The 19th century was the century of historical linguistics. Linguistic research was characterized by the search for regularities and laws in language change, the search for genetic links between languages (keywords: family trees, Indo-European), and the reconstruction of older language periods and languages in historical-comparative linguistics (or: comparative philology) by means of comparing with each other younger language periods and languages for which written data material was available.

The 20th century, on the other hand, is the century of synchrony. This is certainly the most important aspect of the paradigm shift which affected linguistics in the decade after 1900, a paradigm shift which is inseparably linked to the name of Ferdinand de Saussure, the famous Swiss linguist who taught at the University of Geneva a century ago.

paradigm shift:
focus on synchrony

1.3.1 | Structuralism

Ferdinand de Saussure is generally considered to be the founder of modern linguistics, more precisely the founder of structuralism, the 'Bible' of which is the *Cours de linguistique générale* (1916). The *Cours* offers an introduction to general linguistics based on Saussure's lecture materials and the lecture notes taken by his disciples and was not published until after his death (in 1913). In this book, the reader will find thorough discussions of numerous ideas concerning a new approach to the study of language only some of which are found in the works of linguists at the end of the 19th century (e. g. in the writings of the German Georg von der Gabelentz and, above all, those of William Dwight Whitney, the eminent American linguist of the late 19th century).

Cours de linguis-
tique générale
(1916)

Primacy of synchrony and the system: Besides the call for a separation of synchrony and diachrony and for the primacy of synchrony, Saussure's structuralist approach to linguistics focusses on language as a closed system in which all elements are linked to one another, and in which the value (*valeur*) of every single element is defined by its place in the system alone. For example, the Simple Past in English (*she worked*) has a different status than its counterpart in German, the preterite (*Präteritum*), because it contrasts both with the Past Progressive (*she was working*) and the Present Perfect (*she has worked*). German grammar does not only lack a counterpart of the English progressive form; *Präteritum* (*sie arbeitete*) and *Perfekt* (*sie hat gearbeitet*) are in most contexts interchangeable without a difference in meaning. The different status of Simple Past and *Präteritum* within the grammars of English and German, respectively, thus partly results from the value of the Present Perfect in the English tense system in contrast to the value of the *Perfekt* in the German tense system. The view that every linguistic sign is part of the system and has no existence outside of it is an important reason for the structuralist position that every language system needs to be considered by itself.

value / *valeur*

Langue-parole: According to Saussure, linguistics should solely be concerned with the systematic regularities of the abstract language system which is shared by all members of a speech community (*langue*), and not with its concrete use by the individual (*parole*). What stands at

the centre of structuralist linguistics is the determination and description of the individual elements of this system (on all structural levels: sounds, words and their components, sentences and their constituents), and the relations holding between them on each of these levels.

choice vs. chain

Paradigmatic vs. syntagmatic relations: Within any system, there are two basic types of relations between linguistic units which have to be distinguished: relations of choice or interchangeability on the vertical axis (paradigmatic relations), and relations of 'chain' or combination on the horizontal axis (syntagmatic relations). A paradigmatic relation holds between the initial sounds of *ban*, *can*, *Dan*, *fan*, *tan* and *van*, whereas the relation between any of these sounds and the two following sounds is a syntagmatic one. (1) illustrates paradigmatic and syntagmatic relations on the sentence level:

(1)

$$\left\{ \begin{array}{c} A \\ The \\ His \end{array} \right\} \left\{ \begin{array}{c} man \\ girl \\ visitor \end{array} \right\} \left\{ \begin{array}{c} saw \\ loved \\ hit \end{array} \right\} \left\{ \begin{array}{c} my \\ your \\ our \end{array} \right\} \left\{ \begin{array}{c} horse \\ cat \\ baby \end{array} \right\}$$

A choice (or paradigmatic) relation holds among the words within any of the braced brackets, a chain (or syntagmatic) relation between the words in the immediately neighbouring brackets. These relations are found on all structural levels of language (see figure 1.1):

branches of linguistics		
object of study	form	function/meaning
sound	phonetics	phonology
word	morphology	(lexical) semantics
phrase, sentence	syntax	(sentence) semantics

Figure 1.1:
The structural
levels of language

Structural levels and interfaces: As far as these structural levels (sound, word and sentence structure) and the corresponding branches of linguistics are concerned, it is important to note that it is not always easy to determine the exact boundaries between them. Often we can observe interaction between the structural levels and, as a consequence, so-called *interfaces* between the relevant linguistic subdisciplines. When, for example, in the course of the derivation of the noun *pronunciation* from the verb *pronounce*, the sound shape of the root changes from /prəˈnaʊns/ to /prəˌnʌns-/, we are not only dealing with a morphological (more precisely: word formation) process, but also with a phonological one. The same holds true in the case of the regular English plural formation, where the plural marker is pronounced /s/ (*kits*), /z/ (*kids*), or /ɪz/ (*kisses*) depending on the final sound of the singular form of the respective noun. The interface relevant for these two examples is called *morphophonology* or *morphophonemics* (see chapter 3.2). Other interfaces are, for instance, those between phonology and syntax, morphology and syntax, or syntax and semantics.

