11 German

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11.1 Introduction

Modern German is the supra-regional standard of a connected language area in Central Europe. It has evolved as a written language. The so-called standard pronunciation is and has always been strongly influenced by the written standard. All users of German can understand the standard pronunciation, the vast majority of them can write and read standard orthography, but only a minority uses the standard pronunciation in everyday speech.

The main isoglosses in the German language area run from west to east, dividing it into three main dialect areas called – going from north to south – Low German, Central German and Upper German. The basis for this classification is the extent to which the dialects followed the Old High German Consonant Shift, which led to the separation of Old High German (sixth to eleventh century) from the other Germanic languages. It changed the voiceless stops [p, t, k] depending on the context either to the affricates (p͡f, t͡s, k͡x] or to the fricatives [f, s, ç–x]. The voiced stops [b, d, g] became devoiced to [p, t, k]. According to the traditional theory, the Consonant Shift reached completion in the Upper German dialects, it occurred only partly in the Central German dialects, whereas the Low German dialects in the north did not follow it at all. The modern standard is said to be based mainly on a dialect of East Central German (*Meißner Deutsch*).

German is the official language or one of the official languages in Austria, Germany, Liechtenstein, Luxembourg and Switzerland. In these countries it has approximately 90 million users. Another 2 million live in western European countries (Belgium, Alsace-Lorraine/France, South Tyrol/Italy), and the same number is found in Eastern Europe (Poland, Czech Republic, Slovakia, Hungary, Croatia, Slovenia, Rumania, and in the republics of the former Soviet Union). Outside Europe we have to mention the minorities in the Americas and in Australia, formed by immigrants mainly during the nineteenth and twentieth century, and some remainders from the colonial epoch in Namibia and South Africa.

As a foreign language, German is learned worldwide by an estimated 18 million people, in most cases as second foreign language competing with

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French, Spanish, Russian and Chinese. The biggest groups of learners are found in Russia, France, Japan, South Korea, and in several East European countries. Since the unification of both Germanies the number of people learning the language has been growing steadily.

11.2 Phonology

In what follows we will concentrate on the central phonological system, i.e. on the sound structure of native words. It makes a considerable difference whether one takes into account the whole range of structural phenomena appearing in non-native words. For the sake of clarity, we will restrict ourselves to some indication of how non-native words are related to the central system. Most problems to be discussed have to do with the interaction of phonology in the narrower sense of the term (distinctiveness) and phonetics (variation of sounds). To avoid confusion, we normally use the more neutral phonetic notation ([ ]). Phonological notation (//) is restricted to discussions of allophony.

Vowels
German vowels are divided into two main classes depending on whether they can or cannot occur in stressed syllables. In articulated speech, the latter class comprises only schwa ([ə]). Phonetically schwa is a central mid lax vowel in unstressed syllables. Being restricted to this position, it does not stand in opposition to any other vowel. The vowels which occur in stressed as well as in unstressed syllables exhibit the full range of distinctive features only in stressed syllables. According to their distributional and inherent properties, they again have to be divided into two classes, namely tense vowels and lax vowels.

Tense Vowels
These vowels occur in open syllables as in [fRoː] (*froh*, 'glad'), [ʃuː] (*Schuh*, 'shoe') as well as in syllables with one consonant in the coda (henceforth 'simple coda') as in [ʃRoːt] (*Schrot*, 'grist'), [huːt] (*Hut*, 'hat'). There are only very few simplex words with a tense vowel and a complex coda like, for instance, [moːnt] (*Mond*, 'moon'). If a tense vowel occurs in a stressed syllable, it is phonetically long.

   Table 11.1 presents the system of tense vowels, giving one example for every position of the chart. The system distinguishes two categories of backness and three categories of height. Rounding is only distinctive for front vowels ([i – y], [e – ø]). Back vowels are differentiated by both tongue height and rounding.

   There is a special relation between the rounded back and the rounded front vowels. A rounded front vowel is called the umlaut of its back counterpart. So [y] is the umlaut of [u], and [ø] is the umlaut of [o]. Umlaut has to be

Table 11.1   The system of tense vowels

	Front Unrounded	Rounded	Back
High	i *Vieh* [fiː] 'cattle'	y *früh* [fʀyː] 'early'	u *Schuh* [ʃuː] 'shoe'
Mid	e *Schnee* [ʃneː] 'snow'	ø *Bö* [bøː] 'squall'	o *froh* [fʀoː] 'glad'
Low			ɑ *nah* [nɑː] 'near'

understood as a morphophonemic term. It plays an important role in inflectional morphology (e.g. [floː] 'flea' – [fløːə] 'fleas'; [kuː] 'cow' – [kyːə] 'cows') as well as in derivations ([fʀoː] 'glad' – [fʀøːliç] 'glad'; [natuːʀ] 'nature' – [natyːʀliç] 'natural'). Yet it has to be emphasized that [ø] and [y] also occur independently of their function as umlaut. There are many words like [ʃøːn] (*schön* 'beautiful') or [fʀyː] (*früh* 'early') which are no longer related to units like [ʃoːn] and [fʀuː]. In Old High German, the umlaut vowels always had a morphonological basis. In Modern German this is not the case though the special relationship between such pairs is still reflected in the writing system (‹u – ü›, ‹o – ö›).

Most phonological descriptions of German have one more tense vowel, namely [æ]. This vowel is situated in height between [e] and [ɑ], so it can be integrated into the system by distinguishing four instead of three degrees of height. We do not accept [æ] as a vowel of the phonological system proper, however, because its occurrence in standard pronunciation is highly restricted. It has a functional load in pairs like [seːə – sæːə]; [geːbə – gæːbə]; [neːmə – næːmə], orthographically ‹sehe – sähe›, ‹gebe – gäbe›, ‹nehme – nähme›. The first member of these pairs is a form of the present indicative of the verbs *sehen* 'to see', *geben* 'to give' and *nehmen* 'to take' respectively, the second member is a form of the preterite subjunctive. [æ] is used here to differentiate the forms in question, i.e. it bears morphological information.

Many phonologists suppose that [æ] occurs also as umlaut of [ɑ] in pairs like *Hahn* 'rooster' – *Hähne* 'roosters' or *Gefahr* 'danger' – *gefährlich* 'dangerous'. This supposition seems to be induced by the spellings of these words. It is true that the grapheme ‹ä› has been introduced into the writing system to mark the umlaut, but the difference between [æ] and [e] has never been established. The pronunciation [hæːnə], [gefæːʀliç] is still favoured by normative pronunciation dictionaries. Yet a realistically conducted pair test reveals that even in cases like *Beeren* 'berries' – *Bären* 'bears' or *Ehre* 'honour' – *Ähre* 'ear' the average speaker's pronunciation is [beːʀən; eːʀə]. This point is of some importance since the systems of tense vowels and lax vowels turn out to be parallel only if [æ] is not recognized as an element of the phonological system proper.

Table 11.2 The system of lax vowels

	Front Unrounded	Rounded	Back
High	ɪ *Kind* [kɪnt] 'child'	ʏ *hübsch* [hʏpʃ] 'pretty'	ʊ *Burg* [bʊʀk] 'castle'
Mid	ɛ *Geld* [gɛlt] 'money'	œ *Mönch* [mœnç] 'monk'	ɔ *Gold* [gɔlt] 'gold'
Low		a *Wand* [vant] 'wall'	

Lax Vowels

Lax vowels occur in syllables with simple and complex coda. They never appear in open, stressed syllables. The system of lax vowels is represented in Table 11.2. The only real structural difference with respect to the system of tense vowels is the position of the [a].

It is uncontroversial that the German vowels constitute two systems which are at least approximately parallel. Yet there is an old and ongoing discussion as to whether the two systems have to be distinguished by tenseness or by length. In stressed syllables, a tense vowel is long while a lax vowel is short, so that either pair of features could be taken as distinctive. The long–short distinction permits a direct and natural correlation of syllable weight and vowel length: the long vowel as nucleus combines only with an empty or a short (i.e. simple) coda, while the short vowel can also combine with long (i.e. complex) codas. Nucleus and coda tend to complement each other in length. On the other hand, the long–short distinction can only be made in stressed syllables, while the tense–lax distinction carries over also to unstressed ones. In polysyllabic non-native words in particular we often find short tense besides short lax vowels. For example the first syllables in [modɛʀn] (*modern*), [motiːf] (*Motiv*) have a short tense vowel while in [mɔnaːdə] (*Monade*), [mɔnaʊʀaːl] (*monaural*) they have a short lax vowel. The problem is that in all these cases tenseness is not really distinctive, i.e. we can say, and in fact do sometimes say, [modɛʀn], [motiːf] without changing anything semantically or even producing a really marked pronunciation. We cannot go further into this difficult problem here and have decided to make use of the tense–lax distinction in this chapter.

Schwa

Schwa is the only vowel restricted to unstressed syllables, i.e. schwa never occurs in monosyllabic words. In simplicia, its prototypical occurrence is as nucleus of the last syllable in bisyllabic words, e.g. [ʃuːlə] (*Schule* 'school'), [hamɔʀ] (*Hammer* 'hammer'), [ʃtiːfəl] (*Stiefel* 'boot'), [knoːtən] (*Knoten* 'knot'), [aːtəm] (*Atem* 'breath'). In this type of word, the syllable with schwa never has a complex coda. The coda is either empty or it consists of a single

consonant, which is a nasal or a liquid ([R, l, n, m]). The consonant preceding schwa is in most cases of lower sonority than the one in the coda, therefore these two consonants could never be connected to form a coda by themselves ([mR], [fl], [tn], [tm] in our examples). For this reason, schwa has been understood as epenthetic.

Consonants

There is no position in German words in which every consonant can occur. To reconstruct the system of consonants, we have to consider at least two positions: (1) word-initially before vowel as in [bax] (*Bach* 'brook') and (2) word-internally between lax vowel and schwa as in [tREpə] (*Treppe* 'staircase'). Of the 20 consonants, 17 show up in position (1) and 15 in position (2). The overlap is 12 (see Table 11.3). From data like these, the system of consonants can be reconstructed as in Table 11.4.

Most phonological descriptions of German make use of features referring to places of articulation (bilabial, dental/alveolar, palatal, velar, glottal) instead of those referring to articulators. We do not intend to make this a major issue but would simply like to point out that for all phonological rules it is sufficient to have four instead of the usual five categories and that nearly all theories about 'feature geometry' operate with categories referring to articulators.

Table 11.3   The inventory of consonants

Position 1	Position 2
[puŋkt] *Punkt* 'point'	[lapən] *Lappen* 'rag'
[taːk] *Tag* 'day'	[latə] *Latte* 'lath'
[kint] *Kind* 'child'	[bakə] *Backe* 'cheek'
[ʔuːʀ] *Uhr* 'clock'	——
[bal] *Ball* 'ball'	[ɛbə] *Ebbe* 'ebb'
[dax] *Dach* 'roof'	[vidəʀ] *Widder* 'ram'
[gɪʃt] *Gischt* 'foam'	[ʀɔgən] *Roggen* 'rye'
[fɪʃ] *Fisch* 'fish'	[afə] *Affe* 'monkey'
	[vasəʀ] *Wasser* 'water'
[ʃaːl] *Schal* 'scarf'	[aʃə] *Asche* 'ash'
	[zɪçəl] *Sichel* 'sickle'
[huːt] *Hut* 'hut'	——
[vant] *Wand* 'wall'	——
[zant] *Sand* 'sand'	——
[jɑːkt] *Jagd* 'hunt'	
[man] *Mann* 'man'	[haməʀ] *Hammer* 'hammer'
[naxt] *Nacht* 'night'	[kanə] *Kanne* 'can'
	[luŋə] *Lunge* 'lungs'
[lʊft] *Luft* 'air'	[hœlə] *Hölle* 'hell'
[ʀɪŋ] *Ring* 'ring'	[kʀalə] *Kralle* 'claw'

				Labial	Coronal	Dorsal	Glottal
obstruent	plosive	voiceless		p	t	k	?
		voiced		b	d	g	
	fricative	voiceless		f	s, ʃ	ç, x	h
		voiced		v	z	j	
sonorant		nasal		m	n	ŋ	
		oral			l	ʀ	

Presented as in Table 11.4, the system of consonants appears to be fairly balanced. Most gaps can be directly related to articulatory facts. To separate the voiceless coronal fricatives [s] and [ʃ], we need one more pair of features, for instance the *SPE*-feature [± distributive].

