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Professor Noël Burton-Roberts
University of Newcastle upon Tyne

Dr Andrew Spencer
University of Essex

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Kate Kearns

Lecturer, Department of Linguistics, University of Canterbury
New Zealand

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11 Implicature and Explicature

As previewed in Chapter 1, this chapter takes up some of the main issues in the relationship between semantics and pragmatics, or between the literal meaning of the expressions the speaker utters and the extra information, taken from the context, which is needed to understand exactly what was said or what was meant.

The modern field of pragmatics is very strongly influenced by the work of the philosopher Paul Grice, who outlined a theory of inferences that hearers draw to arrive at a full understanding of what a speaker meant by an utterance, especially in those cases where what is meant goes well beyond the literal meaning of what is uttered. This kind of communication is dramatically illustrated in Grice's famous example of a letter of reference.

A is writing a testimonial about a pupil who is a candidate for a philosophy job, and his letter reads as follows: 'Dear Sir, Mr X's command of English is excellent, and his attendance at tutorials has been regular. Yours, etc.'

The utterly condemnatory nature of this testimonial is so clear that it is worth pointing out how positive the literal content is. Having an excellent command of English and attending tutorials regularly are both positive qualities for a potential teacher. The two compelling points about this example are, first, that the negative overall impact of the letter seems to be quite separate from the actual mildly positive content, and second, that given the context, any English speaker who knows what a testimonial letter is would understand this letter in the same way – the negative interpretation is in some fashion systematic, not arbitrary.

In Grice's theory the extra information conveyed here, roughly that Mr X is no good at philosophy, is **implicated** by A or by A's letter, or is an **implicature** of A's letter. As this example shows clearly, implicature is quite different from entailment, as the content of the letter in no way entails that Mr X is no good at philosophy.

Gricean implicature is a systematic part of communication which involves the interplay between what a speaker actually said and certain broad rules, shared by speakers and hearers, which govern communication. The details of Grice's proposal are reviewed in the next section.

11.1 GRICE'S CONVERSATIONAL IMPLICATURE

Grice's theory of implicature includes two main kinds of implicature which he called conversational implicature and conventional implicature. This discussion concerns only conversational implicature, which is by far the more important.

Grice proposed that communicative utterances and exchanges, typically in conversation but not confined to conversation, are in accordance with a general principle of cooperation.

The Cooperative Principle

Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.
or
Be helpful.

The Cooperative Principle is observed in the application of four more specific maxims which fall under it, commonly called Grice's Maxims.

Maxim of Quality (also called the Maxim of Truthfulness)

Try to make your contribution one that is true.

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

Maxim of Quantity (also called the Maxim of Informativeness)

- 1 Make your contribution as informative as is required (for the current purposes of the exchange).
- 2 Do not make your contribution more informative than is required.

Maxim of Relation (also called the Maxim of Relevance)

Be relevant.

Maxim of Manner (also called the Maxim of Clarity)

Be perspicuous.

- 1 Avoid obscurity of expression.
- 2 Avoid ambiguity.
- 3 Be brief. (Avoid unnecessary prolixity.)
- 4 Be orderly.

(In the discussion below I shall use the Maxim names given in brackets.)

In a communicative act, (typically talking but also writing) the assumption that the speaker obeys the Cooperative Principle and the Maxims adds further information about the utterance itself. The utterance can be taken to

be currently relevant, true and informative, and the hearer can draw inferences based on these assumptions. Knowing that these ways of drawing inferences are available, the speaker can speak in such a way as to encourage inference drawing, and thus deliberately convey the content of inferences. When the speaker deliberately phrases an utterance to lead the hearer to draw a certain inference, the content of that inference is implicated by the speaker – implicature is a deliberate communication tactic.

Alternatively, the speaker may say something that clearly does not obey all the Maxims, in such a way that both the speaker and the hearer are mutually aware of this. Even so, the assumption that the Maxims should be obeyed is still in force, and the obvious breaking or violating of a Maxim is itself a salient feature of the utterance from which inferences may be drawn, in accordance with the speaker's intentions. Whether a Maxim is observed (obeyed) or violated, if it plays a clear role in the way a speaker sets up an implicature, the Maxim is said to be **exploited** by the speaker. These points should become clearer with the discussion of examples below.

First, consider again A's letter of reference for the unfortunate Mr X. In the context of writing a reference for Mr X's application for a philosophy job, A should have written about Mr X's abilities in philosophy, and his failure to do so flagrantly violates the Maxim of Informativeness. He simply does not give the information required. In addition to the Maxims, there is a general agreement that references should be positive – if you cannot write a positive reference you should encourage the applicant to find another referee if possible. So A is constrained not to be too openly critical of Mr X in his letter. All these background assumptions are just as familiar to A's academic colleagues to whom Mr X has applied for a job. A's failure to comment on Mr X's philosophical abilities, which is a violation of the Maxim of Informativeness, clearly signals, as A intends, that something is wrong. A has had to choose between writing negatively or violating the Maxim of Truthfulness by writing positively about Mr X's philosophy, and caught on the horns of this dilemma, he has chosen to violate the Maxim of Informativeness. His readers can with little difficulty recover the message that A considers Mr X to be a poor philosopher.

Further examples of implicatures based on Grice's Maxims are illustrated in the next few sections.

11.1.1 Clarity

Suppose that Marcia and Clive are at a party, and have the following exchange.

- (1) C: Who are those two standing by the door?
M: That's my mother and her husband.

If the couple referred to were Marcia's parents in a stereotypical nuclear family, the phrase *my mother and her husband* used by Marcia would refer to them, but this would be an odd way for her to describe them, and would violate the Maxim of Clarity. Assuming that she is in fact obeying Clarity and also Truthfulness, her reason for speaking this way is that she doesn't judge it true to say 'Those are my parents', and in particular, the man is not a parent to her. The obvious inference to be drawn is that the man is not her father.

Compare this example with (2) below.

- (2) Alan is the male offspring of my parents.

Here the circumlocution *male offspring of my parents* just expresses the same content as the phrase *my brother*, but in a more obscure way. It cannot be understood as an exact way of expressing a slightly different meaning, unlike *my mother and her husband*. Here Clarity is violated, probably signalling the avoidance of the phrase *my brother* with its connotations of sibling closeness and affection, and the speaker implicates that she doesn't like her brother.

A standard illustration of Clarity violation is (3).

- (3) They don't allow dogs at that B-E-A-C-H.

The speaker in (3) signals that utterance of the word *beach* is to be avoided, presumably because the dog (assume there is a dog) recognizes the word and will infer that a trip to the beach is in the offing. The central point of Clarity devices like (3) is that the way of speaking is clear to the intended audience, but unclear to a potential audience, and what the speaker implicates is that what is said should be kept from the potential audience.

11.1.2 Truthfulness

The Maxim of Truthfulness is taken by Grice to be of higher priority than the other Maxims, providing the background against which they come into play, and generally taking precedence over the others if there is a clash. Observing Truthfulness is not usually cited as giving rise to particular implicatures on its own, although one instance would be the rhetorical device mentioned in Chapter 2 and repeated below.

- (4) If that's a genuine Picasso then the moon is made of longlife food product.

