## Beginning Linguistics



# English Department University of Bern 

Franz Andres Morrissey

## Table of Contents

1 What is Language? What is Linguistics? ..... 7
1.1 Considering Language ..... 7
1.1.1 Some basic considerations ..... 7
1.1.2 The classic dichotomy ..... 9
1.1.3 The status of the "Rules" ..... 11
1.1.4 Studying language ..... 13
1.1.5 So what is language? ..... 14
1.1.6 Types of language ..... 20
1.1.7 What does language consist of? ..... 26
1.2 Linguistics as the Study of Language ..... 27
1.2.1 A basic division: theoretical study and applied exploration ..... 27
1.2.2 From language to linguistics ..... 28
1.2.3 Focus of the next chapters ..... 30
1.3 Key Terms ..... 32
1.4 Exercises and questions ..... 34
1.5 References ..... 35
2 Sounds of language I: Phonetics ..... 36
2.1 Introduction: Phonetics vs. phonology ..... 36
2.2 Representing spoken language ..... 36
2.3 How to describe speech sounds ..... 38
2.3.1 Consonants ..... 39
2.3.2 Vowels ..... 45
2.4 Key concepts and references ..... 51
2.5 Exercises ..... 54
2.5.1 Consonants ..... 54
2.5.2 Vowels ..... 55
2.5.3 Transcription Practice ..... 56
2.6 References ..... 57
3 Sounds of language II: Phonology ..... 58
3.1 Introduction: The focus of phonology ..... 58
3.2 Segmental phonology ..... 59
3.2.1 Categorising speech sounds ..... 59
3.2.2 Segments in fluent speech ..... 62
3.3 Supra-segmental phonology ..... 66
3.3.1 Phonotactics ..... 66
3.3.2 Syllable structure ..... 68
3.3.3 Feet and timing ..... 69
3.3.4 Word stress ..... 70
3.3.5 Stress and intonation in utterances ..... 71
3.4 Key concepts ..... 73
3.5 References ..... 75
3.6 Phonology Exercises ..... 75
3.6.1 Minimal pairs ..... 75
3.6.2 Allophones in complementary distribution ..... 76
3.6.3 Phonology of fluent speech ..... 77
3.6.4 Sonority and Syllable Structures ..... 78
3.6.5 Feet ..... 78
3.6.6 Intonation ..... 79
4 Building Blocks of Words: Morphology ..... 80
4.1 Introduction: What is a "word"? ..... 80
4.1.1 Attempts at a definition ..... 80
4.1.2 Carriers of meaning ..... 82
4.1.3 An exploration ..... 83
4.1.4 Word classes or parts of speech ..... 83
4.2 The structure of the words ..... 85
4.2.1 Basic building blocks: Morphemes ..... 85
4.2.2 The core element: Stem/base or root ..... 86
4.2.3 Affixation ..... 86
4.2.4 Combining existing words into new lexical items ..... 92
4.3 Word formation: an overview ..... 94
4.4 Key concepts ..... 96
4.5 References ..... 98
4.6 Morphology Exercises ..... 99
4.6.1 Simple vs. Complex Words ..... 99
4.6.2 Affixation ..... 99
4.6.3 Compounding ..... 101
4.6.4 Word Formation ..... 101
5 Getting the Meaning: Semantics ..... 102
5.1 Introduction: What does it mean? ..... 102
5.2 Categorisations and meaning ..... 103
5.2.1 Inclusions and overlaps of word meaning ..... 103
5.2.2 Elements of meaning ..... 105
5.2.3 Meaning relations ..... 108
5.2.4 Meaning beyond the word level: making words do extra work ..... 117
5.3 Problems of word meaning: the "arbitrariness" of lexemes in relation to their meaning ..... 124
5.3.1 Sounds and their meaning ..... 125
5.3.2 The shifting relationship between referent and sign ..... 126
5.4 Key concepts ..... 127
5.5 References ..... 129
5.6 Semantics Exercises ..... 130
5.6.1 Categorisation of Meaning ..... 130
5.6.2 Meaning Relatedness ..... 131
5.6.3 Beyond word meaning ..... 131
6 Phrases and Clauses / Sentences: Syntax ..... 134
6.1 Introductory: Speakers' (implicit) awareness of combination rules ..... 134
6.2 Approaches to analysing sentences ..... 136
6.2.1 The lexical level ..... 137
6.2.2 The thematic analysis ..... 137
6.2.3 Parsing sentences in terms of meaning ..... 138
6.2.4 The functional elements of a clause/sentence. ..... 139
6.3 Constituents/Phrases and their structure ..... 140
6.3.1 Constituent analysis ..... 140
6.3.2 Phrase Structure Rules ..... 146
6.3.3 Analysing more complex structures and sentences ..... 153
6.4 Functional categories and a language typology ..... 160
6.5 Key Concepts ..... 162
6.6 References ..... 164
6.7 Syntax Exercises ..... 164
6.7.1 Analysing clauses / sentences ..... 164
6.7.2 Constituent structures ..... 165
7 Beyond Microlinguistics: Language in context ..... 168
7.1 The whole picture? ..... 168
7.1.1 Beyond well-formedness ..... 168
7.1.2 Getting a message (across) ..... 169
7.1.3 Issues not covered by generative or message models. ..... 170
7.2 Language in use ..... 179
7.2.1 Preliminary considerations ..... 179
7.2.2 Language as Communication ..... 180
7.2.3 Achieving things by using language: Speech Act Theory ..... 187
7.2.4 Organising conversation: turns and turn-taking ..... 191
7.2.5 Cooperation in Conversation ..... 198
7.3 Key concepts ..... 205
7.4 References ..... 209
7.5 Language in use: excercises ..... 209
7.5.1 Ambiguity and situation ..... 209
7.5.2 Communication ..... 210
7.5.3 Speech Acts ..... 211
7.5.4 CP and Implicatures ..... 211

## 1 What is Language? What is Linguistics?

## What you know/can do after working through Chapter 1

- You know the key concepts that describe
o the "classic dichotomy"
o the game analogy
o the approaches to the study of language at a specific point in time or longitudinally
o the main types of grammar
- You can identify indications that characterise types of language.
- You are familiar with what the various areas of linguistics focus on.


### 1.1 Considering Language

### 1.1.1 Some basic considerations

The Merriam-Webster Dictionary, amongst others, defines linguistics as "the study of language", which raises the question, "what is language?" This looks like a simple enough question, but the trouble is that the answer is rather complex - and quite elusive. Many great minds have tried and found one or several answers, but they usually have the same drawback: they covered one or a number of aspects, usually the one/ones these great minds considered central, but closer examination invariably showed had that there were other important aspects that these answers did not cover.

The problem starts with the very nature of language: is it an entity, a thing in and of itself, and if so, how abstract or how concrete a thing do we consider it to be. Is it a philosophical entity that somehow exists independent of its everyday use or is it something that is a basic human feature? Is it not perhaps a system rather than a thing? If so, this raises another set of questions, such as whether we are dealing with a fixed, a static system, or whether the system undergoes changes and, related to this, whether such changes are to be considered a part of language or not. Another way to see language is its use as a means of passing on information, which raises two questions: is language use always an exchange of information and is every exchange of information an instance of language use? Then there is the question as to where language is "situated", in a scholarly or didactic account that is largely scientific and objective, or in the minds and mouths of its speakers, which makes it rather an individualistic phenomenon and rather disorganised (as all the exceptions to rules we are confronted with when we learn of foreign language seem to suggest).

This list of questions is by no means exhaustive, but let us for a moment look at some further issues that asking them raises. To begin with, let us return briefly to the suggestion that language could be seen as a system. This system could be seen as a set of rules that can be defined and compiled in a book, a grammar book, which tells its users how to combine the words of that language, i.e. how they apply the rules to connect the items collected in a dictionary of that language. This seems neat and tidy, but such a rule book does not really explain that our choice of words say something about the views of the speaker, for instance whether he or she uses the word "terrorist" as opposed to "freedom fighter", to use an often quoted example. This element of content cannot be explained with a system of "grammatical" rules, at least not a relatively narrowly defined system of such rules. What about the very different messages we can convey with the same words, such as "well done", which can be either praise or criticism, depending on a number of factors that lie outside the rules that are used to combine the building blocks of vocabulary as suggested above. Similarly variations in tone when we say "yes" go beyond such rules and the accepted word meaning, because it is possible to signal disagreement or at least doubt when using this apparently affirmative word. If language is a system of sorts, it is considerably more complex than what we have learnt to see as "grammar and vocabulary" in more traditional settings dealing with the study of language, for instance in schools.

Some of the above considerations seem to suggest that language is a means of communication. Indeed, we often use language to pass on information, although this need not always be the case. When we say to someone we know and perhaps even love, "you are such an idiot", the words accompanied by a smile and perhaps a touch of the hand, this will most likely be interpreted as an endearment, not an insult; this content is communicated by gesture or facial expression not passed on by language. Conversely, there are instances of language use which do not result in information being conveyed, for instance when we talk to ourselves, often when stories or usually when jokes are being told, or during a rite e.g. a baptism, an inauguration, etc. By contrast, we can ask if the opposite applies: if information is passed on, does this necessarily constitute a form of language? When bees by their dance in the hive inform other bees about the direction and the distance of a source of nectar, do they use language? Do street signs and icons in everyday life (e.g. a crossed out cigarette), which all convey information too (i.e. "smoking is forbidden here"), use language, even though they are not even organic entities? And is it possible to let someone know that you disapprove of them without using a single word? This would suggest that language is related to communicating messages, but that this is hardly its only manifestation or its only purpose.

Furthermore, if the "locus" of language is in its speakers, in other words, if language is inextricably linked to those who (can) speak or at least understand it, which is a reasonable assumption, what exactly is the nature of this locus. Should we consider language how it
manifests itself in an individual, or is it a product of the collective consciousness of a group of humans. If the latter, is it in the consciousness of humans in general or only of those who in one manner or another "speak in the same way"? Are groups of such humans really ever so homogenous that they actually do speak "the same way"? Perhaps a bit more concretely, do all English speakers speak in the same way to the degree that we can say they all use the same language?

All in all, we can see that what looks like a simple question, i.e. "what is language", actually leads to a whole range of other questions, some of which we may be able to answer in this course, some of which other areas of language study can provide answers for, and then there are those questions to which answers will remain ever elusive.

### 1.1.2 The classic dichotomy

### 1.1.2.1 Two essential features

Any approach to a complex phenomenon in our world requires a metaphor or a simplified model, often one and the same thing, to help us conceptualise what we are observing. In order to find our way into the subject of what language is, we will therefore focus on certain of its elements to the exclusion of others and what characterises language in general.

To begin with, we may observe that what you have just read and what I have just written a) is accessible to you as the readers (or, if I had said rather than written it, as the listeners), in other words, you can follow the ideas, and
b) it has never before been said in exactly that way.

This tells us two things: firstly, you have the means to follow the above, to decode what the words mean, to understand how the sentences are structured and, ideally, what I have attempted to convey with the text despite the fact that you have not encountered this kind of sequence of words and sentences, and perhaps even the ideas expressed here before. In other words, you have a system or a set of systems to understand the structure and the way it relates to your and my world, and you have the set of meanings that allow you to deduce what these lines are to inform you about. Secondly, as I have used words in a sequence and perhaps in a meaning that may be new or at least unusual to the degree that they have not been combined quite like this before, there is an element of creativity in the way I can formulate and you can understand. To put it more succinctly: Language is both systematic and creative.

### 1.1.2.2 One set of rules, endlessly varied manifestations

To return to the fact that complex phenomena can be made accessible with an image or a metaphor, we can see language as a game. Like a game it has a finite set of rules, which are binding and (usually) observed by the players, especially those who share the same cultural background: they therefore know what is an acceptable move in the game and what
is not. But even though the rules of the game are finite and clearly defined, i.e. they can be written down in a clearly delimited set of instructions, the number of actual instances where the game is played results in an infinite number of possible manifestations or outcomes, each one of which is different from the one(s) played before and the ones played afterwards.

If we consider poker as an example we have a relatively small set of rules concerning the values of the combinations of cards in a hand and a set of rules how players can bet on them. However, as we know from countless films, e.g. the scene between Chiffre and James Bond in Casino Royale, each actual game is different and varies in excitement and its manifestation.



Figure 1-1 An actual game of poker (www.pokerfanactics.net)

Figure 1-2 Rules of poker (www.fullhousepokersets.com/why-you-should-know-the-rules-of-poker)

The game metaphor can be translated to the classic dichotomy where in language, on the one hand, we have a set of rules and the elements that they apply to, and, on the other hand, we have all the instances, the manifestations, in which we see language being used in their infinite variety.

This dichotomy has been described in the following terms by two leading thinkers in the field of linguistics, by the Swiss linguist Ferdinand de Saussure (1857-1913) and American thinker Noam Chomsky (*1928). They use different terms for what is, for our purposes, essentially the same two concepts:

|  | language as <br> a system | language in <br> its (creative) manifestation |
| :--- | :---: | :---: |
| De Saussure |  |  |
| Chomsky |  |  |

For some linguists, especially those interested in how language works in itself, the focus is on the systematicity of language; for them the manifestations are mainly the (imperfect) realisation of the system of the language. For other linguists, who are primarily interested in the use of language, it is the manifestations of language and the impact this has on situations and interlocutors that they are concerned with. This second group extends the concept of systematicity to elements other than words and rules for their combination and would include, for instance, the rules that apply to make an utterance or sentence not just correct but also appropriate to a variety of parameters. Needless to say, neither of these two groups can be considered superior to the other and similarly, needless to say, both explore language and answer (different) questions, some of which were raised at the beginning of this chapter.

### 1.1.3 The status of the "Rules"

We typically associate the term "rules" with a set of binding instructions that must be obeyed. They prescribe what has to be done. If we consider language rules, which we may call a grammar, we often see them in the way we were exposed to them in formal schooling. Grammar rules, many assume, need to be followed carefully, and those who do not follow such language rules produce incorrect language, they make mistakes.

Let us consider a (very) small number of examples. An utterance like
(1a) Did you eat yet?
contravenes the Standard English rule that yet triggers a Present Perfect; some language purists would therefore argue that anything other than
(1b) Have you eaten yet?
is incorrect, is bad English. However, this utterance will not raise any eyebrows in an American conversation. Similarly, formal grammar rules state that if we ask after a person who is the subject of a sentence, we use who and if we ask after a person who is the object, we use whom. Thus in the sentence
(2a) Mary met John this morning
if we want to find out who did the meeting we can ask
(2b) Who met John this morning?
and, if we want to find out about which person Mary went to meet
(2c) Whom did Mary meet this morning?
However, in an everyday conversation, using the grammatically correct (2c) would be considered rather odd;
(2d) Who did Mary meet this morning?
would typically be preferred. In the same way, many language teachers will insist that ending a clause with a preposition is ungrammatical or at the very least bad language. According to this rule
(3a) This is the girl to whom I gave the keys.
is the correct way to say this. However, it is much more likely that a speaker in an everyday situation would say
(3b) This is the girl I gave the key to.
Lastly, utterances like
(4) John cookin now.
or
(5) John be cookin now.
would be condemned by many traditional grammarians as the speaker getting a continuous verb form wrong in two different ways, because either to be is missing altogether in (4) and not inflected in (5), quite apart from seemingly missing $g$ at the end of the verb cooking. However, in African American Vernacular English (AAVE) utterances (4) and (5) are not only entirely in keeping with language rules (as is the pronunciation of cookin with an /n/ as the final sound), they do not represent two incorrectly formed continuous forms of the verb cook. In fact, they express two different concepts, in (4) that John is cooking at the time of speaking and in (5) that John is always in the middle of cooking around the time of speaking, a concept that cannot be expressed with verb inflection only in so-called grammatical English. This shows us that we need to be careful about the status of the rules in a grammar. "School" grammar is essentially based on a relatively conservative form of the standard language and demands that its rules be followed, otherwise the speaker uses bad or incorrect English; it is said to be prescriptive.

By contrast, most linguists are interested in the rules that explain why we express certain things in certain ways. They see grammar as a set of rules that describe how language users form what they consider acceptable sentences. In this way they can provide an explanation for the examples of AAVE as being perfectly in keeping with what an AAVE speaker would accept as a well-formed utterance. In AAVE the rule is that to be is not inflected and will be left out as an auxiliary verb in the continuous (as well as, incidentally, a linking verb in "I not home tonight"). There is another rule that states that be + verb-ing expresses
a habitual action. All of these rules will be adhered to when well-formed utterances are produced in AAVE. So in contrast to the prescriptivist perspective, which is likely to condemn AAVE as ungrammatical (in terms of the standard norm), a descriptive grammarian will point out that AAVE is as much subject to rules and the rules are just as systematic as in any form of (standard) English.

This leaves us with one more issue, namely, that both the prescriptive and the descriptive approach to language are concerned with the rules of "grammatical" utterances or sentences, that these will or will not be considered acceptable to or well-formed in the perception of the majority of speakers. The prescriptive approach sees rules as the prerequisites that lead to correct language, the descriptivists see rules as the system that underlies the production of language that the speakers will consider well-formed and is in keeping with how their language is spoken.

### 1.1.4 Studying language

A question that we did not raise at the outset of this discussion is whether a language needs to be considered as a phenomenon at a given time, e.g. present day, $18^{\text {th }}$ century, etc. or as an entity we examine from its beginnings (as far as they are known) to today and possibly beyond. To put it differently: is it related to one particular moment in time or does it include older and oldest forms (as well as speculations as to what it might look like in the future).

As, for instance, the various meanings of the word nice over time indicate (from nescius, i.e. ignorant, via shy, delicate and fine to present day pleasant), language changes all the time. The use of periphrastic do for questions and negation is a relatively novel development as a reading of any Shakespeare play will indicate. Heavy enjoyed a brief spell in the Sixties and Seventies meaning difficult and unpleasant etc. whereas nowadays in this meaning it is as dated as the term groovy from the same period. However, another word from youth language of that time, cool, is still happily in use. It may have even undergone a change in (British English) pronunciation which allows some speakers to distinguish between the meaning "not warm, not very cold" [ku:l] and the meaning of "impressive, desirable, socially adept", for which a different /u/ is often used, one that doesn not have rounded lips [ku:l]. What these examples show is that language is subject to change, some changes result in an older form disappearing, some lead to further changes, some changes are merely temporary. How a change will affect the language in the future, is often difficult or impossible to tell, although there are certain changes that are relatively predictable, for example, some consonant changes described in the "law" that bears the name of those early exponents of linguistics, the Brothers Grimm. What these thoughts demonstrate is that we can consider language in a historical perspective in its development over time, but also that we can explore it at particular points in time, for instance, in the Middle Ages, in the $19^{\text {th }}$ century, at present, etc.

This means that there are two perspectives on language, one longitudinal, the other focused on a specific period in time. Again, a metaphor might be useful. If we study a tree starting from the root and growing more and more branches we can get an overview from the point which started with the seed in the soil to the solid entity that stands in an field now. The way the tree has grown gives us an insight into the conditions it has lived through, into its history. By contrast, we can take a cross-section of the trunk or a branch and look at the grain and what the grain tells us, e.g. how the lines are spaced, etc., in other words what the tree structure was like at a given point in the growth.


Figure 1-4 Language in its entire development over time from root to leaf


Figure 1-3 Language at a specific period in time (where the saw cuts...)

When we are concerned with the development of language over an extended duration, using the tree metaphor, from root to leaf or with a longitudinal section of trunk (or the branches), we talk about a $\qquad$ approach. In focusing on a specific moment in language development, at the point we would metaphorically cut the tree, we are choosing a $\square$ approach. Again, neither approach is superior to the other, they merely look at language from a different perspective, as the development of a phenomenon or as the state it is in at a given moment.

### 1.1.5 So what is language?

Now let us return to some of the questions raised in 1.1 and examine how they manifest themselves in instances of language and language use. This will illustrate to some degree what language and its function is for human beings. Needless to say, the list is far from exhaustive, but will also illustrate to a point what we as linguists are dealing with.

To begin with, we have an instance of a speaker who refers to a situation and to some elements in the situation that seem to warrant mentioning:
(6) I never realized that you were in pain. I want to help you honey, let me see you again.

After the speaker has made this statement, a listener will be better informed about a number of issues, for instance that the speaker was unaware of the listener's discomfort, that he or she is prepared to help, but also possibly interested in a deeper relationship. All or some of these elements may have been unknown to the listener before the utterance was made. In other words, (6) illustrates one of the prime functions of language, language as a $\qquad$

Another aspect of language is important in the following example:
(7) Foreman to new worker: "I don't waste words. When I wave at you like this, it means I want you to come over."
New worker: "I don't waste words either. If I shake my head like this, it means I won't."

Here too information is passed on, from the foreman to the new worker. However, what is important here is that they both indicate that they will use specific signs, a wave of the hand or a shake of the head, and that these signs have a clearly assigned meaning. This illustrates that there is an instance of agreement between the two, the signs have to mean the same thing to both participants in the exchange, in other words this is an instance of language (and gestures) as a


The excerpt from a linguistic paper illustrates another important aspect of language, one that we have already briefly discussed above.
(8) Observations of speakers' use and tests of preferences for sentences with be indicate that speakers of African-American Vernacular English will systematically select be for habitual contexts such as Sometimes they be doing it but not for single-time contexts such as They be doing it right now. (Wolfram 1998: 109)

What Wolfram expresses here is that AAVE, far from being ungrammatical as some uninformed believers in the Standard as the only acceptable form of English would have it, is in fact very clearly $\square$ and that such seeming "breakdowns" of conventional rules are in fact $\square$
With our next example we can illustrate two things:
(9) First I will consider whether verbs when combined with each other do so in the base form with or without to in contrast to taking an -ing suffix. Then I will try to formulate rules for this, what I would call 'the verbal daisy chain'.

Firstly, (9) expresses what the speaker has thought about and how he or she will go about presenting the findings of this thought process. Secondly, and this is a point we will return to below, the phenomenon described, a sequence of verbs in a sentence, is presented in a rather imaginative way, probably in a way that very few listeners - if any - will ever have come across before. In other words, (9) illustrates that language can express $\square$
$\square$ that it is in fact a means for $\square$ that it can express the result in a highly unconventional, $\square$ fashion.

A similar phenomenon is at work in our next example, a speech from Macbeth (V.5. 1928) in which he expresses his nihilism in the face of recent developments, in particular the death of his wife.
(10) To-morrow, and to-morrow, and to-morrow, Creeps in this petty pace from day to day, To the last syllable of recorded time; And all our yesterdays have lighted fools The way to dusty death. Out, out, brief candle! Life's but a walking shadow, a poor player, That struts and frets his hour upon the stage, And then is heard no more. It is a tale Told by an idiot, full of sound and fury, Signifying nothing.

Whereas (9) demonstrated how a speaker can organise ideas through language, here the speaker uses language to organise what has happened and to come to terms with the fact that he has achieved what was prophesised but at considerable cost. He thus uses language to structure his $\qquad$ , and once again, he does so very audience is probably confronted with for the first time, a typical characteristic of literary and poetic language.

Using language for structuring goes further than this:
(11) Policeman: "What's your name, boy?"

Black Doctor: "Dr. Poussaint. I'm a physician."
Policeman: "What’s your first name, boy!"
Black Doctor: "Alvin." (Wardhaugh 2010: 283)
What we are confronted with here is the situation with different power differentials. On the surface, Dr Poussaint would appear to be in a socially stronger position due to his education and his profession. However, the policeman is endowed with certain powers, and this policeman reinforces them by using an interaction scheme which is based on white supremacy and a history of oppression of African-Americans, who are routinely referred to as "boy". By ignoring Poussaint's attempt to establish at least an equilibrium or possibly a social superiority and insisting on being told his interlocutor's first name, another instance of establishing superior social power, the policeman clearly puts the African-American physician in "his place". This exchange then illustrates language is a powerful tool to structure $\qquad$ and impose $\qquad$ in an interaction.

This is also possible because of another function of language which can be illustrated with the excerpt from the Book of Judges.
(12) 4. Then Jephthah gathered together all the men of Gilead, and fought with Ephraim: and the men of Gilead smote Ephraim, because they said, "Ye Gileadites are fugitives of Ephraim among the Ephraimites, and among the Manassites."
5. And the Gileadites took the passages of Jordan before the Ephraimites: and it was so, that when those Ephraimites which were escaped said, "Let me go over"; that the men of Gilead said unto him, "Art thou an Ephraimite?" If he said, "Nay";
6. Then said they unto him, "Say now Shibboleth"; and he said Sibboleth: for he could not frame to pronounce it right. Then they took him, and slew him at the passages of Jordan: and there fell at that time of the Ephraimites forty and two thousand. (King James Bible, Judges 12.4-6; event of 1125 BC)

Saying the word "shibboleth" incorrectly marks the Ephraimites as the enemy, as a member of what is sometimes called the out-group in comparison to the in-group, the Gileadites. How someone speaks is an indication to their identity, be it regionally with a dialect or in terms of class in a sociolect. That shibboleth to this day is a term for a distinguishing feature in someone's speech is a strong indication of how far back such distinctions go and that the way we use language constitutes a $\square$ as well as a potential means of discrimination.

We have seen above (1.1.1) that language can also be used in certain rites and that the related utterances do not really convey information has such. Consider
(13) By the power vested in me and in the name of the State of New York, I hereby pronounce you husband and wife. You may kiss the bride.

The operative elements in (13) are the words "I hereby pronounce you...". They indicate, firstly that something is achieved by the use of the verb pronounce; that, secondly, the speaker has a specific power, i.e. to make that pronouncement; that thirdly the place where and the manner in which the pronouncement was made is significant; and, finally, that somebody's status will have changed as a result of this pronouncement. We shall return to this function of language, i.e. that it can be used to $\square$, sometimes ritualised $\square$ in chapter 7.

The next example illustrates the same phenomenon in two ways:
(14a) I really don't appreciate this kind of language around here!
(14b) 1 a: the words, their pronunciation, and the methods of combining them used and understood by a community
b: audible, articulate, meaningful sound as produced by the action of the vocal organs
2: a systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings 3: the suggestion by objects, actions, or conditions of associated ideas or feelings <language in their very gesture - Shakespeare> ...

In order to talk about language we need to use language. In (14a) the speaker uses it to object against the way somebody uses language, perhaps being crude, using swearwords or touching on taboo topics (sexist, racist, etc. language). (14b) lists the Merriam-Webster dictionary definitions of language. This shows that we use language to describe language, i.e. that language is also self-referential.

In (12) we have seen a close connection between a group and the language that is typically used in this group. Samuel Johnson's statement about the disappearance of a language and why this is to be deplored takes this notion one step further:
(15) "There is no tracing the connection of ancient nations, but by language; and therefore I am always sorry when any language is lost, because languages are the pedigree of nations." Samuel Johnson (1709-1784) in Boswell: Tour of the Hebrides

The idea that language is more than just something spoken by a group of people (Johnson equates group with nation, which is a problematic connection to make as we will see below, but also in the context of language and society later on in sociolinguistics). Language is also understood to be linked to the very nature of the group, it is part of its DNA, its "pedigree". According to this approach languages are not just relatively abstract entities but that they represent a vehicle for or are intricately linked with the culture of a group, a society, or with a "nation", to use Johnson's view. Language, in other words, is a $\square$ $\square$ and of " $\square$ ".

The term "nation" is somewhat problematic as it suggests a uniformity and homogeneity that does not actually exist. That English as a language is no exception to this heterogeneity can be seen in the various forms of the Lord's Prayer:
(16a) Fæder ure pu pe eart on heofonum; Si pin nama gehalgod to becume pin rice, gewurpe ðin willa on eorðan swa swa on heofonum. urne gedæghwamlican hlaf syle us todæg...
(16b) Oure fadir that art in heuenes, halewid be thi name; thi kyndoom come to; be thi wille don in erthe as in heuene: gyue to us this dai oure breed ouer othir substaunce...
(16c) Our father which art in heauen, hallowed be thy name. Thy kingdome come. Thy will be done, in earth, as it is in heauen Giue vs this day our daily bread...
(16d) Our Father, who art in heaven, hallowed be thy Name. Thy kingdom come. Thy will be done, on earth as it is in heaven. Give us this day our daily bread...
(16e) Our Father in Heaven, let your holy name be known, let your kingdom come, and your will be done, on earth as in heaven. Give us today the bread that we need..
(16a) represents the most archaic form of what we consider (Old) English, Anglo-Saxon, spoken between 450 and 1150, (16b) the form it developed into, Middle English, with this example being taken from the 1380 Wycliff Bible. (16c) represents what is known as Early Modern English, the English spoken in Shakespeare's days; the version is the one in the King James Bible of 1611. (16d) and (16e) are examples of Modern English, albeit from different periods, from the Book of Common Prayer of 1928 and from the Alba New Testament of the 1970s respectively; the two differ in terms of how they have or have not retained the traditional formulaic or liturgical language with the new version completely doing away with any of it and adopting a much more conversational tone. All of these are "English" but clearly these forms of English differ from each other as they represent how the language $\qquad$
The following versions of the Lord's Prayer are all contemporary and are all at least linked to English if they are not actually what we call "variants" of English.
(17a) Yo, Big Daddy upstairs, you be chillin.
So be yo hood. You be sayin' it, I be doin' it in dis here hood and yos. Gimme some eats...
(17b) Hello, Dad, up there in good ol' 'eaven, your name is well great and 'oly, and we respect you, Guv.
We hope we can all 'ave a butcher's at 'eaven and be there as soon as possible: and we want to and do what you want, Guv, 'ere on earth, same as in 'eaven. Please give us our Uncle Fred to keep the ribs apart today...
(17c) Oor Faither wha bides in heiven, hallowt be thy name;
Thy Kinrick come; thy will be dune, in the yird, as in the lan o' the leal.
Gie us wir breid ilk day...
(17d) Papa bilong mipela, yu stap long heven. Nem bilong yu i mas i stap holi. Kingdom bilong yu i mas i kam. Strongim mipela long bihainim laik bilong yu long graun, olsem ol i bihainim long heven.
Givim mipela kaikai inap long tude...
(17e) We Papa een heaben, leh ebrybody hona you nyame cause you da holy.
We pray dat soon you gwine rule oba all ob we. Wasoneba ting you da want, leh um be een dis wol, same like e be dey een heaben.
Gee we de food wa we need dis day yah an ebry day...
(17a) and (17b), African-American Vernacular English and British Cockney, are considered "variants" or dialects of English. They are part of this conglomerate of variant forms called English to which the standard forms Received Pronunciation or Standard British English and General American English also belong, although both are often understood to be (proper) "English" as such; for linguists, however, they are variants or dialects like Cockney or AAVE, although they have considerably more social prestige. Variants may differ from each other in terms of vocabulary, even with slang expression meant to confuse outsiders - similar to (12) - such as the Cockney Rhyming Slang expression Uncle Fred which means bread. (17c), Scots, Doric or Lallans poses a bit of a problem, because it is sometimes considered a variant and sometimes a separate language, just like Swiss German and Standard German. There may well be a more marked difference between variants of English on the one hand and English and Lallans on the other. The German sociolinguist therefore created terms that reflect this state between variant and separate language, i.e. "semi-language" (Halbsprache) or "language with a distance" (Abstandssprache) (cf. Kloss 1967). Needless to say that such distinctions are rather problematic and views differ between linguists, who tend to use scientific criteria and speakers of such codes, who for ideological reasons may emphasise differences or deny them for "national(istic)" divergence or cohesion. ${ }^{1}$ (17d) and (17e) are not normally considered forms of English, but they are so-called English-based creoles, the first being Tok Pisin, spoken in Papua New Guinea, the second is called Gullah and is spoken by African Americans, former slaves, in the low-lying areas between Charleston, South
${ }^{1}$ An example for the former is the separation into Serb and Croat of what was Serbo-Croatian until the 1990s. An example for the latter was the claim of the Italian Irredenta under Mussolini that Raetoromansh was an Italian dialect and the Rumantschia therefore belonged to Italy.

Carolina, and Jacksonville, Florida, and the islands off that sea coast (South Eastern US). Creoles arise from so-called pidgins, which are highly simplified forms of language that allow speakers from two different languages, usually one of them culturally or economically dominant and thus used more widely (e.g. English, French, Spanish, Portuguese, Arabic, etc.), the other spoken locally, to communicate with each other. They use a small stock of vocabulary, usually from the dominant language, with the meanings extended to cover a wide variety of related meanings ${ }^{2}$ and their sentence structure tends to be very simple and based on what the speakers' sentence structure would be like. Once these simplified languages, often used for trade or limited communication, are learned by a new generation as a first language, they become more complex in terms of vocabulary and they become more fixed in their sentence structures. In summary, whereas (16) demonstrate how English differs over time, (17) shows differences in terms of and also, often implicitly, in terms of social stratification.

A final feature of language, and one that as students of language and literature we are clearly familiar with is its use for (cultural) enjoyment.

## (18) missed

```
out of work
divorced
usually pissed
    he aimed
    low in life
    and
        missed
        Roger McGough
```

The poem by Roger McGough plays with meanings and concepts like aims we may have in life, that we may miss a target we aim for and the fact that we usually describe worthwhile things in terms of height and failure with in adjectives like low; but it clearly also uses sounds such as alliteration in "low in life" as well as rhyme "pissed" and "missed"
 with a degree of playfulness not associated with a simple transmission of information. An important feature of language, especially for those who enjoy literature, is that it represents a source of enjoyment and even fun.

### 1.1.6 Types of language

In linguistics we can look at different types of language. The following list is by no means exhaustive, it is simply intended to give a general idea of what kind of language a linguist
${ }^{2}$ bilong thus means, belong, of, along; pela - from fellow - is person in the widest sense: tripela would mean three. "Рара bilong mipela" therefore means "my/our father" "kingdom bilong yu" means "your kingdom".
may explore. The most obvious forms of language that would come under consideration, especially for developing a grammar for use in education is represented in (19).
(19a) Our centre has made every endeavour not to marginalise any members of this neighbourhood.
(19b) Our center made every endeavor not to marginalize any members of this neighborhood.

Although (19a) and (19b) look identical at first glance there are noticeable differences. (19a) represents $\qquad$ whereas (19b) is an example of
$\qquad$ The difference lies mainly in orthography, but also in the more widespread use of the present perfect represented in (19a).

Another type of language of interest in linguistics is exemplified here:
(20a) Y'all get yo sorry asses ouda this here car.
(20b) Youse be’er bugger of oot av this coach.
The meaning is the same in both, a speaker is telling a group of people to leave a section of a train. (20a) has typical features of Southern American $\qquad$ with a y'all as a you plural, which is unavailable in the standard, whereas (20b) with youse as the same pronominal reference is typical a Scottish or an English $\square$ from the Border area. Other features seem to indicate the same region but as this is not given phonetically such an assumption must remain speculative. Other difference are the reference to the section of the train car vs. coach and the expression of impatience with the addressees.

A similarly different use of items of vocabulary and grammatical features is in evidence in (21):
(21a) Would you be so kind as to vacate this carriage.
(21b) Youse be'er bugger of oot av this coach.
Here the difference between the two ways of expressing the same concept is one of
$\qquad$ (21a) represents an elevated and somewhat formal mode of expression, (21b) can be seen as rather informal. What is perhaps more important here, rather than the difference in style may also be that the two versions represent a difference in social markers. In this case we talk about a

Various forms of expressing oneself which owe nothing to either region or social class can also be observed in the way individual people express themselves.
(22) My sufficiency has been elegantly suffonsified.
represents such a highly individualistic way of expressing oneself. Anecdotally this example was used by a grandparent of an acquaintance to say "I'm full-up", which is sometimes expressed by the rather overly formal "I have had an elegant sufficiency". The technical term for such an individualistic way of speaking, including with the creation of the word suffonsified, a so-called neologism, is $\square$

So far we have considered forms of English. Other kinds of language that we may study are
(23a) Ayr ain t’ayns niau, casherick dy row dt'ennym.
(23b) Ár n-Athair, atá ar neamh, go naofar d’ainm
(23c) Ar n-Athair a tha air nèamh, gu naomhaichear d' ainm.
All three examples belong to a group of Celtic languages known as the Goidelic group. (23a) is Manx, the language of the Isle of Man, (23b) represents Modern Irish and (23c) expresses the same meaning Scots Gaelic. Whereas Modern Irish and Scots Gaelic still have first language speakers, although in ever shrinking numbers, Ned Mandrell, the last known speaker of Manx died in 1974. In other words, Irish and Gaelic are $\qquad$ languages, Manx with no first-language speakers has to be considered a $\qquad$ language, like Latin or Ancient Greek.

What also commands considerable interest among language lovers are languages like (24) and (25) but for different reasons.
(24) Ash nazg durbatulûk, ash nazg gimbatul, ash nazg thrakatulûk agh burzum-ishi krimpatul.

J.R.R.Tolkien, a medievalist created a whole range of languages for his Middle Earth, for which he used his expertise in Nordic and Celtic languages, "Black Speech" being one of them. Other examples of languages created like this are Na'vi for the film Avatar, Klingon in the Star Trek series and Dothraki in the HBO series Game of Thrones. This is different, however, for
(25) La knabo vidis la nigra hundo.
which is one of several language created with the purpose to make communication between speakers of different mother tongue easier. Esperanto mixes various European languages and has a very simple inflection system free of any "exceptions" that make life difficult for learners of natural language. Black Speech, Na’vi, Klingon, Dothraki, etc., are often also constructed by or with the help of linguists, but for "cultural" reasons. What they all have in common is that they are all $\qquad$ languages.

Each surah in the Koran except for the $9^{\text {th }}$ begins
(26) Bismi Allahi arrahmani arraheem


The Koran is clearly a religious text but it is also held in high regard by more secular thinkers for its fine writing. In other words, it represents not just a holy scripture but it also is seen as an instance of $\qquad$

Although the same to a degree applies to
(27) Glory be to God on high

And in earth peace, goodwill towards men,
We praise thee, we bless thee, we worship thee, we glorify thee, we give thanks to thee, for thy great glory
O Lord God, heavenly King,
God the Father Almighty.
there is something that is a level of archaic usage alongside its specific place in the religious ceremony - it is a hymn - that is its distinguishing feature. Because of this, (27) represents an instance of $\qquad$ language.
The following example is interesting to a student of language for a different reason:
(28a) Patrons are kindly requested to refrain from smoking.
(28b) No smoking
Both (28a) and (28b) have the same meaning but they express it differently. To be more precise there is a difference in terms of $\qquad$ or $\qquad$ with the language in (28a) being more $\qquad$ whereas in (28b) it is rather more $\qquad$
Although the following are also two ways to express the same concepts in English there is a sizeable difference between them.
(29a) a bilabial velaric click / a voiced glottal fricative
(29b) smacking your lips / moan or sigh
(29a) would mean nothing to a non-linguist or to someone without any knowledge of vocal technique or anatomy. (29b) is much more accessible to language users in general, but the terms also present less detailed information. Whereas (29b) expresses the concept in laypersons' terms, (29a) requires the knowledge of specialised, subject-related vocabulary. It is an instance of $\square$ or $\square$ language/terminology.

The following examples also express the same concept in different ways.
(30a) In the course of the relentless bombing huge numbers of defenceless women and children were blown to bits.
(30b) In the bombardment there were heavy civilian casualties.
(30c) In the servicing of soft targets there was collateral damage.
(30b) presents the information in the least "engaged" terms, doing so relatively unemotionally. (30a), by contrast, quite obviously shows the considerable involvement of the passionately indignant speaker whereas the speaker in (30c), by avoiding words like "bombardment" and by not referring to people or to the loss of life, can refer to the traumatic events avoiding or at least downplaying what might arouse a reaction of disgust or anger in the listener. What we are confronted here is $\qquad$ language vs.
$\qquad$ and/or or distanced use of language.

Another area of language study is to consider what the typical elements are in the language used in specific contexts or fields
(31) In the next game, from 30-30, he put a forehand wide and then another half way up the net. It was the first of seven breaks of the Federer serve as he squandered that break in the first set and then a double break in the second.

Several items of vocabulary, but also collocations like "put a forehand wide" or "squander a break" that clearly identify this excerpt from the bbc.co.uk website as a text about

Even if we do not recognise
(32) I wandered lonely as a cloud

That floats on high o'er vales and hills,
When all at once I saw a crowd, A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.
as Wordsworth's probably most famous piece of writing "The Daffodils", the rhymes, the regular rhythm but also imagery like the "crowd" or "host" of flowers "dancing" in the wind as well as the line breaks characterise this instance of language use as the language
of $\qquad$
The next example,
(33) Removing the apical buds removes the source of growth-inhibiting chemicals, so the buds behind it are able to grow into shoots.
may sound rather confusing to anyone who does not know anything about pruning fruit trees. The reference to "buds", "growth" and "shoot" however are an indication that this text is about $\qquad$
There are also pointers in (34) that make it clear what kind of a text type this is:
(34) so if your message ain't shit, fuck the records you sold cuz if you go platinum, it's got nothing to do with luck it just means that a million people are stupid as fuck

The orthography ("cuz"), the grammar and vocab ("your message ain't shit"), the choice of words in general, but also the rhythm and rhyme, make it clear that this excerpt must be
a


There are also "pointers" as to what kind of language we are concerned with in
(35) Printers that don't use proprietary vendor codes communicate with computers using one or more of three major printing protocols. The communication is done over a hardware cable that can be a parallel connection (printer port) or a serial connection (COM port). ${ }^{4}$

Such pointers are words like "codes", "protocols", "hardware", "serial connection", etc. They clearly place this instance of language use in the $\qquad$ domain.

Pointers or a different kind help us identify the type of language we encounter in
${ }^{3} \mathrm{http}: / /$ rapgenius.com/Immortal-technique-industrial-revolution-lyrics\#note-54214
${ }^{4} \mathrm{http}: / / d o c s . f r e e b s d . o r g / d o c / 4.3-R E L E A S E / u s r / s h a r e / d o c / e n / b o o k s / c o r p-n e t-g u i d e / x 28 . h t m l ~$
(36) Man, you're like a total breadhead, that's such a bummer.

Here it is expressions like "breadhead" to refer to someone who is concerned with (earning) money and "bummer", a turn-off, that are reminiscent of the way young people spoke in the second half of Sixties and the first half of the Seventies. Either of these expressions are no severely dated and used mainly for comical impact. Interestingly enough, "total" is still used as an intensifier and so is the marker "like". The selective datedness of some elements and the continued vigour of others are typical for this kind of language use, of what is often referred to as $\qquad$ in particular $\qquad$ which sounds really odd ("like totally weird") when used by the wrong people at the wrong age.

The pointers in
(37) ru smart bcoz i need some1 smart :)
are of a very different nature. First of all, unlike the other instances of language use, this clearly relies on being a written medium as "r", "bcoz" and "some1" cannot be readily pronounced. The smiley emoticon also is only possible in a written medium. Furthermore, this instance of language use relies on brevity as a necessary feature, something that is fairly unique to texting with its constraints in terms of characters and the traditional awkwardness of composing text messages with a number pad. But like texting also emails between friends or contributions to chats and instant messaging rely on speed and thus brevity, for which a certain amount of orthography and punctuation is sacrificed, but compensated for with the codified use of symbols to express how the message is to be taken, similar to a facial expression in oral face-to-face communication. This text type therefore shares features of informal oral interaction and written language, which is typical for $\qquad$
Other types of language we might want to study are directly linked to specific speakers and the abilities or limitations they typically show. Here two examples will have to suffice. The first is an interesting instance because without further information it is not clear if it is an infant or her/his carer that would say
(38) Milk allgone?
to express that there may be no more milk. Small children's way of speaking is quite unique and it usually goes through a number of stages that can be predicted quite accurately. (38) is relatively typical of a first attempt by infants to combine what they consider units of meaning, thus laying the groundwork for sentence building to follow later on. Very often carers will imitate such combinations as in (38), leading to the possible question whether it is the carers that are responsible for some typical combinations as we have it in the example. We characterise such instances of early language use as $\square$ and the way in which carers may speak to children as $\qquad$
Another instance of language use specific to certain speakers manifests itself in
(39) Well this is ... mother is away here working her work o'here to get her better, but when she's looking, the two boys looking in the other part. One their small tile into her time here. She's working another time because she's getting, too.

Here a patient with a brain lesion is attempting to describe a picture in which a mother in the kitchen ${ }^{5}$ is drying the dishes while two children are stealing some cookies behind her back. Without this information, utterance (39) is virtually incomprehensible, this instance of language use being an example for $\qquad$ in this case $\qquad$ language.

To conclude this rather sketchy tour of the kinds of language or types of language use we can research as students of language we also need to take into consideration the various examples of (16) and (17) as representative for the use of language over time and in very different regions of the Earth.

### 1.1.7 What does language consist of?

In order to be able to develop an understanding of how language works, in other words, to study the linguistics of a given language (English in our case) we need to break the phenomenon down into manageable elements. Each of these elements might represent a field of linguistic study. The table below (once again, not exhaustive for reasons that will become clear in 2.1) represents a possible way in which we can break an individual language down into such elements.
1.

- [p] [b] [t][d] pbtd pbtd
- pen / ben / ten / den

2. 

- pen / pens / penned / penlike / pen-friend / penman / penmanship

3. 

- the pen
- the mighty pen
- the pen is mightier than the sword
- she penned a first novel, which was about her family, when she was in her early twenties.

4. 

- pen: 1 (noun): a) a writing implement, b) an enclosure for animals, c) an enclosed play area for toddlers, d) a prison, e) a female swan 2 (verb): a) write a literary text, b) enclose or keep in a pen

5. 

- That the pen be mightier than the sword may be counter-intuitive. There are several instances in history, however, where a tract or a treatise has at least contributed to unleashing momentous events, for instance Abbé Sieyès pamphlet "Qu'est-ce que le tiers-état?" (What is the Third Estate?) and the beginning of the French Revolution ...
${ }^{5}$ The picture can be seen at http://www.rachaelanne.net/teaching/psych/aphasia_HO.doc

| 6. |  |
| :--- | :--- |
| - "Yo ol' man, he been in de pen too long." <br> - Your progenitor's confinement to a correctional facility has been of a considerable <br> duration. |  |

A slightly different approach would be to look at the elements which a language consist of in somewhat less lay-person's terms. This will be done in the following subsection 1.2.