There are, of course, many debatable points concerning the consonant system, only some of which will be raised here.

/ç, x/

The voiceless back (dorsal or palatal) fricative [ç] has a positional variant [x]. [x] occurs after low and back vowels, [ç] after consonants and all other vowels. So we have [kʀax] (*Krach* 'noise'), [buːx] (*Buch* 'book') but [pɛç] (*Pech* 'pitch'), [ʃtɪç] (*Stich* 'sting') and [dɔlç] (*Dolch* 'dagger'). Neither [ç] nor [x] occurs in word-initial position in the native vocabulary. [ç] and [x] can be understood as allophones of each other in the classical sense. There is still a controversy about which of the two is unmarked, whether they really are in complementary distribution, and whether other sounds like [h] or [k] have to be regarded as variants of one or both of them.

Semivowels and Glides

In Standard German we have three closing diphthongs which can best be represented as consisting of a vowel proper followed by a 'non-syllabic vowel': [taɪ̯ç] (*Teich* 'pool'), [baʊ̯x] (*Bauch* 'belly'), [frɔɪ̯nt] (*Freund* 'friend'). Distinguishing vowels as non-syllabic means that they are not part of the nucleus. From a phonotactic point of view the second element of a diphthong is in the position of a consonantal element since it is part of the coda.

A coronal glide appears in non-native words like *Nation*, transcribed as [natsjoːn] according to the IPA. Since the IPA does not distinguish this glide from the respective fricative, it is perhaps more appropriate to use a transcription like [natsi̯on]. A bilabial glide (more or less rounded) appears in non-native words like [leːgwan] (*Leguan*). The same glide probably occurs

in second position in the onset of the syllable like in [kwaːl] (*Qual* 'pain').
Another glide [ɐ̯] can appear as realization of /ʀ/ (see below).

Articulation of /ʀ/
The question of how the ʀ-sounds are best described phonologically is not yet
settled. For a realistic and phonetically sound analysis, we have to distinguish
two sets of contexts. The first set comprises /ʀ/ in the onset and in internuclear
position. Here it can be either a coronal sonorant [r] (rolled or flapped) or an
uvular sonorant [ʀ] (equally rolled or flapped). These variants are supposed
to stand in free variation, so we have [roːt]/[ʀoːt] (*rot* 'red') and [eːrə]/[eːʀə]
(*Ehre* 'honour'). The second set of contexts comprises /ʀ/ in pre-consonantal
and in word-final position following schwa. In pre-consonantal position we
normally have so-called vocalic /ʀ/, which can be represented as [ɐ̯], e.g.
[vɪɐ̯t] (*Wirt* 'host'), [vʊɐ̯f] (*Wurf* 'throw'). In word-final position we also have
[ɐ̯], but here it is vocalic, derived from schwa + [ʀ] as in [ʀuːdəʀ], [ʀuːdɐ]
(*Ruder* 'scull'). Note that word final [ɐ̯] stands in opposition to schwa, so we
have minimal pairs like [faːzə – faːzɐ] (*Phase* 'phase' – *Faser* 'fibre').

Affricates
Sequences of plosives and homorganic fricatives like [t͡s], [p͡f] and sometimes
[t͡ʃ] are analysed as monosegmental by some authors. Besides phonetic
considerations, there are in principle two types of arguments for deciding this
question. First, we can ask whether the affricates behave phonotactically like
one consonant or like two, and second, we can ask whether it is possible to
separate the parts of the affricates by the familiar procedures of segmentation.
Both lines of reasoning lead to different results for each of the clusters in
different positions.

Syllable Structure and Syllabic Structure

Syllable Structure
The syllable in German can be rather complex. If we restrict ourselves to
monosyllabic words without internal morphological boundaries, we find
syllables with three consonants in the onset and up to four consonants in the
coda.

The onset is built up of one, two, or three consonants. Figure 11.1 shows
the combinatorial possibilities of the onset with two consonants (obstruent
plus sonorant).

Two different types can be distinguished for the onset with three
consonants. The first consists of affricate plus sonorant like in [p͡flɪçt] (*pflicht*
'duty') or [t͡svɛk] (*Zweck* 'purpose'). The second type begins with [ʃ] plus
plosive like in [ʃplɪtəʀ] (*Splitter* 'shiver') and [ʃtʀɪç] (*Strich* 'stroke'). The
coda is more complex than the onset and shows some significant structural
differences. As we have already seen, the coda interacts with the nucleus with

Figure 11.1   Onset with two consonants

| 1st position / 2nd position	p	t	k	b	d	g	f	ʃ	v
R	+	+	+	+	+	+	+	+	+
l	+		+	+		+	+	+	
n			+			+		+	
m								+	
w			+					+	

respect to length, whereas the onset does not. The coda with two consonants does not show the combinatorial restrictions of the corresponding onset. Instead, every consonant in the first position of the coda also occurs in its second position. The best-known property of the coda in German is that it can not contain any voiced obstruent. The consequence of this restriction is a considerable amount of allomorphic variation called 'final devoicing' (*Auslautverhärtung*). So we have the form [hʊndə] (*Hunde* 'dogs') besides the form [hʊnt] (*Hund* 'dog'). That final devoicing indeed affects the whole coda and not just its final position can be seen in cases like [zaːgən – zaːkst] (*sagen* 'to say' – *sagst* 'you say').

The overall syllable schema of German can be represented as in Figure 11.2.

Syllabic Structure
The syllabic structure of a phonological word is its segmentation into syllables. The syllabic structure of a phonological word is given with the syllable boundaries contained by it.

In simplex words, syllabification in German conforms to the universally

Figure 11.2   Syllable schema of German
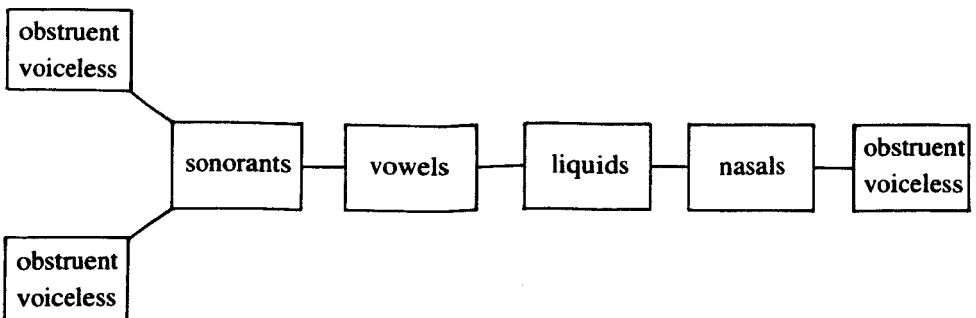
preferred syllable contact law: if there are several internuclear consonants, the one with the lowest sonority is the first element of the second syllable. This rule gives us the correct syllabification for words like [boː.dən], [fal.tə], [kan.tə], [kaʀ.pfən]. This general rule has to be complemented by a language-specific one, which states that a stressed syllable with a lax vowel cannot have an empty coda. From this it follows that the internuclear consonant in words like [halə], [kanə], [mutəʀ], [bagəʀ] belongs to both syllables: [haḷə], [kan̩ə], [mut̩əʀ], bag̩əʀ]. The 'ambisyllabic consonant' after lax vowels is a widespread phenomenon in German.

Word Accent

Word accent in German is mainly determined by the syllabic structure and by the morphological structure of the word. For phonetic reasons we do not operate with more than two levels of accent, which we call 'primary' (´) and 'secondary' (`) accent. Syllables with schwa as nucleus can never be stressed.

Non-derived Words

In non-derived words with more than one syllable the accent is placed on the last syllable which can be stressed, but never on the last syllable of the word. Within a paradigm (set of inflected word forms) the accent never changes its position.

Let us consider some examples. In bisyllabic words like *Régen* 'rain', *Léiter* 'ladder', *Núdel* 'noodle' the first syllable has to be stressed of course. The same holds for inflected forms of monosyllabic base forms like *Kínd* 'child' – *Kínder* 'children' or *stárk* 'strong' – *stárker* 'stronger'. It also follows directly from the rules stated above that in words with bisyllabic base forms like *Héring* 'herring' and *Árbeit* 'work' the first syllable is stressed (though the last does not have schwa as nucleus). Consequently, the tri-syllabic inflected forms of these words have two unstressed syllables (*Héringe, Árbeiten*). In three-syllabic base forms like *Forélle* 'trout' and *Holúnder* 'elder' the penultimate has to be stressed, since the last syllable has schwa as nucleus.

These statements can be generalized in the following way. The over-whelming majority of the word forms belonging to the central (i.e. native) part of the vocabulary have one of two accent patterns, namely $\acute{-}-$ or $\acute{-}--$. The reason is that inflected forms of nouns, adjectives and verbs tend to be bisyllabic or tri-syllabic in such a way that only the first syllable can be stressed (see section 11.3 for further explication). No word form of the central, non-derived part of the vocabulary has a secondary accent.

Derived Words

In the literature on word accent in German we often find a partition of the derivational suffixes as to whether they are stressed or unstressed. Stressed suffixes are mostly non-native, e.g. *-ieren* (*kommandíeren*) or *-ie* (*Infamíe*).

Let us concentrate on the other set of suffixes, whose members are mostly native and generally unstressed.

A word like *fréundlich* 'friendly' has of course the accent on the first syllable, i.e. the suffix *-lich* is unstressed. The stress pattern is ´–. If we go on and build *Fréundlichkeit* (with *-keit* as nominalization suffix), we have two unstressed suffixes, the pattern is ´––. The plural form of this is *Fréundlich-kèiten* with the pattern ´–`–. Here we clearly have a secondary accent on the so-called 'unstressed' suffix *-keit*. Due to limitations of space we cannot elaborate this line of reasoning, so we simply state our thesis: derivational suffixes of the type discussed can be stressed or unstressed, depending on their position in the word. Derived words are completely broken up into stress patterns, one with two steps and the other with three steps. These two patterns are sufficient to handle all suffix-derived words with respect to their primary and secondary accents.

Compound Words

The basic rule for primary accent is that compounds with two constituents have primary stress on the first constituent. So we have *Héringsschwarm* 'shoal of herrings' because we have *Héring*. In compounds with three constituents, we basically have to distinguish two cases. In left-branching structures ((A B) C), the primary accent goes to the left constituent (and within this constituent again to the left subconstituent). So we have ((*Áußenhandels*) *gesellschaft*) 'foreign trade company' with primary accent on the leftmost constituent. In right-branching structures (A (B C)), the primary accent goes to the right constituent. This is due to the so-called Compound Stress Rule which says that a right constituent is 'strong' (i.e. it takes an accent), if it is branching. So we have (*Welt(áußenhandel)*) 'world foreign trade' with primary accent on the left subconstituent of the right part of the compound.

