Conversational Implicature: The Basics of the 'Gricean Theory' [1]

In our first unit, we noted that so-called 'informational content' (the information 'conveyed' by an utterance) can be divided into (at least) three different categories.

(1) **The Three Categories of 'Informational Content'**

a. Asserted Content

(i) Definition:
The content that is 'explicitly added' to the discourse by an utterance of sentence 'S'.

(ii) Key Property / Test:
Sentence 'S' **asserts** that p :: 'S' is T *if and only if* p

b. Presupposed Content

(i) Definition:
The 'background information' which is 'taken for granted' by an utterance of sentence 'S'.

(ii) Key Property Test:
Sentence 'S' **presupposes** that p :: 'S' is T *or F* only if p
('S' *and 'not S'* are T only if p)

c. (Conversational) Implicature

(i) Definition:
Those things that are not explicitly asserted by an utterance of 'S', but which the speaker intends the listeners to conclude.

(ii) Key Property Test:
p is an **implicature** of sentence 'S' ::
'S' implies p, but is consistent with 'not p'
('S *and not p*' is logically consistent)

(2) **Example of a Conversational Implicature**

a. Dialog: Person A: "Are you going to the party tonight?"
Person B: "I have to work."

b. Implicature: Person B is not going to the party tonight.

c. Test: "I have to work, and I'm going to the party tonight" (logically consistent)

[1] These notes are based on the material in Chierchia & McConnell-Ginet (2000: 25-28, 239-255).

Thus far in class, we have developed rudimentary theories of how our cognitive linguistic systems compute the 'asserted content' and the 'presuppositions' of a given sentence.

(3) **Our Theory of 'Informational Content' Thus Far**

a. Computation of Asserted Content:
T-conditions derived via our extensional semantics

b. Computation of Presuppositions:
Restrictions on the domains of certain functions can encode the notion that merely saying "X" requires that *p* be true.
(*eg.* you can't even say 'the president' unless it's the case that there's exactly one)

(4) **Goal for This Unit**

- We have rudimentary theories for (1a) and (1b)…
- **Now let's attempt to develop a theory of (1c)!**

(5) **Key Question for This Unit**

- How do our cognitive systems come to associate a given sentence/utterance with its observed implicatures?

- That is, what are the rules/principles involved in computing the implicatures of a given sentence/utterance?

1. Some Background Puzzles

We'll work our way towards an answer for (5) by first looking at some interesting puzzles concerning the words "or" and "some", as well as a puzzle concerning numerals like "three".

Why? Historically, these kinds of puzzles were what first prompted philosophers and linguists to develop the theory of implicature we'll study here.

1.1 The Puzzle Concerning "Or"

We've learned that, when "and" conjoins two sentences, as in sentences like (6a), it has the semantics in (6b).

(6) a. [[$_S$ Barack smokes] [and [$_S$ Barack dances]]]

b. $[\lambda x : x \in D_t . [\lambda y : y \in D_t . \underline{y = T \text{ and } x = T}]]$

Interestingly, we can write out the function in (6b) in the 'table format' for functions we learned back in the first couple weeks.

(7) **The Extension of "And" Written in Table Form**

T	→	T	→	T
		F	→	F
F	→	T	→	F
		F	→	F

That was pretty easy… now what about the extension of "or"? We also learned that in sentences like (8a), it has the extension in (8b).

(8) a. [[$_S$ Barack smokes] [or [$_S$ Barack dances]]]

b. [$\lambda x : x \in D_t$. [$\lambda y : y \in D_t$. y = T or x = T]]

So, let's try to write out the function in (8b) as a table, like we did above. Interestingly, we run into a bit of an issue…

(9) **The Extension of "Or" Written in Table Form**

F	→	T	→	T
		F	→	F
T	→	F	→	T
		T	→	**??**

What do we write here??

(10) **Key Question**

In a sentence of the form "S1 or S2", what is the T-value of the sentence when both "S1" and "S2" are true?

- Should such sentences be 'true'?
- Or, should such sentences be 'false'?

(11) **An Example Where the T-Value Seems to be 'True'**

a. Sentence: John is vegan, and so **John either gets his protein from nuts or he gets it from dietary supplements.**

b. Intuition: If it turns out that John gets his protein from nuts *and* dietary supplements, then the sentence in (a) isn't false.

(*cf.* If it turns out that John gets his proteins neither from nuts *nor* from dietary supplements (but from beans), then the sentence in (a) *is definitely false*).

(12) **Another Example Where the T-Value Seems to be 'True'**

a. Sentence: It's going to rain, and so **I suggest that you take an umbrella, or you take a raincoat.**

b. Intuition: If you take *both* an umbrella and a raincoat, you would still be following the speaker's suggestion.

(*cf.* If you don't take an umbrella and you don't take a raincoat, you *would not* be following the speaker's suggestion.)

(13) **Yet Another Example Where the T-Value Seems to be 'True'**

a. Sentence: Dave and Sue both love to bake desserts. So, at the potluck, **Dave will bring a dessert, or Sue will.**

b. Intuition: If it turns out that both Dave and Sue bring desserts, the sentence in (a) isn't false.

(*cf.* If it turns out that neither brings a dessert, then sentence (a) does seem to be false).

