nonce noun, *die Toftel* contains one plural feature (the article *die*); *die Bachter* contains two plural features (the article *die* and the pseudo-suffix *-er*); and finally *die Wührer* contains three plural features (the article *die*, the pseudo-suffix *-er* and umlaut).

Patterns in the real lexicon predict that feminine nouns ending in pseudo-suffixes (*-en*, *-el*, *-er*) take the *-(e)n* plural marker. However, Köpcke's experiment showed that the more features of plurality a noun had, the less likely it was to take *-(e)n*. In other words, it was the combination of plural features that had an effect, not simply whether a single feature appeared or not. For example, the nonce noun *die Toftel* would be expected to have the plural form *die Tofteln*, given the patterns in the lexicon. However, 28% of the respondents in the experiment interpreted the article *die* to indicate plurality. Thus, they added no further plural marker. In other words, 28% of respondents matched *die Toftel* to a schema that indicated it was already in the plural form, and they then gave no further indicator of plurality. He claims this is evidence that the test subjects did not simply apply rules of plurality based on patterns in the real lexicon, but applied abstract schemas based on morphological features in order to create plural forms.

A further piece of evidence to support Köpcke's hypothesis is in the pluralisation of the nonce words ending in full vowels. In the majority of such cases, the plural *-s* was used. However, in 25% of the plural responses to masculine nouns the final vowel was replaced with *-(e)n*. For example, 25% of the respondents deleted the *-a* in *Treika* to create the plural form *Treiken*. Köpcke asserts that a model in which plurals are created from singular forms would not be able to explain the replacement of *-a* with *-(e)n*. His assertion is that a model based on plural schemas would predict the vowel deletion. This is because final full vowels followed by *-(e)n* are infrequent in German and mostly occur with recent loanwords. In addition, the hypothesis predicts *-(e)n* as the chosen plural marker because it has the highest cue strength.

The third piece of evidence supporting a schema model involves the pluralisation of polysyllabic schwa-final nouns, for example, the nonce singular noun *die Maſte*. The predicted plural marker of this noun was *-(e)n*, as this would match the patterns in the real lexicon. Despite this, there was frequent use of the *-Ø* plural marker with these nouns in the experiment. The common plural marker for monosyllabic masculine and neuter nouns in the real lexicon is *-e*. Köpcke (1988) states that the use of the *-Ø* plural marker instead is evidence that the subjects perceived the singular nonce nouns ending in schwa as already being in plural form.

The final piece of evidence in support of the schema hypothesis involves the plural form of neuter monosyllabic nonce words. Based on the real lexicon, the predicted plural marker for these nouns is *-e*, and the subjects used this for the majority of cases. However, an unexpected result occurred with *das Kett*. Instead of the predicted plural form *Kette*, the

subjects preferred *Ketten*. This is the plural of the real noun *die Kette* ‘chain’. No other pluralisation coincided with the plural of a real word. Köpcke claims this is evidence that the subjects were searching for schemas in the real lexicon to apply to the nonce words and were not creating plurals from a singular base.

There is an issue regarding the participants in the experiment. All of the participants were educated young adults in their first year of university. Thus, the results of the experiment are from a narrow social group. Although there was a reasonable number of participants (40), the statistical data of the experiment provide no overwhelmingly clear evidence that applies to the majority of German speakers.

Importantly, the results of Köpcke’s experiment are similar to those of his analysis of the plural marking on loanwords. In this analysis, Köpcke derived a list of 182 loanwords from the list of 1,466 monosyllabic nouns he identified in his study on gender assignment (1982). Of these loanwords, 33 have more than one plural marker. This creates 215 instances of plural marking in his list. The results of his analysis are in Table 48. (Köpcke notes that 2% of the nouns taking *-e* also took umlaut + *-e*, indicated in brackets in the table.)

	Noun	<i>-(e)n</i>	<i>-e</i> (um + <i>-e</i>)	<i>-Ø</i>	<i>-s</i>	<i>-er</i>
masc.	140	1%	39% (2%)	2%	56%	<1%
fem.	35	49%	14%	-	37%	-
neut.	40	5%	23%	5%	68%	-

Table 48: Plural allomorphs on monosyllabic loanwords in Köpcke (1988:325)

The analysis shows that *-s* is the most common plural allomorph for masculine and neuter nouns, and it appears on more than one third of feminine nouns. Köpcke posits that this is largely the result of bilingual competence of German speakers in English or French, and that

the plural forms of the nouns entered German along with their singular forms. However, Köpcke does not provide evidence for this hypothesis. He, (and later Davies and Langer (2006)), claims that the *-s* plural marker was already in existence before many English and French loans arrived in German. However, the arrival of these loans in the late 17th century and the use of *-s* by bilinguals and then monolinguals, as well as in some dialects, strengthened it as a plural marker. He reports a spread of the *-s* to the native lexicon, where it became the preferred marker of plurality for non-native nouns.

Köpcke argues that his experiment supports his analysis of pluralisation of nominal loans, particularly in the underutilisation of *-er* and umlaut + *-e*, when they are obligatory in the native lexicon. One example of *-er* occurs on *Skier* as the plural marker of *Ski*. The umlaut + *-e* plural allomorph is obligatory on feminine nouns in the native lexicon. However, it does not appear on any of the feminine loanwords. One masculine noun, *der Pasch* ‘doubles when rolling dice’, takes umlaut + *-e* in the plural (*die Päsche*) but here the umlaut is optional.

In sum, the results of the loanword pluralisation analysis correlate with those of Köpcke’s experiment using nonce words in regards to the use of umlaut + *-Ø*, umlaut + *-e*, umlaut + *-er* and *-er* as plural markers. The only issue here is that Köpcke restricted himself to monosyllabic loans. Therefore, an analysis including polysyllabic nominal loans would provide a clearer and more detailed picture in regards to his schema model.

6.6.2 Default Plural marking within a Dual-Mechanism approach

An alternative view on the pluralisation of nouns to the schema model involves two separate mechanisms (Marcus et al. 1995). The first mechanism involves generative rules providing

regular inflection and the second involves a memorised lexicon that provides irregular inflection. Marcus et al.'s distinction between the descriptive and psychological definitions of regularity in inflection is crucial to this model. In the descriptive sense, which Janda (1990) employed, the markings that occur most often are the ones counted as regular. In German, this would mean that *-en* is the regular plural marker because it is the most common. In the psychological sense, which Marcus et al. employ, the definition of "regular" is the generalisation of a rule to any noun or verb. This general application need not match to frequency.

Marcus et al.'s main argument is that the *-s* plural marker is the default and is therefore regular. This argument relies on the results of an experiment involving written responses using nonce nouns within particular contexts. The experiment involved a group of 48 test subjects rating 24 pluralised nonce nouns on a Likert scale ranging from "perfectly natural to being perfectly unnatural" (Marcus et al. 1995:233). Marcus et al. view this method as an improvement upon Köpcke's (1988) experiment. Their criticism of his experiment was that the nouns were presented in isolation, allowing the subjects to treat each nonce word as a root. This means that the subjects could too easily compare them with similar roots in the existing lexicon and thus pluralise the nonce nouns accordingly. To prevent this from occurring in their experiment, Marcus et al. chose two sets of nonce words. The first set of nonce words rhymed with German irregular nouns (nouns which, according to Marcus et al., have *-e* or *-er* plural markers) and did not rhyme with regular nouns (those which have the *-s*). In the second set, the nouns did not rhyme with any existing nouns in German. They chose these types of nonce words because they wanted to test their hypothesis that nonce nouns receive irregular inflection if they are similar to existing nouns. Otherwise, they expected the nouns to receive the default *-s*.

Marcus et al. presented example sentences that provided each of their 24 nonce nouns in a neutral context, or as promptings for different interpretations of the word, i.e. names and borrowings. Each sentence was repeated, each time presenting the nonce noun in a different possible plural form. An example that they provide is the nonce noun KACH in the following lead sentence (1995:234-235):

Ich habe einen grünen KACH gegen meine Erkältung genommen.

‘I have taken a green KACH for my cold.’

Underneath were eight sentences, each with a different plural form of KACH:

Aber die weißen KACH sind oft billiger und helfen auch besser.

Aber die weißen KÄCH sind oft billiger und helfen auch besser.

Aber die weißen KACHE sind oft billiger und helfen auch besser.

Aber die weißen KÄCHE sind oft billiger und helfen auch besser.

Aber die weißen KACHEN sind oft billiger und helfen auch besser.

Aber die weißen KACHER sind oft billiger und helfen auch besser.

Aber die weißen KÄCHER sind oft billiger und helfen auch besser.

Aber die weißen KACHS sind oft billiger und helfen auch besser.

‘But the white KACHS are often cheaper and work better’

The nonce words were then presented as family names in the lead sentence:

Mein Freund Hans KACH und seine Frau Helga KACH sind ein bißchen komisch.

‘My friend Hans KACH and his wife Helga KACH are a bit strange.’

Eight sentences, each with a different plural form, appeared underneath, e.g.:

Die KACH versuchen immer, ihre Schuhe anzuziehen, bevor sie die Socken anhaben.

‘The KACHS always try to put on their shoes before they have their socks on.’

To test whether the plural form of the nonce word was affected by it being presented as a foreign word, the following context was used:

Die französische „KACH“ sieht schwarz am besten aus.

‘The French “KACH” looks best in black.’

The different plural forms appeared in the sentence:

Aber eigentlich sehen KACH in jeder Farbe gut aus.

