

INFERENCE: PROCEDURES & IMPLICATIONS FOR TEFL

Part 1: Background

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INTRODUCTION

Inferencing (commonly referred to as "reading/ listening between the lines") is essential for effective communication. Firstly, "discourse rarely provides us with a fully explicit description of a situation" (Eysenck, 1990: 224); therefore, we usually have to fill in the missing information (Clark & Clark, 1977: 96-98). Secondly, the conventional meaning of lexis is not always a clear indicator of the intended message of speakers/writers.

But how is inferencing achieved? That is, how do we understand more than what is in the actual words, or something different from what the words seem to mean? What knowledge and clues do we use? What thinking processes take place in our minds?

I will discuss the clues given by speakers/ writers and the clues and thinking processes used by listeners/ readers in order for successful inferencing to take place. This outline will draw from Pragmatics, Discourse Analysis and Psycholinguistics. I will go on to present and comment on examples of how those clues can be exploited successfully for effective communication to take place. Then, I will discuss implications for the learning/teaching of English as a foreign language.

CONTEXT

It is a truism worth stating here that language is not used in a vacuum, but in specific situations, by people who want to achieve specific purposes. The physical, social and psychological background in which language is used has been termed "context" (see Brown & Yule, 1983: 36-46; Crystal, 1991: 79; Halliday & Hasan, 1989: 5-9; Levinson, 1983: 23). The basic elements of context are:

- Participants: speaker(s)/writer(s) and listener(s)/reader(s) (actual or intended)
- Relationship between participants
- Topic
- Setting (place & time)
- Purpose (what speakers/ writers want to achieve)

Language out of context only has potential for meaning. In other words, the same "sentence" can have different meaning in different contexts. Let us take for example the following question:

What do you think?"

- Context 1. Two friends shopping. One of them tries on a pair of shoes, looks at the other and asks "What do you think?" (= Do you think they suit me? I Should I buy them?)
- Context 2. Wife comes in the house all wet. Husband asks "Is it raining?". Wife answers "What do you think?" (= Of course it is).

An interesting observation is that whereas in context 1 the speaker is asking a genuine question, in context 2 the speaker doesn't expect a response.

A useful distinction has been made between context (as defined above) and co-text, that is the text preceding and following the stretch of language we aim to interpret (Brown & Yule, 1983: 46-50. See also the sections on cohesive ties in text and new & given information in discourse below).

In order to clarify further the nature and use of contextual knowledge, I would like to stress the following points. Firstly, knowledge of context is not an either/or affair, but depends on the number of elements that a listener/ reader knows. Secondly, In cases when listeners/ readers have partial knowledge of context they can use the given elements of context, the co-text and relevant background knowledge to infer the missing contextual elements. Thirdly, full knowledge of context is not always essential for successful interpretation (see also Levinson, 1983: 22-23). Brown & Yule (1983: 59) present the "principle of local interpretation", which "instructs the hearer not to construct a context any larger than he needs to arrive at an interpretation". Finally, when listeners/ readers try to interpret language out of context they use "a set of background assumptions about the contexts in which [the particular stretch of language] could be appropriately uttered" (Searle, 1979 in Levinson, 1983: 8).

BACKGROUND KNOWLEDGE

Apart from knowledge of language and context, listeners/readers need to make use of background knowledge relevant to the context, in order to interpret the messages of speakers/writers. For example, let us take the following exchange:

Text 1. (from Brown & Yule, 1983: 226):

- A: What time is it?
B: Well, the postman's been already.

In order for A to make use of B's reply, A doesn't just need to understand the language, but also to know what time the postman usually comes.

