

Chapter 1 with the 'bicycle' example, and is further illustrated in [15].

- [15] a. I just rented a house. The kitchen is really big.
b. We had Chardonnay with dinner. The wine was the best part.
c. The bus came on time, but he didn't stop.

Making sense of [15a.] requires an inference (i.e. if *x* is a house, then *x* has a kitchen) to make the anaphoric connection. Such inferences depend on assumed knowledge which, as in [15b.], may be much more specific (i.e. Chardonnay is a kind of wine). In addition, the inference can be considered so automatic for some speakers (for example, a bus has a driver), that they can go straight to a pronoun for anaphoric reference, as in [15c.]. In this example, note that the antecedent ('the bus') and the anaphor ('he') are not in grammatical agreement (i.e. normally a bus would be 'it'). As pointed out already, successful reference does not depend on some strictly literal, or grammatically 'correct', relationship between the properties of the referent and the referring expression chosen. The word 'sandwich' can identify a person and the pronoun 'he' can be an anaphor for a thing. The key to making sense of reference is that pragmatic process whereby speakers select linguistic expressions with the intention of identifying certain entities and with the assumption that listeners will collaborate and interpret those expressions as the speaker intended.

The social dimension of reference may also be tied to the effect of collaboration. The immediate recognition of an intended referent, even when a minimal referring expression (for example, a pronoun) is used, represents something shared, something in common, and hence social closeness. Successful reference means that an intention was recognized, via inference, indicating a kind of shared knowledge and hence social connection. The assumption of shared knowledge is also crucially involved in the study of presupposition.

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Presupposition and entailment

In the preceding discussion of reference, there was an appeal to the idea that speakers assume certain information is already known by their listeners. Because it is treated as known, such information will generally not be stated and consequently will count as part of what is communicated but not said. The technical terms presupposition and entailment are used to describe two different aspects of this kind of information.

It is worth noting at the outset that presupposition and entailment were considered to be much more central to pragmatics in the past than they are now. In more recent approaches, there has been less interest in the type of technical discussion associated with the logical analysis of these phenomena. Without some introduction to that type of analytic discussion, however, it becomes very difficult to understand how the current relationship between semantics and pragmatics developed. Much of what follows in this chapter is designed to illustrate the process of thinking through a number of problems in the analysis of some aspects of invisible meaning. Let's begin by defining our terms.

A **presupposition** is something the speaker assumes to be the case prior to making an utterance. Speakers, not sentences, have presuppositions. An **entailment** is something that logically follows from what is asserted in the utterance. Sentences, not speakers, have entailments.

We can identify some of the potentially assumed information that would be associated with the utterance of [1].

[1] Mary's brother bought three horses.

In producing the utterance in [1], the speaker will normally be

expected to have the presuppositions that a person called Mary exists and that she has a brother. The speaker may also hold the more specific presuppositions that Mary has only one brother and that he has a lot of money. All of these presuppositions are the speaker's and all of them can be wrong, in fact. The sentence in [1] will be treated as having the entailments that Mary's brother bought something, bought three animals, bought two horses, bought one horse, and many other similar logical consequences. These entailments follow from the sentence, regardless of whether the speaker's beliefs are right or wrong, in fact. They are communicated without being said. Because of its logical nature, however, entailment is not generally discussed as much in contemporary pragmatics as the more speaker-dependent notion of presupposition.

Presupposition

In many discussions of the concept, presupposition is treated as a relationship between two propositions. If we say that the sentence in [2a.] contains the proposition *p* and the sentence in [2b.] contains the proposition *q*, then, using the symbol \gg to mean 'presupposes', we can represent the relationship as in [2c.].

- [2] a. Mary's dog is cute. (= *p*)
 b. Mary has a dog. (= *q*)
 c. $p \gg q$

Interestingly, when we produce the opposite of the sentence in [2a.] by negating it (= NOT *p*), as in [3a.], we find that the relationship of presupposition doesn't change. That is, the same proposition *q*, repeated as [3b.], continues to be presupposed by NOT *p*, as shown in [3c.].

- [3] a. Mary's dog isn't cute. (= NOT *p*)
 b. Mary has a dog. (= *q*)
 c. NOT *p* \gg *q*

This property of presupposition is generally described as **constancy under negation**. Basically, it means that the presupposition of a statement will remain constant (i.e. still true) even when that statement is negated. As a further example, consider a situation in

which you disagree (via a negative, as in [4b.]) with someone who has already made the statement in [4a.].

