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0. Syntax, Semantics, Pragmatics.

The term “pragmatics” is due to Charles Morris (1938). Within *semiotics*, the general science of signs, Morris distinguished three branches: *syntax*, the study of “the formal relation of signs to one another”, *semantics*, the study of “the relations signs to the objects to which the signs are applicable” (their designata), and *pragmatics*, the study of “the relations of signs to interpreters” (1938, p.6), quoted from (Levinson 1983, p.1). On this view, syntax concerns properties of expressions, such as well-formedness; semantics concerns relations between expressions and what they are “about”, such as reference and truth-conditions; pragmatics concerns relations among expressions, meanings, and uses in context, such as *implicature*.

Much recent work challenges the sharp distinction between semantics and pragmatics implied by the traditional trichotomy. The subdiscipline of *formal pragmatics* is concerned especially with issues where semantics and pragmatics overlap. Kadmon (2002) and Potts (2005) are good examples of work in formal semantics and pragmatics; Kadmon’s book has a large section on presuppositions and a large section on “association with focus”. Potts investigates conventional
implicatures (Section 4 below), and argues that they are a special part of semantics. We begin in
sections 1 and 2 with some aspects of pragmatics that are not “formal pragmatics”, but are classic
and important, based on the work of Grice (1975).

1. Grice’s Conversational Implicatures.

1.1. Motivation. Questions about the meanings of logical words.

It was widely held (before Grice) that there are considerable mismatches between the standard
interpretations of the standard connectives and operators of logic (‘∼’, ‘&’, ‘∨’, ‘→’, ‘∀x’, ‘∃x’,
‘ιx’) and the meanings of their closest counterparts in ordinary English (‘not’, ‘and’, ‘or’, ‘if –
then’, ‘every’, ‘some’ (or ‘at least one’), ‘the’). Some consider natural language vague and
imprecise and take logical language as an improved “regimentation”. Others consider natural
language richer than and different from the language of formal logic, but not ‘inferior’, and urge
the independent investigation of ‘natural logic’ as something distinct from formal logic.

Grice does not take sides in this debate; he challenges its common presupposition. He believes
that the meanings of the operators of standard logic are quite close to the meanings of their natural
language counterparts. The reason for the widespread belief to the contrary, he argued, was a
failure to distinguish between semantics and pragmatics, a failure to distinguish between the
literal semantic content of a sentence (“what is literally said by a sentence”) and a variety of
further kinds of pragmatic inferences that may reasonably be drawn from the speaker’s use of that
sentence in a particular context.

An example:
(1) A: How is C getting along in his new job at the bank?
   B: Oh, quite well, I think; he likes his colleagues, and he hasn’t been to prison yet.

What B implied, suggested, or meant is distinct from what B said. All B said was that C had not
been to prison yet.

1.2. Truth-conditional content (semantics) vs. Conversational Implicatures (pragmatics).

Grice’s new terms: implicate, implicature. “Implicate” is meant to cover the family of uses of
“imply”, “suggest”, “mean” illustrated above. Things that follow from what a sentence literally
“says” or asserts are called entailments; so the major distinction Grice is drawing is between
(semantic) entailments and (pragmatic) implicatures. B’s sentence in (1) entails that C is not in
prison; it conversationally implicates that C may have a tendency toward criminal behavior.

Example: How many and’s?

(2) (a) Mary got married and had a baby.
   (b) Mary had a baby and got married.
   (c) Mary got married. She had a baby.
   (d) Mary got married and had a baby, although not in that order.

(3) Tests proved that Jones was the author of the pamphlet( ) and
   (a) he was sent to jail.
   (b) he was awarded the prize.

There have been proposals that and is ambiguous among “logical and”, and then, and therefore,
and nevertheless, ….. But Gricean principles like “Be orderly” and “Be relevant” can help to
defend the semantic non-ambiguity of and.

• Consider the two hypotheses:
• The semantic ambiguity hypothesis: there are multiple and’s, and the one in (2a) and (2b) means “and then”;

• Just one meaning for and: ordinary logical conjunction, plus a conversational implicature that the events happened in the order in which the two clauses are given, an implicature that can be derived from the Gricean principle “Be orderly”.