The implicature here, that that is not a genuine Picasso, requires the initial assumption that the whole conditional is true, which we can attribute to the

assumption that Truthfulness is observed. The consequent is mutually accepted by speaker and hearer as false, giving a true conditional with a false consequent. Accordingly, the antecedent must also be false, hence the implicature 'That's not a genuine Picasso'.

The observance of Truthfulness at the cost of another Maxim is illustrated in examples like (5).

- (5) A: Where's the city branch of Woolworths?
B: Oh, somewhere near the Peacock Mall.

Assume that A and B both know that A wants to go to Woolworths, so she wants to know exactly where Woolworths is. B gives less information than is required and so violates Informativeness, but preserves Truthfulness by saying as much as he knows, rather than giving explicit but false instructions for getting to Woolworths. In contrast to 'I don't know' or silence, B's response shows a helpful attitude, gives correct but limited information, and implicates that he doesn't know more precisely where Woolworths is, or he would have said.

11.1.3 Informativeness

The Maxim of Informativeness has two clauses, 'Make your contribution as informative as is required' and 'Do not make your contribution more informative than is required'. The first clause, requiring the speaker to give enough information, is identified as the basis of a wide range of implicatures known as scalar implicatures. **Scalar implicatures** typically arise with terms denoting quantities or degrees of attributes which can be graded on some scale of informative weakness and strength. The term *scalar implicature* was coined by Laurence Horn, whose theory of implicature is reviewed further in Section 11.3 below.

A classic scale giving rise to scalar implicature is the one shown in (6).

- (6) (weak) < *some*, *most*, *all* > (strong)

The scale indicates that *some* is typically used to make a weaker, less informative statement than *most*, and *most* is typically used to make a weaker, less informative statement than *all*.

With a scalar implicature it is assumed that the speaker obeys Informativeness and makes the strongest statement consistent with what he or she knows or believes to be the case. The speaker's use of an expression on an information strength scale implicates the negation of any higher term on the same scale. For example, assume that the students in a particular course have just had a test. Their teacher is asked 'So how did the students do on the test?' The possible answers in (7) have different scalar implicatures.

- (7)a Most of them passed.
implicature: Not all of them passed.
b Some of them passed.
implicature: Not all of them passed.
implicature: It isn't the case that most of them passed.
c Two or three did very well.
implicature: Not more than two or three did very well.

On the scale illustrated here, the relative informational strength of the expressions can also be defined in terms of entailment. 'All the students passed' entails 'Most of the students passed' and 'Some of the students passed' but not vice versa, so *all* is informationally stronger on the scale than *most* and *some*. Similarly, 'Most of the students passed' entails 'Some of the students passed' but not vice versa, so *most* is informationally stronger than *some*.

Further examples of scalar implicature 'no more than stated' are given in (8)–(14). The appropriate scales of informational strength are informally indicated.

- (8) Sam got a passing grade on the test.
implicature: He didn't do any better than a passing grade.
<pass, very good, excellent>
(9) It's quite warm out.
implicature: It isn't hot.
<warm, hot, sweltering>
(10) I tried to contact Don several times.
implicature: I didn't manage to contact Don.
<try, manage>
(11) I've read halfway through the book.
implicature: I haven't read any further than halfway.
<barely started, halfway, three-quarters through, finished>
(12) Diane can carry 30 pounds in her pack.
implicature: She can't carry any more weight than 30 pounds.
<20 pounds, 30 pounds, 40 pounds, ...>
(13) (Receptionist to patient seeking an urgent appointment)
Dr Evans could fit you in tomorrow afternoon at 2.00.
implicature: He can't see you any sooner.
<tomorrow at 2.00, tomorrow morning, this afternoon, in an hour, right now>

(14) Milk and sugar?

One sugar, thanks.

implicature: I don't want any milk (not both milk and sugar).
< sugar, milk and sugar >

Example (13) shows that the appropriate scale for a scalar implicature may depend on the context. Here the patient wants to see the doctor as soon as possible, so the most informative response the receptionist can make is to identify the earliest available time. In a different context, as in (15) below, the relative informational strength of different time expressions is reversed, and the most informative utterance identifies the latest possible time.

(15) The machine is playing up a bit – when do you want those negatives?
I suppose first thing tomorrow would be OK.
implicature: We need the negatives no later than first thing tomorrow.
< this afternoon, first thing tomorrow, tomorrow afternoon, ... >

Scalar implicature is unlike other kinds of conversational implicature in being commonly associated with particular groups of words or expressions, such as *some* and *all*. Nevertheless, even these implicatures depend on the context, as illustrated in (16) and (17).

(16a) Some cast members want to see you after the show.

b The photographer wants some cast members for the photo.

(17a) Some of you are working well.

b If some of you work solidly the mess could be cleared by tomorrow.

Here the (a) member of each pair has the expected implicature 'not all', but the (b) member has no such implicature. It is likely that the photographer would like the whole cast or most of the cast in the photo if possible, and if some of you can clear the mess by tomorrow, certainly most of you or all of you could clear the mess in the same time or sooner.

Scalar implicature is discussed further in section 11.3.1.

We turn next to Relevance.

11.1.4 Relevance

Relevance is most commonly seen to be at play in implicature where a speaker makes a remark which appears at first sight to be irrelevant, but is fully understood only on the assumption that it is relevant, as in (18).

(18) A: Where's Bill, do you know?

B: His coat's gone.

Given that A inquired after Bill and not his coat, B's response does not seem to answer the question. But assuming that both A and B know that Bill doesn't leave the building except to go home, and further assuming that Bill does not wear his coat inside the building, B's response is relevant to the question of Bill's whereabouts – B implicates that Bill has left for the day.

A different kind of Relevance implicature is shown in (19).

(19) A: Why don't you see if Bob might join you in your new venture?

B: I try to stay clear of shady operators.

Here B's remark about shady operators is relevant to A's suggestion concerning Bob only if Bob is a shady operator, and accordingly, B's utterance implicates that Bob is a shady operator.

Relevance is in fact an all-pervading consideration, not only in making and understanding implicatures, but also in understanding the basic content of what a speaker actually said. This is illustrated in (20).

(20) A: I'm sick to death of going to the laundromat.

B: The man should be coming tomorrow.

The general background context is that the washing machine in A and B's flat has broken down, and A's remark introduces the laundry problem as a topic. B's apparently irrelevant remark can then be understood to mean that the washing machine repairman should come to the flat the following day to repair the washing machine. Unlike an implicature, this content is a more explicit version of what B actually said. A possible implicature here, relevant to A's remark, is that A won't need to go to the laundromat again, provided that the repairman does come and mend the machine. The role of Relevance in understanding what was actually said will be discussed in section 11.4.

11.2 LATER DEVELOPMENTS

Grice's theory remains the main starting point for discussions of pragmatically conveyed meaning, although the original theory and Maxims as stated above have been extensively re-evaluated and revised.

Grice's four Maxims do not have equal importance in generating implicatures. As we have seen, the main kind of implicature attributed to Clarity is the 'warning of potential listeners' device, which isn't a major part of day-to-day communication. Truthfulness, although said to underpin the functioning of all the other Maxims, does not often play the main part in giving rise to implicatures, apart from its possible contribution to ironical utterances. Most of the work is done by Informativeness and Relevance.