‘But actually KACHS look good in any colour.’

One difference between Marcus et al.’s (1995) and Köpcke’s (1988) experiments is that the subjects in the former received all the variants in written form. Therefore, they might have preferred variations that they otherwise would have not created themselves. Having the items in written format may have also provided the subjects with further visual clues and may have allowed the subjects more time to analyse each item, and thus provided less “natural” or “spontaneous” results.

From this experiment, Marcus et al. (1995) concluded that if a word is learned as a root (i.e. those presented in the neutral context), the plural form is more likely to match that of a similar noun in the lexicon. For roots that do not match the lexicon, for names and for borrowings, *-s* is more likely to be utilised as the plural marker. Thus, Marcus et al.’s hypothesis is that irregular forms are stored in the lexicon as roots and that any morpheme that does not act as a root must be the default form. To a certain extent, these “clusters of

roots” have similarities with Köpcke’s schemas. However, Köpcke does not consider any plural marker as a default. Marcus and his associates refer to personal communication with Köpcke and Bybee about the idea that a schema can explain the pluralisation of recent borrowings, names and neologisms that fit canonical stress patterns. In this correspondence, Marcus et al. argue that schemas cannot explain the other cases where *-s* occurs, such as in “conjunctions, truncations, acronyms, quotations and other headless and rootless circumstances” (1995:239). Marcus et al. challenge Bybee’s (1993) suggestion of an “open” schema containing anything that does not match an existing schema. They contend that such a schema is “not a natural characteristic of pattern associators” (1995:239).

The main justification for the hypothesis that *-s* is the default plural marker in German rests upon its flexibility. Unlike other plural markers, it is

haphazardly sprinkled throughout morpho-phonological space: to masculine, feminine, and neuter nouns, to words that are part of the canonical stress pattern and to those that aren’t, to monosyllables and polysyllables, to both vowel-final and consonant-final stems (Marcus et al. 1995:245).

The *-s* plural allomorph attaches to nouns that do not have an analogous form in the lexicon. Marcus et al.’s experiment shows the flexibility of this plural marker and supports the hypothesis that it is the default. Whether a neologism or loanword retains the *-s* marker will be discussed the following section.

6.6.3 *-s* as a temporary plural

In contrast to Marcus et al. (1995), Wegener (2005) asserts that the plural allomorph *-s* is used only temporarily on neologisms and loanwords and does not constitute a permanent default marker. Wegener analyses the Italian borrowing *Pizza* as support for this hypothesis.

Appearing in German in the 1960s, this noun first used the Italian plural form *Pizze*. As the word became integrated into the language, it took *-s*, creating *Pizzas*. Wegener explains that the fully assimilated form in which it appears today is *Pizzen*. She explains that the change from *Pizze* to *Pizzas* to *Pizzen* was necessary because the expected plural **Pizzaen* violates phonological constraints in German. Wegener postulates that over time, as German-speakers became more familiar with the term, they no longer considered it monomorphemic. Instead, they reanalysed the word into the stem *Pizz* and the suffix *-a*. Wegener argues that this occurred because of two reasons. First, native German speakers compared it with the noun *Firma* → *Firmen* ‘firms, companies’, and second, they had enough knowledge of Italian to analyse the noun morphologically. Wegener claims that the same phonological process occurred with other similar nouns such as *Villa* → *Villen* ‘villas’, *Konto* → *Konten* ‘accounts’ as well as the above-mentioned example *Firma* → *Firmen* ‘businesses, firms’. This phonological change also occurs in nouns with unstressed final vowels.

Her main claim is that the *-s* plural maintains the identity of the singular form because it does not change the syllabic structure or mutate any vowels. If the singular form of a loanword is easily identifiable from its plural form, then there is a greater possibility that it will spread. However, Wegener (2005) claims there are some problems with the *-s* plural marker that can lead to its being replaced by an alternative plural marker. Some of those problems include that fact that it is not possible to add a marker for dative plural case (e.g. *mit den *Autosn* ‘with the cars’)⁵⁸ and that in strong nouns, the plural is identical with the genitive singular (e.g. *Autos* ‘cars’).

⁵⁸ All nouns in the dative plural receive the suffix *-n* regardless of their plural marking, with the exception of plural forms already ending in *-n* and plurals ending in *-s* (see Table 12).

Wegener predicts that all borrowings that take *-s* will undergo a similar process to that undergone by *Pizza* as they are integrated more into German. She argues that when a noun first enters the language, it is more important that its structure be preserved. Otherwise, the plural form of the borrowing may be too different to its singular form and thus not recognised. If there is no obvious link between the singular and plural forms of a borrowing, its success may be affected. Once the borrowing has been in the language long enough, the need to integrate into the grammatical system overrides the need to be identifiable. Thus, the noun undergoes a process of integration that may alter its shape.

There is the question of how long a borrowing needs to be part of the language before it can lose the *-s* plural. Furthermore, in regards to *Pizzas/Pizzen*, Wegener fails to mention that *Pizzas* is still by far the most common plural form. Neither form occurred in my data set of spoken German. A search using *Google.de*⁵⁹ gave approximately 10,100,000 hits for *Pizzas* and only 194,000 hits for *Pizzen*. Both plural forms are acceptable in the *Duden* (2001).

Wegener also fails to take into account that *-s* was an established plural marker that appeared before the majority of English and French loanwords entered German, and that it is a permanent feature of the German pluralisation system. This affects her assumption that *-(e)n* is the plural marker which all neologisms will obtain. The *-(e)n* marker is indeed the most common plural ending. Nevertheless, only approximately 40% of nouns use it. The most common plural marker for not only neologisms but also peripheral nouns (onomatopoeia, proper nouns, etc.) is *-s* (Janda, 1990). Without sufficient evidence from a wide variety of sources, Wegener does not provide sufficient evidence for her hypothesis concerning the temporary nature of *-s* plural marker.

⁵⁹ June 23, 2010

6.6.4 The future of the -s plural

Janda (1990) agrees with Marcus et al. (1995) that the plural -s in German falls into the category of “default” plural. However, Janda differs from Marcus et al. in that he predicts that -s will spread at the expense of the other plural markers due to its low degree of markedness. He argues against the hypothesis that the more frequent a feature or characteristic of a language is, the less marked it is – Janda argues that a feature may be both very frequent and highly marked.⁶⁰ As evidence, he gives the example of the English verb *be*, stating that it is the second most common word in English (Janda 1990:138). *Be* is commonly considered a highly marked verb because it is irregular (*I am, you are, he/she/it is/I was, you were, he/she/it was*, etc.). Janda lists productivity (in regards to application to neologisms), the diversity of environments in which the -s marker occurs, along with the phenomenon of double marking (as discussed below), to demonstrate that it is the default plural marker. Janda then argues that this hypothesis accounts for the fact that although -s is the least common plural marker, it is the least marked.

Janda shows that -s appears in the widest of contexts compared to other plural markers (see Section 6.4). However, it is his argument that the use of -s in “doubling” is “clear evidence” (Janda 1990:145) that -s is the least marked plural marker which requires further attention. In this case, doubling refers to adding the plural -s to words that are already in the plural form. Janda cites Plank’s (1981) description of the pleonastic use of -s on nouns in northern dialects and provides the examples “*Junge-n-s*” ‘boys, guys’, “*Bub-en-s*” ‘lads, guys’, “*Dame-n-s*” ‘ladies, girls’ and “*Frau-en-s*” ‘women, gals’. This phenomenon also occurs with borrowed words such as “*Exam-ina-s*” ‘examinations, tests’ and “*Komma-ta-s*” ‘commas’ (Plank 1981:77).

⁶⁰ Haspelmath (2006:27) argues that the term *markedness* is unnecessary and in some aspects can be replaced with terms such as “frequency of use, phonetic difficulty, and generalised conversational implicatures.”

Janda's evidence is limited. He does not indicate how frequent or widely spread the phenomenon of doubling is. If doubling is restricted in frequency and distribution, it is impossible to make generalisations regarding the language as a whole. Further, Janda does not take into account the fact that there is a small group of borrowed plural forms (i.e. with endings that are not typical for native nouns, such as *-ina* in *Examina*) that may not be recognised as plural markers by native German speakers. Therefore, this is a different phenomenon to the use of two native plural markers on the one noun. His argument that *-s* is the most unmarked plural marker based on the phenomenon of doubling needs further empirical support.

Janda provides two further reasons why *-s* will become the dominant plural marker. First, it combines with nouns ending in either a vowel or a consonant. Secondly, he claims it is more durable compared to other suffixes (/n/ can be lost completely, and /e/ might be reduced to schwa, then lost). He uses the changes in plural markings from Old English to Middle English as examples to support this claim. Based on similar patterns of change in other West Germanic languages such as Dutch, Yiddish and Low German, he concludes with the prediction that the regular unmarked plural allomorph of New High German will ultimately become *-s*. It could be argued that the historical developments observed in other Germanic languages are not certain predictors of the future of New High German.

The addition of loanwords, in particular anglicisms, to the lexicon may possibly expand the number of words that take *-s* in the plural. However, as shown in Chapter 2, anglicisms are few in number, indicating that any overall increase of *-s* in relation to anglicisms is only small. Instead, it may be that the category of nouns in German in which anglicisms appear is

expanding. Thus, the claim that nouns in other categories are increasingly taking on the -s as plural marker remains unsubstantiated.