### 1.2 Linguistics as the Study of Language

### 1.2.1 A basic division: theoretical study and applied exploration

So far we have encountered a difference in the way in which linguists might approach their subject, i.e. in terms of whether they look at a longitudinal development of a given language or whether they explore the state of a language at a specific point in time, in other words, whether they choose to look at language diachronically or synchronically. However, there is also another division: Do we look at language as an entity, what this entity consists of and how its component parts work, or do we look at language or languages as a phenomenon in use and therefore linked to its/their users.

The former approach assumes an idealisation of the language as a system, as well as an artificial, idealised language user (Chomsky in fact talks of the "idealised speaker listener"), who has perfect mastery of the language and does not make mistakes; furthermore, this speaker is monolingual. The focus is on explaining how the language and its component parts work, the sound system, the way in which the language is written, the way its words are constructed, how words are combined into meaningful and well-formed utterances, what its words mean and how the language logically has meaning. What all this suggests is that this approach is rather theoretical.

If this first approach could be compared to pure or theoretical maths, by contrast, the second approach is more like practical physics in the sense that it uses the theoretical tools of pure maths, but applies them to real life phenomena that do not always comply with the theory but whose methodology and the findings are often close enough to it to allow sensible conclusions. Thus the second approach looks at a variety of issues, listed here a little unsystematically: how speakers acquire a language, how they may lose it, how speakers can be taught other languages, how they use language to structure relationships, what we can gather from the way people speak about their origins, their background, their aspirations, how language is stratified and how it changes through negotiation, how speakers of different variants of a language or of different languages interact with each other, etc.

Whereas the first approach looks at language in its micro-elements, the second approach looks at language in more comprehensive, and by definition more interdisciplinary terms.

### 1.2.2 From language to linguistics

If we consider what we have discussed so far, we can broadly list the elements that make up a language into two categories, which largely correspond with the notion of the basic division mentioned above. We can see language as an entity in itself with an underlying system that works on a number of levels, from the basic building blocks of sounds and letters to the way in which we form texts. On the other hand, we can analyse language in terms of how it is manifests itself in practice, when we will see it as a fluctuating, selfdefining system that is constantly negotiated in its use and that is inevitably subject to variation and change, which comes into existence because of the way the individual speakers use it.

A way to illustrate this and then to apply it to the fields of study in linguistics is the following table. We begin by listing the various elements in the two main categories of language (Table 2-1); this approach is loosely based on Crystal (2009: 2-3), which is a very useful starting point.


Table 1-1 Language in terms of elements and use/variation (based on Crystal 2009)
If we take the above, on the one hand, as representing the elements that make up language as an entity, and, on the other hand, the ways in which language is used, which inevitably leads to practical deviations from the theoretical "idealisations", and deduce from this model of language elements and language use the various areas of linguistics (table 2-2).


Table 1-2 Fields of linguistics
However, as with all neat subdivisions, of course, the reality is somewhat more complex and there are areas of language analysis that fall into either or both categories. Consider, for instance, language philosophy, which explores areas that can belong to either of the categories, depending on the focus of the language philosopher in question. The same applies, perhaps even more so, to pragmatics and text linguistics as they may well focus on language in a relatively abstract manner and use a methodology that relies to a considerable degree on language theory, but clearly focus on language in use. However, apart from methodological considerations, in the disciplines of the left-hand column there is often strong tendency towards formulating findings in terms predictability. To put it more simply, in theoretical linguistics we often look for models that can explain certain language phenomena, also in terms of language manifestations that have not taken place yet. Theoretical linguistic analysis tends to work with idealised forms of language (consider Chomsky's idealised speaker listener) and often with relatively limited data, which need not be linked to a specific instance of language use. It has been said, for instance, that Chomsky analysed language with an amount of data which could be fitted on a blackboard.

The disciplines in the right-hand column, by contrast, clearly often also aim for predictability, but, as it can be quite elusive at times, it need not be the final objective in research; predictability is often limited to tendencies because of the complexity and diversity of language in use and the situations in which this occurs, which often is so individual and so specific that a generalisation, which is the aim of theoretical methods, is simply not possible. For this reason, one could argue that these two areas referred to above, pragmatics and text linguistics could be represented also in the right-hand column.

Considering the interdisciplinary nature of the study of language, the fact that we use language in so many fields that go beyond the outline presented in tab. 2-2, it comes as no
surprise that what can be covered in linguistics is very varied indeed. The illustration below (fig. 2-1) represents the dual approach of section 2.1: the study of language theory as the central element of the circle, the exploration of how we can apply linguistic findings in practice shown in the outer circle as further fields of linguistics. It does so in considerably more detail than the model presented above, but as many, indeed, most of these areas of application of linguistics are highly specialised, we can simply acknowledge for the moment that they exist but their discussion in an introduction of this kind would lead too far.


Figure 1-5 The Interdisciplinary nature of Linguistics (www.philology-upatras.gr/en/department/glossology)

### 1.2.3 Focus of the next chapters

In this Introduction to Linguistics, we will focus largely on the theoretical approach to the study of language. We will follow the system presented earlier (in 1.1.7). However, we will (at least in the parts where there is a choice between spoken and written manifestations of language) concentrate on the spoken variety. This means that graphology and the study of writing systems, fascinating as it is, will be left to other study courses and/or to the
individual student. An interesting and entertaining overview is presented in The Cambridge Encyclopaedia of the English Language by David Crystal (2005).

The sequence of topics of this introduction will look like this:

### 1.2.3.1 Sounds of language I: Phonetics

We will firstly study how speech sounds are produced, look at how we can describe them and then develop the system for representing speech sounds in writing.

### 1.2.3.2 Sounds of language II: Phonology

In a second step we will look at how speech sounds are part of a specific system, that of the English language: how do they relate to each other, what are the ways in which they can/cannot be combined. Here we will also look at how speech sounds combine into larger units and explore patterns of which elements will be particularly noticeable.

### 1.2.3.3 Building blocks of words: Morphology

In Morphology we will examine the way in which words in English are composed. We will also find about the various categories which words can belong to and how they can change from one such category to another. Lastly we will consider the strategies English uses to create (new) words.

### 1.2.3.4 Word meaning: Semantics

Although meaning clearly goes beyond the word level, for the time being we will start by looking at what words express and how they do this. In this consideration we also are concerned with the various layers of meaning, such as the objective vs. the emotive meaning of words, but we will also consider variation, sameness and overlap of meaning as well as opposite meanings of certain words.

### 1.2.3.5 Combination rules for phrases and sentences: Syntax

In this part of the introduction we will look at the way words are combined into phrases and what the constituents of sentences are; this is the structure of sentences. This will be tied in with the way in which we can assign functions in the sentence to these structural elements. Clearly there is a fair amount of overlap with the Modern English Grammar course and cross-references will be made.

### 1.2.3.6 Beyond the sentence/ turns in conversation: Pragmatics

This part deals with the way in which sentences are combined into discourse or into a conversation (although, of course, sentences in writing tend to be overtly closer to the laws
of syntax than utterances in conversation, which are often characterised by false starts or elliptical production of sentences. ${ }^{6}$

Pragmatics is also concerned with language production in an actual situation such as in the conversational exchange between interlocutors (people involved in a conversation, speaking, listening and thus interacting with each other). In this context we will learn that in order to express a concept we may never actually use any words that refer to this concept.

### 1.3 Key Terms

| systematicity of <br> language |  |
| :--- | :--- | :--- |
| creativity of <br> language |  |
| Langue / Parole |  |
| Competence / |  |
| Performance |  |
| game analogy |  |
| grammar |  |
| prescriptive / |  |
| prescriptivism |  |
| descriptive / |  |
| descriptivism |  |
| well-formedness |  |
| diachronic |  |

${ }^{6}$ i.e. sentences that are not complete in a prescriptively grammatical sense.
$\square$
pragmatics

### 1.4 Exercises and questions

1. Using the game analogy,
a. what is the de Saussurian concept for an individual game that is played?
b. what is the Chomskyan term for the rules of the game?
c. what would the term parole correspond with in Chomskyan terms?
2. Language is both systematic and creative.
a. Which concepts show the systematic nature of language?
b. Illustrate in what way language is creative.
3. If you see a book with the title English Grammar for Foreign Language Learners what type of grammar would you expect?
4. Which approach to the study of language do you expect from the following book titles:
a. African-American Vernacular English: developments since the Second World War diachronic / descriptive
b. The Language of Gaming Chat Rooms
c. English from Beowulf to the Canterbury Tales
d. Accents and Speech Styles of Beatles Songs from 1962 till 1970.
5. What can you say about these utterances?
a. did he go yet?
b. has he goed yet?
c. he gone yet?
6. In the following identify what kinds of language you are dealing with and what the cues are that tell you this.
a. ... The soil tends to be warmer which promotes root growth, and - unlike with spring planting - there's not the potential of a long, hot, dry summer facing the young upstarts.
b. Turn the idle speed adjuster screw next to the throttle cam with a flat head screwdriver until the engine idles smoothly without stumbling at the lowest possible engine revolutions per minute. Turn the screw clockwise to reduce idle speed and counterclockwise to increase idle speed.
c. ... the knight's unique, non-straight pattern of movement creates two advantages: it allows a knight to attack other pieces without fear of being captured by them; and it enables a knight to make jumps and deliver threats that are surprising to the eye and so are easy to overlook.
d. Play the Tinker Tailor Soldier Spy soundtrack and the NAD glides through the elegant and mournful music with a good attention to detail. Play the track Esterhase, and each note is delivered with precision and subtlety.

### 1.5 References

Crystal, David. 2009. The Cambridge Encylopedia of the English Language, Second Edition, Cambridge: Cambridge University Press
Kloss, Heinz. (1967) Abstand languages and Ausbau languages. Anthropological Linguistics, 9(7): 29-41
Wardhaugh, Ronald. 2010. Introduction to Sociolinguistics, Sixth Edition, Maldon, Oxford, Chichester: Wiley-Blackwell.
Wolfram, Walt. 1998. Black children are verbally deprived. In Bauer and Trudgill (eds.), Language Myths, Harmondsworth: Penguin.

## Online Sources of the exercise texts (accessed in June 2014):

http://www.thedailygreen.com/living-green/blogs/save-money/fall-gardening-tips-1011
http://www.ehow.com/how_4577352_tune-motorcycle-carburetor.html
http://www.chesstactics.org/index.php?Type=page\&Action=none\&From=2,1,1,1
http://www.whathifi.com/review/nad-c546bee

## 2 Sounds of language I: Phonetics

### 2.1 Introduction: Phonetics vs. phonology



## What you know/can do after working through Chapter 2

- You know the terms needed to describe consonants and vowels
- You can write out the IPA symbols for the speech sounds of English from the descriptions of consonants and vowels with the above terms
- You can transcribe simple English words into IPA including stress markers.

We can look at the study of how language sounds in different ways, firstly, in terms of the individual speech sounds, how they are produced, transmitted and heard, and, secondly, in the ways in which these speech sounds are realised and combined in a specific language. Although the borderline between the two areas is fluid and there are overlaps, we can say that the former is the focus of phonetics, the latter is what phonology deals with (see Chapter 3).
Given that we can look at individual speech sounds in terms of how they are produced, how they are transmitted and how they are heard, we make a distinction between three types of phonetics articulatory, acoustic and auditory. In this course we will focus on articulatory phonetics as this field can be explored without complex equipment. It relies largely on careful self-observation, a very useful skill in many branches of linguistics.

There are two issues we will focus on in this present chapter: how speech sounds can be represented and, related to this, how they are produced and thus how we can describe them.

### 2.2 Representing spoken language

The orthography (writing system) of any written language has evolved over time but it rarely does so in a systematic manner. Consider that English has always been an acquisitive language (indeed, most language are in order to keep up with the needs of new concepts entering into the discourse), which has led to new words being introduced into the lexicon. Sometimes the


Figure 2-1 English as a "magpie" language; perhaps it would be more apt to say, however, that English acquires loose vocabulary, which explains the orthographic vagaries. spelling has been "anglified" sometimes it has not. Pronunciation has changed over time, spelling may or may not have followed suit. This

Figure 2-2 An example for the vagaries of English spelling
means that spelling in English is notoriously unpredictable. The playwright and activist George Bernard Shaw (1856-1950), whose play Pygmalion, shows his interest in language, in particular phonetics/phonology and class, was fundamentally concerned with this. He was a keen supporter of the spelling reform for English and is often credit with suggesting that the word "ghoti" can be pronounced as $\qquad$ (although according to Zimmer 2010, there is little evidence for him being the first author to use this example. However, the spelling could also indicate a word whose pronunciation would be completely silent.

More examples for the inconsistency
between English orthography and pronunciation can be shown in the excerpt from a well-known poem called "The Chaos" by Dutch writer Gerald Nolst Trenité. What the whole poem shows is that different spellings can have the same pronunciation and the same spelling can have very different pronunciation.

If we want to study a language we are not familiar with, one of the first things we do is to learn how words are pronounced. However, the question is how this pronunciation is represented. The following list is taken from a Peruvian book called Apprenda Ingles en 15 dias.

## The Chaos

Dearest creature in creation, Study English pronunciation. I will teach you in my verse Sounds like corpse, corps, horse, and worse. I will keep you, Susy, busy, Make your head with heat grow dizzy. Tear in eye, your dress will tear. So shall I! Oh hear my prayer.

Just compare heart, beard, and heard, Dies and diet, lord and word, Sword and sward, retain and Britain.
(Mind the latter, how it's written.)
Now I surely will not plague you
With such words as plaque and ague.
But be careful how you speak:
Say break and steak, but bleak and streak; Cloven, oven, how and low,
Script, receipt, show, poem, and toe.

Finally, which rhymes with enough -Though, through, plough, or dough, or cough? Hiccough has the sound of cup.
My advice is to give up!
Figure 2-3The Chaos showing more vagaries of English spelling

| Jueves (9) |  | zórsdei |
| :--- | :--- | :--- |
| estaciones |  | sísons |
| verano |  | samer |
| otoño |  | ótom, fol |
| invierno |  | uínter |
| quarto |  | forz |
| quinto |  | fifz |
| sexton |  | sicsz |
| el fuego (13) |  | di-fáia |
| el agua | di-uótoe |  |
| la tierra |  | di-oerz |
| el aire | di-ar |  |
| serrucho o serrote (14) |  | jammer |
| carnicero (20) |  | buchoe |
| cigarrera | sígar-ques |  |

Table 2-1 English Phrase Book with pronunciation based on Peruvian Spanish

## Un Petit d'un Petit

Un petit d'un petit
S'étonne aux Halles
Un petit d'un petit
Ah! degrés te fallent Indolent qui ne sort cesse Indolent qui ne se mène Qu'importe un petit d'un petit Tout Gai de Reguennes.


This problem can also be seen if we look at a text in a language we are familiar with, but given in the orthography that would correspond to the pronunciation in another. In Figure 2-4 a well-known English nursery rhyme is presented using French orthography; what it is becomes obvious if we read the poem out loud and with French pronunciation.

What these examples demonstrate is that if we use the orthography of a given language to represent how another language is pronounced, we create several problems:

| Problem | Example | to represent |  |
| :--- | :--- | :--- | :--- |
| 1. <br> The language uses more than one letter to represent <br> one sound. | (R)eguenne |  |  |
| 2. | The language uses one letter to represent different <br> sounds in the other language. | ótom, fol <br> zórsdei |  |
| 3. | The language does not have an equivalent for a <br> specific speech sound in the other language. | Zorsdei / <br> jamer <br> sígar-ques |  |
| 4.A combination of letters to represent a sound in one <br> language is different from the sound represented by <br> the same combination in the other language. | buchoe |  |  |

Table 2-2 Problems of using one language to represent speech sounds of another language (Spanish or French for English)
Clearly then, no orthography of any one language will work as a guide to the pronunciation of another language whose sound system we might want to present. This means that if we need to represent the speech sounds of any given language, we need to have a system for writing speech sounds that fulfils four criteria:

|  | Criterion | Problem |
| :--- | :--- | :--- |
|  |  | $1 / 2$ |
|  |  | 3 |
|  |  | $1-4$ |
|  |  | $1-4$ |

Table 2-3 Criteria for a workable alphabet to represent speech sounds

### 2.3 How to describe speech sounds

Traditionally we differentiate between consonants and vowels. Consonants occur together with another sound (hence the name which comes from Latin consonare "to sound along/with") and vowels carry sound by themselves they are "vocal" (which is the root of
the word). In our discussion we start with consonants because they are relatively easy to describe, even though, as we shall see, they are relatively complex in terms of their features. We will then have a look at what vowels are and how we can describe them, which is less clear-cut as any researcher into the pronunciation of dialects will point out. The differences between an /a/ sound in different Swiss dialects can be really quite remarkable and distinctive (consider how people from St. Gallen would pronounce "Sanggalle" vs. Bernese "Sanggaue")

### 2.3.1 Consonants

We can visualise the production of consonants (and to a certain degree also vowels) by considering how notes are created on a musical instrument, in particular on a wind instrument like a saxophone. Firstly, we need an energy input to initiate the sound, secondly, we need an element that can be made to


Figure 2-5 Sound production on a saxophone vibrate and thus create the sound, thirdly, we use certain valves to vary the sound and lastly we need a resonance body to amplify the sound.

Therefore we consider four elements as being general part of speech sound production:

### 2.3.1.1 Initiation: Air

If we put the tip of our tongue behind the upper front teeth and breath out (or even in) with our lips parted, we produce a consonant sound, the sound being $\qquad$ Keeping our tongue, our teeth and lips in the same position, but stopping the airflow results in the immediate termination of the sound. In this way we can see that one important ingredient in the production of a speech sound is the airflow.

For the vast majority of speech sounds the airflow comes from the lungs, which means these speech sounds are pulmonic (from lat. pulmo, lung), and the speech sound is produced when the air flows outward, i.e. the airflow is egressive (from lat. egressus, going out). However, there are other sources of air, and the airflow can go in the opposite direction. For instance, by pushing up the Adam's apple, the so-called voice box, upwards, air is also pressed outwards, which is another way to produce an airflow. Such speech sounds do not occur in Western European languages and are relatively rare; they are called ejectives. Finally a third way in which airflow can be initiated works as follows: we create a vacuum behind our lips, in the area at the side or on the tongue. By pulling the soft area at the roof of the mouth, known as the velum, backwards, we increase the pressure in this vacuum, which is then suddenly filled with air flowing into the mouth with explosive force, creating what is known as a click sound. Such sounds are ingressive, as the air flows inward, and, because they use the velum, they are called velaric clicks. A pecked kiss is one such sound, another is the sound we may make with the tip of our tongue and the back
of the teeth or the teeth ridge when we disapprove of something or the clicking sound we make at the side of our mouths when we want a horse to get going.

### 2.3.1.2 Vibration: Phonation, voice

There are two ways in which we can pronounce most consonants. We can feel the difference if we put our fingertips or the palms of our hands on our Adam's apple, our voice box, the so called larynx and produce the $/ \mathrm{z} /$ sound "buzz" and then the $/ \mathrm{s} /$ sound in "bus". The larynx plays a central role in breathing and speech. In rather simplistic terms, it has a lid on the top and two membranes, the vocal cords inside that can close almost completely in the middle or remain open so that air can pass through unhindered.

In terms of breathing it has two functions:

- it controls of the airflow during breathing
- it protects the windpipe from liquids or food morsels going down "the wrong hole"

In speech production it clearly has an


Figure 2-6 Vocal cords open during breathing and voiceless consonsants (left) vs. closed for voiced consonants (right) important function that we have already encountered in the comparison of the /s/ and /z/ sounds in "bus" and "buzz": It is responsible for the production of specific sound "colourings" in speech.

For our consideration the vocal cords (Figure 2-6) are probably the most important part of the larynx. They consist of a right and left cord, forming a "V" when viewed from above. During speech the vocal cords are brought close together. As the air passes by the closed vocal cords, they vibrate like reeds on a musical instrument and produce a vibration. This is known as voice. If it is present, in other words if there is vibration, we talk about a voiced, if it is absent about a voiceless consonant.

### 2.3.1.3 Manner and place of articulation

These are strictly speaking two parameters but they are closely related, which makes it acceptable to discuss them together. To return to the analogy with the saxophone, the way in which you press the valves and which valves are pressed affects how the note sounds. The same is true for consonants: the way in which and where they are produced clearly distinguishes one from the other.

### 2.3.1.3.1 Places of Articulation

Underlying all our considerations is the relative closure or opening somewhere along the tract from larynx to lips that creates the actual speech sounds. Such openings or closures are formed by what we call articulators, for instance, the tongue, the teeth, the roof of the mouth, the lips, etc. We can distinguish between hard or immobile and soft or mobile articulators. Closures or approximations are formed by mobile articulators touching or
approaching immobile ones except if both lips or tongue and the velum, the soft palate at the back of the mouth, are involved. Fig 3-7 shows all the articulators with numbers and the resonating cavities (to which we will return below) with letters, which tab 3-4 lists. The soft/mobile articulators are marked with an asterisk.

|  | articulator <br> (* soft) | descriptive <br> adjective |
| :--- | :--- | :--- |
| $1^{*}$ |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| $6^{*}$ |  |  |
| $7^{*}$ |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| $11^{*}$ |  |  |
| a |  |  |
| b |  |  |
| d |  |  |
| e |  |  |
| Resonation chambers or cavities |  |  |
| A |  |  |
| B |  |  |
| C |  |  |
| Tabe\| |  |  |



Figure 2-7 Places of articulation and resonating chambers/cavities

When we describe consonants we always mention where they are created and which articulators are involved; for this we use the adjective form.

### 2.3.1.3.2 Manner of Articulation

Articulators can be involved in range of approximation, from total closure with a release resulting in a small explosion of air via the forming of a narrow opening, which creates a turbulence in the air stream, a kind of friction of air and the articulatory elements involved in forming the opening mentioned, to a mere approximation of the articulators resulting in a sound that has almost vowel-like quality. ${ }^{7}$ Let us examine the various types of consonants

[^0]resulting from relative closure or opening in turns, starting with a complete obstruction and finishing with types of consonants resulting from a mere approximation.


Figure 2-8 /t/ /d/


Figure 2-9 /n/ (sound produced in the nasal cavity)


Figure 2-10 /s/ /z/
1.
 or $\qquad$ are created by a complete closure formed by the articulators, behind which air pressure builds up and is released with a burst. These speech sounds are very short and generally have a low level of sound. They can be voiceless or voiced. The velum is up, thereby blocking any air escaping through the nose; these speech sounds are characterised by being produced in the oral cavity. (cf. Figure 2-8) ${ }^{8}$
2. $\qquad$ are a second group. Like in the first group there is a total obstruction between articulators so no air can escape through the mouth. The central difference between these speech sounds and the previous group, however, is that they are produced with the velum down so the air can escape through the nose (cf. Figure 2-9). In contrast to the first group, also characterised by a total blockage of air in the mouth, these speech sounds can be as long as the speaker has breath. Furthermore, in difference to group 1 these speech sounds are characterised by being accompanied by voice. ${ }^{9}$
3. $\qquad$ are the result of a narrow passage in the air stream, an obstruction through which air can pass, creating a turbulence which results in the creation of this kind of speech sound. As above, these consonants can be voiceless or voiced, but in contrast they can be as long as the speaker has breath to hold them. If they are produced in the alveolar and post-alveolar region, they are characterised by a hissing sound and are therefore called $\qquad$ As above, the velum blocks any air escaping through the nose and the sounds are produced in the oral cavity. (cf. Figure 2-10)
4. $\square$ are created by the air stream getting a soft articulator to vibrate. One example, not used in normal Western European languages is the bilabial $\qquad$ or $\square$ which is the sound children often make when imitating a car. Similarly in Italian the $/ \mathrm{r} /$ sound is usually a $\square \ldots$ in the alveolar region as it may be in Scots. In some (Eastern) Swiss dialects and in the way in which Bernese upper classes (used to) pronounce the /r/ it is produced by a vibrating uvula. Like group 2 they are usually pronounced with voice.
5. $\qquad$ are a type of speech sounds created by a single and very short contact between the tip of the tongue or possible the tongue bent back (though not in English) and the alveolar dam. They are a minimal interruption of sound usually
${ }^{9}$ Although they can be pronounced with almost no voice (devoiced), especially at the end of a word.
used between two vowels. A typical example is the American pronunciation of the /t/ in city.
6. $\qquad$ are the combination of two sounds, the first belonging to group 1 and the second, produced in the same region or immediately next to it, belonging to the third group. In effect, in English we only encounter them in the pronunciation of the letter $j$ in jam or in a ch as in church. ${ }^{10}$ As the example shows, they can be either voiced or voiceless.


Figure 2-11/r/ as in read.
7. $\qquad$ are produced when the articulators approach each other, but do not get close enough to create an air turbulence. They are relatively close in their pronunciation to vowels (although there the distance between the articulators is even greater), which is the reason why they are sometimes referred to as $\square$. It comes as no surprise that they carry voice. English uses three: the /w/ in well, the /r/ in read (see Figure 2-11)and the /y/ in yard.

### 2.3.1.3.3 Central vs. lateral articulation



Figure 2-12 /l/ with the airstream passing on both sides of the tongue.

All the groups from 1 to 7 are characterised by the airstream passing centrally through the mouth, which is the usual direction for the air flow. However, some speech sounds are produced at the side of the mouth.
8. For English there is another type belonging to group 7, but unlike the ones in that group it is produced on the side of the tongue, whose tip is in contact with the alveolar damn. This sound, the $/ \mathrm{l} /$ is called a $\qquad$

### 2.3.1.4 Descriptive parameters for consonants

Our discussion so far has shown that we can describe consonants in terms of five parameters:

1. the $\qquad$
2. the $\qquad$
3. the $\qquad$
4. the $\qquad$
5. the $\qquad$
6. the $\qquad$
[^1]Out of these parameters some will always be mentioned (3 and 4), some will be mentioned if there is a possible contrast (2) and some are only mentioned when the exceptional occurs (1, 5 and 6).

### 2.3.1.5 Transcribing consonants

As we saw earlier, in order to represent pronunciation accurately we need an internationally accepted, language-independent writing system that has one exclusive sign for every sound in any language. The IPA, the International Phonetic Alphabet, fulfils all these requirements. In Table 2-1 we have on overview of all the symbols for the speech sounds with the ones used in English and related variants (with the addition of some that are important for other Western European languages) to be filled in.

|  | labial |  |  |  | apical |  |  |  | apical / laminal |  |  |  | dorsal |  |  | radical |  |  |  | glottal |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | bilabial |  | labio dental |  | Dental |  |  |  | postalveolar |  | retroflex palatal |  |  | velar |  | uvular |  | pharyngeal |  | glottal |  |
|  | v- | v+ | v- | v+ | v- | v+ | V- | V+ | v- | V+ | v- | v+ v- | v+ | V- | v+ | v- | v+ | V - | v+ | v- | v+ |
| plosive |  |  |  |  |  |  |  |  |  |  | t | d c | J |  |  | q | G |  |  |  |  |
| nasal |  |  | $\square$ | m |  |  |  |  |  |  | $\square$ | n | n | $\pi$ |  | , | N |  |  |  |  |
| trill |  | B |  | $1$ |  |  |  |  |  |  | $\checkmark$ | $7$ | J |  |  | $\square$ | R | $\square$ | $\square$ |  |  |
| $\begin{array}{\|ll} \text { tap } & \text { or } \\ \text { flap } & \\ \hline \end{array}$ |  | $1$ |  | $1$ |  |  |  |  |  |  |  |  |  |  |  |  |  | $1$ | $1$ |  |  |
| fricative | $\Phi$ | $\beta$ | f | V |  |  |  |  |  |  | S | Z | d |  | 8 | $1$ |  | ћ | § |  | ¢ |
| lateral fricative |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| approximant |  |  | $1$ | $v$ |  |  |  |  |  |  |  | む |  | $1$ | щ |  |  |  | $7$ |  |  |
| lateral approximant |  |  |  |  |  |  |  |  |  |  | $\sqrt{ }$ | 1 | $\kappa$ | / | L |  |  |  |  |  |  |

not in the table: /w/ ${ }^{11}$
Table 2-5 The pulmonic vowels in IPA

[^2]
### 2.3.2 Vowels

In comparison to consonants there are fewer parameters to describe vowels. However, whereas it is relatively easy to describe consonants, being equally accurate about the positioning of vowels is considerably more difficult. To begin with there are no points at which articulators are close together or in actual contact with each other to allow for anything like the precision with which we can describe places of articulation in consonants. This is because vowels are even more open than approximants, which are the most open types of consonants. There are approximations of areas of the tongue and the roof of the mouth, but these will differ for variants or, to put it more popularly, accents, and they might even differ for individual speakers of the same variant. As a result, most descriptions of vowels are approximations to the actual speech sound produced. ${ }^{12}$

### 2.3.2.1 Position

When we produce the sound one might write orthographically as "ah" we realise that our mouth is rather wide open and there is a muscular constriction rather far at the back of the tongue. By contrast, if we pronounce what could be written as "ih" the mouth is considerably less open and there is a greater muscular constriction somewhere near tip of the


Figure 2-13 Tongue position for /a/ and /i/ tongue. This suggests that there are two basic parameters,

- an open or low vs. high or close "opening" of the mouth
- a constriction towards the front or the back of the tongue, also of course with a possibility for this constriction being in a central region.
If we take the two sounds mentioned above as the extreme points of vowel articulation we can posit that they represent the two corners of a trapeze that are connected by the longer of the two diagonals. This is known as the vowel trapeze and represents a simplified way of positioning all other vowels in relationship to these two extreme corner elements.


### 2.3.2.2 The position of the lips

A third parameter can be explored if we observe our lips when pronouncing the first vowel in the two German words liegen and lügen. Moving between the two vowels only and without interruption shows us that both are in the same position, i.e. front and high/close, but the difference is created by the rounding of the lips.

[^3]

Figure 2-14 lip positions for unrounded and rounded vowels
create spread rather than simply unrounded lips, but lip-spreading does not have an effect on vowel production as audible as the difference between rounded or unrounded lips.

### 2.3.2.3 Other parameters

There are some more parameters to describe vowels but they refer to qualities that are not relevant for English. One is nasalisation, which plays a role in French: The only difference in the vowel pronunciation between fait and faim is the nasality added to the latter, where the velum is lowered so that part of the sound reverberates in the nasal cavitiy. This difference, which results in two words with different meanings, is said to be distinctive, a concept we shall return to when we explore phonology.

Another parameter not relevant for English is length. In some languages the length of a vowel may make a difference in meaning, but in English the difference in vowel length is always accompanied by a difference in the vowel quality. For instance the -i sound in "bean" (long) and "bin" (short) also differs in fronting and height. In German, the difference between hacken and Haken very largely resides in the length of the /a/.

One could also argue that tone might be a vowel parameter as there are languages where meanings between words differ if the same sequence of segments is pronounced with a different tone or pitch, i.e. a higher pitch, a rising or falling pitch, etc, for instance in Lao where the word moo can mean "friend" or "pork/pig" depending on the tone.

### 2.3.2.4 The vowel trapeze

The phonetician Daniel Jones (1881-1967) created an abstract vowel sound system, the so-called Cardinal Vowels, which are situated in a grid providing a reference for the placement of all actual vowels. Cardinal vowels (CV) are close to some vowels we may know in different languages but there will always be slight differences between an actual vowel and the abstraction that CVs represent.

The CVs are numbered consecutively and go around the circumference of the vowel trapeze twice. The convention is that unrounded vowels are printed on the left, rounded vowels on the right. What is perhaps noteworthy is that the numbering does not follow the logic of one circuit of unrounded and one of rounded vowels; both are mixed on the two
circuits. This is because Daniel Jones seems to have numbered the vowels according to the likelihood with which they appear in English or in Western European languages, which would account for the unrounded back vowels being the last in the list.


Figure 2-15 The Cardinal Vowels according to Daniel Jones

| CV | Symbol | Lip Position | Tongue constriction | front/back | Sample word |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | /a/ |  |  |  | $\mathrm{l} \underline{a}$ (F) |
|  | /a/ |  |  |  | dam (Dut) |
|  |  |  |  |  | but, luck (E) |
|  | /i/ |  |  |  | beat (E), sil (F) |
|  | /e/ |  |  |  | chez ( F ) |
|  | /ع/ |  |  |  | bet (E), wenn (Ger) |
|  | /b/ |  |  |  | sock (E), dom (Dut) |
|  | /0/ |  |  |  | hawk (E) |
|  | /0/ |  |  |  | beau (F) |
|  | /u/ |  |  |  | ou (F), gut (Ger) |
|  | /y/ |  |  |  | t $\underline{u}$ (F), für (Ger) |
|  | /ø/ |  |  |  | eux (F), Goethe (Ger) |
|  | /æ/ |  |  |  | heure (F), Götter (Ger) |
|  | /E/ |  |  |  | not distinctive |

[^4]
### 2.3.2.5 Transcribing "real" vowels

What is striking about Figure $2-15$ is the absence of any central vowels, in particular the one which is probably most widespread in English or in German, where it occurs in unstressed syllables or words, the so-called schwa represented as /ə/. It is a German spelling (as it was introduced into German by the Jakob Grimm) and a transliteration from the Hebrew, where it refers to a reduced or absent vowel.

Clearly, in order to be able to transcribe vowels we need an adapted vowel trapeze with the approximate positions of the vowels as they actually occur. What is more, we also need to be aware of the fact that there are other vowel sounds in addition to "pure" vowels or monophthongs, i.e. combinations of vowels, so-called diphthongs, which speakers mostly perceive as one speech sound.

### 2.3.2.5.1 Monophtongs in English

In English we differentiate between short and long vowels, which, as pointed out above, also differ from each other in position. An approximate presentation of the vowels within the vowel trapeze could look like Figure 2-16. It differs in some ways from the one supplied by the International Phonetics Association's positioning, which is more closely modelled on the CVs. It also includes a vowel not associated with English in the literature, but I feel that the $/ \mathrm{I} /$ in the transcription of [sitid] (seated) is more central than the generally used symbol would suggest, which should explain its inclusion here.

To explain the presentation of the trapeze, all unrounded vowels are in a square box, all rounded ones in a circle. Black shapes are vowels that are recognised as independent vowels of English (either in British or American English; more about this below); one could also describe them as full vowels as they occur in stressed syllables. In unstressed syllables or unstressed function words they are typically replaced by reduced vowels represented as light grey boxes. Dark grey indicates these vowels normally do not occur as monophthongs but are the starting sounds of diphthongs, which will discuss below.

To illustrate the pronunciation of English vowels it is useful to use British dialectologist J. C. Wells' (1982: 123ff) Standard Lexical Set. It is based on two reference accents, i.e. the standard forms of British and American English, and thus acts as a benchmark for dialectal differences in other variants of English. The terms we use to refer to these two reference accents are

- RP or Received Pronunciation, which Crystal (2008: 404) defines as "the regionally neutral accent in British English, historically deriving from the prestige speech of the Court and the public schools [...] indicat[ing] that its prestige is the result of social factors, not linguistic ones", and
- General American (GenAm), which according to Wells "refers to a conservative accent of the General American type" (Wells 1982: 118). In other words, both these
reference accents are theoretically free of regional features and relatively prestigious, a norm speakers may aspire to when they want to project sophistication, culture and prestige.

Wells explains the choice of keywords for the Standard Lexical Set in this way:
[t]he keywords have been chosen in such a way that clarity is maximized: whatever accent of English they are spoken in, they can hardly be mistaken for other words. Although fleece is not the commonest of words, it cannot be mistaken for a word with some other vowel; whereas beat, say, if we had chosen it instead, would have been subject to the drawback that one man's pronunciation of beat may sound like another's pronunciation of bait or bit... Wherever possible, the keywords end in a voiceless alveolar or dental consonant. (Wells 1982: 123)

In the following we will draw the vowel trapeze for English vowels (Figure 2-17) and link them with the Standard Lexical Set (Table 2-7).


Figure 2-16 Distinctive Vowels in English with approximate placement

| Key word | RP | GenAm | Example words |
| :--- | :--- | :--- | :--- |
| FLEECE |  |  | seed, key, seize |
| KIT |  |  | ship, rip, dim, spirit |
| DRESS |  |  | step, ebb, hem, terror |
| TRAP |  |  | bad, cab, ham, arrow |
| START |  |  | far, sharp, farm, safari |
| BATH |  |  | staff, clasp, dance |
| PALM |  | $*$ | calm, bra, father |
| LOT |  |  | stop, rob, swan |
| CLOTH |  |  | cough, long, laurel, origin |
| NORTH |  |  | war, storm, for, aural |
| THOUGHT |  | $*$ | taut, hawk, broad |
| FORCE |  |  | floor, coarse, ore, oral |
| STRUT |  |  | cub, rub, hum |
| FOOT |  |  | full, look, could |
| GOOSE |  |  | who, group, few |


| NURSE |  |  | hurt, term, work |
| :--- | :--- | :--- | :--- |
| NEAR |  |  | beer, pier, fierce, serious |
| SQUARE |  |  | care, air, wear, Mary |
| CURE |  |  | poor, tour, fury |
| FACE |  |  | weight, rein, steak |
| PRICE |  |  | ripe, tribe, aisle, choir |
| CHOICE |  |  | boy, void, coin |
| GOAT |  |  | soap, soul, home |
| MOUTH |  |  | pouch, noun, crowd, flower |

* not followed by /r/

Table 2-7 Standard Lexical Set according to Wells (1982) for RP and GenAm

### 2.3.2.5.2 Diphthongs

The last 8 items in Table 2-7 are not pure vowels or monophthongs, they are a combination of two vowels. In a diphthong the tongue glides from the position of the first vowel to the second in one smooth movement. This is why they are sometimes also called glides, although this is misleading as the term is also used by some scholars for approximants/semivowels.

Figure 2-17 shows how this glide manifests itself in English with five starting points and three end points.


Figure 2-17 Beginning and end points of English Diphthongs

We can therefore categorise diphthongs according to where the glide ends.


Figure 2-18 categorisation of English Diphthongs
There are also triphthongs in English. They are formed by adding a schwa to /ei/ /ai/ /əı/ or /au/ /əu/ as in /leıə/ /taıə/ /lэıг/ /pauə/ and /ləuə/. In a number of cases however, this added schwa is an element in another part of the word (which will discuss in more detail when we look at morphology in Chapter 4), for instance lay $\rightarrow$ layer, law $\rightarrow$ lawyer, or low $\rightarrow$ lower. One could therefore come to the conclusion that triphthongs do not always represent a vowel sound in the same way that diphthongs are perceived to, i.e. as a special case of a long vowel. In diphthongs we do not have a kind of "border" between two vowels, as they are both considered to be part one vowel sound. However, triphthongs are often perceived as consisting of two vowels, a diphthong and a schwa, because in many cases there is this "borderline" resulting from an added element -er of the newly formed word. The only true triphthongs, in other words, can be found in fire, tyre, etc. and tower, power or flower, etc.

### 2.4 Key concepts and references

| phonetics |  |
| :--- | :--- |
| articulatory <br> phonetics |  |
| acoustic phonetics |  |
| auditory phonetics |  |
| IPA |  |



| alveolar |  |
| :--- | :--- |
| post-alveolar |  |
| palatal |  |
| velar |  |
| glottal |  |
| plosives/stops |  |
| fricatives |  |
| approximants |  |
| trills/rolls |  |
| front /central lback |  |
| flapsitaps |  |
| nasal |  |
| vontral |  |


| high/close |  |
| :--- | :--- |
| mid-high |  |
| mid-low |  |
| lowlopen |  |
| cardinal vowels |  |
| Standard Lexical |  |
| Set |  |
| monophthongs |  |
| diphthongs |  |
| triphthongs |  |

### 2.5 Exercises

### 2.5.1 Consonants

1. Describe the following consonants, using only the parameters that are needed.

| p | unvoiced/voiceless bilabial plosive /stop | I |  |
| :---: | :--- | :---: | :--- |
| z |  | w |  |
| $\theta$ |  | ð |  |
| f |  | r |  |
| j |  | 3 |  |
| l |  | g |  |
| k |  | y |  |
| S |  | r |  |
| t |  | v |  |
| ? |  | b |  |

And you can do these as a bonus using the chart in Table 2-5 The pulmonic vowels in IPA, p 44 or an IPA chart:

| x |  | к |  |
| :---: | :---: | :---: | :--- |
| c |  | Ћ |  |
| t |  | $\odot$ |  |

## 2. Transcribe the following consonants

| voiced bilabial plosive |  | voiceless postalveolar fricative |  |
| :--- | :--- | :--- | :--- |
| voiceless velar plosive/stop |  | alveolar lateral approximant |  |
| bilabial nasal stop |  | alveolar trill/roll |  |
| alveolar flap/tap |  | unvoiced glottal stop |  |
| voiced labio-dental fricative |  | voiced velar stop/plosive |  |
| voiced interdental fricative |  | voiceless interdental fricative |  |
| voiced postalveolar fricative |  | labial-velar approximant |  |
| voiceless alveolar stop/plosive |  | velar nasal stop |  |

And you can do these as a bonus using the chart in Table 2-5 The pulmonic vowels in IPA, p 44 or an IPA chart:

| retroflex approximant |  | alveolar lateral approximant |  |
| :--- | :--- | :--- | :--- |
| voiceless palatal fricative |  | voiceless velar fricative |  |
| voiceless bilabial fricative |  | labiodental approximant |  |

### 2.5.2 Vowels

5. Describe the following vowels based on the Standard Lexical Sets. Where possible/applicable put the corresponding or nearest Cardinal Vowel number in the last column

| SLS | IPA <br> RP | IPA <br> GenAm | lip <br> position | height | front <br> back | closest <br> CV Nr |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BATH |  |  |  |  |  |  |
| CLOTH |  |  |  |  |  |  |
| CURE |  |  |  |  |  |  |
| DRESS |  |  |  |  |  |  |
| FLEECE |  |  |  |  |  |  |
| FOOT |  |  |  |  |  |  |
| FORCE |  |  |  |  |  |  |
| GOOSE |  |  |  |  |  |  |
| KIT |  |  |  |  |  |  |
| LOT |  |  |  |  |  |  |
| NORTH |  |  |  |  |  |  |
| NURSE |  |  |  |  |  |  |
| PALM |  |  |  |  |  |  |


| SLS | IPA <br> RP | IPA <br> GenAm | lip <br> position | height | front <br> back | closest <br> CV Nr |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| START |  |  |  |  |  |  |
| STRUT |  |  |  |  |  |  |
| THOUGHT |  |  |  |  |  |  |
| TRAP |  |  |  |  |  |  |

6. Group the following words from the Standard Lexical Set with diphthongs according to the articulatory position where they "end up".

CHOICE, FACE, GOAT, MOUTH, NEAR, PRICE, SQUARE

| final vowel position |  |  |  |
| :--- | :--- | :--- | :--- |
| examples of standard <br> lexical set |  |  |  |

### 2.5.3 Transcription Practice

7. Write the following transcribed words ( $R P$ ) in orthographic script:

| faun'derfon | ıəu'mæntisisəm |  |
| :---: | :---: | :---: |
| d3:mə'tplad3I | 'su:pətfa:d3 |  |
| sa'tıfıkət | mæg'nænıməs |  |
| 'leimbieın | 'su:ðı! |  |
| .ii'.Jart | həumıəบ'pæ ${ }^{\text {I }}$ Ik |  |
| 'sækləud | 'fo:fa:ðə |  |
| 'k.audıd | məu'ti:f |  |
| 'Өз:məsflask | nju:'tıifos |  |
| əb'stııkt | 'tuauzəz |  |
| semı'skımd | hætfit d3vb |  |

8. Transcribe the following words, using GenAm or RP vowels depending on your accent.

| houses |  | goatee |  |
| :--- | :--- | :--- | :--- |
| stones |  | absolution |  |


| flight plan |  | think |  |
| :--- | :--- | :--- | :--- |
| far-fetched |  | slobbering |  |
| hardball |  | motherhood |  |
| thesis |  | bloodstain |  |
| bother |  | bass guitar |  |
| freedom |  | vividness |  |
| fridge |  | queen |  |
| shoeshine |  |  |  |

### 2.6 References

Crystal, David. [1980] 2008. A Dictionary of Linguistics and Phonetics, Sixth Edition. Malden MA and Oxford: Blackwell.
Ladefoged, Peter. n.d. A Course in Phonetics (5 ${ }^{\text {th }}$ edition), http://www.phonetics.ucla.edu /course/contents.html, accessed 27.7.2012.
Mannell, Robert, Felicity Cox and Jonathan Harrington. 2009. Phonetics and Phonology. Version 3.9. http://clas.mq.edu.au/phonetics/phonetics/index.html accessed 26.7.2012.
N.A. 1978. Aprenda Ingles en 15 dias. Lima: Editorial Mercurio.

Nolst Trenité, Gerald (Charivarius). 1929. The Chaos, in Drop Your Foreign Accent -- Engelse Uitspraakoefeningen (5th revised edition, H. D. Tjeenk Willink \& Zoon), http://en.wikisource.org/wiki/The_Chaos, accessed 25.7.2012
Wells, J.C. 1982. Accents of English. Cambridge: Cambridge University Press.
Zimmer, Ben. 2010. Ghoti, New York Times, 25 June 2010, http://www.nytimes.com /2010/06/27/magazine/27FOB-onlanguage-t.html?_r=1, accessed 25.7.2012.

## 3 Sounds of language II: Phonology

### 3.1 Introduction: The focus of phonology



## What you know/can do after working through Chapter 3

You can identify

- minimal pairs
- the difference between phonemes and allophones in English
- the various phenomena of fluent speech (assimilation, etc.)
- syllables and syllable boundaries in a polysyllabic word
- the syllable peak as well as the onset and the coda in an English syllable
- feet in polysyllabic words

As we saw in the previous chapter, phonetics deals with the production of individual speech sounds. These speech sounds can theoretically belong to any language spoken anywhere in the world, although we sometimes talk about the phonetics of, for instance, English. Phonology, by contrast, looks at the relationship between the speech sounds of a given language and how they affect each other. This can happen on two levels, firstly, on the level of individual speech sounds and secondly on the level of how these speech sounds combine into larger units.