Informativeness and Relevance are not clearly separate and independent principles. If you are to obey Informativeness, you must know exactly how much information is required, so as not to give too much or too little information. But surely information which is not required (that is, on the topic but too much) is irrelevant to the current purpose, and information which is required is relevant to the current purpose. If you give too little information it is because you omit information which is relevant to the purpose, and therefore required. So Informativeness and Relevance are interdependent.

Sections 11.3 and 11.4 outline two main approaches to implicature since Grice, both emphasizing in different ways the importance of Informativeness and Relevance, and the interdependence between them. The first approach takes Informativeness as the basis for a new theory of implicature, incorporating Relevance into a more general principle. The second approach develops a technical notion of Relevance as the central key to understanding and interpretation in general, including, but not confined to, the understanding of implicature.

11.3 HORN'S Q PRINCIPLE AND R PRINCIPLE

Horn observes that human language design can be partly characterized as the product of a tension between cost and benefit, or the need to achieve a balance between economy and effectiveness. This dual constraint is expressed quite clearly in the two clauses of Grice's Informativeness Maxim, which enjoin the speaker to say not too little (clause 1) and not too much (clause 2). In other words, clause 1 imposes a lower limit on the amount of information expressed by the speaker and clause 2 imposes an upper limit.

Horn retains Grice's Maxim of Quality (that is, Truthfulness) as a background rule, and proposes two general Principles, based on the two-way contrast in Informativeness, to replace Grice's other three. Horn's Principles do not express exactly the same constraints as Grice's, but they are loosely related as indicated below.

The Q principle

Make your contribution SUFFICIENT:

Say as much as you can (given both Quality and R)

The Q Principle collects Grice's Maxims:

Quantity 1: 'Make your contribution as informative as is required (for the current purposes of the exchange)'

Manner 1: 'Avoid obscurity of expression'

Manner 2: 'Avoid ambiguity'

The R Principle

Make your contribution NECESSARY:

Say no more than you must (given Q)

The R Principle collects Grice's Maxims:

Relation: 'Be relevant'

Quantity 2: 'Do not make your contribution more informative than is required'

Manner 3: 'Be brief (avoid unnecessary prolixity)'

Manner 4: 'Be orderly'

The theory sorts implicatures into two main classes corresponding to the principle which drives the implicature.

11.3.1 Q-Implicatures

Assuming that the Q Principle is obeyed, the hearer accepts that the speaker made the most informative statement that could be made in the circumstances. Accordingly, the hearer infers that a stronger statement would not be warranted, and an implicature on the lines of 'but no more' is added to the speaker's statement. Given that the Q Principle is most closely based on Grice's Informativeness, scalar implicatures, introduced in section 11.1.3, are the main kind of Q-implicature. Further illustrations are given in (21) below.

(21)a It's possible he'll be elected.

Q-implicature: It's not likely / not certain he'll be elected.

b Harold is as tall as Tom.

Q-implicature: Harold is not taller than Tom.

c We recorded most of the tunes.

Q-implicature: We didn't record all of the tunes.

d That performance was very good.

Q-implicature: That performance was not outstanding.

e I believe he'll be here on Wednesday.

Q-implicature: I don't know for a fact that he'll be here on Wednesday.

Q-implicature in Horn's theory also gives the exclusive interpretation of *or*. Recall that the truth table for logical disjunction defines inclusive *or*, often glossed as 'and/or', which does not fit with exclusive uses of *or*, as in (22a).

(22)a That tree is native to either China or India (I can't remember which).

b No, I think you'll find it's native to both countries.

can serve as the basis of implicature which goes beyond what the speaker actually said to a much stronger statement along the same lines. As one might expect, R-implicatures include devices of suggestive understatement, such as those illustrated in (27).

- (27)a This essay is not entirely satisfactory.
R implicature: This essay is entirely unsatisfactory.
- b He isn't very bright.
R implicature: He's thick.
- c He needs to go somewhere.
R implicature: He needs to use the lavatory.
- d not at all bad (in fact, very good)
 not bad (in fact, pretty good)
 not too bad (OK)
 not too good (in fact, pretty bad)
 not good (in fact, bad)

A major kind of R-implicature Horn proposes is a pragmatic account of what syntacticians have called **Neg-Raising**. The Neg-Raising phenomenon is illustrated in (28)–(30) below.

- (28)a I don't think John has left town.
 b I think John hasn't left town.
- (29)a I don't imagine the price will stay down.
 b I imagine the price will not stay down.
- (30)a I don't expect to see you tomorrow.
 b I expect I won't see you tomorrow.

The (a) sentences are Neg-Raising sentences. Strictly speaking, the negations in these sentences should apply to the main verb, as in *don't think*, *don't imagine* and *don't expect*, simply to deny that the speaker has a thought content of the sort specified. So for example, (29a) would be expected to mean that the speaker lacks the thought 'The price will stay down', which would be compatible with the speaker having no opinion about the price at all. But in fact these sentences are generally interpreted as if the negation were in the lower clause, so that (a) and (b) in each pair are interpreted as having the same meaning.

The term *Neg-Raising* for the (a) sentences is based on a syntactic analysis in which the negation originates in the lower clause and is subsequently raised to the main clause. For example, 'I do not think John has left town' is

On the exclusive interpretation, (22a) is false if the tree is native to both China and India, and (22b) contradicts (22a), but $p \vee q$ is true if both p and q are true.

The key to the exclusive *or* implicature is that *and* and *or* form a strength scale: $p \& q$ entails $p \vee q$, but not vice versa.

	p	q	$p \vee q$	$p \& q$
(23)	T	T	T	T
	T	F	T	F
	F	T	T	F
	F	F	F	F

The truth of $p \& q$ guarantees the truth of $p \vee q$ (top line). But $p \vee q$ is also true on lines 2 and 3 where $p \& q$ is false, so $p \vee q$ does not entail $p \& q$. Accordingly, *and* and *or* form the scale in (24).

(24) (weak) < *or*, *and* > (strong)

Now suppose I say 'Jones bought a Coke or an icecream.' On the inclusive logical disjunction reading, I allow for all of the following:

- (25)a He bought a Coke only.
- b He bought an icecream only.
- c He bought a Coke and an icecream.

If I know what Jones bought, and in fact he bought a Coke and an icecream, according to the Q Principle I should have said 'He bought a Coke and an icecream', because that is the strongest statement of the facts I could make, even though in that case 'Jones bought a Coke or an icecream' on the inclusive reading would still be true. So the choice of *or* instead of *and* signals that the stronger statement with *and* would not be true. The hearer infers the Q-implicature 'Jones did not buy a Coke and an icecream'. The logical representation for exclusive *or* shows the two parts clearly.

(26)a	$(p \vee q) \& \sim(p \& q)$	exclusive interpretation
b	$p \vee q$	what was said
c	$\sim(p \& q)$	'not both' implicature

11.3.2 R-Implicatures

The R Principle, on the other hand, enjoins the speaker to say no more than is necessary. If the hearer assumes that the R Principle has been obeyed, this

derived from 'I think John has not left town' by moving *not*. According to the Neg-Raising analysis, the negation really belongs in the lower clause, and so a 'Neg-Raised reading' interprets the negation in the lower clause, before it is moved.