6.7 Conclusion

In this chapter I have described the two competing models explaining the mechanisms behind plural marker allocation in German by Köpcke (1988) and Marcus et al. (1995). Whilst these authors differ in their approach, there is agreement that the -s plural allomorph, although not the most common, is reserved for peripheral nouns or in other words, it is an “elsewhere” plural marker. Thus, theoretical arguments point towards it as being the default marker. However, there is not enough evidence to show that it will become the dominant marker. I will show in the next chapter how the data from the present study compare to the findings of other similar studies in this field. I will also explore whether the anglicisms in the present study adhere to general pluralisation patterns in the lexicon and if the data provide evidence for Janda’s (1990) and Wegener’s (2005) hypotheses regarding -s.

Chapter 7. The realisation of plurality in anglicisms in German: Evidence from the present study

The aim of this chapter is to determine whether the anglicisms in the present investigation adhere to the pluralisation patterns observed in the regular lexicon as described in Chapter 6 and whether any additional patterns occur. In this chapter, I will present a comparison of findings from the analysis of my data set of spoken anglicisms in plural form with those from Glahn (2002), Onysko (2007), Köpcke (1988), Marcus et al. (1995) and Bartke, Rösler, Streb and Wiese (2005). I will also demonstrate that my data set does not provide evidence in support of Janda's (1990) and Wegener's (2005) hypotheses concerning the *-s* plural allomorph; rather it supports Marcus et al.'s (1995) hypothesis that *-s* is the default plural marker instead.

7.1 Plural marking on anglicisms in my data set

My data set contains 131 anglicism lexemes in plural form (see Appendix B). There are four plural suffixes present: *-s*, *-Ø*, *-e* and *-(e)n*. Figure 13 shows the distribution of plural markers on the anglicisms in my data set. The majority of the nominal anglicisms take *-s*. The second largest group of anglicisms take *-Ø*. Both *-e* and *-(e)n* each occur with the same number of types. Each noun in my data set appears with only one type of plural marker. There are no anglicisms in my data set that vary with respect to which plural marker they take.

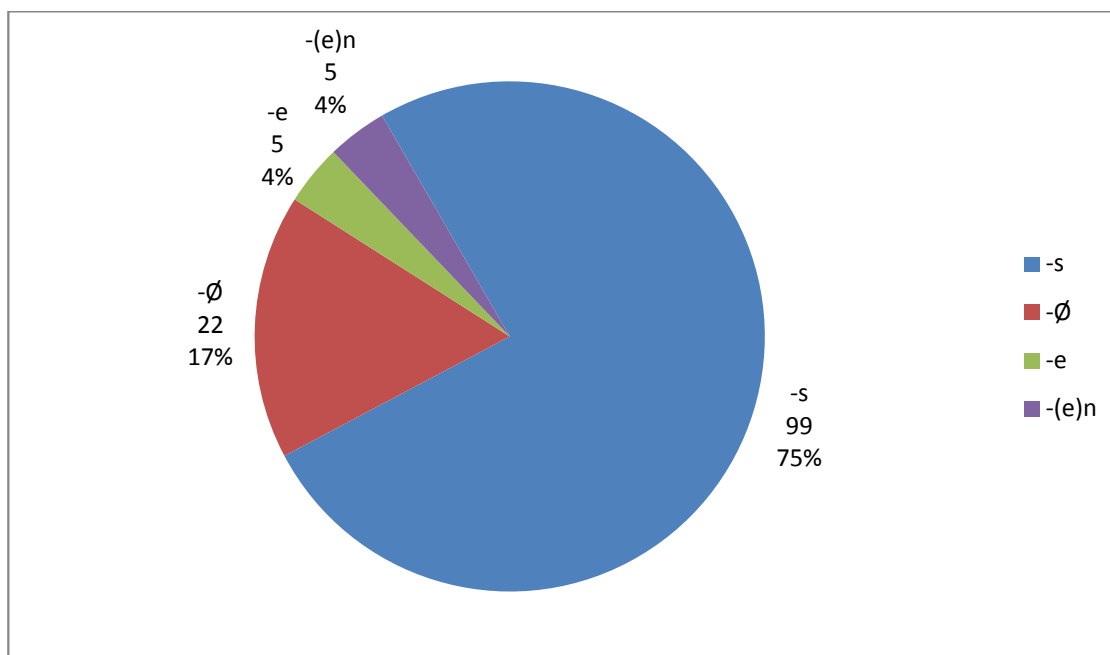


Figure 13: Plural marking on anglicisms in my data set - total types

By far the largest group of plural anglicism types ($n = 99$) in my data set takes the *-s* plural allomorph, followed by a group of 22 types that take the *-Ø* plural marker. Thirteen of the *-Ø* plural marker types have the genuine suffix *-er*, such as *Hip-Hopper* ‘hip-hopper’ and *Rocker* ‘rock musician’. Eight end in the pseudo-suffix */er/*, e.g. *Wollpullover* ‘woollen pullover’ and *Partner* ‘partner’. Finally, there is *SMS*. Plurality is not easily discernable with this noun. It has two meanings: the service that allows the sending of electronic text messages via mobile telephones and the individual text messages themselves. The most common interpretation and use of *SMS* is as an individual text message. This is an abbreviation of the longer *SMS-Nachricht* ‘SMS message’ (pl. *SMS-Nachrichten*). However, the phrase in which the noun frequently occurs, *SMS schreiben* ‘to write an SMS/SMSs’, contains no verb or article to indicate plurality. I do not include such occurrences in my analysis. According to Kunkel-Razum and Münzberg (2005), the *-s* plural marker is avoided in foreign words ending in */s/* in the singular. Apart from *SMS*, there are four noun types ending in */s/* in my data set: *Campus*, *Tennis*, *Stress* and *Keks*. Of these nouns, *Tennis* is non-count (and therefore has no plural

form), *Stress* and *Keks* take *-e*, and *Campus* and *SMS* take *-Ø*. However, only *Keks* and *SMS* are used in a plural context in the spoken data. Although the alternative plural forms such as *SMSe* and *SMSen* exist, they are rare and do not appear in my data set.

Five types utilise the *-e* plural marker. An interesting point to note among the nouns in this group is that the singular noun *Keks* ‘biscuit’ originates in the plural form of the English noun *cake*. *Keks* originally entered German as the singular form and now has *-e* as a plural marker (Görlach 2005). (For further discussion of the age and integration of other anglicisms, see Section 7.3.1.) The final group comprises five nouns, all of which take *-(e)n*.

There are 618 tokens of plural anglicisms in my data set. The distribution of plural markers among these tokens shows the highest proportion takes *-s*. The second most common plural marker is *-e*, then *-Ø* and *-(e)n*. Table 49 shows a comparison between the number of types and tokens in my data set.

	<i>-s</i>	<i>-e</i>	<i>-Ø</i>	<i>-(e)n</i>	Total
<i>Tokens</i>	382 (62%)	140 (23%)	63 (10%)	33 (5%)	618
<i>Types</i>	99 (75%)	5 (4%)	22 (17%)	5 (4%)	131

Table 49: Types and tokens of spoken plural anglicisms in my data set

Although *-s* occurs on the highest number of tokens, it does not appear on the noun type with the highest number of tokens. This noun, *Film*, takes *-e* in the plural. It has 94 tokens, which is 15.3% of all plural tokens in my data set. *E-Mail*, which takes *-s* in the plural, has the second highest token count with 73 tokens. *Fax*, pluralised with *-e*, is the type with the third highest number of tokens (27). *Band* and *CD*, both taking *-s*, have 24 tokens each. *Tourist*, also with 24 tokens, takes *-(e)n* in the plural form. This is illustrated in Table 50. A point to

note is that more than half of the plural types (57 in total) in my data set appear with only one token. Of these types, 47 take *-s*, nine take *-Ø* and one takes *-(e)n*. This indicates that although some anglicism types do not constitute a large part of the lexicon, their token frequency is high. On the other hand, most plural anglicisms do not occur with high token frequency.

Noun type	No. of tokens	% tokens in my data set	Plural marker
<i>Film</i>	94	15.3	<i>-e</i>
<i>E-Mail</i>	73	11.9	<i>-s</i>
<i>Fax</i>	27	4.4	<i>-e</i>
<i>Band</i>	24	3.9	<i>-s</i>
<i>CD</i>	24	3.9	<i>-s</i>
<i>Tourist</i>	24	3.9	<i>-en</i>

Table 50: Plural marking on the six most frequently occurring plural anglicisms in my data set

7.1.1 Monosyllabic nouns

Monosyllabic nouns provide further insight into the pluralisation process because they do not possess any derivational suffixes or pseudo-suffixes that may influence plural marking (Köpcke 1988). If only the monosyllabic anglicism types in plural form in my data set are analysed, the results can be compared with Köpcke's (1988) list of plural allomorphs on monosyllabic loanwords (see Table 51 for comparison). A point to note is that Köpcke's analysis contains loanwords from a variety of languages, including English.

The main difference in the two data sets is illustrated in Table 51. It shows that only three plural allomorphs appear on the anglicisms here, whereas five appear in Köpcke's study. All feminine nouns in my data set have the *-s* plural allomorph, whereas only one-third in Köpcke's does. Another point to note is that no masculine or feminine nouns in my data set take *-(e)n* in the plural form. Furthermore, three anglicisms in my data set have varying

gender and Köpcke does not indicate any. The distribution of plural marking in each study is different. The most common plural marker in both studies is *-s*. However, it is over-represented amongst the anglicisms in my data set compared to the loans in general in Köpcke’s study. A much smaller portion of the anglicisms in my data set take *-e* and even fewer take *-(e)n* when compared to the monosyllabic loanwords in Köpcke’s study.