A number of models have been proposed regarding the way knowledge is represented in the mind and used in interpretation. What seems to be common ground in the different models is that we keep stored in our minds stereotyped representations of places, situations, event sequences, participants etc. (sources: Brown & Yule, 1983: 238-255; Clark & Clark, 1977: 166-168; Eysenck, 1990: 261-273; Singer, 1990: 98-110). For example, when the topic is "going to the dentist" the knowledge we will activate may include any of the following:

- place & organisation (waiting room, surgery - which we expect to be next to each other)
- objects, their position & layout (chairs & magazines in the

waiting room; dentist's equipment in the surgery), as well as their expected size, weight, texture, colour etc.

- participants (dentist, secretary, nurse, other patients) and their roles
- activities (drilling, filling a tooth), their sequence and their results
- sounds (drilling)
- smell (camphor)
- feelings (anxiety)

These representations are modified and expanded according to our experience. When interpreting language, the nature and quantity of knowledge that is activated will depend on the particular context, co-text and our needs. Let us consider Text 2 below in a "dentist" context:

Text 2.

I tried to read to keep my mind occupied, but the sound kept reminding me of what was to follow.

It is clear that we don't need to activate all possible elements of knowledge for successful interpretation of Text 2.

COHESIVE TIES IN TEXT

We can define cohesion as the "glue" which links the

elements of a text (Crystal, 1991: 61; Richards et. al., 1992: 62). Speakers/ writers help listeners/ readers interpret texts by:

- referring to something outside the text (exophoric co-reference); e.g. "Not this one, the other one".
- referring to something in the text (endophoric co-reference). This can be reference to what has already been mentioned (anaphoric co-reference), or reference to something that follows (cataphoric co-reference).
- signalling the relation between parts of the text (e.g. addition, comparison, contrast, cause, result).
- making explicit the sequence of events (e.g. enumeration, use of tenses).

(Sources: Brown & Yule, 1983; Halliday & Hasan, 1976.)

It should be noted that the words/expressions creating cohesion are not necessarily found in adjacent sentences; cohesion can still be created when the cohesive devices are further apart. Table 1 below provides an outline of the different ways in which speakers/writers can create cohesion (sources of categories: Brown & Yule, 1983: 191-194; Halliday & Hasan, 1976; Malkmjaer, 1991: 463-464; Nunan, 1993: 21-32; Salkie, 1995).

Category	Examples & Comments
Repetition	<ul style="list-style-type: none"> • 'Crunchy Crisps. The crunchiest crisps you've ever tasted. ' • 'The more you know about whiskey, the more you appreciate Brand X'
Synonyms & antonyms	<ul style="list-style-type: none"> • 'I came home feeling exhausted. ... There was a message on the answering machine about a party, but being knackered I just ignored it. ' • 'The teacher's enthusiasm can make even the most indifferent learner show interest in the lesson. ' <p>The second example shows that cohesion through synonymy/antonymy can also be created when the two words are not the same part of speech.</p>
Hyperonyms, hyponyms & related lexis	<ul style="list-style-type: none"> • 'Although he likes milk, he won't touch other dairy products.' <p>Here 'milk' (the hyponym) is a type of 'dairy product' (the hyperonym).</p> <ul style="list-style-type: none"> • 'They've also got a Labrador. He's adorable, but the little devil has chewed every shoe in the house. ' <p>This is an example of the use of what Halliday & Hasan (1977: 274-277) term "general noun" (<i>devil</i> - here modified by <i>little</i>).</p>
Pronouns & Possessives	<ul style="list-style-type: none"> • 'Mr Peterson was here yesterday evening. He seemed to be fine. ' • 'True, Ed's got a fast car, but mine is more reliable. '
Demonstratives	<ul style="list-style-type: none"> • 'I'll try to reason with him first. If that fails, I'll take him to court. '
Substitution	<ul style="list-style-type: none"> • 'I don't need a new computer. The one I've got works fine. ' • 'I am a social smoker, and so is my husband'.
Ellipsis	<ul style="list-style-type: none"> • 'Your second assignment is much better than the first — . ' <p>The word 'assignment' is not repeated.</p>
Connectives	<p>Lexis denoting <i>addition</i> (and, furthermore), <i>opposition/contrast</i> (but, nevertheless), <i>cause</i> (because, therefore) and <i>time orientation/sequence</i> (then, before).</p>

Table 1. Cohesive devices.