Whether or not the Neg-Raised interpretation is available depends on the predicate in the main clause. In the sentences in (31)–(33) below the main verb does not allow Neg-Raising, as is shown by the fact that the (a) and (b) sentences in each pair do not have the same interpretation.

- (31)a He doesn't claim to have all the answers.
 b He claims not to have all the answers.
- (32)a It wasn't possible to sit near him.
 b It was possible to not sit near him.
- (33)a Jones didn't manage to stop the car.
 b Jones managed to not stop the car.

The Neg-Raised interpretation is informationally stronger than the non-Neg-Raised interpretation. As we saw with scalar implicatures in Section 11.1.3, a difference in informational strength can be demonstrated by the presence of one-way entailments – an informationally stronger statement entails a weaker statement, but not vice versa. This is illustrated in (34)–(36) below.

- (34) I don't think John has left town.
Neg-Raised interpretation
 a 'I have the thought "John has not left town"'
non-Neg-Raised interpretation
 b 'I lack the thought "John has left town"'
- (35) I don't imagine the price will stay down.
Neg-Raised interpretation
 a 'I have the thought "the price will not stay down"'
non-Neg-Raised interpretation
 b 'I do not have the thought "The price will stay down"'
- (36) I don't expect to see you tomorrow.
Neg-Raised interpretation
 a 'I have the thought "I won't see you tomorrow"'
non-Neg-Raised interpretation
 b 'I do not have the thought "I'll see you tomorrow"'

In each example, assuming that the speaker is cognitively coherent, (a) entails (b), but (b) does not entail (a). For example, if I lack the thought that John has left town, this does not entail that I have the thought that he has not left town – I may have no view on the matter at all. In Horn's analysis, the literal meaning of these sentences is the non-Neg-Raised interpretation, consistent with the actual order of the words in the sentence. The informationally stronger Neg-Raised interpretation is an R-implicature, strengthening what was actually said.

To sum up, Horn's system centres on two principles, similar to the two clauses of Grice's Informativeness Maxim, which tend to produce opposite effects. Observing the Q-Principle ensures that the speaker will give enough information. The hearer who assumes that the Q-Principle has been obeyed is led to infer limiting 'no more than I said' implicatures. Observing the R-Principle ensures that the speaker does not go into unnecessary detail or voice what is obvious and easily recovered. The hearer who assumes that the R-Principle has been obeyed is led to infer elaborating, 'at least as much as I said and more' implicatures – the utterance is recognized as an understatement.

The next section introduces the notion of Relevance in Relevance Theory, which is a major current alternative to Gricean and revised Gricean theories.

11.4 RELEVANCE THEORY

Relevance Theory, developed originally by Deirdre Wilson and Dan Sperber, accounts for the hearer's understanding of an utterance, including implicatures, in terms of cognitive information processing. The emphasis is not so much on the external context in which an utterance is made as on the internal context, this being the hearer's current knowledge, beliefs, assumptions, hypotheses, and cultural and social conventions, in the form of mental representations of propositions. For simplicity, I shall refer to all these contents as the hearer's current assumptions. Recall also that the hearer stands for both hearers and readers. The concept of Relevance used in Relevance Theory is illustrated in the next section.

11.4.1 Cognitive Effect and Processing Effort

An incoming message interacts with the hearer's current assumptions to a greater or lesser degree. For example, I could break off at this point to comment that I'm not using footnotes in this book.

(37) I'm not using footnotes in this book.

You may have already noticed this, but you probably don't care about it one way or the other. It has no apparent bearing on the current issue, which is how Relevance Theory works, nor on any other issue at hand. So this information will not cause you to change your mind about anything, or draw any new inferences, or add a new proposition to your existing stock. In different circumstances you might wonder why the writer had pointed out such a trivial thing, but in this case it is obviously presented as an example sentence, so that speculation doesn't arise. In short, the content of 'I'm not using footnotes in this book' probably has minimal **cognitive effects** for you – that is, it doesn't interact with your current assumptions to produce any effects. In this, it has little significance to you at this point.

Now take a different case. Suppose that friends of Tom have invited him to come with them to an afternoon showing of a new film. One of the group, Jenny, says

(38) The movie ends at 3.50.

Tom's current assumptions include the information that he has a lecture at four o'clock, and it takes ten minutes to walk from the cinema to the lecture room. Tom now infers that if he goes to the film and leaves immediately at the end he should be on time for the lecture. So he decides to go to the film.

In this case the utterance in (38) interacts significantly with Tom's current assumptions. In particular, the new information combines with existing current assumptions to lead to new inferences, and ultimately to the decision to see the film.

Take a third and very different case. Alan and Bridget, a married couple, have an old friend Chester who they haven't seen for a while. Alan has recently begun to suspect that Bridget is having an affair, though he has no idea who with. One of Bridget's annoying habits is to read aloud bits of what she is reading in bed – Alan usually doesn't listen. One night she reads this passage:

The magnolia likes to spread itself over two and even three stories. It is the kind of shrub for whose sake any outmoded old parsonage, however riddled with dry rot and beetle, should be acquired with enthusiastic pride. If the owner starts inquiring 'How should I prune my magnolia?' a preservation order, to include every twig, must be served on him forthwith. He should be grateful for being allowed to live in permanently darkened rooms, when the darkness springs from so august an umbrage. (Christopher Lloyd (1985), *The Well-Tempered Garden* (revised edn), Penguin, pp. 235–6)

Some days later, Alan runs into Chester by chance. After initial greetings, the conversation proceeds:

(39) A: We haven't seen you since, it must be just before you moved. We haven't even seen the inside of the house. Have you had to do much work on it?

C: Ah, yes! The rat-ridden rectory! Fortunately the august umbrage is over the garage so it can stay. Of course I had to paint the whole interior, but the house is terrific.

Chester's remarks about the rat-ridden rectory and the august umbrage are unclear to Alan, but they sound familiar. The thought nags him that he has heard something similar recently, perhaps a quote ... something about a magnolia tree, some gardening book ... so august an umbrage', that was it, odd that Chester should quote the same thing a few days later, he never reads gardening books, that's for sure ... Suddenly Alan is convinced that Bridget has recently quoted the same passage to Chester about his new house – they have seen each other without her mentioning it – Chester is her lover! Here Chester's rather obscure remark triggers a chain of speculation for Alan. In casual chat we quite often let an unclear remark go by, but Alan latches onto this allusion and worries at it, makes the connection with a recent utterance of Bridget's to which he wasn't even listening properly, and comes to a startling conclusion which may have far-reaching consequences. In short, the utterance interacts very significantly with Alan's current assumptions.

These three examples, 'I'm not using footnotes', 'The movie ends at 3.50', and 'the august umbrage can stay', can be ranked in two ways. First, they differ in the cognitive effects for the hearer, according to the extent to which the new information interacts with the hearer's current assumptions to produce changes in the hearer's stock of assumptions, including further assumptions derived by inference, and possibly decisions to act. Secondly, they can be ranked according to how much processing effort they provoke in the hearer. 'I'm not using footnotes in this book' presumably produces almost no cognitive processing, providing trivial information which may not be new and stimulating no inferences.

'The movie ends at 3.50' produces a moderately complex reasoning process but presumably does not involve much mental effort for Tom. For one thing, the existing assumptions which were also used were easily accessible to Tom's calculations; either they were connected to the familiar scenario of going to the local cinema or to Tom's plans for the afternoon, both counting as part of the topic of the conversation of the moment.