• First argument for a single and: Occam’s razor (“Do not multiply entities unnecessarily.”) If we posit multiple “and”s, how many? Will we have “and then” in (2a-b), “and therefore” and “and nevertheless” for the sentences in (3), and other kinds of and in other sentences?

• Second argument: We can see in example (2c) that the principle, “Be orderly”, gives rise to the same implicature even without the word and.

• And a third argument is illustrated with example (2d). Conversational implicatures can be “cancelled” without contradiction: we can see that happening in (2d), which would be contradictory if and in the first clause of (2d) meant “and then”.

Thus it seems most reasonable to conclude that the sentential conjunction and is unambiguous: lexical semantics should specify that its truth-conditional meaning is just the meaning of the logical conjunction and. The rest can be explained within pragmatics, using the concept of conversational implicatures, generated by Grice’s “Conversational maxims”.

1.3. Conversational maxims. (“Gricean maxims”.)

Conversational partners normally recognize a common purpose or common direction in their conversation, and at any point in a conversation, certain “conversational moves” are judged suitable or unsuitable for accomplishing their common objectives. A most general principle:

CP: 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.

Under this very general principle, Grice distinguishes four categories of maxims.

Note: these maxims are characteristic of conversation as a cooperative activity. Think about which ones would change in a non-cooperative setting, such as between a prosecutor and a defendant, or when having your tax return audited (I could tell an anecdote about the latter case), or when a commander is giving orders soldiers, or if I am a crook trying to persuade you to buy something worthless, or in the context of answering examination questions.

Maxims of Quantity.
(i) Make your contribution as informative as is required (for the current purposes of the exchange). [What does “as informative as is required” mean? See (Potts 2006).]
(ii) Do not make your contribution more informative than is required.

Maxims of Quality.
Supermaxim: Try to make your contribution one that is true.
(i) Do not say what you believe to be false.
(ii) Do not say that for which you lack adequate evidence.

Maxim of Relation.
(i) Be relevant.

Maxims of Manner.
Be perspicuous:
(i) Avoid obscurity of expression.
(ii) Avoid ambiguity.
(iii) Be brief (avoid unnecessary prolixity).
(iv) Be orderly.

The question of why speakers can normally be expected to obey the supermaxim of trying to tell the truth is insightfully discussed in David Lewis’s classic book *Convention* (Lewis 1969). There are other maxims that are not “conversational” maxims but which may also be observed during conversational exchanges (aesthetic, social, moral), such as “Be polite”.


Grice’s maxims are a first step towards formalizing the reasoning by which a hearer may conclude that a speaker is communicating more than she is literally saying. We can use the maxims to make inferences from the speaker’s choice of saying one thing rather than another in a given context; we consider not only what the speaker did say, but what the speaker might have said but did not say, taking into account what we know or assume about the purposes of the conversation, the speaker’s knowledge, and other aspects of the context.

- **Example**: saying (4) when in fact Bill has two wives. This violates a maxim of quantity (be as informative as is required), and would normally be misleading, although it is not false.

(4) Bill has a wife

- Such “Quantity implicatures” are very widespread: a weaker statement generally implicates the falsity of any stronger statement, unless other maxims interfere. For instance, one can think of contexts in which (4) would not be misleading, e.g. in a community where having multiple wives is normal and unremarkable, and the important question at issue is whether Bill is still unmarried – then (4) would be a perfectly reasonable answer and not misleading.

- Sometimes it is impossible to fulfill one maxim without violating another. For instance, one may be unable to fulfill the first maxim of Quantity (say enough) without violating Quality (only say what you have evidence for.). **Example**: in conversation (5), B’s answer is less informative than required. Assuming B is trying to be cooperative, we can explain the violation if we assume that B could not give a more informative answer without violating the maxim of Quality. So B implicates that she does not know more precisely where C lives.

(5) A. Where does C live?
   B. Somewhere in the south of France.

- **Example**: The speaker may *flout* a maxim: that is he may *blatantly* fail to fulfill it. This is similar to violating a maxim, except that in this case the hearer is expected to recognize what is happening, and if so, then the maxim is likely to be being *exploited* to intentionally generate a conversational implicature.