The analysis of individual speech sounds, so called segments, their realisation and the way the influence each other is known as segmental phonology. But, of course, how segments typically combine also needs to be considered, and the way this happens is language-specific. The study of such combinations of segments is called suprasegmental phonology. Here we are concerned with the likely sequences that form larger units, the syllable, then how syllables are combined into words and how the syllables relate to each other in terms of prominence in a word, a phrase or an utterance. ${ }^{13}$ In other words, we will see how syllables are used to give rhythm to a language in terms of stress and/or length of syllables or rather the central element of the syllable (cf. 3.3.2). Lastly we will examine how tone plays a role in conveying meaning.

In our discussion we will first focus on segmental phonology and expand the terminology needed to describe individual segments for phonological purposes. This will

[^5]also give us an opportunity to explore two different kinds of transcription. So far we have looked at what is known as phonetic transcription. Depending on the level of accuracy needed to represent specific speech sounds we distinguish between wide and narrow phonetic transcription. For most purposes wide transcription is sufficient. Phonetic transcription generally is signalled by the use of square brackets ([...]).

In this chapter, however, we will be concerned with phonemic transcription. In one of the following subsection (3.2.1.1)we will discuss what precisely phonemic transcription is based on. For the moment suffice it to say that phonemic transcription attempts to use as few specialised symbols as possible, a contrast to phonetic transcription, and wherever possible uses letters from "normal" graphemic alphabets. This means that generally speaking phonemic transcription looks simpler and closer to normal orthographic script than phonetic transcription. Furthermore, phonemic transcription is indicated by slashes (/.../).

### 3.2 Segmental phonology

### 3.2.1 Categorising speech sounds

When we begin our analysis we describe an uncategorised speech sound of a language, according to some of the literature at least, as a phone. In our further analysis we determine into one category a phone will be placed. For illustration consider Table 3-1.

| orthographic <br> script | wide <br> transcription | position of articulators | narrow <br> transcription |
| :--- | :--- | :--- | :--- |
| key |  |  |  |
| care |  |  |  |
| car |  |  |  |
| cool |  |  |  |

Table 3-1 Analysing phones
Even though in wide transcription we use the $/ \mathrm{k} /$ throughout, a careful examination of what happens in articulatory terms will reveal that each one of the $/ \mathrm{k} /$ sounds is produced slightly differently in each case. However, most speakers will not be aware of these differences. For them all the /k/ sounds will seem identical. Given the fact that we are psychologically aware of some speech sounds, but not of others, it makes sense to categorise phones accordingly. We therefore call phones which speakers in general perceive as distinctive speech sounds phonemes, whereas their realisations with subtle articulatory elements that most speakers are unaware of called allophones. Another approach to this distinction considers phonemes to be a (mainly) theoretical construct, and allophones being their actual, practical realisation.

### 3.2.1.1 Phoneme and allophone

As pointed out, most speakers perceive phonemes as a psychological reality. They will recognise the fact that in English there is a difference in the quality of the pronunciation of the "i" as in green versus grin, which suggests that English has two different /i/ sounds. That these two are different sounds in English manifests itself in the fact that we can find two words which only differ in that one segment, but which have a clearly different meaning. Similarly, speakers of English will perceive a difference between faith and face and therefore realise that the pronunciation of "th" and "ce" has a fundamental impact on meaning. By comparison, if in German the word "Fass" is pronounced [fas] or [fa0] has no such impact; the speaker of German may correctly interpret the second realisation as the result of a speech impediment, a lisp to be precise, but will still interpret the word as meaning barrel.

This illustrates the difference between phoneme and allophone: in English the realisations of the two "i" sounds, the high long versus the retracted and lowered vowel sound, and the alveolar versus the interdental fricative represent two distinctive pairs of speech sounds. In other words, the two word pairs grin and green and faith and face clearly indicate the total of four phonemes, on the one hand $/ \mathrm{i} /$ and $/ \mathrm{I} /$ ( $[\mathrm{i} \mathrm{i}]$ and [ I$]$ respectively in phonetic transcription), on the other hand $/ \mathrm{s} / \mathrm{vs}$. $/ \theta /$.

Thus, if we can identify a pair of words or a set of words which only differ in one segment but with clearly different meanings, this segment will represent a phoneme of that language. This test for phonemes is based on the existence of so-called minimal pairs, or, if we can find several words differing only in one segment on minimal sets. Such a minimal set could be faith, face, fate, fake, fail and fame, for instance, and this minimal set would demonstrate that $/ \theta / / \mathrm{s} /$, /t/, /k/, /l/ and $/ \mathrm{m} /$ are phonemes in English. It is important to note, of course, that minimal sets or pairs are based on pronunciation not on orthography.

By contrast, the way in which for instance a $/ \mathrm{k} /$ is pronounced in English may differ as the following examples show:
subject, scar, car, doctor, decry, Scotch

|  | phonemic <br> transcription | phonetic <br> transcription | Description | Environment |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Table 3-2 Realisation of /k/ in various environments
The six examples above demonstrate that it makes a difference to the pronunciation in which environment the segment is realised. However, this difference obviously has no impact on the meaning of any of the words whether or not there is aspiration. To illustrate, in South East Asian forms of English, for instance, there is rarely if ever aspiration in the word "curry", which is usually pronounced [kırı], but no speaker of English would have any difficulty interpreting the meaning of the word. Such differences in pronunciation, in this case realisations of the phoneme $/ \mathrm{k} /$, are called allophones. The analysis of the six examples above and the fact that most speakers would not have been aware of differences in pronunciation shows that that allophones are not perceived in the same way as phonemes, that they are not considered "distinctive".

To recapitulate: phonemes have a psychological reality, can be found by means of minimal sets or pairs, their substitution in otherwise identical words resulting in different meaning; by contrast, allophones are not perceived by speakers of the language and their substitution does not result in different meaning, possibly only in an unusual or awkward pronunciation.

Allophones as the realisation of phonemes, according to the examples above, seem to depend on the environment in which they occur, for example at the beginning or at the end of the syllable/word, at the beginning or at the end of consonant cluster, but they can also be influenced by the quality of the vowel as we shall see later on. This type of allophone is said to be in complimentary distribution. To put it in simple terms, one allophonic realisation will occur in one specific phonological environment and not in another, in which a different allophonic realisation will be seen to occur. To use the example above, an unaspirated $/ \mathrm{k} /$ is unlikely to occur in syllable- or word-initial position (unless the dialect variant makes no such distinction), whereas an aspirated $/ \mathrm{k} /$ will not be used after a consonant; similarly, the/k/ will only be unreleased if followed by another voiceless plosive. Actually, in this position it is physically almost impossible to produce an aspirated /k/.

However there is also a kind of allophone which is not dependent on the phonological environment. An informal survey of even a relatively small group of English speakers will show that the realisation of the initial vowel phoneme in the word either can differ: some
speakers will pronounce it as [aっðə], others will prefer [i:ðə]. Although there is a tendency that speakers of British English may be more likely to prefer the former with Americans often opting for the latter, this can by no means be generalised and the choice very often depends on individual preferences. Another example is the pronunciation of the word economics, with some speakers using a long high front vowel as in [i:kə'nvmıks] whereas other speakers will use the short half open vowel pronouncing the word as [ $\varepsilon$ kə'nnmiks]. Neither of these realisations depend on phonological environment as both segments occur at the beginning of the word, nor does the choice of vowels result in different meaning. In other words, although clearly allophones, their realisation is not governed by phonological environment but by personal preference. For this reason this type of allophone is known as a free variant.

### 3.2.1.2 Overview

Our discussions so far, therefore, results in the following diagram (Figure 3-1):


Figure 3-1 Categorisation of speech sounds

### 3.2.2 Segments in fluent speech

The discussion of allophones in complimentary distribution has made it clear that segments are influenced by or even dependent on their environment. In the same way certain segments are dispreferred in combination, for example the juxtaposition of voiced and unvoiced constants in the cluster. When such combinations occur, speakers tend to change the pronunciation of some of the segments in order to make the combination more easily pronounceable. In the following we will be looking at a variety of phenomena that are to do with the way in which fluent speech influences the pronunciation of segments. The
discussion at this point of the course cannot take all phenomena or more aspects of these phenomena into consideration.

### 3.2.2.1 Assimilation

As already pointed out, very often the combination of two adjoining segments, only one of which being voiced, presents a problem in pronunciation. A typical example where this happens in English is the formation of plurals, which adds an -s to a noun. Plurals in English, even though spelt with an $s$ are actually voiced, although this is not always audible because we tend to devoice sounds towards the end of the syllable or at the end of a word. In practical terms, the plural of English nouns is $/ \mathrm{z} /$. However, this can create difficulties in pronunciation, for instance if the preceding, the word final-segment is unvoiced.

| singular | plural | transcription | singular | plural | transcription | remarks |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| cab | cabs |  | cap | caps |  |  |
| cod | cods |  | cot | cots |  |  |
| tag | tags |  | tack | tacks |  |  |
| wave | waves |  | life | lives |  |  |

Table 3-3 illustrates the interplay between the word-final segment and the plural -s. The norm are the examples, cab, cod ${ }^{14}$ and tag , which are formed by adding a voiced $/ \mathrm{z} /$ to $b, d$ and $g$ respectively. However if that word-final segment is unvoiced as in cap, cot, or tack, adding a voiced $/ \mathrm{z} /$ would create an unpronounceable combination. This results in what is called assimilation, i.e. one segment assimilates to another, in this case the assimilation happening from left to right. The result is that the unvoiced word-final plosives result in an unvoiced plural -s. As the change, the assimilation, happens because the left affects the right segment, we speak of progressive assimilation.

The situation is slightly different in the case of nouns which end in unvoiced fricatives. The two examples leaf/leaves and life/lives illustrate this in a way that is also visible in orthography. But here it is the voiced plural /z/ which affects the preceding segment; the unvoiced fricative becomes voiced as a result. Whereas in the first examples, cap, cot and tack the assimilation took place from left to right, moving forward, in the examples leaf/leaves and life/lives the effect was from right to left or backwards. In this second case we speak about regressive assimilation.

Assimilation can also result from "prefixation", i.e. adding the negative prefix in-. In the following cases (Table 3-4) assimilation even has an impact on the orthography.

[^6]| unmarked forms | marked forms |  |  |
| :--- | :--- | :--- | :--- |
| direct | indirect | mobile |  |
| accessible |  | balance |  |
| fallible |  | possible |  |
| sane |  | logical |  |

Table 3-4 Behaviour of the prefix in-
In other cases (Table 3-5) the impact is apparent only in the pronunciation, but this is of course to do with the fact that there is no orthographic symbol for $/ \mathrm{y} /$. It also needs to be said that these examples are typical for casual rather than careful speech. In careful speech we tend to pronounce an $/ \mathrm{n} /$, but the overwhelming majority of speakers in fluent normal conversation will assimilate the syllable-final nasal.

| orthographic script | transcription |
| :--- | :--- |
|  | uŋ'kaınd |
|  | Iŋkəu'hirənt |
|  | əŋ'kæpsjuleit |

Table 3-5 Assimilation 2: /y/.

### 3.2.2.2 Epenthesis

Another strategy for dealing with two segments occurring side-by-side which are difficult to pronounce is called epenthesis. This can be observed in some languages where, for instance, combinations of fricatives and so-called liquids (such as /r/ and /l/) are dispreferred. Speakers will then insert a minimal vowel between the two, resulting, for instance, in /tərein/ for train. The same phenomenon also occurs in English plural formations, as Table 3-6 shows

| singular | plural | transcription | explanation |
| :--- | :--- | :--- | :--- |
| pass | passes |  |  |
| bush | bushes |  |  |
| dodge | dodges |  |  |
| scratch | scratches |  |  |

Table 3-6 Plurals in English 2: epenthesis
There are of course also other instances of epenthesis in English, for example in the spelling of the surname Thompson/Thomson. Here the second example is the one that reflects the construction of the word (the "son of Thomas"), whereas the first spelling reflects the fact that $/ \mathrm{m} /$ and $/ \mathrm{s}$ /are difficult to pronounce in combination, which is why plosive is inserted between the by labial nasal and the alveolar fricative.

### 3.2.2.3 Elision/deletion

The opposite of epenthesis, where a segment is inserted in order to facilitate pronunciation, with elision or deletion (the two words are synonymous) speakers will not pronounce, or as some lay people will have it "swallow" a segment, but sometimes also elide consonant cluster, the syllable or even an entire word. Table 3-7 provides some examples.

| element deleted | careful speech | fluent speech | Orthographic script |
| :---: | :---: | :---: | :---: |
|  | /m^n $\mathrm{s}^{\text {/ }}$ | /m^ns/ |  |
|  | /'fæməlı/ | /'fæmlı/ |  |
|  | /twelf0s/ | /twels/ |  |
|  | /'nevəmaind/ | /'nemaind/ |  |
|  | /'rok ənd roul/ | /'roky,rəul/ |  |

Table 3-7 Types of elision/deletion
Elsion/deletion is quite frequent in fluent speech and will often lead to the loss of unstressed vowels towards the ends of words. Therefore we may find that many speakers will pronounce the word button with only one (full and stressed) vowel as $/ \mathrm{b} \Lambda \mathrm{tn} /$, where the last symbol illustrates that the second syllable has lost a vowel to elision/deletion, but the $/ \mathrm{n} /$ has syllabic status, in other words it is considered a syllable in its own right.

### 3.2.2.4 Crossing the word boundaries: Coalescence and linking/liaison

Segments influencing each other are not limited to having an effect word-internally; in fact similar effects can be observed across the word boundary. One could say that there is often a combination of elision and assimilation in positions like this. One such salient phenomenon is referred to as coalescence. As the term suggests the ending of one word coalesces, i.e. grows together, with the initial segments of the following word. This happens most frequently in English with word-final alveolars (Table 3-8).

| orthographic script | careful speech | fluent speech | orthographic script | careful speech | fluent speech |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | I3 Sii /ISii |  |  | ði:3 jpbz |
|  |  | ØIf $\int$ ¢pk/ðIJpk |  |  | ØIf jpt |
|  |  | gub bıd/gubid |  |  | gug germ / gugerm |
|  |  | gub mo:nıy/ gumo:nı |  |  | gon nart/ gunart |
|  |  | ðæр pa:t/ ðæp a:t |  |  | ðæр mo:nıy |
|  |  | tem pleits / templeits |  |  | tey kıps |

Table 3-8 Coalescence with word-final alveolars

The second phenomenon that crosses word boundaries although it is also observable between syllables in a word is called linking or liaison. In some ways it could be compared to epenthesis because here, too, two segments, in fact two vowels, appear side-by-side which are difficult to pronounce in this juxtaposition. A typical situation where this occurs is the combination of a determiner ( $a$ or the) and a noun or adjective beginning with a vowel, for example "an orange" or "the apple". Whereas in the first example of course /n/ is used as a linking sound, in the second case we insert a glottal stop between the /I/ of the determiner and the /æ/ in apple leading to the pronunciation /ðı Ræpəl/.

In other cases of liaison or linking we insert a semivowel to link the two elements (syllables or words). Which semi-vowel is used depends on the phonological environment.

| across syllable boundaries |  | across word boundaries |  | remarks |
| :---: | :---: | :---: | :---: | :---: |
| brewing | 'bru: ${ }^{\text {w }}$ In | brew it | bru: ${ }^{\text {w }}$ It |  |
| showing |  | show us | $\int \partial v^{w} \Lambda s$ |  |
| seeing |  | see all | ${ }^{\text {'si }}{ }^{\text {j }}$ pl |  |
| agreeing | $\partial^{\prime} \mathrm{gri}^{\text {i }}{ }^{\mathrm{j}} \mathrm{I} \mathrm{g}$ | agree on | $\partial^{\prime} \mathrm{gri}^{\text {i }}$ j pn |  |

Table 3-9 Linking/liason with semi-vowels
Yet another instance of linking can be observed in some forms of British English: instead of a glottal stop between two vowels, sometimes an /r/ is inserted. Thus the word vanilla ice cream may be pronounced as vanilla rice cream, a pronunciation that is frowned upon by language purists, but nevertheless quite frequent, even in formal speech.

### 3.3 Supra-segmental phonology

### 3.3.1 Phonotactics

Scottish poet Edwin Morgan’s "The First Men on Mercury" is a good example of a poem that uses words that sound English (or perhaps more typically Scottish) but are nonsensical. Similarly, the website www.soybomb.com / tricks / words/ generates random nonsense words which for the most part look like English words and, if we apply English pronunciation rules, also sound English. With such a word list it is possible to create a text that to appears to be English but has no actual meaning. In the same way, those familiar with the work of Swiss comedian and poet Franz Hohler will know his famous spoof of a Bernese dialect story called "'s Tootemüggerli", which also contains a large number of words that clearly sound Bernese, but will not be found in any dictionary. The reason why, if such texts are well crafted, they sound unmistakably English (or Swiss German) is because they apply the same strategies for combining phonemes and the typical vowel sounds of the language that they mimic. This strategy for combining phonemes is called phonotactics and is language-specific.

- We come in peace from the third planet. Would you take us to your leader?
- Bawr stretter! Bawr. Bawr. Stretterhawl?
- This is a little plastic model of the solar system, with working parts. You are here and we are there and we are now here with you, is this clear?
- Gawl horrop. Bawr Abawrhannahanna!
- Where we come from is blue and white with brown, you see we call the brown here 'land', the blue is 'sea', and the white is 'clouds' over land and sea, we live on the surface of the brown land, all round is sea and clouds. We are 'men'. Men come -
- Men come in peace from the third planet which we call 'earth'. We are earthmen. Take us earthmen to your leader.
- Thmen? Thmen? Bawr. Bawrhossop. Yuleeda tan hanna. Harrabost yuleeda.
- I am the yuleeda. You see my hands, we carry no benner, we come in peace. The spaceways are all stretterhawn.
- Glawn peacemen all horrabhanna tantko! Tan come at'mstrossop. Glawp yuleeda!
- Atoms are peacegawl in our harraban. Menbat worrabost from tan hannahanna.
- Banghapper now! Yes, third planet back Yuleeda will go back blue, white, brown nowhanna! There is no more talk.
- Gawl han fasthapper?
- No. You must go back to your planet. Go back in peace, take what you have gained but quickly
- Stretterworra gawl, gawl...
- Of course, but nothing is ever the same, now is it? You'll remember Mercury.
- You men we know bawrhossoptant. Bawr. We know yuleeda. Go strawg backspetter quick.
- Glawp men! Gawrbenner menko. Menhawl? - We cantantabawr, tantingko backspetter now!

In the following we will examine the possibilities that the English language presents for creating the "beginning" of a syllable. In Table 3-10 there is a list of potential combinations of consonantal segments that could make up such a beginning.

| kj |  | kl |  | kr |  | kw |  | pf |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| pj |  | pl |  | pr |  | ps |  | pt |  |
| pw |  | skj |  | skl |  | skr |  | skw |  |
| spj |  | spl |  | spr |  | spw |  | stj |  |
| stl |  | str |  | stw |  | tf |  | ts |  |
| tj |  | tl |  | tr |  | ts |  | tw |  |

Table 3-10 Possible syllable-initial consonant combinations in English
This overview shows that there are certain combinations that exist in English, that there are some which English speakers can pronounce but would not readily use in their native vocabulary, and there are some which English speakers will not pronounce at least not word initially. A typical example for this are the Greek words psychology and pterodactyl, both pronounced with a silent p- even though the combination of pt or ps can occur at the end of a syllable or at the end of the word (inept/biceps).

If we analyse the possible syllable-initial consonants combinations the so-called onsets, a certain regularity emerges. The last element in an onset, whether it is a two- or threeconsonant onset will be a $\qquad$ a segment that is voiced and carries a considerable amount of sound (some of them can actually have syllabic status); they are in fact relatively close to vowels in that respect. Such segments are generally known as sonorants. By contrast the initial segment is unvoiced, i.e. $\square$. What we can observe in a two- or three-consonant onset is an increase in "sound" from left to right. The next segment in a syllable will be a vowel phoneme. A multiple-consonant onset will thus move from relatively little sound to a segment that almost carries as much sound as the vowel itself. In other words, towards the vowel we can observe an increase in sonority. Skandera and Burleigh (2005: 165) define
sonority as "the intrinsic relative loudness, or 'carrying-power', of a phoneme" with "vowels" being "more sonorant than consonants." An example for a simple sonority scale can be seen in Figure 3-2. We will apply this insight in the following subsection.

### 3.3.2 Syllable structure

A monosyllabic word like strength can be used to illustrate the structure of an English syllable. Based on our discussion of the consonant cluster at the beginning of the word we can see that a similar phenomenon occurs at the end: there too we have a development in sonority but in

| 7 | low/open vowels |
| :--- | :--- |
| 6 | high/close vowels |
| 5 | approximants |
| 4 | liquids |
| 3 | nasal stops |
| 2 | fricatives |
| 1 | plosives |

Figure 3-2 Simple sonority scale the opposite direction, the most sonorous part being adjacent to the vowel the least sonorous at the very end of the syllable. However, it needs to be said that not all syllables display such an even distribution of sonority as illustrated in Figure 3-3.

| 7 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| Level 1 |  |  |  |  |  |  |  |  |
| Segment | S | t | r | $\varepsilon$ | 1 | $\theta$ |  | S |

We can now analyse the word strengths as a single syllable with a consonant cluster at the beginning and at the end, surrounding a vowel in the centre. This central element, the one with the most "carrying- power" is known as the syllable peak, as Figure 3-3 clearly illustrates. The way in which we analyse the syllable in English is based on the fact that the syllable peak or nucleus is an indispensable part of the syllable, preceded by a consonant or a consonant cluster and followed by a consonant or a consonant cluster. The initial consonant or consonant cluster, the onset, we have already become acquainted with in subsection 3.3.1. The syllable peak or nucleus in combination with the syllable-final consonant or consonant cluster, the coda, represent the so-called rhyme in analogy with the way in which rhymes are constructed in poetry. Syllables thus consist of

1. an onset and
2. a rhyme, consisting of
a. the nucleus
b. the coda. (fig. 3-4)

Both the onset and the coda are optional: there are syllables without onsets (e.g, /if/), syllables without coda (/traI/) or syllables consisting of only a syllable peak (e.g. "eye" as
/aI/). The nucleus will always be present, but instead of a vowel, it may consist of a nasal or an approximant, a so-called liquid.


Figure 3-4 Syllable structure

### 3.3.3 Feet and timing

In English, as in German, not all syllables are of the same length or receive the same amount of stress. This is achieved by the quality of the syllable peak. In English we distinguish between so-called reduced vowels and full vowels. Reduced vowels, apart from occurring in unstressed syllables, are also present in unstressed words in a sentence, often for instance in prepositions and

i:, a:, ग:, u:, eI, a I, $\supset \mathrm{I}, \partial \mathrm{J}, \mathrm{a}$, $\varepsilon ə$,

Iə, Uə, ఎə

Figure 3-5 Categories of vowels auxiliary verbs. In the category of full vowels, we distinguish between long vowels, also called tense vowels, because they are pronounced with somewhat more constriction in the vocal tract, and short or lax vowels, because they usually do not have that much constriction. In the category of long/ tense vowels we not only have long monophthongs but also the diphthongs used in English (because this
analysis focuses on phonemes rather than individual speech sounds/segments). A systematic overview is given in Figure 3-5.

Whereas in English, as mentioned, there is a difference in the quality of the syllable peaks in terms of length and emphasis, in French, by contrast, syllables are of roughly equal length, which is why we consider French to be a syllable-timed language. In English and German, on the other hand, there is a rough equivalence in the time that elapses between stressed syllables; unstressed syllables are therefore usually shorter or elided altogether. This is why these languages are considered to be stress-timed. ${ }^{15}$

From poetry we are familiar with the concept of feet, a unit containing one stressed syllable ${ }^{16}$ and one or more unstressed syllables. In phonology we also talk about feet, but in contrast to poetry they always start with a stressed syllable. We distinguish between three types of feet, depending on whether they are followed by unstressed syllables, and if they are, whether there is one or two unstressed syllables. Thus we distinguish between a unary foot, which only consists of one stressed syllable, a binary foot in which the stressed syllable is followed by an unstressed one, and a ternary foot which has two unstressed following the stressed syllable.

/'n ə U z I nəs/
nosiness

Figure 3-6 Types of feet

### 3.3.4 Word stress

Feet help us to determine where the stress lies in a word. This is particularly useful if we have a word that consists of more than three syllables. In the following we shall see how this can be done with the polysyllabic words participate [pa:tisəpert] and participation [pa:tisəpeifən].

The procedure works as follows:

1. Identify the syllable peaks
2. Determine which syllable peaks contain full vowels.

[^7]3. Link all reduced vowels (or syllabic liquids) to the full vowels to their left.

## pa:tis $\boldsymbol{\text { a }}$ pert

## pa:tis $\operatorname{p}$ pei $\int$ ə n

Figure 3-7 Identifying feet for word stress
In order to determine where the word stress lies in the above examples it is helpful to remember that polysyllabic words generally do not to have the stress on a word-final syllable. This would mean that in many cases the main stress of the word would be on the penultimate syllable if the last syllable is unstressed (as in participation), but on a syllable with a full vowel to the left of the last syllable if that last syllable contains a full vowel (as in participate). Needless to say, rules for stress placement in English are very complicated so this analysis is relatively simplistic, but helps to illustrate why feet play an important role in the analysis of word stress.

### 3.3.5 Stress and intonation in utterances

Stress also plays an important role on the utterance level, but unlike in word stress, where its place is fixed by rules of microlinguistic, in the utterance its position is more flexible. Consider the following sentence, which can be read in several different ways, each with a different meaning:
(1) I love my computer.

Depending on which element we stress, the sentence can suggest that the speaker and only the speaker loves a particular computer, that the speaker not only likes but loves the computer, etc. This differentiation is achieved by stress. We can create such stress in four different ways:

1. by increasing the loudness of the voice,
2. by lengthening the syllable that the stress falls on,
3. by raising the pitch of our voice,
4. with extra linguistic elements such as leaning forward, hand gestures, facial expression, etc.
Elements 1-3 can be described as intonation. We can use intonation for a variety of purposes.

| Example | purpose | Function |
| :--- | :--- | :--- |
| (2a) You will get there on time. |  |  |
| (2b) You will get there on time?   <br> (2c) You will get there on time!   <br> (3) Bankers who award themselves huge <br> bonuses face public anger.   <br> (4) You want me to take your picture?   <br> (5) I'd like to deposit some money.   <br> (6) How cool was that?   <br> (7) A: What did you do in the holiday   <br> camp?   <br> B: There were lots of things- river   <br> rafting, abseiling, nature walks and   <br> a disco.   <br> A: Sounds great.   Table 3-11 Functions of intonation |  |  |

Table 3-11 shows these functions. As we can see there, it can be used to indicate punctuation, it can add emphasis to an utterance (see also (1)), it can help structure information by indicating whether a specific item is likely to be new to the listener or represents shared knowledge between the interlocutors, it can express the speaker's emotion or attitude and it can be used for structuring and organising discourse. In the last case lowering the tone at the end of an utterance suggests that the speaker has come to an end and that potentially another speaker could take over at this point. However if the tone is kept level, it will be clear to the interlocutors that the speaker has not finished yet, i.e. has completed her/his turn and wants to go on speaking, in other words, aims to retain the floor. ${ }^{17}$

An interesting instance where speaker attitude and discourse structuring are combined can be found in the rising intonation at the end of statements which is thought to have originated in Australia, but is also typical for the speech of Californian "Valley girls" and by extensions many young American females, e.g. the character of Michelle Flaherty in American Pie, but it is also encountered in Scottish, Irish and English non-standard variants. According to Britain and Newman (1992) there are two possible explanations for this: the first one is based on the fact that women tend to use it more often than men, teenagers more than adults, working class people more than middle-class people and ethnic

[^8]minorities more than majority groups. The suggestion therefore is that the tone is preferred by those members of society who command less power and that the rise invites approval of the more powerful partners. The second explanation takes into account that in any exchange those interlocutors who are not speaking will signal their attention and possibly approval or disapproval with facial expressions, but linguistically with what is known as "minimal listener response" or "back-channelling" such as "mhm", "yes", "right" or "I see" or . This type of listener response is particularly obvious during phone conversation when such feedback can only be given orally. The rising tone could be seen as inviting such listener responses.

### 3.4 Key concepts

| segmental phonology |  |
| :--- | :--- |
| phonemic <br> transcription |  |
| phone |  |
| phoneme |  |
| minimal pairslsets |  |
| allophone |  |
| complimentary |  |
| distribution |  |$\quad$| free variant |
| :--- |
| progressive |
| assimilation |
| regressive |
| assimilation |
| epenthesis |


| elision/deletion |  |
| :--- | :--- |
| coalescence |  |
| linkinglliaison |  |
| suprasegmental |  |
| phonology |  |
| phonotactics |  |
| onset |  |
| rhyme |  |
| syllable peaklnucleus |  |
| coda |  |
| sonse vowels |  |
| fonorants |  |
| unarylbinarylternary |  |
| foot |  |


| lax vowels |  |
| :--- | :--- |
| stress |  |
| intonation |  |
| grammatical/structural |  |
| function |  | | emphatic function |  |
| :---: | :---: |
| informational function |  |
| attitudinal/emotional |  |
| function |  |

### 3.5 References

Britain, David and J. Newman. 1992. High-rising Terminals in New Zealand English. Journal of the International Phonetic Association 22, 1-11.
Morgan, Edwin. 2011. The First Men on Mercury, http://www.poemhunter.com/poem/the-first-men-onmercury/ accessed 14.8.2012
Skandera, Paul and Peter Burleigh. 2005. A Manual of English Phonetics and Phonology, Tübingen: Narr Francke Attempo

### 3.6 Phonology Exercises

### 3.6.1 Minimal pairs

1. Find minimal pairs to illustrate the phonemic status in English of the following phonemes:

| 1. $/ \mathrm{u} / \mathrm{and} / \mathrm{v} /$ | 2. /r/ and /l/ |  |
| :---: | :---: | :---: |
| 3. $/ \mathrm{s} / \mathrm{and} / \theta /$ | 4. /f/ and /v/ |  |
| 5. /t/ and /d/ | 6. /əv/ or /ou/ and /au/ |  |
| 7. /p/ and /f/ | 8. /æ/ and/eı/ |  |

10. $/ \Lambda /$ and $/ \mathrm{b} /$
11. In the following list of words, how many phonemes can you identify with the help of minimal pairs? (Transcribe them first!)

| 1. beak | 2. beg | 3. big | 4. black |
| :--- | :--- | :--- | :--- |
| 5. back | 6. bag | 7. block | 8. blot |
| 9. bog | 10. bug | 11. diss | 12. mitt |
| 13. knit | 14. peek | 15. Pete | 16. pig |
| 17. place | 18. plaque | 19. plate | 20. play |
| 21. plot | 22. pratt | 23. pray | 24. sit |
| 25. thin | 26. thing | 27. this | 28. zit |

Phonemes: $\qquad$

### 3.6.2 Allophones in complementary distribution

3. What are the distribution rules for the allophones in the following examples?

There are differences in pronunciation for the diphthong /aı/ in some English dialects as the following list shows.

| b It | farl | faıuı | baik | bai |
| :---: | :---: | :---: | :---: | :---: |
| nain $\theta$ | sard | Jaız | 1nıf | f IIt |
| taI | taim | tsip | InIt | INIS |

Formulate the phonological rule that determines which pronunciation is used.
aI $\qquad$
II $\qquad$
4. Look at the transcriptions of a number of words in Scots.
a) Match the orthographic English gloss in the box below with the Scots transcription. (Hint: diphthongs in RP are usually lengthened monophthongs in Scots)
b) Do you think the sounds [w] and [ m ( (voiceless labial velar approximant, a kind of mixture between $/ w /$ and $/ h /$ ) are phonemes, allophones or in free variation? Give reasons. (If you think they are allophones, give the archiphoneme.)

| Scots transcription | English orthographic gloss | Scots transcription | English orthographic gloss |
| :---: | :---: | :---: | :---: |
| мa'e | why | MIp |  |
| әwe: |  | wIt ${ }^{\text {Iz }}$ |  |
| MIt ${ }^{\text {d }}$ |  | wとðлrve:n |  |
| weł |  | əMAIt |  |
| we: |  | Msit |  |
| M\&ð $\Lambda \mathbf{r}$ |  | we:t |  |
| ме: |  | wont |  |
| wełz |  |  |  |

> away, awhile, wait, Wales, want, way, weathervane, whale, whether, whey, which, whip, white, why, witches

### 3.6.3 Phonology of fluent speech

5. Complete the following table and describe the phenomenon present.

| orthographic script | careful speech | fluent speech | phenomenon |
| :---: | :---: | :---: | :---: |
|  | miks ənd mæt $\int$ | miks n mæt miks m mæts |  |
| got back | gdt bæk |  |  |
| Pamela Anderson |  | 'pæmələı 'ændəsn |  |
|  | $\wedge$ ndə'stændəbəl | ^ndə'stændəbl |  |
| Zicken (German) |  | 'tsıky |  |
|  | bləu it | $\mathrm{bl}^{\text {b }}{ }^{\text {w }}$ it |  |
| ungainly | $\wedge \mathrm{n}$ 'gemlı |  |  |

6. Advanced: In the words for kitchen [kegin], cottage [bv $\begin{aligned} & \text { In], house [ti:], village }\end{aligned}$ [pentre], valley [dəfrin] and Wales [kamri:] the word-initial sounds change when they occur in connection with the word [an] meaning "my". With the following table,
a) give the English translations,
b) describe the phonological changes that have occurred.
c) formulate a general rule for these changes.

| English meaning | Welsh transcription | phonological changes |
| :---: | :---: | :---: |
|  | on ni: |  |
|  | ən nəfrın |  |
|  | วm muӨin |  |
|  | วm mentre |  |
|  | əり 〕egin |  |
|  | วŋ yəmrı |  |

Rule:
7. In Dutch we sometimes have schwa epenthesis (the insertion of an optional schwa). In the table you can see where this is possible and where it is not (marked by *).
a) Complete the table in analogy of the data given.
b) Identify the conditioning environment for Schwa epenthesis in these examples

| ع1k | $\rightarrow$ | عlək | "each" | عl'kar | $\rightarrow$ | *elokar | "each other" |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| volk |  | volək | "people" | 'volkən |  | *voləkən | "peoples" |
| warm |  | warəm | "warm" | 'warmən |  | * warəmən | "to warm" |
| horn |  | horən | "horn" | 'hərnətjə |  | *'hərənətjə | "little horn" |
| belx |  | belox | "Belgian" | 'belyja |  | * b loyjə | "Belgium" |
| arm |  |  | "Arm" |  |  |  | "arms" |
| melk |  |  | "milk |  |  | ən | "to milk" |
| korn |  |  | "corn" |  |  |  | "corns" |

b)

### 3.6.4 Sonority and Syllable Structures

8. Fill in the sonority levels for the following words: plane, start, loft, ground, queues. (Transcribe them phonemically first in the bottom row.)

9. Draw syllable trees
a) for plane, start, loft, ground, queues
b) for a syllable without a coda
c) for a syllable without an onset.

### 3.6.5 Feet

10. Split the following words up into feet and explain where you would place the word stress. Hint: transcribe the words first and check in a good dictionary that your transcripts are correct.
[^9]
### 3.6.6 Intonation

11. Identify where the stress would be in the following utterances. Be careful, it is not the whole word that would be stressed..

A: I am looking for my glasses?
B: Which glasses have you lost this time?
A: My reading glasses.
B: They're on the bookshelf.
A: The bookshelves in which room?
B: The ones in the living room.
12. Indicate where in the following utterances the voice would go up ( 7 ) where it would remain on the same level $(\rightarrow)$ or where it would go down $(\searrow)$.

A: Did you do anything interesting last weekend?
B: I went to see my brother in London, had a great evening out with him in the theatre, went of a ride on the London Eye on Sunday and had a fabulous meal at and Indian Restaurant before driving back.

A: I'm glad for you.

## 4 Building Blocks of Words: Morphology

### 4.1 Introduction: What is a "word"?



## What you know/can do after working through Chapter 4

## You can

- point out the difference between a complex and simple word
- identify the stem of a complex word
- distinguish between various affixes, and identify derivational and inflectional ones
- identify the word formation strategies behind English words


### 4.1.1 Attempts at a definition

The question "what is a word" seems easy to answer as one thing that languages have in common is that they are made up of words. Speakers are intuitively aware of what a word is and usually are able give an example of a word when asked to do so. Furthermore, as some psychological tests show, for instance word-association, supplying words when prompted presents no problem to most people. However, if we have to come up with criteria for what constitutes a word, we run into problems as none of them works entirely for all the different types of words we use.

The following list is loosely based on Crystal (1987: 91). It demonstrates that all of the criteria given below work for most but not for all words.

- Potential pause: If we ask speakers to pronounce sentence pausing where they find it appropriate, the majority will pause at word boundaries. However, it is quite conceivable that other speakers would pause at syllable boundaries, which are also places for potential pause. In other words the "potential pause" test will not inevitably yield individual words.
- Spaces in print: In terms of writing the identification of a word boundary can be based on the spaces that are apparent in the print text. However, in English there are several "words" which seemingly consist of several words separated either by hyphens (timeconsuming, part-time) or by spaces, for instance Christmas Eve, which is perceived as one word in terms of its meaning, but consists of two words separated by a space; in other words the way it is printed suggests that it is two words, in our perception based on its meaning it will be considered to be an inseparable unit. The same applies to phrasal verbs like limber up, face down, taper off, etc.
- Indivisibility: We can identify words because they tend to be perceived as an indivisible whole, i.e. we cannot insert another element word inside a word. Woman is indivisible in the sense that we will not insert another word or even part of a word between, say, wo- and -man. This holds true to a large extent, also for words which are composed of two other words. However, there are two notable exceptions: in German for instance we can insert -ge- into some forms of the verb (past participle) as in the verb eingehen - eingegangen. In colloquial English we also find expressions like absobloominglutely, which also illustrate that the indivisibility of words cannot always be taken for granted.
- Minimal free form: according to Bloomfield, an American linguist, words are the most minimal free form that can stand on its own. This view will be discussed further below, but as the discussion will show, the reality is more complex. Furthermore, we can question whether a word like the or $a / a n$, and a whole range of other words like on or and can ever stand on their own. French provides another case in point in the sense that je can never stand on its own unlike the English I.
- Phonetic boundaries: As we saw when we discussed coalescence and linking/liaison, word boundaries can be difficult to spot because two adjacent segments may merge into one (good morning becoming [gub mo:nıy] and - in more fluent speech [gumsinın]) or a linking segment effectively connects the last segment of one with the first segment of the following word as in see in $\left[\mathrm{sii}^{\mathrm{j}} \mathrm{In}\right]$; even though in transcription we write the two words with a gap between them, the function of the linking ${ }^{j}$ clearly acts as a unifying element to the degree that the difference between see in and a non-standard pronunciation of seein' as [ $\mathrm{si}^{\mathrm{j}} \mathrm{In}$ ] are indistinguishable.
- Semantic units: Words are said to carry meaning but as we shall see, not all of them can do so on their own. A preposition like on actually only takes on meaning when it occurs together with a noun (potentially preceded by a determiner, an adjective, etc.). In other words, carrying meaning is only obvious in certain types of words, whereas others, like preposition, do not carry meaning in themselves. There is also another aspect, however: a phrase like three sheets to the wind consists of several words, each with a meaning of its own, but combining their individual meanings makes no sense; it is only in this exact combination that speakers of English use this idiom.

Like so often in linguistics, we have to accept that the reality is less clear-cut than we might at first assume. But the above discussion opens up the field for a number of interesting phenomena, which we will examine in this chapter.

### 4.1.2 Carriers of meaning

As the discussion of words as semantic units has hinted at, there is a problem that needs to be clarified before we look at the construction of words. If in a text we encounter a word like gerrymandering, with whose meaning we are probably not familiar, we obviously do not go to the dictionary to look up the word in this -ing form. We are most likely to recognise that the word is the present participle of to gerrymander. Similarly, if we read that someone is cachinnating, we are likely to realise that the term to look up in a dictionary will be cachinate (and not *cachinnat).

There is a slightly different problem with a verb like pine away, peter out, taper off or tag along. Although all of these consist of two words, a verb and what looks like a preposition, it is actually the combination of the two that makes up the meaning in the same way as it does in more commonly used phrasal verbs like stand up. Clearly therefore, if we want to consider the meaning of these verbs, we need to take both elements as a unit of meaning. The same phenomenon applies to the combination of two or more words, for instance, in jiggery-pokery or penal servitude. Both of these only acquire their full meaning in combination, even though in one case they are separated by a hyphen, in the other case by a gap. However, in order to understand what the two expressions mean, a learner of English would have to look up the words in these combinations, not individually in a dictionary.

The third problem that we may have in this context is the idiom three sheets to the wind. Looking at any of these words in the dictionary may give us a hint, that sheet can also mean sail, or the ropes with which it is secured, but it is in the nature of idioms that their meaning only partly reflects their constituent parts and that it is usually a metaphor of sorts. This is the case here: in sailing insufficiently secured lines result in flapping sails; if the sails are flapping, the boat will be at the mercy of the winds and lurch wildly in the water. The idiom therefore means to be staggeringly drunk, a meaning that clearly cannot be derived from the individual words.

All these considerations indicate the necessity for a specific term that would cover all of these: a) single words carrying meaning, b) base forms of words, in particular verbs and nouns, c) expressions that are created by the combination of individual elements, such as phrasal verbs and compound nouns (also when written with a space between the elements) and, d) idiomatic phrases. The term used in linguistics for these is lexeme or lexical items. It is these lexemes or lexical items that carry the meaning which we build into utterances; they are also, as David Crystal (2009: 118) points out, "the headwords in dictionaries", even though not all idioms may be found there, depending on the size of the dictionary. Having clarified this term, we can now move on to an exploration of how words in English are constructed.

### 4.1.3 An exploration

| (1) | A person who looks around when talking to you to <br> see if there is anyone more interesting about. <br> Criss-cross wooden construction hung on a teenage <br> girl's bedroom wall which is covered with glass <br> bambies and poodles, matching pigs and porcelain <br> ponies in various postures. <br> Descriptive of the way people stand when examining <br> other people's bookshelves. <br> Gifted with the ability to manipulate taps using only <br> one's feet. <br> Measure. The minimum time it is necessary to spend <br> frowning in deep concentration at each picture in an <br> art gallery in order that everyone thinks you're not a <br> complete moron. <br> Mentally incapacitated by a severe hangover. <br> People who just won't go. <br> Shifting increasingly anxiously from leg to leg when <br> desperate to go to the lavatory and the person you are <br> talking to keeps on remembering things s/he wants <br> to mention. <br> The steady lengthening of plastic handles of an <br> overloaded supermarket carrier bag full of bottles <br> being carried across a stone floor. <br> To strongly desire to swing from the pole on the rear <br> footplate of a bus. <br> (of small nasty children) To fall over gently, look <br> around to see who's about and then yell blue murder. |
| :--- | :--- |
| $\square$Abercrave, Ahenny, Clunes, Dungeness, Duntish, Frolesworth, <br> lping, Polbathic, Sconser, Tibshelf, Timble |  |

Figure 4-1 From Douglas Adams and John Loyd (1990) The Deeper Meaning of Liff

As speakers of a language we are often too accustomed to its everyday use it to be aware of its elements. For this reason, linguists often explore languages that are unfamiliar such as Native American or African languages. The idea of defamiliarisation is the point of the following experiment (1), based on Douglas Adams and John Loyd's book The Deeper Meaning of Liff, (1990) whose premise it is, loosely paraphrased, that there are large number of experiences for which there are no adequately succinct words in English, and a lot of English words that do not, as it were, work for a living, leading a lazy existence on signposts and maps. The Meaning of Liff attempts to rectify this by putting such words (technically so-called toponyms) to use as the headword in a dictionary of these unnamed experiences. While the book is undoubtedly highly amusing, it also illustrates a number of interesting linguistic phenomena about word construction and vocabulary, which we shall develop in the following.