The last example produced quite an extensive processing effort for Alan, including the identification of a misquoted passage as one he had recently heard but not attended to, the creative leap to the assumption that Chester also heard the quote from Bridget, and the inference that Bridget has seen Chester without mentioning it, and that this demonstrates their guilt.

So the utterances can be compared on two scales, as in (40).

	cognitive effect (benefit)	processing effort (cost)
<i>footnotes</i>	minimal	minimal
<i>movie</i>	moderate/high	low/moderate
<i>umbrage</i>	high	very high

The probability that a hearer will actually follow a potential processing path presented by an utterance to draw further inferences from it (in association with existing assumptions) depends on the balance between cost and benefit. Generally, a hearer will process an utterance, achieving cognitive effects from it, only if the processing cost is not too high for the benefit gained.

The technical notion of **Relevance** on which Relevance Theory is based is defined in terms of the balance between cost and benefit. A highly relevant utterance (that is, relevant for the hearer) has high cognitive effects for low processing cost, and an utterance of low relevance has a processing cost which outweighs its potential cognitive effects. Relevance, then, is a property of utterances from the hearer's point of view, reflecting whether or not it is worth the hearer's trouble to work for understanding and for further inferences.

The discussion so far has not included the role of the speaker as a deliberate communicator, in particular as a deliberate implicator. Essentially, implicature arises where the speaker is confident that a potential utterance would be highly relevant for the hearer, and takes advantage of this. In normal successful communication all utterances are relevant, as both the speaker and hearer mutually recognize. If an utterance is relevant for the hearer, then the hearer will perform the required processing to achieve the anticipated cognitive effects, including the drawing of inferences. So the speaker has only to make the utterance to cause the hearer to arrive at the anticipated and intended inference(s).

Of the examples above, only 'The movie ends at 3.50' is a reasonable candidate for implicature.

'I'm not using footnotes in this book' produced little or no cognitive effects anyway.

In example (39), 'the august umbrage can stay', it is clear that Chester certainly did not intend to communicate to Alan that he had been seeing Alan's wife. So this is not an instance of implicature, which is a deliberate communicative tactic on the speaker's part. Even if Chester had intended to betray the secret, (39) was arguably so costly in terms of processing effort that Chester would not be justified in expecting Alan to follow the chain of reasoning through, even though the cognitive effects were substantial. For one thing, he couldn't count on Alan remembering the quote, assuming he knew Alan had heard it.

But 'The movie ends at 3.50' is just right. The moderately low processing effort is justified by the cognitive effect. Jenny (the speaker) could

confidently anticipate that Tom would perform the required processing and could judge that the utterance would be highly relevant for Tom, so long as she was familiar with Tom's background assumptions – chiefly, the distance from the cinema to the lecture hall and Tom's four o'clock lecture. So when Jenny said 'The movie ends at 3.50' she implicated 'You can see the film and be back in time for your lecture'.

11.5 LEVELS OF INFERENCE: IMPLICATURE AND EXPLICATURE

In discussing implicature so far, we have more or less taken for granted the meaning of what a speaker said, and worked forward from there to analyse the implicature. This gives two main propositions forming the communication. The **explicature** is what the speaker expressed explicitly, or what was said. Whether the speaker spoke truly or not rests on the truth or falsity of the explicature. The implicature is what the speaker conveyed implicitly, or in common parlance, what was implied.

Attention in pragmatics has generally focused on the role of contextual information in implicature, as defined in this two-way contrast, which suggests that pragmatics has little part to play, if any, in determining the explicature. One might assume, as Grice appeared to assume, that the explicature is just the literal meaning of the words the speaker uttered, given by core semantics.

But in fact there is almost always a gap between the literal meaning of an utterance and the explicature. Traditional semantics has long acknowledged three main areas in which contextual information is needed to establish a proposition for which truth conditions can be given: the disambiguation of ambiguous expressions, the assignment of reference to variables, and the interpretation of indexical expressions.

11.5.1 Disambiguation, Reference Assignment and Indexicality

Disambiguating ambiguous expressions is straightforward. Both lexical and structural ambiguity can be resolved by pragmatic considerations to identify which of two meanings a speaker actually expresses, as in (41).

- (41) a They've got that creamy duck on special at Forresters.
 b Everyone should bring a pencil.

The phrase *that creamy duck* in (41a) is lexically ambiguous. For example, if Forresters is a restaurant, *that creamy duck* refers to their special dish, roast duck in a spiced cream sauce. If Forresters is a fabric store, *that creamy duck* refers to a cream-coloured strong cotton twill. The structural ambiguity in

(41b) is a quantifier scope ambiguity, which common sense resolves here in favour of the surface order of the quantifiers, so we understand that each person should bring a separate pencil. Disambiguation in context also applies to most personal names such as *Bruce* and *Violet* – context allows the hearer to discern whether the speaker is talking about, for example, Violet Trefusis or the hearer's Auntie Vi.

The assignment of reference to variables includes personal pronouns and may also include simple tense time references, as illustrated in Section 7.7 with the examples repeated below.

- (42)a He'll never make it.
 (said while watching a man climb a ladder carrying two pots of paint, a scraper, a roller, a brush, a rag, putty, and sundry other items.)
 b I left your mail on your desk.
 c The plumber came and he'll send a quote.
 d Everyone came to dinner last night and Jones got tipsy.

The general context supplies the person referred to by *he* in (42a) and the time referred to by the past tense of *left* in (42b). The pronoun *he* in (42c) and the past tense of *got drunk* in (42d) both pick up the reference of some expression earlier in the sentence. In (42c) *he* takes the same referent as its antecedent, *the plumber*, and in (42d) the time at which Jones got drunk is the time of the party mentioned in the first conjunct. Here, the referent for the variable is identified through a linguistic context, but the connection between the variable (pronoun or time variable) and the expression it depends on is still established pragmatically, not by any automatic syntactic or semantic rule. In some cases the reference of a pronoun is established by syntactic rules, but not in the examples given here.

Indexical expressions, also called **deictic expressions**, are expressions which depend on the context of utterance in some systematic way for their interpretation. The classic examples of indexicality or deixis are words and expressions like those in (43).

- (43) yesterday today tomorrow
 last week this week next week
 last year this year next year
 I, we you, youse, y'all
 here
 now
 this, these that, those

The central anchoring points of an utterance are the identity of the speaker, the identity of the hearer(s), the time and place of the utterance,

and the position of the speaker. The expressions in (43) are interpreted in relation to these key points. For example, *yesterday* refers to the day before the day of utterance, *this morning* refers to the morning of the day of utterance, *you* refers to the hearer(s), and so on. *This, these, that* and *those* are deictic where the contrast between them is interpreted in terms of nearness to or distance from the speaker, as in *this one (here)* and *that one (over there)*. Demonstrative uses of *this, these, that* and *those*, canonically associated with a pointing gesture, are also deictic in that their reference depends on the gesture, which is a feature of the immediate context of utterance.

Tense is also indexical, as past, present and future are calculated as earlier than, overlapping with, or later than the time of utterance. As we have seen, in addition to placing the time spoken of in the past or future, simple tenses also commonly trigger the hearer to use wider contextual information to identify the specific time a speaker is talking about.

