

# CHAPTER TWO

## Communication

Let us now examine what actually takes place when one human attempts to communicate with another. On the surface it appears to be very simple. Let us take two characters, Barbara and Hans, abbreviated B and H. B wishes to say something to H. She opens her mouth and makes noises, which H hears and interprets correctly. Communication has taken place.

This appears to be perfectly straightforward, but the matter is much more complicated. Suppose, for instance, B speaks to H in Dutch, which H does not understand. Communication does not take place. Suppose H is deaf. Communication does not take place, regardless of what language B speaks. Yet in both instances B has done her bit - she has done all that is necessary for another human being who understands the language she is speaking to understand her. She cannot alter the fact that H is deaf or does not understand Dutch.

On the other hand, H may speak and understand Dutch, but B has a speech defect which is so severe that H cannot understand what B is attempting to say. Or B may speak Dutch so badly that H, who speaks only Dutch, cannot understand what she is trying to say. Here too we are dealing with communication breakdown, although both parties may be trying their utmost to communicate.

What is actually involved in a **successful** act of communication between two speakers of the same language? Let us continue to use B as the speaker and H as the hearer. B makes certain noises with her vocal cords, lips, tongue, teeth and other parts of the mouth and possibly also with her nose, using breath exhaled from her lungs. These noises cause sound waves which are transmitted through the air and fall on H's eardrums, which vibrate as a result. The vibration is passed on to some bones in H's middle ear, which vibrate in sympathy. These vibrations are in turn passed on to the cochlear fluid in the inner ear, which also vibrates. These vibrations are extracted by the hairs of the basilar membrane and somehow a message is transmitted from there along certain nerves to H's brain, and H ends up with the same thought in his mind that B had in hers at the outset.

I have so far presented this as a purely physical act involving the broadcasting and reception of sound waves, but it is even more complicated than that. Once the speaker has an idea, and we have very little if any knowledge about this stage, there seem to be **at least** eleven steps until the speaker has transmitted that idea to the hearer. First of all, the idea has to be put into **words** which will convey the intended meaning. We can call this step *semantic encoding*. *Semantics* is the study of meaning. The words, in turn, must be arranged into a **sentence** or sentences. We can call this process *syntactic encoding*. *Syntax* is the study of how sentences are formed. The sentences which result from the syntactic encoding then have to be put into **sound**. We can call

this process *phonological encoding*. *Phonology* is the study of speech sounds. Once B has done the semantic, syntactic and phonological encoding the speech signal is passed, somehow, from her brain to her organs of speech, at which point she makes the noises spoken of in the previous paragraph, using air gradually exhaled from her lungs. Once B has done all of that, she has *transmitted* her signal and her part as speaker is finished.

The signal, carried through the air by sound waves, falls on H's ears, setting up the vibrations already mentioned. H's brain then goes through something like the reverse of the process which B's brain went through to encode the signal. H must *decode* the signal. First of all the sounds H hears must be decoded into sentences. We can call this *phonological decoding*. The sentences which result are then decoded into words. We can call this *syntactic decoding*. The resulting words are decoded for their meanings. This is *semantic decoding*. Then, and only then, does H have the same idea in his mind that B had in hers.

To summarise, an act of communication seems to entail at least these steps:

- 1) semantic encoding of the idea the speaker wishes to communicate,
- 2) syntactic encoding (which can also be called *grammatical* encoding),
- 3) phonological encoding,
- 4) transmission of speech signal from the brain to the organs of speech,
- 5) production of speech sounds,
- 6) transmission of speech sounds via air waves,
- 7) reception of speech sounds by the ear,
- 8) transmission of the speech signal to the brain,
- 9) phonological decoding,
- 10) syntactic (or *grammatical*) decoding,
- 11) semantic decoding.

The really remarkable thing about this whole complicated process is that it happens so quickly that we are all but unaware of it. We all go through this process hundreds of times a day without thinking about it at all.

I have used the terms ***encoding*** and ***decoding*** several times. Both of these words are formed on the root *code*. These words were chosen deliberately to convey the idea that a human language is a set of codes, including at least a *phonological code* (the sound pattern of a language), a *syntactic* or *grammatical code* (the rules of word and sentence formation) and a *semantic code*, which is some set of principles which associates particular meanings with particular sequences of sound. Thus the language itself is a code, made up of other codes. As is the case with other codes, if one does not know the code, one does not understand the signal. For instance, there is a code called semaphore, traditionally used by sailors to pass messages from one ship to another. A person who does not know semaphore can watch one sailor signalling to another and get all of the visual information that the receiving sailor gets, i.e. everything that is necessary to understand the message, without understanding any of it because he or she does not understand the code. The same is true of Morse code. We can hear a Morse transmission on the radio and receive all of the auditory information a trained radio operator receives, but if we do not know the code we understand nothing. And if I hear someone speaking Arabic I hear exactly the same sounds that an Arabic speaker hears, but the Arabic speaker understands and I do not because I do not know the code. On the other hand, if I hear someone speaking English or German I understand, because I know those codes. In other words, if someone speaks to us using a language (i.e. a code) we do not know, all of the work which B does in our example proceeds apace; all of the semantic, syntactic and phonological encoding takes place, the actual production of speech sounds and their

transmission by means of sound waves takes place, the reception of the signal takes place in that the eardrums and the bones of the middle ear vibrate, and that signal is passed on to the brain, but it stops there. The decoding does not take place because we do not know the code. All we hear is so much noise.