### 4.1.4 Word classes or parts of speech

Before we develop the above analysis further, it is necessary to establish a few basic principles concerning the categorisation of words. When we look at the list in Figure 4-1 we will notice first of all, that the list comprises nouns

adverbs $\square$ ). Conspicuous by their absence are other word classes or parts of speech, which we will try to determine in the following exploration. Let us begin by analysing (2) based on Table 4-1.
(2) This grumpy man at the reception who looked up our bookings must have thought that we were slightly mad.

|  | meaning | word class |
| :--- | :--- | :--- |
| This |  |  |
| grumpy |  |  |
| man |  |  |
| at |  |  |
| the |  |  |
| reception |  |  |
| who |  |  |
| looked |  |  |
| up |  |  |
| our |  |  |
| bookings |  |  |
| must |  |  |
| have |  |  |
| thought |  |  |
| that |  |  |
| we |  |  |
| were |  |  |
| slightly |  |  |
| mad |  |  |

Table 4-1 Sentence analysis in terms of meanings and word classes
What becomes obvious is that there are certain word classes for which it is quite easy to define their lexical meaning, whereas there are others whose meaning in isolation is difficult if not impossible to determine. This would suggest that some words carry the meaning of the sentence or utterance while others in connection with these specific words either provide further information, but can only do so in connection with the words carrying the main meaning, or others which, somewhat simplistically put, provide the glue that holds the sentence or utterance together. In other words, some lexemes belonging to certain word classes carry the content of the utterance while others fulfil specific functions in the utterance in relation to the former or with the structure of the sentence. It is for this reason we speak about content words, i.e. $\qquad$ and function words, i.e. $\qquad$
In this chapter we are concerned with how words are constructed in English, which also means considering how "new" words enter the language. Our focus for reasons of space will be on word formation, but clearly, there are other ways in which languages acquire new vocabulary, such as borrowing (the word robot is a borrowing from Czech, anorak from Inuit, to name but a few) loan translations (the German Wolkenkratzer from English skyscraper), etc. It is quite obvious that a new concept in a society or culture will require new words to refer to them and thus such words will either be taken over from other languages (in this respect English is a rich source for a great many languages at present, perhaps most obviously so in computer technology and the related vocabulary) or they will be formed in ways we will consider shortly. As these new words refer to new concepts and therefore all need to carry meaning, such new lexemes will all be content words. On the other hand, given the fact that function words help structure sentences/utterances and
provide connections between the content words, it would not make sense for the sake of general communication, if the category of function words were capable of expanding, adapting and changing in the same way. For this reason we also speak about open classes, in which we find content words and closed classes, which comprises the word classes belonging to the category of function words, the terms open and closed reflecting the fact that former can be added to theoretically indefinitely, whereas the latter is quite fixed and change, if it happens at all, is usually due to exceptional circumstances. For instance during the prolonged language contact between the Anglo-Saxons and the Danes resulted in changes in the Anglo-Saxon pronoun system, most notably the introduction of they, their and them (Crystal 2009: 21 and 25). But such a fundamental change is rare: closed classes usually are quite firmly closed. For an overview of which word classes belong into which category, cf. Table 4-2.

| Open classes/content words | Closed classes/function words |
| :--- | :--- |
|  |  |
|  |  |

Table 4-2 Overview of word classes

### 4.2 The structure of the words

Let us now turn to an analysis of the lexical items presented in our introductory exercise in (1), The Deeper Meaning of Liff. We shall use the examples from there to illustrate the structure of content words in English and develop the terminology needed to describe the morphology of words from them.

### 4.2.1 Basic building blocks: Morphemes

When we look at the words in the exercise and analyse them in terms of elements that could be split off, we find that one that - ignoring a possible syllable break - seems to be composed of only one element, the word timble. On the other hand, a word like tibshelf could be considered as consisting of two elements, each carrying independent meaning: a word tib, being a fictitious collective term for "glass bambies and poodles, matching pigs and porcelain ponies in various postures", whereas the word shelf clearly refers to what the tib is placed on. These example words stand in contrast with, for example, frolesworth or ahenny, which according to English word formation rules could be said to consist of several elements: froles and worth analogous to pennyworth and $a+h e n(n)+y$ similar to $a$-long or anger $\rightarrow$ angr-y. Also the word clunes consists of more than one element, firstly of the central clune and secondly of the added $-s$, which denotes that this is a plural. Iping could
be analysed in the same way, consisting of ipe and -ing, making this into a present participle. The collective term for all of these elements, irrespective of whether they form the core of a word or whether they are attached to it is morphemes. According to O’Grady and de Guzman (1996: 133) a morpheme is "the smallest unit of language that carries information about meaning or function" (emphasis added).

### 4.2.2 The core element: Stem/base or root

What all these examples have in common is that they have at least one element which represents the basic core of meaning in the word, viz. timble, tib, shelf, frole, hen, clune and ipe. Such words can occur by themselves and are therefore known as free forms or free morphemes. We also refer to such free forms as simple words. However, it is obvious from the examples in (1) that in many words they represent a central element to which other elements can be added, which makes them into complex words.

Such elements that can stand on their own and carry the core meaning are also referred to as stem or base, in some of the literature also as the root although we will use the term slightly differently. Crystal (2009: 459, 469) defines the base or stem as "the minimal form of a word to which affixes can be added" (emphasis added). The root, to be a bit more specific, is also defined as "the base form of a word, from which other words derive (meaningfulness)" (Crystal 2009: 468). One needs to keep in mind is that the spelling of the root or stem may be modified by the addition of an element that follows it, for instance in swimming, in taking or in ladies. (For details see 4.2.3.6)

### 4.2.3 Affixation

In 4.2.2 we have come across the term affix. ${ }^{\mathbf{1 8}}$ This is the collective expression covering elements that either precede or follow the base morpheme. Affixes cannot stand by themselves, they require a base morpheme to which they are attached. For this reason we refer to them as bound morphemes.

### 4.2.3.1 Creating new words

A good example to illustrate how bound morphemes attach themselves to the base is the word ahenny in our list from The Deeper Meaning of Liff. We can postulate that the base morpheme could be a fictitious English verb to hen, meaning "standing with the ahead leaning to one side". Attached to this base morpheme is another morpheme at the front ( $a$ ), which we call a prefix, and a morpheme $-y$ at the end, which is known as a suffix. In English there is a whole range of prefixes, for instance, in-, un-, dis-, re-, $a b-$, etc., some of which have Germanic origin (for example un-), others are of Latinate (for example dis-, re-
${ }^{18}$ see http://www.affixes.org/index.html for a comprehensive overview of affixes in English.
, $a b-$ - etc,) or of Greek origin (dys-, idio-, poly- etc.). The same is true for suffixes; such suffixes in the example list include -ic, -ness, -ish, -er, -worth, -ing, and -s.

What we may note is that attaching suffixes sometimes results in the creation of a new word: for instance we can assume that there is a fictitious noun dunt, which means "a debilitating hangover"; by adding the suffix -ish we turn the noun dunt into the adjective duntish. Similarly, we can postulate the existence of the fictitious verb to sconce meaning "to look around in search of someone more interesting"; by using the suffix -er we create a noun referring to a person "who looks around etc."

However, in real English not all suffixes result in a change of word class. Some merely create new word with a related meaning. For instance, the adjective grey can take the suffix -ish with the resulting greyish still being an adjective. However in terms of meaning there is a difference between grey and greyish. The same is true for prefixes: in English the word pre-fixation creates will be the same world-class as base (do/redo, happy/unhappy, fusion/confusion/diffusion).

Affixation in English is a highly productive way of creating new words. This can be shown in Figure 4-2, based on the word grace (noun and/or verb) as a starting point.


Figure 4-2 Productivity of affixation (based on Tournier 1985)

### 4.2.3.2 Problems with prefixes

成納 $\times$

Most prefixes are unproblematic. If I do something, I can hopefully also undo it. If one person's movements are graceful and those of another are not, we can refer to this second person's movements as ungraceful. However, there are a whole range of words where prefixation is not quite so straightforward. The opposite of disgruntled is not *gruntled, the opposite of uncouth would be couth, a word, however, that fell into disuse some centuries ago (except in Scots where it is usually couthie and means homely or genial).

Another problem presents itself with Latinate prefixes: re- is seen as a prefix in general, we can read a book and we can reread it, but we can only receive an offer; there is no English verb *ceive. However, there are other constructions apparently based on that root, for instance deceive, conceive or perceive, which would seem to suggest it should exist after all. Similarly, there is an English word refuse, but the word fuse cannot be the root as the two words have very different meanings. The question arises therefore whether words such as disgruntled, uncouth, receive, deceive, refuse etc. are in fact to be considered simple rather than complex words because they are no longer recognised by general speakers as consisting of a prefix and a root.

### 4.2.3.3 Suffixes as part of the grammar

Even though there are suffixes that create new words, there are some that do not. If we add an -s to the word clune, a person "who just won't go", the resulting clunes is clearly not a new word (and certainly no new word class), but simply a plural meaning "people who just won't go" (emphasis added). In the same way we can assume that there is a verb to ipe, whose presence participle is iping. This means that we need to differentiate between two types of suffixes, so-called derivational suffixes, which result in a new word, and, in the cases just presented, inflectional suffixes, which are used to denote singular vs. plural and verb inflection.

Returning to the terminology of simple versus complex words we can say that any root with affixes represents a complex word, irrespective of whether the affixation is derivational or inflectional. Thus runs is a complex word because it consists of a stem/root run and an inflectional suffix -s. In the same way sensitivities is a complex word consisting of the root sense and the derivational suffixes -itive and -ity, and the inflectional plural suffix -s.

### 4.2.3.4 Word-internal affixation

There are some languages in which affix morphemes can also occur word-internally. The classic example for this is Bahasa Indonesian, in which it is possible to insert for example a morpheme with intensifying meaning into the stem. In English and in most other European languages this type of infixation does not occur. However, the case has been
made that some colloquialisms like absobloominglutely, unbebloodylievable or fanfuckingtastic represent infixation. Whereas such possibilities exist in informal English, they are limited to expletives of the kind presented here. Furthermore, it has been suggested that this is not infixation in the true sense of the word because the morphemes inserted are not affixes, i.e. bound morphemes, but represent free forms in themselves. (Their insertion into an existing free-form would perhaps better be described as tmesis.)

### 4.2.3.5 Hierarchies of affixation

A look at the various affixes shows that they attach to specific word classes. For instance, un- can be attached to verbs as in unwind or to adjectives (and by extension to adverbs formed with $-l y$ ) but not to nouns: there is no such thing as an *unrose. Yet there are nouns that seem to go against this rule, for example the somewhat artificial word ungracefulness. Given the fact that nouns do not take the prefix un- this morpheme must


Figure 4-3 Hierarchy of affixation with resulting impact on word classes. have been added "earlier" than the noun-morpheme ness. From these considerations we can derive the assumption that there is a hierarchy of affixation, which Figure 4-3 illustrates.

### 4.2.3.6 Variations of morphemes

The presence of suffixes, derivational or inflectional, leads to a further consideration, as can be seen in (3).
(3a) an apple / a pear, an ice cream / a mousse
(3b) knife / knives, scarf / scarves
(3c) pad / pat / patch, pads / pats / patches
(3d) commit / commission, confuse / confusion, decide / decision
In (3a) the morpheme $a$ can be realised as $a$ or as $a n$. In other words, even though it clearly represents the same word (and base morpheme) $a$ it can take on two different forms, i.e. $a$ and an. (3b) shows a similar yet slightly different phenomenon: because of regressive assimilation the word final unvoiced labio-dental fricative /f/ followed by the voiced plural $/ \mathrm{z} /$ results in a variant of the word knife in the form of knive-s. In (3c) it is not the base morpheme which is affected, but the actual plural morpheme: in pad it is the regular / $\mathrm{z} /$, in pat, as a result of the voiceless final plosive it is voiceless $/ \mathrm{s} /$; and in the case of patch the plural morpheme is realised as / $\mathrm{Iz} /$ as a result of the word-final sibilant. All of these changes or variations are the result of phonological conditions in 3b and 3c created by inflectional suffixation.

By contrast (3d) is the result of a derivational morphological process: the change from the verbs decide, commit and confuse to the nouns decision, commission and confusion respectively, leading to a seeming change of the stem in terms of the last segment of the stem.

Such changes, the variation between $a$ and $a n$, the change in the morpheme-final segment, the various realisations of the plural suffix $-s$, and of course the changes in the stem of verbs being turned into nouns by the use of derivational suffixes, create a phenomenon called allomorphy. In other words, the realisation of determiner an and $a$, the realisations of the plural suffixes $-s /-e s$ and the changes in the base morphemes in 3 b and 3d, are all allomorphs.

### 4.2.3.7 n't,'m, 're, 've, 'Il, 'd and 's

The question arises as to what morphemes such as $-n$ ' $t$,' $m$, 're, 've, 'll, ' $d$ or 's can be described as. They can be attached to verb morphemes, for instance n't to do/does/did, inflected forms of to be and have (as an auxiliary) and defective modals auxiliaries like can, must, may, etc.. They can also be linked with pronouns as in she's, which may be a contraction of she has or she is, or attached to nouns to indicate possession as in Mary's husband. Like suffixes they cannot stand on their own; however, we can say that they are clearly not derivational as no new lexemes result, and they are also not properly inflectional (although they can form part of the verb inflection) because they are not the result of inflectional rules (such as to make a noun plural add $-s$ ). In short, they are clearly not suffixes in the proper sense of the word. Such morphemes that are attached to other stems, in English following, in French preceding them (je m'excuse) are known as clitics.

The last type, the 's-Genitive is an interesting case in point to illustrate that these morphemes are very different from suffixes in the sense that they are quite flexible in what they attach to.
(4a) My aunt's car
(4b) My aunt Mary's car
(4c) My aunt from Germany's car
This shows that the ' $s$-Genitive can be attached either to the word aunt in (4a), to her name in (4b) and to her country of origin in (4c) and not, as one might perhaps expect, always to the noun aunt. By comparison, the inflectional plural morpheme -s can only attach to the noun that is to be given in the plural:
(5a) My aunts
(5b) My aunts Mary and Jane not * my aunt Maries and Janes
(5a) My aunts from Germany not * my aunt from Germanys

### 4.2.3.8 Berries: a special case of bound morphemes

There is also group of morphemes which precedes the stem like prefix, but is clearly different from these as they only occur with stems referring to soft fruit. They are also not lexemes consisting of two separate words (which we will discuss in 4.2.4) because, like prefixes, these morphemes in words like cranberry, bilberry, raspberry do not exist on their own: cran-, bil-, rasp-, and arguably logan- and josta- as in loganberry and jostaberry need to be attached to the stem berry. Such morphemes are put in a class of their own and are called cranberry morphemes.

A brief remark, however, about loganberries and jostaberries. Logan- and josta-, appear to belong to the category of cranberry morphemes and may well be perceived as such by speakers, but the first morphemes are different from the previous examples: loganberries, a cross between blackberries and raspberries, were created by American horticulturalist James Harvey Logan and the josta in jostaberries is a blend of the two German words Johannis- and Stachelbeere, which describes this cross between blackcurrants and gooseberries. ${ }^{19}$

### 4.2.3.9 An overview of bound morphemes

A systematic overview of bound morphemes in English is represented in Error! Reference source not found.. Whereas the number of clitics, cranberry morphemes and inflectional suffixes is rather small, there are a larger number of derivational suffixes and even more prefixes. They reflect the dual sources of English, Germanic and Latinate. Generally roots or stems of Germanic origin connect with Germanic affixes, whereas roots or stems with latinate or Greek affixes tend be used with roots or stems of the same origin, although unis testimony to the fact that there are exceptions (unconditional, but inacceptable).


### 4.2.4 Combining existing words into new lexical items

A very productive way of creating new vocabulary is to "recycle" existing words in new combinations. According to (1) we can assume that there is a (fictitious) noun tib, which refers to of "glass bambies and poodles, matching


Figure 4-4 Illustration by Tenniel of a"rocking-horsefly" pigs and porcelain ponies in various postures", these two elements creates the new word tibshelf, i.e. the wooden construction that holds said "glass bambies and poodles etc." This strategy for word formation is called compounding, the resulting new lexeme is known as a compound. The process works with nouns (such as the fictitious example tibshelf, but also with starship, plant-pot or plant pot), with verbs (manhandle), with adjectives (bittersweet), with adverbs (right away) and even with prepositions (onto, into, strictly speaking also in accordance with, etc.). The two elements that are being combined do not necessarily have to be of the same word class as the example manhandle demonstrates: it consists of the noun man and the verb handle. The compound does not even have to consist exclusively of content words as the example bypass illustrates, consisting of the prepositions by and the noun/verb pass.

What can create problems is the spelling of compounds. Whereas in a language like German the compound is almost always joined (sometimes a hyphen may be used), in English the spelling can appear quite erratic with the compound elements being spelt separately, hyphenated or as one word. Rules to the effect that new compounds tend to be hyphenated and more widely used compounds either joined or separate do not hold consistently and most dictionaries will vary from each other in the spelling of the same compound.

### 4.2.4.1 Rules of combination

It would go too far in this framework to discuss all the rules of combination for all content words so for the sake of simplicity we will focus on noun compounds. Generally speaking, a plant pot is not a plant but a pot for plants; a swearword is a word used when swearing, not the action of swearing; and an in-crowd is a group of people, the prepositions in simply defines this group in more detail. This suggests that in the majority of cases it is the rightmost element, known as the head of the compound, that determines the category (the pot, the word, the crowd) and the word class, which in all cases is a noun irrespective of the element to the left. Because the right-most element in most cases is the head, we say that English compounds are right-headed. Table 4-1Table 4-3gives an overview of some possible noun compounds.

| bookshelf | blackbird <br> flat-liner <br> high tea | runway <br> ghanging-room <br> cleaning lady | insight <br> offshoot <br> up-take | yes-man <br> nowhere man |
| :--- | :--- | :--- | :--- | :--- |

Right-headedness also largely holds true for compounds consisting of three elements: a business law firm is a firm, specialising in business law, business law being a special branch of law. In general terms, then, we can say that in most cases the rightmost element determines the basic meaning and word class, whereas the elements to the left modify the head.

What is also noteworthy is that the word stress is often on the modifying morpheme rather than on the head. In cases where there is an ambiguity, often in words where the modifying element is an adjective or denotes a property, stress can make it clear what is meant. Therefore a gréen room is a room where actors wait before going on stage and a green róom is a room painted or decorated in green.


Figure 4-5 Ambiguity in 3-element compound

### 4.2.4.2 Exceptions from right-headedness

However, in some rare cases this hierarchy can be upset as Figure 4-5 illustrates. This is because there is a possibility for family to be an element of the term for a specific type of law or for a modifier to the noun firm.

Other exceptions to the rule of English compounds being right-headed can be found in compounds composed of a phrase like sister-in-law, brother-in-arms or lady in waiting. Here, clearly, the head is the noun on the left, which can be demonstrated with

> Exocentric Reminiscenses
> I've been getting mired in quags, which is something that I really hate, and my dash, alas, has been slapped just a little too often of late.
> My brow is no longer as high as I remember it once used to be and the way my hip hops these days frankly embarrasses me.
> To have saulted away so many summers
> fills me with loathing and shame, A few mates I may have ended up checking but fallen short of winning the game;
> It's so long since my hap was a hazard and buffed up all spic and span, So I'll just stick to pausing my meno for as long as I feasibly can.

Figure 4-6 Example of wordplay with exocentric compounds the affixation of the plural morpheme -s: the plural forms are sisters-in-law, men-at-arms and ladies in waiting, not *sister-in-laws, *brother-is-armses and lady in waitings.

While the two kinds of exceptions introduced so far are rather unusual and rare, there is a group of compounds that are markedly different from the ones discussed in 4.2.4.1, which are said to be endocentric. Compounds where the rightmost element does not determine the category and sometimes not even the word class and where the element to the left need not modify the element to the right are called exocentric. Typical examples are words like
redneck, killjoy or haphazard. Redneck denotes a poor white, usually conservative American from a southern state and not a neck that is red; a kill joy is not a specific kind of joy, but a person who ruins the fun for everybody, the compound thus reflecting what that person does; and haphazard is not a special type of hazard, in fact it is not even a noun, it is an adjective meaning "determined entirely (and unpredictably) by chance". Figure 4-6 gives an example how such compounds can be used in a nonsense poem, illustrating that the seeming elements of the compound fail to work meaningfully as individual elements.

### 4.3 Word formation: an overview

We will conclude this chapter with an overview of how new words can enter the English lexicon, several of which we have discussed above. As we are concerned with the structure of English words in this part of the course, we shall ignore borrowings and loan translations from other languages. The box below lists them in alphabetical order, the ones in bold print have not been discussed so far.
acronyms , alphabetisms/initialisms, backformation, blends, clipping, compounding, conversion, prefixation, reduplication, suffixation

- $\quad$ : This word-building strategy was discussed above. By adding a prefix to the beginning of an existing content word, a new word with a meaning influenced by the prefix is formed. Prefixation does not change the word class of the root, but some prefixes can only be used for certain word classes; un- does not connect with nouns unless they are derived from an adjective. Uncola, the term coined for an ad-campaign of a softdrink, is effective because it violates this rule of prefixation.
- $\square$ : Suffixes are added to the end of content words or rather their stem and can but need not change their word class. It can result in allomorphs (divide $\rightarrow$ division)
$\square$ : This is a special case based on the speaker's assumption of a straight-forward case of derivational suffixation: If a runner is someone who runs, then, it is assumed, a peddler peddles and a burglar burgles. In latter case the spelling of the seeming derivation burglar indicates that this is not in fact a derivation but a simple / free form, but the pronunciation suggests the suffix -er. In peddler the fact that it is a free form is not obvious, but it nevertheless is the root, not peddle. Both peddle and burgle are formed "backwards" from the perceived suffixation. Other examples include televise, backformed from television as the root of vision would be the Latin videre.
- $\quad$ : This is a relatively wide-spread process whereby words from one word class are simply converted to another word class. Our example with grace illustrates this, where the noun grace becomes a verb to grace. English is quite productive in this respect as an anecdote with former US Secretary of State Alexander Haig demonstrates. He was
known to use the English noun caveat (a warning not to commit certain acts) based on Latin "may he beware" as a verb: "I would caveat this".
$\qquad$ : This is the process by which two existing concepts are melded into a new one by juxtaposition. The process is recursive, in other words a compound can be combined with a new element to form a new compound with three, four or even more elements: research association $\rightarrow$ cancer research association $\rightarrow$ cancer research association steering committee $\rightarrow$ cancer research association steering committee meeting... Because of this productivity they can be combined quite freely, but not all compounds thus created will enter the lexicon of English permanently. Furthermore, many compounds created to fit new concepts are based on a metaphor. Hence, for example, the word for an interplanetary vessel introduced earlier is starship, even though the shape of the vessel has very little in common with a ship. However, a ship is a prototypical concept for a means to journey across uncharted distances without fixed routes in the forms of roads or tracks, which makes it a useful metaphor for space travel. or in communication with children: examples are easy-peasy, goody-goody, but also wishy-washy, teensy-weensy, etc.
- $\qquad$ :Some words in their full length may feel cumbersome or awkward to speakers so they shorten them, from refrigerator to fridge, perambulator to pram, influenza to flu, television to telly, but also words like gentlemen or advertisement, which may be more familiar in their full form, are clipped to gents and advert or ad respectively. Also speakers of specific jargon tend to clip: thus Stratocaster (a classic electric guitar) is usually referred to as a Strat amongst aficionados.
- $\quad$ : These are also known as portmanteau words. The term is based on the scene in Alice Through the Looking-Glass, in which Humpty-Dumpty explains the words mimsy as "flimsy and miserable" or slithy as "lithe and slymy" as portmanteau words with "two meanings packed into one word". In this type of word formation two terms blend into one morpheme - unlike compounds, where two or more morphemes are combined. Typical examples are smog, from smoke and fog, or brunch from breakfast and lunch. Many of these can also be ad-hoc formations, perhaps person- or family-specific, and will not become part of the lexicon in the long term. Others are more long-term and may move from one distinctive area to being used more widely, such as the originally Scouse (Liverpool) expression mingy, a blend between miserable and stingy (Fazarkerley 2001). A recent addition to the OED, gaining entry in 2012 is the word vageazzle, which combines vagina and dazzle meaning to decorate the pubic area with erotic jewellery.
- $\quad$ : These are words formed from the initial letters of the words that make up their name. They are pronounced as if they were actual words rather than a series of letters. Typical examples are UNESCO (United Nations Educational, Scientific and

Cultural Organisation) or NATO (North Atlantic Treaty Organisation), but also terms like laser (Light Amplification by Stimulated Emission of Radiation) and radar (Radio Detection and Ranging).

- $\qquad$ : They are another form of words formed from initial letters, but the letters are not melded into a word, they are pronounced as individual letters. Examples are USA, BBC, VIP, etc.
- $\qquad$ : These are almost exclusively reserved for new products and are usually the result of a definite effort. A good example for this is the word Kodak an artificial word created with the express purpose, to be pronounceable in any language as the combination CVCVC does not violate any phonotactic rules in the overwhelming majority of languages. Most of these words do not catch on except when a brand becomes a household name. Xerox is such an example which can be seen that for many years in the $20^{\text {th }}$ century the term for photocopy was xerox (copy) and the activity of photocopying was xeroxing. However, with the waning importance of the company, the lexeme seems to be falling into disuse. Another, very well-know example is google...


### 4.4 Key concepts

| idiom |  |
| :--- | :--- |
| lexeme Ilexical item |  |
| word class / part of <br> speech |  |
| content words / open <br> classes |  |
| function words I |  |
| closed classes |  |


| complex words |  |
| :--- | :--- |
| base/stem |  |
| root |  |
| bound morphemes |  |
| affix / affixation |  |
| prefix / prefixation |  |
| compound $/$ |  |
| compounding |  |
| crandix I suffixation |  |
| productive |  |
| inflectional |  |
| allomorics |  |
| allomorphy |  |


| exocentric compounds |  |
| :--- | :--- |
| recursive / recursivity |  |
| acronyms |  |
| alphabetisms |  |
| backformation |  |
| blends |  |
| clipping |  |
| conversion |  |
| reduplication |  |

### 4.5 References

Adams, Douglas and John Lloyd. 1990. The Deeper Meaning of Liff: a dictionary things that there aren't any words for yet. London: Pan Books, Faber \& Faber
Crystal, David . 1987. The Cambridge Encyclopedia of Language. Cambridge: Cambridge University Press.
___ 2009. The Cambridge Encylopedia of the English Language, Second Edition, Cambridge: Cambridge University Press
Fazarkerley, Fred (ed. and comp.). 2001. Scouse English. London: Abson
O’Grady, William and Videa P. de Guzman. 1996. Morphology: The analysis of word structure. In W. O'Grady, M. Dobrovolsky and F. Katamba: Contemporary Linguistics: An introduction. Harlow: Pearson Education.
Tournier, Jean. 1985. Introduction descriptive a la léxicogénétique de l’anglais contemporain. Paris: Champion-Slatkine

### 4.6 Morphology Exercises

### 4.6.1 Simple vs. Complex Words

1. In the following, identify which of the lexemes are simple and which ones are complex. Further identify the bound morphemes.

| Lexeme | simple / complex? |  | stem/root/base | bound morphemes |
| :--- | :---: | :---: | :--- | :--- |
| impossibility | $\square$ | $\square$ |  |  |
| overrated | $\square$ | $\square$ |  |  |
| replacement | $\square$ | $\square$ |  |  |
| snowman | $\square$ | $\square$ |  |  |
| friendships | $\square$ | $\square$ |  |  |
| undertaker | $\square$ | $\square$ |  |  |
| crack | $\square$ | $\square$ |  |  |
| magically | $\square$ | $\square$ |  |  |
| ingratitude | $\square$ | $\square$ |  |  |
| rhinoceros | $\square$ | $\square$ |  |  |
| unimaginable | $\square$ | $\square$ |  |  |
| railway station | $\square$ | $\square$ |  |  |
| unquestionably | $\square$ | $\square$ |  |  |
| good-looking | $\square$ | $\square$ |  |  |
| halflings | $\square$ | $\square$ |  |  |

For discussion:

| refuse | $\square$ | $\square$ |  |  |
| :--- | :---: | :---: | :---: | :---: |
| unlockable | $\square$ | $\square$ |  |  |
| criteria | $\square$ | $\square$ |  |  |
| ungainly | $\square$ | $\square$ |  |  |
| destination | $\square$ | $\square$ |  |  |

### 4.6.2 Affixation

2. Find examples that use the following prefixes:

| a/an- | ab- | anti- |
| :--- | :--- | :--- |
| counter- | dis- | for(e)- |
| in- / etc. | mal- | meta- |
| non- | out- | over- |
| pre- | pseudo- | re- |
| un- | under- | up- |

3. Find examples that use the following suffixes. Mark where the result is a different word class from the unaffixated root:

| -able/ible | -al | -ant |
| :---: | :---: | :---: |
| -ar | -ar(-er) | -ary |
| -(c)ate | -bound | -cide |
| -dom | -ee | -en |
| -ence | -ent | -er |
| -esque | -ic | -id |
| -(i)fy | -ile | -ion |
| -ise/-ize | -ish | -ism |
| -ite | -itude | -ity |
| -ive | -less | -like |
| -ling | -ment | -ness |
| -ory | -ose | -ous |
| -ward | -wise | -y |

4. With the following roots create an overview of possible derivations as for grace.

- act
- harmony
- communicate

5. With structure trees like the one in Figure 4-3 show the sequence of affixation for

- unhappiness
- uncommunicative
- reformulated
- underperformance
- non-conformity

6. What are the following bound morphemes?If a bound morpheme results in a change in word class, say from which to which word class the change takes place.

| bound <br> morpheme | type of affix | change of <br> word class? | if yes, original <br> word class | resulting word class |
| :--- | :--- | :--- | :--- | :--- |
| -able |  | $\square$ yes $\square$ no |  |  |
| -s |  | $\square$ yes $\square$ no |  |  |
| huckle- |  | $\square$ yes $\square$ no |  |  |
| -'ve | $\square$ yes $\square$ no |  |  |  |
| -'s | $\square$ yes $\square$ no |  |  |  |
| over- |  | $\square$ yes $\square$ no |  |  |
| -ies | $\square$ yes $\square$ no |  |  |  |
| -iousness |  | $\square$ yes $\square$ no |  |  |

### 4.6.3 Compounding

7. Find examples for the following types of compounds.

| $\mathrm{N}+\mathrm{N}$ | adj+V | $\mathrm{N}+\mathrm{V}$ | Prep+Prep |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

8. What type of compound are these (4.2.4.2)? Determine the word-class and the heads, if they have one.

| compound | meaning | type of compound | head | word-class |
| :--- | :--- | :--- | :--- | :--- |
| breakfast |  |  |  |  |
| criminal justice |  |  |  |  |
| crowd-pleaser |  |  |  |  |
| father-in-law |  |  |  |  |
| flagship |  |  |  |  |
| manhandle |  |  |  |  |
| man-o-war |  |  |  |  |
| newspaper |  |  |  |  |
| page turner |  |  |  |  |
| pickpocket |  |  |  |  |
| poorhouse |  |  |  |  |
| scarecrow |  |  |  |  |
| short-change |  |  |  |  |

### 4.6.4 Word Formation

9. Determine which word formation process is at work in the following examples.

| lexeme | meaning | word formation process |
| :--- | :--- | :--- |
| backformation |  |  |
| bagonize | worry about one's luggage at an airport |  |
| bartend |  |  |
| DHL |  |  |
| enthuse |  |  |
| EU |  |  |
| exam |  |  |
| hanky-panky |  |  |
| harmful |  |  |
| infotainment |  |  |
| nitty-gritty |  |  |
| pampers |  |  |
| PDF |  |  |
| pop (music) |  |  |
| orientated |  |  |
| restructure |  |  |
| sitcom |  |  |
| snafu |  |  |
| to DHL |  |  |
| to PDF |  |  |

## 5 Getting the Meaning: Semantics

### 5.1 Introduction: What does it mean?



## What you know/can do after working through Chapter 5

- You can identify in a group of words hypernyms and (co-)hyponyms.
- You understand the notions
o entailment
o homophone and homograph
0 (cognitive) synonyms
o Homonymy vs. polysemy
o denotation vs. connotation
- You can identify

0 prototypical and peripheral elements in word/semantic fields
o various types of antonyms
o figures of speech such as simile, metaphor, synecdoche/metonymy, paradoxes and oxymoron

So far we have looked at the sound system of English and the way in which words in the language are constructed. To a large degree, even though we have on occasion referred to it, meaning has been left aside. This follows a time-honoured tradition. Many theoretical linguists, interested mainly in clean-cut systems and structures, found that just such systems and structures were frustratingly elusive in the context of studying meaning, in the linguistic field of semantics. In this chapter we shall see why this is the case: meaning is strongly tied to individual ideas and worldviews, often culturally and socially conditioned, and as a result it is difficult at times to agree on features or categories of meaning that are accepted by all speakers and applicable in all situations. However, without at least considerable overlap in our perception of what words mean, communication would be impossible. The stark reminder of how important such shared meanings are for the speakers of a language is Swiss writer Peter Bichsel's short story "Ein Tisch ist ein Tisch", ${ }^{20}$ whose protagonist decides to refer to everyday objects with his own system of meaning (i.e. giving them new names), and ends up in complete isolation.

We can assume that the lexicon of the English language at a conservative estimate has more than 500,000 lexemes, a figure based on the head words in the Oxford English

Dictionary, which excludes certain, admittedly short-lived, neologisms. Yet even an extremely well-read individual is unlikely to have a vocabulary (active and passive) exceeding 50,000 items. It is clear therefore that, depending on the specialisation of our reading and our interactions, we may often come across words with whose meaning we are not familiar. In (1) we have a number of terms some of which we may know, others will be unfamiliar.

| (1) | buck | doe | fawn | hog/boar | sow |
| :--- | :--- | :--- | :--- | :--- | :--- |
| buck | doe | kitten/kit | lion | lioness | cub |
| buck | doe | leveret | ram | ewe | lamb |
| bull | cow | calf | stallion | mare | foal |
| cob | pen | cygnet | tiercel | eagless | chick |

Working with the familiar terms it becomes clear to us that the individual sets refer to the male, the female and the young of various animals. In this process of developing the meaning of the unfamiliar from the familiar we actually duplicate much of what happens in the natural process of acquiring the meaning of new words.

### 5.2 Categorisations and meaning

### 5.2.1 Inclusions and overlaps of word meaning

Another way of coming to terms with the meanings of the lexemes in (1) is to determine which ones could be grouped together. A very simple categorisation could be to make a distinction between birds $\qquad$ and $\square$ ) and mammals $\qquad$ , $\square$
$\qquad$

$\square$ and $\qquad$ Some of the subgroups could be subdivided further, for instance into rodents, predators and hooved animals, so-called ungulates; ungulates could be further categorised into animals that ruminate and others that do not, or into even-toed vs. uneven-toed ungulates. Another way of forming categories would be to make a distinction based on the animals' diet, i.e. whether they eat meat (carnivores) or plant matter (herbivores) with some animals eating both (omnivores). A last way of categorising the animals could be according to whether their young are born helpless and need to be nurtured after birth, in other words, whether they are "altricial", or whether within a very short period of time they can fend for themselves, i.e. they are "precocial".

Let us begin by focusing on the largest category in (1), the mammals. Figure 5-1 shows the way in which this category can be graphically represented.


Figure 5-1 Systematising the category of "mammals"
We can say that the animals listed in Figure 5-1 are all part of the category of mammals, in other words, that for anything from rabbits to elephants the term mammal is the superordinate term, the so-called hypernym. Conversely, the subordinate terms for the category mammals, listed in the row of individual species at the bottom of Figure 5-1 (rabbits etc.) , are all so-called hyponyms to the hypernym mammal. As all of these animals (rabbits, pigs, cows, etc.) are hyponyms to mammal, this makes them co-hyponyms of each other.

The relationship between hypernyms and hyponyms is an important one for determining meaning. In order to illustrate this we have to move from the focus on individual words to the consideration of full sentences for a moment. We can say that
(2a) Mammals are warm-blooded.
(2b) Rabbits are mammals.
(2c) Rabbits are warm-blooded.
If sentence (2a) is true and sentence (2b) is true as well, then it follows that sentence (2c) must also be true. This relationship is called entailment. The meaning of (2c) is included in the meaning of (2a) and (2b), which is why we also talk about meaning inclusion, a term that is "synonymous" (a concept we will return to below) with entailment. Another way of expressing this concept is to say that (2c) is entailed in (2a) and (2b). From this we can formulate a rule to define entailment:
(3) If sentence $S_{1}$ is true and sentence $S_{2}$ is equally true, sentence $S_{1}$ entails $S_{2}$

In the same way we can say that a hypernym entails a hyponym, that the lexeme mammal entails the lexeme rabbit. Co-hyponyms do not entail each other, but they are all entailed in their hypernym, i.e. mammals entails cows, elephants, sheep, rabbits, etc.

There can of course be several levels of entailment. For instance, some of the animals listed in Figure 5-1 could also be co-hyponyms of the hypernyms rodents and ungulates (Figure 5-2). Thus the term rodents entails rabbits etc., the term ungulates entails pigs, cows, etc. The hypernym for rodents and ungulates is mammals; mammal therefore entails
rodents and ungulates, but it also entails, a level further down, rabbits, pigs, cows, deer, etc.


Figure 5-2 Levels of entailment

### 5.2.2 Elements of meaning

Having explored one approach to how we construct meaning, i.e. through the creation of typological hierarchies, we are still left with the question as to how the meaning of individual words can be constructed. It has been suggested that the way in which we may do this is by identifying elements of meaning, some typical features of a lexeme whose meaning we want to develop. Somewhat simplistically put, the way in which a baby begins to refer to the people around her is by associating the one person who is the source of food as mama and other kindly humans as dada, based on the linguistic input of adult references to mummy and daddy. It is only later that both terms become more refined and more restrictive as the child adds more features to the two lexemes mummy and daddy.

The analysis of meaning in terms of semantic features (or semantic components) in


Figure 5-3 Semantic features of selected animal males, females and young
some ways mirrors this approach: by defining features to characterise a lexeme and refining those features to make them truly distinctive, we are able to determine with increasing accuracy what a given lexeme means. In order to illustrate this, let us return to (1). Bull, cow and calf are clearly hyponyms either of cow or possibly elephant; buck and doe can refer to deer, rabbits or hares, but the terms fawn, kit or leveret make it clear that these are the young of specific types of animals. To illustrate how such semantic features could be presented see
Figure 5-3. If a feature is present, we indicate
this with $\mathrm{a}+$ (plus), if it is absent with a (minus) sign. If we see female (animal) as a hypernym, cow and doe are (co-)hyponyms. The lexemes also share the hypernym adult (animal). However, in terms of what kind of adult female animal the respective cows and does are, we need a further feature, the feature regarding the genus, the type of animal they are. As far as the distinction between the various adult female animals goes, this last feature is essential. To put it the other way round [+ cervine, +adult, + female] can only be the doe of the species deer.

Such an essential feature need not always be the reference to the species. If we compare the semantic features of cygnet and chick, either as the young of a hen or an eagle, that essential feature that leads to the clear definition of the animal may be [ $\pm$ bird of prey], [ $\pm$ domestic] or [ $\pm$ web-footed]. On the other hand, if the development of semantic features of any of these young birds is not contrastive as obviously as in our examples so far, the bundle of semantic features [-adult, $\pm$ female + bird of prey] will be as inconclusive as [-adult, $\pm$ female, + web-footed]; in the first case the features could apply to any young of a bird of prey, a young falcon, harrier, kite or even a shrike ${ }^{21}$, in the second case it would equally describe a young duckling, gosling or several other species of waterfowl. The case is even more complex if we compare leveret and kit, which share a large number of semantic features: [-adult, $\pm$ female, + rodent, + herbivore, - ruminant, + leporine, + long-eared, ...], but, in order to make a clear distinction between the two species hare and rabbit, a rather "esoteric" feature needs to be found, which is [- altricial] and [+ altricial] respectively as leverets are born practically ready to live relatively independently whereas kits are born naked and blind in underground burrows and need to be nurtured for the first two weeks of their lives. One could say therefore that the feature that distinguishes a leveret from a kit, the distinctive "rabbitness" or "hareness" lies in this one relatively little-known feature. Nevertheless, the essential feature to make that final distinction is clearly identifiable, even if it is rather obscure for non-zoologists.

Before addressing some more complex issues concerning semantic features, let us return briefly to summarise the semantic features we have compiled so far about the groups animals in (1). We can compile all the semantic features of a group of co-hyponyms in a semantic matrix. An example for this is Table 5-1. It has to be said that there are some elements in this matrix that do not follow the textbook too strictly, mainly the last column (species) as these for a table of this complexity cannot be determined on a narrow +/- basis. For this to work, one adjective would have to be chosen, e.g. ovine, which would result in this feature being "-" for all animals except ram, ewe and lamb.

[^10]|  | mammal | adult | female | eventoed | ungulate | ruminant | herbivore | altricial | (species) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| cob |  |  |  | ? |  |  |  | + | (anserine) |
| pen |  |  |  | ? |  |  |  | + | (anserine) |
| cygnet |  |  |  | ? |  |  |  | + | (anserine) |
| tiercel |  |  |  | ? |  |  |  | + | (acciptrine) |
| eagless |  |  |  | ? |  |  |  | + | (acciptrine) |
| chick |  |  |  | ? |  |  |  | + | (acciptrine) |
| stallion |  |  |  |  |  |  |  | - | (equine) |
| mare |  |  |  |  |  |  |  | - | (equine) |
| foal |  |  |  |  |  |  |  | - | (equine) |
| buck |  |  |  |  |  |  |  | - | (cervine) |
| doe |  |  |  |  |  |  |  | - | (cervine) |
| fawn |  |  |  |  |  |  |  | - | (cervine) |
| ram |  |  |  |  |  |  |  | - | (ovine) |
| ewe |  |  |  |  |  |  |  | - | (ovine) |
| lamb |  |  |  |  |  |  |  | - | (ovine) |
| bull |  |  |  |  |  |  |  | - | (elephantine) |
| cow |  |  |  |  |  |  |  | - | (elephantine) |
| calf |  |  |  |  |  |  |  | - | (elephantine) |
| buck |  |  |  |  |  |  |  | + | (leporine) |
| doe |  |  |  |  |  |  |  | + | (leporine) |
| kitten/kit |  |  |  |  |  |  |  | + | (leporine) |
| buck |  |  |  |  |  |  |  | - | (leporine) |
| doe |  |  |  |  |  |  |  | - | (leporine) |
| leveret |  |  |  |  |  |  |  | - | (leporine) |
| lion |  |  |  |  |  |  |  | - | (feline) |
| lioness |  |  |  |  |  |  |  | - | (feline) |
| cub |  |  |  |  |  |  |  | - | (feline) |
| hog/boar |  |  |  |  |  |  |  | + | (suine) |
| sow |  |  |  |  |  |  |  | + | (suine) |
| piglet |  |  |  |  |  |  |  | + | (suine) |

Table 5-1Semantic matrix for animals discussed in (1)
By contrast, however, there are lexemes for which it is difficult if not impossible to find such an essential feature: gradable adjectives are problematic by definition because the point where [+ poor] turns to [- poor] may be politically definable for the sake of calculating a cut-off point for the payment of social benefits, but whether someone, who falls short of the cut-off point by a few dollars/pounds/euros etc. is [+ poor] and someone who exceeds the limit by the same amount can be said to be [- poor] is at least debatable. Even more elusive are gradable adjectives that reflect a value judgement or a personal opinion, for instance [ $\pm$ clever] or [ $\pm$ beautiful].

Thus, whereas semantic features represent a useful model to account for how elements of meaning contribute towards defining the overall meaning of, say, a noun, as a general model of how we create meaning they fall short because a set of definitive and generally accepted features can be rather elusive, especially where personal or evaluative judgement comes into play.

### 5.2.3 Meaning relations

### 5.2.3.1 Presence or absence of hypernyms

Another problem may arise with a group of lexemes like stroll, saunter, wander, ramble, amble, promenade. All of these lexemes are co-hyponyms and thus form what is called a semantic field or word field, the field of verbs of "bipedal, relaxed locomotion". In our earlier discussion of semantic features we found that such a feature shared by all the lexemes in the semantic field constitutes the hypernym (which was mammal for the animals we considered). However, even though for the semantic field under discussion here we may be able to define a common meaning, there is no single lexeme, no actual hypernym in the English language that means to walk relaxedly with little or no purpose or goal. Go is too general as this would also entail run or even drive, which are both clearly not co-hypomyms of saunter etc. as one includes bipedal locomotion but is neither relaxed and is unlikely to include the concept of little or no purpose and the other does not even incorporate the notion of moving on foot. The absence of such a hypernym for the co-hyponyms saunter etc. is said to be a lexical gap, a missing item in the lexicon of English.

### 5.2.3.2 Sameness of meaning(?)

Nevertheless, the various verbs of movement introduced above share a meaning relation, as co-hyponyms and their meaning is rather similar, although in analogy to George Orwell, some are more similar than others. Such similarity of meaning is known as synonymy: synonyms need to have the same or at the very least share most semantic features. However, there are subtle differences in meaning between the various types of leisurely walking: ramble can be something a subject may be doing for some time, even have it as a life-style as can be seen in many a blues song ("Rambling on My Mind"), whereas promenade may be more formal and somewhat dated, features that stroll does not share. Amble is sometimes associated with strolling in a public space, a bit like promenade but different from wandering, which can also include a search for food, shelter or employment and is as such closer to ramble than to saunter. Furthermore, several of these verbs also have a metaphorical meaning: wander can include the concept of being sexually unfaithful as well as being of unsteady mind; promenade can also refer to a formal procession or a figure in line or country dancing; ramble can refer to a near-delirious way of speaking, for example in a fever, etc. Whereas to describe a leisurely walk on a Saturday morning, we can to an extent use any of these verbs as in (4a), (4b-d) clearly shows that the same replacements do not work in other contexts.
(4a) The young couple promenaded along the sea front.
The young couple ambled along the sea front.
The young couple strolled along the sea front.
The young couple sauntered along the sea front.
(4b) *The young men promenaded from farm to farm in search of work. (instead of rambled)
(4c) *Because of his high fever, his thoughts strolled incoherently. (instead of wandered)
(4d) *The procession of war veterans ambled down the High Street. (instead of promenaded)

But also other co-hypoyms, which clearly share semantic features, and would thus be considered synonymous demonstrate that if we take synonymy to mean "words that share identical semantic features and can be substituted for one another", the definition for complete synonymy, we find that there are always factors that prove that such complete synonymy is virtually impossible. Consider (5), sentences that all contain hyponyms of the hypernym horse.
(5a) The knight rode on a white horse.
(5b) The knight rode on a white steed.
(5c) The knight rode on a white stallion.
(5d) ?The knight rode on a white gee-gee.
(5e) ?The knight rode on a white nag.
(5a) and (5b) differ slightly in meaning in the sense that (5a) is considerably less specific, but both sentences seem appropriate in the choice of vocabulary. (5c) is more specific than (5a) and (5b), giving information about the sex of the horse and the fact that it is not castrated (unlike if gelding was used). (5d) seems odd because the word gee-gee is typical for language used with small children or it is used to refer facetiously to race horses that bets are placed on. (5e) finally seems odd because nag is used to describe a tired, old horse, which is hardly in keeping with the image that the sentence normally seems to convey ${ }^{22}$. In other words, these terms are not complete synonyms, but as all competent language users would acknowledge a wide-ranging overlap in meaning, we can say that this is a case of cognitive synonymy.