Model of the linguistic sign: Saussure's model of the linguistic sign, i. e. his model of what constitutes the nature of words (see figure 1.2), is another of his ground-breaking contributions to modern linguistics. The linguistic sign consists of two parts which are as inseparably linked to one another like the two sides of a sheet of paper: a sound or, typically, sound sequence (*signifier*; *signifiant*) on the level of expression and a concept (*signified*; *signifié*) on the level of meaning.

comparison with a sheet of paper

signifiant – signifié: Two kinds of relations hold between *signifié* and *signifiant*: on the one hand, a reciprocal relation, which means that the sound sequence automatically evokes the concept linked to it and vice versa (therefore the arrows in figure 1.2). Importantly, this relationship is arbitrary and conventional. Which *signifiant* ('signifier') is used for which *signifié* ('signified') is solely based on an 'agreement', a kind of 'contract' between the members of a speech community. Neither side of the linguistic sign has any special feature that would inevitably require the assignment of a particular signifier to a particular signified, or vice versa. That is why different languages have completely different expressions – all equally appropriate or inappropriate – for the same concept (for FLOWER just take /flaʊə(r)/ in English or /bluːmə/ in German), and why, conversely, the same sound image can refer to completely different concepts in different languages (consider /gɪft/, which denotes the concept PRESENT in English as opposed to TOXIC SUBSTANCE in German).
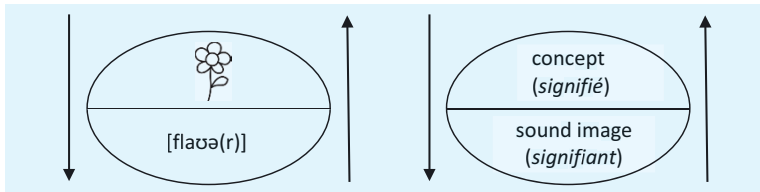
reciprocity, arbitrariness, conventionality

Figure 1.2: Saussure's model of the linguistic sign

Linguistic sign = symbol: The crucial point about the linguistic sign is its arbitrariness, i. e. the lack of a motivated link between signified and signifier. According to the theory of signs by Charles Sanders Peirce (pronounced /pɜːs/), the linguistic sign therefore qualifies as a symbol, in contrast to the two other major types of signs he distinguishes, namely indices and icons.

Peirce's typology of signs

Indices: The characteristic feature of indices is an existential or physical effect-cause or effect-reason relationship between the sign and what it stands for. Tears, for instance, are a sign of emotional turmoil (sorrow, disappointment, joy), smoke is a sign of fire, and slurred speech is a sign of drunkenness.

Icons and iconicity: The defining feature of icons is that there is a relationship of similarity between the sign and what it stands for. The nature of this similarity can be physical or imagic, i. e. consist in visual similarity (e. g. the pictogram of a telephone indicating a public telephone, or the pictogram of a running person indicating an emergency exit) or in phonetic similarity (e. g. *bow-wow* for barking, or *cuckoo* for the bird).

imagic iconicity

However, icons can also display a rather abstract relationship of simi-

diagrammatic iconicity

larity. This kind of (so-called diagrammatic) iconicity holds, for example, between maps and the regions of the earth they represent, or between the order in which, on a list of topics for presentations and term papers, the topics are listed and the chronological sequence in which they are to be presented in the seminar. Iconicity thus is a special kind of motivation. Although in human language symbols are by far the most important and best researched type of signs, it should not be overlooked that there are definitely also words which, besides qualifying as symbols, are partly iconic (e. g. so-called *onomatopoetic expressions* like *bow-wow*, *moo*, *cuckoo*) or partly indexical (e. g. *here* and *today*, part of whose meaning refers to the here and now of the speaker; cf. chapter 7.2).