- [4] a. Everybody knows that John is gay. (= *p*)
 b. Everybody doesn't know that John is gay. (= NOT *p*)
 c. John is gay. (= *q*)
 d. $p \gg q$ & NOT *p* \gg *q*

Notice that, although both speakers disagree about the validity of *p* (i.e. the statement in [4a.]), they both assume the truth of *q* (i.e. [4c.]) in making their statements. The proposition *q*, as shown in [4d.], is presupposed by both *p* and NOT *p*, remaining constant under negation.

Types of presupposition

In the analysis of how speakers' assumptions are typically expressed, presupposition has been associated with the use of a large number of words, phrases, and structures. We shall consider these linguistic forms here as indicators of **potential presuppositions**, which can only become actual presuppositions in contexts with speakers.

As already illustrated in examples [1] to [3], the possessive construction in English is associated with a presupposition of existence. The **existential presupposition** is not only assumed to be present in possessive constructions (for example, 'your car' \gg 'you have a car'), but more generally in any definite noun phrase. By using any of the expressions in [5], the speaker is assumed to be committed to the existence of the entities named.

- [5] the King of Sweden, the cat, the girl next door,
 the Counting Crows

We shall reconsider the basis of existential presuppositions later, but first we should note that there was a different type of presupposition present in [4]. In [4], the verb 'know' occurs in a structure, 'Everybody knows that *q*', with *q* as the presupposition. The presupposed information following a verb like 'know' can be treated as a fact, and is described as a **factive presupposition**. A number of other verbs, such as 'realize' in [6a.] and 'regret' in [6b.], as well as phrases involving 'be' with 'aware' [6c.], 'odd' [6d.], and 'glad' [6e.] have factive presuppositions.

- [6] a. She didn't realize he was ill. (>> He was ill)
 b. We regret telling him. (>> We told him)
 c. I wasn't aware that she was married. (>> She was married)
 d. It isn't odd that he left early. (>> He left early)
 e. I'm glad that it's over. (>> It's over)

There are also a number of other forms which may best be treated as the source of lexical presuppositions. Generally speaking, in **lexical presupposition**, the use of one form with its asserted meaning is conventionally interpreted with the presupposition meaning (non-asserted) meaning is understood. Each time that another (non-asserted) meaning is understood, the asserted you say that someone 'managed' to do something, the asserted meaning is that the person succeeded in some way. When you say that someone 'didn't manage', the asserted meaning is that the person did not succeed. In both cases, however, there is a presupposition (non-asserted) that the person 'tried' to do that something. So, 'managed' is conventionally interpreted as *asserting* 'succeeded' and *presupposing* 'tried'. Other examples, involving the lexical items, 'stop', 'start', and 'again', are presented, with their presuppositions, in [7].

- [7] a. He stopped smoking. (>> He used to smoke)
 b. They started complaining. (>> They weren't complaining before)
 c. You're late again. (>> You were late before)

In the case of lexical presupposition, the speaker's use of a particular expression is taken to presuppose another (unstated) concept, whereas in the case of a factive presupposition, the use of a particular expression is taken to presuppose the truth of the information that is stated after it.

In addition to presuppositions which are associated with the use of certain words and phrases, there are also **structural presuppositions**. In this case, certain sentence structures have been analyzed as conventionally and regularly presupposing that part of the structure is already assumed to be true. We might say that speakers can use such structures to treat information as presupposed (i.e. assumed to be true) and hence to be accepted as true by the listener. For example, the *wh*-question construction in English, as shown in [8a.] and [8b.], is conventionally interpreted

with the presupposition that the information after the *wh*-form (i.e. 'When' and 'Where') is already known to be the case.

- [8] a. When did he leave? (>> He left)
 b. Where did you buy the bike? (>> You bought the bike)

The type of presupposition illustrated in [8] can lead listeners to believe that the information presented is necessarily true, rather than just the presupposition of the person asking the question. For example, let's say that you were standing at an intersection one evening. You didn't notice whether the traffic signal had turned to red before a car went through the intersection. The car was immediately involved in a crash. You were witness to the crash and later you are asked the question in [9].

- [9] How fast was the car going when it ran the red light?

If you answer the question as asked (Just answer the question!) and estimate the speed of the car, then you would appear to be accepting the truth of the presupposition (i.e. >> the car ran the red light). Such structurally-based presuppositions may represent subtle ways of making information that the speaker believes appear to be what the listener should believe.

So far, we have only considered contexts in which presuppositions are assumed to be true. There are, however, examples of non-factive presuppositions associated with a number of verbs in English. A **non-factive presupposition** is one that is assumed not to be true. Verbs like 'dream', 'imagine', and 'pretend', as shown in [10], are used with the presupposition that what follows is not true.