The term *indexicality* is also often used in formal semantic theory to cover a much wider range of contextual dependence, including the assignment of a reference to variables and names, and the identification of the domain for a restricted quantifier. In addition to the expressions given in (43), many writers class definite descriptions as indexical, because definite descriptions can be used in context to refer in a name-like way. The contribution of these kinds of contextual information to the explicature is illustrated in (44).

- (44) I saw Jean's new plane yesterday.
 (uttered 6 p.m., 25 October 1937)

The literal meaning for (44) is approximately as given below.

- (45) 'At a time before the time of utterance and overlapping the day before the day of utterance, x_{1s} saw Jean's aeroplane or woodscrapping tool which was just born, recently manufactured or recently acquired.'

The notation ' x_{1s} ' represents 'first person singular', and the ambiguous words *plane* and *new* are shown as disjunctions.

Pragmatic information can now be added to make this more precise, as follows:

- (46) (The speaker is Irma Smith. The hearer knows that Irma visited Jean Nagy, a friend of Irma's from woodwork classes, in the morning of 24 October 1937. The time of utterance = 6 p.m., 25 October 1937.)

I refers to Irma Smith

Jean refers to Jean Nagy

the past tense of *saw* identifies an event time before 6 pm, 25 October 1937

yesterday refers to the day before the day of utterance = 24 October 1937

the time of the event is during the day of 24 October 1937

add background context:

the time of the event is during Irma's visit to Jean Nagy on the morning of 24 October 1937

disambiguation:

her new plane refers to a woodscrapping tool which Jean has recently bought

Now we can compare Irma's utterance (47a), the literal meaning of Irma's utterance (47b), and the explicature for Irma's utterance, as represented in (47c). The truth condition for what Irma said is (47c).

(47)a 'I saw her new plane yesterday'.

b 'At a time before the time of utterance and overlapping the day before the day of utterance, x_{1s} saw Jean's new aeroplane or woodscrapping tool which was just born, recently manufactured or recently acquired.'

c 'During the morning of 24 October 1937 while visiting Jean Nagy, Irma Smith saw a woodworking tool which Jean Nagy had purchased shortly before 24 October 1937.'

We have identified five components of interpretation as summarized in (48).

(48)1 The literal meaning of the words uttered.

2 First pragmatic level:
reference assignment to variables, including tense; disambiguation of ambiguous expressions, including names; interpretation of indexical expressions, giving the explicature as output.

3 The explicature, the main truth condition for what was said.

4 Second pragmatic level:
further inferences taking the explicature as input, giving implicatures as output.

5 The implicature(s).

So far, the operations in the first pragmatic level, which provide input to the explicature, are not the same as the operations of the second pragmatic

level, which construct implicatures. Given that the explicature is the main truth condition for an utterance, it is obviously desirable if possible to have a clear picture of the explicature – what is actually said – distinguished from the implicature – what is additionally implicated/inferred. This distinction depends to a considerable extent on the distinction between the first and second pragmatic levels. Accordingly, the question arises whether or not any further processes, usually associated with conversational implicature, also operate at the first level. This question is discussed in the next section.

11.5.2 Further Pragmatic Contributions to Explicature

The discussion in this section is based on work by Robyn Carston, particularly her paper 'Implicature, explicature and truth-theoretic semantics' (1988).

Carston draws attention to a range of examples which demonstrate the need for further pragmatic input to explicatures, in addition to the pragmatic contributions to explicature outlined in the previous section. To begin with, there are vague statements like (49).

(49) The park is some distance from my house.

To calculate the explicature, we apply the familiar processes of reference assignment, disambiguation and interpretation of indexicals. In this example the quantifier NP *the park* will also be interpreted in context as referring to a particular park. This gives (50) as the purported explicature, assuming the park to be Hyde Park and the speaker to be Soames Forsythe.

(50) A distance exists which is the distance between Hyde Park and 62 Montpelier Square.

Now recall that whether or not Soames speaks truly depends on the truth of the explicature, so Soames speaks truly if and only if (50) is true. But given that the house is not actually in Hyde Park, obviously there is *some* distance between the house and the park, even if the park is right across the street from the house. So if (50) really is the explicature, Soames speaks truly even if he lives across the street from the park, which runs counter to our strongest intuitions: surely in uttering 'The park is some distance from my house', Soames actually said that his house and the park are quite a large distance apart. (What distance counts as large will also depend on the context.) If in fact he lives across the street from the park, he spoke falsely. Suppose that an acquaintance has asked if Soames walks in the park frequently. In this case the explicature for (49) might be something like (51).

- (51) The distance between Hyde Park and 62 Montpelier Square is so great that it would not be convenient to walk from 62 Montpelier Square to Hyde Park (and back again) in order to walk in Hyde Park.

The extra information in (51) is not drawn from assigning reference to variables, interpreting indexical expressions or resolving ambiguity. Similar examples are in (52).

- (52)a It will take us some time to do this.
(a long time)
- b They have money.
(a lot of money)
- c Hold the noise down for a minute. I think I heard something.
(something other than the noise you are making, and unexpected or requiring investigation).

The need to enrich the explicature is also demonstrated by examples like (53).

- (53)a We don't have enough rice.
b The park is too far from the house.

Here the words *enough* and *too* signal that the amount of rice and the distance to the park are estimated in relation to some purpose or projected action which is not mentioned. This content is provided explicitly in (54), where the underlined parts are complements to *enough* and *too*.

- (54)a We don't have enough rice to make curry and rice for three people.
b The park is too far away from the house to walk the distance in half an hour.

Again, whether or not the speaker speaks truly depends on the extra content. The third kind of example Carston raises concerns the interpretation of *and*. One of Grice's main purposes in identifying implicature was to consign the variability of interpretation of *and*, *or* and *if* to pragmatics. If this can be done, then the logical analyses (that is, the meanings given by the truth tables) can be retained as the actual semantic content of these words.

Different interpretations for *and* are illustrated in (55)–(58). In each pair, the underlined part of the (b) example shows the extra information added to logical conjunction.

- (55)a Alice opened the wine and poured a glass.
b Alice opened the wine and after that poured a glass.

- (56)a Jackie has won the Golden Kiwi and she's going to pay off the mortgage.
b Jackie has won the Golden Kiwi and as a consequence she's going to pay off the mortgage.

- (57)a Stephen was tuning his bike and he was listening to the cricket.
b Stephen was tuning his bike and simultaneously he was listening to the cricket.

- (58)a We looked into your Mr Sutton and he has been fiddling his taxes for years.
b We looked into your Mr Sutton and consequently we discovered that he has been fiddling his taxes for years.

It has been suggested that *and* should be treated as an ambiguous word, with many readings including those shown in (55)–(58). In fact, the readings associated with *and* in these sentences do not depend on the presence of *and*, but are chiefly conveyed by the order in which the clauses appear, as shown in (59).

- (59)a Alice opened the wine. She poured out a glass.
b Stephen was tuning his bike. He was listening to the cricket.
c We looked into your Mr Sutton. He has been fiddling his taxes for years.

This shows that the variable readings are pragmatically associated with the combination of sentences in a certain order (along with *and* where it appears), rather than semantically coded in *and*. Carston's main point is that this pragmatic content is not implicature, but must be included in the explicature. The evidence for this is reviewed below.