	Noun		<i>-(e)n</i>		<i>-e</i>		<i>-s</i>	
masc.	140	26	1%	-	39%	8%	56%	92%
fem.	35	5	49%	-	14%	-	37%	100%
neut.	40	7	5%	14%	23%	14%	68%	71%
varying	-	3	-	33%	-	33%	-	33%

Table 51: Plural allomorphs appearing on monosyllabic loanwords in Köpcke (1988:325) and monosyllabic anglicisms in my data set

The data in bold are from my data set. The plural markers umlaut + *-e*, *-Ø* and *-er* have been left out of this table because they do not appear on the monosyllabic anglicisms in my data set.

The sections that follow are a discussion of whether the anglicisms in my data set as presented and analysed above support the theoretical perspectives introduced in Chapter 6.

7.1.2 Plural anglicisms and patterns in the lexicon

According to Bartke et al.’s (2005) reanalysis of the CELEX database of 25,000 noun types in German (Figure 14), only 4% of nouns in the German lexicon take the *-s* plural allomorph. The proportion of noun types taking *-s* in my data set is much greater. In fact, the hierarchy of plural allomorphs in my data set is the reverse of that of the general lexicon. Based on the frequency of plural allomorphs (and excluding those that do not feature on anglicisms) the anglicisms have the hierarchy of plural markers *-s*>*-Ø*>*-e*>*-(e)n*, whereas the general lexicon has the hierarchy *-(e)n*>*-e*>*-Ø*>*-s*.

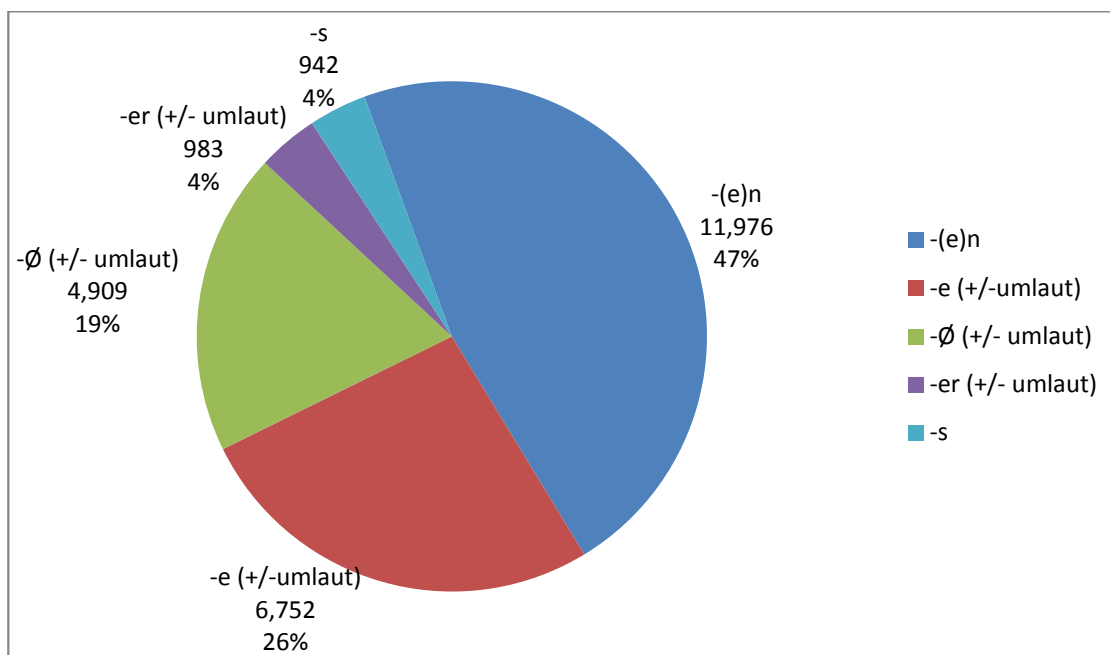


Figure 14: Type frequencies of plural forms in the whole lexicon (Bartke et al. 2005)

The gender and plural marking patterns in my data set of anglicisms are also different to that of the regular lexicon. Bartke et al. (2005) make the following summaries based on the combination of the gender and the number of syllables in German nouns. They group masculine and neuter nouns together because their plural marking patterns are similar:

1. Feminine nouns most often take *-(e)n*;
2. Monosyllabic masculine/neuter nouns and disyllabic masculine/neuter nouns with a final stressed syllable usually take *-e*;
3. If a masculine/neuter noun has a reduced final syllable (such as in *Filter* ‘cleaner, filter’, *Segel* ‘sail’ or *Garten* ‘garden’), it takes *-Ø*; and
4. No monosyllabic noun or a disyllabic noun with two full syllables has *-Ø*.

The patterns in my data set regarding the correlation between gender and plural marking do not reflect those in the regular lexicon as described by Bartke et al. (2005). As illustrated in Table 52, most feminine plural anglicisms in my data set take *-s* and not *-(e)n* as in the

regular lexicon. Only one feminine type, *Diskette* ‘disk’, takes *-(e)n* and another, *SMS*, takes *-Ø*. Bartke et al. also state that the majority of non-feminine nouns in the native lexicon take *-e*. The nouns in my data set that take *-e* include the masculine nouns *Film* and *Keks* ‘biscuit’, the neuter nouns *Produkt* ‘product’ and *Boot* ‘boat’, and *Fax*, which is either masculine or neuter. However, more nouns that are non-feminine take *-s* rather than *-e*, when pluralia tantum are excluded. Therefore, the plural anglicisms in my data set do not reflect the *-e* plural marking pattern of the native lexicon.

Gender	Types	Total				Polysyllabic nouns					Monosyllabic nouns				
		<i>-(e)n</i>	<i>-e</i>	<i>-Ø</i>	<i>-s</i>	Types	<i>-(e)n</i>	<i>-e</i>	<i>-Ø</i>	<i>-s</i>	Types	<i>-(e)n</i>	<i>-e</i>	<i>-Ø</i>	<i>-s</i>
m.	75	2	2	21	50	47	2	-	21	24	28	-	2	-	26
f.	23	1	-	1	21	13	1	-	1	11	10	-	-	-	10
n.	23	1	2	-	20	16	-	1	-	15	7	1	1	-	5
m./n.	8	1	1	-	6	5	-	-	-	5	3	1	1	-	1

Table 52: Correlation between gender and plural marking in my data set

Some phonological patterns with regard to plural marking in my data set do mirror the patterns occurring in the regular lexicon. The tendency that Bartke et al. mention is that native non-feminine nouns with reduced final syllables take *-Ø*. The plural forms in my data set support this because 70% of nouns with this phonological pattern take *-Ø*. However, the remaining 30% of nouns with this pattern in the data take *-s*. These include *Button*, *Comedian*, *Dungeon*, *Gospel* (an abbreviation of *Gospelsongs*), *Musical*, *Single*, *Slogan* and *Wallpaper*. Bartke et al. also state that no noun in the general lexicon with one syllable or two full syllables takes *-Ø*. This is also true of the anglicisms in my data set. Those nouns that take this plural marker have an *-er* ending in the singular (and therefore end on a reduced syllable) or are an acronym (*SMS*) containing three full syllables.

In summary, the findings that emerged from the analysis in the present study do not support the hierarchy for plural marking of the general lexicon that Bartke et al. (2005) proposed, nor do they support their hypothesis about the relationship between gender and pluralisation. These findings will next be compared with the findings of similar corpus-based studies of anglicisms in German. I will evaluate Wegener's (2005), Janda's (1990) and Marcus et al.'s (1995) hypotheses about plural formation in view of the similarities and differences that emerge from these comparisons.

7.2 Comparison with similar studies

As illustrated in Figure 13, the vast majority of pluralised noun types in my data set take the *-s* suffix. This is in accordance with Götzeler (2008), and Köpcke (1988), who noted that this is the most common plural marker for all loanwords. A similarly high proportion of the nouns that take the suffix appears in Glahn's (2002) analysis of anglicisms in spoken German on television. Nearly three-quarters of the nouns in his study take *-s*, followed by *-Ø*, *-e* and *-(e)n* (see Figure 15). Onysko's analysis of written German in *Der Spiegel* is also comparable. In his corpus, 60% of the anglicisms take *-s* (see Figure 16).⁶¹

⁶¹ Glahn (2002) and Onysko (2007) do not provide a list of types and tokens of plural anglicisms occurring in their studies. They only mention the percentages presented here.