Orthography

The orthography of German can be characterized as highly systematic and as well integrated into the overall system of the language. Its basis is a phonographic correlation which maps the set of phonemes nearly one to one into the set of graphemes and vice versa. Graphemes can be single letters as well as certain sequences of letters like ‹sch› for /ʃ/ and ‹ng› for /ŋ/. Taking the graphemes as starting point, we have to mention a major deviance from the one-to-one mapping only for the vowels. More precisely, there is only one grapheme for every pair consisting of a tense vowel and its lax counterpart, So /a/ and /ɑ/ are both written as ‹a›, /u/ and /ʊ/ are both written as ‹u›, etc. This peculiarity can be explained by the fact that tense vowels and lax vowels differ systematically in distribution. As we have seen in section 11.2, the tenseness of a vowel is in most cases determined by the structure of the syllable in which it occurs. So the ‹a› in *laden* represents a tense vowel since

it stands in an open, stressed syllable, whereas the ‹a› in *Land* represents a lax vowel since it is followed by a complex coda.

Apart from the phonographic component there is a strong syllabic as well as a strong morphological component in the orthography. We will give one example of either of them. Every ambisyllabic consonant is represented in writing by a geminate. So we write *Butter* 'butter' for [bʊʈəR] and *Tasse* 'cup' for [taṣə]. This is to say that every geminate follows a grapheme which is to be read as a lax vowel. As to morphology, the most significant property of German orthography is what has been called the Principle of Greatest Similarity of Morphemes. Whereas in the spoken language there is much allomorphic variation, in written language every morpheme tends to have one and only one form. Take for instance final devoicing. We say [kint] – [kindəR], but we write *Kind – Kinder*. Or take the morphological rule for gemination. If there is a form in the paradigm which causes gemination as in [ʃnɛləR] (*schneller* 'faster'), then all the forms in this paradigm preserve the geminate, no matter whether or not the consonant in question is ambisyllabic. Therefore we write *schnell* with double ‹l›.

11.3   Morphology

There is a rich inflectional system, both for nominals (pronouns, nouns, articles, adjectives) and for verbs. Moreover, the major lexical classes (nouns, verbs, adverbs, adjectives, prepositions) are interconnected by a complex network of word-formation rules. In a normal text, only a small percentage of the word forms can be regarded as strictly morphologically simple.

Nominals

We use the term 'nominal' as comprising those units which are inflected for number and case.

Pronouns

The pronominal inflection belongs to the inflection type called stem inflection. Every form in the paradigm consists of a stem plus a suffix. There are no suffixless forms.

Table 11.5 presents the inflection paradigm for the demonstrative pronoun *dieser* 'this'. Table 11.5a uses the form of presentation which we find in most grammars of German. We see that in the singular there is a differentiation with respect to case and gender. There is no gender in the plural. This holds for all nominals. All suffixes consist of schwa alone or schwa plus [R], [n], [m], [s]. This can also be generalized to all nominals. No other phonetic material is used in declension suffixes than these five elements.

In Table 11.5b the suffixes are arranged in such a way that identical forms are put together as far as possible. This shows that the genitive and the dative are still relatively well distinguished from the nominative, and accusative. The

Table 11.5   Pronominal inflection

		Masculine	Feminine	Neuter	Plural
(a) Standard presentation					
Nom.	dies	-er	-e	-es	-e
Gen.		-es	-er	-es	-er
Dat.		-em	-er	-em	-en
Acc.		-en	-e	-es	-e
(b) Fields of syncretism					
Nom.		-er	-e	-es	-e
Acc.		-en	-e	-es	-e
Dat.		-em	-er	-em	-en
Gen.		-es	-er	-es	-er

latter two cases have identical forms except for the masculine. This differentiation carries over at least in principle to the full noun phrase, consisting for instance of article, adjective and noun. It can be explained by the fact that case in German basically serves to indicate the syntactic function of noun phrases and pronouns. So the indirect object is marked as dative; the direct object as accusative. Since the two objects appear side by side in either of two sequences in sentences with three-place verbs, they have to be different in form. The genitive is the case of the attribute, i.e. the genitive appears with nouns in all cases. This keeps the genitive stable in the system and formally separated from the other cases. Similar arguments can be given for the prepositional phrase. Prepositions govern case (genitive, dative, accusative, but not nominative). Many prepositions govern both the dative as well as the accusative, so these cases have to be formally distinguishable. These remarks can only indicate how the functional load of the case forms has to be understood. It is, of course, a complex and difficult task to explain fully how the system is motivated.

Pronominal inflection is applied to pronouns from different classes as far as they are used in the full range of syntactic functions of nominals. This is the case for most demonstratives (*dieser* 'this', *jener* 'that', *solcher* 'such', and with further specifications *der*); for possessives (*meiner* 'my', *deiner* 'your', *seiner* 'his'); for some indefinites (*einer* 'one', *keiner* 'no', *jeder* 'each', *mancher* 'many (a)', *einiger* 'some', *weniger* 'few', *vieler* 'much') and for the interrogative pronoun *welcher* 'which'.

Many other pronouns are restricted in form and function. There is an interrogative *wer* 'who', which has only masculine and neuter forms in the singular, and there are numerous indefinites which have only one form in the paradigm like *etwas* 'some', *nichts* 'nothing', *mancherlei, allerlei* 'all kinds (of)' *vielerlei* 'many kinds (of)'.

Table 11.6 Personal pronoun

	Nom.	Gen.	Dat.	Acc.
1 sg.	ich	meiner	mir	mich
pl.	wir	unser	uns	uns
2 sg.	du	deiner	dir	dich
pl.	ihr	euer	euch	euch
3 m.	er	seiner	ihm	ihn
f.	sie	ihrer	ihr	sie
n.	es	seiner	ihm	es
pl.	sie	ihrer	ihnen	sie

There is no separate relative pronoun in German. The most commonly used relative pronoun is *der*. It has the same forms in its paradigm as the demonstrative *der*, from which it is derived. *Welcher* can also be used as relative pronoun, but it is stylistically marked. The third and syntactically very restricted relative pronoun is *wer*.

It is of some interest to consider, albeit briefly, the personal pronoun. Though the paradigm (Table 11.6) is highly suppletive, it has some interesting structural characteristics. The fact that the first person and the second person are not differentiated with respect to gender, whereas the third person is, can be explained by the deictic function of the personal pronoun. The differentiation for case is for the third person similar to the one we know from the other pronouns, but it is different for the first and second person. This can be explained by the fact that only the third person has a separate reflexive pronoun (*sich*), whereas the 'normal' pronoun has to be used for reflexivization in the first and second person (see below, section 11.4). All genitives are taken from the possessive pronoun. The genitive of the personal pronoun is excluded from the syntactic function of attribute (which otherwise is the most common function of the genitive). We do not say *das Haus seiner* '*the house of his' but *sein Haus* 'his house' with the possessive article *sein* (see again section 11.4).

Nouns

Like pronouns, nouns are inflected for case and number, but, of course, not for gender. So the status of gender is different for the two categories. For pronouns, gender categories are inflectional categories whereas each noun is classified either as masculine, e.g. *der Baum* 'the tree'; feminine, e.g. *die Bank* 'the bank'; or neuter, e.g. *das Haus* 'the house'.

Nouns are inflected according to several declension types. There is little agreement in grammars as to how these declension types have to be defined. We will first set out our views on the basic declension system for underived nouns, ignoring exceptions and marginal classes. We will

then show how the system works for derived nouns.

Noun inflection is a type of 'base-form inflection' (*Grundformflexion*). The unmarked form (nominative singular) never has an inflectional suffix. All other forms can be marked by a suffix and by an umlaut (which we are not going to discuss here). The best marked forms are the plural and the genitive singular. Therefore, most classifications are based on these two forms. Whenever this is admitted by the phonological context, the dative plural is marked by *n*. The inflection of a noun is in part determined by its gender. Taking this into account, we can establish three main declension types.

Type 1

Type 1 comprises nearly all neuter nouns as well as those masculine nouns which do not belong to Type 2 (see below). Following the traditional terminology (which goes back to Jacob Grimm), we call type 1 nouns 'strong'. A paradigm case is given in Table 11.7. The genitive of strong nouns has -(*e*)*s*. Whether a noun takes -*es* or -*s* is determined exclusively by morphophonemic regularities. So in *Regen* – *Regens* 'rain' and *Schnabel* – *Schnabels* 'bill, beak' we have -*s*, since there is already a syllable with schwa in the stem. No noun with schwa in the last syllable can ever get another such syllable through inflection *Baum* – *Baumes* 'tree', *Hut* – *Hutes* 'hat', *Bein* – *Beines* 'leg' are examples with the 'normal' genitive -*es*. Of course schwa can be omitted here in the spoken language (baʊms, huts, baɪns]). The dative singular of strong nouns is optionally marked by schwa. This suffix is obsolete in the sense that it is scarcely found in the spoken language.

The unmarked form of the plural for Type 1 nouns is *e* (*Baum* – *Bäume*, *Hut* – *Hüte*, *Bein* – *Beine*). This again does not hold for nouns with schwa in the last syllable. These have a plural without suffix (*Schnabel* – *Schnäbel*, *Wagen* – *Wagen* 'carriage', *Eimer* – *Eimer* 'pail'). There are some neuter nouns with *er*-plural (*Kind* – *Kinder*, *Haus* – *Häuser*). This subtype is irregular in the sense of isolated. We do not regard it as part of the central system.

Table 11.7   Paradigms for noun declension

	Strong (Type 1)	sg.	pl.	*Weak* (Type 2)	sg.	pl.	*Feminine* (Type 3)	sg.	pl.
Nom.	Bein 'leg'	——	-e	Mensch 'man'	——	-en	Burg 'castle'	——	-en
Gen.		-es	-e		-en	-en		——	-en
Dat.		-(e)	-en		-(en)	-en		——	-en
Acc.		——	-e		-(en)	-en		——	-en

Type 2

These are nouns with the semantic feature [+animate]. In the present context they are perhaps best characterized in terms of grammatical and natural gender. Grammatically they are masculine. As will also be shown below for derived nouns, the masculine is the unmarked gender with respect to the male–female distinction. In nearly all cases where a noun designates a class of beings whose members can be either male or female (i.e. persons and animals), the noun is masculine. Let us call these nouns generic. Examples are: *Franzose* 'frenchman', *Löwe* 'lion', *Affe* 'monkey', *Mensch* 'man', *Kunde* 'client', *Zeuge* 'witness'. When these nouns belong to inflection Type 2, they are called 'weak'. Weak nouns have -(*e*)*n* in the genitive singular and in the plural. In the dative singular and accusative singular -(*e*)*n* is optional, i.e. archaic like the -*e* in the dative singular of Type 1.
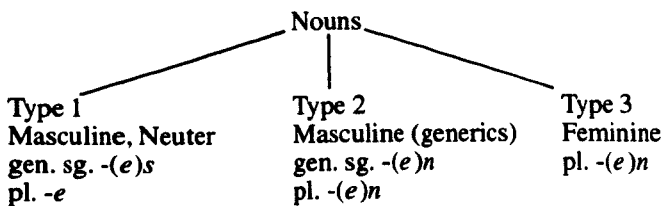
Type 3

The third type comprises the feminine nouns. For this type the plural is always overtly marked, but there are no case endings. Most feminine nouns mark the plural by using -(*e*)*n*, as for *Burg – Burgen* 'castle', *Frau – Frauen* 'woman' and *Quelle – Quellen* 'source'. Only some of them take -*e* (*Stadt – Städte* 'town').