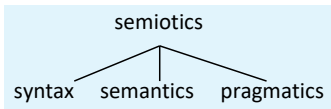**linguistics = part of semiotics**

Semiotics is the science of linguistic and non-linguistic signalling systems and signing processes. From the perspective of the theory of signs, human language is a (rather complex) sign system and, as a consequence, linguistics a semiotic science. Traditionally, it considers its object of study from three angles: (a) the relation(s) between signs (syntax); (b) the relation(s) between signs and their meaning(s) (semantics); (c) the relation(s) between signs and their users (pragmatics). The subdisciplines exploring these three kinds of relations in the scientific study of signs therefore also belong to the central areas of linguistics.

semiotics

syntax   semantics   pragmatics

Figure 1.3: Branches of semiotics

Leonard Bloomfield, Prague School

Structuralism until the 1950s: The importance of structuralist thinking as we find it in Saussure's *Cours* and, in general, from the 1920s until the 1950s is largely undisputed in present-day linguistics. The two most important cases in point are American structuralism à la Leonard Bloomfield which was even more rigidly empirical and form-orientated than Saussure's vision of structuralism, and the Prague School of functionalism, which was primarily interested in the function(s) of language and linguistic elements (cf. also 1.3.3).

critical reflection of Saussurean dichotomies

Development of linguistics from the 1960s until today: The crucial difference, however, is that ever since the 1960s (starting, above all, in sociolinguistics) and especially since the 1970s (with the advent of pragmatics) and 1980s (especially due to cognitive linguistics; cf. chapters 6.4 and 9.2), linguistics has significantly gone beyond the description of a linguistic system and the search for purely system-inherent explanations for linguistic phenomena. Rather, as will be detailed in section 1.3.3, it has given priority to social, functional, and cognitive aspects, as well as aspects of language (use) grounded in communicative behaviour. Typically, these new approaches do not compete, but rather complement each other very well. What all these 'post-structuralist' approaches have in common is that the most important Saussurean dichotomies are increasingly critically reflected, and that linguists start to emancipate, or already have emancipated, themselves from these dichotomies.

4 directions of emancipation

Emancipation from Saussure: In the course of the renewed interest in processes of language change, for example, the strict separation between synchrony and diachrony has largely been abandoned (which makes sense especially if we consider, for example, the immediate link between language variation and language change; cf. chapters 8.6 and 9.4). It is furthermore no longer important to give priority to the system and to re-

duce linguistics to the study of the formal aspects, i. e. the structure, of language, which was typical of 20th century linguistics until the 1960s. Since then, research into language use (i. e. *parole* or *performance*) in the context of an individual speaker, their social and communicative situation, and their communicative goal(s) has gained significantly in importance. Therefore, at the latest since the 1980s, sociolinguistics and pragmatics also need to be counted among the disciplines constituting the core of linguistics. A third example of the emancipation from Saussure concerns his sign model, more precisely the central role he attributes to arbitrariness. Especially since the 1980s, it has increasingly been acknowledged that, both on the level of words and grammar, iconicity plays a bigger role than is traditionally assumed in Saussurean structuralism. Fourth, there is a general tendency in current linguistics that the idea of dichotomies (e. g. synchrony – diachrony, language system – language use, vocabulary – grammar, written – spoken language) and sharp category boundaries (e. g. main verb versus auxiliary) can be accepted only as idealizations which are pedagogically useful, but which, apart from that, should better be given up in favour of interfaces and fuzzy boundaries (thus the growing importance of so-called gradients, clines, or continua).

1.3.2 | Formalism / Generative linguistics

Noam Chomsky: Both the emancipation of linguistics from traditional structuralist ideas and the central status which especially pragmatics and sociolinguistics have developed since the 1960s and 1970s can also be seen as reactions to probably the most influential school of thought in the second half of the 20th century, namely generative linguistics. Noam Chomsky initiated this approach to the study of language at the end of the 1950s and has remained the key intellectual and major shaping force of generative linguistics during its various phases and its various guises until the present day.

Generative (Latin *generare* = generate) refers to the generation of language, more exactly to the full and precise description of syntactic structures by means of a limited (or: finite) inventory of rules. On the one hand, this inventory of rules allows linguists to make explicit statements concerning the grammatical well-formedness of a given phrase or sentence. On the other hand, it provides the theoretical and descriptive apparatus for predictions concerning the grammaticality (in the sense of grammatical well-formedness) of all possible grammatical sentences (and smaller syntactic units) in a language, or at least in its core grammar.

definition

The beginnings of generative linguistics mark the second fundamental paradigm shift in 20th century linguistics. Within a few years, it came to be one of the most influential schools in linguistics; in the US (unlike in Europe) it is even the predominant approach, both in research and teaching. One of the crucial distinctive properties of this approach is a high standard of explicit and stringent theory-formation and argumentation. This and other essential features of the generativist (alternatively known

2nd paradigm shift in 20th century linguistics