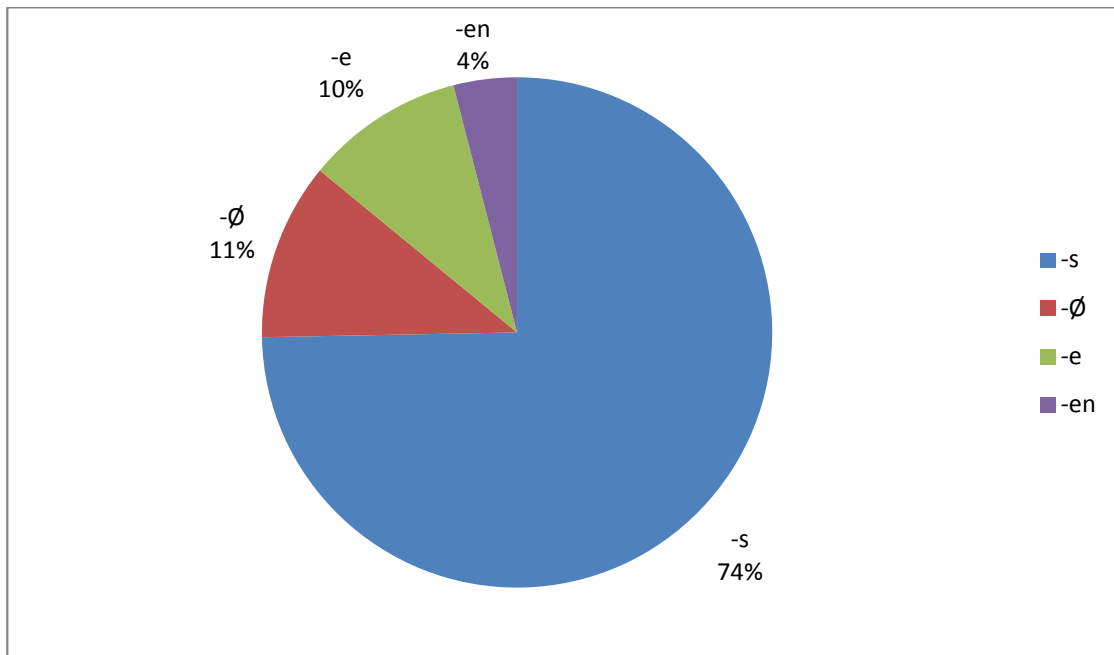


Figure 15: Distribution of plural marking on anglicisms in Glahn (2002)

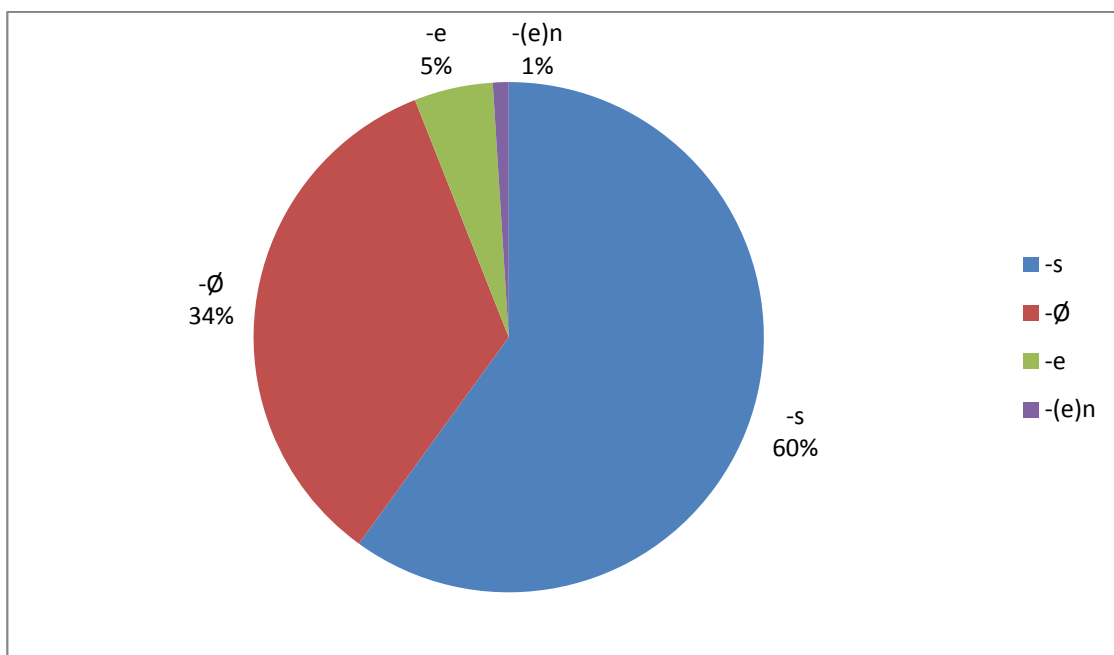


Figure 16: Distribution of plural marking on anglicisms in Onysko (2007)

The fact that such a high proportion of nominal anglicisms take *-s* may have a number of interpretations. According to Janda's (1990) hypothesis, the large number of nouns taking the

-s plural influences native nouns to take on this marker. Thus, it will become the dominant plural marker in German under the influence of English. In contrast, according to Wegener (2005) the number of nouns utilising this plural marker will not increase because as borrowed nouns become integrated into German, they take an alternative plural marker. Finally, according to Marcus et al. (1995) these results are a confirmation of their hypothesis that -s is the default plural marker because it is so liberally applied to loanwords.

7.3 Anglicisms and the -s plural

7.3.1 Wegener's analysis

To investigate Wegener's (2005) hypothesis of -s being a temporary marker applied to anglicisms, it is important to separate "older" from "newer" anglicisms. For the German language, the end of World War II provides a suitable point of separation. The year 1945 represents the beginning of a huge influx of anglicisms. This is due to the Allied occupation of Germany after WWII and the further opening up of Germany to Anglo-American cultural and linguistic influences (Carstensen 1965). Some pre-1945 anglicisms in plural form in my data set have plural markers other than -s. These include *Boote* 'boats' and *Kekse* 'biscuits', which entered the language in the 12th century and the end of the 19th century respectively. This category also includes the older loans of *Film*, *Park*, *Toast* and *Couch*. According to Carstensen and Busse (2001), the noun *Film* had either -e or -s in plural form when first recorded in German in 1900. However, since 1915 it has had the -e plural marker exclusively. The vast majority of pre-1945 anglicisms have retained the -s plural marker. Table 53 lists these anglicisms and their first recorded mention in German, as indicated by Carstensen and Busse.

Anglicism	Year first recorded in German
<i>Park</i>	beginning 17th century
<i>Club</i>	mid 18th century
<i>Clown</i>	1770
<i>Toast</i>	1773
<i>Trick</i>	late 18th century
<i>Song</i>	end 18th century
<i>Steak</i>	1825
<i>Training</i>	1830s
<i>Slang</i>	mid 19th century
<i>Bar</i>	1867
<i>Interview</i>	1870
<i>Baby</i>	1871
<i>Cocktail</i>	1871
<i>Tip</i>	1871
<i>Truck</i>	1871
<i>Track</i>	1883
<i>Story</i>	1890
<i>Show</i>	1894
<i>Cowboy</i>	end 19th century
<i>Test</i>	1911
<i>Team</i>	1915
<i>Hooligan</i>	1929
<i>Job</i>	1929
<i>Slogan</i>	1930
<i>Couch</i>	1931
<i>Gag</i>	1933
<i>Party</i>	1942

Table 53: Pre-1945 nominal anglicisms in my data set along with their first recorded mention in German.
All have retained the -s plural marker. Dates provided in Carstensen and Busse (2001).

This data set of anglicisms does not support Wegener's hypothesis. There is no evidence here that the longer a loanword has been in German, the more likely it is to lose -s as a plural marker and take another one. There are some seldom-occurring alternatives in pluralisation for some anglicisms in my data set, such as the three nouns *Park* 'park', *Toast* 'toast' and *Couch* 'couch'. *Park* has two other plural forms, *Parke* and *Pärke*. The first is much less common than *Parks* and the second appears only in Swiss German. Similarly, *Toaste* and *Couchen* exist alongside *Toasts* and *Couch(e)s* respectively. Although these nouns have been

in German for a long time, there is little evidence that they are changing their plural forms. For this reason, Wegener's hypothesis does not apply to anglicisms.

7.3.2 Janda's analysis

As we have already seen, Janda (1990) states that *-(e)n*, *-e*, *-Ø* and *-s* are the only productive plural allomorphs in modern German. This is supported by studies by Glahn (2002), Onysko (2007), and Cannon and Pfeffer (2003). The anglicisms in my data set also utilise only the plural markers that Janda mentions for this category.

The most common plural marker by far on the anglicisms in my data set is *-s*. However, this does not provide support for Janda's (1990) hypothesis that it will spread throughout the native lexicon to become the dominant plural marker. The reason for this is that anglicisms constitute far too small a percentage of the German lexicon to have any effect on it overall. As we have seen in Chapter 2, studies by Busse (1993), Kettemann (2003), Langer (1996), Onysko (2007) and Plümer (2000) show that only between approximately 0.6% and 3.5% of the German lexicon has its origins in English.

7.3.3 The default plural hypothesis

The plural marker *-s* was and is the default quite independently of loans. In other words, *-s* applies to loans because it has been the default plural in German for a long time. It is not the case that it has been borrowed into German with loans and then developed into the default because loans can be phonotactically unusual. Öhmann (1961) states that *-s* has been in existence in German since long before the first recorded English or French borrowings. It was recognisable as a plural marker due to its high cue validity and salience before foreign influence (Köpcke 1988). Bartke et al. (2005) also agree with Marcus et al. (1995) that

although the *-s* plural suffix is not the most frequent plural allomorph, it applies in such a wide variety of situations, including more than just loanwords (see Section 6.4), that it must be the default. Bartke et al. add that language data collected from children (both with and without language impairment), as well as from people with disorders affecting language production (e.g. Alzheimer's Disease, Parkinson's Disease, William's Syndrome and aphasia) support the status of *-s* as the default or regular marker. Therefore, they assert that the *-s* was not borrowed along with the singular of the loanword, but was attached by a native pluralisation process instead. The analysis of my data set lends support to this view.