(6) A asks: Where’s Bill?
   B answers: There’s a yellow VW outside Sally’s house. (Levinson 1983, p. 102)

- **Example**: Letter of recommendation: Use Maxim of Relevance to generate the implicature that the letter writer does not have a very high opinion of Mr. X.

(7) “Dear Sir, Mr. X’s command of English is excellent, and his attendance at tutorials has been regular. Yours, etc."

- **Example**: A “generalized implicature”. Almost any use of a sentence of the form (8) would normally implicate that the person to be met was not X’s wife, mother, or sister.

(8) X is meeting a woman this evening.
1.5. Are Gricean implicatures universal?

Short answer: “Yes, but …”. It makes a difference what alternatives the language makes available. In languages with basic lexical items for “older brother” and “younger brother” and a ‘non-basic’ term meaning “brother”, saying that Michio is Takashi’s “brother” will give rise to an implicature that the speaker does not know whether Michio is Takashi’s older or younger brother. So such implicature for English, since we don’t have ‘basic-level’ terms indicating older brother vs. younger brother.

Keenan (1974) argued that speakers of Malagasy do not obey the Quantity maxim; new information is a rare commodity and is only reluctantly shared, and in addition, individuals rarely make explicit statements about beliefs and activities.

But as discussed by von Fintel and Matthewson, others have argued that in Keenan’s examples, the dialogue participants are indeed being cooperative relative to their culture, which involves taking other goals into account as well. Their conclusion agrees with Green (1990) that Grice’s maxims are universal, but using them to determine a speaker’s communicative intentions requires considering the fuller cultural context.

2. How a better understanding of conversational implicatures helps semantics.

Intuitively, it often seems that natural language or is often used in an “exclusive” sense: “but not both”. We can easily write a truth-table for exclusive or, which we will represent with the symbol ‘+’.

<table>
<thead>
<tr>
<th>p</th>
<th>q</th>
<th>p ∨ q</th>
<th>p + q</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
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<td>0</td>
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<tr>
<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
</tbody>
</table>

The question is, is English or (or German oder, or Russian ili) really semantically ambiguous between two truth-conditional connectives? Or can one defend an analysis on which or is semantically always inclusive disjunction, and all the apparent exceptions can be explained as a result of other factors such as Gricean implicatures?

1. **Intrinsically mutually exclusive alternatives**: Examples like (9) are sometimes given as examples of exclusive disjunction (I even gave such examples in my first textbook).

(9) Mary is in Prague or she is in Stuttgart.

But (9) gives no evidence for an exclusive or, because with (9), the first line of the truth table is simply irrelevant; we know independently that p and q will not be true simultaneously.

2. **Using the (first) Gricean Maxim of Quantity**.

(10) Mary has a dog or a cat.

In this case, the alternatives are not intrinsically incompatible; it is perfectly possible to have both. So is this a case where we should say that or is ambiguous? How else can we explain that in most normal contexts an utterance of (10) would be construed exclusively, but sometimes it is possible to understand it inclusively (for instance, if I am allergic to dogs and cats and can’t stay at the home of anyone with a dog or a cat.)? Answer: Make use of the Gricean maxim: “Make your contribution as informative as is required.” If the speaker had evidence that Mary has a dog and a cat, she could have made the stronger statement (11):

1. In Prague or she is in Stuttgart.
2. Using the (first) Gricean Maxim of Quantity.
3. Mary has a dog or a cat.
(11) Mary has a dog and a cat.

In contexts where it would be relevant to know whether the stronger statement holds, the use of or signals the absence of evidence for the conjunctive case; and if we believe that the speaker would have known if the conjunction were true, we obtain the implicature that the conjunction is false. In such a case, we can say that semantics allows lines 1 through 3 of the truth table, but the first line may be ruled out pragmatically through implicatures.

More generally: whenever the speaker has a choice between a weaker or less specific form and a stronger or more specific form, other things being equal, the use of the weaker form implicates that the speaker does not have evidence that the stronger form is true. And if the speaker is presumed to have full information, that will lead to the implicature that the stronger form is false. Thus “or” plus an assumption of full information implicates “not ‘and’”, and “some” plus assumption of full information implicates “not all”, etc.

3. A strong argument from negation.

(12) Mary doesn’t have a dog or a cat.