Figure 11.3 gives a summary of the basic declension system of German nouns as it has just been outlined. It should be noted that the morphonological condition 'only one syllable with schwa' always has priority. Many so-called subtypes like the 'zero plural' of strong nouns and the -*n*-plural of weak nouns are a consequence of this condition.

There is one other declension type which should also be mentioned. A growing set of nouns takes -*s* in the genitive singular and in the plural (e.g. *Echo – Echos, Balkon – Balkons*). Until recently this type comprised only proper names and some other marked nouns. It is now very productive because it is in use for large parts of the non-native vocabulary such as trade names, abbreviations and loanwords.

For derived nouns, the grammatical gender as well as the declension type is strictly fixed. Each derivational suffix leads to exactly one gender and one

Figure 11.3 The basic declension of nouns

	Nouns	
Type 1	Type 2	Type 3
Masculine, Neuter	Masculine (generics)	Feminine
gen. sg. -(*e*)*s*	gen. sg. -(*e*)*n*	pl. -(*e*)*n*
pl. -*e*	pl. -(*e*)*n*	

declension type. For the most productive nominal suffixes, we have the following assignments:

Masculine
-ling: de-adjectival personal noun; declension Type 1 e.g. *feige* 'cowardly' – *Feigling* 'coward'
-er: de-verbal agentive noun; declension Type 1 e.g. *schreiben* 'to write' – *Schreiber* 'writer'
There are also several specific suffixes for the derivation of non-native personal nouns like *Katholik, Astronom, Optimist, Demonstrant*. They are all generic and belong to declension Type 2.

Feminine
-in: de-nominal motion suffix; declension Type 3; *Schreiber* (m.) – *Schreiberin* (f.). Nouns with *-in* are marked as [+female], whereas their base nouns are normally generic.
-ung: most productive action noun; declension Type 3; e.g. *brefreien* 'to liberate' – *Befreiung* 'liberation'
-heit and *keit*: de-adjectival state nouns; declension Type 3; e.g. *echt* 'genuine' – *Echtheit* 'genuineness', *sauber* 'clean' – *Sauberkeit* 'cleanness'

Neuter
-nis: de-verbal noun which designates an act or its result; declension Type 1; e.g. *erleben* 'to experience' – *Erlebnis* 'experience'. By changing its meaning from action noun to 'resultative noun', *-nis* has changed the grammatical gender from feminine to neuter. There are still many feminine nouns like *Erlaubnis* 'permission', *Besorgnis* 'apprehension', which take declension Type 3.
-chen: de-nominal diminutive noun; declension Type 1; e.g. *Mann* 'man' – *Männchen* 'little man'

As the examples show, there is a clear tendency for derivational suffixes to select the gender according to their meaning. The feminine is selected if there is no semantic motivation for the masculine or the neuter.

Many of the specific properties of derived nouns are also valid for compound nouns. For instance *Heimatstadt* 'home town' is feminine and takes declension Type 3, since *Stadt* is feminine and takes declension Type 3. Moreover, the paradigmatic compound noun is the so-called *Determinativkompositum* ('determinative compound'), which internally shows an attribute–head-construction with the second constituent as head. So a *Heimatstadt* is a *Stadt* and a *Lehrbuch* 'textbook' is a *Buch*. This structure can be found in all types of compound nouns, no matter whether the first constituent is an adjective (*Kleinkind* 'little child, infant'), a verb (*Gießkanne*

'watering-can'), some kind of particle (*Unterarm* 'forearm'), or another noun. Since the rules for composition can be applied recursively, compound nouns can have a very complex structure. Composition is regarded as the most productive type of word formation in German.

Articles

Like pronouns, articles are inflected not only for case, but also for gender. For the definite articles we have the forms *der* (m.), *die* (f.) and *das* (n.). The gender of the article is governed by the adjacent noun, so we have *der Baum* 'the tree' *die Straße* 'the road' *das Buch* 'the book'.

Most pronouns can be used with nouns in one way or the other, cf. *dieser Baum* 'this tree', *jener Baum* 'that tree', *manche Bäume* 'some trees', *alle Bäume* 'all trees'. It is therefore not clear how to separate pronouns from articles. Traditionally, only two articles are recognized: the definite article *der* and the indefinite article *ein*. All other words in adnominal position are called 'article words', 'determiners' or the like.

Yet a closer look reveals that articles can be separated from pronouns on the basis of their inflectional behaviour.

The definite article is shown in Table 11.8. The differentiation of forms is almost the same as in pronominal inflection (Table 11.5) yet the paradigm of the article *der* is not identical with the paradigm of the demonstrative pronoun *der*. The genitive singular of the pronoun is *dessen* (m.), *deren* (f.), *dessen* (n.); the genitive plural is *deren* and the dative plural is *denen*. These differences in form can be explained by the restriction of the article to adnominal position. What we propose then is to restrict the notion of article in German to those units which only occur in adnominal position. By this criterion we get three more articles. The possessive article *mein* (as opposed to the pronoun *meiner*), the negation article *kein* (pronoun *keiner*) and the indefinite article *ein* (pronoun *einer*). All of these follow

Table 11.8   Inflection of articles

		Masculine	Feminine	Neuter	Plural
Definite article					
Nom.		der	die	das	die
Gen.		des	der	des	der
Dat.		dem	der	dem	den
Acc.		den	die	das	die
Other articles					
Nom.	*kein* 'no'	——	e	——	e
Gen.		es	er	es	er
Dat.		em	er	em	en
Acc.		en	e	——	e

the declension scheme for other articles in Table 11.7, except that *ein* has no plural form.

Adjectives

The inflectional behaviour of adjectives is determined by syntactic factors even more directly than the other nominal categories. In predicative position (*dieses Auto ist billig* 'this car is cheap') the adjective is uninflected: it appears in the so-called 'short form'. In attributive position (*dieses billige Auto* 'this cheap car') the adjective is inflected for gender, number and case according to several inflection types. Most grammars recognize three inflection types (strong, weak, mixed). Apart from morphophonological variation, all adjectives are inflected in the same way. Unlike for nouns and articles, there are no different declension types for adjectives.

The most interesting fact about the inflection of adjectives is its dependence on other elements within the noun phrase. How this works can be shown by considering the syntactic minimum of the prototypical noun phrase into which an adjective can be inserted. Two basic cases have to be distinguished. In the first case, the noun phrase consists of a single noun as frequently occurs with mass nouns e.g. *Suppe schmeckt gut* 'soup tastes good'. A noun of this type does not have any case endings (declension Type 3), and there are, as we have seen, many nouns which do not even have a plural suffix. If we add an attributive adjective as in *heiße Suppe schmeckt gut* 'hot soup tastes good', this adjective appears in the first position of the noun phrase. It occupies the position of the determiner and it has to do the syntactic work of the determiner by marking the noun phrase for case. Consequently, the adjective in this position is inflected according to what we have called the pronominal inflection (Table 11.4). Thus we get in the nominative singular *heißer Tee* (m.), *heiße Suppe* (f.), *heißes Wasser* (n.). The forms of all other cases in the singular and the plural can be constructed from the pronominal paradigm. To avoid terminological confusion, it is perhaps better not to speak of pronominal inflection of the adjective, but to use again the traditional term 'strong inflection'.

In the second case, the minimal noun phrase consists of a determiner and a noun. If the determiner is inflected according to the pronominal inflection, as it is the case of *dieser* or the definite article *der*, then there is little work for the adjective to do. The adjective takes schwa in the nominative singular for all genders and the accusative singular for the feminine and neuter, and *-en* for all other forms. This is the 'weak' inflection of the adjective, e.g. *dieser heiße Tee* 'this hot tea', *diese heiße Suppe* 'this hot soup', *dieses heiße Wasser* 'this hot water' for the nominative singular and *diese heißen Suppen* 'these hot soups' for the nominative plural.

There are three determiners which constitute their own inflection type. The articles *kein, mein* and *ein* do not take a suffix in the nominative singular masculine and neuter, and the accusative singular neuter (see Table 11.8).

Consequently, the adjective takes strong forms in these cases, cf. *kein heißer Tee* (nom. sg. m.), *kein heißes Wasser* (nom./acc. sg. nt.). All other forms of the adjective are, of course, weak. This is called the 'mixed inflection' of the adjective.

As can be seen from our discussion, it is somewhat artificial and clumsy to speak of three inflection types for the attributive adjective. The inflectional behaviour of the attributive adjective is governed by one single principle: the adjective marks the noun phrase for case, number and gender according to the pronominal inflection if no other constituent of the noun phrase does so.

The system of comparatives is highly regular although there are some irregular cases. A regular adjective like *klein* 'small' has the comparative *kleiner* and the superlative *kleinst*. On all three levels the adjective exhibits the usual inflection for gender, number and case.

Verbs

As for many other languages, the term 'verbal paradigm' is not used as a purely morphological term in most German grammars. Instead, the verbal paradigm is analysed as comprising many periphrastic forms such as the forms of the perfect tense or the forms of the passive. Since we are dealing with morphology in this section, we will restrict ourselves to synthetic forms within the paradigm and postpone the treatment of analytic forms.

Regular Main Verbs

The regular verb ('weak verb') has finite forms in the singular and plural of the present tense and the past tense. Table 11.9 shows the conjugation pattern for a verb without any morphonological peculiarities (*legen* 'to lay').

There is a syncretism between the first and third person in the past tense, whereas this syncretism is restricted to the plural in the present. It is very difficult to interpret this syncretism from a functional point of view, and it is even more difficult to really understand why the third-person singular present is marked the way it is. We cannot go into these problems here. What we want to point out is merely that the third-person singular present is the unmarked

Table 11.9 Conjugation of weak verbs, *legen* 'to lay'

	Present	Past
1 sg.	lege	legte
2 sg.	legst	legtest
3 sg.	legt	legte
1 pl.	legen	legten
2 pl.	legt	legtet
3 pl.	legen	legten

form of the verb in the semantic sense (deictic function) as well as in the syntactic sense of the word (agreement with the subject, see below, pp. 377–8). So in German as in many other languages the third-person singular present plays a special role within the verbal paradigm.