7.4 Conclusion

My data set of spoken nominal anglicisms analysed in the present study is comparable to that of previous studies on plural forms. The dominant plural allomorph on anglicisms in the present study is *-s*, followed by a sizeable portion of plural anglicisms that take *-e*, followed by *-Ø* and *-(e)n*. The hierarchy in which these plural markers occur in my data set, based on frequency, is the reverse of that posited for the general lexicon. The patterns in my data set concerning the relationship between plurality and gender differ in some respects from the patterns in the German lexicon as a whole. However, the patterns in my data set do conform to pluralisation patterns of nouns within the peripheral or “other nouns” category. The results of my analysis support Bartke et al.'s (2005) and Marcus et al.'s (1995) hypothesis that *-s* is the default plural marker. No evidence was found to support the hypothesis that that the *-s* plural gives way to other plural markers the longer a loanword has been in German. Indeed, apart from some limited exceptions, all the anglicisms that entered German before 1945 have retained the *-s* plural marker. Neither is there any evidence in the present study to support the hypothesis that *-s* will become the dominant plural marker in German.

Chapter 8. Summary and conclusion

What sets this thesis apart from other studies on anglicisms in German is that it is based on an analysis of spoken language. My data set derives from spontaneous speech on everyday topics, collected from participants from a broad range of education backgrounds and a variety of ages within Germany. The motivation for analysing spoken data only was to provide the most accurate insight into the penetration of anglicisms in German. Previous studies have focussed on written language data, such as that found in the print media or in dictionaries. Language found in these sources is subject to much editing and must adhere to certain prescriptive written standards. On the other hand, because of the primacy of the spoken word over the written, analysing spontaneous spoken language provides a more accurate indication of how English may affect German.

The English language has been influencing German for centuries. However, the majority of anglicisms have entered German since the end of World War II. There have been many attempts to describe, on a lexical level, the influence and the occurrence of anglicisms in German. This has resulted in a numerous complicated taxonomies describing not only direct but also indirect loans. The approach I have taken in this thesis is that of Görlach (1994) in analysing only those nouns which are most obvious to native-speakers of German. That is, I have included in my study direct loans and pseudo-loans only. Focussing on these nouns not only allows the easier identification of the anglicism for analysis, but also provides a better indicator of what native-speakers might perceive as being ‘foreign’.

In this thesis, I have investigated the impact of nominal anglicisms on German with a particular focus on gender and plural marking. I have shown through the empirical study of

nominal anglicisms derived from corpora of spoken German that the number of anglicisms in German is too small to have any significant effect.

In regards to the gender system of German, all nominal anglicisms adhere to the patterns relevant to native German nouns. I have shown that morphology (including the appearance of pseudo-suffixes) is the most accurate predictor of the gender of any noun in German, whether native or non-native. Animacy is the only semantic category which influences the gender of nouns with pseudo-suffixation, along with those nouns that are easily recognisable as morphologically simplex and those that appear simplex. The grammatical gender of nouns denoting humans and higher animates matches the sex of their referents. The gender of only a small percentage of nouns, those that are monosyllabic inanimate nouns, is still unable to be clearly predicted with 100% accuracy.

Previous discussion on the gender of German indicates the difficulty in establishing predictive theories relating to both native and non-native nouns. So far, the studies discussed in thesis are still unable to provide 100% predictive theory on the gender of native nouns or nominal anglicisms. Independently based criteria of semantic and phonological theory are essential to any theory regarding the gender of nouns in German. A major issue with the explanations relating to gender of nouns by the authors that I have discussed in this thesis is that there is a lack of independently based criteria across the board as well as a lack of clear limitations to the number of rule types. Bittner (2001) may have a valid argument about gender in relation to semantic primitives based on affixes on German nouns. However, in general this theory is still unclear. In general, rules based on semantics in particular, as offered by Köpcke (1982), Steinmetz (1986, 2001) and Onysko (2007) are not based on independent testing and appear to be idiosyncratic. On a more specific level, animacy is the

only well-established criterion with which a prediction of gender may be made. Overall, animacy appears to be the only criterion based on semantics that plays a role in predicting the gender of nouns in German.

Morphology (including pseudo-suffixes) is by the best predictor of the gender of both native German nouns and nominal anglicisms. For nouns which do not have any suffix or pseudo-suffix, or for those which refer to inanimates (or lower-order animates), there exist no clear predictive patterns regarding the gender of nouns in terms of anything that is independently justified. For these monosyllabic, simplex nouns, there appears to be an identifiable trend for the masculine to be the default gender for both native and anglicism nouns. For nominal anglicisms in particular, lexical-conceptual equivalence may play a role. However, there is a lack of theory on what constitutes an “equivalent”. Any theory based on lexical-conceptual equivalence would require first a full theoretical investigation of semantics to determine whether equivalence is a factor. Therefore, further research in this area is needed in order to obtain a definitive theory regarding the gender of anglicisms in German. Therefore, although the gender of the majority of nouns in German, both native nouns and nominal anglicisms, is predictable to a high degree using morphology, that which determines the gender of a very small minority remains unclear. However, nominal anglicisms do adhere to previously existing patterns in gender assignment.

In regards to pluralisation, it appears that all nominal anglicisms adhere to existing patterns of plural marking in German. The majority of anglicisms take the default plural marker *-s*, reserved for any noun (either native or non-native) fitting the “elsewhere” category. This indicates that the *-s* is not merely borrowed along with the original English term. Furthermore, some anglicisms take other plural allomorphs *-Ø*, *-e* and *-(e)n*.

By analysing my data set of nominal anglicisms in spoken German, I have confirmed that the default plural marker for all nouns in German is *-s*. This plural allomorph applies to nouns that appear in a certain category of peripheral nouns including people's names, onomatopoeia and foreign nouns. This indicates that, although this plural marker is most frequently applied to anglicisms, it is not borrowed into German along with the anglicism itself. Neither will the *-s* plural allomorph spread to nouns outside this category at the expense of other plural markers. Rather, it is because anglicisms fit into the category in which *-s* is applied. I have also shown that this plural marker does not give way to other plural markers over time.

As previously mentioned, the majority of nominal anglicisms adhere to native German patterns in terms of gender and plural marking. Because anglicisms conform to these native patterns, and because they constitute such a minor part of the overall German lexicon (at most approximately 4% of the general lexicon), they do not exert any influence on German grammar. Hence, they do not present any threat to the German language

The influence that foreign languages have had in German has been the topic of much debate over the past four hundred years. Purist groups, language societies and individuals have expressed particularly negative views on foreign influences on German. However, in recent decades the target of criticism has been solely the influence of English. The main opinion expressed by language societies and individuals is that English is in some way damaging German. However, these opinions are not necessarily shared by the entire general population. Evidence suggests that the average population are ambivalent towards anglicisms – participants in studies have expressed an equal amount of both negative and positive attitudes towards anglicisms.

Perhaps anglicisms are seen as a threat not necessarily because of their actual number, but rather because of the Anglo-American culture they represent. Perhaps the opinions expressed by groups and individuals are not about language itself, rather about the dominance by an outside culture. People's identity is more overtly expressed in spoken rather than written language. This reflects that the primary form of language is the spoken form. Thus, analysing spoken language offers a clearer view of the true influence that English has on German. As the findings from the present research suggest, that influence appears to be minimal.

Appendices

A. Singular nominal anglicisms in the corpus of spoken German

<i>Abstract</i>	<i>Computertower</i>	<i>Happy-End</i>
<i>Action</i>	<i>Container</i>	<i>Hardware</i>
<i>Aiming</i>	<i>Controlling</i>	<i>Headquarter</i>
<i>Baby</i>	<i>Couch</i>	<i>Headset</i>
<i>Bachelor</i>	<i>Cowboy</i>	<i>Helikopter</i>
<i>Bar</i>	<i>Credit</i>	<i>Highlight</i>
<i>Barkeeper</i>	<i>Cross-Validation-Set</i>	<i>Highschool</i>
<i>Beamer</i>	<i>Cup</i>	<i>Hobby</i>
<i>Bit</i>	<i>Dad</i>	<i>Homepage</i>
<i>Bodybag</i>	<i>Deadline</i>	<i>Humor</i>
<i>Boiler</i>	<i>DJ</i>	<i>Image</i>
<i>Boom</i>	<i>Drive-In</i>	<i>Input</i>
<i>Boot</i>	<i>Druckerdriver</i>	<i>Internet</i>
<i>Box</i>	<i>DSL</i>	<i>Interview</i>
<i>Browsegame</i>	<i>DVD</i>	<i>Jackpot</i>
<i>Browser</i>	<i>Einkaufsmarketing</i>	<i>Jeans</i>
<i>Bug</i>	<i>E-mail</i>	<i>Job</i>
<i>Burger</i>	<i>Error</i>	<i>Joke</i>
<i>Burner</i>	<i>Export</i>	<i>Joker</i>
<i>Campus</i>	<i>Fan</i>	<i>Joystick</i>
<i>Cape</i>	<i>Farm</i>	<i>Keks</i>
<i>Card</i>	<i>Fax</i>	<i>Keyboarder</i>
<i>Carport</i>	<i>Feedback</i>	<i>Kick</i>
<i>CD</i>	<i>Feeling</i>	<i>Killer</i>
<i>CD-ROM</i>	<i>Festival</i>	<i>Kinodate</i>
<i>Center</i>	<i>File</i>	<i>Klo</i>
<i>Chat</i>	<i>Film</i>	<i>LAN</i>
<i>Chatten</i>	<i>Flat</i>	<i>Laptop</i>
<i>City</i>	<i>Flowchart</i>	<i>Layout</i>
<i>Clan</i>	<i>Flyer</i>	<i>Level</i>
<i>Clip</i>	<i>Freak</i>	<i>Library</i>
<i>Club</i>	<i>Frustration</i>	<i>Lift</i>
<i>Code</i>	<i>Gag</i>	<i>Link</i>
<i>Cola</i>	<i>Gap-Year</i>	<i>Management</i>
<i>Comedy</i>	<i>Golden Retriever</i>	<i>Manager</i>
<i>Comic</i>	<i>Grill</i>	<i>Map</i>
<i>Community</i>	<i>Handout</i>	<i>Meeting</i>
<i>Computer</i>	<i>Handy</i>	<i>Message</i>