The distinction between explicature and implicature is clearly shown with *yes/no* questions and responses in rebuttal or agreement. Implicature in these frames is illustrated in (57).

- (60) (Jones is generally scruffy, but tidies himself up from time to time when he has a girlfriend. His friends are familiar with this pattern.)
a A: Jones has transformed himself again recently.
(**implicature:** Jones has a new girl.)
B: No he hasn't.
b A: Has Jones tidied himself up lately?
B: Yes, he has.

The point here is that B's response in rebuttal in (60a) can only target the explicature, and so contradict the assertion that Jones has tidied himself up.

It cannot be understood to contradict the implicature, meaning 'No, he hasn't got a new girl'. In the context, A's question in (60b) can implicate the query 'Has Jones's got a new girl?', and again, B's response can only address the explicated question about Jones appearance, not the implicated question about Jones's love life.

The extra content with *and* does not behave like implicature in similar examples, as shown in (61). Here the 'subsequently' content, giving the order of events, is used.

- (61) A: (to director) I light her cigarette and she smiles, right?
B: No, she smiles and you light her cigarette.

Here it is clear that the order of events is the target of B's response, which indicates that the 'subsequently' content is included in the explicature.

Carston cites more complex examples which show that the extra content associated with *and* can be crucial in determining the logical properties of utterances. Her examples include (62) below.

- (62)a If the old king died of a heart attack and a republic was declared Sam will be happy, but if a republic was declared and the old king died of a heart attack Sam will be unhappy.
b $p =$ the old king died of a heart attack
 $q =$ a republic was declared
 $r =$ Sam will be happy
c $((p \& q) \rightarrow r) \& ((q \& p) \rightarrow \sim r)$

Recall that if the extra 'subsequently' content of *and* is implicature, then the content of *and* at the level of explicature is simply logical conjunction, where $p \& q$ is equivalent to $q \& p$. Then, with the values for p and q as given in (62b), the sentence in (62a) has the form in (62c), which is a contradiction. But it is clear that (62a) spoken or even written on any occasion is not understood as contradictory, and can be true. So the explicature expressed by any use of this sentence must include the 'subsequently' content pragmatically associated with *and*. Similar examples from Carston's paper are given below.

- (63)a He didn't steal some money and go to the bank; he went to the bank and stole some money.
b $p =$ he stole some money
 $q =$ he went to the bank
c $\sim (p \& q) \& (q \& p)$

(64)a It's better to meet the love of your life and get married than to get married and meet the love of your life.

- b $p = x$ to meet the love of x 's life
 $q = x$ to get married

($p \& q$) is better than ($q \& p$)

- c 'x is better than y' entails ' $\sim x = y$ '

(65)a Either she became an alcoholic and her husband left her or her husband left her and she became an alcoholic, I'm not sure which.

- b $p =$ she became an alcoholic
 $q =$ her husband left her

c $((p \& q) \vee (q \& p)) \& \sim ((p \& q) \& (q \& p))$

In summary, both the explicature and the implicature(s) (if any) may include pragmatic content, and so the domain of pragmatics is not confined to what Grice identified as implicature. Moreover, pragmatic content in the explicature may go beyond the assignment of reference to variables, disambiguation and the interpretation of indexical expressions.

11.5.3 Differentiating Explicature and Implicature

We now return to a point that was raised earlier. If we are to confidently identify the explicature (what was said) and distinguish it from any implicatures (what was implied), we want to separate the two kinds of pragmatic processes that contribute to the two levels.

Now a key property of implicature as first discussed by Grice is that implicatures are fully distinct from and logically independent of what the speaker actually says. For example, the explicature of the utterance 'The movie ends at 3.50' is a completely independent proposition from the implicature 'You (Tom) can see the film and still attend your 4.00 lecture' – neither of these propositions entails the other. The lack of a logical relationship between explicature and implicature was the chief point that required explanation, given that we seem to derive one from the other.

As Carston points out, the explicature and the literal meaning of an utterance are not independent and distinct in this way, as the explicature is an elaborated form of the literal meaning. Example (46), repeated below in (66), shows that the explicature entails the literal meaning, but not vice versa. The literal meaning would entail the explicature only if the two were identical.)

- (66)a 'I saw her new plane yesterday.'
b **literal meaning:** (day of utterance = 25 October 1937)

'At a time before the time of utterance and overlapping the day before the day of utterance, x_{14} saw Jean's new aeroplane or wood-scraping tool which was just born, recently manufactured or recently acquired'.

c **explicature:**

'During the morning of 24 October 1937 while visiting Jean Nagy, Irma Smith saw a woodworking tool which Jean Nagy had purchased shortly before 24 October 1937.'

In short, an explicature entails the literal content of the expression uttered, but an implicature does not. Accordingly, Carston proposes that explicature is characterized by its lack of functional independence from the literal sense.

The pragmatic processes which contribute to the explicature are all ways of filling in a framework provided by the literal sense. The literal sense is still contained in the explicature and entailed by it. The linguistic form of the utterance provides clues guiding the construction of the explicature, and accordingly Carston characterizes the pragmatic processes at this level as 'linguistically directed enrichment'.

The main pragmatic processes in constructing the explicature are summarized below.

- i. **Assigning reference to variables**
linguistic trigger: pronouns, tense, etc.
- ii **Disambiguation:**
linguistic trigger: ambiguous words, including names or ambiguous structures
- iii **Interpreting indexical expressions**
linguistic trigger: indexical expressions such as *you*, *tomorrow*, tense, etc.
- iv **Filling in ellipsis**
linguistic trigger: syntactic ellipsis, such as *There isn't enough (for what?)*, *It's too hot (for what?)*, etc.

11.6 CLOSING COMMENT

The main theme of this chapter is to show that pragmatically derived meaning, variable from one context to another and from one set of participants to another, is not separate from what we take to be the basic meaning of what a speaker says. Generally, language is not a complete coding device into which we translate completely specified propositions for transmission, and the

literal meaning of a sentence as analysed by basic semantic theory falls far short of what a speaker would communicate by uttering that sentence on a particular occasion. Even setting aside what we implicate, insinuate, suggest, or hint, much of the time what we plainly say is dramatically underdetermined by the literal meaning of the words we utter.

This is not to claim that human language cannot encode more precise explicatures as the literal meaning of sentences. While talking to her friend, instead of 'I saw Jean's new plane yesterday', Irma Smith could have said 'The present speaker, Irma Smith, during the morning of the twenty-fourth day of the month of October in the year numbered 1937 in the Julian calendar incorporating the Gregorian correction (being the day prior to the day on which the speaker, Irma Smith, is speaking), while visiting Jean Nagy did see a woodworking tool used for shaving timber which Jean Nagy purchased between three and five days prior to the twenty-fourth day of the month of October in the year numbered 1937 in the Julian calendar incorporating the Gregorian correction (being the day prior to the day on which the present speaker, Irma Smith, is speaking)'.

Irma Smith could have expressed herself more explicitly, but fortunately she didn't have to.