The regular verbs are called weak verbs because they 'need' a segmental morpheme for the past tense. Thanks to their ablaut, the strong verbs do not need a segmental morpheme of this kind (see below, pp. 370–1).
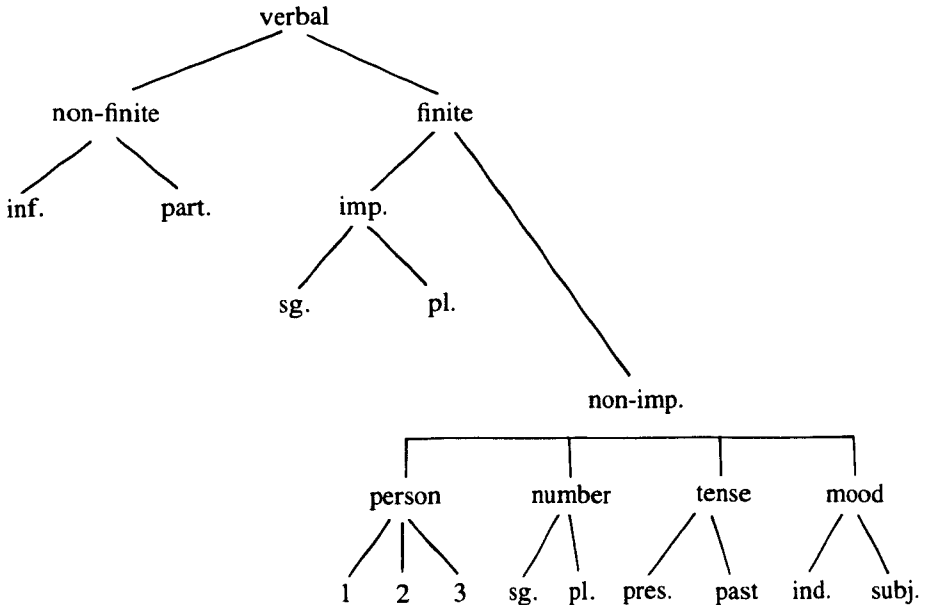
There is a special problem for the weak verbs with respect to mood. The verbal paradigm is normally seen as having subjunctive forms besides indicative forms in the present as well as in the past tense. In the present, the subjunctive looks like the indicative of the past without the -t-, so it has the forms *lege, legest, lege, legen, leget, legen*. This subjunctive is not in all forms separated from the indicative, but it is in the most frequently used forms (by far the highest frequence in use has the third-person singular). In the past, all forms of the subjunctive are identical with the forms of the indicative. Strictly speaking, we do not even know whether there is a past subjunctive for the regular verbs. All we can do is to conclude by analogy from the subjunctive forms of the strong verbs that some forms of the past of weak verbs have to be interpreted as subjunctives. There are also certain periphrastic forms which are often considered to be 'substitutes' for the synthetic subjunctives. Thus most grammarians say that *ich würde legen* 'I would lay' stands for *ich legte* (subj.). The whole question of the functional load of the subjunctive and the place of the forms with *würde* in the verbal paradigm cannot be settled within the traditional structure of the paradigm. Furthermore, in many cases it is difficult to decide whether a form is used for reasons of normative prescription or whether it has in fact to be considered as standard.

As can be expected, the imperative is marked with respect to number. In the singular we have the stem without suffix or stem plus optional schwa (*leg* or *lege*). In the plural the imperative has the form of the second-person plural (*legt*).

There are two synthetic non-finite verb forms in the paradigm, the infinitive (*legen*) and the participle (*gelegt*). For morphologically simple verbs, the participle consists of *ge*+stem+*t*, in other words, *ge*+past stem. For verbs with prefix, the participle does not take *ge*-, for instance *verlegen* 'to misplace' – *verlegt, zerlegen* 'to take apart' – *zerlegt*. If the prefix is separable (as is the case for most prepositional prefixes), then *ge*- is placed in front of the root. So we have *ablegen* 'to lay down' – *ich lege ab* – *abgelegt, vorlegen* – *ich lege vor* – *vorgelegt*. It is sometimes said that there is a third simple non-finite verb form *legend* which is called participle I or present participle. This form exists for all verbs, but it never occurs in periphrastic verb forms. Its normal (though not exclusive) use is that of an adjective. It is therefore questionable whether it should be considered as a form within the verbal paradigm.

Figure 11.4 gives an overview on the paradigm of the verb as it has just been outlined. The non-imperative forms are put under a scheme of

Figure 11.4 Structure of the inflectional paradigm of the verb

```
                        verbal
              ┌───────────┴───────────┐
          non-finite                finite
          ┌───┴───┐              ┌─────┴──────────┐
        inf.    part.          imp.               \
                              ┌──┴──┐               \
                            sg.    pl.               \
                                                   non-imp.
                              ┌────────┬────────┬────────┐
                           person   number    tense    mood
                           ┌─┼─┐    ┌─┴┐     ┌──┴─┐   ┌─┴──┐
                           1 2 3   sg. pl.  pres. past ind. subj.
```

simultaneous categorizations, i.e. every form is classified by exactly one category from every categorization. So *lege* in *ich lege* is classified as first-person singular present indicative. The scheme of Table 11.10 is valid for all verbs, no matter whether they are main verbs, auxiliaries, or modals.

Irregular Main Verbs

Present day German has about 170 irregular main verbs ('strong verbs'). This class is decreasing in number, but it still comprises many verbs of the basic vocabulary. The most characteristic property of strong verbs is ablaut. If we take the infinitive, the first-person singular past, and the participle as stem forms, we get vowel gradations like *finden – fand – gefunden* [i – a – ʊ] 'to find', *schreiben – schrieb – geschrieben* [aɪ, iː, iː] 'to write', *streiten – stritt – gestritten* [aɪ, ɪ, ɪ] 'to fight'. There are more than 30 different sequences of ablaut, which have to be learned word by word. The most frequent of these sequences are the ones just mentioned. Each of them is selected by about 20 verbs.

The inflectional behaviour of strong verbs is presented in Table 11.10. As can be seen, the structure of the paradigm is the same as for weak verbs.

Both classes have the same suffixes in the present and identical syncretisms in the past. The participle of strong verbs takes the form *ge*+stem+*en* (*gefunden*), and *ge-* behaves as with weak verbs. There is, furthermore, no difference in the forms of the subjunctive present, see e.g. *schreibe –*

Table 11.10 Conjugation of strong verbs, *schreiben* 'to write'

	Present	Past
1 sg.	schreibe	schrieb
2 sg.	schreibst	schriebst
3 sg.	schreibt	schrieb
1 pl.	schreiben	schrieben
2 pl.	schreibt	schriebt
3 pl.	schreiben	schrieben

schreibest – schreibe – schreiben – schreibet – schreiben, but there is a difference in the past. Here the subjunctive is formed by the past stem and the suffixes of the subjunctive present: *schriebe, schriebest, schriebe, schrieben, schriebet, schrieben*. Except for *schrieben*, these forms are different from the relevant forms in the indicative.

As a prototype, strong verbs take the umlaut for the second- and third-person singular present indicative (*fahren – du fährst – er fährt* 'to drive'), and they take the umlaut for all forms of the subjunctive past (*ich fuhr – ich führe*).

Since many verbs are becoming more and more regular, we find pairs of forms like *buk – backte* (from *backen* 'to bake'), *gor – gärte* (from *gären* 'to ferment'), *scholl – schallte* (from *schallen* 'to sound'). In some cases this doubling leads to semantic differentiation. So we have *hängen – hing* 'to hang' as intransitive and *hängen – hängte* as transitive verb.

Auxiliary and Modal Verbs

If we consider auxiliaries to be those verbs which occur as constituents of periphrastic verb forms together with a non-finite form of a main verb, we have three auxiliaries in German: *sein* 'to be', *haben* 'to have', *werden* 'to be, to will, to become'. As will be shown below (pp. 378–80) there are some additional verbs which tend to be used as auxiliaries in some constructions.

With respect to their inflectional behaviour, auxiliaries are irregular to a different degree. The most irregular auxiliary is *sein*. *Sein* has no regular stem morpheme. For some forms it is difficult to separate a stem and a suffix, and some of its forms even have to be considered as suppletive (see Table 11.11).

If we look at the paradigm as a whole it appears to be pretty much regular in the sense that it has the same syncretisms as the regular verbs. The subjunctive is completely regular for both tenses. In the present it is derived from the infinitive (*ich sei, du seist*, etc.) and in the past it is derived in the usual way from the past stem with umlaut (*ich wäre, du wärest*, etc.).

Most grammars list six modal verbs: *wollen* 'will', *dürfen* 'may', *können* 'can', *müssen* 'must', *mögen* 'like', *sollen* 'shall'. There are additional

Table 11.11   Paradigm of *sein*

	Present	Past
1 sg.	bin	war
2 sg.	bist	warst
3 sg.	ist	war
1 pl.	sind	waren
2 pl.	seid	wart
3 pl.	sind	waren

candidates for such an analysis, such as *möchten* 'want', *brauchen* 'need', *lassen* 'let', *werden* 'become', which pose different problems and would have to be discussed in detail. For *werden* there is an intensive discussion of whether it is to be considered as a modal, as auxiliary or both. As in other Germanic languages, modals in German take the inflectional endings of the preterite for the present tense.

11.4   Syntax

The Noun Phrase
The basic structure of the noun phrase is given in Figure 11.5. The head noun *Kind* is preceded by a determiner and an adjectival attribute. All other types of attributes are found in postnominal position. Their relative order is fixed. In the position adjacent to the head noun we first have the genitive construction, then the prepositional phrase and after that the relative clause. With respect to the main constituents of the sentence German has relatively free word order. This does not hold for the noun phrase. Here the order of the elements is fixed.

Figure 11.5 is not meant to make any claim about the syntactic hierarchy of the noun phrase. For a description of its basic typological and language-specific characteristics, we only have to know which elements can occur in which order.

The sequence of all specifiers in a wide sense of the word (i.e. determiners and attributes) is determined by the universal principle of Heaviness Hierarchy which is known in traditional German grammar as *Gesetz der wachsenden Glieder* ('law of growing elements'). The heavier (i.e. longer and internally more complex) the prototype of a syntactic class, the later it appears in the sequence of elements. In German, the noun phrase conforms strictly to this principle. The principle may be motivated by such needs of the language-processing apparatus as relief of short-term memory. If this is so, one is tempted to establish a relation to another characteristic property of the noun

Figure 11.5 Basic structure of the noun phrase

det.	adj.	N			
Ein	kluges	Kind	reicher Eltern	mit blauen Augen,	das viel weint
a	bright	child	of rich parents	with blue eyes	who often cries
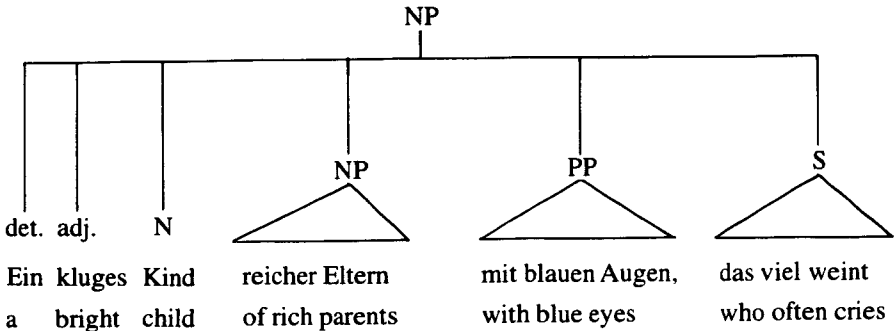
phrase. Its left part including the positions of the determiner, the adjective and the head noun, forms a block whose parts are highly interconnected by syntagmatic relations. The head noun governs the gender of the determiner and the adjective and agrees with both in number and case. Therefore many grammars speak of this part of the noun phrase as being bracketed by the determiner and the head noun (*Nominalklammer*).

It is much more difficult to interpret the position of the head noun typologically. According to one theory, the positions of the head in different categories are interrelated by a preference principle of Cross-category Harmony, and the reference point for the application of this principle is given by the position of the verb in the sentence. In the main clause the order is SVO, which seems to indicate that there is indeed a topological parallelism between the sentence and the noun phrase. But there are also good reasons to question this thesis. German is generally considered to be SOV, or at least, tending towards SOV. However, no such tendency is found in the noun phrase. And even if it is accepted that SVO is basic, then the intended parallel is not unconditionally clear. Is the determiner to be counted as a separate position or not? Is SVO to be understood as verb second or as verb central? We will come back to this later.

Let us now have a closer look at the relation between the different types of attributes and the head noun. The simple adjectival attribute can be replaced by complex constructions of different kinds. One possibility is syndetic and asyndetic coordination which would have the bracketing as in [*das [große gelbe] Haus*] 'the big yellow house'. On the other hand there are phrases which clearly seem to be right-branching, as, for example, *das [neue [technische Konzept]]* 'the new technical conception'. Here the adjectives are not interchangeable. Both constructions can be further extended and are recursive in this sense.