Mitternachtseditorial
Mix
Modem
Mountainbike
Net-Call
Paper
Park
Partner
Party
PC
PDF
Planing
Player
Pub
Pudding
Pulli
Pullover
Punkband
Ranking
Rap
Rapper
Reader
Reaktor
Recorder
Retainer
Scanner
Schock
Server
Service

Setup
Sex
Shooter
Shop
Show
Skript
Slang
Slogan
Smalltalk
SMS
Software
Song
Sound
Sport
Spot
Standard
Start
Stopp
Story
Streik
Stress
Supervision
Tank
Team
Teamkaptain
Tennis
Test
Testen
Thriller

Ticket
Timer
Tip
Toast
Top
Touch
Tourer
Touri
Trainer
Trainieren
Training
Tram
Trip
Truck
T-Shirt
Tunnel
URL
User
Video
Vorstopper
WC
Webmaster
Whisky
Wischmop
Wordprocessing
Zungenpiercing
Zwölferpack

B. Plural nominal anglicisms in the corpus of spoken German

<i>Babys</i>	<i>Fans</i>	<i>Shooter</i>
<i>Backpacker</i>	<i>Faxe</i>	<i>Shows</i>
<i>Bands</i>	<i>Filme</i>	<i>Singles</i>
<i>Bars</i>	<i>Flyer</i>	<i>Sitcoms</i>
<i>Beats</i>	<i>Food-Courts</i>	<i>Skinheads</i>
<i>Binaries</i>	<i>Freaks</i>	<i>Skins</i>
<i>Bits</i>	<i>Gags</i>	<i>Slangs</i>
<i>Boote</i>	<i>Gameconventions</i>	<i>Slogans</i>
<i>Brackets</i>	<i>Gangsterrapper</i>	<i>Smileys</i>
<i>Bug Fixes</i>	<i>Gospels</i>	<i>SMS</i>
<i>Buttons</i>	<i>Gothics</i>	<i>Soaps</i>
<i>Canyons</i>	<i>Handouts</i>	<i>Songs</i>
<i>Cartoons</i>	<i>Handys</i>	<i>Sponsoren</i>
<i>CDs</i>	<i>Headshots</i>	<i>Spots</i>
<i>Charts</i>	<i>Hearings</i>	<i>Spreadsheets</i>
<i>Chatrooms</i>	<i>Highlights</i>	<i>Steaks</i>
<i>Chats</i>	<i>Hip-Hopper</i>	<i>Storys</i>
<i>Cheerleader</i>	<i>Hooligans</i>	<i>Styles</i>
<i>Chips</i>	<i>Hot Dogs</i>	<i>Teams</i>
<i>Chopper</i>	<i>Inline-Skates</i>	<i>Tests</i>
<i>Classes</i>	<i>Internetprovider</i>	<i>Thriller</i>
<i>Clowns</i>	<i>Interviews</i>	<i>Tipps</i>
<i>Clubs</i>	<i>Jobs</i>	<i>Toasts</i>
<i>Cocktails</i>	<i>Kekse</i>	<i>Tourer</i>
<i>Comedians</i>	<i>Learners</i>	<i>Touristen</i>
<i>Comics</i>	<i>Leggings</i>	<i>Tracks</i>
<i>Computer</i>	<i>Libraries</i>	<i>Trailor</i>
<i>Connections</i>	<i>Links</i>	<i>Trainings</i>
<i>Consumergoods</i>	<i>Maps</i>	<i>Tricks</i>
<i>Container</i>	<i>Minidiscs</i>	<i>Trucks</i>
<i>Cornflakes</i>	<i>Musicals</i>	<i>T-shirts</i>
<i>Couchs</i>	<i>Musikclips</i>	<i>Tubes</i>
<i>Cowboys</i>	<i>Native Speaker</i>	<i>Videos</i>
<i>Credit Points</i>	<i>News</i>	<i>Wallpapers</i>
<i>Credits</i>	<i>Parks</i>	<i>Wollpullover</i>
<i>Deals</i>	<i>Partner</i>	<i>Workshops</i>
<i>Disketten</i>	<i>Partys</i>	<i>Workstations</i>
<i>DJs</i>	<i>PCs</i>	
<i>Dollars</i>	<i>PC-User</i>	
<i>Downloads</i>	<i>Piercings</i>	
<i>Dungeons</i>	<i>Poster</i>	
<i>DVDs</i>	<i>Punks</i>	
<i>Ein-Euro-Jobber</i>	<i>Rankings</i>	
<i>E-mails</i>	<i>Rocker</i>	
<i>Essays</i>	<i>Schools</i>	
<i>Events</i>	<i>Scripten</i>	
<i>Fakten</i>	<i>Server</i>	

C. Singular nominal anglicisms from Glahn (2002)

<i>Airbag</i>	<i>Highlife</i>	<i>Sex</i>
<i>Astronaut</i>	<i>Highlight</i>	<i>Shopping</i>
<i>Attraktion</i>	<i>High-Tech</i>	<i>Show</i>
<i>Baby</i>	<i>Hit</i>	<i>Single</i>
<i>Base-Cap</i>	<i>Hobby</i>	<i>Skip</i>
<i>Boom</i>	<i>Import</i>	<i>Smalltalk</i>
<i>Boss</i>	<i>Internet</i>	<i>Snack</i>
<i>Box</i>	<i>Investment</i>	<i>Snowboard</i>
<i>Boykott</i>	<i>Joggen</i>	<i>Soap</i>
<i>Break</i>	<i>Kid</i>	<i>Soft-Drink</i>
<i>Camp</i>	<i>Killer</i>	<i>Software</i>
<i>Captain</i>	<i>Klub</i>	<i>Song</i>
<i>CD</i>	<i>Kondom</i>	<i>Sound</i>
<i>CD-ROM</i>	<i>Least-Cost-Router</i>	<i>Splitting</i>
<i>Champion</i>	<i>Limit</i>	<i>Sport</i>
<i>Chip</i>	<i>Malt-Whiskey</i>	<i>Sprint</i>
<i>Clip</i>	<i>Management</i>	<i>Sprinter</i>
<i>Coach</i>	<i>Manager</i>	<i>Spurt</i>
<i>Cola</i>	<i>Match</i>	<i>Star</i>
<i>Cop</i>	<i>Miss</i>	<i>Start</i>
<i>Crack</i>	<i>Mister</i>	<i>Steak</i>
<i>Crash</i>	<i>Mix</i>	<i>Story</i>
<i>Cup</i>	<i>Mixer</i>	<i>Stress</i>
<i>Curler</i>	<i>Mom/Mum</i>	<i>Team</i>
<i>Date</i>	<i>Monster</i>	<i>Tennis</i>
<i>Downhill-Bike</i>	<i>Partner</i>	<i>Test</i>
<i>Export</i>	<i>Pipeline</i>	<i>Ticket</i>
<i>Fan</i>	<i>Playboy</i>	<i>Tipp</i>
<i>Feeling</i>	<i>Poker</i>	<i>Toaster</i>
<i>Festival</i>	<i>Pop</i>	<i>Tourist</i>
<i>Fight</i>	<i>Power</i>	<i>Trainer</i>
<i>Film</i>	<i>Propeller</i>	<i>Training</i>
<i>Flirt</i>	<i>Pudding</i>	<i>Traktor</i>
<i>Flop</i>	<i>Rekord</i>	<i>Trend</i>
<i>Freak</i>	<i>Reporter</i>	<i>Trick</i>
<i>Hamburger</i>	<i>Revolver</i>	<i>T-Shirt</i>
<i>Handy</i>	<i>Rock</i>	<i>Twist</i>
<i>Happy-End</i>	<i>Run</i>	<i>Video-Recorder</i>
<i>Hattrick</i>	<i>Service</i>	<i>Walken</i>