- [10] a. I dreamed that I was rich. (>> I was not rich)
 b. We imagined we were in Hawaii. (>> We were not in Hawaii)
 c. He pretends to be ill. (>> He is not ill)

We have already noted, at the end of the discussion of deixis, a structure that is interpreted with a non-factive presupposition ('If I had a yacht, ...'). Indeed, this type of structure creates a **counterfactual presupposition**, meaning that what is presupposed is not only not true, but is the opposite of what is true, or 'contrary to facts'. A conditional structure of the type shown in [11], generally called a counterfactual conditional, presupposes that the information in the *if*-clause is not true at the time of utterance.

[11] If you were my friend, you would have helped me.
 (>) You are not my friend)

The existence of non-factive presuppositions is part of an interesting problem for the analysis of utterances with complex structures, generally known as 'the projection problem', to be explored in the next section.

Indicators of potential presuppositions discussed so far are summarized in Table 4.1.

Type	Example	Presupposition
existential	the X	>> X exists
factive	I regret leaving	>> I left
non-factive	He pretended to be happy	>> He wasn't happy
lexical	He managed to escape	>> He tried to escape
structural	When did she die?	>> She died
counterfactual	If I weren't ill,	>> I am ill

TABLE 4.1 Potential presuppositions

The projection problem

There is a basic expectation that the presupposition of a simple sentence will continue to be true when that simple sentence becomes part of a more complex sentence. This is one version of the general idea that the meaning of the whole sentence is a combination of the meaning of its parts. However, the meaning of some presuppositions (as 'parts') doesn't survive to become the meaning of some complex sentences (as 'wholes'). This is known as the **projection problem**. In example [12], we are going to see what happens to the presupposition *q* ('Kelly was ill') which is assumed to be true in the simple structure [12c], but which does not 'project' into the complex structure [12h]. In order to follow this type of analysis, we have to think of a situation in which a person might say: 'I imagined that Kelly was ill and nobody realized that she was ill.'

- [12] a. Nobody realized that Kelly was ill. (= *p*)
 b. Kelly was ill. (= *q*)
 c. *p* >> *q*

(At this point, the speaker uttering [12a.] presupposes [12b.].)
 (= *r*)

d. I imagined that Kelly was ill. (= NOT *q*)
 e. Kelly was not ill.

f. *r* >> NOT *q*

(At this point, the speaker uttering [12d.] presupposes [12e.], the opposite of [12b.].)

g. I imagined that Kelly was ill and nobody realized that she was ill. (= *r* & *p*)

h. *r* & *p* >> NOT *q*

(At this point, after combining *r* & *p*, the presupposition *q* can no longer be assumed to be true.)

In an example like [12], the technical analysis may be straightforward, but it may be difficult to think of a context in which someone would talk like that. Perhaps example [13] will contextualize better. In an episode of a TV soap opera, two characters have the dialog in [13].

[13] Shirley: It's so sad. George regrets getting Mary pregnant.
 Jean: But he didn't get her pregnant. We know that now.

If we combine two of the utterances from [13], we have the sequence, 'George regrets getting Mary pregnant; but he didn't get her pregnant'. Identifying the different propositions involved, as in [14], we can see that the presupposition *q* in [14b.] does not survive as a presupposition of the combined utterances in [14e.].

- [14] a. George regrets getting Mary pregnant. (= *p*)
 b. George got Mary pregnant. (= *q*)
 c. *p* >> *q*
 d. He didn't get her pregnant. (= *r*)
 e. George regrets getting Mary pregnant, but he didn't get her pregnant. (= *p* & *r*)
 f. *p* & *r* >> NOT *q*

One way to think about the whole sentence presented in [14e.] is as an utterance by a person reporting what happened in the soap opera that day. That person will not assume the presupposition *q* (i.e. that George got Mary pregnant) is true when uttering [14e.].

A simple explanation for the fact that presuppositions don't 'project' is that they are destroyed by entailments. Remember that an entailment is something that necessarily follows from what is asserted. In example [13], Jean's utterance of 'he didn't get her pregnant' actually entails 'George didn't get Mary pregnant' as a logical consequence. Thus, when the person who watched the soap opera tells you that 'George regrets getting Mary pregnant, but he didn't get her pregnant', you have a presupposition *q* and an entailment NOT *q*. The entailment (a necessary consequence of what is said) is simply more powerful than the presupposition (an earlier assumption).