Halliday & Hasan (1977:4) argue that cohesive relations as outlined above define a stretch of language as a text; in other words such relations help readers/listeners decide whether "a passage of language which is more than one sentence in length ... forms a unified whole or is just a collection of unrelated sentences" (op.cit: 1). Brown & Yule (1983: 199-204) express a number of caveats regarding this view of cohesion. Following are the ones which are directly relevant to our discussion.

The presence of cohesive ties does not ensure that a sequence of sentences should be treated as a text. Although quite a lot of cohesive devices are used in Text 3 below, the result is not a unified text.

Text 3.

*Cooking is seen by some as an art. Some **artists** become famous after their **death**. **Life after death** is a oel/ef shared by most **religions**. **Religious** conflicts sometimes result into war.*

Availability of cohesive devices alone does not ensure successful interpretation. In Text 4 below, the reader needs to have the necessary context and background knowledge in order to understand the function of and information in the text. (See also background knowledge above).

Text 4. (From The Wire, Issue 182, April 1999).

*From the beginning Trans Am struck a truce between Progressive, Shellac-like **rock** and low-cost avant electronics. No two Trans Am records are alike - on the earlier *The Surveillance*, traces **of electronica** were masked by a full-blown homage to garage **rock**, while *Futureworld* contains just a one guitar-driven **track**.*

NEW & GIVEN INFORMATION IN DISCOURSE

Speakers/writers usually use linguistic devices to mark entities (people, objects, ideas, information etc.) as "new" or "given". In the narrow sense, "new" entities are the ones which are mentioned for the first time, or are mentioned again after a long stretch of text, and "given" are the ones the speaker/ writer has already mentioned. "New" entities are introduced by naming or the indefinite article; for "given" entities the definite article or pronominal reference is used. (See Brown & Yule, 1983: 169-179). Consider the following examples:

Text 5. (from The Economist, 8.5.1999)

*It **is a battle** about how far countries are willing to accept constraints on domestic policy... **The battle** is putting huge strains on the World Trade Organisation.*

Text 6. (from The Economist, 8.5.1999)

***Music companies** may soon be able to stop worrying about piracy on the Internet. Instead, **they** will need to start worrying about what **they** are **for**.*

In reality, what speakers/writers treat as "new" or "given" is influenced by what they expect their listeners/readers will have in mind when interpreting a particular stretch of text (see Brown & Yule, 1983: 169-189; Clark &

Clark, 1977: 91-93). Text 7 below illustrates the point:

Text 7.

*Ted bought an **expensive computer system**, but only after a week **the screen** broke down.*

Here the treatment of "the screen" as a given entity is based on the assumption that the previous mention of a "computer system" has lead listeners/ readers to think of all the components of such a system, and therefore "screen" was on their minds when listening to or reading the second part of the text.

COMMUNICATION CONVENTIONS & IMPLICATURE

The notion of *implicature* was introduced by Grice (1975) to account for the distinction between what is **said** and what is **implicated** by a speaker, or in other words "what the speaker can imply, suggest, or mean, as distinct from what the speaker literally says" (Brown & Yule, 1983: 31). Leech (1983: 17 & 30-35) uses the terms "sense" ("meaning as semantically determined") and "force" ("meaning as pragmatically, as well as semantically, determined"). He stated that "the force will be represented as a set of implicatures".