This means that words which are cognitive synonyms may not be interchangeable in all contexts, but they are all recognised as referring to the same type of entity. Steed, stallion, gee-gee and nag all have the same basic referent, i.e. horse; in other words, they have the same denotation. However, the image they are likely to project in the readers’ or listeners’ minds are probably quite different. This difference may be personal, i.e. affective/emotional, or it may be culturally conditioned, and is known as connotation. An interesting example of a culturally conditioned connotation is the word liberal, which in European usage is a positive political statement, a liberal being in favour of freedom; in the

[^11]US it is associated with weakness, with touchy-feeliness and a lack of backbone, in other words it represents a slur on the person on whom it is bestowed.

To summarise, there is little to no evidence for complete synonymy in any language. The existence of two words with identical meaning would make no sense for the economy of a language as one of the two synonyms would be redundant. This can be illustrated in English where there is often a Germanic-based lexeme alongside a French-derived one; a good example are phrasal verbs derived from a Germanic and the synonymous simple lexical verb derived from a Latinate root. However, as the word pairs run out/expire, back off/retreat or go up/increase demonstrate, there is a clear difference in register, the level of formality. The Germanic phrasal verbs are clearly more colloquial, the Latin- or Frenchbased lexemes are more formal and indicative an official or academic style.

### 5.2.3.3 Opposites

Another kind of meaning relation, in direct opposition to (cognitive) synonymy can be observed in words that have contrasting meanings, such as beautiful and ugly, but also dead and alive. These represent two types of antonyms.

A painting can either beautiful or ugly, but there are degrees in either direction, in fact from stunningly beautiful to revoltingly ugly. These two extremes are at the opposite end of a spectrum based on aesthetic criteria which may be highly subjective, but speakers are capable of determining the degree of beauty or ugliness of the picture. As our discussion showed (5.2.2), this is the kind of determination of meaning, of the degree of beauty or ugliness on a continuum, that defies semantic feature analysis: there is no point on the spectrum (unless we were to use a physical graph with a fixed middle, a somewhat cherché undertaking with little practical application) at which we can say that a painting on either side of this point is either [+ beautiful] or conversely [+ugly]. Because of these meanings are placed on a continuous spectrum, we refer to these kinds of lexical pairs, very often adjectives, as gradable antonyms.

In contrast to gradable antonyms there are antonyms which can clearly be described in terms of semantic features: dead is unequivocally [-alive, + dead] and alive is just as obviously [+alive, -dead]. Instead of a continuum along which various degrees of a given quality are possible, here there is an indisputable presence or absence of an attribute. Similar word pairs are also possible with verbs as in stop and go or take off and land, or with nouns, for instance sea and shore. In all of these cases, semantic feature analysis works because states or features can either be present or absent. In this case we speak about complementarity.

A third type can be seen in word pairs or sets that are neither gradable nor complementary. If an object is blue, it cannot be red at the same time. If John is Mary's uncle Mary cannot be John's aunt, not just because of gender differences but also because the terms uncle, aunt, niece and nephew are exclusive in the roles they describe in kinship
terms as red and green are in terms of colour. They are also not actually antonyms, they are rather examples of a phenomenon known as exclusivity, meaning that if they represent their key feature, i.e. redness or older male relative, they cannot at the same time represent another, related feature such as blueness or younger female relative.

### 5.2.3.4 Degrees of meaning relatedness

Another set of phenomena becomes apparent if we consider the outward appearance of words and their meanings. A case in point are the words fair, fair and fare in (6) where some but by no means all of their meanings are given and exemplified.
(6a) fair (adj/adv) [fعə]:

1. without prejudice, in conformity with generally accepted/approved rules as in "The criminal was given a fair trial."
2. not excessive
as in "I earn a fair wage."
3. not overly impressive
as in "It was not more than a fair performance of their greatest hits"
(cf. also "They did fairly well in the games.")
4. pleasant, agreeable (typically used together with weather)
as in "Tomorrow the weather will be fair with a few passing clouds."
5. pleasant to look at (typically used together with [+ female])
as in "Women are often referred to as the fair(er) sex"
6. light-coloured
as in "Her fair complexion makes her susceptible to sunburn."
7. blond or light-coloured (typically used together with hair in one form or another)
as in "The most striking feature was his fair hair."
(6b) fair (n) [fعə]:
8. a gathering of merchants or producers to present their goods as in "on Fridays they whole family went to the fair to sell their vegetables."
9. a mobile amusement park
as in "They met on a rollercoaster ride at the county fair."
(6c) fare (n) [fعə]:
10. the price of the ticket, usually on the bus, train or plane (airfare)
as in "the fares on Swiss trains must seem very high to foreign visitors."
11. a passenger in a taxi
as in "the taxi driver dropped his fare outside the front door."
(6d) fare (vb) [fعə]:
to proceed, to get on
as in "they fared rather well under new management."
(6a) and (6b) on the one hand and (6c) and (6d) on the other hand represent one type of meaning relation: they are spelt differently but pronounced the same way, both as
[fعə]. For this reason they are called homophones, which means "the same sound". Other cases of homophony would be read as in "this book is a good read" and reed, the tall, hardy plant that grows on the edge of ponds or the vibrating element in instruments like clarinets, saxophones etc.

We also encounter the opposite, words with the same spelling, but with a different pronunciation. In (7) we can see this exemplified with the words lead [li:d] and lead [led].
(7a) lead (n) [li:d]:

1. the front position in a race as in "Usain Bolt was in the lead from the very start."
2. an indication to the solution of a problem
as in "The police are following a promising lead."
3. a piece of rope, leather or fabric tied to a (dog's) collar as in "Dogs must be kept on the lead at all times"
4. plastic-coated wire or set of wires connecting an appliance to power socket as in "the lead on most electrical appliances is rather too short to be useful."
(7b) lead (n) [1عd]:
5. a heavy, grey and poisonous metal
as in "Lead works as a shield against radiation"
6. the black or coloured central element of a pencil
as in "The lead in a pencil is actually made of graphite."
The fact that these words differ in pronunciation but are spelt the same is reflected in the term, homograph, literally the "same writing". As lead in (7a) has a different pronunciation from lead in (7b), they will clearly be listed as two separate entries in a dictionary. Why this should be significant is something we will discuss in the following.

The question arises how the various meanings of the words fair, fair and fare or lead and lead are listed in the dictionary. If, as was discussed in the previous chapter, lexemes are head words, clearly the editors of a dictionary would have to make a decision whether to list the various meanings of the above words as separate entries or whether they can group them under one head word. The criterion for this decision would have to be how many semantic features that set of words share and in how many semantic features they are obviously different. Somewhat simplistically put, we can say that the fewer semantic features shared, or if no actual overlaps in meaning can be observed, the more likely it is that dictionary editors would see such words as separate entries; the more semantic features a pair or set of words share, the easier it is to make the case that they belong under the same heading. In theory, words that have the same appearance but very different meanings would be considered homonyms. By contrast, words with a significant degree of meaning overlap are seen as being polysemous; in this phenomenon, called polysemy, each polysemous word
is considered to have a related meaning to other polysemous words (reflected in the shared semantic features).

However, as is often the case in language, to make a hard and fast distinction between homonymy and polysemy is not as straight-forward as the definition might suggest. In some ways, for instance, two words, an ear as part of the anatomy and an ear of corn, seem to share meaning, and could be seen to be polysemous, because both represent something that extends from the side of the central element, the ear of the head, the ear of corn to the central stalk. However, a closer look at the etymology (the study of the origin of words) reveals that in fact they come from two different words originally: ear goes back to Old English eare, which in turn is assumed to go back to hypothetical Proto-Germanic *auzon, (cf. Old Norse eyra, Old High German ora, Latin auris); by contrast, the ear of corn comes from West Saxon ear, which in Northumbrian was ceher, a cognate of the German word Ähre. ${ }^{23}$ Even though sometimes considered to be a case of polysemy, these two "ears" are therefore actually homographs even though very few speakers of English would be aware of this.

But even in the examples listed in (6) and (7) the question whether we are confronted with polysemy or homonymy is less than clear-cut. We can demonstrate how this question is addressed in two practical examples, the Cambridge Advanced Learners Dictionary (CALD) and the Shorter Oxford English Dictionary (SOED). The CALD in broad terms seems to follow the argumentation that in (6a) there are four instances of homonymy, meaning 1 referring to moral aspects, meanings 2 and 3 referring to moderation, meanings 4 and 5 focusing on colour or shade and meanings 6 and 7 on the degree to which an entity is considered pleasant. By contrast, it could be argued that all the adjective meanings and all the noun meanings respectively, represent instances of polysemy and only fair as an adjective and fair as a noun represent cases of homonymy; the SOED does precisely this by listing only two headwords, the adjective fair and the nouns fair, with all meanings presented in (6a) and (6b) listed as polysemous. The same applies for the meanings of fare with the CALD listing each of the meanings in (6c) and (6d) as separate entries, in other words as instances of homonymy, whereas the SOED merely lists the two entries for the noun fare and the verb to fare, once again treating the meanings listed under the verb entry and the ones listed under the noun entry as polysemous, but the verb and the noun as homonyms. Lastly, both dictionaries, unsurprisingly, make a distinction between the homographs lead [lعd] and lead [li:d] with separate entries, but the SOED once again only makes a distinction between lead as a noun or a verb, in contrast to the CALD which has a separate entry for each of the meanings detailed in (7a) as well as in (7b).
${ }^{23}$ http://www.etymonline.com/index.php?term=ear accessed 11.9.2012

In summary, this discussion shows two things: firstly, the more scholarly SOED opts mainly for a restrictive interpretation of homonymy, listing the various meanings as instances of polysemy, whereas the CALD, possibly aiming at access to English headwords as vocabulary for advanced learners, tends towards an interpretation of the various meanings as homonymous. Secondly, and more generally, the decision as to whether a set of words are polysemous or homonymous is less than clear-cut and may depend to a large extent on the dictionary editors' interpretation of sameness or difference of meaning.

To end this subsection on a lighter note, it may be interesting to see many puns in riddles and jokes in English rely on homophony and homonymy /polysemy. (8) to (10) demonstrate such puns in the context of children's jokes:
(8) Two fish in a tank, one says to the other, "Do you know how to drive this thing?"
(9) "A man walks into a bar and falls down unconscious"
(10) "What’s black and white and [red] all over?"
"A newspaper."
Running the danger of ruining a joke by explaining it, we nevertheless briefly need to mention the phenomenon manifested in these examples, homonymy of tank in (8), homonymy or polysemy of bar in (9) and homophony of red and read in (10); in the last case there is a variant to disappoint listeners too familiar with joke, ${ }^{24}$ which also plays on the homophony of the expectation that [red] will be interpreted as the past participle of read, but could also be red, with the answer being "a sunburnt penguin". In all of these cases, the punch line, the actual joke, depends on some ambiguity in meaning, which is normally resolvable, at least in parts, in the context that is usually present then the (potentially) ambiguous utterance is made in a real-life situations. Jokes, by their very nature, are selective in terms of the amount of context they provide, as is demonstrated clearly in (8) and (9), where, if this were desired, the ambiguity could be resolved with a premodifier, e.g. an adjective.

There is another interesting phenomenon at work here, comparable to Figure 5-1. Here too we have two images in


Figure 5-4 "All is Vanity" by C. Allan Gilbert as a "Vexierbild" one, but it seems to be characteristic of the human mind when perceiving such images, that it is only ever possible to process one at a time. We mentally switch between perceiving the young woman in the round mirror and her dark hair and its reflection as the empty eye sockets of the skull; the same is true for the punch line in (8): its evokes amusement because

[^12]we make the same switch from tank as fish tank, which, given the protagonists are fish, seems a reasonable assumption, to tank as armoured vehicle, because the punch line refers to the tank being driven.

### 5.2.3.5 Word fields revisited

Earlier in our discussion we came across lexemes, whose meaning was absolutely clear, especially when used contrastively, e.g. in a complementary pair like alive and dead or married and single. However, other lexemes were much less clear-cut in their meaning either because they depend on individual judgement (beautiful and ugly) or on a fluid kind of gradability (rich and poor or hot and cold). A case where both ideas, individual judgement and fluid gradability coincide is in lexeme sets like terrorist, guerrilla, freedom fighter and activist. They all share a core meaning in the sense that they refer to people who find the status quo inacceptable and set out to change what they feel is wrong, potentially using illegal or lethal means. However, both in terms of denotation and more obviously of connotation, they can differ strongly from one to another, and, needless to say, one person's freedom fighter is another person's guerilla, or, as the events during the 2001 G8-Summit in Genoa demonstrated very disturbingly, one party's activist is conveniently another party's terrorist, which was used to justify the brutal treatment of the sleeping protestors raided and arrested in the Diaz-Pascoli and Diaz-Pertini school buildings after midnight on 21 July of that year.

What these examples demonstrate is that there may be a core meaning that most speakers of the language will agree on, but towards the edges, i.e. the further from the core meaning we perceive a concept, the more debatable its meaning becomes. The question as to where an activist becomes a terrorist highlights such a fluid transition between meanings: whether someone who is passionate about a cause and as a result unwilling to condemn the use of force as unacceptable is per definition already to be regarded as a terrorist is at least debatable. Similarly, is someone who is so committed to a cause that $\mathrm{s} / \mathrm{he}$ is prepared to use explosives but ensures that only material damage results and nobody comes to physical harm a freedom fighter, a guerrilla or a terrorist? Such deliberations must result in the insight that far from having clearly defined meanings, there are a considerable number of lexemes that must be regarded as fuzzy concepts, i.e. that in the interpretation of their meaning, most speakers would agree on the core meaning, but where the borderlines are at which such meanings no longer apply, is the subject of a potentially serious, if not acrimonious debate among language users. Such fuzziness is very often part of everyday language, mainly in the form of hedges, devices used in discourse (written and oral) to indicate fuzziness. In this way we may use phrases like "in a manner of/generally speaking", "sort/kind of", "a bit", but also adverbs like generally, usually, possibly, perhaps, roughly, etc.

This is due to the fact that we may or may not agree what is more or less typical for the meaning of certain lexemes; when we use hedges we signal that uncertainty while at the same time also indicating the core meaning, a strategy that helps to get a message across while at the same time allowing the listener/addressee to determine the "edges" of meaning, where we as speakers may not be too sure about the degree to which they apply or would be mutually acceptable.

Just how fuzzy the edges can become can be seen when we use certain lexemes that are hypernyms or not very obvious co-hyponyms. Again, it may be a device like an adverb (e.g. technically, actually, really) or an adverbial (in actual fact, strictly speaking) that can signal this, as (11) and (12) demonstrate:
(11a) Actually, a dolphin is a mammal.
(11b) ?Actually, a cow is a mammal.
(12a) To be botanically accurate, a cucumber is a fruit.
(12b) ?To be botanically accurate, an apple is a fruit.
In both (11a) and (12a) it makes sense to use the adverb/adverbial, because some language users may be unaware that dolphins unlike fish give birth to living young, suckle them and breathe with lungs, all relatively reliable semantic features of the hypernym mammal. That cucumbers are fruit rather than vegetables may require a more profound knowledge of horticulture or botany, because fruit are usually associated with sweetness and their likely use in a dessert of some kind, whereas something that is made into a salad with a savoury dressing or is cooked in a savoury dish is more likely thought to be a vegetable; however, cucumbers grow out of flowers and contain the seeds of the plant, which makes them into


Figure 5-5 Degrees of prototypicality of fruit; more prototypical fruit in the centre
 the fruit of this annual plant. By contrast (11b) and (12b) are at the very least odd because it is clear, even to speakers with only minimal knowledge of zoology and botany, that cows give birth to calves, which suckle in their first weeks or months, and that they do not breathe through gills, just as apples are typically fruit, partly because they are generally known to share certain semantic features with other fruit, e.g [+ sweet, - savoury dish, ...], even if not everybody thinks of them as having grown from a blossom, containing seeds, etc., which would be the common
definition of fruit. In neither case is there any surprise in the utterance about the fact that cows are mammals and apple are fruit, a surprise usefully flagged by the adverb actually or the adverbial (clause) to be botanically accurate in (12a) and (12b). This is because cows are what most speakers more typically associate with the hypernym mammal, and because the same applies to apple and the hypernym fruit. The association of some hyponyms with a hypernym as being more typical than other co-hyponyms leads to the concept of prototypes: some co-hyponyms are more prototypical for their hypernym than others.

Such prototypes have an obvious psychological reality. If we ask speakers of English to name a fruit, they are likely to mention apple, pear, perhaps orange rather than raspberry or blackcurrant and considerably more likely than cumquat, papaya or lychee, probably on the grounds of familiarity and availability (see Figure 5-5). In the same way, cows or cats are more prototypically mammals than manatees, purposes or duckbilled platypuses as are hammers or screwdrivers for tools rather than circular saws or soldering irons.

### 5.2.4 Meaning beyond the word level: making words do extra work

Back in 824.1.2 we introduced the term lexeme because the concept of word is rather fraught and to a certain degree not entirely helpful as the following discussion will demonstrate. In this subsection we will look at a few special cases of how meaning is connected with words/lexemes and in some cases how it relates to entities, features, states and activities in the real world.

### 5.2.4.1 Combination of "words"

### 5.2.4.1.1 Fixed combinations with circumscribed meanings

One type of lexeme is composed of a stable combination of words, but its meaning is not obvious from the combined meaning of the constituent words in themselves. This type of lexeme is known as an idiom. It often creates an image in the combination of the words or it may refer to the specific background or domain, the idiom originates from. To illustrate, the example we used in 824.1.2, three sheets to the wind creates such an image, the image of an out of control, lurching sailing ship, but the actual meaning based on the constituent words is only accessible to someone familiar with sailing terminology. Nevertheless, many speakers of English use this idiom correctly without being aware of the nautical etymology because of its relatively widespread usage in reference to someone who is seriously drunk. In the same way
(13a) to throw in the towel
is understandable to speakers of English as meaning to give up, even if they do not realise that this is what a trainer may do during a boxing bout which is going badly to make his
champion give up and prevent serious defeat or injury. Other idioms seem merely colourful like
(14a) It's raining cats and dogs.
or their origin may be lost in the mists of etymology like the rather odd phrase
(15a) by the skin of one's teeth
e.g. "we made the train by the skin or our teeth"
which means we managed to catch the train "at the last minute".
What idioms have in common, to reiterate, is that their meaning cannot be determined by the combined meaning of the individual words. The meaning of an idiom is usually culturally determined and part of a shared (and possibly short-lived) convention among the speakers of a language or a variant, and they tend to be firmly linked to these languages and variants. Frequently they date rather quickly and fall into disuse. These two points, language/variant specificity and the tendency to be dated is most noticeable in slang idioms as a brief discussion of such slang expressions for being sick in English and in Swiss German will illustrate in (16). ${ }^{25}$ In fact (16) will show some overlap in imagery or in meaning between English and Swiss German but also sizeable differences:
\(\left.$$
\begin{array}{ll}\text { (16a) to call Hughie } & \begin{array}{l}\text { em Ueli rüefe } \\
\text { (dat.) Ueli call } \\
\text { "to call Ueli"" }\end{array} \\
\text { (16b) to do the martini yodel } \\
\text { (American, dated) }\end{array}
$$ \quad \begin{array}{l}de Chräije juuzge <br>
(dat.) crows yodel <br>
"to yodel to/for the crows" (dated) <br>

(no equivalent)\end{array}\right\}\)| (16c) to use the big white telephone equivalent) |
| :--- |
| (16d) a Technicolor yawn |
| (dated) |
| (16e) (no equivalent) | | rückwärts väspere |
| :--- |
| in reverse eat (lit. at vesper, afternoon) |
| "to eat backwards" (dated) |

Whereas (16a) reflects fundamentally the same idea in both languages, albeit with different names, but they are both reminiscent of the attendant sounds of retching, which is reflected in the choice of the respective names Hughie and Ueli. (16b) makes use of the same verb, but uses a different image, American English referring to the cause, Swiss German to the content of the activity. (16e) also refers to the material aspect but with a variation on the focus. By contrast, there seems to be no slang idiom at present that would be the SwissGerman equivalent of (16c) and (16d) and no English equivalent for (16e). This demonstrates that such idioms do not easily cross language borders, but when they do, comparable imagery may be used.
${ }^{25}$ They are highly informal, often clearly regionally or socially localised and potentially rather short-lived.

Apart from the above two aspects, idioms are also usually very stable in their composition. Thus it is highly unlikely that we would find
(13b) *to throw in the terry cloth

## Sick Bed

I rose from my sick bed
To write this verse
And send for the doctor When things got worse.

He took one look
Shook his head and said, 'No doubt about it
That's a very sick bed.
Give it a hot water bottle
Three times a day Keep it well wrapped up
Now I must be on my way.'
So I'm left here alone With a sick bed to nurse And nothing to do But to write a silly verse.

Figure 5-6 "Sick Bed" by Roger McGough
(13c) *to throw in the bath towel
(14b) $\quad$ it's raining dogs and cats
(14c) $\quad$ it's raining big cats and dogs
(15b) *by the hide of one's teeth
(15c) *by the bare skin of one's teeth
Changes as in (13b), (14b) and (15b) would be considered odd or unacceptable by native speakers and might well be corrected if a nonnative speaker used them. Insertions (13c, 14c, 15c) would most likely result in similar treatment. The exception may be in humorous writing, for instance in children's poetry, where such changes or insertions may be used to create a comic awareness of the gaps between the meaning of individual words and the meaning of the idiom (see fig. 6-6 "That's a very sick bed" or "with a sick bed to nurse").

### 5.2.4.1.2 Fixed lexical combinations

A similar phenomenon in a number of ways are so-called collocations. The term comes from Latin com + locatus and literally means "placed together"; it refers to words that typically occur side by side in a language. In English the word crime usually collocates with the verb commit, but also with prevent or witness, with the adjectives heinous or terrible and with the preposition against. Like idioms, collocations are usually languagespecific, and like idioms they are relatively impervious to changes in the words that make them up, but they are much more flexible in terms of insertions, as (17) demonstrates.
(17a) My neighbour committed a crime.
(17b) *My neighbour executed a crime.
(17c) *My neighbour went on a crime. (Mein Nachbar beging ein Verbrechen)
(17d) My neighbour committed a heinous crime.
(17e) My neighbour committed an obviously premeditated crime.
(17f) My neighbour committed a crime that was obviously premeditated.
Whereas (17a) is well-formed, (17b) and (17c) clearly are not, even though (17c) would be correct in Standard German. However, in difference to idioms, which do not tolerate insertions, as we have seen, we can add to elements to collocations, for instance by premodification (17d and 17e) or postmodification (17f). Very often, however, such
insertions are also limited to a certain extent and represent further instances of collocations, as (17) demonstrates with the adjective heinous.

In practical terms, then, a collocation represents a sequence of lexemes whose meaning can be determined, to a some degree at least, by the meanings of its lexical components; the possibilities for substitution of its lexical components is highly limited and conventionalised by the usage of the language; there is some flexibility as far as pre- and postmodification of collocated lexical elements are concerned, but that flexibility may in turn be curtailed by collocational limitation of the lexical elements in question, as evidenced in (17d). Collocations often elude even the advanced language student; in fact, their correct usage can be seen as a hallmark of a high level of language competence in second and foreign language learning.

### 5.2.4.2 Creating images in language by juxtaposition

In the framework of an introduction of this kind it would go too far to try to discuss the various ways in which language uses or creates imagery, of figurative language. Suffice it to say that imagery in language is often result of juxtaposing elements that fit with each other in ways that are more or less startling, original, but sometimes also quite well-worn and that may therefore go unnoticed. The first two are typical for literary language, in particular in poetry, in comic writing, but also very often in slang expressions (cf. 16), the latter are more often encountered in everyday speech. For example to sleep like a $\log$ would hardly make a listener sit up and pay attention, even though the image would be quite an interesting one. In our discussion of compounding (4.2.4) we have already seen such juxtaposition at work for instance in the compound starship used there.

However, whereas compounding takes place on the lexeme level, the two types which we will focus on in this subsection manifest themselves as meaning on the

## The Windmills of Your Mind

Music: Michel Legrand, Iyrics: Marilyn and Alan Bergman
Sting's cover: www.youtube.com/watch?NR=1\&v=8TtdW-jhAQ\&feature=endscreen

Round
Like a circle in a spiral
Like a wheel within a wheel
Never ending or beginning
On an ever spinning reel
Like a snowball down a mountain
Or a carnival balloon
Like a carousel that's turning
Running rings around the moon
Like a clock whose hands are sweeping
Past the minutes of its face
And the world is like an apple
Whirling silently in space
Like the circles that you find
In the windmills of your mind!
Like a tunnel that you follow
To a tunnel of its own
Down a hollow to a cavern
Where the sun has never shone,
Like a door that keeps revolving In a half forgotten dream,
Or the ripples from a pebble
Someone tosses in a stream ... phrase or clause/sentence level. Both types

Figure 5-7 Examples of simile in popular music ("Chanson") work with juxtaposition of two concepts creating a comparison in the form of an image.

The first is based on an explicit comparison of the elements juxtaposed, which is typically signalled with the prepositions like or as. This type is known as the simile. A striking example of this in popular music is the song "The Windmills of your Mind", the
title theme of the 1968 Norman Jewison film The Thomas Crown Affair starring Faye Dunaway and Steve McQueen. Its first three verses represent multiple instances of simile signalled by like. Similes are also often in evidence in literary language. Consider their use in Shakespeare's poetry and his plays: the opening line of Sonnet 130, "My mistress' eyes are nothing like the sun" is one famous example, in fact a scathing commentary on the predictable use of such comparisons in love poetry of the time. Another well-known instance is Macbeths soliloquy in which he debates with himself whether to kill Duncan to bring about the witches’ predictions about becoming King of Scotland (Act 1 Scene 7, 1821):
(18)
that his virtues
Will plead like angels, trumpet-tongued, against
The deep damnation of his taking-off;
And pity, like a naked new-born babe ...
In both cases we equate two entities, but line 19 illustrates another example of juxtaposition resulting in comparison as does the continuation of the soliloquy:
(19) ...

Striding the blast, or heaven's cherubins, horsed Upon the sightless couriers of the air, Shall blow the horrid deed in every eye, That tears shall drown the wind. I have no spur
To prick the sides of my intent, but only Vaulting ambition, which o'erleaps itself And falls on the other -

Notably absent in (19) is the linking preposition, but the comparison is nonetheless evident. This absence of the preposition, signalling the comparison linguistically, results in a metaphor. Because the link between the two elements is more direct, often through a linking verb, but also by expressing how one entity acts as or manifests itself as another, many creative writing manuals suggest that metaphor be used in preference to simile.

The example of the jazz classic in Figure 5-8 demonstrates both strategies, the linking verb in (20) the dynamic verb in (21).
(20) You're the cream in my coffee ...

You're the sail in my loveboat...
(21) You give life savor, bring out its flavour...

A special case of metaphor, the opposite of (20) and (21), where a person is presented as an object (objectification) is personification, which describes a quality or an inanimate object as if it were a person.
(22) My car has a mind of its own.
illustrates this quite clearly. If such a personification becomes very widespread and is used in daily language, we may be looking at an allegory, for instance in the form of Death often represented as the

## You're the Cream In My Coffee

Words and Music by
B. G. de Silva, Lew Brown and Ray Henderson

You're the cream in my coffee, you're the salt in my stew You will always be my necessity, l'd be lost without you.

You're the starch in my collar, you're the lace in my shoe You will always be my necessity, I'd be lost without you.

Most men tell love tales, and each phrase dovetails You've heard each known way -- this way is my own way:

You're the sail in my loveboat, you're the captain and crew, You will always be my necessity, I'd be lost without you.

You give life savor, bring out its flavor,
So this is clear, dear, you're my wor'stershire, dear
You're the sail in my loveboat, you're the captain and crew, You will always be my necessity,
I'd be lost without you.
1928 Recording with Jack Hylton \& His Orchestra www.youtube.com/watch?v=tFS758_rmtg\&feature=related

Figure 5-8 Examples of metaphor in popular music (Big Band Jazz) Grim Reaper with a monastic cowl and a scythe

Our daily language is full of metaphor, so full that we often are unaware of its presence. Whether we are aware of the metaphor in
(23) They were not afraid to face death.
is at least open to debate. But there are other everyday metaphors we are almost always unaware of, for instance, we rarely realise that we tend to see time in terms of a spatial metaphor with a horizontal extension: thus we look forward to an event, or think back to our childhood. Similarly, values, both ideational or material, are also expressed in metaphorical notions of space, but along a vertical axis, being either high or low (as in "to hold someone in high esteem") and capable of rising or falling (e.g. "prices are falling"). As we are usually not aware of this metaphorical usage of language, we tend to refer to such everyday metaphors as dead metaphors, the ones that are strike us as new or unexpected as live metaphors. Needless to say, both terms are pertinent examples of fuzzy concepts.

There is a rather amusing illustration of the difference between simile and metaphor in the 1994 Penny Marshall comedy Renaissance Man, in which a teacher played by Danny de Vito explains both terms, but also oxymoron, yet another instance of meaning resulting from a striking juxtaposition. (24) is the transcribed scene from the film. ${ }^{26}$
(24) Danny de Vito: "It's when you take two words that are totally the opposite and you jam 'em together, right? Like military intelligence, dark victory, thunderous silence, girly man ...[laughter from class].

Mark Wahlberg [nudging a class mate]: "He is talking about you (?)." [more laughter from class]
Danny de Vito: "Alright, OK, so let's end the class with an oxymoron from Shakespeare himself: 'Parting is such sweet sorrow.'"
(24) provides both, an explanation of the term oxymoron and some examples, the first one, military intelligence, being actually a satirical interpretation of a compound with no such meaning intended, but all the others aptly illustrate the concept.

Clearly, oxymorons rely on a paradox, which can be considered as a category of meaning on the phrase or clause/sentence level in itself. Crystal (2009: 421) gives ignorance is strength as an example. Other instances of paradox are often encountered in idioms or proverbs, such as discretion is the better part of valour, in which, as is generally the case in a paradox in our sense, the contradiction needs to be cognitively resolved for the meaning to emerge. Shakespeare's Falstaff utters a variation of the phrase in Henry IV, Part One, Act 5, Scene 4, 119 but it was in evidence as a proverb before this use (Caxton 1477), meaning it is better to be circumspect than foolhardily brave.

As this last example is usually associated with the Shakespearean character of Falstaff, we could also consider it a catchphrase, a concept of meaning in this context where the juxtaposition also includes a reference to the situation in which it occurs or the person who is famous for uttering it. Catchphrases are mentioned here for the sake of completeness; they are usually based on or taken from popular culture and may be rather short-lived although some can become idioms. Examples of recent catchphrases are "Shaken, not stirred" (James Bond), "And now for something completely different" (Monty Python's Flying Circus), "tired and emotional" (from the satirical British magazine Private Eye, meaning drunk, possibly to avoid litigation) or "refreshes the parts other beers cannot reach" (a very popular slogan from a beer advert in the 70s). Many of these are taken up and satirised or used in comparable but different contexts. By contrast, examples of catchphrases that have become a part of the English language are from Shakespeare plays like too much of a good thing (As You Like It), to wear one's heart on one's sleeve (Othello), to be in a pickle (The Tempest) or from the Bible such as being the apple of one's eye (Deuteronomy), to be beside oneself (Mark), the sins of the fathers (1. Kings).

A last phenomenon to be included here concerns the relationship between a part and the whole of a concept. The lexeme or phrase in question has a meaning relation with the entity it refers to which is similar to metaphor. For instance, when we talk about the Crown we may mean the Queen as the representative of State power in the UK, but potentially also to the British Monarchy as a whole. Similarly, Downing Street refers to the British government because the Chancellor of the Exchequer, the finance minister lives at number 11, the Prime Minister's residence is Number 10, which is why that reference means the British Prime Minister and his/her office. In the US, the White House or the Oval Office denote the American president, Wall Street the financial markets of the US and very often
even to the Market itself and the Pentagon the American military establishment. These references using an element to denote the entire entity are called metonymy or synecdoche. There is a subtle difference between the two: in metonymy the relationship between the part mentioned and the institution it refers to tends to be looser or more abstract. When we say Number 10 or the Oval Office what is usually meant is the activity or in this case the power that is associated with these two places. The same is true for the examples listed above with one notable exception, the Crown if it refers to the Queen. It is then a more immediate part of her and the relationship would therefore be considered a synecdoche. We also consider a phrase like welcome under my roof, a formal greeting inviting the addressee to one's house, or the question where someone may have left his/her wheels to refer to their car as instances of synecdoche because roof and wheel are actual elements of house and car respectively, whereas the lexemes Wall Street or the Square Mile/the City, the financial districts of New York and of London represent the more abstract metonymic relationship. A further difference is that in metonymy it is always the part that stands for the whole (the place the Square Mile for the activity of the institution the financial centre of the $U K$ ), whereas in synecdoche the relationship can be that the whole stands for a part: in sports commentators use synecdoche when they point out that the Spanish national football team won the European Football Championship in 2012 by replacing the part, the Spanish national football team with the whole, i.e. Spain, as in Spain has won the Cup. Incidentally, Cup would be metonymic, referring to the institution of the European Football championship, as well as a synecdoche as the trophy actually is a kind of cup.

### 5.3 Problems of word meaning: the "arbitrariness" of lexemes in relation to their meaning

So far, the discussion has mainly focused on a relatively fixed relationship between a lexeme as a signifier, which is a linguistic representation of the signified, an entity, a feature, a state or an action in reality, sometimes also called a referent. Even though according to linguistic theory (for a good and accessible overview see Chandler 2009), the choice of the signifier is said to be arbitrary: tree, arbre or baum are all equally valid and sensible signifiers for the psychological concept of a tree. However, whereas the term can be arbitrary, the relationship between the lexemes and the concept or actual object needs to be fixed as otherwise meaning would be entirely fluid and, as a result communication would be difficult if not impossible (see the Bichsel short story mentioned 5.1). In this subsection, we will touch upon two instances which deviate from the concepts mentioned, one from the concept of arbitrariness of the signifier, the other calling into question the fixed relationship between signifier/sign and signified/referent

### 5.3.1 Sounds and their meaning



Figure 5-9 Kiki vs Bouba

There are some words in most languages, where what was said about the arbitrariness of the lexeme in terms of its meaning does not hold. Verbs like sizzle, roar, rumble, growl, whir, whisper, etc. clearly show a relationship between the action and the sound that accompanies it. A claim that the sound of thunder could equally well be described by rumble as by the verb sizzle would clearly strike us as absurd. The relationship between a lexeme and the sound that is associated with it is called onomatopoeia.

Also in words like thump, bump, clump, limp, lump there seems to be a link between the sign and the referent. Whereas thump and bump are onomatopoeic in the sense that they mimic the sound associated with the action or the noun, the others do not do this, but as they all have a short vowel and end in /mp/, they reflect an action or an object in a way that suggests a certain heaviness and clumsiness in movement with a relatively abrupt halt when the action or the object comes to a standstill. A similar kind of sound symbolism can be observed in the onset of $/ \mathrm{sl} /$, which is quite often associated with something vaguely or distinctly unpleasant as in slime, slither, slobber, slide, slippery, etc. Furthermore, it is interesting to note that the overwhelming majority of people, when asked which ones of the two shapes in Figure 5-9 should be called bouba and which one would be kiki, assign the former to the rounded and the latter to the pointy shape (cf. Robson 2011). All of this would indicate that there is a closer relationship between sound and sign than traditional linguistic theory would suggest.

The branch of linguistics that explores the possible connection between meaning and sound, especially if it is less obvious than onomatopoeia is called phonosemantics, a phenomenon that is relatively difficult to pin down, but that we often find at work in literary writing. Consider in (25) and (26) how the poets use the sounds of words to mimic the content of the lines.
(25) The curfew tolls the knell of parting day, The lowing herd wind slowly o'er the lea, The ploughman homeward plods his weary way, And leaves the world to darkness and to me. (Thomas Gray, 1716-1771)
(26) Bumpity doun in the corrie gaed whuddran the pitiless whun stane. Bumpity down in the small valley went thudding the pitiless flint stone Sisyphus, pechan and sweitan, disjaskit, forfeuchan and broun'd-aff Sysiphus puffing and sweating, dejected, worn out and browned off (Robert Garrioch, 1909-1981)

In the opening stanza of "Elegy Written in a Country Churchyard" Gray creates the soundscape of the evening in the village, the bells (toll and knell), the mooing of the cows
(lowing, herd, slowly, o'er) and the tired steps of the returning ploughman (plough, plods in combination with the long vowels in weary and way), rounding the stanza off in the peaceful rest suggested by the long vowels and the many voiced consonants in line 4 . The same applies to (25), where the Scottish poet Robert Garrioch's choice of vocabulary is reminiscent of the noise of the bolder rolling down the mountainside with the exhaustedly panting Sisyphus looking on.

### 5.3.2 The shifting relationship between referent and sign

If the relationship between signifier and signified (sound and concept referred to) is not as arbitrary as traditional linguistic theory would have us believe, there is little dispute among linguists that the same relationship is not as fixed as one might assume, apart even from the existence of fuzzy concepts. There is a considerable range of lexemes whose signified/referent depends entirely on the circumstances of the utterance and the interlocutors involved, so-called deixis. Fromkin et al. (2003: 579) define them as "words or expressions whose reference relies entirely on context and the orientation of the speaker in space and time." Deixis, then, are mainly pronouns (including some determiners, i.e. possessive and demonstrative), as well as spatial and temporal adverb(ial)s relating to the speaker, her/his location and the time when the utterance was made. How this works can be seen, if we consider the changes which an actual utterance undergoes when it is reported later, elsewhere, by a speaker other than the one who originally made it and to interlocutors other than the ones present at the original utterance.
(27) Mary can go and stay with John in John's flat until the following week.
(27a) John is saying in his flat today: "Mary can come and stay with me here in my flat until next week."
(27b) Mary said to a friend in town one day later: "John said I could go to his flat and stay there with him until next week."
(27c) Mary mentioned to another friend in town one week later that John said she could go and stay at his flat stay there with him until this week.
(27d) John said two weeks ago in his flat that Mary could go and stay with him there, in his flat until last week
(27a-d) thus illustrate that personal pronouns and possessive determiners change, depending on the speaker and the person who reports the utterance, whether the (indirect) object of the reporting clause $X$ said to $Y$ is present. Furthermore, it matters where the utterance was originally made and where it is subsequently reported. Then it makes a difference in a verb of movement what the location of the speaker, the interlocutors and the addressee was at the time of the original statement. Lastly, the choice of lexemes also depends on the timeframe of the original utterance, the time at which the utterance is reported and whether a duration or date mentioned in the utterance is yet to expire, is about to expire or is already past. In conversation such decisions need to be made relatively
quickly and require a considerable degree of referential flexibility in personal, spatial and temporal terms. Because of the complexity of this deitic flexibility it is understandable that language learners, both second/foreign language learners and small children take a considerable amount of time till they can handle it successfully and free of errors.

### 5.4 Key concepts

| hypernym I <br> superordinate term |  |
| :--- | :--- |
| hyponym I <br> subordinate term |  |
| co-hyponym |  |
| entailment I <br> meaning inclusion |  |
| semantic features I <br> components |  |
| semantic matrix |  |
| semantic field (word |  |
| field) |  |
| synonymy |  |
| synonym |  |
| cognitive vs |  |
| complete synonymy |  |
| referent / signified |  |
| denotation |  |
| connotation |  |


| register I level of <br> formality |  |
| :--- | :--- |
| antonym |  |
| gradable antonym |  |
| complementary |  |
| antonym |  |
| complementarity |  |$\quad$| homophone |
| :--- |
| homograph |
| homonym I |
| homonymity |
| homonymous |
| polysemy I <br> polysemous |
| pun |
| idiom |
| ambiguity |
| hedges |
| slang (idiom) |
| collocate I |
| prototypes I |
| prototypical |


| simile |  |  |
| :--- | :--- | :--- |
| metaphor |  |  |
| dead vs. live |  |  |
| metaphors |  |  |

### 5.5 References

Chandler, Daniel. 2009. "Semiotics for Beginners", www.aber.ac.uk/media/Documents/S4B/sem02.html, accessed 16.9.2012
Chiaro Delia. 1992. The Language of Jokes: analysing verbal play. London: Routledge
Crystal, David . 2009. The Cambridge Encylopedia of the English Language, Second Edition, Cambridge: Cambridge University Press
Fromkin, Victoria, Robert Rodman and Nina Hyams. 2003. An Introduction to Language, Seventh Edition, Boston, Mass: Heinle Thomson.
Miner, Margaret and Hugh Rawson (sel./ eds). 1992. A Dictionary of Quotations from Shakespeare, Harmondsworth, New York: Penguin.
Robson, David. 2011. Kiki or Bouba? In search of language’s missing link. www.newscientist.com/ article/mg21128211.600-kiki-or-bouba-in-search-of-languages-missing-link.html?full=true, accessed 16.9.2012

### 5.6 Semantics Exercises

### 5.6.1 Categorisation of Meaning

1. Which ones of the lexemes in the box are hypernyms, which ones are hyponyms?

Apollo, Athena, Deities, Dionysos, Freya, Ganesha, Greek gods, Hera, Hindu gods, Juno, Jupiter, Kali, Lakshmi, Loki, Mars, Nordic gods, Odin, Roman gods, Shiva, Thor, Venus, Zeus
2. Draw a tree showing the various levels of hypernymy/hyponymy.
3. Fill in the missing symbols in the following semantic matrix.

|  | liquid | savory | Western | vege- <br> tarian | main meal | dairy-free |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| cock-a-leakie soup | + | + |  |  |  |  |
| strawberry icecream |  |  |  |  |  |  |
| haggis |  |  |  |  |  |  |
| hotdog |  |  |  |  |  |  |
| pizza |  |  |  |  |  |  |
| tandoori chicken |  |  |  |  |  |  |
| lassi |  |  |  |  |  |  |
| chocolate soufflé |  |  |  |  |  |  |
| pint of Guiness |  |  |  |  |  |  |
| roesti |  |  |  |  |  |  |
| fondue |  |  |  |  |  |  |
| Spaghetti al tonno |  |  |  |  |  |  |
| gefilte fish |  |  |  |  |  |  |
| raita |  |  |  |  |  |  |
| chicken lap |  |  |  |  |  |  |
| crème brûlée |  |  |  |  |  |  |
| paella |  |  |  |  |  |  |
| black pudding |  |  |  |  |  |  |
| mango chutney |  |  |  |  |  |  |

4. Find the lexeme that is not a synonym in these series and explain which feature(s) it does not possess.
a) dependable, trustworthy, hard-working, reliable, conscientious
b) amble, mosey, mooch, stride, saunter
c) directive, aim, goal, purpose, intention, aspiration
d) friendly, kindly, charitable, affable, pleasant
e) upbringing, education, schooling, teaching, training
f) support, assure, demonstrate, prove, confirm
g) left-wingers, socialists, anarchists, communists, reds
5. Find opposites (antonyms) and mark those pairs that are gradable.

|  | antonym | gradable? |  | antonym | gradable? |
| :--- | :--- | :--- | :--- | :--- | :--- |
| aimless |  |  | intelligent |  |  |
| careful |  |  | married |  |  |
| eccentric |  |  | obscure |  |  |
| frantic |  |  | optional |  |  |
| grumpy |  |  | religious |  |  |
| inedible |  |  | unique |  |  |

### 5.6.2 Meaning Relatedness

6. Determine the meaning relationship between the following lexical pairs/sets.
```
flare / flair
book (v) / book (n)
lug (n)/ lug (v)
launch (a ship) / launch
(=begin)
fast (quick) / (stuck) fast
wring / ring
row (v) / row (v)
row (n) / row (n)
strict (controls) / strict
(translation)
try (a criminal) / try
(something new)
dry (desert) / dry (humour) /
dry (v)
die / dye
```


### 5.6.3 Beyond word meaning

7. Characterise the italicised phrases in the following sentences (5.2.4)
8. What do a pig's tail and $3: 30$ am have in common? They are both twirley.
9. We have had uninvited guests.
10. The Ulster Loyalists are loyal to the Crown, not to Westminster.
11. The Pentagon has no plans for an invasion.
12. The farmer had 25 heads of cattle.
13. The captain got the officers to assemble all hands on deck.
14. That's a fine mess you have gotten me into. (Oliver Hardy)
15. She had teeth like the Commandments, ten and all of them broken. (Mike Harding)
16. She gave him her answer, a firm maybe.
17. Santa's helpers are subordinate Clauses.
18. No sensible man would go to the ball with her wearing a bikini; so she went with a little moron.
19. John talks the hindlegs off a donkey, you just can't get $a$ word in edgeways.
20. I'm at the end of my tether.
21. How can you stop an elephant charging? Take away his credit card.
22. He's a serious musician but country music is his bread and butter.
23. He'll be able to do the speech off the cuff.
24. He tickled the ivories. (played piano)
25. He said he was being cruel to be kind.
26. He is conservative, fundamentalist and anti-liberal, a real redneck.
27. He got out faster than greased lightning .
28. He felt lower than a millipede with fallen arches.
29. Everything is clear as mud.
30. Certain political groups in Britain are keen on leaving Europe.
31. Blonde to make a bishop kick a hole into a stained glass window (Raymond Chandler)
32. Atheists form nonprophet organisations.
33. A nose like a sharp autumn evening, inclined to be frosty towards the end. (Dickens)
34. "Time flies like an arrow. Fruit flies like a banana." (Groucho Marx)
35. "Friends, Romans, countrymen, lend me your ears."

## 6 Phrases and Clauses / Sentences: Syntax

## What you know/can do after working through Chapter 6

In a sentence or clause you can

- distinguish between functional and constituent analysis
- identify theme and rheme
- point out agent, affected, recipient, etc.