The power of entailment can also be used to cancel existential presuppositions. Normally we assume that when a person uses a definite description of the type 'the X' (for example, 'the King of England'), he or she presupposes the existence of the entity described, as in the utterance of [15a]. Also, in any utterance of the form 'X doesn't exist', as in [15b], there is an entailment that there is no X. But does the speaker of [15b] also still have the presupposition of the existence of the entity described?

- [15] a. The King of England visited us.
- b. The King of England doesn't exist!

Instead of thinking that a speaker who utters [15b] simultaneously believes that there is a King of England (= presupposition) and that there is not a King of England (= entailment), we recognize that the entailment is more powerful than the presupposition. We abandon the existential presupposition.

As already emphasized, it may be best to think of all the types of presuppositions illustrated in Table 4.1 as 'potential presuppositions' which only become actual presuppositions when intended by speakers to be recognized as such within utterances. Speakers can indeed indicate that the potential presupposition is not being presented as a strong assumption. Possessive constructions such as 'his car' have a potential presupposition (i.e. he has a car) which can be presented tentatively via expressions such as 'or something', as in [16].

- [16] a. What's that guy doing in the parking lot?
- b. He's looking for his car or something.

In [16b], the speaker is not committed to the presupposition (he has a car) as an assumed fact. It is worth remembering that it is never the word or phrase that has a presupposition. Only speakers can have presuppositions.

Ordered entailments

Generally speaking, entailment is not a pragmatic concept (i.e. having to do with speaker meaning), but instead is considered a purely logical concept, symbolized by \Vdash . Some examples of entailment for the sentence in [17] are presented in [18].

- [17] Rover chased three squirrels. ($= p$)
- [18] a. Something chased three squirrels. ($= q$)
- b. Rover did something to three squirrels. ($= r$)
- c. Rover chased three of something. ($= s$)
- d. Something happened. ($= t$)

In representing the relationship of entailment between [17] and [18a.] as $p \Vdash q$, we have simply symbolized a logical consequence. Let us say that in uttering the sentence in [17], the speaker is necessarily committed to the truth of a very large number of **background entailments** (only some of which are presented in [18 a.-d.]). On any occasion of utterance [17], however, the speaker will indicate how these entailments are to be ordered. That is, the speaker will communicate, typically by stress, which entailment is assumed to be in the foreground, or more important for interpreting intended meaning, than any others. For example, in uttering [19a.], the speaker indicates that the **foreground entailment**, and hence her main assumption, is that Rover chased a certain number of squirrels.

- [19] a. Rover chased THREE squirrels.
- b. ROVER chased three squirrels.

In [19b.], the focus shifts to Rover, and the main assumption is that something chased three squirrels. One function of stress in English is, in this approach, clearly tied to marking the main assumption of the speaker in producing an utterance. As such, it allows the speaker to mark for the listener what the focus of the message is, and what is being assumed.

A very similar function is exhibited by a structure called an 'inverted cleft' construction in English, as shown in [20].

- [20] a. It was ROVER that chased the squirrels.
b. It wasn't ME who took your money.

In both examples in [20], the speaker can communicate what he or she believes the listener may already be thinking (i.e. the foreground entailment). In [20b.] that foreground entailment (someone took your money) is being made the shared knowledge in order for the denial of personal responsibility to be made. The utterance in [20b.] can be used to attribute the foreground entailment to the listener(s) without actually stating it (for example, a possible accusation). It is one more example of more being communicated than is said.

5

Cooperation and implicature

In much of the preceding discussion, we have assumed that speakers and listeners involved in conversation are generally cooperating with each other. For example, for reference to be successful, it was proposed that collaboration was a necessary factor. In accepting speakers' presuppositions, listeners normally have to assume that a speaker who says 'my car' really does have the car that is mentioned and isn't trying to mislead the listener. This sense of cooperation is simply one in which people having a conversation are not normally assumed to be trying to confuse, trick, or withhold relevant information from each other. In most circumstances, this kind of cooperation is only the starting point for making sense of what is said.

In the middle of their lunch hour, one woman asks another how she likes the hamburger she is eating, and receives the answer in [1].

[1] A hamburger is a hamburger.

From a purely logical perspective, the reply in [1] seems to have no communicative value since it expresses something completely obvious. The example in [1] and other apparently pointless expressions like 'business is business' or 'boys will be boys', are called **tautologies**. If they are used in a conversation, clearly the speaker intends to communicate more than is said.

When the listener hears the expression in [1], she first has to assume that the speaker is being cooperative and intends to communicate something. That something must be more than just what the words mean. It is an additional conveyed meaning, called an **implicature**. By stating [1], the speaker expects that the