Grice's point of departure, and the cornerstone of his proposal, is that human interaction has a set of purposes, or a "direction" mutually recognised and accepted by both interlocutors (Grice, 1975: 45-48). He summarised those shared conventions in the *Co-operative Principle* and its *Conversational Maxims* (see Table 2). Grice presents his framework more as a proposal to build upon than a fully worked out theory, and leaves several issues open to further discussion. For instance, he recognises the possibility of the need for more maxims (tentatively proposing a fifth: "be polite"). Leech (1983) introduces a set of further principles, each with its own maxims. He particularly highlights the *Politeness Principle* as a "necessary complement" of the co-operative principle (op.cit: 80) (see Table 2)

CO-OPERATIVE PRINCIPLE (Grice, 1975)

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 engaged.

Maxim of Quantity

Make your contribution as informative as is required.
Do not make your contribution more informative than is required.

Maxim of Quality

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

Maxim of Relation

Be relevant

Table continues on next page

Maxim of Manner

Avoid obscurity of expression.

Avoid ambiguity.

Be brief (avoid unnecessary prolixity).

Be orderly.

THE POLITENESS PRINCIPLE (Leech, 1983)**Tact maxim**

Minimise cost to other

Maximise benefit to other

Generosity Maxim

Minimise benefit to self

Maximise cost to self

Approbation Maxim

Minimise dispraise of other

Maximise dispraise of self

Modesty Maxim

Minimise praise of self

Maximise dispraise of self

Agreement Maxim

Minimise disagreement

Maximise agreement

Sympathy Maxim

Minimise antipathy

Maximise sympathy

THE IRONY PRINCIPLE (Leech, 1983)

If you must cause offence, at least do so in a way that doesn't overtly conflict with the Politeness Principle, but allows the bearer to arrive at the offensive point of your remark *indirectly*, by way of implicature.

Table 2. Summary of conventions/principles governing human verbal interaction.

What seems to have been excluded from the discussion of implicature is the manipulation of pauses and phonological features in spoken language, as well as punctuation and letter-type in written language. It can be argued that manipulation of such features aiming at leading listeners/ readers to work out implicatures is compatible with Grice's proposals, as these features can be used by speakers/ writers to flout the Maxim of Manner. Let us take Text 8 as an example:

Text 8. (From the BBC video Black Adder the Third, BBCV5713, 1995)

As a reward Baldrick, take a short holiday. ... (2" pause) ... Did you enjoy it?

The pause before the question helps the listener to identify the duration of the pause as the duration of the 'short holiday'.

MAXIMS & CULTURE

A debatable aspect of Maxims and implicatures is their universality. Grice (1975) seems to imply that this is the case, since he makes no mention of culture-specific maxims or ways of working out implicatures. Similarly, Levinson (1983: 120-121) argues for the universality of conversational implicatures on the grounds that "if the maxims are derivable from considerations of rational co-operation, we would expect them to be universal in application, at least in co-operative kinds of interaction".

Conversely, Keenan (1976) argues that "in developing such notions, philosophers likely reflect on conversational conduct as it operates in their own society". Keenan, after investigating the communication conventions in Malagasy (the language of Madagascar) discovered the following.

- Speakers are not expected to observe the Quantity Maxim and regularly provide less information than is required even if they have the information the listener needs. This is because in a closed community "new information is a rare commodity" and the ones who have new information "are reluctant to reveal it", as having access to information that others don't have gives them "some prestige" over the others (op.cit. 70). Keenan (1976: 76-77) notes that the Quantity Maxim is more likely to be disregarded when the information is significant, the interlocutors are not familiar with each other, or the speaker is a man. This leads to the interesting observation that in Malagasy society "the same utterance may have different conversational implicatures, depending on whether the speaker is a man or a woman ... for a woman may be expected to answer the question fully if they have the information desired" (op.cit.: 78).
- Use of an indefinite expression to refer to an individual (e.g. / see a person) does not lead listeners to infer that the person is not *familiar* to the speaker. This is because in Malagasy society it is considered bad form to refer to someone using their personal name, and prefer to use a nickname, the person's occupation, sex or age, or even refer to someone as 'person' (Keenan, 1976: 72-74).