You can

- identify a phrase and show how it is constructed with head, specifier and complement and
- formulate phrase structure rules with their obligatory and their optional elements.
- use constituent analysis and structure trees to show the different meanings of ambiguous sentences.
- identify in a set of sentences with the same content/meaning,
o which ones correspond to the deep structure,
o which ones to the surface structure and
0 what transformations have taken place.
Syntax is a very complex field and that has one often been rife with controversy. It also addresses a wide variety of issues, only a small number of which can be discussed in the framework of an introductory course of this kind. Any further reading will demonstrate that what is presented here is a selection of topics, but nevertheless one that will, hopefully, help develop the ability to develop a budding linguist's approach to understanding and analysing sentence structures.


### 6.1 Introductory: Speakers' (implicit) awareness of combination rules

In the same way as phonology examines the way the phonetic sounds combine with each other to form larger units such as syllables, words and utterances, syntax, the subject of this chapter, helps us to explore ways in which words can be joined together into longer "strings". This happens on two levels: firstly, individual words form units with other - and rather narrowly circumscribed - words, thus creating phrases; secondly, phrases combine again in rather rigidly defined ways to create clauses and/or sentences. The difference between the two is that generally clauses make up sentences. A sentence that consists of one main clause is called a simple sentence; a sentence consisting of several clauses is a complex sentence.

In the creation of phrases as well as in the composition of clauses and sentences, there are rules at work, which can be formulated into grammars. The set of such rules is relatively
limited, but the possibilities for generating sentences (in writing) or utterances (in oral language) are endless and as we saw in the game analogy (1.1.2): with a limited set of rules it is possible to be limitlessly creative

Despite the fact that such rules can be formulated for any language, it is interesting to note that the speakers of that language may not be able to explain consciously how words are combined into phrases, nor may they be capable of describing how phrases are built into clauses or sentences. But they are generally able to spot which phrases or clauses/sentences are "correct" and which ones are not. Thus all the example sentences in (1) below would be recognised as not being well-formed or ungrammatical in one way or another by a speaker of English.
(1a) *gave surreptitiously girlfriend his he Italian of car keys sports car the smart his red Faced with the rather random sequence of words in (1a), an English-speaker may not even realise that they could actually be combined into a number of phrases, which in turn could made into a grammatically well-formed clause or sentence. What may be clear is the verb, but even the contender for the focus of the sentence is unclear as it could be girlfriend, he, Italian, car keys or sports car. In this and other respects
(1b) *surreptitiously gave he his girlfriend the car keys of his smart red Italian sports car is at least much clearer, but it is also not well-formed because gave precedes he. In a German sentence this would actually be the expected sequence because the element heimlich (surreptitiously) at the beginning of the sentence would call for that inversion of er (he) and gab (gave). English, however, does not usually have this inversion, but when it occurs in literary or formal contexts, it usually follows an adverb with a negative meaning as in "rarely did he give his girlfriend...".

The adverb surreptitiously is also the reason for (1c) not being well-formed.
(1c) *he gave surreptitiously his girlfriend the car keys of his smart red Italian sports car Although adverbs can appear in a number of slots in a clause or sentence, they tend not to be placed between the verb gave and his girlfriend as these two elements are not normally separable in English.

Our next example, (1d) would also be rejected as violating a grammatical rule:
(1d) *he surreptitiously gave the car keys of his smart red Italian sports car his girlfriend This is not because his girlfriend cannot appear at the end of this clause, but if it does, it requires the preposition to. Again, the sequence of elements in this sentence would be acceptable in German, but this is because German is more explicit in its inflectional morphology, i.e. it has markers for cases (nominative, accusative, dative, etc.); therefore, his girlfriend would be identifiable as the recipient of the car keys in German, because its declination markers would signal that it is a dative.

Finally, the reason why (1e) is not considered well-formed may possibly elude a learner of English.
(1e) *he surreptitiously gave his girlfriend the car keys of his Italian smart red sports car To begin with, it is important to note that unlike in Romance languages, where adjectives often follows the noun, in Germanic languages they typically precede it. This is the case in (1e) but a sequence of adjectives in front of a noun also follows a set of rules, which demands that a classifying adjectives (e.g. adjectives referring to countries, historical periods, etc.) need to be placed after gradable adjectives (adjectives that can take a comparative smarter, or a superlative smartest) and after colour adjectives like red.

This discussion demonstrates two related concepts: sentence building is governed by clearly defined and definable rules; if they are not, even if a speaker is not aware of these rules explicitly, the speaker will recognise a sentence (or utterance) as not well-formed.

### 6.2 Approaches to analysing sentences

In order to analyse sentences or clauses to trace these rules, we need to find ways in which we can split them into their constituents. This is sometimes known as parsing sentences, and there are various ways in which this can be done. As a starting point we take a wellformed version of (1).
(1) He surreptitiously gave his girlfriend the car keys of his smart, red Italian sports car. There are several ways in which we can analyse (1), on the level of word classes (6.2.1), then in terms of their theme and how that theme is developed (6.2.2), next on the basis of what various elements in the sentence may mean (6.2.3) and finally as to the function of the constituents (6.2.4). What the discussion will show is that each level of analysis provides insights into some aspects of sentence or clause analysis, but will not be able to address all issues. This does not mean that any of these approaches is inadequate in itself, because each approach is designed to answer specific sets of questions, questions that other approaches cannot and or do not attempt to answer. We can therefore say that any model of sentence and clause analysis will account for certain features and concerns, but not for others, but this does not represent a judgement on the general validity of these models. In the same way as it makes little sense to use a screwdriver to hammer in a nail, it is futile to attempt to use a model to explain a feature or concern that is it is not designed for. In this sense this account aims to avoid the occasionally acrimonious debates between proponents of different syntactic models.

### 6.2.1 The lexical level

Breaking a sentence up into discrete units like words represents the most obvious way for an initial analysis. As our discussion of the nature of words demonstrated, such an analysis can yield useful information, for instance that there are words that carry meaning (the content words) and others that mainly act as the connections (the function words) between representatives of the former category. The analysis of (1) in terms of word classes would yield the following:


Figure 6-1 Sentence analysis on the lexical level
Being aware of the word classes will be quite helpful as we shall see in the following subsection, but it tells very little beyond the categories of the words. We get no information about how the words are to be combined to form a complete clause or sentence. Without such information, (1a), which we established as being particularly ill-formed, would be as much of a possibility for possible sequence as all of the other examples (1b-1e). Obviously, what is needed therefore is a set of rules that prevents a sentence like (1a) from being formed. In other words, we need to look at other ways in which we can analyse (1).

### 6.2.2 The thematic analysis

One such possibility would be an analysis based on the question of who (or what) does something and what is being done. The first element would therefore be the theme of the sentence, the second element would give more information about the theme and is called the rheme. This combination is often referred to as the theme-rheme dichotomy. Figure 6-2 illustrates this, at the same time however shows also that this is a relatively crude way of analysing a sentence, because it mainly answers the question who does what, with who being the theme and what being the rheme.


Figure 6-2 The theme-rheme approach

This analysis accounts for the sequence in which, in our case, an English sentence presents itself with the theme on the left the rheme on the right. The problem is that a relatively large number of words and therefore probably also of constituents are combined in one big category, i.e. in the rheme, but beyond giving some information about the sequence of theme and rheme, we do not gain any insight into how the rheme is constructed.

### 6.2.3 Parsing sentences in terms of meaning

We can gain more insight into this question if we consider how the words could be combined into units of meaning. If we approach the clause in this way we can see that there is someone who is performing an action, i.e. what that person is doing, that we have an object (in this case) which is affected by this action, that someone is affected by the action and the object (that other element), and that we are told something about the way in which the action takes place. On the basis of these considerations we can attempt to develop another way of analysing the clause:


Figure 6-3 The level of meaning
However, whereas is this approach gives us a considerably more detailed picture of the sequence of constituents or elements of the sentence, i.e. that the agent precedes the action, the action precedes both the affected and the recipient (although the position of these two is interchangeable, provided the recipient appears with the preposition to when it follows the affected), it tells us little to nothing about how the various constituents are structured in themselves. What it does tell us is the meaning relationships between the elements.

However not all verbs represent an action (viz. be, belong, contain, mean, to name just a few), and not all initial elements in the sentence, ignoring for the moment that circumstance can be in the initial position too, actually represent an agent. This can be shown with (2) and (3)
(2) It/this feels really awkward.
(3) To know him is to love him.

The leftmost constituent in (2) is clearly not an agent, it does not do anything. One could even argue that it or this, although they are pronouns, do not actually stand for an entity as pronouns are expected to. Like existential there in there's a fly in my soup such clauseinitial constituents look like agents but they actually merely fill the position that an agent would in such a clause. (3) represents a further complication because the "agent-position"
in that sentence is taken up by the clause to know him, which again obviously is not an agent by any description.

### 6.2.4 The functional elements of a clause/sentence

Rather than trying to develop categories that would describe the meaning of constituents in a clause, it would make sense to look at such constituents in terms of the functions that they perform in this clause. In a manner of speaking this combines the theme-rheme with the meaning approach, addressing the weaknesses of the former by being more detailed and avoiding the pitfalls of the latter, i.e. assigning meaning categories to constituents which need not or do not apply in a large number of cases of in clauses and sentences. This functional approach (Figure 6-4) is the one that most students are familiar with from grammar school.


Figure 6-4 The Functional Approach
By analysing the sentence in this manner, we not only get some insight into how the sentences are structured, but we also allow for the fact that the initial constituents in (2) and (3) fulfil a role, have the function of subject in those sentences, irrespective of whether they also represent an agent or not, and more generally that they do not actually need to refer to an entity, something the category agent would be expected to. They control the verb/predicate, which, again, is a function rather than being defined in terms of an action.

In our discussion so far we have mainly focused on (1), but to complete this limited tour of functional analysis of sentences and clauses, we need one more category, which has not been demonstrated in our examples so far.

(5)

a real idiot.

Figure 6-5 The Functional Approach: Complements
The constituent a real idiot in (4) and (5), Figure 6-5, follows the verb or predicate but is neither a direct or indirect object. It provides more information, in (4) about the subject
of the sentence my girlfriend's new boss, in (5) about the same entity, i.e. her new boss, in this clause the object of the verb considers. This type of functional syntactic constituent we call a complement because it complements the entity it is linked with, in (4) via the linking verb seems, in (5) providing more information about the object (her new boss), without a linking verb like to be (that her new boss is a real idiot). The complement in (4) is called a subject complement, the one in (5) as it provides more information about the object is the object complement. In some grammars the object is also considered a complement, the verb complement as we will see below. However, as the category of object is more widely known, we will use this term.

We will revisit this functional approach to syntax when we look at word order in English and other languages, because the sequence of the main functional syntactic components subject, verb / predicate and object represents a way in which languages can be categorised into types (see 6.4). For the moment, however, it needs to be said that, useful as this functional approach may be, giving us a reasonably clear indication as to the structure of the clause or sentence, it tells us nothing of constituent structure. The following subsection will address this issue.

### 6.3 Constituents/Phrases and their structure

Each approach to parsing a sentence or clause discussed so far, as was pointed out in 6.2., has been useful to the extent that the model was designed for, but problematic when other aspect were considered. The question as to how we can explain clause or sentence structure in general is answered but the sequence of the elements within their constituents is still open. What would be useful, therefore, is to determine what clauses or sentences consist of, i.e. what precisely constituents are, how they make up sentences and clauses, but also how they are structured in themselves.

### 6.3.1 Constituent analysis

It pays to begin by looking at the way in which most speakers would break up a clause. ${ }^{27}$ We shall take as a starting point a simplified version of (1).
(1f) The man gave his car keys to his girlfriend.


Constituent 1
An initial break would make sense between $\qquad$ and $\qquad$ These two elements would represent the theme-rheme approach.
Figure 6-6 clause split into top-level constituents ("constituent" at this point in the discussion is a placeholder for something we will name later!)

[^13]However, if we had to split this clause up further, we will find that more constituents can be found in the second constituent. A most likely split would be after $\square$, a further one between $\square$ and $\square$.
$\square$
$\square$ $\square$.

This leaves with four constituents, three of which form Constituent 2 as it appeared in Figure 6-5. Each such constituent contains a central element belonging to a specific word


Figure 6-7 Constituent 2 parsed further class, which can only be replaced by another lexical item from the same word class or a placeholder that fulfils the same function. In Constituent 1 this is another $\square$ (or as a placeholder a $\square$, in Constituent 2 it is a
$\square$ (or a verb placeholder like $\qquad$ and in Constituent 3 it is a further
$\square$ . Constituent 4 needs more consideration as it clearly represents a constituent but could be broken up further:


Constituent 5
Figure 6-8 Constituent 4 parsed further
Thus the central element of Constituent 4 is a preposition followed by Constituent 5 , which is required by Constituent 4 as prepositions cannot stand by themselves; Constituent 5 again has as its central element a $\qquad$ As we need to be more specific than to refer to constituents by numbers, it pays to call them after that central element, which is known as the head, and we further refer to the each constituent as phrase or in some of the literature as a group (Downing and Locke 2006), named after the head. The practical applications of this convention can be summarised in Table 6-1 Constituents, heads and phrases. The naming conventions remain the same, even if we use placeholders, substituting the man with he and the his girlfriend with her. In both cases the name for the constituents remains the same, i.e. noun phrase because the pronouns he and her act syntactically as a noun would.

| constituents | heads | terms |
| :--- | :--- | :--- |
| the man |  |  |
| gave [the car keys to his girlfriend] |  |  |
| the car keys |  |  |
| to [his girlfriend] |  |  |
| his girlfriend |  |  |

To complete the list of phrases, we can also consider what will happen if we further modify some of the heads, for instance, when we pre-modify the noun man as in
(1g) The man gave the car keys to his new girlfriend.
Although some approaches to constituent structure would simply include adjectives in the Noun Phrase in the same way as determiners like the and his, another, probably more accurate way of accounting for them is to introduce further types of phrases, to be precise, the Adjective Phrase and the Adverb Phrase to modify verbs and a few other types of heads (see (4) and (5)).

(6) The young man was rather foolish.
(7) The young man behaved rather sensibly.

This makes sense because the Adjective Phrase rather foolish in (6) functions as an obviously autonomous constituent in a Verb Phrase with a linking verb; in the same way the adverb phrase rather sensibly in (7) represents a constituent of its own. However, in both phrases the adverb rather is part of the phrase, modifying the heads foolish and sensibly.


What these structure trees Figure 6-9 to Figure 6-11 also demonstrate are levels of hierarchy in the clause. Thus the Noun Phrase on the left is subordinate to the clause level and on the same level of the hierarchy as the verb phrase. However, in (1g) the Noun Phrase the car keys is subordinate the Verb Phrase and the Noun Phrase his girlfriend is subordinate to the Prepositional Phrase with to as its head, in other words, it is hierarchically the one on the lowest level.

In order to describe such levels we use female kinship terms for the nodes (the places where two branches meet or one branch ends); we speak of mothers, daughters and sisters to describe the hierarchies as illustrated in Figure 6-12. Thus A is the mother of B and C, but not of D and E; B and C are sisters, and they are daughters of A. C is the mother of D and E who, logically are daughters of C , but not of B . In the same way, D and E are sisters but they are not sisters of B.

To be able to describe such relationships may not seem to be very important in the context of the kind of sentences we have considered so far (1-7). But to be have the


Figure 6-12 Relations between nodes in a structure tree tools to describe hierarchies is important when we have clauses or sentences that are ambiguous, because such ambiguity results from the appearance of a sentence as it is represented from left to right, which cannot reflect which constituent depends on which other constituents, in other words, which constituents are daughters or sisters. Example of such ambiguity can be found in (8) and (9).
(8) The mother of Mary and Jane read a book

The ambiguity in (8) lies in the fact that the subject noun phrase can be understood to mean that the mother of Mary read the book with Jane, or that the woman is the mother of both Mary and Jane. These two meanings can be illustrated with the structure trees in Figure 613.

Another way to describe the two structure trees is to resort to the description in terms of mother and daughter nodes. In (8a) the mother and Jane are sisters under the mother node of the (Subject) Noun Phrase. In the (8b) Mary and Jane are sisters under the mother node of the Noun Phrase in the Prepositional Phrase whose head is of.

A similar description can be useful to solve the ambiguity of
(9) The children heard a story about animals in the garden.

The question is whether the children heard the story in the garden or whether the story was about animals living in the garden. Again this can be done with structure trees as in Figure 6-13 or we can use the family relation descriptions. In the first case, the prepositional phrase in the garden is a sister of the verb and the object Noun Phrase, all three daughters of the mother node Verb Phrase. In the second case the prepositional phrase is the daughter of the mother Noun Phrase a story.


Figure 6-13 Structure trees illustrating the meanings of (8)
To make the naming of parts simpler, henceforth we will use the common abbreviations, cl for Clause, NP for Noun Phrase, VP for Verb Phrase, PP for Prepositional Phrase, AdjV for Adjective Phrase and AdvP for Adverb Phrase. This is particularly useful if we try to express the above structure trees with the method using square brackets. Each pair of square brackets surrounds a constituent as can be seen below:

8a) [[The mother [of [Mary and Jane $\left.\left.\left.]_{\mathrm{NP}}\right]_{\mathrm{Pp}}\right]_{\mathrm{NP}}\left[\text { read }[\text { the book }]_{\mathrm{NP}}\right]_{\mathrm{vp}}\right]_{\mathrm{cl}}$
(8b) [[The mother [of [Mary $\left.]_{\mathrm{NP}}\right]_{\mathrm{Pp}}$ and $\left.[\text { Jane }]_{\mathrm{NP}}\left[\text { read }[\text { the book }]_{\mathrm{NP}}\right]_{\mathrm{VP}}\right]_{\mathrm{Cl}}$
(9a) [[The children] $\left.\left.\left.]_{\mathrm{NP}}\left[\text { heard }[\text { a story [about [animals }]_{\mathrm{NP}}\right]_{\mathrm{PP}}\right]_{\mathrm{NP}}\left[\text { in }[\text { the garden }]_{\mathrm{NP}}\right]_{\mathrm{PP}}\right]_{\mathrm{VP}}\right]_{\mathrm{cl}}$
(9b) [[The children] $\left.\left.\left.\left.\left.\left.]_{\mathrm{NP}}[\text { heard [a story [about [animals [in [the garden] }]_{\mathrm{NP}}\right]_{\mathrm{Pp}}\right]_{\mathrm{NP}}\right]_{\mathrm{PP}}\right]_{\mathrm{NP}}\right]_{\mathrm{vP}}\right]_{\mathrm{cl}}$
This type of representation essentially gives the same information as the structure trees, using considerably less space, but lacks the "at-a-glance" clarity of how the hierarchy in a clause works, which we see rather clearly in tree diagrams.


### 6.3.2 Phrase Structure Rules

### 6.3.2.1 Introductory consideration: about syntactic theory

As we saw in 6.1, speakers have implicit ideas about how sentences are structured correctly and which sequences of their elements, be they individual words, thematic or semantic units or constituents like the phrases just discussed, are consistent with the grammar of a language, in our case English. In the following we will examine what the rules are that determine the composition of constituents, of the phrases introduced in 6.3.1. In this context, and especially when we consider accounts in other introductory discussions, we will come across different approaches that are sometimes at odds with each other, even though it would be more sensible to say that they aim to account for different aspects of the
construction of phrases, each one valid for what it is intended to explain, each with weaknesses when it comes to certain aspects that other approaches are intended to address and can therefore explain more "elegantly". It may sound odd that "elegance" is a criterion, but the aspiration of syntacticians seems to be to explain as much, ideally everything, about clause and sentence structure of a language with as few rules as possible. This introduction is intended to be eclectic and to make use of those models that can explain the aspects we will focus on here as accessibly as possible.

### 6.3.2.2 The psychological reality of phrases

We may at this point also raise the question whether what we are postulating as constituents of sentences and clauses are purely theoretical, if perhaps elegant, constructs or if they reflect a reality that language users may not be explicitly aware of but use in accordance with implicit rules, comparable to their intuitions about what constitutes well-formed clauses and sentences. In other words, to what degree do phrases reflect a psychological reality?

There are several ways in which this psychological reality can be demonstrated. We will focus on three, which all show that there is a certain integrity to phrases that speakers are unlikely to violate. One test is to focus on potential constituents by reformulating a given clause into a sentence beginning with it is or it was with the remaining constituents of the original clause introduced with a relative pronoun. This is called a cleft sentence. Such cleft sentences are often the answer to a wh-question (e.g. who, what, which, etc.). If we take (10) as a starting point,
(10) My father baked a cake for the birthday party. we can ask four wh-questions:

- Who baked a cake for the birthday party? $\quad \rightarrow$ (10a)
- What did my father bake? $\quad \rightarrow$ (10b)
- What did my father bake a cake for? $\quad \rightarrow$ (10c)/ (10d)
- What did my father do? $\quad \rightarrow$ (10e)

These can be answered with cleft sentences as follows:
(10a) It was
(10b) It was
(10c) It was
(10d) It was
(10e) ?It was baking a cake for the birthday party which my father did.
(10e) may be a little odd and not a very likely utterance but it does answer the question What did my father do? The element between it was and the relative pronoun always
represents a phrase, the subject NP in ( $\square$ ), the entire VP in ( $\square$ ), the object NP in ( $\square$ ), the PP in $(\square)$ and the prepositional NP in ( $\square$ ), and thus demonstrates that speakers do not violate the integrity of a phrase in cleft sentences.

Another way to determine the integrity of a phrase for speakers is to see where we can insert an element into the clause that is not part of the clause structure. Such insertions can be a clause like x said, or a speech marker like you know or like, which has a similar function as erm. We will use like as it is the shortest. To begin with it is obvious that like can be added at the beginning or at the end of the sentence. For our purposes, however, it needs to be put medially, i.e. within the clause; then the following picture emerges:
(10f) "My father - like - baked a cake for the birthday party."
( 10 g ) "My father baked - like - a cake for the birthday party."
(10h) "My father baked a cake - like - for the birthday party."
(10i) "My father baked a cake for - like - the birthday party."
This test too, demonstrates the psychological reality of phrases in that like is only ever inserted at phrase boundaries.

The final argument in this discussion to make the case for the psychological reality of phrases can be observed in code-switching, the conversational strategy adopted by bilingual speakers in conversation with each other. Within sentences they may switch quite readily between the languages they are familiar with, but such switches typically occur at a phrase boundary and the switches usually represent entire phrases as the example of Kiswhali/English code-switching demonstrates.

| (11) | Lakini | ni | -ko | sure | u | -ki | -end | -a after two days |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| But | 1S -COP | sure | 2S- | CONDIT | -go | -FV after two days |  |  |
| "But I am sure if you go after two days |  |  |  |  |  |  |  |  |

The multiple switches all represent entire phrases, sure as an AdjP, after two days as a PP and Uchumi Supermarket as an NP.

If there is a single lexeme switch, it is only possible if this single lexeme switch does not violate the phrase structure rules of the language to which the speaker switches, as (12) demonstrates:
(12a) I want a motorcycle verde.
(12b) *I want a verde motorcycle.
In Spanish the AdjP postmodifies the N , which explains why in (12b) the switch of the AdjP follows the Spanish rather than the English phrase structure rule.

On the basis of such considerations we can safely assume that phrase structure rules are part of the individual speaker's grammar and a violation of such rules in an interlocutor
will trigger a similar reaction as the production of an ungrammatical/ill-formed sentence would.

### 6.3.2.3 How we construct phrases

This leads us to the question as to how phrases are structured in English. We shall focus on the construction of NPs. Phrase structure rules for other phrases (VP, PP, AdjP and AdvP) can be developed analogously. To begin with, we know now that there are elements that are obligatory in a NP and others that may but need not be present. The obligatory element, the so-called head, is the one that gives the phrase its name. Nouns (children, man, etc.) proper names (Mary, Jane, etc.), pronouns and place holders (a green one, red ones) are all Ns.

In addition to the N we may find that a NP can contain

- a determiner
- adjectives, actually AdjPs
- PPs (and possibly AdvPs)
- a clause

To express this as a phrase structure rule we can use a formula like
(13) $\mathrm{NP} \rightarrow$ (det) (AdjP) $\mathrm{N}(\mathrm{PP})(\mathrm{NP})(\mathrm{cl})$
where the mandatory element, the $\qquad$ is presented without parentheses, the optional elements, i.e. $\qquad$
$\qquad$ or rather $\qquad$
$\square$ and $\qquad$ with parenthesis. How a phrase, in our case the NP is structured in English is represented in phrase structure rule (13) as determiner and adjectives / AdjP appear before the head, in other words, premodify the head, whereas some rare adjectives, but Figure 6-14 Phrase Structure Rules as a tree diagram for a NP mainly PPs and cl appear after the head and postmodify the head. This is demonstrated in a tree structure in Figure 6-14.

The same approach is of course possible for all the other phrases, for PPs VPs, AdjPs or AdvPs, where the one mandatory element is the head, which also gives the phrase the name, along with specifiers and complements, which are optional. We can therefore generalise the phrase structure rule as follows

$$
\text { (14) XP } \rightarrow \text { (spec) X (comp) }
$$

or in the form of a diagram as in Figure $6-15$. The one exception to this rule is the PP, because the head, the preposition, always requires a complement in the form of an NP.

What these considerations imply is
 the fact that phrase structure rules are Figure 6 - 15 XP Rule recursive, i.e. the rules can be applied to different levels.
(13a) $\mathrm{NP} \rightarrow$ (det) (AdjP) N (AdjP) (PP) (cl)
PP $\rightarrow$ (AdvP) P NP (AdvP)
The phrase structure rules (13) for an NP clearly apply in the same way to the complement of the PP in (13a), in other words, the NP complement of the PP can be constructed according to the same rules as (13). The result can be a clause that contains several recursive phrases.
(15) I saw a rat on the table to the left of the door at the end of the room.


Figure 6-16 demonstrates that the various NPs in (15) are extended by a complement PP, whose NPs in turn are extended further by another PP. On the one hand, this demonstrates recursivity in that every NP in a PP is based on the NP Phrase Structure rule, which allows for a PP, which in turn contains an NP, etc. But it also raises a question to which need to return below: what is the precise node that the post-modifying PP needs to be attached. In other words, is the mother of the post-modifying PP really the NP or is it the N ? The XP rule approach does not really address that question. We will return to this issue in 6.3.2.4.

Another question that so far we have not addressed but need to is the following: if XP rules are to explain phrase structure at all levels, what is the head of the topmost phrase the Cl . According to traditional XP rules two heads are only possible if they are connected by a conjunction and if they belong to the same category, i.e. are both Ns, Vs, Ps, etc. This is
obviously not the case as the daughters of the mother node Cl are a NP and a VP respectively. For this reason the XP model introduces the notion of an infl, short for inflection. In other models this is also referred to as aux for auxiliary. According to O'Grady et al (1996: 191 and 234-235), then, the infl is the head of the Cl with the NP as the specifier and the VP as the complement, effectively making the Cl an InflP.

To postulate the existence of an infl or an aux is useful, as we shall see in 6.3.3.3. However, to postulate an "abstract category dubbed 'infl’ ... which indicates the sentence’s tense" (O Grady 1996: 191) as a head, which would make the Cl an InflP is perhaps more consistent with a theory than intuitively accessible to most except the hard-core syntax aficionados.

### 6.3.2.4 An alternative approach to the level at which phrases attach to other phrases

Let us now return to the question raised above, i.e. where specifiers and complements attach to the head of a NP. In the XP approach head, specifier and complement are daughters, attached directly to the mother node XP. But it has been argued that the reality is more complex and that there are levels of X which allow for a more detailed analysis as to hierarchies in extended phrases as well as the nature of the elements attached to the nodes.

Adding other levels within a simple NP allows us to account for different types of determiners (articles, possessives, demonstratives). But it also helps with an issue in English that is difficult to explain with the simpler model. Generally we can say that in some cases determiners can be replaced by so-called pre-determiners, for example both, all and half, but these pre-determiners can also co-occur with determiners, something that determiners cannot do (Burton-Roberts 1997: 157). In practical terms, it is possible to replace the in the sisters with all as in all sisters, which means that all acts as a determiner; what we cannot do is to have two determiners beside each other as in *those the sisters. However, if all acts as a predeterminer as in all the sisters we do apparently have two determiners side by side. The question arises, however, if both all and the are on the same hierarchical level, and if not, what their respective levels are.

It therefore makes sense to add a level below "det" to specify what sort of determiner (or predeterminer) we are confronted with. Similarly it makes sense to add a level above the N corresponding to the "new" level of DET. Error! Reference source not found. shows a comparison between the two analyses, which also demonstrates the degrees to which sister constituents are more closely linked to each other than nodes that are outside such relations.

In the same way we can postulate that an additional level under the NP is useful, especially if we need to express possession not with a determiners (his), but with an 's-genitive and to make the difference in structure between the meanings of the NPs in (14) clear.

Although the difference is rather subtle, it is nevertheless useful to demonstrate whether the predeterminer all refers to the men or to possessions. This sort of difference can be expressed quite neatly with the system outlined in fig. 7-18, less so with the system of XP rules, which in its simple form does not really distinguish between levels of hierarchy and presents all the men's as a uniform specifier.


Figure 6-17 Hierarchies resolving the ambiguity of (16)
Lastly it is also useful to be able to distinguish between the meanings of a NP like
(17) Those romantic short fiction writers which can have three meanings. Either they can be a) writers of romantic short fiction, b) fiction writers who are both romantic and short, or c) romantic and writing short fiction.
(17b)



These meanings can be expressed rather elegantly with a multiple-layer analysis of phrases as shown in Figure 6-18.

### 6.3.3 Analysing more complex structures and sentences

So far our discussion has centred on clauses, i.e. simple sentences that followed a straightforward sequence from left to right, from (subject) NP to VP and all the constituents in the VP being contiguous. However, this need not be the case as the following discussion will demonstrate

### 6.3.3.1 Sentences with phrasal verbs

The following sentence (18) contains a so-called phrasal verb, put up, which is formed with the verb put and the particle on. Normally the particle follows the verb, but (18) shows a different sequence.
(18) Aunt Polly put Huck up in the spare room.

The problem in (18) is that put and the particle up, are separated by the object. The uninterrupted left-to-right sequence would have to be put up Huck. Such a separation, however, is not unusual as verbs with particles are often split up like this in order to avoid the ambiguity of
(19) Mary slipped on her new shoes.
(19) does not make clear whether Mary's new shoes were slippery, which caused her to fall as in (19a) or whether she had new shoes and slipped them on her feet as in (19b).
(19a) would be parsed like this:
(19a) $\left[[\text { Mary }]_{\mathrm{NP}}\left[\text { slipped }\left[\text { on }[\text { her new shoes }]_{\mathrm{NP}}\right]_{\mathrm{PP}}\right]_{\mathrm{VP}}\right]_{\mathrm{Cl}}$
However, the shift of the particle to the end of the clause in (17b) obviously signals the second meaning:
(19b) Mary slipped her new shoes on.
This separation between verb and particle makes it clear that on unlike in (19a) is not a preposition but the particle of the phrasal verb slip on. The proof for this is that on does not have a complement NP. However, to reiterate, what we could call the "basic sequence" would be as presented in (19). We will return to this notion of a basic sequence of elements in a clause a little further down.

### 6.3.3.2 Analysis of clauses combined into complex sentences

Most of our analysis to date has focused on simple sentences, i.e. clauses that were sentences. However, language users often combine clauses into complex sentences. This creates a somewhat more elaborate structure as can be shown with (20), (21) and (22) below. For these structure trees we will resort to the slightly simpler XP model as the level
of complexity with which we shall discuss these does not require the subtleties of the multilevel analysis by Burton-Roberts (1996).
(20) Tom knows that Becky loves him.
(20) consists of two clauses:
(20a) Tom knows a fact.
(the fact is) Becky loves him.
In the complex sentence (20) the two clauses are combined, the second clause replacing the complement of the VP, which would be a NP. We can show this in the three structure trees in Error! Reference source not found. What is also noteworthy is that we need to introduce a new kind of phrase, the so-called Complementiser Phrase CP, which introduces a clause on a lower hierarchical level, a subordinate clause which acts as a complement to the head know. The head of the CP is the complementiser, i.e. here a conjunction like that, whether or the indirect question complementiser how. Needless to say complementisers can be recursive as in
(21) I know that you know that I know that you know...



Sentence (22) represents another issue, but one that is related to the one just discussed.
(22) Tom ate the fruit and Becky the pie.

This sentence also consist of two clauses:
(22a) Tom ate the fruit and Becky ate the pie.


Figure 6-19 Structure tree for (22a)
First of all it is noteworthy to state that these two clauses are on the same level: they are coordinate clauses and linked with the coordinating conjunction and. Furthermore, as the verb is the same (as is the inflection, i.e. past) there is no need to repeat the verb. English has two strategies for avoiding the repetition of verbs, one is to use a ZERO-Form, as in this example (20), i.e. to leave the repeated verb out; the other is to replace it with a PROForm. This is usually the case in question tags as in
(23) She ate the pie, didn't she?
where did is the Pro-Form. This demonstrates the usefulness of the Infl as a concept because it is the fact that the verb has as its inflection the simple past, which produces the Pro-Form of do for lexical verbs with the same inflection, in the case of (23) simple past did. We will return to this issue in the following subsection.
(22)


[^14]
### 6.3.3.3 Analysis of wh-questions

Wh-question have an impact on English sentence structure in two ways: firstly, they replace a constituent and shift a placeholder (and sometimes parts of that constituent) to another position in what, for the time being, we are calling the "basic sequence". Secondly, they often result in a shift of the inflected part of the verb, the Infl, sometimes also referred to as the $A U X .{ }^{28}$ This can be demonstrated in (24) and

Figure 6-21 Invisible shift of Subject NP into NP slot of CP in (24)
 (25) below.

First let us consider an - apparently - simpler case of a wh-question.
(24) Who kissed Becky? - Tom.

It would seem that the sequence of Subject NP and VP is retained. The entity that would be the head of the Subject NP, Tom, is replaced by the interrogative pronoun who. Also the Infl and the V are apparently unaffected by the fact that (24) is not a statement but a question.

That matters are structurally a little more complex will become clear when we consider
(25) What did Tom paint? - The garden fence.

The subject of (25) is the NP Tom, the head of the VP is paint. However, the Infl, which in an affirmative sentence would have been integrated into the V is now represented by did and precedes the subject NP, leaving the V in the uninflected form paint. The object NP, which would be the garden fence has been replaced with a question pronoun as in (24) and now stands at the
 beginning of the clause rather than following the V as its complement.

[^15]This leads to a few changes in the sentence structure as it presents itself in contrast to the corresponding affirmative sentence Tom painted the garden fence. First of all we need a construct that allows the shifting of constituents without resulting in crossed lines in a structure tree. Once again, the CP is useful for this except that here it has as its head not a conjunction like that, but the auxiliary inflection construction did representing the Infl and expressing past, which is important because the V in this clause is in the uninflected (base) form paint. The Object NP also moves to a new place (in this example) to the left of all other constituents leaving the slot for the complement of the V, the head of the VP, empty.

To return to (24) we need to note that, in reality, the same process is at work as in (25): the wh-constituent in subject position also shifts into the NP position in the CP, but the Infl does not and also does not become the head of the CP in this instance because, with the wh-word being the subject NP, no auxiliary construction like did is needed. All this information is still manifested in the Infl of the clause Cl . The shifts as presented in Figure 6-21 illustrate this.

### 6.3.3.4 Consequences of the discussion

What our discussion will have demonstrated is that there are sentences and clauses in their left-to-right order that reflect or are very close to what we called the "basic sequence", the way in which simple English clauses are constructed with contiguous constituents or phrases in an order consistent with English clause construction. The XP rules would stipulate that the following phrase structure rules apply:

| cl | $\rightarrow$ | NP Infl VP |
| :--- | :--- | :--- |
| NP | $\rightarrow$ | $(\operatorname{det})(\operatorname{AdvP})(\operatorname{AdjP}) \mathrm{N}(\operatorname{AdjP})(\mathrm{PP})(\mathrm{cl})$ |
| VP | $\rightarrow$ | $(\mathrm{AdvP}) \mathrm{V}(\operatorname{AdvP})(\operatorname{AdjP})(\mathrm{NP})(\mathrm{CP})(\mathrm{PP})(\mathrm{cl})$ |

In other words, constituent phrases are created according to the above phrase structure rules, which prescribe the sequence of elements within the constituent, as well as the sequence of the constituents themselves, which eventually result in a clause or sentence. However, in actual language usage, this "basic sequence" may (need to) be modified and will then deviate from the left-to-right order in the following ways:

- constituents can be shifted to other places in the order, e.g. particles in phrasal verbs in (18) and (19); XPs in wh-questions in (25)- and invisibly - also (24),
- constituents can be deleted and replaced with a CP, e.g. that +cl in (20) and (21), or with a pro-form as in the tag question didn't she in (23),
- redundant constituent can be deleted, or, to be more precise, replaced with zero-form, e.g. the second ate in (22),
- constituents can be replaced with other elements that act as placeholders or carriers of information, for instance the use of Infl in the auxiliary form in (25), which is typical for wh-questions (except for the ones replacing the subject NP), yes-no questions and negations of lexical verbs with don't/doesn't/didn't.

These changes suggest that there are forms of clauses and sentences that represent or are very close to the "basic sequence" and there are others that have undergone changes from this "basic sequence" in accordance with certain rules.

The classic understanding of this phenomenon is to refer to the "basic sequence" as the Deep Structure of a clause or sentence. This Deep Structure can undergo certain changes (shifts of constituents or their replacement with other forms), which are called transformations. The fewer transformational rules are needed, the more elegant a model is considered. The result of these transformations is a new left-to-right order, the so-called
Surface Structure. In the following we shall briefly discuss some of these notions in detail.
The Deep Structure is based on the fundamental rules of constituent construction in phrase structure rules and it makes use the lexicon of the language. The rules include information on the basic structure of the constituents. However, also restrictions as to possible combinations need to be considered. An example for such restrictions can be how many open slots a verb may have (see Figure 6-23). In (18) the verb requires a mandatory subject NP, whose head has to be human, and a mandatory direct object NP, whose head also needs to be human. It furthermore has two XP slots (most likely PPs or AdvPs), one more likely to be filled - referring to place, the other expressing manner, which is less important for the clause in question and this less likely to be present. The lexicon thus provides information about what a lexical entry like put up must and can be combined with, but also what the selection criteria for the categories are that


Figure 6-23 Constraints of the $V$ in the Deep Structure of (18) the entry in question combines with. For put up these could be represented as follows:
a) Basic information: dictionary entry and word class: put up = V
b) Lexical entry for structural constraints put up: V [+_NP, (+_PP), (+_AdvP)]
c) Lexical entry for semantic category restrictions

$$
\begin{array}{ll}
\text { put up: } & \text { NP }_{\text {Subject }}[+ \text { human }] \\
& \text { NP }_{\text {object }}[\text { human }] \\
& (\text { PP/advP } \text { Adverbial }[+ \text { place }]) \\
& \left(\mathrm{PP} / \text { advP }_{\text {Adverbial }}[+ \text { manner }]\right)
\end{array}
$$

According to some theories the information under a) and under b) is called subcategorisation. Thus put up is subcategorised as requiring an NP in the VP. This type of subcategotorisation successfully blocks the creation of grammatically ill-formed clauses like
(26a) *Aunt Polly put up.
(26b) *Aunt Polly put up Huck in.
In other words, subcategorisation as defined above, by supplying the information as to what slots a head has to have filled and which ones can be filled, prevents ungrammatical clauses like (26a), which lacks the mandatory direct object NP slot. Similarly it prevents ungrammatical constituents as in (26b), where the mandatory Complement NP in the PP is missing.

However, this restricted notion of subcategorisation would not prevent a clause like
(26c) Green ideas furiously put up Huck Finn.
(26c) while being structurally correct is nonsensical for several reasons. Most obviously the V put up requires a [+human] subject NP and ideas as a [-concrete] head cannot have a [+colour] AdjP. For this reason it makes sense to extend subcategorisation to include such semantic category restrictions. This will determine from which semantic categories XP heads can be taken or which ones from the same semantic category they can be exchanged with (e.g. other [+human], [-concrete], etc.).

which realises all the phonological or graphological elements in a left-to-right sequence; the Surface Structure may be identical, close to or rather different from the Deep Structure. Whereas the Deep Structure and the transformations are based on the speaker's awareness of grammaticality and therefore rely on the competence, the Surface Structure represents the speaker's performance. An overview of the relationships between Deep and Surface Structure can be seen in Figure 6-24.

To conclude this brief tour, on the basis of the above considerations we come to the conclusion that some versions of clauses are closer to the Deep Structure.
(18a) Aunt Polly put up Huck in the spare room.
(18b) Aunt Polly put Huck up in the spare room.
(18c) In the spare room Aunt Polly put Huck up.
(19a) Mary slipped on her new shoes.
(19b) Mary slipped her new shoes on.
(20a) Tom knows a fact. Becky loves him.
(20b) Tom knows that Becky loves him.
(21a) Tom ate the fruit and Becky ate the pie.
(22b) Tom ate the fruit and Becky the pie.
(25a) Tom painted what?
(25b) What did Tom paint?
In our examples it is clauses marked $a$ which either represent the Deep Structure or are closer to it than the clauses marked $b$ (or 18c).

### 6.4 Functional categories and a language typology

We shall conclude this tour of syntax with a subsection on how the sequence of functional elements in a clause or sentence can be and is used to typify languages. Below we will discuss a set of sentences which are all translations of
(27) The boy saw the black dog.

This clause consists of a Subject NP, a VP with a V and an Object NP, the latter modified with and AdjP. In terms of a functional analysis as discussed in 6.2.4, it contains a Subject $\mathbf{S}$, a verb $\mathbf{V}$ and an Object $\mathbf{O}$. The terminology to describe this structure, but also the type of language English represents is reflected in (27): English has the basic clause structure SVO. Of course, one could also consider the Object NP as the complement to the head V of the VP, which would mean that the description SVC would also include the clause structure where the functional constituent to the right of the V is not an Object but a Complement (see the discussion in 6.2.4). However, the generally used terminology is SVO.

Considering the following translations of (27) we can make certain pronouncements about the structure of the language in question.
(27a) Chonnaig an buchaill an chú dubh. (Irish)
(27b) Poika näki mustan koiran. (Finnish)
(27c) Mál'čik uvídel čórnuju sobáku. (Russian)
(27d) Chunnaic an gille an cu dubh. (Gaelic)
(27e) To agori eiסe to mauro skylo.
(27f) Il buob ha viu il tgaun ner.
(27g) Fe welodd y bachgyn y ci du.
(27h) El niño vió el perro negro.
(Greek)
(Romansh)
(Welsh)
(27i) Y-whelas an vap an chy du.
(Spanish)
(27j) Al walad shat al kalb al iswid. (Egyptian Arabic)
(27k) Puer canem nigrum videbat. (Latin)
(27l) the black dog the boy saw. (Yoda)
An examination of the data shows that some of the languages have no determiners. This is the case for $\square, \square$ and $\square$, whereas $\square$ also has a determiner in front of the adjective. In $\square, \square$ and $\square$ the determiner is an, in
$\qquad$ it is $y$. The second NP, the O in these languages, must be chú dubh, cu dubh, ci $d u$ or chy du. Given that saw must be chonnaig in $\square$ and chunnaic in $\square$ and $f e$-welodd in $\square$ and $y$-whelas in $\square$, we can draw two conclusions. Firstly, in contrast to the other languages - with the exception (27k) and (27l) - which all have SVO-structure, these four languages have the V as the first constituent of a clause; this has to be the case as the first constituent does not begin with a determiner, whereas the other constituents do; furthermore, the last constituent consists of three words, one of which must be the adjective, and thus obviously represents the $O$. Therefore these languages must have a $\qquad$ -structure as the first constituent does not have any modification (i.e. no adjective). This suggests that the four languages may conceivably be related because of the shared, relatively rare, basic clause structure. Their geographical proximity would further support this contention.

The second conclusion is based on the fact that Irish and $\square$ and Welsh and
$\qquad$ respectively, have relatively similar forms of the verb meaning saw, but the forms are quite different between the two groups. This suggests that they are related but also subdivided into two groups, $\square$ and $\square$ on the one hand and $\square$ and $\square$ on the other. In fact, all four are Celtic languages, the first two are classed as Goidelic, the second two as Brythonic languages. These considerations show that at least in part we can use basic clause structures to suggest or confirm relations between languages.

Another sequence, which is not quite as widespread as SVO is manifested in (27k). Here the $S$ precedes the $O$, but the $V$ is placed at the end. The same is also true for Japanese, which also has an $\square$-structure. If auxiliaries are used, German also has the lexical verb in final position
(27m) Der Junge sah den schwarzen Hund.
(27n) Der Junge hat den schwarzen Hund gesehen.
Usually there is no readily accepted answer to the question why such a clause structure would be adopted over another. In the case of Japanese, however, it has been suggested that, as the culture is strongly dependent on social hierarchies and their maintenance, leaving the predicate to the end of an utterance is an advantage in oral interaction (conversation), allowing an adaption of what is being said on the feedback clues from the interlocutor (including actually negating what the speaker actually set out to say...).

Why Latin and German should have the same structure, however, is much harder to explain. Nevertheless, a consideration of the two languages shows that they are relatively free(r) with the sequence of the elements in a clause. In the case of Latin in particular, but also with German this freedom seems to go hand in hand with the amount of inflectional suffixation used in the language. In fact, when translating classical Latin it is often necessary that we identify the cases of the NP constituents first in order to establish which one fulfils which function. Agglutinating languages where grammatical relations are expressed by inflectional morphology (such as Latin) have this freedom although not all of them use it to the same degree. In synthetic languages, which have little, or in the case of some Southeast Asian language practically no inflectional markers, clauses need to be more predictable as to the order of their functional elements and therefore adhere much more rigidly to their basic clause structure. English with relatively few inflectional suffixes, probably for this reason, is more consistently SVO than German, which deviates from this structure quite frequently (inversion, separation of S with auxiliary and lexical V).

Lastly, (27l) represents a very rare structure. There are few if any known languages that have $\square$ structure. Yoda, the character from Star Wars uses this structure, but it is, in the true sense of the word, rather outlandish.