There are a number of points in the communication act where a breakdown may occur. We have already discussed cases in which one partner does not know the code adequately and hence cannot encode or decode well enough to make the communication successful. We have mentioned physical impediments, e.g. the receiver may be deaf or the sender may have a speech impediment which makes successful phonological decoding by the receiver difficult or impossible.

Communication breakdown may occur at any of the eleven stages of the communication act. It can occur even between native speakers, although the chances are fewer than when non-native speakers are involved because native speakers know the code better than non-native speakers. Nevertheless it occurs. Given the complexity of the speech act, it is not surprising that communication breakdown occurs. Perhaps what is really surprising is that it does not occur more frequently.

Let us return to the eleven stages of the act of communication.

Of the stages of communication we will be concerned primarily with stages 2, 3 and 5. Time constraints prevent any largescale discussion of semantics. Stages 9, 10 and 11 are the inverses of 3, 2 and 1. Stages 6 and 7 belong properly to physics. We know next to nothing about stages 4 and 8, just as we know very little about how people come to have ideas in the first place. In any case, these stages belong more properly to the science of physiology than to linguistics.

In this semester we will first discuss varieties of German in the German-speaking countries (chapters 3, 4, 5) and then discuss the position of German in Australia (chapter 6). After that we will begin with the actual production of speech sounds (stage 5). This is known as *articulatory phonetics*, and it will occupy us for the balance of the semester.

In second semester we will approach stages 3 and 2 in that order. This will entail a discussion of the techniques involved in classifying the very many speech sounds involved in the pronunciation of German into a relatively small set of basic sounds of which the others are variants. This is known as *phonemics*. This will be followed by a discussion of how the sounds of German are put together to form words. This includes two stages, *morphology* and *word formation*. Next we will look at how words are put together to form sentences, *syntax*, and finally we will look at the history of the German language.

What should be clear from the description of an act of communication just sketched is that language involves some sort of correlation between **sound** and **meaning**. All human languages, with the exception of sign languages, which correlate **gesture** with meaning, function in this same manner: meaning is somehow associated with sound. Meanings are transmitted from one person to another by means of sound. A moment's thought will reveal that the association is arbitrary. If it were not, there would be only one language. Let's put it another way. Words do not mean what they mean because of anything inherent in the sound of those words. Words mean what they mean because the speakers of a language are in general agreement as to what the words mean. The English word *blanket* means what it means because we speakers of English agree that it means that. No one has legislated this. Nor is there anything inherent in *b* or *l* or the combination *bl* or anything else in the word which has anything to do with a bed covering which is heavier than a sheet. Similarly the German word *Decke* does not mean "blanket" because of the *ck* or the *d* or the

vowels. It means *blanket* (or, for that matter *ceiling*) because speakers of German agree that it means *blanket* (or, as the case may be, *ceiling*) **and for no other reason**. If final proof were needed that there is no mystical union between sound and sense, we would need only to compare the different English and German meanings associated with the same phonetic sequence, the word "Mist". Take a series of words which rhyme, e.g. *hut*, *cut*, *but*, *mutt*, *shut*. There is no common meaning in these words, despite the fact that each consists of three basic sounds, the final two of which are identical in every case. The difference in meaning between *but* and *mutt* can in no way be ascribed to the meaning difference between *b* and *m*. *B* and *m* are indeed different, as the different meanings of *but* and *mutt* show, but *b* and *m* do not **mean** different things - they don't mean **anything**. But they serve to **distinguish** meaning - a point to which we shall return.

Sound sequences with which meanings are associated are called **linguistic signs**. A linguistic sign consists of two parts, which we can call **shape** and **content**. Often the terms **signifier** and **signified** are used. Let us return to our last examples. The English word "mutt" denotes a type of dog. The **shape** (signifier) is the sound sequence, what we hear or say. The **content** (signified) is the meaning - a type of dog. The combination of shape and content in this case produces a linguistic sign of the English language, a sequence of sounds which is correlated with a meaning. There are other possible combinations of English sounds which are not linguistic signs because they have no content, only shape. For instance, the sound sequence which could be spelled *dut* or perhaps *dutt* (intended to rhyme with "mutt") is a possible English sequence. It is in accord with the rules of English. But it has no content. In other words, there is no English word *dutt*. It sounds like it could be an English word, but it isn't, because there is no meaning associated with it. It is not a linguistic sign in English, although it could well be a linguistic sign in some other language. The investigation of the arbitrary relationship between sound and meaning, between signifier and signified, between shape and content, is the overall aim of linguistics.