Furthermore, Gumperz (1982) and Jupp et.al. (1982) discuss cases of intercultural miscommunication, several instances of which are attributed to "misreadings of intent" between interlocutors. Let us examine the following examples.

- Context: A house painter (American), visiting the house he is assigned to paint, looks at some paintings on the wall and asks the owner (British) "Who's (he *artist*?" The owner answers "*The painter is not well known. He's a modern London painter named X.*" The painter hesitates and says "*I was wondering if someone in the family was an artist.*" The source of the misunderstanding here is the lack of knowledge on the part of the owner of the fact that the question was meant to be complimentary of someone in the household - in the same way that a guest, by noticing a musical instrument in the house, may ask "Who's the musician?". (Source: Gumperz, 1982: 144-145)

- Context: Interview of South Asian applicant by a British interviewer (both male). Towards the end of the interview the interviewer asked "Why are you applying for this particular job?" The applicant failed to understand that the question was meant to elicit the aspects of the job that the applicant found appealing and/or relevant to his career. Instead he understood the question as meaning "Why do you want a job?" and responded accordingly. This was also the interpretation of a number of other South Asians asked by the researchers. (Source: Jupp et.al., 1982: 252)

In both cases above, the misreadings seem to stem from the interlocutors failing to detect the culture specific clues which were meant to lead them to recognise the existence of the underlying implicature. Another reason for the misreadings may be that utterances that carry conventional implicatures in one culture may be taken at face value by speakers from another culture, and vice versa. Furthermore, Coulthard (1985: 53) notices that "one complicating problem for foreigners is that speech communities differ in the relative weight they give to positive and negative politeness and the amount of politeness they require in informal situations."

TYPES OF IMPLICATURE

Implicatures can be categorised in two ways, according to whether they depend on (a) the Co-operative Principle and its Maxims, and (b) a particular context.

a. Regarding the Co-operative Principle & Maxims.

- Conventional:** They are not derived from the Co-operative Principle and its Maxims, but are "attached by convention to particular lexical items or expressions" (Levinson, 1983: 127). Leech (1983: 26) gives the example of good *luck* and *bad luck*. Although their structure is similar (*good/bad* + *luck*) their straightforward meaning/use is distinctly different: '*good luck*' is a wish, whereas '*bad luck*' expresses sympathy.
- Non-conventional:** They are not part of the conventional meaning of linguistic expressions. Listeners/readers need to use available clues to work out the non-conventional implicatures of speakers/writers (Grice, 1975: 50; Levinson, 1983: 117).

b. Regarding Context.

- Generalised:** They don't depend on a particular context for their interpretation. For example, '*I walked into a house*' will be understood to implicate that the house was not mine (Levinson, 1983: 126).
- Particularised:** They can only be worked out with knowledge of context.

For examples see IMPLICATURE & INFERENCE AT PLAY (next issue).

MAXIMS & SPEAKER/WRITER OPTIONS

As regards the maxims outlined above, speakers have the following alternatives (Grice, 1975: 49; Levinson, 1983: 104 & 109):

- They can **observe** a maxim (i.e. adhere to it).
- They can **violate** a maxim (i.e. secretly not adhere to it).
- They can **opt out** (i.e. make it clear that they are unwilling

to adhere to it).

- They may be faced with a **clash** (i.e. be unable to fulfil one maxim without violating another).
- They can **flout** (or **exploit**) a maxim (i.e. clearly and purposefully fail to fulfil a maxim).

The last option presents the greatest interest for our discussion, as it is the one which speakers/ writers exercise to communicate meanings beyond the conventional meaning of the words they use. Following are two examples showing Grice's maxims 'in action'.

Text 9. (adapted from Yule, 1996: 36)

⇒ What is the problem in the following situation?

(Context: A and B are strangers. B is waiting outside a shop; a dog is sitting beside him. B is aware of the presence of the dog. A is on his way into the shop.)

A: Does your dog bite?

B: No.