Another expansion of the simple adjectival attribute is the attachment of a complement. In predicative position, adjectives can be subclassified like

verbs with respect to the complements they take (subjects and objects in a broad sense, see below). So we have *dieser Wein ist alten Menschen bekömmlich*, 'this wine is wholesome for old people' with a dative as complement of *bekömmlich*. This dative can also appear in attributive use, cf. *dieser alten Menschen bekömmliche Wein*. In fact all nominal and prepositional complements of an adjective apart from its subject can be used this way. This leads to constructions of considerable complexity, especially for participles, since there can be several complements. So from a sentence like *das Auto wurde meiner Frau von einem Engländer angeboten* 'the car was offered to my wife by an Englishman' we can derive *das meiner Frau von einem Engländer angebotene Auto*. Such structures are scarcely found in spoken language.

The attribute immediately following the head noun is the genitive construction. Except for the so-called Saxon genitive, which strongly resembles the relevant construction in English (e.g. *Chomskys Meinung* 'Chomsky's opinion'), the genitive is always restricted to this position and it always modifies the noun preceding it. In consequence, the head noun can have one and only one genitive following it as attribute. Since the construction is right-branching with a clear hierarchical order, there can be chains of genitives of considerable length which do not cause any difficulties for the syntactic processor (*der Hund des Bruders der Freundin des Bürgermeisters* 'the dog of the brother of the friend of the mayor').

For large classes of de-verbal nouns, the genitive has to be interpreted as one of the verb's thematic roles: an Agent noun derived from a transitive verb like *Lehrer* 'teacher' takes an *genitivus obiectivus*, i.e. the genitive is interpreted as the direct object of the verb whenever this is semantically possible. *Der Lehrer Meiner Kinder* is to be read like *lehrt meine Kinder* 'teaches my children'. A noun like *Schlaf* 'sleep' derived from the intransitive verb *schlafen* by contrast takes a *genitivus subiectivus*. *Der Schlaf meiner Kinder* has an interpretation parallel to *Meine Kinder schlafen*.

The prepositional attribute has much in common with the genitive. It is a right-branching, endocentric construction. (There are very few occurrences in prenominal position in the spoken language). Like the genitive, the prepositional attribute of de-verbal nouns has to be regularly interpreted as the prepositional object of the base verb, if it has the relevant form (e.g. *der Gedanke an Paul < denken an Paul* 'think of Paul'). The prepositional attribute is different from the genitive and does not have to be attached directly to the head. This has two consequences. First, a head noun can have more than one prepositional attribute, no matter whether there is a genitive or not. Second, if a prepositional attribute follows a genitive or another prepositional attribute, it normally can be related to several nouns as its head. So *mit blauen Augen* can be attributed to *Eltern* as well as to *Kind* in Figure 11.5. This construction is the source of a considerable amount of syntactic ambiguity.

So far, we have discussed some characteristics of those positions within the noun phrase which are normally called attributive. In a structure like that in Figure 11.5 all attributes are optional, that is they do not belong to the syntactic minimum of the noun phrase. The syntactic minimum comprises in most cases only the head noun and an element in the leftmost position, which we have called the position of the determiner. Yet these so-called determiners in no way constitute a homogeneous class, either from a syntactic or from a semantic point of view. Semantically, the main distinction is that between determination and quantification. Whereas determination relates to the definite–indefinite distinction, quantification is concerned with the specification of absolute or relative quantities of something specified in the rest of the noun phrase. In German, the main syntactic difference between determiners in the narrow sense and quantifiers is often seen in the greater mobility of the quantifiers. Thus we have *die drei großen Häuser* 'the three big houses' as well as *drei große Häuser*. And *all die großen Häuser* is possible besides *die großen Häuser alle*.

An important aspect of the mobility of quantifiers is known as quantifier floating: *Wasser habe ich keins bekommen* 'I did not get any water'. Since this construction is not restricted to quantifiers but also occurs with adjectives, it has been proposed to use the less-specific term *Distanzstellung* ('distance position'). To handle these cases, one could either think of a floating operation which moves the quantifier out of the noun phrase, or of a movement of the noun phrase (topicalization) which leaves the quantifier behind. Both suggestions are faced with the problem that the quantifier in distance position is a pronoun, i.e. it generally cannot be integrated into the noun phrase, cf. **keins Wasser, *die alle Häuser*.

Judged by their inflectional properties, quantifiers behave in part like adjectives and in part like pronouns. It is a question of principle whether one tries to establish a syntactic class of quantifiers or tries to understand the behaviour of these elements on the basis of established categories. The problem arises in this specific form because German still has a rich inflectional morphology. As we have seen, this morphology fulfils in part purely semantic functions; on the other hand, it is in part clearly motivated syntactically. If there is a syntactic motivation, it seems to be natural to establish syntactic classes on the basis of the inflectional behaviour of the elements at least to the extent that there is morphological encoding of syntactic functions.

We can find other interesting problems of this kind in the syntax of the noun phrase. So it seems to be unproblematic to distinguish a head noun from an adjectival attribute. But consider expressions like *Beratungsstelle für Abhängige* 'welfare centre for addicts', *die Integration Abhängiger* 'the integration of addicts', *ein Abhängiger berichtet* 'an addict reports', *alle anwesenden Abhängigen erzählten* 'all addicts present reported', *der Abhängige sucht Hilfe* 'the addict looks for help', *die Probleme eines Abhängigen*

'the problems of an addict' (examples due to Sue Olsen). Most grammars consider *Abhängiger* 'addict' as a nominalized adjective with the function of a head noun in all these expressions. Yet *Abhängiger* is inflected like an adjective here. It takes exactly the form of weak vs strong inflection which can be predicted by the context. Moreover, nouns of this type are inflected for gender. We have *der Alte* 'the old', *die Alte, das Alte*, and it is not possible to consider these expressions as elliptical.

Let us take up once more the difference in status between the syntactic features of case, on the one hand, and of gender and number on the other. The difference mentioned is not only relevant for the noun phrase itself, but also for its role as antecedent for anaphora and pronouns.

If an anaphoric pronoun is related to a noun phrase, both then normally agree in gender and number. If the pronoun is related to a sentence, it takes the form of the neuter singular: *Paul schläft. Das freut mich* 'Paul is sleeping. That makes me happy'. An anaphoric pronoun cannot be bound within its clause. In *Paul$_i$ sieht ihn$_j$, weil er$_{i,j}$ einen grauen Mantel trägt* 'Paul sees him because he is wearing a grey coat' *ihn* cannot be co-referential with the subject *Paul*, whereas *er* can be co-referential with either *Paul* or with *ihn*. Since the features of gender and number have to be seen as indicators of the meaning of a pronoun, these features are not strictly bound by anaphoric relations. We can have *Das Mädchen* (n.) *lachte. Sie* (f.) *schloß die Tür* 'The girl laughed. She closed the door'; or *Das Paar* (sg.) *fuhr ab. Sie* (pl.) *wollten nach Spanien* 'The couple left. They wanted to go to Spain'.

There is a rather strict functional and distributional separation between pronouns and anaphors (reflexives and reciprocals). German has the reflexive pronoun *sich* which occurs obligatorily with some 'reflexive' verbs like *sich schämen* 'to feel ashamed' or *sich freuen* 'to be glad'. These cases are not of interest here. In its genuinely reflexive use, *sich* stands in the position of a dative or an accusative. It then has the function of an indirect object, e.g. *Paula hilft sich* 'Paula helps herself'; of a direct object, e.g. *Paula wäscht sich* 'Paula washes (herself)'; or as part of a prepositional object e.g. *Paula denkt an sich* 'Paula takes good care of herself'. In each of these cases, *sich* refers back to the subject. Even though there are still some verbs with object in the genitive, this genitive can never be replaced by *sich*. Therefore in *Er gedenkt seiner* 'He thinks of him(self)', the genitive *seiner* is ambiguous. It can refer back to the subject, but this is not the only possible reading.

In three-place verbs, *sich* can refer back from the indirect object to the direct object, e.g. *Paula überläßt ihn sich* 'Paula leaves him to himself'; and even the other way round, e.g. *Paula empfiehlt ihm sich* 'Paula recommends him to himself'. Similar cases exist with prepositional objects. This use of *sich* is restricted in various respects, which we cannot discuss here.

The domain of reflexivization is the clause. The reflexive pronoun can only be bound by *Hans* in: *Paul glaubt, daß Hans sich verbessert* 'Paul believes that Hans will improve'; and by *Paul* in: *Paul glaubt, daß er sich verbessert.*

As is shown by *Paul glaubt, sich zu verbessern*, the reflexive can be bound from outside in an infinitival complement. This holds at least for those causes in which the infinitive is controlled in a clear-cut way.

The Verb Phrase and the Structure of Simple Sentences

The term 'verb phrase' is understood in a similar way as the term noun phrase as above. In this sense the verb phrase is the phrase with a verbal head. Its syntax is primarily concerned with the behaviour of the verbal complements.

The verb takes as complement different kinds of objects and possibly some types of adverbials. For reasons of space we will not consider any adverbials. The main types of objects in German are the accusative (direct object), the dative (indirect object), and the prepositional object. Although some verbs still take the genitive, this will not be discussed here.

The first question is whether the subject has to be counted as complement. If so, there will be at least some types of verb phrases which are sentences. There are many subject–object assymmetries in German. But it is questionable whether they 'prove' that the sentence has to be broken down into the main constituents of subject and verb phrase, the latter consisting of the predicate and the objects. There are clear syntactic differences between the different types of objects and there are also important similarities, between, for example, the direct object and the subject. Apart from this, there is the strong syntactic relation of agreement between the subject and the predicate which is often assumed to show that subject and predicate are bound together syntactically more tightly than the objects and the predicate. So, how this question is answered depends to a great extent on ideological commitments. Both positions are widespread in German grammaticography.

In what follows, we will concentrate on the strict subcategorization of the verb with respect to the subject and the direct object. This gives us the basic forms of sentences with two-place transitive verbs. In doing so, we presuppose that the verb is also subcategorized for the subject. Indeed, I would like to make this claim, though I do not deny that there are strong arguments for the 'existence' of a verb phrase (verb plus objects) in German.

The position of the direct object can be occupied by expressions of very different form. In addition to the accusative we find several types of sentential and infinitival complements. The main types of sentential complements are subordinate clauses with *daß* 'that', *ob* 'whether', or interrogative pronouns like *wer* 'who', *wie* 'how', *wann* 'when' as complementizers. The complementizers can be classified as we have listed them. *Daß* constitutes one class, *ob* another one, and the so-called *wh*-words a third one. The reason for classifying them this way is that they combine with different verbs. There are many transitive verbs which do not take any sentential complement in object position. Those which do are subcategorized into four classes. The first class takes only *daß*, e.g. *Paul behauptet, daß Helga schläft* 'Paul claims that Helga is sleeping'. The second takes *daß* and *wh*, e.g. *Paul bedauert, daß/wie Helga*

schläft 'Paul is sorry...'. The third takes *ob* and *wh*, e.g. *Paul überlegt, ob/wie Helga schläft* 'Paul reflects ...'. The fourth takes *daß, ob,* and *wh*, e.g. *Paul vergißt, daß/ob/wie Helga schläft* 'Paul forgets...'. Each of these classes comprises a great number of verbs. The classes also constitute relevant categories in so far as each class has its semantic characteristics. The *ob/wh*-class consists of a certain kind of question verbs, *daß/wh* and *daß/ob/wh* consists of factive verbs, whereas the *daß*-verbs are never factive.