If or were ambiguous between inclusive and exclusive, negating it should be likewise ambiguous, and (12) should have one reading on which it asserts that Mary has either neither or both. But (12) unambiguously asserts the negation of the inclusive or: Mary has neither.

We conclude that it is simplest to say that or is semantically unambiguously inclusive; apparent “exclusive or” can be explained in terms of inclusive or plus general pragmatic principles. But not all uses of exclusive or are easy to explain this way, and there are active ongoing debates.

3. At the borderline of semantics and pragmatics: presuppositions.

(A classic definition of semantic presupposition: A sentence S presupposes a proposition p if p must be true in order for S to have a truth-value (to be true or false). *Note that this requires that we allow some sentences to lack a truth-value; this definition does not make sense if we work with a strictly bivalent logic, in which each sentence must be either true or false.

An approximate definition of pragmatic presupposition: A use of sentence S in context C pragmatically presupposes p if p is backgrounded and taken for granted by the speaker in C.

Test for backgrounding: p is in the background of S if p is implied by all of the sentences in the “S family”:

(13) a. S
    b. It is not the case that S.
    c. Is it the case that S?
    d. If S, then S’.

(14) “Joan has stopped drinking wine for breakfast.”

• Presupposition: Joan used to drink wine for breakfast.

Backgrounded but not presupposed: non-restrictive relative clauses.

(15) Jill, who lost something on the flight from Ithaca to New York, likes to travel by train.

• A number of authors have considered the embedded proposition, that Jill lost something on the flight from Ithaca to New York, to be a presupposition (Keenan 1971, Levinson 1983), but arguments against considering it a presupposition can be found in Padučeva (1985, p.65) and
Contrasting sentence with a real presupposition: Pseudo-cleft construction.

(16) What Jill lost on the flight from Ithaca to New York was her new flute.

3.1 Presuppositions of definite descriptions.

(17) “After the separation of Schleswig-Holstein from Denmark, Prussia and Austria quarrelled.”

This is an example from Frege (1892). Frege states that the thought that Schleswig-Holstein was once separated from Denmark “is the necessary presupposition in order for the expression in (17) to have any reference at all”. A classic example discussed by Russell and Strawson is (18).

(18) a. The present king of France is bald.
   b. The present king of France is not bald.

Russell analyzed (18b) as ambiguous, treating the conditions of existence and uniqueness as part of the truth-conditions of the sentence. If there is no king of France, (18b) would come out true on Russell’s analysis if negation has wide scope, false if the definite description has wide scope.

(Optional exercise: You could work out a Russelian analysis of this kind explicitly by using our fragment, with Montague’s \(<e,t>,t>\) type analysis of “the king”.)

Strawson argued that it is more normal to consider (18b) neither true nor false if there is no king of France. Strawson’s analysis corresponds to our e-type treatment of definite descriptions. If you try to evaluate (18b) using a Strawsonian analysis, assuming there is no king of France, then the subject NP will get no semantic value. And we assume that if one of the parts has no semantic value, then the whole sentence has no semantic value. But as Strawson noted, a sentence like (19) does not lack a truth value: it seems to be definitely true.

(19) Sarkozy is not the king of France.

For this example (but not for all), we can capture the absence of presupposition by using the predicative \(<e,t>\) meaning of the definite description proposed in (Partee 1986). In other examples, as argued by Hajicová (1984), Theme-Rheme structure may be crucial: a definite description that is part of the Theme (Topic) carries a presupposition of existence and uniqueness; but a definite description that constitutes all or part of the Rheme (Focus) seems to carry only an “allegation”, or cancellable implicature, of existence and uniqueness.

(20) a. Our defeat was not caused by Bill’s cousin.
   b. Bill’s cousin did not cause our defeat.

Potential presuppositions: (i) we were defeated. (“our defeat” has a reference.) (ii) Bill has a cousin. Test for cancellability:

(21) a. “... , in fact Bill does not have a cousin.” (ok after 20a, not after 20b)
   b. “..., in fact this time we achieved a great victory.” (ok after 20b, not after 20a)

A good discussion of referential status of a variety of kinds of noun phrases, and their associated presuppositions, can be found in Chapter 4 of (Padučeva 1985).