(Speaker A reaches down to pat the dog. The dog bites his hand).

A: Ouch! Hey! You said your dog doesn't bite.

B: He doesn't. But that's not my dog

In Text 9 we have a clear instance of lack of co-operation. Although B did tell the truth (his dog doesn't bite) he did not give the information that A actually asked for (i.e. if the dog beside B bites). B chose to ignore the relevance of 'here' and 'now' (i.e. understand that in the particular context A was seeking information about the dog present, which he mistook for B's dog). To use Grice's terms, speaker B observes the Quality maxim, but violates the maxims of Quantity and Relation; for example, B could have added "... *but this is not my dog*", or could have answered *It's not my dog*. Of course, speaker A could have been more explicit and not expect that B would interpret '*your dog*' as '*the dog sitting beside you*'. We can assume that A's choice was based upon the assumption that B shared the same culture/communication conventions.

Text 10. (from Levinson, 1983:108)

⇒ Compare the two versions. Which is more effective?

a. *Open the door.*

b. *Walk up to the door, turn the door handle clockwise as far as it will go, and then pull gently towards you.*

The main difference between (a) and (b) is that the second text gives much more detailed information. It is impossible to answer the question without information about the context. For example, text (a) would be effective as a command from an officer to a soldier, or a straightforward request from one friend to another. In those contexts, a speaker using version (b) could well be understood as expressing irony or implying that the listener is rather dim, as he/she violates the maxim of

quantity by giving more information than needed. On the other hand, (b) would be preferable in the context of an expert giving information on how to open a door which is connected to an explosive device. In the second context, response (a) would be less than informative (not to mention lethal).

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REFERENCES

Brown, G. & G. Yule. 1983. **Discourse Analysis**. Cambridge University Press.

Coulthard, M. 1985 (2nd ed.) **An Introduction to Discourse Analysis**. Longman.

Clark, H.H. & E.V. Clark. 1977. **Psychology and Language**. Harcourt Brace Jovanovich.

Crystal, D. 1991. **A Dictionary of Linguistics and Phonetics**. Basil Blackwell.

Eysenck, M.W. (ed.) 1990. **The Blackwell Dictionary of Cognitive Psychology**. Blackwell.

Eysenck, M.W. & M.T. Keane. 1995 (3rd ed.) **Cognitive Psychology**. Psychology Press.

Grice, H.P. 1975. 'Logic and Conversation'. In Cole & Morgan (eds.) **Syntax and Semantics Vol.3: Speech Acts**. Academic Press.

Gumperz, J. J. 1982. **Discourse Strategies**. Cambridge University Press.

Halliday, M.A.K. & R. Hasan. 1976. **Cohesion in English**. Longman.

Halliday, M.A.K. & R. Hasan. 1989. **Language, Context and Text: Aspects of language in a social-semiotic perspective**. Oxford University Press.

Jupp, T.C., C. Roberts & J. Cook-Gumperz. 1982. 'Language and disadvantage: the hidden process.' In J.J. Gumperz, (ed.) **Language and Social Identity**. Cambridge University Press.

Keenan, E. 1976. 'The Universality of Conversational Postulates.' **Language in Society** 5.

Leech, G. 1983. **Principles of Pragmatics**. Cambridge University Press.

Levinson, S. C. 1983. **Pragmatics**. Cambridge University Press.

Malmkjaer, K. (ed.) 1991. **The Linguistics Encyclopedia**. Routledge.

Nunan, D. 1993. **Discourse Analysis**. Penguin.

Richards, J.C., J. Platt & H. Platt. 1992 (2nd ed.) **Dictionary of Language Teaching & applied Linguistics**. Longman.

Salkie, R. 1995. **Text and Discourse Analysis**. Routledge.

Singer, M. 1990. **Psychology of Language: An introduction to sentence and discourse processes**. Lawrence Erlbaum Associates.

Yule, G. 1996. **Pragmatics**. Oxford University Press.