The expressive power of natural language rests largely on its interaction with context, and on what does not need to be explicitly stated. If language was not designed to be interpreted in a context (that is, if it was not indexical in the broader sense), every name would have to have a unique bearer, every use of a definite description would have to completely identify the referent, every use of a quantifier would have to state the background set, all ambiguous words such as *bank*, *settle*, *drive*, *duck*, which normally give us no problems, would have to be replaced with nonambiguous sets of words, each with one meaning only, and so on. To express the range of meanings we can now express, a language would have to have a vocabulary so vast that it might well defeat human powers of memory. We would be constantly groping for the right word.

Without indexicality, we couldn't use demonstratives to refer. Faced with some unidentified object, we couldn't ask 'What is that?', because we couldn't use *that* to refer. Speaking of past and future events without indexicality would be extraordinarily difficult, perhaps impossible, as the very concepts of past and future are indexical. In any case, the fully explicit expression of what we want to say would require an unmanageable degree of prolixity.

As things are, the literal meaning of a sentence lays down a framework which determines the set of propositions, perhaps infinitely many, that a speaker can express by uttering the sentence. But the context allows the hearer to identify which of these propositions the speaker actually expressed.

EXERCISES

(A) Basic Review of Grice's Maxims

In the dialogue below, identify the implicatures (if any) of each utterance, and state how Grice's Maxims are involved in calculating them. The different utterances are numbered for convenience.

- 1 Adam: I need a hand to get this piano upstairs.
- 2 Barry: Oh ... my practice starts in ten minutes.
- 3 Adam: Mmm ... I wonder if Jim next door is home.
- 4 Barry: The Volkswagen is in the drive.
- 5 Adam: Do you think it's a bad time to ask?
- 6 Barry: Well, he really hates missing the six o'clock news.
- 7 Adam: I'll wait till you get back.

(B) Q- and R-Implicatures: Discussion

As we saw in Chapter 2, *if* can be interpreted as 'if and only if', written as *iff*. This is a likely interpretation for *if* in

If the fingerprints match then Jones is guilty.

Assume that the basic meaning of *if* is logical implication, and the biconditional interpretation arises through implicature. In Horn's system, is this R-implicature or Q-implicature, and why?

(C) More Q- and R-Implicatures: Discussion

The frames illustrated below are considered to be diagnostic of informational strength scales such as *< some all >*, on which scalar implicature is based.

- (1) Some of them, if not all of them, have left.
- (2) Some of them, indeed all of them, have left.
- (3) Some of them, even all of them, have left.
- (4) # All of them, if not some of them, have left.
- (5) # All of them, indeed some of them, have left.
- (6) # All of them, even some of them, have left.

Can the examples below be reconciled to the notion of strength scales, and if so, how?

- (7) Three workers, if not two/indeed two/even two, will finish this in a day.
- (8) This soap dissolves in hot, indeed warm water.

- (9) If everyone or even anyone objects then we'll reconsider the plan.
- (10) If every tree, indeed any tree, is felled we are likely to lay charges.

(D) Basic Review of Explicature and Implicature

Analyse the literal sense, the explicature and the implicatures (if any) of the italicized utterance in each example below. Use informal paraphrases like the ones used in Section 11.5. Identify the information added at each level and state how it is provided.

- (1) A group of friends are about to go out for dinner to a busy restaurant where they don't have a table booked. Alan has wandered off and started reading the paper. Lucy comes to find him.
Lucy: *Everyone's waiting.*
- (2) Amy and Brian are making a list of people to invite to a picnic on Sunday.
Brian: ... and I'll ring Gareth and Carrie and Leo.
Amy: *Oh but she'll bring Donald.*
- (3) Amy and Brian are making a list of people to invite to a picnic on Sunday.
Brian: ... and I'll ring Gareth and Carrie and Leo.
Amy: ... and she'll bring Donald.
- (4) Morse: We know the documents were locked in that cabinet at four and found to be missing at six thirty when Donald Barrett needed them for the meeting. The secretary had the afternoon off and left at twelve, which leaves Barrett, Jeremy Lamb and Maria McLeay in the office at some time in the afternoon.
Lewis: *Lamb doesn't have a key.*

(E) Relevance in Narrative Interpretation: Discussion

The mechanisms for recovering pragmatic meaning in conversation seem also to operate in other linguistic texts, such as narrative. In the passages below, identify all the gaps in the literal meaning which you can fill from context. Do you think the information you add belongs in the explicature or the implicature?

- (1) I am glad Rex never saw a trained police dog jump. He was just an amateur jumper himself, but the most daring and tenacious I have ever seen. He would take on any fence we pointed out to him. Six feet was easy for him, and he could do eight by making a tremendous leap and hauling himself over finally by his paws, grunting and straining; but he

lived and died without knowing that twelve-and sixteen-foot walls were too much for him. Frequently, after letting him try to go over one for a while, we would have to carry him home. He would never have given up trying.

(James Thurber (1945), 'Snapshot of a Dog' in *The Thurber Carnival*, London, Penguin)

- (2) We went out at the French doors and along a smooth red-flagged path that skirted the far side of the lawn from the garage. The boyish-looking chauffeur had a big black and chromium sedan out now and was dusting that. The path took us along to the side of the greenhouse and the butler opened a door for me and stood aside. It opened into a sort of vestibule that was about as warm as a slow oven. He came in after me, shut the outer door, opened an inner door and we went through that. Then it was really hot.

(Raymond Chandler (1939), *The Big Sleep*, London: Hamish Hamilton)

(F) Implicature and Explicature: Discussion

Section 11.5.3 outlines ways of differentiating the explicature and implicature(s) of an utterance. Is the distinction made here compatible with Horn's theory of Q and R implicatures, outlined in section 11.3?

(G) Context Dependence: Discussion

The example below, repeated from section 11.5, was an illustration of an explicit utterance, in an attempt to make the literal meaning express the explicature. Is the passage below in fact quite independent from pragmatic input?

The present speaker, Irma Smith, during the morning of the twenty-fourth day of the month of October in the year numbered 1937 in the Julian calendar incorporating the Gregorian correction (being the day prior to the day on which the speaker, Irma Smith, is speaking), while visiting Jean Nagy did see a woodworking tool used for shaving timber which Jean Nagy purchased between three and five days prior to the twenty-fourth day of the month of October in the year numbered 1937 in the Julian calendar incorporating the Gregorian correction (being the day prior to the day on which the present speaker, Irma Smith, is speaking).

FURTHER READING

For pragmatics and implicature, see Levinson (1983), Blakemore (1992), and other introductions to pragmatics. A general discussion of the Maxims is in Green (1990). The most commonly cited of Grice's papers is 'Logic and Conversation' (1975). Neale (1992) provides an accessible review of Grice's philosophy of language.

Horn's theory of Informativeness-based Implicature is outlined in Horn (1984) and in sections of Horn (1989). A similar view is outlined in Chapter 3 of Gazdar (1979).

The main work on Relevance Theory is Sperber and Wilson (1986), revised edition (1995). Blakemore (1992) is a students' introduction to Relevance Theory, and Blakemore (1995) provides a summary of the theory. A précis of the theory is also given in Sperber and Wilson (1996).

Pragmatic inputs to implicature and explicature are discussed in Carston (1988). A detailed discussion of pragmatic inference is in Wilson and Sperber (1986). Lakoff (1971) provides an extensive discussion of the interpretation of conjunction with *and*.