### 6.5 Key Concepts

A preliminary remark about the Key Concepts: In this chapter the strategies, how to draw structure trees and how to formulate phrase structure rules are at least as important as the key terms.
$\square$

| well-formed |  |
| :--- | :--- | :--- |
| constituent |  |
| parsing |  |
| theme I rheme |  |
| subject |  |
| verb/predicate |  |
| recursive |  |
| sister |  |
| object |  |
| meaghter |  |
| nomplemer |  |
| subject vs. object |  |
| complement |  |


| infl |  |
| :--- | :--- |
| zero-form |  |
| pro-form |  |
| Deep Structure |  |
| Surface Structure |  |
| transformations |  |
| subcategorisation |  |
| SVO / vSO ISOV |  |
| structure |  |

### 6.6 References

Burton-Roberts, Noel. 1997. Analysing Sentences: An Introduction to English Syntax. London: Longman.
Downing, Angela and Philip Locke. 2006. English Grammar: a university course (second edition), London: Routlegde.
Heredia, R. R. and Brown J. M. forthcoming. Codeswitching. In The Encyclopaedia of Linguistics. Chicago: Fitzroy Dearborn.
Myers-Scotton, C. 1993. Duelling Languages. Grammatical structure in codeswitching. Oxford: Oxford University Press.
O‘Grady, William, Michael Dobrovolsky and Francis Katamba. 1996. Contemporary Linguistics: An introduction. London: Longman.

### 6.7 Syntax Exercises

### 6.7.1 Analysing clauses / sentences

1. Analyse the following sentences
a) on the lexical level,
b) in terms of theme and rheme,
c) as meaning relationships,
d) functionally and
e) according to constituent structure.
f) identify all the heads of constituents
(1) John watched a boring film on TV yesterday
(2) The woman in the red parka gave sugar lumps to the horse.
(3) The group of students considered the lecture a waste of time.

### 6.7.2 Constituent structures

2. Can fill the following tree structures with example words?




3. Identify the mother nodes, their daughters and the sister nodes in the above examples.
4. The following clauses/sentences are ambiguous. Wherever possible draw a structure tree to illustrate the ambiguity. Are the any ambiguous sentences where structure trees as we know them do not demonstrate how the ambiguity works?
(8) The woman bumped into the man with the broom.
(9) She found the book on murders in the manor house.
(10) John left the party in a worse condition.
(11) Mary put the bags on the bench in the hall.
(12) I saw the boy with the binoculars.
(13) The woman decided on the motorbike.
(14) Her happy mood was ruined by the evening.
(15) The blind carpenter picked up his hammer and saw.
(16) I shot an elephant in my pyjamas. (Groucho Marx in Animal Crackers)
(17) Mary gave her dog crackers.

## 5. Which of the following sentences or clauses are closer to the Deep Structure or actually

 represent it? Also describe the Transformation(s) that have produced the surface structure. Draw the structure trees that illustrate the transformations.(18a) The student solved which task?
(18b) Which task did the student solve?
(19a) After a few years she actually loved this grumpy, old cat.
(19b) She actually loved this grumpy, old cat after a few years.
(20a) He put his brother up in the attic.
(20b) He put up his brother in the attic.
(20c) In the attic he put up his brother.
(21a) Batman drove the Batscooter and Catwoman Catmobile.
(21b) Batman drove the Batscooter and Catwoman drove the Catmobile.
(22a) Rarely is he flustered about a situation, but now he is.
(22b) He is rarely flustered about a situation, but he is flustered now.
(22c) He is flustered about a situation rarely, but is flustered about a situation now

## 7 Beyond Microlinguistics: Language in context

## What you know/can do after working through Chapter 7

## In Speech Act Theory

- you can describe the locutionary act of an utterance, identify its illocutionary and its perlocutionary force.
- you can identify direct as well as indirect speech acts and performatives
In conversational organisation you can recognise
- TCUs, TRPs, turn-allocation, turn-mending
- the difference between overlaps, interruptions and back-channelling/minimal listener response
With the Co-operative Principle you can
- identify the maxims and where they are not observed


### 7.1 The whole picture?

- what kind of implicatures such instances create.

Our discussion so far has focused on the structure of language, in other words on what we call microlinguistics. The last chapter on the structure of sentences has shown a model for the way in which we construct sentences/utterances when we use language (and of course deconstruct them when we listen or read), using the concept of a Deep Structure, the transformations and the Surface Structure. The DS contains the lexical items we require for the semantic content of the planned utterance, the lexical information leading to the basic construction of the sentence or utterance we are about to make, and the fundamental left to right sentence structure; the transformations allow us to shift some elements around and to modify others in order to create the Surface Structure, which represents the left-to-right appearance of the final sentence or utterance as it manifests itself in writing or speech. What this model demonstrates very clearly is that language production is rule-governed and that we consider an utterance or sentence well-formed if it conforms with these steps and the underlying grammatical rules. It also shows how complete sentences, in our case in English, are formed correctly.

### 7.1.1 Beyond well-formedness

It does, nevertheless, have certain shortcomings. Firstly, it focuses almost exclusively on the speaker, the person who produces the sentences. Language users, however, clearly are hearers as well as speakers. A more global perspective on language therefore cannot ignore the role of the hearer. In the model as it stands the role of the hearer however is reduced almost completely to someone assessing the well-formedness of sentences and utterances.

Another potential shortcoming is the fact that we relatively rarely use full or in fluent conversation even only well-formed sentences. Fluent speech when transcribed in many
cases presents serious difficulties for punctuation as we would expect it in written texts, and it is often riddled with what could be seen as violations of grammatical rules, frequently resulting from slips of the tongue, the speaker changing tack in mid-sentence, distractions leading to incomplete utterances, etc. This has led to the widely held notion that whereas speakers of the language clearly know, albeit usually only implicitly, the rules of that language and are able to assess the well-formedness of utterances, in other words, that they have the "competence" of the language, but that the manifestations of that competence, what Chomsky has called "performance", is anything but equally perfect and is therefore often even described as "degenerate". Given the fact that children acquire language based on such "degenerate" data, in other words that they develop a competence in the language at all, has led to the theoretical construct of an innate ability to learn a language, something that has sometimes been called a Language Acquisition Device (LAD) or a postulated Universal Grammar, which allows extrapolation of rules from and despite the "degenerate" input data. It needs to be remembered, however, that this approach represents a theoretical model that works very well for what it attempts to show, but, like the grammatical theory presented above, it is just that, a theory which needs to be modified in the light of real language in use and taking into consideration real speakers of that language.

As pointed out, one of the shortcomings of this theory, and one for which, in all fairness, it is not designed, is that it ignores the dialogic nature of language. Speakers are never just speakers and hearers are very rarely only hearers; in actual language use, interlocutors (which is a better expression to represent the reality of how we use language) are both at the same time, speakers and hearers. Language is considerably more than the use of grammatical rules to string together semantic elements, i.e. lexical items, into well-formed strings. Furthermore, language has a purpose, in fact a whole number of purposes, one of which is imparting information from speaker to hearer, from interlocutor to interlocutor.

### 7.1.2 Getting a message (across)

To put it somewhat simplistically, let us assume that a speaker may wish to impart communicative content, a message, to hearer. The way in which this could be seen to happen is illustrated in Figure 7-1. The $\square$ on the left $\square$
$\qquad$ which is transmitted by a variety of means, e.g. vibration in the air, letters on paper, electronic impulses down a telephone line or via aerials, or 0 s and 1 s digitally through a $\square$ to the hearer, who $\square$ the signs into the $\square$ received. In an ideal instance of communication the two, $\qquad$ and $\qquad$
$\qquad$ , would be the same.

This model has a clear advantage over the Chomskyian approach because it contains the important aspect that when language is used there is normally an exchange of some kind of content, of a message, between a speaker and a hearer.

Nevertheless, like the Chomskyian model, also this model has one very serious drawback: it is unidirectional in the sense that there is a speaker and a hearer, but the dialogic and interactional nature of language is not included in the considerations. In addition, both models ignore the fact that whenever language is being used between interlocutors, apart from the use of language on what could be called the productive or message level, there is also always a social component. Speakers and hearers do not interact in a social vacuum, they enact social roles, they define themselves in relation to each other and, in order to do so, they modify the way they speak, for instance by adopting or deciding not to adopt specific speech patterns, dialect or sociolect features that would either create a feeling of mutual solidarity in the situation or signal to an interlocutor that such closeness is either not given or not desired. Language use therefore is a constant exchange not just of information (in some cases there may in fact be no real information exchanged at all, for instance in a conversation about the weather) but also of feedback about how the interlocutors perceive their own and each other's status in a given exchange. Such an exchange and the roles explored in it are therefore never static, they are constructed in the interaction, they are emergent. We will explore the notions presented above in the following, first in somewhat general terms (7.1.3), then within the framework of seminal theories (7.2).

### 7.1.3 Issues not covered by generative or message models

### 7.1.3.1 Resolving ambiguity

There are, in addition to the ones discussed so far, also other short-comings in the above models which we need to address. The first one, the resolution of ambiguities can be illustrated with two examples, (1) and (2):
(1) Moving freight cars can be lethal.
(2) A: My boss gave me a bottle of whisky for my husband.

B: That's a brilliant deal.
Phrase structure trees can resolve some ambiguities such as "The children found the book about fairies in the gazebo", indicating whether the PP "in the gazebo" is attached directly
to the VP, in which case the book was found there, or whether the PP post-modifies "fairies", signalling that the book deals with fairies inhabiting the gazebo. However, the ambiguity in (1), i.e. whether the shunting of freight cars presents a mortal danger or whether freight cars in motion can cause fatal accidents is most obviously rendered unambiguous by the situation in which the sentence is uttered: as a statement warning workers whose job it is to shunt freight cars around a station or as a general warning on a public notice in a station or freight yard to beware of freight cars that may already be moving. In other words, it is the situation in which the utterance is made that indicates whether someone or something is moving the cars or whether they are in motion; to put it in grammatical terms, whether moving is used transitively (the workers move the freight cars) or intransitively (the freight cars are in motion). Similarly, although (2) is obviously a joke playing on the ambiguity of "for my husband" as meaning "in exchange for" or "as a present for", B would be aware that an exchange of this kind is unlikely in a situation outside a joke, i.e. that a situation in which a spouse would be swapped for whisky is unlikely in the real world.

Neither the generative nor the message model can account for the fact that these utterances are actually unambiguous, something that only the situation can establish in which the communicative exchange takes place. In more general terms, we can say that very often a potentially ambiguous utterance proves to be unambiguous because contextual appropriateness to the situation is something a language user can gauge.

### 7.1.3.2 Shared knowledge

The above considerations demonstrate how important the context is in language. As language is dialogic and interlocutors exchange content with each other, they also develop insights or create items of information that they both have access to as a result of their exchange. In other words, they build up a stock of shared knowledge. Such knowledge can
a) become available within the framework of a specific utterance or communicative exchange,
b) arise from the fact that interlocutors speaking the same language are aware of the meanings and shades of meaning of the words and phrases they use as speakers of that language, and/or
c) be the result of social, historical and cultural norms shared in a given group, community, etc.

Let us begin the discussion with a), by considering how knowledge is constructed and shared in a specific utterance or a conversational interaction. What has been referred to at an earlier stage in the interaction can be assumed to be common knowledge later on. An example for this is the use of the definite article the for an entity that in a previous sentence or utterance would have been referred to unspecifically with the indefinite article $a / a n$. This change in the use of the determiner cannot be accounted for with either the generative or
the message model. Similarly, the fact that interlocutors will be aware of the fact that the same entity can be referred to with very different words can be illustrated in (3) with the excerpt from the Paul Simon song "You can call me Al":
(3) A man walks down the street he says "Why am I soft in the middle now, Why am I soft in the middle, the rest of my life is so hard?..."

To any listener of the song it is clear that anaphoric and cataphoric references like he and $I$ refer to the same person, the "man walk[ing] down the street" (even though, admittedly, the rest of the meaning in this passage is less obvious). The fact that in the preceding sentence "A man" from (3) is referred to as "the 'man...'" demonstrates the point about the use of definite an indefinite articles made above. What this example also demonstrates is that the shared element of knowledge can be introduced in what is usually referred to as one turn, i.e. a stretch of discourse uttered by one speaker. However, shared elements of knowledge could as often as not have been introduced in an earlier turn in the conversation or even in a conversation between the two interlocutor that took place at an earlier stage.

We also have instances of shared knowledge that manifest themselves in the sorts of presuppositions that arise from the use of a particular item of vocabulary - see b) above as demonstrated below:
(4a) Have you stopped hitting your boyfriend?
(4b) Have you considered hitting your boyfriend?
(5a) I admitted to them that I had lost the money.
(5b) I said to them that I had lost the money.
Both (4) and (5) share the same structure; in other words, a phrase structure tree representing (4a) and (4b) as well as (5a) and (5b) respectively could not show the different truth conditions in the examples: the fact that in (4a) blows have been administered, which is not the case in (4b); whereas in (5a) money had been lost, which need not be the case in (5b). Here the shared knowledge lies in the fact that as speakers of English we are aware of the meanings of stop and admit referring to something that has (already) taken place, i.e. hitting a person or losing money, whereas consider indicates that something has not happened but may be an option, and say in this context contains no information as to the truth of what has been said. Such truth conditions represent shared knowledge because the interlocutors' grasp of semantics is given to a large degree by the fact they speak the same language and have thus acquired an awareness of the semantic features of the words, they use, in (4) and (5) of the verbs stop, consider, admit and say.

Whereas (3) to (5) show how shared knowledge can be inherent in the language, either constructed in a given verbal interaction or as part of the semantics of that language, there is also a level c) of shared knowledge that may have become apparent in the discussion in
7.1.3.1. We have established that the exchange in (2) is unlikely to be misunderstood, except deliberately for comic reasons, because both interlocutors share the social/cultural knowledge that a barter in which a human being is traded for a bottle of whisky is unthinkable in the world as we know it. Such shared knowledge about the world also is at play in the following example:
(7a) The teacher sent the boy out because he was annoyed.
(7b) The teacher sent the boy out because he was naughty.
In both sentences (7a) and (7b), the pronoun he refers to a male entity, which grammatically could be the boy, an assumption that would make sense in terms of the closeness of the antecedent as well as the teacher as the subject of the sentence (even though teacher could of course also be a woman, in which case 7 would not be ambiguous, cf. 7.1.3.1). However, if speakers are asked about the antecedents in the two sentences, the verdict is always the same: in (7a) he refers to the teacher because we assume that being annoyed is a better reason for a teacher to remove a student from a class room, whereas in (7b) he is always identified as the boy because the adjective naughty is usually applied to children (if it does not have sexual connotations) and that naughty behaviour is more likely to result in the expulsion of a student from a class room than the teacher engaging in naughty behaviour.

## Exploring

(8a) The terrorists assassinated the $\qquad$ .
(8b) The terrorists murdered the $\qquad$ -
in a similar way, i.e. by asking speakers to fill in the blank, we find that the overwhelming majority of respondents will complete (8a) with the president or a person of equally high profile and standing; by contrast, the object of (8b) is most likely a hostage or a less "elevated" member of the public. Slightly disrespectfully put: we all share the knowledge that terrorist for maximum impact assassinate public figures but indiscriminately murder common people. This shared knowledge of "the world" manifests itself in the spontaneous completion of the two sentences as well as in the assumptions that "boys", not teachers, are "naughty" and teachers', not boys’ annoyance is a reason for expulsion from a class room.

### 7.1.3.3 Agendas and intentions

Another element of language use that neither the generative approach nor the message model can account for is how sentences and utterances are affected by what the speaker would like to be the outcome of the sentence or utterance. This agenda can be explicit, represented in the words being used.
9) I wish you were more spontaneous.

It may be somewhat counterintuitive to ask someone to be more spontaneous, but nevertheless such an utterance is perfectly feasible. Two elements here indicate what the
speaker wants to achieve with the utterance, firstly the phrase I wish, which explicitly indicates what the utterance represents, i.e. a wish, and what the intention of the speaker is, i.e. for the interlocutor to be more relaxed and less premeditated in her/his actions. That the latter is not the case is reinforced by the use of the subjunctive you were, which adds weight to the utterance being a wish and thus stating what the speaker's agenda is in this utterance.

However, the utterance does not have to be flagged as a wish as explicitly as is the case in (9). What appears to be a question can also express a communicative intention as (10) demonstrates.
(10) Could you pass the salt?

One possible response on the part of the interlocutor could be an answer in the affirmative or the negative "yes, I could" or "no, I couldn't", perfectly acceptable in "grammatical" terms as (10) is a polar (yes-no-) question. However, both interlocutors know that this is not request for information, as questions often are, but that the speaker would like the interlocutor to do something, i.e. pass the salt, and that the interlocutor is expected not only to recognise what the speaker intends with the utterance but also to respond appropriately to the request.

What is noteworthy is that the request in (10), unlike in (9), is not clearly flagged as such, that it is largely implicit if we consider the utterance purely from its surface structure; similarly, the message is not explicitly encoded along the lines of "I haven't got any salt, you can reach, so please pass it to me". But both elements the object of the speaker's request, the salt, and what the speaker would like the interlocutor to do, to "pass the salt" are present in the utterance.

This need not be the case when it comes to an interlocutor determining what the speakers intention is, as (11) shows. A teacher trying to elicit an answer to a question or a person in charge of a group asking for volunteers to take on an unpopular task may say
(11) Don't all shout at once...
into the deafening silence occasioned by the question or request. To the class or group thus addressed it is clear that they are expected to think harder so that they can provide an answer or that the members of the group addressed should be more public-spirited and volunteer. The fact that two such different intended outcomes can be encoded by the same utterance, is something that neither the generative nor the message model can account for. However, it is also interesting to consider that on the one hand the utterance neither contains a reference to the teacher's question or to the nature of the unpopular task, nor is there an explicit request for a reaction (answering the question or volunteering for the task). In fact, the wording suggests a reaction of the interlocutors that is patently not taking place, no one is making any kind of utterance in response and there clearly is no shouting to be heard.
(11) would therefore appear to contradict the observable facts, a point that 7.1.3.4 discusses in more detail.

### 7.1.3.4 Word and other meaning

In our discussion of semantics we have come across the notion that meaning not only "resides" in the words we use, but that in the absence of any direct verbal reference to what the speaker means, meaning can be created indirectly as manifested in (10) and more palpably in (11). We will return to this aspect further down in more detail. First let us discuss the notion that we often use words, phrases and utterances non-literally as in (11). This can happen in three ways

Firstly, non-literal meaning can be represented in the form of an idiom. As we have seen (4.1) these are the result of a social, historical or cultural process that imparts on a phrase a meaning which is generally understood by speakers of that language even though there is no direct use of lexical items to indicate that particular meaning and even though the image used to convey it is no longer in the general consciousness.

An example for this non-literal use of language is
(12a) It's cold enough to freeze the balls off a brass monkey.
The notion of low temperature is explicit in "it's cold enough to freeze...", but the degree of cold is expressed in a rather odd, if not positively surreal, and seemingly somewhat risqué image. Nevertheless, despite the obscurity of the phrase as to why "balls" should be susceptible to falling "off a brass monkey" as a result of weather conditions, it is clear to native speakers that temperatures must be very low indeed, because that is what the common usage of the idiom means to them, despite the opacity of the wording.

Secondly, the non-literal use of language is evident where ambiguity is used for comic effect as in (2) above, and as in (13).
(13) As my grandfather is always good for a laugh I put his walking stick just out of his reach for a practical joke. He fell for it.

On the surface both examples play on the multiple meanings of certain words used; but whereas in (2) the ambiguity lay in the word meaning of for, in (13) it rests on the collocation to fall for a joke, i.e. "to be taken in". Also unlike in (1) and, admittedly, in view of its intended comic effect less so in (2), in (13) the ambiguity remains deliberately unresolved because of the absence of the context or the situation, which leaves it open whether the grandfather fell when trying to get the stick that had been put of his reach or whether he was taken in by the joke. The deliberately unresolved ambiguity of course results from the fact that such utterances are always made outside the situation in which they might have taken place; (13) thus represents a deliberate attempt to mislead the listener, which is typical for punning, a form of language (use) that cannot be accounted for either in generative or message model framework.

A final example of how words and meanings can be at odds with each other is shown in the following exchange:
(14) A: I'm really very sorry, but I've dented your car.

B: Brilliant! Well done!
It is clear that in reaction to A's admission to having done damage, B 's seemingly positive response contravenes what would be expected in the situation; such words usually reserved for praise seem at odds with the situation. At the same time it is highly unlikely that A would interpret B's response as praise, unless A is, improbably in view of the situation referred to and the relatively sophisticated language use, a very young child, who would unable for developmental reasons to interpret the mismatch between the situation and the utterance as irony or sarcasm. Indeed, in all likelihood A would have picked up non-verbal elements of B's utterance such as facial expression and intonation that would have indicated B's sarcasm. However, it is precisely these non-verbal elements - the mismatch of language and situation on the one hand and facial expression, body language and intonation on the other - that would have conveyed what the words in themselves patently do not, that B's is truly annoyed with A's clumsiness.

In short: our discussion shows that we can express notions or concepts using words that do not explicitly refer to these notions or concepts or that actually seem to contradict the observable facts. Non-literal meaning as evident in idioms, in word play and punning, or in irony and sarcasm cannot (readily) be accounted for with the models discussed so far.

Neither can the deliberate use of indirectness, which we have already encountered in (11). Such indirectness can arise from non-literal use of language, making a phrase even more obscure to an outsider. It is possible, for instance, to hear someone say
(12b) It's brass monkey weather
an expression that does not appear to refer to low temperature in any way as (12a) did, but to most native speakers means that it is very cold indeed. But it is also in evidence in the following examples:
(15) A: Do you think she'll go out with me? B: Fat chance.

In (15) A asks a polar question to which the expected - direct - answer would most likely be yes or no. B's response is neither and it is only if one is aware of the irony in the use of fat to suggest the opposite, i.e. slim, that B's meaning becomes clear, that the answer to A's question is no. The response is thus both indirect and non-literal.

We encounter a slightly different situation in (16). A refers to a series of teenage fiction novels, very popular at the time but not without its detractors.
(16) A: What did you think of the Twilight series?
$B$ : The cover design was nice.

Again, a direct answer would express either approval, qualified or not, or disapproval in response to A's question. However B's reference to something as marginal as the design of the book covers, which says little or nothing about the quality of the narrative or the language of the novels, makes it clear - without explicitly stating this - that B is not what could be described as a fan. Another feasible and equally unenthusiastic response could be
(16b) B: A waste of perfectly good trees.
which again is not a direct reaction to the question of the appeal of the Twilight series, but by raising the issue that otherwise "perfectly good trees" were used in the production of the work, B once again indicates, without an explicit reference to literary quality, a clear lack of enthusiasm. As this lack of B's enthusiasm is not expressed explicitly, it is up to A to make the inference from B's utterances, to interpret what B's indirect responses imply. As was the case with irony or sarcasm A would be helped in the interpretation of B's responses by correctly gauging the situation and the context, as well as shared knowledge about how such notions can be expressed by indirectness, implication, etc., in the linguistic/discourse practice of a community or group which both A and B would be part of.

### 7.1.3.5 The absence of a message

We can, as we will discuss in more detail below, also use language without imparting information, i.e, without sending a message. This is the case when the function of an utterance is to bring about a change to an existing state of affairs. As there is no actual message that is being passed on, this instance of language use is not covered by the message model; and as the generative approach to language is not concerned with the results of sentences or utterances, clearly accounting for such instances of language use are outside its remit as well.

Perhaps the most obvious example of this kind of language use is
(17) I hereby pronounce you husband and wife.

The speaker, by uttering the phrase "I hereby pronounce", does not impart information, but seals the new state between the two people addressed, a state that is legally binding, provided the speaker has the correct credentials, and it has a number of far-reaching consequences.

The same can be said about (18), a short statement quoted in the Daily Mail on 23 September 2011 under the headline "The 23 words that sentenced Troy Davis to death":
(18) "The application for stay of execution of sentence of death presented to Justice Thomas and by him referred to the [Supreme] Court is denied."

```
(ORDER LIST: 564 U.S.)
WEDNESDAY, SEPTEMBER 21, 2011
                ORDER IN PENDING CASE
11A317 DAVIS, ANTHONY TROY V. HUMPHREY, WARDEN
                The application for stay of execution of sentence of death
    presented to Justice Thomas and by him referred to the Court is
    denied.
```

Figure 7-2 Supreme Court Pronouncement that sealed Troy Davis' fate

Here too it can be said that the central notion is not the message that is imparted but the pronouncement by Justice Thomas and the Supreme Court that the execution of Troy Davis, an African American convicted of having shot security guard Mark McPhail in Savanna, Georgia, was to go ahead after a temporary stay four hours earlier, in other words, the verbial "is denied" sealed his fate, against which there had been massive protests on account of the controversial evidence that had led to his conviction.

What these two examples show is that here we are confronted with an essentially noncommunicative use of language. What happens here is that by making a (ritualistic) utterance (17) or writing a specific sentence (18) an action is performed. This is the reason why verbs like pronounce in the sense it is used here or deny in connection with an appeal or an application are referred to as performatives. We shall return to this and related phenomena when we discuss Speech Acts (7.2.3)

### 7.1.3.6 The influence of social interaction

However, one of the most important element that neither generative approaches nor the message model can account for, the former because by presupposing the idealised speakerlistener (who is monolingual and only speaks the standard language) the latter because it focuses on messages being conveyed unidirectionally from speaker to hearer is the fact, already referred to above (7.1.2), that language is embedded in or represents social interaction. This can be illustrated with the following examples:
(19a) Scintillate, scintillate, miniscule sidereal orb.
(19b) Twinkle, twinkle, little star.
(20a) I ain't done nuffink, 'onest. It weren't me.
(20b) I am entirely uninvolved in these events, I assure you.
There can be no doubt that both utterances in (19) and (20) respectively convey the same information (if, in fact, any is conveyed in (19)). Both utterances in (19) and the one in (20b) can be said to well-formed according to the rules of Standard English.

However, (19a) uses vocabulary which either represents the communicative content either in a pompous or, more likely, in a humorous fashion. If the aim is the latter, this presupposes that the interlocutors, at whom the utterance is aimed has the linguistic wherewithal to recognise the rather elevated (or obfuscating) style, i.e. knows or can work out the meaning of the rather complex vocabulary, and that their level of sophistication is such that they can appreciate what is being done. By contrast, (19b) requires no such awareness and, given the fact that it is part of a children's song, would be understandable also by relatively small children, something that would patently not be the case for (19a). As a result it would make no sense to use it with a child interlocutor.

Different levels of sophistication in the traditional sense are also at play in (20). In difference to (19), however, (20a) is not well-formed as far as Standard English is concerned because to begin with the form of to be is non-standard as is the double negative (ain't...nuffink). Also, the inflection of to be in the second sentence is non-standard, although there are dialect of English in which none of these deviations from Standard English would be considered ill-formed. Furthermore, there may be situations in which (20a) may be undoubtedly more appropriate than (20b) because the interlocutors might expect a non-standard utterance or the clearly formal (20b) would be inappropriate for the situation and the interlocutors, who might interpret it as pretentious or affected. In practical terms, a school child would be expected to utter (20a) to a person of authority, a politician (20b) as a statement to the press; the reverse would be inappropriate and might have unpleasant consequences for the speakers, not the least of which would be that the mismatch would in all likelihood cast doubts on the speaker's sincerity.

There are several consequences from these considerations, two of which we will consider briefly: firstly, we have a variety of ways at our disposal to express the same message in different terms, some of which may conceivably be non-standard. However, as competent speakers of a language we usually have access to a level of sophistication in our usage that allows us to make choices appropriate to the situation in which an utterance is to be made. Secondly, and as a consequence of the first point, we can and will tailor our utterances such that they take into account who the addressee of the utterance is, and by extension how we position ourselves vis-à-vis this addressee. In concrete terms, the speaker can project the simple honesty of an - apparently - unsophisticated youngster in the face of a person of greater power in (20a) in a manner that confirms that power relation. In (20b) by contrast, the speaker suggests an aloofness as well as a degree of authority that implies a different power relation altogether: s/he is a person of status, whose word carries enough weight to dispel any notion of wrong-doing, a claim and the attendant power relation that may be disputed by the other interlocutors, for instance the press. Both, the choices we make in our utterances and the affirmation or rejection of power relations in social interaction demonstrate how our language use in a social setting is emergent, in other words, that it is constructed in the communicative exchange and constantly negotiated in definitions and redefinitions of the interlocutors’ selves.

### 7.2 Language in use

### 7.2.1 Preliminary considerations

Our discussion so far has established that models that either focus on the well-formedness of utterances and sentences or are based on the assumption that messages pass from speaker to hearer cannot account for a range of issues that are clearly part of language, of language
in use and of the way in which meaning is created in communicative exchanges. In other words, they do not or only marginally explain that

- language in use is dependent on or (co-)conditioned by the context in which it is used. Many elements that would be ambiguous or unclear are clarified by what is going on around the interlocutors.
- language in use often relates to what was gone on before between interlocutors and that meanings of utterances are constructed by what has been said at an earlier stage.
- language in use relies on what we know about the world, which will affect our choice of words as well as how we interpret what someone says to us.
- language in use is influenced by the situation in which it is uttered. This includes who is present, what the relationships between those present are, but also, very importantly, what participants in an interaction want to and/or can achieve with their utterances.
- language and much of what it is understood to mean is constructed in conversational exchanges (discourse)
- meaning is conveyed even if ostensibly an utterance seems to have no immediate bearing on a previous utterance because we can and often do assume that interlocutors mean to be cooperative with what they say.
- the meaning of utterances does therefore not have to be literal or direct, i.e. that we can express notions with words and phrases that do not seem to bear any obvious relation to the concepts we are referring to, but that nevertheless are interpreted correctly by interlocutors.
- underlying meaning as well as the negotiation of power relations between interlocutors can be and often is conditioned by the way in which something is said.

All of these elements are either influenced, created or conditioned by the fact that language in use is dialogic and thus interactive. In the following subsections we will take up some of the above points and discuss them in more detail. In 7.2.2 we will explore the fact that language is used for communication and what this entails; in 7.2.3 the focus will be on what we can achieve, how we can "get things done" by using language; then consider how conversations are organise among interlocutors in 7.2.4; and lastly, in 7.2.5, we will look at the underlying assumptions that interlocutors cooperate with one another in a communicative exchange.

### 7.2.2 Language as Communication

Clearly one of the primary functions of language is that it represents a way of communication between human beings. This makes it necessary to consider what happens in communicative interactions involving or centring on language. We will take as a starting point of our considerations Watzlawick, Beavin and Jackson's seminal Pragmatics of

Human Communication, in which they presented five axioms about communication. ${ }^{29}$ Inasmuch as they are useful for our purposes - the focus in Pragmatics of Human Communication was on clinical and therapeutic issues not on linguistics - we will make use of some of these axioms here, but expand the notions to do justice to notions that are useful for a better understanding of linguistic questions.

### 7.2.2.1 Impossibility not to communicate

Our first point corresponds directly with Watzlawick et al's first axiom, based on the fact that communication is a form of behaviour. As you cannot not behave, it follows that $\square$
$\qquad$ . This may seem counterintuitive because you can refuse to talk to somebody. However, that refusal in itself communicates something, i.e. that you are not prepared to enter into or continue a conversation with that person. In other words, by our behaviour we send a clear signal, we convey an unequivocal meaning, which is that we do not want any (further) interaction with a prospective interlocutor. In addition, such a refusal is often part/the result of a previous exchange or of an on-going interaction and is thus a response to earlier instance of communication.

### 7.2.2.2 Two levels of communication

Another issue, in fact reflected in Watzlawick et al's second axiom is that every communicative exchange takes place on two levels, a $\square$, which presents the actual information that a speaker wants to convey, and a $\square$ level that indicates how the speaker views her-/himself within the interaction and how the interlocutor fits into it. Any communicative exchange therefore projects the speaker's selfperception and her/his perception of the interlocutor's or interlocutors' standing in this interaction. This has consequences which need be discussed in somewhat more detail below (7.2.2.3). For the moment consider the utterance
(21) You are such a twit.

Assuming this utterance is made with a smile, it may be seen as a friendly comment on what an addressee has just said or done. However, this presupposes that the speaker is either on a very informal footing with or considers her-himself socially securely superior to the addressee. In any case, the utterance contains information, i.e. how the speaker feels, but it also reflects how the speaker views the social relationship between her-himself and the addressee.

[^16]
### 7.2.2.3 Feedback

The above is connected with and leads to a third issue: if the speaker misjudges the situation, addressing the utterance to a socially more powerful person who is not willing to interact in such a non-hierarchical mode, the addressee will most probably react in a way that tells the speaker that such familiarity is not acceptable in the relationship as perceived by the addressee. Thus the self-definition of the speaker, which is also an assessment of how s /he views the interactive situation, will require a redefinition on the part of the speaker as result of the feedback given by the addressee, an inherent element in any communicative interaction and also an important reason why we say that communicative exchanges result in emergent language use.

What is interesting in this context is how feedback can be given. Watzlawick et al suggest that there are three possibilities:

- $\square$ feedback: the addressee signals that - for the time being $-\mathrm{s} /$ he accepts the view of the relationship as projected by the speaker. The speaker is therefore confirmed in her/his assessment of the mode in which the interaction has been established. In practical terms, if an addressee, having been addressed by her/his first name by the first speaker (who intends to establish the relationship as informally egalitarian), responds by using the addressee's first name in return, the feedback confirms the relative informality of the exchange, at least for the moment.
- $\quad$ feedback: if, to spin the practical example above further, the addressee/interlocutor responds by addressing the first speaker as Mr or Ms , the suggestion clearly is that $s /$ he deems egalitarian informality inappropriate in the situation or in their relationship. This kind of feedback rejects the first speaker's definition of the situation and quite probably of either or both interlocutor's status in the exchange. This rejection may be painful, but like the first type, it helps to map the further exchange between the interlocutors quite clearly.
- $\square$ feedback: this is potentially the most difficult type to deal with for the first speaker because the addressee, apart from leaving the speaker in doubt whether the utterances was heard at all, gives no clues as to how the next turn in the exchange could be amended to establish a mutually acceptable relationship. This strategy of "disorienting" a speaker is quite effective when used by a socially less powerful interlocutor (and often interpreted, wrongly as we have seen, as a refusal to communicate, as sulking), but can be devastating to a first speaker who is less powerful than the addressee because it gives the speaker no clues as to how to phrase a further attempt at establishing a relationship.


### 7.2.2.4 Verbal and non-verbal elements of communication

A fourth issue, actually also the fourth axiom, is the fact that communication involves what is being said, i.e. verbal elements, as well as clues that are non-verbal. Watzlawick et al have referred to the actual language being used as "digital" modalities of communication. By contrast "analogic" modalities refer to all the elements in an interaction that convey information apart from the actual words used. Many of those elements, facial expressions, and body language, for instance, are largely outside the remit of linguistics, although they are very


Figure 7-3 Analogic element and power relationship in a communicative situaion as shown in a classic sketch (source: www.indiana.edu/~discprag/polite2.html) important elements in human interaction. Nevertheless, there are elements that could be seen as "analogic" which are part of linguistic analysis, in particular prosodic features such as $\qquad$ and $\qquad$ . They can provide the sort of information to establish whether the addressee in (21) is being censored, criticised or addressed with affection. Similarly, in most cases prosodic features would remove any doubt that in (14) B might be inexplicably pleased with A damaging B's car. Needless to say, digital and analogic modalities of communication provide powerful clues for feedback and also for establishing power relations between interlocutors. This can be seen quite clearly in Figure 7-3, where body language, facial expression and gestures convey a clear impression of the situation without actual "digital" elements being available to the observer.

### 7.2.2.5 Power relationships

This brings us to the fifth issue, how the relationships between interlocutors can be characterised. Although many sociolinguists, quite correctly, assume that in any interaction there is a disparity of power, which may be the result of social constellations or of group dynamics, according to Watzlawick et al.’s fifth axiom we can distinguish between two types of interactive relationships:

- $\quad$ assumes that all interlocutors in an exchange have or assume they have the same level of power. They can all be equally assertive or, for that matter, equally insecure. The result is that communicative exchanges can be more complex because, for instance more turns, more discussion may be required before a decision is reached, because, in theory, all contributions would be seen as equally valid.
- $\quad$, by contrast, reflects a disparity in power relationships as it exists for instance between a teacher and a student, master and servant, a commanding officer and a private, etc. In most cases it is the more powerful
interlocutor whose views prevail and there is likely to be little or no input from powerless interlocutors when decisions need to be reached.

In practice, the second type of relationship is clearly more frequent or it usually emerges as a result of group dynamics or greater linguistic or rhetorical dexterity in a situation where on the surface we have a gathering of equals. In fact, one could go so far as to say that the first inevitably develops into the second type an extended exchange.

### 7.2.2.6 Outcomes of communicative interaction

A sixth consideration concerns to what degree communication can achieve what it is intended to. The ideal outcome of a communicative exchange is of course successful communication, which takes place when what a speaker wanted to communicate was actually understood in the way it was meant by hearer; in terms of the message model the concept that was encoded would be identical in to the one decoded in the receiver/hearer's mind. In folk-linguistic terms, this outcome is often simply considered to be "communication". In any other case, there would be no or no real communication. However, this notion of "non-communication" is rather problematic. Above, in 7.2.2.1, we established that it is impossible not to communicate. We therefore need to reassess this folk-linguistics notion to include the possibility that a communicative interaction may not have the outcome, either entirely or partially, which both communicative partners have had in mind. Rather than considering such instances as non-communication, we can postulate several additional types of communication as illustrated in Figure 7-4 This, rather informal model assumes three possible outcomes.

- Clearly, the ideal outcome is that the message (to use the terminology of the message model) which the sender encodes is the same as the one the receiver decodes. In this case we can say that communication is $\qquad$
- By contrast communication can $\square$ completely. No message is conveyed or the message is misunderstood entirely through no overt fault on the part of the sender or the receiver. Again, this can be the result of a (severe) problem with the channel, but
it can also be the result of a misconception on the part of either participant concerning the communicative partner.
- If a message is received, but the encoded is not the same as the decoded concept, we can say that the communication is $\square$. This can happen either a) because the receiver of message gets "the wrong idea", or b) because the message is not received in its entirety.

In the first case, where the message encoded differs from the message received, we can say that the communication is $\qquad$ There are two ways in which this can happen:
o either the sender aims to deceive the recipient, in which case we can describe this kind of communication as $\qquad$ .
o Another outcome could be that the sender is not aware of certain cognitive limitations that the recipient may have, for instance, $\mathrm{s} /$ he may not have all the facts necessary to decode the message or be unable to understand sarcasm or metaphor (as may be the case with an Asperger syndrome recipient). In this case, communication is $\qquad$
By contrast, a message may also be compromised due to physical or personal limitations, in which case we can talk about $\qquad$ communication. Again there are two ways in which this can happen:
o The partial breakdown in communication can be the result of something that affects the channel or the medium of communication, for instance static in a phone line, the ink being smudged on a letter, the noise of a passing vehicle, etc. In this case we can say that communication is $\qquad$
o Apart from problems on the channel level, there is also the possibility that the sender or the receiver, i.e. the interlocutors, may not have the means to send or receive the entire message successfully, due to impairments such as language production or reception deficits (speech impediments, partial deafness, lack of vocabulary). In this case we can describe compromised communication as being
$\qquad$
It has to be said that often a communicative exchange can be seen as being on a cline between successful and failed communication as many messages are not necessarily decoded in the exact same way as the received encoded or meant to encode them.

### 7.2.2.7 Cooperation

The final consideration concerning features and mechanisms of communication probably underlies why in many cases it succeeds at least in parts: we always assume that what an interlocutor utters is meant to be understandable to us as communicative partners and/or has some bearing on the situation we find ourselves in (or think we do). In other words, we
think of communicative exchanges as being based on some form of cooperation between the interlocutors and what is exchanged as being meaningful or at least not entirely "random". We have already encountered examples where the understanding of an utterances is based on this assumption, notably (10) (11), (14), (15) and (16). A similar situation can be observed here:
(22) A: Have you got the exact time?

B: It's 7:48.
A asks a polar question to which B could answer "yes" or "no", but B interprets A's question not to be question about the accuracy of her/his watch but as a request for the exact time and supplies the possibly somewhat pedantic information of "7:48". By the same token, A can ask the question in the way s/he has, knowing that, unless B is being facetious, the exact time will be supplied. In other words, both interlocutors assume some form of cooperation from each other.

How this assumption remains intact in the face of almost incontrovertible proof to the contrary is an important argument in favour of cooperation in discourse. The two utterances (23) and (24) ${ }^{30}$ (quoted in Xiong 2008) illustrate this quite drastically, both from patients with brain damage. The result is what is known as aphasia in the case of (23) an instance of Broca Aphasia, in (24) with Wernicke Aphasia.
(23) Yes ... ah ... Monday ... er Dad and Peter H ... (his own name), and Dad ... er hospital ... and ah ... Wednesday ... Wednesday nine o'clock ... and oh ... Thursday ... ten o'clock, ah doctors ... two ... an' doctors ... and er ... teeth ... yah.
(24) "Well this is .... mother is away here working her work out o’here to get her better, but when she's looking, the two boys looking in other part. One their small tile into her time here. She's working another time because she's getting, too."

Both at first glance seem equally incoherent, but because we assume some kind of cooperation on the part of the speaker we try make some sense of what is being said. This shows that even though (23) would be delivered in almost painfully staccato with sometimes long pauses represented as "..." in the transcript, it is possible to make some kind of sense of what is being said. What the speaker seems to be trying to communicate is that there must be some kind of medical appointment, probably involving teeth either for himself or his father, possibly on Wednesday at nine and or on Thursday at ten. Working this much out is a task that most interlocutor would at least attempt, and this is helped by the fact that in Broca Aphaisa, despite many function words being lost, left-to-right sentence structure may still be at least partially intact, resulting in potentially understandable utterances. What makes (24) more disturbing is the fact that in Wernicke Aphasia it is the sentence structure that is lost, but fluency in language production is not affected. As a result this utterance would have been delivered in a relatively fluent and
${ }^{30}$ We have already seen this example earlier in 1.1.6. Podcast 2 featured the picture the speaker is trying to describe.
seeming normal fashion. We would try to make sense of what was being said but to understand what this speaker is trying to convey, if he is in fact, is actually impossible, even though we would be tempted to assume that "mother", "work" and "looking" are important in way or another. That we are making this effort at all, however, is clearly a result of the basic assumption that what an interlocutor utters is not random.

### 7.2.3 Achieving things by using language: Speech Act Theory

In 7.1.3.5 we have seen that language use may not always result in communicative content being exchanged. In both (17) and (18) we can postulate that it is not the information that is important in these utterances/sentences but the fact that by being uttered in (17) or written in (18) something is done: a couple is brought together in a legally binding form of cohabitation, and a convict is delivered into the hands of his executioners. These two changes in the lives of the people involved are brought about because something is "hereby pronounced" and an appeal "is denied". These two verbs therefore represent something beyond being simple lexical items as the profound change they occasion indicates. The consideration, therefore, that "things" can be "do[ne] with words" lay at the basis of the works of philosophers J. L. Austin (1962) and John Searle (1969), who are credited with the development of the concept of speech acts. In this subsection we will discuss some of the concepts that arise out of Speech Act Theory. For reasons of space, however we need to keep this discussion relatively short.

### 7.2.3.1 Types of Speech Acts

When we use language we may do so in order to refer to an observable fact. This could be done in the form of (25) during a weather forecast on the radio or on television.
(25) The roads are slippery.

Arguably, (25) represents a simple statement of fact. It is in the form of a declarative sentence, the verbial are underlining this by being in the indicative. In this form the utterance could occur in a conversation or as part of a stretch of discourse, for instance if uttered by an anchor or a radio announcer. In this isolated form, we can describe it as a locutionary act, locution being Latin for "the act of speaking", as something a speaker says.

The term "arguably" was used above because there is clearly more to this utterance. This can be made explicit if we represent the (25) as a noun clause embedded in a main clause:
(25a) I suppose the roads are slippery
(25b) I assure you the roads are slippery
(25c) I'm warning you the roads are slippery
(25d) I doubt the roads are slippery

Through the addition of the main clauses in (25a-d) the locutionary act assumes a further dimension: it becomes a vague assumption or supposition in (25a), a relatively strong assertion in (25b), a warning in (25c) or the rejection of a notion in (25d). In other words, the addition of verbs like suppose, assure, warn and doubt create an illocutionary act, i.e. a supposition, an assurance, a warning or the expression of doubt. This illocutionary act is made explicit by the use of the verbs in the main clauses of (25a-d). However, we can also imagine that with the use of prosody or with facial expression and gestures (i.e. "analogic" elements) we can essentially convey the same information as do the explicit main clauses so that the nature of the illocutionary act in (25) may be conveyed without the explicit verbs.

If we now consider (25) being uttered in a variety of situations, the speaker may get the hearer to adapt her or his behaviour. (25a) said to a friend who is about to go somewhere on foot or on a bicycle may result in that friend exercising more caution on the way. If a wife utters (25b) to her husband before he drives off to work, he may put chains onto the tyres or decide to go to work by bus. An elderly person on hearing (25c) from a companion on a winter's day may walk with greater care, perhaps holding on to walls, garden fences or railings. And (25d) may result in an interlocutor being less careful than the situation would require and having an accident. All these behaviours resulting from (25a-d) are referred to as perlocutionary acts, acts a speaker may get a hearer to do by making an utterance.

### 7.2.3.2 Directness vs. indirectness

If the speaker uses (25) as an explanation why s/he has had an accident, it is clear that a declarative sentence shows that the form (declarative) and function (explanation) are quite well matched. The same is true in a situation where there are a group of people in a heated room, a newcomer comes in but doesn't quite close the door. As a result one of the people in the room might say
(26) Close the door!