D. Singular nominal anglicisms from Onysko (2007)

<i>Action</i>	<i>Computer</i>	<i>Glamour</i>
<i>Baby</i>	<i>Container</i>	<i>Globetrotter</i>
<i>Babyboomer</i>	<i>Controller</i>	<i>Golfer</i>
<i>Babysitter</i>	<i>Controlling</i>	<i>Hacker</i>
<i>Band</i>	<i>Court</i>	<i>Handy</i>
<i>Bar</i>	<i>Cover</i>	<i>Hardliner</i>
<i>Barkeeper</i>	<i>Crack</i>	<i>Headhunter</i>
<i>Beat</i>	<i>Cracker</i>	<i>Highflyer</i>
<i>Bestseller</i>	<i>Crash</i>	<i>Hightech</i>
<i>Biker</i>	<i>Crew</i>	<i>Hijacker</i>
<i>Blockbuster</i>	<i>Cruiser</i>	<i>HipHopper</i>
<i>Boom</i>	<i>Cup</i>	<i>Hit</i>
<i>Boss</i>	<i>Cut</i>	<i>Hoax</i>
<i>Box</i>	<i>Cutter</i>	<i>Hobby</i>
<i>Boxer</i>	<i>Cyberspace</i>	<i>Holding</i>
<i>Boykott</i>	<i>Deal</i>	<i>Hype</i>
<i>Broker</i>	<i>Dealer</i>	<i>Image</i>
<i>Business</i>	<i>Decoder</i>	<i>Insider</i>
<i>Butler</i>	<i>Design</i>	<i>Internet</i>
<i>Camp</i>	<i>Designer</i>	<i>Interview</i>
<i>Carrier</i>	<i>Doper</i>	<i>Interviewer</i>
<i>CD</i>	<i>Drink</i>	<i>Investment</i>
<i>CD-ROM</i>	<i>Drive</i>	<i>Jazz</i>
<i>Center</i>	<i>E-Commerce</i>	<i>Jet</i>
<i>Charter</i>	<i>E-Mail</i>	<i>Jet-Set</i>
<i>Chat</i>	<i>Entertainer</i>	<i>Job</i>
<i>Check</i>	<i>Entertainment</i>	<i>Jogger</i>
<i>Chip</i>	<i>Fan</i>	<i>Joint</i>
<i>Claim</i>	<i>Farmer</i>	<i>Kick</i>
<i>Clan</i>	<i>Festival</i>	<i>Kicker</i>
<i>Clan</i>	<i>Fight</i>	<i>Kidnapper</i>
<i>Clinch</i>	<i>Film</i>	<i>Killer</i>
<i>Clip</i>	<i>Filmer</i>	<i>Laddism</i>
<i>Club</i>	<i>Fit</i>	<i>Laptop</i>
<i>Coach</i>	<i>Fitness</i>	<i>Lifestyle</i>
<i>Cockpit</i>	<i>Flirt</i>	<i>Lobby</i>
<i>Code</i>	<i>Flop</i>	<i>Logo</i>
<i>Colt</i>	<i>Fun</i>	<i>Look</i>
<i>Comeback</i>	<i>Gag</i>	<i>Loser</i>
<i>Comedy</i>	<i>Gangster</i>	<i>Lunch</i>
<i>Comic</i>	<i>Ghostwriter</i>	<i>Management</i>

<i>Manager</i>	<i>Rock</i>	<i>Sticker</i>
<i>Marketing</i>	<i>Rocker</i>	<i>Story</i>
<i>Master</i>	<i>Run</i>	<i>Stress</i>
<i>Mix</i>	<i>Safe</i>	<i>Stuntman</i>
<i>Mixer</i>	<i>Scanner</i>	<i>Surfer</i>
<i>Mob</i>	<i>Science Fiction</i>	<i>Take</i>
<i>Musical</i>	<i>Server</i>	<i>Talk</i>
<i>Newcomer</i>	<i>Service</i>	<i>Team</i>
<i>Nigger</i>	<i>Shareholder</i>	<i>Techno</i>
<i>Okay</i>	<i>Shareholder-Value</i>	<i>Teenager</i>
<i>Outcast</i>	<i>Show</i>	<i>Teenie</i>
<i>Pager</i>	<i>Shuttle</i>	<i>Tennis</i>
<i>Party</i>	<i>Single</i>	<i>Test</i>
<i>Pay-TV</i>	<i>Skater</i>	<i>Testen</i>
<i>PC</i>	<i>Slang</i>	<i>Tester</i>
<i>Performer</i>	<i>Slip</i>	<i>Thrill</i>
<i>Player</i>	<i>Slogan</i>	<i>Thriller</i>
<i>Plot</i>	<i>Slum</i>	<i>Ticket</i>
<i>Poker</i>	<i>Smog</i>	<i>Touch</i>
<i>Pool</i>	<i>Snowboarder</i>	<i>Trader</i>
<i>Pop</i>	<i>Software</i>	<i>Trainer</i>
<i>Power</i>	<i>Song</i>	<i>Training</i>
<i>Producer</i>	<i>Soul</i>	<i>Trapper</i>
<i>Provider</i>	<i>Sound</i>	<i>Trash</i>
<i>Pullover</i>	<i>Speed</i>	<i>Trend</i>
<i>Punk</i>	<i>Speedster</i>	<i>Trendsetter</i>
<i>Ranger</i>	<i>Spleen</i>	<i>Trip</i>
<i>Rapper</i>	<i>Spoiler</i>	<i>Trucker</i>
<i>Raver</i>	<i>Spot</i>	<i>Underdog</i>
<i>Recorder</i>	<i>Sprint</i>	<i>User</i>
<i>Recycling</i>	<i>Sprinter</i>	<i>VIP</i>
<i>Report</i>	<i>Stalker</i>	<i>Web</i>
<i>Reporter</i>	<i>Star</i>	<i>Weltcup</i>
<i>Revolver</i>	<i>Start</i>	<i>Youngster</i>
<i>Roadster</i>	<i>Starter</i>	

E. Semantic, morphological and phonological rules postulated by Köpcke

(1982:70-104)

Adapted summary of Köpcke's rules, translated into English.

Key to abbreviations

C = consonant

C_0^4 = between 0 and 4 consonants

Nom = noun

Pl = plural

m = masculine

n = neuter

f = feminine

I_1 to I_3 = single initial consonants up to clusters of three

N = nucleus

F_1 to F_4 = single final consonants up to clusters of four

Y = any possible sequence of phonemes after the rule-relevant feature(s)

$V_{+diphth}$ = vowel with diphthong

T = both alveolar stops /t/ and /d/

G = both velar stops /g/ and /k/

(C) = consonant optional

Semantic Rules

Masculine

(1): nouns referring to natural measurements, directions on the compass, winds and types of precipitation

(2): nouns referring to minerals and rocks

(3): nouns referring to people, occupations and social ranks without reference to natural gender

(4): nouns referring to alcoholic drinks

Feminine

(5): nouns referring to (basic) numerals

(6): nouns lexicalised as abbreviations receive the gender assignment of the last noun of their full form

Neuter

(7): nouns referring to types of words, unless clear suffixation assigns another gender

(8): nouns formed from zero derivation

(9): nouns referring to physical and theoretical units (e.g. atom, proton, space, gene)

(10): nouns referring to chemical elements

(11): nouns referring to languages

(12): nouns referring to (musical) keys

Mixed Gender

(13): nouns referring to people receive the respective natural sex of their referents

(14): nouns referring to domesticated and game animals receive the gender of their respective sexes. Nouns that function as superordinates or refer to young animals are neuter.

(15): nouns referring to water surfaces / plains receive masculine or feminine gender

Morphological Rules

- (1): $[[C_0^3 V_{(+umlaut)} C_0^4]_{Nom} er]_{Pl} \rightarrow m/n$
- (2): $[[C_0^3 V_{+umlaut} C_0^4]_{Nom} \partial]_{Pl} \rightarrow m/f$
- (3): $[[C_0^3 V C_0^4]_{Nom} \partial]_{Pl} \rightarrow m/n$
- (4): $[[C_0^3 V C_0^4]_{Nom} (\partial)n]_{Pl} \rightarrow f$
- (5): $[[C_0^3 V C_0^4]_{Nom} s]_{Pl} \rightarrow m/n$

Phonological Rules

Numbers in brackets after rule indicate how many monosyllabic nouns from a total of 1466 follow the rule.

Structure Rules

- (1): $[I_2 I_1 N F_1 F_2] \rightarrow m$ (152)
- (2): $[I_3 I_2 I_1 N Y] \rightarrow m$ (51)
- (3): $[I_2 I_1 V_{+diphth} Y] \rightarrow m/n$ (67)
- (4): $[\emptyset V_{+long} Y] \rightarrow m/n$ (13)
- (5): $[X V_{-long} F_1] \rightarrow m/n$ (311)
- (6): $[X V_{+diphth} F_1] \rightarrow m/n$ (134)

Main Rules

Onset Rules

- (1): $[T /r/ Y] \rightarrow m$ (53)
- (2): $[/kn/ Y] \rightarrow m$ (15)
- (3): $[/š/ C Y] \rightarrow m$ (169)
- (4): $[/d/ Y] \rightarrow m/n$ (35)
- (5): $[/r/ Y] \rightarrow m/n$ (64)
- (6): $[/t/ Y] \rightarrow m/n$ (49)
- (7): $[G /r/ Y] \rightarrow m/n$ (54)

Nucleus Rule

- Nucleus rule (1) $[X V_{+long} Y] \rightarrow m/n$ (369)

Coda Rules

- (1): [X Fricative _{+sibilant} /t/] → m/f (70)
- (2): [X Fricative _{-sibilant} /t/] → f (55)
- (3): [X Nasal (C) (C)] → m (290)
- (4): [X /l/] → m/n (79)
- (5): [X /l/ C] → m (89)
- (6): [X /r/ Stop (C)] → m (65)
- (7): [X C /s/] → m (160)
- (8): [X /ʃ/] → m (56)

Stand-by Rules

- (1) [X V _{+long + high} /r/] → f (25)
- (2) [X V _{-long} Stop C] → m (124)

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