There is another set of complements which could be called 'secondary'. They can be seen as closely related to the *daß*-complements. Most of them contribute to a further subclassification of the *daß*-verbs.

Similar to English, most *daß*-complements can be replaced by infinitivals. The infinitival complement with *zu* as in *Paul behauptet, Helga zu kennen* 'Paul claims to know Helga' has the same meaning as the *daß*-complement with a suitable subject. We do not want to go very far into the problems of the control relation, but we would like to mention two small classes of verbs which may be of interest here. The first consists of 'intentional verbs'. They take an infinitival complement but no *daß*-complement, e.g. *versuchen* 'to try', *zögern* 'to hesitate', *sich weigern* 'to refuse', *wagen* 'to dare', and a few others. The second class consists of verbs which do take *daß*-complements but do not permit infinitivals with *zu*. Instead they take the *accusativus cum infinitivo* (ACI, 'subject-to-object raising', 'exceptional case marking'). Semantically, this class is restricted to perceptual verbs like *sehen* 'to see', *hören* 'to hear', *fühlen* 'to feel', *riechen* 'to smell' in their basic meaning, as in *ich höre dich kommen* 'I hear that you are coming'.

The last type of complement to be mentioned is the one exemplified in *Ich höre, du seist gekommen*. Here *hören* is to be analysed as a cognitive verb. The complement is a sentence without complementizer. Contrary to the 'normal' subordinate clause, the finite verb is not found in final but in second position here. Moreover, it has to be a form of the subjunctive. This type of complement occurs with cognitive verbs and with *verba dicendi* as one form of reported speech.

Even our very rudimentary presentation of the facts with respect to the complements in object position shows that there is an unidirectional syntagmatic relation here. It is the verb which governs the object with respect to its form. For the subject this is different as far as agreement is concerned. If the subject is a personal pronoun, the verb agrees in number and person (*ich bleibe* 'I stay' – *du bleibst* 'you stay' – *wir bleiben* 'we stay'). If the subject is a noun phrase, the verb agrees in number and takes the form of the third person (*das Kind lacht* 'the child laughs' – *die Kinder lachen* 'the children laugh'). If the subject is a sentence or an infinitival clause, then the verb takes the form of the third-person singular: *daß du schläfst, ärgert Paul* 'that you are sleeping makes Paul angry'. There is no 'agreement' in this case but a relation of government. It is the subject which determines the form of the verb.

On the other hand, the subject position may be occupied by the same types of sentential complements as the direct object. There is, for instance, the large class of psychological verbs, whose prototype takes an animate dative (*das gefällt ihm* 'he is pleased with it') or an animate accusative (*das ärgert ihn* 'this makes him angry'). Most of these verbs can take sentential subjects. Moreover, they have to be subcategorized in a similar way to that of the direct object. So *vorschweben* 'to have something in mind/to think of' is a *daß*-verb, *erstaunen* 'to astonish' is a *daß/wh*-verb, and *interessieren* 'to interest' is a *daß/ob/w*-verb: *mir schwebt vor, daß du uns besuchst* 'I am thinking of your visit'/'I desire ...' *mich erstaunt, daß/wie du uns besuchst* 'I am astonished about your visit', *mich interessiert, daß/ob/wie du uns besuchst* 'I am interested in your visit'.

Much more could be said about the variety of expressions in subject position, for example, about the distribution of infinitival complements and their control relation. In all of this, the subject is not that different from the direct object, whereas both differ fundamentally from the indirect object. We do not find any sentential complement in this position.

Grammatical Relations and Diathesis

In the core grammar there are two main types of passive which can be called the *werden*-passive and the *bekommen*-passive. Both passives are very much alike in structure. The *werden*-passive (*Hans liest den Brief – der Brief wird von Hans gelesen* 'Hans reads the letter' – 'The letter is read by Hans') changes the direct object (*den Brief*) into the subject of the passive sentence (*der Brief*). We call this 'object conversion'. The subject of the active sentence (*Hans*) is changed into the *von*-phrase ('subject conversion'). For the paradigm of this passive the auxiliary is *werden*. The passive with *werden* manifests the highest degree of grammaticalization and is therefore considered to be 'the' passive of German.

The *bekommen*-passive (*Hans hilft dem Kind – das Kind bekommt von Hans geholfen* 'Hans helps the child ...') changes an indirect object (*dem Kind* (dat.)) into the subject of the passive sentence (*das Kind*). The subject is treated as in the *werden*-passive. The auxiliary *bekommen* (or *erhalten* in written language, *kriegen* in spoken language) is still on its way towards becoming established in this function besides its function as main verb. The main verb *bekommen* 'to receive, to get' takes an accusative (*Hans bekommt einen Brief* 'Hans gets a letter'). It is used frequently, but it is not a typical transitive verb because it does not take a *werden*-passive.

In order to describe the systematicity of the diatheses mentioned, it is best to characterize the conversion of the nominative, accusative and dative separately and then to have a look at their interaction. In doing so we will also accomplish a fairly general explication of what can be said to be a subject, a direct object, and an indirect object in German.

The conversion of the subject is highly grammaticalized, especially for the

werden-passive. If the *werden*-passive is possible for a verb, then it goes with the conversion of the subject, i.e. only subject conversion is necessary for the *werden*-passive. The subject is regularly converted into a *von*-phrase. The prepositional phrase is optional for the *werden*-passive as for the *bekommen*-passive.

There seems to be no syntactic restriction for subject conversion in the *werden*-passive, but there seems to be a heavy semantic restriction. The subject can be converted, if it has the thematic role of Agent. Correlation between syntax and semantics is strict here, even for weak cases. Thus *ärgen* 'to annoy' takes *werden*-passive whereas *freuen* 'to be glad to' does not. We have *das ärgert/freut mich* and *er ärgert mich*, but we do not have **er freut mich*. As a consequence, every passive sentence of this type may appear with or without an Agent.

Subject conversion occurs with all kinds of verbs, no matter what number and what kind of objects they take. In particular, it occurs with verbs which do not take a direct object and therefore no subject in the *werden*-passive. An active sentence like *die Kinder tanzen heute* 'the children dance today' yields *von den Kindern wird heute getanzt* (lit.) 'by the children is today danced' which is called the 'impersonal' (i.e. subjectless) passive. Of course the impersonal passive does not need an Agent, so we get *heute wird getanzt* (lit. 'today is danced'). On the other hand it can have a formal subject *es* (impersonal *es*) like *es wird heute getanzt* (lit. 'it is today danced'). Yet this is not possible in subordinate clauses, which have to be subjectless for non-accusative verbs (*daß* (**es*) *heute getanzt wird*) and which can be reduced to the absolute minimum of the verbal form itself (*daß getanzt wird*). All these reductions are quite normal for the *werden*-passive. They manifest the high degree of grammaticalization acquired by this construction.

For the subject there is an area of strict correspondence between syntax and semantics. Only if the subject is marked for agentivity it can be converted into a prepositional phrase. But as a grammatical function subject is grammaticalized far beyond this area. The logical reason for this might be seen in the fact that the subject is the goal of the conversion of other functional categories like the direct and the indirect object. In other words, the grammatical subject must be capable of bearing the semantic roles which are typical for the direct and the indirect object. Naturally, if this analysis is correct, it has some consequences for how the other grammatical functions are to be understood. The most striking difference between the subject and the direct object would be that 'subject' is a grammatical function in its own right, whereas 'direct object' is not.

An accusative complement (active) can be converted into a nominative one (passive) only if the nominative (active) is convertible into a *von*-phrase (passive). It would be in accordance with traditional terminology to restrict the term 'direct object' to those accusatives which can be converted into a subject. Traditional grammar uses the notion 'transitive' verb exactly in this

sense: a transitive verb in German takes an accusative complement and has the *werden*-passive.

Seen from this point of view, the direct object becomes dependent on the semantics of the subject. The subject is convertible only if it is agentive, and consequently the accusative is convertible only if the subject is agentive. This might have the consequence that there is no uniform semantic correlate to the semantic function of direct object. Semantically, a direct object might be everything that goes with an agentive subject. Here we have a possible explanation for the peculiar difficulties in finding a notional characterization for the semantic role of the direct object. The traditional term 'Patient' is beside the point, and the term 'objective' of Case Grammar is as unspecific as the term 'Theme' used by generative grammarians.

What we propose, then, is to understand the notion of direct object, at least for German, in such a way that it is restricted by the semantic role of the subject. Since this semantic role has a syntactic correlate, 'direct object' remains of course a purely syntactic notion. Within its semantically restricted domain the direct object is highly grammaticalized. As has been mentioned, it can only have certain syntactic forms. Its defining syntactic property is its convertibility into a subject.

The status of the indirect object is again different. First, the notion 'indirect object' cannot be restricted to those datives which are convertible to the subject of the *bekommen*-passive. There are many verbs which clearly subcategorize for the dative but which do not allow the *bekommen*-passive, e.g. *widerstreben* 'to be reluctant to', *unterstehen* 'to be subordinate to', *angehören* 'to belong to', *entfliehen* 'to escape'. All grammars of German agree that it is very difficult to define the notion 'indirect object' syntactically. The reason is that one does not find a set of syntactic properties which define a homogenous class of datives. Due to the notorious problem of the so-called free datives, it is not possible to base 'indirect object' on the dative alone. There are dozens of verbs which accept a dative but which cannot be said to syntactically subcategorize for it e.g. *er kocht ihr Tee* 'he is preparing tea for her'; *das klingt ihr unwahrscheinlich* 'this sounds unlikely to her'. Furthermore, in some areas the dative is in keen competition with analytic constructions. Many verbs combine both with the dative and with a prepositional phrase: *ich schreibe ihm – ich schreibe an ihn* 'I write to him'. Overall, the dative as the case of a verbal complement is less grammaticalized than the accusative. In stating this, we confirm, in part, the hierarchy of syntactic relations known as NP Accessibility Hierarchy 'subject–direct object–indirect object–prepositional object'.

As a complement the dative is however clearly more specific than the accusative if one looks at its meaning. Most datives are animate. In the grammars they are characterized semantically with different terms like 'Recipient', 'Affected', 'Benefactive' or simply as 'Semi-agentive'. So, with respect to animacy, the indirect object clearly has to be put between the

subject and the direct object. The animacy hierarchy is valid for German complements in the form subject–indirect object–direct object–prepositional object. It plays an important role in different parts of the grammar, e.g. for word order (see below pp. 381–4).

What has been said about the indirect object in general seems to be an *a fortiori* for dative conversion. Dative conversion occurs only if the dative is a Recipient. Furthermore, it occurs only if there is also a convertible subject. In other words the *bekommen*-passive depends on the semantics of the subject and that of the indirect object, whereas the *werden*-passive depends on the semantics of the subject alone. This difference might explain the fact that we have so many dative verbs which do not have a *bekommen*-passive.

Both the *werden*- and the *bekommen*-passive confirm the status of German as a nominative language in the typological sense of 'nominative'. In both diatheses we have sentence patterns with a grammatical subject, but without direct or indirect object. What is found as ergative structures in this language is marginal.

Sentence Type and Word Order

With respect to word order, German is considered to be of special interest for typologists. The topological system is counted as one of the most conservative within the Germanic language group. Word order is still relatively free, and there is a complex system of braces, dividing the main constituent types into strictly separated fields.