The form of (26), inasmuch as the utterance is an imperative with the object of the action, the door, mentioned explicitly matches the function, the instruction to close the door. In cases like these, where the form matches the function, we speak of a $\square$ $\square$. It is likely that the hearer sees what the speaker's intention is (illocution) and that s/he will close the door (perlocution).

By contrast, the same concept can be expressed, i.e. that cold air is rendering a comfortably heated room less warm, by an utterance like
(27) Is there a draught somewhere?

In this case the form is a (polar) question, which could be interpreted as a request for information, but in situation as described above, it is highly likely that most hearers present
would get the (illocutionary) idea, i.e. that the speaker wants someone to close the door, which is the actual function of the utterance. As a result, it is highly likely that someone would close the door, despite the fact that the key terms, close and door are not present in the utterance. This, then, is a case of an $\qquad$ b because here form and function do not match.

### 7.2.3.3 Performatives and their conditions

In (25a-d) the verbs in the main clause, suppose, assure, warn and doubt, made it explicit what kind of speech act we were confronted with. The same is true in (17) and (18) with the verbs pronounce and deny respectively. In the following instances we have a similar use of verbs.
(28) I see your 20 and raise to 50 dollars.
(29) I won't be late, I promise.
(30) We find the defendant guilty of murder.
(31) In the name of God I pronounce you husband and wife. You may kiss the bride. By uttering the verbs $\square$ (28), $\square$ (29), $\square$ (30) and $\square$ (31), cf. also (17) the speaker does what $\mathrm{s} / \mathrm{he}$ says, i.e. performs the illocutionary acts. For this reason the verbs in question are known as performatives. Many performatives can be reinforced by the adjunct $\square$, in fact it is often found in contracts or treaties.

However, for performatives to bring about the change that is bound up with them, certain conditions have to be met. These are known as felicity conditions. Such felicity conditions are not necessary for (25) to (29) because any speaker can make any of these utterances with the same illocutionary force and bring about the potential perlocutionary acts. However for utterances (17), (18), (30), (31) as well as for
(32) You have an hour to clear your desk.
felicity conditions are indispensable, even though in (32) no actual performative is in evidence.

Let us analyse briefly what conditions have to be met in the cases of the examples listed. For (18) and (30) similar conditions apply: in both cases the speakers have been given the legal authority by the state to deny the stay of execution as supreme court judges and legal power to pass a guilty verdict on a defendant in a criminal courts as members (or in this case the foreman) of a jury. The same is true for (17) and (31) where the speaker has the institutional power to join a couple in marriage, be it as a civil servant or as a priest respectively. In (32) the speaker also has to have a given power, in this case as a superior to dismiss an employee. In brief, in all cases discussed speakers need to have been vested with the authority and/or must have the power to make the performative binding.

For a stay of execution to be denied the Supreme Court judges have to meet, to deliberate (see Figure 7-5) and then to reach a majority decision, which at a later stage has to be justified in writing. In a trial by jury, the members have to be present in court and listen to the


Figure 7-5 US Supreme Court in session entire proceedings, then withdraw and deliberate the evidence before reaching a decision by a clearly defined majority, a decision then presented in a formal fashion in court. Also a registry wedding has to be performed according to certain conventions: the couple have to exchange their vows, they then have to sign the register, which in turn is confirmed by the witnesses with their signatures. A religious wedding ceremony is similarly conventionalised and follows a traditional ritual. In all of these cases there is a need for a clearly established procedure that is sanctioned by some authority, either that of the state or that of the religious establishment concerned.

Furthermore, in all cases the speaker must believe, or at least appear to believe, a) in the institution s/he represents, the legal system, the civil service, the church, the status as an employer, and b) that the performative is legally or at least conventionally binding. In addition, it needs to be accepted by all present, the speakers, the addressees and the bystanders, that the addressees will behave in accordance with the performatives after they have been written or uttered, be it that an execution will proceed, that a judge will pass sentence on a convicted defendant, that a couple will live together and recognise the legal obligations towards each other and that a sacked employee will leave with her/his possessions and not return to the place of employment.

### 7.2.3.4 Some critical considerations

Even this brief discussion has illustrated an important function of language, i.e. that it can be used to achieve things, a function that is not covered by the generative approach, ignored by the message model and was only partly explored in our deliberations of language as communication, because our discussion has established the fact that speech acts need not have a communicative content at all.

Convincing as the theory may be in many ways, there are nevertheless a few aspects that need to be considered in a critical light. To begin with, one needs to be aware of the fact that speech acts may differ quite considerably in non-Western cultures. In other words, they are not as universal as one might perhaps be lead to think. In a similar way, the categorisations that it presents are rather theoretical because they are based on a philosophy
of language approach and they therefore do not always correspond to what happens in the rather less clean－cut reality．

There are several ways in which this manifests itself．To begin with，like the generative and the message model，Speech Act Theory focuses almost exclusively on the speaker and what the speaker does．Like the other two models it therefore does not address two fundamental features of language，firstly that language by nature is dialogic，i．e．that it requires a speaker and a hearer，but that both roles are exchangeable and exchanged when language is used．Secondly，this the model also，at least to an extent，ignores that language always is interaction，an aspect that，again because of the speaker－centredness of the theory， it does not really address．

By largely ignoring the dialogic and interactional nature of language，we can also not expect that the theory addresses two issues，which are important for an understanding of language in use，firstly，that the dialogic nature of language raises the question how interlocutors organise themselves in a conversation，i．e．who speaks when，as a result of what and how long．In other words，it is useful to be able to make some pronouncements about how linguistic interaction，how conversation is organised．Secondly，in order to appreciate why，for instance，indirectness does not bring a conversation to a halt we need to understand how interlocutors construct meaning and comprehension out of what they expect their communicative partner to do，in other words，that contributions to discourse are seen as being based on cooperative behaviour between the interlocutors．These last two aspects will be the topic of the following subsections．

## 7．2．4 Organising conversation：turns and turn－taking

We usually understand language in use，unless we are looking at written texts，as language in conversation．Indeed most instances of discourse are oral and thus conversational． However，before we can analyse how we behave in conversational settings，we need to be clear about what conversation actually involves．The following observations are an attempt to come to terms with this complex phenomenon not in its totality but in terms of the aspects that we will explore further in the remainder of this chapter．

Perhaps the most salient feature of conversation is that it involves at least two but quite possibly a group of interlocutors，who interact with each other through language，i．e． verbally，but whose interaction also involves non－verbal elements，body language，gestures， facial expressions，eye contact as well as prosodic features such as stress，intonation， loudness，etc．In other words，it is a social phenomenon，in which verbal and non－verbal elements act together for a variety of purposes，for instance（and not in order of importance） to construct and maintain relationships，to achieve individual or collective goals，to exchange information and perhaps also to structure realities．

Like most aspects related to language and like most social phenomena, it clearly exhibits certain patterns, in other words, it is rule-governed. In order to allow social processes to run smoothly, and such social processes obviously include conversation, participants in such processes, in our case interlocutors, interact with each other according to rules we can isolate and describe, and with a variety of purposes. They usually adhere to "microlinguistic" rules to ensure that their contributions to a conversation are comprehensible for the other participants. Beyond the level of making mutually intelligible utterances there are also rules that govern the manner and the sequences of contributions to a conversation. To put it more technically, interlocutors take turns in a conversation, and the manner in which they do this is subject to rules, usually different from culture to culture or from social group to social group. The rules regulate who can speak, at which point and sometimes also for how long. Observance of these rules is vital for the smoothness of social interaction and for social cohesion; what is more, violations of these rules are actionable, they have have consequences. Someone who the group feels talks too much, i.e. someone who "hogs the floor" may be reprimanded on the metacommunicative level with an admonition like "let someone else have a say" or less diplomatically "why don’t you shut up for a change?"

However, such reprimands are seen as a form of verbal attack against the recipient of the reprimand, who as a result may feel uncomfortable or threatened, in other words, may have lost face. Much of what happens in conversation involves an awareness of the interlocutors' face; this means that in conversation interlocutors do their best to maintain their face, i.e. to try not to lose face, to save face when necessary, but also to minimise facethreatening behaviour unless this is the purpose of the conversational setting or of the discourse, for instance in a debate.

Like most language rules, rules that govern conversation are implicit. Most interlocutors are unaware of them, having acquired them, like language, in interaction with others over time and have thus internalised what is and is not acceptable in a variety of settings. This does not mean, however, that discourse is entirely homogenous in a community or in a group. Whereas the generally observed rules are actionable, (e.g. if interrupting a speaker is not acceptable in a setting, and an interruption will evoke a reaction, often in the form of a reprimand), certain individual quirks must be tolerated, perhaps because the threat to the individuals face is seen as out of proportion with the "offence". Take for instance a speaker who punctuates her/his turn with a multitude of so-called speech markers, for instance by using "like", "know what I mean" or simply "erm" very frequently; it is highly unlikely that this fact would result in a reprimand. In other words, conversational idiosyncrasies are not actionable unlike violations of conversational rules.

### 7.2.4.1 Conversational organisation: turns and turn-taking

As pointed out above, in a conversation interlocutors take turns and they do so in sequence. This means that interlocutors must have an understanding what a turn can consist of; they must have an implicit concept of a so-called Turn Construction Unit (TCU), a notion first introduced by Sacks, Schegloff and Jefferson (1974). A TCU can be seen as turn or as part of a turn, at the end of which it is possible for other interlocutors to take over, i.e. to have their turn. However, it is also possible that the current speaker will continue her/his turn. For this reason a TCU must have an ending that other interlocutors can anticipate as is illustrated in (33) to (35).
(33) A: Would you be in favour of telling the students? B: Absolutely.
(34) A: Where are my glasses?

B: On your nose.
(35) A: Have you reserved a table for tonight? B: I have in fact reserved a table for tonight.

The TCU can take a variety of forms. In (33) it consists of a $\square$ in (34) of a $\qquad$ and in (34) of an entire $\square$ In all three cases, and this is why we talk about a TCU rather than a turn here, B could continue, as well as A or another speaker taking the next turn. As in the written form the (potential) end of B's turn is signalled by a full stop, in conversation there are indications that take the place of punctuation and thus signal the boundary of the TCU.

This boundary, the end of a TCU, is called the Transition Relevance Place TRP the point where another speaker might take her/his turn. Like the full stop that signals the TRP in our examples, partners in a conversation use certain strategies to "punctuate" their turns, to indicate the TRP. Such signals often take the form of intonation patterns.
(36) A: We had tea, biscuits, sandwiches and whisky. B: Lucky you .
(37) What is your name?
(38) $\ldots$ and your name is ...

In the three examples we can see that different intonations can indicate the end of the TCU, i.e. that the speaker has reached the TRP. In (36) the $\square$ tone indicates that the speaker wishes to continue the turn, and the TRP is signalled with a $\square$ tone. In (37) it is the $\qquad$ tone, typical for an open question, that signals to the interlocutor that $\mathrm{s} / \mathrm{he}$ now has a turn. (38) represents a slightly unusual instance, where it is the $\square$ tone in combination with the pause at the end of the TCU that actually invites the interlocutor addressed to take the next turn; what is unusual is that the speaker uses the same tone which in (36) indicated that the turn had not finished yet. But it is not only linguistic elements that help indicate a TRP: non-linguistic strategies may be eye contact with a potential next
speaker or other non-verbal clues, for instance a gesture, a facial expression, turning towards an interlocutor, etc.

### 7.2.4.2 Possibilities for turn-taking

If a TRP signals the end of a turn, then clearly the question arises what possibilities exist for someone to claim the floor. There are several possible scenaria for turn-taking: Firstly, speaker A finishes the turn and selects the next speaker. This is known as turn-allocation and there are a number of strategies for this. Often turn allocation is done in the form of a question such as "so what about you" or "What's your view", the allocation being made more forceful if the speaker addresses the next speaker by name. The same applies also when turn-allocation does not involve a question but, for instance, a declarative "I'd like to bring in [name] at this point" or a directive like "Please, [name]" or more explicitly "[name] tell us what you think".

The second possibility is that speaker A does not allocate the next turn to a speaker, but simply relinquishes the floor. This means that another interlocutor may self-select to take the next turn. Such a situation can be created if the first speaker throws the floor open with an (elliptic) question like "any suggestions?" The third possibility is that Speaker A finishes her/his turn, leaves the floor open for a next speaker, but when no one takes the floor, may continue the turn, in some situations by being more forceful in turn-allocation. This special case is known as turn-mending and is frequently used when potential takers of the following turn may be reluctant to or even, in the case of pets and babies (paradoxically), unable to do so. Classic examples are baby talk or "motherese" like "Now who's a clever little boy, then? Hm? Who’s a clever little fellow?", which is used amusingly in the Monty Python sketch where Michael Palin and Terry Jones are two fussy women talking to John Cleese as the Minister for Overseas Development, as if he were a toddler. ${ }^{31}$ In the same way, many pet owners address for instance their dogs with turn-mending utterances like "Would he like his din-dins, eh, would he like his din-dins?", the turn-mending strategy manifesting itself in the repetition of the question, which is also in evidence in an utterance like "Are you sure? Like, really sure?".

The alternative to passing on the turn is that a speaker tries to (re-)claim or hold on to the floor with utterances like "let me tell you...", "as you probably know" or to defend claims to the floor with request like "if I may just finish". A special case in this context is that of a speaker making a (continued) claim to the floor occurs when s /he expects this turn to be an extended one, for instance in order to present a narrative, a story or a joke. In such cases the speaker may "key" the interlocutors into the extended turn, the story or the joke by "framing" it, for instance using the opener of many a comedy routine "Something funny happened on the way to the theatre" or by using a phrase like "Once upon a time", which
${ }^{31} \mathrm{http}: / /$ www.youtube.com/watch?v=MT-JIJTSpF0
is instantly recognisable as an opening of a particular genre of narrative, ie. a fairy tale. In such cases the usual outcome is that the speaker is allocated an extended turn, but that she has to make prolonged holding the floor worthwhile for the interlocutors, who have waived their claim.

If the next turn is not allocated and the original speaker relinquishes the floor, one of the remaining interlocutors needs to self-select. There are a number of ways of doing this with utterances like "If I may come in at this point", "This reminds me..." or "Let me tell you...", which may either take up a topic other interlocutors have been addressing or they can also represent the introduction of a new topic. Utterances like "Look, ..." or "Now just a minute!" on the other hand may tackle the same topic but introducing a new, possibly confrontational take on it.

In all of the scenaria discussed above the assumption is that the turns are predominately monologic, i.e. only one interlocutor speaks at any given time. The usual practice is that speakers have and complete their turns, even though there are differences in the way in which speakers claim a turn at TRPs, ie. whether there is a gap of varying duration or whether there is overlap around the TRP. Such differences are often community-specific. In a community where gaps between turns are the norm, overlap, which may be unquestioningly accepted in another community, will be considered pushy or rude; by contrast, representatives of a community where overlaps are common may interpret observance of gaps in other communities as a sign of slowness, perhaps even of slowwittedness. If non-observance of practices at RPs often create irritation, this would be exacerbated considerably in a situation like the following where the vertical line indicates simultaneous speech:
(39) A: I'm sorry I haven't got the assignment

| B: because my printer | $\begin{array}{l}\text { for some reason ran out of... } \\ \text { so for once it wasn't the dog }\end{array}$ |
| :--- | :--- | that ate your assignment?

What is noteworthy here is that A's turn is incomplete when B claims the next turn; this happens at a point which is clearly not a TRP and A does not relinquish the floor, at least not immediately.
 But B claims, eventually successfully, the next turn. From both, the content and the manner in which turn-taking is handled in (39) - B interrupts and A is not allowed to complete her/his turn - we can see that there is a conflict between the two interlocutors.

### 7.2.4.3 Notions of "face"

A situation of this kind quite probably result in A losing face; by wresting the turn from A and not allowing it to be completed, B commits a Face-Threating Act (FTA) against A. In order to interpret this concept, we need to explore what face actually represents. According to Goffman it is "the positive social value a person effectively claims for himself [sic]"
(1955: 213). The situation in (39) would allow for the interpretation that A would experience her/his "positive social value" under attack, the interruption suggesting that B is in a socially sufficiently powerful position to disregard A's claim to the floor and by the choice of B's words insinuate that A is habitually late with assignments with absurdly flimsy excuses to boot.

However, to spin the idea further, the exchange clearly implies that this is not the first time that A turns in assignment late or not at all. If it were in fact the first time this has happened, B's reaction would be considered unnecessarily harsh. In all likelihood B would be less aggressive in the choice of words, less likely to interrupt. A possible reprimand would be more constructive and aimed at minimalizing the threat to A's face, in other

Figure 7-6 Mutual FTAs
 words, B would attempt to mitigate the face threat. Because face threats are considered a hostile act, in trouble-free conversational settings interlocutors will typically aim to avoid FTAs or, if they occur, to mitigate as best they can with utterances that contain downtoners like modal auxiliaries but also explicit phrases like "I'm very sorry to be so blunt, but..."

In the context of this chapter it would lead too far to discuss the notion of face in very great detail so we will restrict our exploration to two more approaches to the issue, both refinements of Goffman's concept. The first is Brown and Levinson’s (1987) distinction between Positive Face, and Negative Face. "Positive" is to be understood in the sense that an individual would like to be appreciated by the environment and evaluated positively. In contrast to this they postulate Negative Face which means that an individual aims to be unaffected by interference from others or from social pressure. This approach was adapted and developed further by Tae-Seop Lim and Bowers (1991), who claim that there is an Autonomy Face; an individual aims to maintain a status of independence and of selfreliance, in that sense developing the Negative Face further. A reassessment of Positive Face would be their concept of Fellowship Face aimed at being liked and accepted by one's peer group, possibly in combination with a third concept, the so-called Competence Face which is concerned with appearing to be in control and adept at what one is doing. Whether one accepts such relatively layered notions of face or whether one focuses on Goffman's more general concept, it is clear that interactants aim to minimise or avoid facethreat; they may even actively foster cooperation to ensure that the interaction, and
conversation/discourse is a form of interaction, evolves smoothly and without upset, a point we will return to below.

### 7.2.4.4 Simultaneous speech not representing an FTA

Above in (39) we have seen that there are overlaps in speech which represent an FTA. However there are also situations in which two interlocutors may make utterances simultaneously without this constituting an FTA. As already pointed out, in certain communities such overlaps may occur at or near a TRP, i.e. one speaker may be very close to the end of her/his turn and the next speaker already begins the following turn. This may also be the case in an animated debate or an interaction where the interlocutors want to demonstrate eagerness or enthusiastic agreement. In the last case it can be realistically argued that this represents no threat to anyone's face, in fact that it demonstrates a form of collaboration between the interlocutors.

A similar collaborative effect can be observed in what is sometimes called backchannelling or minimal listener response, a phenomenon where speaker A has a (frequently extended) turn and the interlocutors signal with a variety of utterances that they are at least paying attention to what is being said or that they (tend to) agree. Such utterances can take the form of "yes", "I see", "really?" or of simple interjections like "ah", or "mhm". Back-channelling or minimal listener response occur anywhere within a turn, independent of TRPs; they certainly do not signal any intent that the interlocutor intends to take the floor, in fact they are usually an encouragement for the speaker to continue in her/his turn or an indication that the speaker has the attention of the interlocutor(s). This is particularly important where the speaker has no visual cues as to whether the turn is still being received, for instance during telephone conversations. An absence of minimal listener response is often disconcerting, not least in the light of what was said above (7.2.2.3) concerning withholding feedback.

### 7.2.4.5 Predictable Turns

From the above we can see that there are certain almost ritualistic elements in conversation, minimal listener response/back-channelling being one example. However, there are other instances where one turn almost inevitably leads to a next turn, which is highly predictable in itself. Consider the first turns of the following everyday exchanges
(40) Hello.
(41) How are you?
(42) Here you are.
(43) I got a six in my exam.
(44) Well, I must dash.
(40) in all likelihood will result in a greeting of some kind, (41) in a largely non-committal, positive reply to the question, especially if the interlocutors are not very close. (42) will most likely elicit an expression of gratitude, (43) one of admiration or a (unspecific) compliment, and (44) usually leads to an exchange of (relatively "polite") farewells.

As these turns usually occur side-by-side, in other words because they occupy adjacent positions in a conversation they are known as adjacency pairs. Non-observance of their sequences is seen as being rude or at least odd. This suggests, once again, that when we interact with each other we cooperate to some, often to a considerable degree. What we have seen so far has demonstrated that there is such cooperation in turn-taking and, in the cases discussed in 7.2.4.4 within turns as well. However, there is another level of cooperation in conversation, as far as the meaning of the utterances is concerned as we shall see in the following subsection.

### 7.2.5 Cooperation in Conversation

In 7.2.1 the notion was suggested that interlocutors are cooperative in conversation and that they assume the same of each other. In other words, exchanges are meant to correspond to a framework of rules that govern conversational cooperation, which means that what is being said has some bearing on what was said before as well as on the overall direction of the exchange. This can be illustrated in a number of ways.

The song "Big Shot" by the Bonzo Dog Doodah Band, which uses a fair amount of film noir discourse, ends with the following lines
(45) A punk stopped me on the street. He said, "You got a light, mac?" I said, "No, but I've got a dark brown overcoat."

The Chandleresque language in the sample is represented in the word punk here in its pre1970s meaning of a "young man", possibly a petty gangster, as well as in the fifties term mac as a general mode of address, comparable to pal or mate. The speaker, who by this stage in the song has revealed himself to be a deluded, possibly henpecked loser rather than the "big shot" of the title seems to misunderstand the request for a cigarette to be lit (purposely?) as a question concerning a piece of clothing, "a light(-coloured) mac(intosh)" (a raincoat). In other words, the speaker does not cooperate properly, either accidentally or on purpose, with the interlocutor, but seems to do so nevertheless in a manner of speaking, which creates the joke.

However, in everyday language such cooperation works quite often, even if the utterances seem unrelated.
(46) A: What's your poison?

B: I'll have a single malt, if you have one.
B correctly interprets A's question as an offer of a drink, usually spirits, hence the request for a single malt whisky. Even though the words spirits or whisky are never uttered, the
conventional understanding between the two interlocutors allows them to cooperate in this fashion, A offering a drink, B requesting a specific one. A similar type of understanding and cooperation is at work in the following example.
(47) A: Have you hung up your clothes and cleared up your room?

B: I've got an exam tomorrow, Mum!
B's response is not affirmative or negative as the (locutionary act of the) polar question would seem to demand, but a statement of fact. This indirect speech act, however, will with almost complete certainty be interpreted as "a no" because, even though B's answer seems unrelated to the polar question, A assumes that what B says has some bearing on the exchange and that it contains the answer to the question. This assumption is based on the fact that in the vast majority of all exchanges interlocutors cooperate with one another in order to further the exchange or the issue it concerns.

### 7.2.5.1 The Cooperative Principle CP

This insight has led has led H. P. Grice, a British philosopher of language, to explore the nature of this cooperation in his seminal treatise "Logic and Conversation" (1975). He developed a concept called the Cooperative Principle (CP), which he formulated as a number of maxims. Even though these maxims are expressed in the form of imperatives, as we shall see, and thus seem to suggest that these are directives that interlocutors must observe, they are in fact best understood as a set of descriptors reflecting what we usually do instinctively in verbal interaction and, perhaps more importantly, what we assume our interlocutors do; hence the attempt to make sense of the utterances of people with severe language (and cognitive) impairments as the aphasics in (23) and (24).

Regarding our discussion of direct and indirect speech acts we can make the following connections: direct speech acts make use of a set of rules, i.e. the Conversational Maxims, which we will discuss in detail below, whereas indirect speech acts require a bit more work from the interlocutors: the speaker, by making an indirect speech act, implies meaning, i.e. creates an Implicature, the hearer as to interpret this by inferring from what has been said what the speaker meant to communicate. In the following we shall explore both the Maxims and Implicature.

### 7.2.5.2 Conversational Maxims

Grice (1975) formulated four maxims, ${ }^{32}$ which are generally assumed to be observed by interlocutors in a conversation. The first maxim is the Maxim of Quantity. In a communicative exchange we are expected to provide and we expect a sufficient amount of

[^17]information to address the needs of the situation in question. By the same token, to give too much or unnecessary detail is also to be avoided.
(48) A: Where are you?

B: Here.
Thus an exchange like (48) can conform to this maxim if there is eye contact or the possibility for such eye contact between $A$ and $B$, so that A can see where "here" is. On the other hand, if A and B are in separate rooms in a flat or a house, the answer may not provide sufficient information because A may not be able to locate B only "by ear". Therefore Grice specifies

- "Make your contribution as informative as is required (for the current purposes of the exchange)." (1975:45)
On the other hand, the following exchange does the opposite of (48):
(49) A: How do I write to auntie to say I am sorry.

B: Well you sit down at your desk, which is in your bedroom, then out of the drawer you take a piece of paper, that's one of these rectangular white things, and put it in front of you. Then you pick up one of these long things with a pointy bit at the end and you connect this with the white thing in front of you and then you form the letters Dear Auntie...

Here B supplies considerably more information than is needed, because it is highly likely that B knows the location of her/his desk, what paper and a pen are and how to use these to write. Clearly, the chances are, as we shall see shortly, that A's choice to supply so much unnecessary information has another purpose. But for the moment, simply looking at the example from the point of view of the quantity of detail provided, B seems not to observe the principle

- "Do not make your contribution more informative than is required." (Grice 1975: 45)

The second maxim is the Maxim of Quality. It is concerned with the dependability of what is being said and is often summed up as "be truthful" or as Grice puts it "Try to make your contribution one that is true" (1975: 46). We usually assume that a communicative partner will not lie to us or make unsubstantiated claims. This is represented in the two rules:

- "Do not say what you believe to be false."
- "Do not say that for which you lack adequate evidence."

Thirdly, perhaps most obvious in view of what has been said above in connection with indirect speech acts, we usually assume that what is said has some bearing on what was said earlier or relates to the situation as a whole. This is expressed in the Maxim of Relation or Relevance. It would suggest that the response to a polar question would be a yes or no answer, that a wh-question such as A's contribution in (50) would elicit a location in the form of a prepositional phrase or a spatial adjunct.
(50) A: Where are my keys?

B: You haven't lost them again!

What B does here, does not show willingness to cooperate with A, the implied criticism, while possibly justified is not a relevant response to A's question. The principle here is

- "Be relevant." (Grice 1975: 46)

The fourth and last maxim concerns not so much what is being said as the previous three, but the way in which a contribution is made. It is the Maxim of Manner and can be summed up as "be clear", something that does not seem to happen in (51).
(51) The Right-Honourable Member for Penrith is, I believe, culpable of a terminological inexactitude.

In general terms this utterance is not "clear" in several ways to the degree that it seems almost incomprehensible. However, if one is aware of the fact that this is an utterance made in the British House of Commons, where it is customary to refer to parliamentarians as "right-honourable members" (of parliament) and their constituency, in this case of Penrith, the person referred to becomes less obscure. Similarly, it is against the code of conduct to accuse a fellow member of parliament (MP) of lying, which results in the relatively conventionalised expression of "terminological inexactitude" to refer to an untruth. In the framework of a parliamentary session therefore, (51) does not contravene the Gricean rule - "Avoid obscurity of expression."

He adds three more rules, some of which can be said to apply to (51) as well:

- "Avoid ambiguity.
- Be brief (avoid unnecessary prolixity).
- Be orderly." (Grice 1975: 46)

It has to be repeated at this point, that the above rules are presented as directives, but they do not actually constitute a body of instructions. They are implicit principles we tend to follow in conversation, but as (51) demonstrates, how they are enacted is not universal and may differ from setting to setting or be culture-specific. What is also quite obvious is that interlocutors do not always observe the maxims overtly: conversation would be rather bland and avoiding FTAs through indirectness would be an impossibility.

### 7.2.5.3 Non-Observance of Maxims

This raises the question as to what happens when in one form or another maxims are not observed. Again the underlying assumption is that interlocutors in a conversational setting are cooperative. This suggests that B in (49) and in (50), by not observing the maxim of quantity and relation respectively, have a purpose. In (49) B may try to signal that A is lazy and cannot be bothered or would rather not write the letter. B facetiously gives evidently obvious information, thus implying a meaning; A, being aware of the basic cooperative nature of B and of conversations in general tries to guess, tries to infer B's meaning. In other words, by seemingly not observing the conversational maxims, B implies meaning, thus creating what is known as an implicature.

We distinguish between two types of implicature. One can be interpreted irrespective of the situational context as the implicature can be derived, somewhat simplistically put, from the meaning of the language.
(52) This is really rather a good plan. However ...

An utterance like (52) signals that the speaker is not entirely convinced of how good the plan is by her/his use of however, a lexical item we conventionally interpret as introducing a contradiction to what has been said or what is generally believed. A dictionary definition of however will show that its conventional meaning is "in spite of has been said or done" or "on the other hand". In this case we speak of a conventional implicature, which on the one hand is introduced by conventional means and on the other hand can usually be understood by speakers of a language without specific reference to the situation in which it is uttered.

In contrast to conventional implicature, a conversational implicature arises out of a specific conversational setting and is thus always based on the specific context of utterance. By being indirect, the speaker creates conversational implicature for the hearer. For instance in (50), because the answer to A's question was not, as one might expect, an indication where the glasses are, A will look for B's intended meaning, which conceivably could be to signal B's refusal to help looking for A’s glasses for the umpteenth time. Such a refusal is not shown overtly, i.e. it is indirect and thus different from what B actually says. A may or may not understand what B implies with the response, a risk inherent in implicature, but within the conversation or the context of their relationship it is likely that the message will be understood.

### 7.2.5.4 Types of Non-observance

To round off the discussion of cooperation in conversation we need to consider in what ways maxims may not be observed and what this means for the conversational setting in which the non-observance occurs.

Typically, implicature is created by what is called flouting a maxim. Consider the situation in which two friends, A and B , are in a clothes shop, A may be a little chubby
(53) A: Does my bum look big in this dress?

B: The colour suits your skin tone.
B's reply makes no reference to whether A's behind is indeed unfortunately emphasised by the cut of the dress, but instead refers to something that can be seen as complimentary to A while leaving the question obviously unanswered. B flouts the Maxim of Relation, thus creating the implicature that the dress does not bring out A's figure to the best advantage.

Other ways of not observing maxims do not result in creating implicature. It is possible to do so by violating a maxim. A and B are in a relationship in which A invests considerably more emotional energy than B.
(54)

A: Do you still love me just a little?
B: Yes, I do. (thinks "just a little")
Here B violates the Maxim of Quality by mentally focusing on the adverbial "just a little", but the answer can and probably will be interpreted by A as truthful in its entirety, i.e. as an expression of love. B's non-observance of the maxim here clearly has the aim of deceiving or misleading A .

In contrast it is possible that a maxim may not be observed, not with the aim of deception but as a result of a problem one of the interlocutors cannot deal with to avoid nonobservance. This is known as infringing a maxim.
(55) Watch out there's a dog t—dog t-dog t-oo late, you've j-j-j-just stepped in it. The speaker here tries to warn an interlocutor of a dog's mess on the pavement, but due to a stammer $\mathrm{s} /$ he cannot get the message across in time, thus infringing the maxims of manner and possibly also of quantity. This non-observance is not deliberate and the speaker cannot, for the moment or in general help this type of non-observance. In other words, infringement of maxims is mostly unintentional, usually due to performance problems, for instance speech defects such as a stammer in (55), but it may also be the result of a temporary impairment, a loss of voice or being exposed to noise that drowns out the speaker's voice. Another reason for infringement could be a lack of linguistic knowledge, for instance in language learners, who may not be able to express what the situation would require in terms of cooperation.

Whereas infringing a maxim is largely beyond the speaker's control, opting out of a maxim is both deliberate on the part of the speaker as well as evident for the interlocutor.
(56) A: Senator, have you changed your views on gun control?

B: No comment.
(57) A: So is Bloggs in the running for the new professorial position?

B: I can't say anything because this is confidential information.
In both cases, in the situation of an interview between a journalist and a politician (56) or in a conversation between to university employees (57) with A being on a search committee for a new professor, B overtly declines to answer A's question. The same may happen if A were to make proposition, which B is unhappy or uncomfortable with. As an alternative to flouting a maxim and thus making an implicature that signals to A that the proposition is not acceptable, B can quite simply and explicitly opt out. This is not to say that in such cases A will not infer an implicature, i.e. in (56) that the senator has changed her/his mind but does not want this to be public knowledge, in (57) that Bloggs may have made it onto the short-list.

The last type of non-observance again does not result in an implicature. It may be culturally motivated and involve a taboo that is not to be mentioned. For instance it is considered unlucky in theatrical circles to refer to Shakespeare's Macbeth by name. It is therefore usually called "the Scottish Play". This suspends the maxim of manner as calling the work Macbeth would be less obscure. The way of suspending a maxim like this is shown hilariously in the Blackadder episode "Sense and Senility" where the two actors Mossop and Keanrick repeatedly try to get Blackadder to stop saying "Macbeth". Similarly, using the lie in parliament also represents a taboo, which


Figure 7-7 "Sense and Senility" with actors Mossop and Keanrick insisting on suspension of a maxim. means that the term "terminological inexactitude" in (51) can be seen as a suspension of the Maxim of Quality.

As far as non-observance of Maxims is concerned, we can say in conclusion that unless an interlocutor does not intend to deceive (i.e. violates a maxim) or is physically or cognitively unable to observe a maxim (i.e. infringes a maxim), flouting, opting out or suspending maxims clearly also represent a form of conversational cooperation, which both interlocutors will in all likelihood be aware of. This confirms that in the majority of situations we are cooperative in conversation.

### 7.3 Key concepts

| interlocutor I speaker / hearer |  |  |
| :---: | :---: | :---: |
| message model |  |  |
| channel |  |  |
| contextual I situational appropriateness |  |  |
| discourse |  |  |
| communication |  |  |
| message and social component | (in communication) |  |
| emergent nature of language in use |  |  |
| feedback |  |  |
| digital vs. |  |  |
| analogic |  |  |
| symmetric vs. complementary |  |  |
| failed vs. successful communication |  |  |
| © FAM |  | 205 |


| compromised <br> communication |  |
| :--- | :--- | :--- |
| warped |  |
| impaired |  |
| speech acts |  |
| locutionary act |  |
| illocutionary act |  |
| perluctionary force |  |
| filoor |  |
| performatives |  |
| turn |  |
| felicity conditions |  |
|  |  |


| face |  |
| :--- | :--- |
| positive face |  |
| negative face |  |
| autonomy face |  |
| fellowship face |  |
| competence face |  |
| face-threatening act |  |
| (FTA) |  |
| downtoner |  |
| mitigation (of FTA) |  |
| back-channelling I |  |
| minimal listener |  |
| response |  |
| unit (TCU) |  |
| transition relevance |  |
| point (TRP) |  |


| adjacency pairs |  |
| :--- | :--- |
| Cooperative <br> Principle (CP) |  |
| Conversational <br> Maxims |  |
| Implicature |  |
| Maxim of Quality |  |
| Maxim of Quantity |  |
| Maxim of Relation / |  |
| Melevance |  |
| Mnfringing a maxim of Manner |  |
| conventional |  |
| implicatures |  |
| conversational |  |
| implicatures |  |

## opting out of a

 maximsuspending a
maxim

### 7.4 References

Austin, John L. 1962. How to Do Things With Words. Cambridge (Mass.): Harvard University Press.
Brown, P. and S. Levinson. 1987. Politeness. Cambridge: Cambridge University Press.
Coates, Gordon, n.d. Appendix 3: Watzlawick's Five Axioms, http://www.wanterfall.com/Communication-Watzlawick\'s-Axioms.htm\#111 accessed 18.6.2013.
Dyer, Arline, Melanie Hayden, \& Diane Lanctot. n.d. Information Theory Presentation. http://www.uri.edu/artsci/lsc/Faculty/Carson/508/03Website/Hayden/info.html, accessed 22.7.2013
Goffman, Erving. [1955] 1967. On Face-Work: An analysis of ritual elements in social interaction, http://www.stanford.edu/~eckert/PDF/GoffmanFace1967.pdf, accessed 4.5.2013.
Grice, H. Paul. 1975. Logic and Conversation. In Syntax and Semantics, Vol. 3, Peter Cole and Jerry L. Morgan (eds.) Speech Acts. New York: Academic Press, 41-58.
Sacks, Harvey, Emanuel A. Schegloff, and Gail Jefferson. 1974. A simplest systematics for the organization of turn-taking for conversation. Language, 50, 696-735.
Searle, John R. 1969. Speech Acts: An essay in the philosophy of language. Cambridge: Cambridge University Press.
Shannon, C. E., \& Weaver, W. 1949. The mathematical theory of communication. Urbana, Illinois: University of Illinois Press
Tae-Seop Lim and John Waite Bowers. 1991. Facework solidarity, approbation, and tact. In Human Communication Research Volume 17, Issue 3, 415-450.
Watzlawick, Paul, Janet Helmick Beavin, and Don D. Jackson. 1967. Pragmatics of Human Communication: A Study of Interactional Patterns, Pathologies, and Paradoxes. New York: Norton, 1967.
Xiong, Joseph. 2008. Aphasia: A Language Disorder. http://serendip.brynmawr.edu/exchange/node/1707, accessed 3.3.2013

### 7.5 Language in use: excercises

### 7.5.1 Ambiguity and situation

1. Which of the following utterances would be unambiguous in an actual situation? To illustrate, give the situation.

|  | Ambiguity | Situation that makes the utterance un- <br> ambiguous |
| :--- | :--- | :--- |
| (1) How dare you speak before <br> the Queen? |  |  |
| (2) Oh look, the mother of Janet <br> and Peter! |  |  |
| (3) Running water can be <br> wasteful. |  |  |
| (4) I have a skip in my garden. |  |  |


|  | Ambiguity | Situation that makes the utterance un- <br> ambiguous |
| :--- | :--- | :--- |
| (5) Spring in the air! |  |  |
| (6) We watched this programme <br> about llamas in the Andes. |  |  |
| (7) She bought a new pair of high <br> heels. |  |  |
| (8) She slipped on her new high <br> heels. |  |  |
| (9) I got a new leash for my dog. |  |  |

### 7.5.2 Communication

2. Describe the outcome of the communication in the following exchanges:
(10) A: Do you have another woman?

B: I wouldn't dream of it! (B is having an affair)
(11) A: We are going to the Europa Park by car. (A is Swiss and actually means
"coach")
B: Well, drive carefully!
(12) $\mathrm{A}:{ }^{33} \quad\left[\right.$ 'fo: $\left.\mathrm{k}^{\mathrm{h}} æ n \mathrm{ndlz}\right]$.

B: There you are. Four candles.
A: No, [fo: ' $\left.k^{\text {h}} æ n d l z\right]$.
B: Well there you are, four candles.
A: No[fo: ' $\mathrm{k}^{\mathrm{h} æ n d l z] \text {, 'andles for forks. }}$
B: Fork 'andles (gives A a fork handle)
(13) A: Where did you leave the car?

B: It's in the garage (a passing tram drowns out the following) waiting to be mended.
A: Great, thanks.
(14) A: You smashed that priceless Ming vase. Brilliant, well done!

B: Oh, that's a relief...
3. Give examples for

- a communicative situation which is symmetrical (in terms of two interlocutors).
- a situation in which interlocutor B feels the need to give negative feedback to an opening by interlocutor $A$.
- two ways in which the message "sit down" can be conveyed between interlocutors of different social status.
- a situation in which child A gives a seemingly plausible explanation for the disappearance of a piece of cake (the dog got it) and B realises that A is lying. What elements can give B that impression.
${ }^{33}$ See The Two Ronnies http://www.youtube.com/watch?v=Cz2-ukrd2VQ


### 7.5.3 Speech Acts

5. Describe the locutionary acts in the following examples.
6. What is the illocutionary act in the following examples?
7. What could the perlocutionary force of the examples be?
(15) Passengers are kindly requested to refrain from smoking.
(16) I really hate it when people don't switch off their mobile phones in class.
(17) A breath of fresh air would be really great.
(18) Please change quickly to the connecting trains.
(19) Could you make even more noise when you get back late?
(20) Damn, I need to make a call and am completely out of juice.
(21) Give us a fiver!
(22) A "thank you" from time to time would be nice.
(23) You are spending a lot of time at that cafe lately...
8. Identify the indirect speech acts, give the situation in which they might be uttered and say what a corresponding direct speech act might look like.
9. Add the missing performatives to the following examples:
(24) I hate it when that happens, I must $\qquad$ .
(25) I $\qquad$ you think that is really funny.
(26) You are gonna get a smack in a minute, I $\qquad$ !
(27) I $\qquad$ you, reconsider this rash decision.
(28) As we don't think any of our concerns are being addressed, we hereby ___ further negotiations.
(29) If you don't agree with the decision you can always $\qquad$ objections with the boss.
(30) I $\qquad$ to the way in which you treat your workforce.
10. What are the Felicity Conditions for a situation in which a speaker says
(31) I hereby declare this bridge open.

### 7.5.4 CP and Implicatures

11. Analyse the following exchanges in terms of Maxims and Implicatures.
(32) A: I am out of petrol.

B: There's a garage round the corner. (Grice 1975: 51)
(33) A: Smith doesn't seem to have a girlfriend these days.

B: He has been paying a lot of visits to New York lately. (Grice 1975: 51)
(34) A: What is the capital of New York State?

B: I know it's not New York. Albany perhaps?
(35) A: Where is my mobile?

B: Where you left it.
(36) A: I really didn't enjoy the play last night. Too much bad language.

B: To be cutting edge nowadays, it seems you need to use the f-word constantly.
(37) A: Where were you on the night of the murder?

B: I'd rather not say.
(38) A: Why are you late for the meeting?

B: I succumbed to a bout of postprandial torpor.
A: Can you say that in English?
(39) A: I really can't help you, mate, sorry.

B: What a fine friend you have turned out to be.
(40) A: Do you think Charles will be here in time?

B: I just heard there is a major traffic jam on the motorway.
(41) A: Have you taken the rubbish out and washed the floors?

B: I've taken the rubbish out.
(42) A: Did you like the latest album by the Stones?

B: Do they really still need the cash?
(43) A: Jane and Patrick are thinking of emigrating to Australia. B: I'd miss Patrick.
A: I didn't realise you don't like Jane.
B: Oh I do, but Patrick is a really good mate.
(44) A: I saw you-know-who in her garden this afternoon.

B: Oh dear, she's back then...


[^0]:    ${ }^{7}$ Vowels, as we shall see, are also produced by an approximation of articulators, but the opening here is relatively large and offers rather little constriction, certainly none comparable to the constrictions of consonants.

[^1]:    ${ }^{10}$ The borderline between these and normal juxtapositions of, e.g. a /t/ and an /s/ in cuts is debatable in articulatory terms but they often are perceived by native speaker as one speech sound (which they are not), whereas the /ts/ is not a speech sound in English and results from adding a plural -s to a word ending in an unvoiced plosive.

[^2]:    ${ }^{11}$ This approximant, somewhat unusually, has two places of articulation, in the bilabial and the velar region. Is therefore called a "voiced labialized velar approximant".

[^3]:    ${ }^{12}$ This is true even though in careful transcriptions we can use diacritical signs that indicate to what degree a vowel is produced in a slightly different place, higher or lower, more advanced or more retracted, than one might expect.

[^4]:    Table 2-6 Some of the Cardinal Vowels

[^5]:    ${ }^{13}$ Utterances are, somewhat simplistically put, the oral equivalent of a sentence. However, as spoken language is clearly less formal than written language, such "sentences" may look very incomplete from the point of view of a careful user of the language, missing for instance subject, main verb and other elements. The end of an utterance is usually signalled phonologically with a falling tone (as we shall see) and represents the point at which another interlocutor can take the next turn in the conversation.

[^6]:    ${ }^{14}$ The word cod does not usually appear as a plural, but it is used here the make the distinction between the example words and the pronunciation of their plurals clearer.

[^7]:    ${ }^{15}$ It is interesting to note in this context that the classic verse form in English is the iambic pentameter, a line with five stressed syllables followed by an unstressed syllable each, whereas in French the classic verse form is the Alexandrine with 14 syllables per line. In other words English counts the stresses, French the syllables.
    ${ }^{16}$ In poetry there are feet with two stresses, for example the spondee, which in phonology, as we shall see, would be two feet.

[^8]:    ${ }^{17}$ We will revisit the terms turn and floor in our analysis of conversations in 7.2.4.

[^9]:    family, anti-establishment, verification, claimant, clairvoyant, verisimilitude.

[^10]:    ${ }^{21}$ The smallest bird of prey, which, at a distance, can be mistaken for a sparrow.

[^11]:    ${ }^{22}$ However, if the sentence is to make a point, it may be appropriate. Cervante's character Don Quixote considers himself a knight-errant based on the books he reads and rides out on tired, old horse called "Rocinante", the name containing the word rocin, which means nag as well as illiterate person.

[^12]:    ${ }^{24}$ This is a phenomenon that is quite frequent in jokes that are relatively well known, as Chario (1992) points out in her account of The Language of Jokes.

[^13]:    ${ }^{27}$ We shall henceforth use the term clause for a sentence with one main verb and sentence when several clauses are combined.

[^14]:    Figure 6-20 Structure of (22) with the zero-form for the second verb

[^15]:    ${ }^{28}$ Unfortunately we cannot enter into the discussion of verb agreement in English, or of the exact structure of Infl, Aux or what Burton-Roberts (1996) calls the Verb Group as this would go considerably beyond what can be covered in this introduction.

[^16]:    ${ }^{29}$ For a very concise but highly informative overview of the five axioms cf. http://www.wanterfall.com/Communication-Watzlawick\%27s-Axioms.htm\#111. Our discussion leaves out the notion of Punctuation (Axiom 3), which would have been somewhat difficult to fit into the present line of argument.

[^17]:    ${ }^{32}$ In his original paper, Grice refers not to Maxims but "[e]choing Kant" (1975: 45) categories with the individual directives (listed as bullet points in the following discussion) as the actual maxims. However, in conformity with other introductory texts, we shall refer to four Maxims rather than four Categories making up the Cooperative Principle.