Are definiteness presuppositions universal? It seems that some languages have articles that presuppose ‘familiarity’, as in Heim’s theory of the, and some have articles that presuppose ‘uniqueness’ as in Strawson’s approach (modifiable to ‘maximality’ as in Link’s theory of plurality, discussed last week); some even have both: see (Schwarz 2008, 2009) on German.
Von Fintel and Matthewson (2008) report that the Salish languages have no determiners that presuppose either familiarity or uniqueness; Matthewson proposes a semantic parameter distinguishing languages that do or do not have presuppositional determiners. The Salish languages also lack presuppositional it-clefts: sentences whose form is like that in (22) do not have any exhaustivity implicature, unlike in English. This can be argued to follow from the determiner differences on some recent analyses on which cleft sentences contain concealed definite descriptions.

(22) It’s the children who are hungry (*, and also the adults). [continuation ok in Salish: (Davis et al. 2004)]

In the domain of “definiteness” presuppositions, the strongest constraint that seems consistent with what I know about is that articles may presuppose familiarity and/or uniqueness, or neither. **Open question**: Salish is argued to have a determiner which is “unspecified” for familiarity or uniqueness, covering the range of English *a* and *the*. Russian has no articles; does the existence of the Salish ‘unspecified’ determiner make it more likely that Russian should be analyzed without positing a grammaticized definite/indefinite distinction?

### 3.2. Presuppositions of Factive Verbs.

Another classic case of presuppositions much studied by linguists are the presuppositions of factive verbs. Let’s consider two sets of verbs and compare their behavior in the sentences in the “S family”.

<table>
<thead>
<tr>
<th>Non-factive verbs</th>
<th>Factive verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>believe</td>
<td>know</td>
</tr>
<tr>
<td>say</td>
<td>regret</td>
</tr>
<tr>
<td>hope</td>
<td>be surprised</td>
</tr>
<tr>
<td>deny</td>
<td>notice</td>
</tr>
<tr>
<td>claim</td>
<td>discover</td>
</tr>
</tbody>
</table>

(23)  
(a) John said that Bill is a spy.  
(b) John didn’t say that Bill is a spy.  
(c) Did John say that Bill is a spy?  
(d) If John said that Bill is a spy, Mary will be unhappy.

None of the sentences in (23) imply that the speaker takes for granted, or even believes, that Bill is a spy, not even the positive assertion (23a). In contrast, all of the sentences in (24) require for appropriate use that the speaker takes for granted that Bill is a spy.

(24)  
(a) John knows that Bill is a spy.  
(b) John doesn’t know that Bill is a spy.  
(c) Does John know that Bill is a spy?  
(d) If John knows that Bill is a spy, Mary will be unhappy.

We get similar results putting any non-factive verb in the pattern in (23) and any factive verb in the pattern in (24). The classic work is (Kiparsky and Kiparsky 1970); there has been much important work since then, including (Gazdar 1979, Heim 1992, Karttunen 1971, Karttunen 1973, Karttunen and Peters 1979).

### 3.3. Presuppositions in lexical meanings.

The division of “components” of lexical meaning into assertive and presuppositional has been emphasized both in the work of Fillmore (1971) and in the work of Apresjan (1974) and his colleagues. Good examples include the contrast discussed by Fillmore among the verbs *blame*,
criticize, accuse, all involving an agent \(X\), an addressee or patient \(Y\), and an action \(P\), and the different status of the components ‘\(X\) says/believes that \(Y\) did \(P\)’, ‘\(X\) says/judges that \(P\) is/was a bad action’, and ‘\(X\) says/believes that \(P\) happened’, and the similar contrast discussed by Padučeva (1985, p.67) among the Russian verbs obvinjat ‘accuse’ (\(X\) obvinjaet \(Y\) v \(P\)) and osuždat ‘criticize’ (\(X\) osuždaet \(Y\) za \(P\)), noting an observation of Langendoen that when an adverb such as spravedlivo ‘justly’ is added to a sentence containing one of these verbs, what is asserted to be “just” is only the asserted part, not the presupposed part.