It is uncontroversial that the basic order of nominal complements is subject–object. Relative to the sequence SO, the verb can have every possible position. We have VSO (*schreibt Hans den Brief?* 'does Hans write a letter?') as well as SVO (*wer schreibt einen Brief?* 'who writes a letter?') and SOV (*wir wissen, daß Hans einen Brief schreibt* 'we know that Hans writes a letter').

But the variability of the position of the verb has nothing to do with free word order. As far as the basic sentence types are concerned, word order is distinctive. With a suitable intonation pattern, VSO is a yes/no-question or an imperative sentence e.g. *schreib einen Brief*. The SVO pattern can be a *wh*-question or a declarative sentence: *Hans schreibt einen Brief*. The function of SOV is different in nature. It is purely syntactic. SOV occurs in standard type subordinate clauses which have a characteristic initial element, be it a conjunction, a *wh*-word or a relative pronoun.

If one takes more complex sentences into account, SVO turns out not to be verb-central but verb-second, cf. *Hans schreibt seinen Freunden einen Brief* 'Hans writes a letter to his friends'. The question then arises whether German is basically verb-initial, verb-second, or verb-final. Verb-initial can be ruled out for many reasons, be it only the secondary communicative function of the relevant sentences (question, imperative). Verb-second is treated as basic by many grammars mainly because it is the pattern of the declarative main

clause. Within language typology German is regarded as basically verb-final by a clear majority. In generative linguistics too, most authors decide on verb-final as basic word order. There are internal arguments for this view, such as the cohesion of the verbal group in final position, and there are external arguments from language acquisition and language disorders ('patholinguistics').

The characterization of the main clause as verb-second is an abstraction for most sentences. On the surface, verb-second is found only if the form of the verb is synthetic. A periphrastic verb form is always divided into a finite part in second position and a non-finite part in final position. So from *Hans schreibt einen Brief* we get *Hans hat einen Brief geschrieben* with the periphrastic form *hat geschrieben*. The parts of the periphrastic form are considered to constitute braces or a frame. Most grammars call this type of discontinuous constituent 'verbal braces' (*Verbalklammer*) or 'sentence frame' (*Satzrahmen*). The first part of the braces can be whatever may appear as an inflected (i.e. finite) verb form, be it the form of a main verb, of an auxiliary, or a modal verb. The second part of the braces is empty for synthetic verb forms. It might consist of a simple or complex non-finite form, of a verbal particle or a particle plus non-finite form.

In Figure 11.6 the braces divide the sentence into different sections, called 'topological fields'. The word-order regularities of German are mostly formulated in terms of these fields. For the main clause we get the forefield preceding the finite verb form, the middle field within the braces, and the final field following the non-finite part of the verb form. Co-occurrence restrictions differ considerably for these fields.

The forefield is regularly occupied by exactly one major constituent of the sentence, i.e. by the subject, by an object, or by an adverbial. If the forefield is occupied by the non-finite verb form, then the objects and the adverbials can go with the verb as indicated in the following sentences.

Figure 11.7 shows one of the many examples of pied-piping structures in German. It should be mentioned that the subject can never enter the forefield together with the non-finite verb, except in the case of some intransitive verbs as in *eine Lösung eingefallen ist mir heute* 'a solution has come to me today' ('ergative verb' in generative terminology).

The most striking difference between the forefield and the final field can be seen in the fact that there is no need to fill the final field at all. The final field
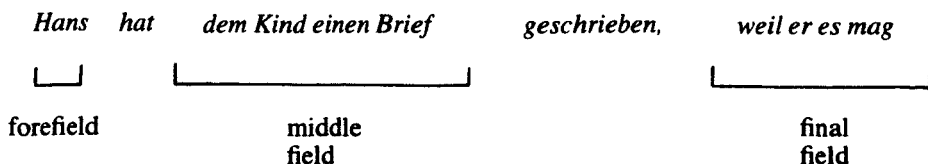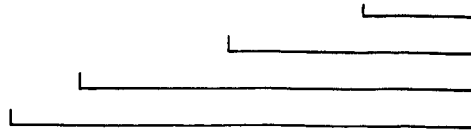
Figure 11.6

Hans	*hat*	*dem Kind einen Brief*	*geschrieben,*	*weil er es mag*
⌊_⌋		⌊_____⌋		⌊_____⌋
forefield		middle field		final field

Figure 11.7

Hans hat heute einem Freund einen Brief geschrieben
(lit.) 'Hans has today to a friend a letter written'

Geschrieben hat Hans heute einem Freund einen Brief

Einen Brief geschrieben hat Hans heute einem Freund

Einem Freund einen Brief geschrieben hat Hans heute

Heute einem Freund einen Brief geschrieben hat Hans

can be occupied by adverbials and in some cases even by an object, but whether this is possible or not is scarcely expressible in purely syntactic terms. There is a general tendency that a constituent is the more likely to appear in the final field, the heavier it is. By the 'weight' of a constituent is meant both its length, and also certain intonation features.

The filling of the final field is fully grammaticized only for subordinate clauses, cf. *Hans hat einem Freund geschrieben, daß er kommt*. Except for relative clauses, subordinate clauses are excluded from the middle field: **Hans hat einem Freund, daß er kommt, geschrieben*.

The most extended and complex part of the sentence is the middle field. There are no restrictions on the number and almost no restrictions on the type of constituent which can appear in the middle field. Furthermore, there are virtually no syntactic restrictions on the serialization of these elements. All one can do is to find out what has to be considered the unmarked order of subject, objects and adverbials in this part of the sentence.

The difficulty in doing so arises from the diversity of parameters determining the acceptability and pragmatic function of constituent order. For personal pronouns the unmarked and even grammaticalized order is subject–direct object–indirect object. For adverbials there seem to hold certain semantic restrictions saying that local–temporal is the unmarked order against temporal–local. Other criteria frequently discussed are definite before in-

definite, short before long, subject before object, known before new, and unstressed before stressed.

A detailed examination of these parameters through systematic variation reveals that for the main types of complements there is no unmarked syntactic order valid for the language as a whole. What has to be considered as unmarked order is not determined syntactically, but semantically by the animacy hierarchy. So for a three-place verb from the semantic field of *geben* 'to give', the unmarked order is subject – indirect object – direct object – prepositional object, cf. *heute hat Hans seinem Freund einen Brief geschrieben* with *schreiben* 'to write'. The same relative order holds of course for two-place verbs as long as there is the normal descent of animacy from the subject to the object. Otherwise the unmarked order is syntactisized differently.

For a dative verb like *fehlen* 'to be missing', the order indirect object – subject is unmarked compared to subject – indirect object: *bis heute hat den Europäern das Selbsbewußtsein gefehlt*. For an accusative verb like *begeistern* 'to inspire', things are not so clear. But there is no doubt that the sequence direct object – subject is much more acceptable for a *begeistern*-type verb than it is for the paradigmatic transitive verb with an agentive subject like *behindern* 'to hamper': *bis heute hat keinen Europäer die Zollunion begeistert* is clearly less marked than *bis heute hat keinen Europäer die Zollunion behindert*.

11.5   Lexis

The vocabulary of Modern Standard German naturally shares most of its structural characteristics with the vocabularies of the neighbouring languages like French, Dutch, Polish, Danish or English. Since there is no developed methodology for comparing the overall vocabularies of closely related languages, I would like to mention very briefly two points with respect to which German might be different at least from some of its neighbours.

The first point concerns the distinction of a native and a non-native part of the vocabulary. With this distinction one normally refers to structural properties of words, rather than to etymological ones. It is widely agreed that one should make this distinction with respect to phonology as well as morphology. We will illustrate what is meant here by a few examples.

In segmental phonology, the [ʒ] is often regarded as being restricted to non-native words. First, it appears in non-native suffixes like [aːʒə] (*Blamage, Garage, Massage*), and second, it appears in phonotactically marked combinations as in [ʤ] (*Dschungel* 'jungle', *Dschunke* 'junk'). There are no combinations of voiced stop + fricative in the onset of syllables in native words. On the other hand, [ʒ] very easily finds its place in the system of consonants since it has a voiceless counterpart [ʃ]. Without [ʒ], there would be a gap in the system.

One of the main areas of non-native structural properties is found in the

prosodic and syllabic structure of words and morphemes. Thus suffixes without influence on the accentuation of the stem are regarded as native, whereas stressed suffixes count as non-native. Oddly enough, the latter class seems to be even bigger than the former. It comprises suffixes like *-ieren* (*kuríeren* 'to cure' *garantíeren* 'to guarantee'), *-eur* (*Ingeniéur*, 'engineer', *Domptéur* 'farmer'), *-ion* (*Revolutión, Inspektión*), *-ist* (*Sozialíst, Romaníst*) and many others. With regard to the stem it is often held that the simple native stem is monosyllabic whereas polysyllabic stems are non-native. This criterion plays an important role in discussions of the peculiarities of non-native words in word formation. First, it is often very difficult to decide whether a stem is a simplex or not. There are for instance many words with stem final [oː] like *Manko* 'deficiency', *Lasso* 'lasso', *Photo, Ghetto, Porto* 'postage'. They have certain properties in common which show that they are marked (e.g. they take [s] as the plural morpheme). Moreover, [oː] cannot be separated by the stems in most cases, but these words do have more internal structure than say monosyllabic native ones like *Baum* or *Stuhl*. It is equally difficult to distinguish the basic types of word formation in the non-native part of the vocabulary. There are of course some native semi-affixes like *-los* (*friedlos* 'peaceless'), *-mäßig* (*schulmäßig* 'orthodox'), and *-frei* (*schulfrei* 'free from school/no school'). But such elements have a much wider range in non-native words. Morphemes like *poly-, mini-, makro-, bio-, zero-, mono-, extra- semi-, inter-, deko-, contra-, auto-, retro-* are clearly neither real prefixes nor first components of compounds in the relevant words.

German has been influenced by other languages in a very specific way. The influence may be thought of as coming in waves, first from Latin (from the Roman occupation up to the Renaissance), then from French (from the Middle Ages up to the French Revolution), and then from English. It could well be that this kind of steady and strong influence from different but relatively few sources has had its specific consequences.

As a second point I would like to call attention to the notion of univerbation, which is a key notion in most textbooks on German word formation. On the basis of its 'normal' word-formation regularities, German forms new words either by combining stems and affixes (approximately 250 affixes and 3,000 to 4,000 simplex stems) or by composition. The extensive use of compounds, especially of compound nouns, is often seen as one of the most characteristic features of the vocabulary. The latest edition of the orthographic dictionary of the former German Democratic Republic comprised about 75,000 entries (Duden 1985), the one of the Federal Republic of Germany about 110,000 (Duden 1986). The vast majority of the difference consists of compound nouns, showing how difficult it is to decide what has to be considered as being lexicalized.

One source of the numerous patterns of composition is univerbation. Syntactic phrases or parts of them are put together into one word. Some randomly selected examples are given in Figure 11.8. All of these examples

Figure 11.8

Mutters Sprache 'mother tongue' > *Muttersprache*
noun+noun   noun

kleines Kind 'litle child' > *Kleinkind*
adjective+noun   noun

auf dem Grund 'on the basis' > *aufgrund*
preposition+noun   preposition

legen auf 'to put on' > *auflegen*
verb+preposition   participle verb

fahre Auto 'drive a car' > *autofahren*
verb+noun   particle verb

Durst stillend 'thirst quenching' > *durststillend*
noun+partic.adjective   partic.adjective

manifest possible transitions from syntactic units to morphological units. Some of them have led to productive composition patterns which have become independent of their respective syntactic sources, yet there remains a close relation between the structure of complex morphological and syntactic units. A close relation of this kind seems to be typical of a major part of the complex words of German.

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