If we follow Frege and take the denotations of most words to be functions, then semantic presuppositions can be treated formally as **conditions on the well-definedness of functions**. Recall, for instance, our definition of the iota-operator used for the referential sense of the definite article: \(\iota x[\text{king}(x)]\) is defined iff there is one and only one king, and undefined otherwise. In general, when a semantic presupposition (precondition) of a function is not satisfied, the function is not defined and it is impossible to compute a value (Heim 1983).

**Universals?** Some authors have argued for the universality of some lexical presuppositions, and have proposed that some kinds of meanings could not fail to include presuppositions: see von Fintel and Matthewson’s discussion of proposals by Levinson & Annamalai and by Simons. Suggested examples include regret, stop, too, again. But Matthewson cites evidence that similar lexical items in the Salish language St’át’imcets do not carry the expected presuppositions. They fail von Fintel’s well-known “Hey, wait a minute!” test (von Fintel 2004), illustrated in the example below, from von Fintel (2004).

\[
\begin{align*}
\text{(25) A:} & \quad \text{The mathematician who proved Goldbach’s Conjecture is a woman.} \\
& \quad B: \quad \text{Hey, wait a minute. I had no idea that someone proved Goldbach’s Conjecture.} \\
& \quad B’: \quad \# \quad \text{Hey, wait a minute. I had no idea that that was a woman.}
\end{align*}
\]

Von Fintel and Matthewson (2008) report examples from Matthewson’s work showing the absence of any “Hey, wait a minute!” responses for examples whose English translations contain some primary candidates for universal presupposition-trigger status. I give just some of the English translations below, indicating context.

\[
\begin{align*}
\text{(26) Context. B has just walked into A’s house, and there has been no prior conversation except greetings.} \\
& \quad A: \quad \text{Would you like some more tea?} \quad B: \quad \text{Yes.}
\end{align*}
\]

\[
\begin{align*}
\text{(27) Context: B has been a teetotaler for several decades, and this is well known.} \\
& \quad A: \quad \text{Do you want some more alcohol?} \\
& \quad B: \quad \text{No way. I’ll get drunk. (laughs)}
\end{align*}
\]

\[
\begin{align*}
\text{(28) Context: B has no knowledge of anyone planning a trip to Paris.} \\
& \quad A: \quad \text{Henry is also going to Paris at Christmas.} \\
& \quad B: \quad \text{Oh, good.}
\end{align*}
\]

The next examples show that St’át’imcets speakers do sometimes challenge presuppositions, but that they do it in exactly the same way that they challenge assertions they don’t believe. In the examples below, B, B’, C, C’ are all responses received to the assertion in A.

\[
\begin{align*}
\text{(29) A:} & \quad \text{Bob stopped smoking.} \\
& \quad B: \quad \text{I didn’t know Bob smoked.} \\
& \quad B’: \quad \text{I didn’t know he stopped.} \\
& \quad C: \quad \text{Did Bob used to smoke?} \\
& \quad C’: \quad \text{Did he stop?}
\end{align*}
\]
Von Fintel and Matthewson (2008) discuss the question of how to characterize this difference. Matthewson (2006) argues that if the source of the difference is linguistic, we have to conclude either (30a) or (30b):

\[
\begin{align*}
\text{(30) } & \quad \text{a. St’át’imcets equivalents of \textit{stop, again, more, too} are not presuppositional.} \\
& \quad \text{b. They are presuppositional, but presuppositions do not enforce exactly the same common} \\
& \quad \text{ground/update constraints in St’át’imcets that they do in English.}
\end{align*}
\]

If (30a) were correct, then the presuppositions of \textit{stop}, etc., follow directly from their truth-conditional semantic content. Matthewson argues rather for (30b), supporting the universality of the presuppositionality of such ‘strong presupposition triggers’, and argues that languages differ in the nature of how presuppositions work. The “Hey, wait a minute” test identifies Stalnaker-type presuppositions – presuppositions that are supposed to be part of the common ground shared by speaker and hearer (and if they are not, they must be “accommodated”, which may not be possible in all cases (as in “Would you like some more tea?” if you haven’t had any yet)). St’át’imcets presuppositions may fit better with the analysis of Gauker (1998), who simply requires that the \textit{speaker} must make the relevant assumptions.

Von Fintel and Matthewson (2008) “tentatively conclude that all languages \textit{do} have presuppositions, but how those presuppositions behave may differ from language to language.”

4. Implicatures within semantics: Conventional implicatures.

4.1. Conventional vs. conversational implicatures.

\textbf{Grice:} distinguished \textit{conventional implicatures} and \textit{conversational implicatures}.

\textbf{Conventional implicature:} part of the meaning of a word or construction but not part of its truth-conditions. An implicature which arises from the particular choice of words or syntax, rather than from conversational maxims. See (Potts 2002, 2005, Potts 2007). Potts argues that these are fully semantic, not pragmatic, but on a separate dimension, independent of “at-issue” meaning.

From Potts (2007):

\[
\begin{align*}
\text{(31) } & \quad \text{a. CIs are part of the conventional (lexical) meaning of words.} \\
& \quad \text{b. CIs are commitments, and thus give rise to entailments.} \\
& \quad \text{c. These commitments are made by \textit{the speaker of the utterance} “by virtue of the meaning} \\
& \quad \text{of” the words he chooses.} \\
& \quad \text{d. CIs are logically and compositionally independent of what is “said (in the favored} \\
& \quad \text{sense)”, i.e., the \textit{at-issue entailments}.}
\end{align*}
\]

Some authors have equated conventional implicature with presupposition, but conventional implicatures can add new information; for arguments see Potts (2005, 2007).

\textbf{Examples:} (32a) \textit{manage}, (32b) \textit{too}, (32c) \textit{even}, (32d) \textit{but}, (32e) the appositive construction, (32f) non-restrictive relative clauses, (32g) expressive meaning.

(32) (a) John \textit{managed} to close the door. \\
\textbf{Assertion:} John closed the door. \textbf{Implicature:} The door was hard to close.

(b) Susan left the party at midnight, and Maria left the party early \textit{too}. \\
\textbf{Assertion:} Susan left the party at midnight, and Maria left the party early. \textbf{Implicature:} Midnight was early to leave the party.

(c) \textit{Even} Al passed the test. \\
\textbf{ Assertion:} Al passed the test. \textbf{Implicature:} Al was the least likely person to pass the test. There were grounds for expecting that Al would not pass the test.
(d) Mary is a linguist, but she’s rich.  
**Assertion:** Mary is a linguist, and she is rich.  
**Implicature:** Linguists are not usually rich.  

(e) David Partee, a former president of the Alaska Dog Mushers Assn., lives in Fairbanks.  
**Assertion:** David Partee lives in Fairbanks.  
**Implicature** (conventional): David Partee was the president of the ADMA.  

(f) Just like (e), but with non-restrictive relative clause ‘who is a former president of the ADMA’.

(g) Bob brought his damn dog with him.  
**Assertion:** Bob brought his dog with him.  
**Implicature:** Speaker has a negative attitude toward the dog, or toward Bob’s bringing the dog with him.

**Conversational implicature:** an implication that follows from general principles of conversational exchanges (Grice). **Example:** *some* usually conversationally implicates *not all*, by the Maxim of Quantity. Other examples were given earlier.

### 4.2. Non-restrictive vs. restrictive modifiers

Example (32f) is an example of a non-restrictive modifier, in particular a non-restrictive relative clause. (Non-restrictive modifiers may also be adjectives, adverbs, or adverbial clauses.) The content of a restrictive modifier contributes to the truth-conditions of the clause containing it – i.e. it contributes to the *at-issue* (primary) *entailments* of the whole sentence.

A restrictive modifier is never a complete proposition in itself, but usually a predicate. Review our analysis of relative clauses as one-place predicates formed by lambda-abstraction from an open sentence.

A non-restrictive modifier usually contributes a complete proposition. It is independent of the main “at-issue” proposition, but is normally relevant to it. Potts (2005) has argued that non-restrictive modifiers contribute a conventional implicature; that’s an entailment, but independent of the main “at-issue” entailments.

Potts’s analysis helps to explain the well-known phenomenon that restrictive relative clauses can occur with almost all determiners (*a, the, some, many, every, no, ...*, but perhaps not with demonstrative *this, that*), while non-restrictive clauses can occur only on referential DPs, with determiners like *the, this, that, my*, or with no determiner, as with proper names or kind-denoting expressions. Determiners that allow both restrictive and non-restrictive relative clauses include *the, some, a, one, two, three, ....*

In general, the basic explanation is that a restrictive relative must combine with an NP, type *<e,t>*, to form a new NP, and it combines by predicate conjunction, as in our earlier fragment. The restrictive relative is itself of type *<e,t>*. A non-restrictive relative, on the other hand, combines with a DP, type *e*, to form a new DP. On earlier theories, the relative pronoun *who or which* in a non-restrictive relative was interpreted as a coreferential e-type pronoun, so that the relative clause itself was interpreted as a complete proposition. Potts argues against that solution, since even adjectives and appositive NPs can be non-restrictive, and they are of type *<e,t>*. So on his analysis, the non-restrictive relative clause is also of type *<e,t>*, just like the restrictive one; but the difference is that in combines with the complete e-type DP, and contributes a proposition formed by function-argument application:  REL’(DP’), at a ‘separate level’ of interpretation, the implicature level – the propositions at this level are also entailments, but not “at-issue” entailments. For details, see (Potts 2007); a detailed extract is included in http://people.umass.edu/partee/MGU_2009/materials/MGU094.pdf.
Examples:
(33) (a) The woman, who earned the most points, had worked very hard.
    (b) The woman who earned the most points had worked very hard.
(34) (a) Mary doesn’t like cats, which have fleas.
    (b) Mary doesn’t like cats which have fleas.

5. Semantic/pragmatic classifications of definite and indefinite DPs.

In parts of our discussion of Heim’s work we discussed the debates about the primary ingredients of definiteness, **familiarity** and **uniqueness/exhaustivity**. Another important issue concerning definites that we have not discussed explicitly is one that starts from the work of Donnellan (1966), who distinguished **referential** and **attributive** uses of definite DPs. Classic examples include the alleged ambiguity of (35).

(35) The murderer is insane.

On the **referential** use, or interpretation, the DP is of type e, and is used by the speaker to pick out a certain individual. If it happens that the speaker is wrong, and the individual referred to is not actually the murderer, the speaker may still utter a true proposition, namely that “that individual” is insane, with a false presupposition or implicature, namely that the referred-to individual is the murderer. (To make this into a possible semantic analysis, there would have to be a reading of the definite article that makes it very similar to a demonstrative; cf. David Kaplan’s “Dthat” paper (Kaplan 1978) for related ideas, not applied to this particular case.)

On the **attributive** use, the DP is probably best analyzed as a generalized quantifier; in that case there is no presupposition, and the sentence is paraphrasable as ‘Whoever is the murderer is insane’. That would be an appropriate interpretation if, for instance, the evidence for insanity comes from looking at the crime scene, and we may not even have identified a suspect yet.

Partee (1972) analyzed the distinction between **specific** and **non-specific** indefinites as analogous to Donnellan’s distinction between referential and attributive definites. I believe it is still reasonable to analyze both non-specific indefinites and attributive definites as non-type-e phrases, either generalized quantifiers or in some cases as <e,t> type. But for indefinites, the consensus is that we need both **scope** distinctions, as illustrated Lecture 3, and a further distinction among the wide-scope indefinites, which may be either quantificational (non-specific, existential) or pseudo-referential (specific). For discussion of formal approaches to capturing these distinctions, see (Kratzer 1998, 2005, Landman 2004, Schwarzschild 2000, Winter 1997, Yanovich 2006).

6. DP or NP speech acts.

We won’t have time to discuss this topic in any detail, but it is worth mentioning that although the normal working hypothesis is that the basic unit of communication is the proposition (plus proposition-sized units like questions, exclamations, wishes, and imperatives), there have also been proposals to the effect that sometimes NPs or DPs constitute complete speech acts on their own. The contrary hypothesis is that all such NPs or DPs are elliptical propositions. See (Progovac et al. 2006). Some examples:

(36) a. John! (vocative)
    b. Ryabinushka. (naming, identifying objects in the environment.)
    c. Your turn.
    d. Thief! Thief!
    e. Fire!
    f. Two beers. (Two beers, please.)
    g. Nice picture!
References


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