So, it is possible to construct contexts where "S1 or S2" seems compatible with "S1 and S2"…

…**However, it's also true that, in many contexts, a sentence of the form "S1 or S2" seems *incompatible* with the truth of "S1 and S2"…**

(14) **An Example Where the T-Value Seems to be 'False'**

a. Sentence: With your entrée, **you can have rice, or you can have potatoes.**

b. Intuition: The sentence in (14a) seems 'incompatible' with your being able to have *both* rice *and* potatoes as a side.
(*i.e.,* it seems correct to infer from (14a) that you *can't* have both rice *and* potatoes).

(15) **Another Example Where the T-Value Seems to be 'False'**

a. Sentence: (Said by kidnappers)
You will pay us 1 million dollars, or the president will die.

b. Intuition: The kidnappers' statement in (15a) is false if they do both.
(*i.e.,* if they take the money *and* kill the president, then there's a sense in which they 'lied' in making their statement.)

So what's going on with our conflicting intuitions here?
Why do we sometimes think "S1 or S2" *is true if both are, and sometimes we think it's false?*

1.2 The Puzzle Concerning "Some"

A puzzle similar to the one we just observed for "or" can be observed for the determiner "some".

(16) **Puzzle Concerning the Truth Conditions of Sentences with "Some"**

a. Question: What are the truth-conditions of the sentence in (b)?
In which of the situations in (c) is it true?

b. Sentence: Suzie has some of the soccer balls.

c. Situations:
(i) Suzie has no soccer balls.
(ii) Suzie has some (but not all) the soccer ball.
(iii) Suzie has all the soccer balls.

(17) **The Key Puzzle**
- Everyone agrees that (16b) is *false* in situation (16ci), and that it is *true* in (16cii)…
- But, it is less clear whether (16b) is *true* or *false* in situation (16ciii)…

(18) **The Key Question**

In a sentence of the form "… some of the NPs …", what is the T-value of the sentence when the parallel sentence "… *all* of the NPs …" is true?

(19) **An Example Where the T-Value Seems to be 'True'**

a. Sentence: If **Suzie has some of the soccer balls**, then we need to warn Joe.

b. Intuition: In a situation where Suzie has all the soccer balls, then if (19a) is true, then we still need to warn Joe.

(*cf.*, in a situation where Suzie doesn't have any soccer balls, (19a) doesn't entail that we need to warn Joe.)

(20) **An Example Where the T-Value Seems to be 'False'**

a. Sentence: For dessert, **you can have some of the candies.**

b. Intuition: If someone tells you (20a), then you don't have permission to eat all the candies.
(*i.e.,* if you ate all the candies, you'd be breaking the rules.)

So what's going on with our conflicting intuitions here?
Why do we sometimes think "Some NP" *entrails* "Not all NP", *while sometimes we don't?...*

1.3 The Puzzle Concerning Numerals

A puzzle similar to the one we just observed for "some" also can be observed for all numerals, like "three".

(21) **Puzzle Concerning the Truth Conditions of Sentences with Numerals (*e.g.* "three")**

a. Question: What are the truth-conditions of the sentence in (b)?
In which of the situations in (c) is it true?

b. Sentence: Suzie has three soccer balls.

c. Situations:
(i) Suzie has exactly two soccer balls.
(ii) Suzie has exactly three soccer balls.
(iii) Suzie has four (or more) soccer balls.

(22) **The Key Puzzle**
- Everyone agrees that (21b) is *false* in situation (21ci), and that it is *true* in (21cii)…
- But, it is less clear whether (21b) is *true* or *false* in situation (21ciii)…

(23) **The Key Question**
For a sentence of the form "… *n* NPs …" (where *n* is a numeral), what is its T-value when the parallel sentence "…*m* NPs…" is true (where $n < m$)?

(24) **An Example Where the T-Value Seems to be 'True'**

a. Sentence: If **you have two children**, then you get a discount.

b. Intuition: In a situation where you have *three or more* children, you still should get the discount.

(*cf.*, in a situation where you have *only one* child, (24a) doesn't entail that you get the discount.)

(25) **An Example Where the T-Value Seems to be 'False'**

a. Sentence: Joe: How many children do you have?
Mary: **I have three children.**

b. Intuition: If Mary has four children, then she's said something false.

So what's going on with our conflicting intuitions here? Why do we sometimes think "*n* NP" *entrails* "Not *m* NP", *while sometimes we don't?...*

- **As a matter of fact, understanding the answers to these questions requires that we better understand *how* the things that we say end up communicating *more* than what they actually assert…**
- **That is, we will find that solutions to these puzzles can be gained from a better understanding of *what* 'implicatures' are and *how* they arise in context…**

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2. The Classic 'Gricean' Theory of Conversational Implicatures

(26) **Our Overarching Questions**

- How do our cognitive systems come to associate a given sentence/utterance with its observed implicatures?
- That is, what are the rules/principles involved in deriving/computing the implicatures of a given sentence/utterance?

The first person to articulate an answer to these questions was the philosopher H.P. Grice …

(27) **The Classic 'Gricean' Theory**

- In 1967, H.P. Grice introduced his theory of conversational implicature (this work also was the first to clearly identify and distinguish the phenomenon of 'implicature')
- Since 1967, Grice's original account has been subject to much criticism and revision.
- Consequently, most current theories of implicature depart in important ways from Grice's original account.
- However, Grice's classic account remains the foundation of all work that follows him; his account thus remains fundamental to the fields of semantics and pragmatics
- The key assumption underlying Grice's theory is that **in rational, cooperative conversation, people follow the principle in (28):**

(28) **The Cooperative Principle**

"Make your 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:

In plain language: Don't be a jerk. Be cooperative.

- Now, on its own, the principle in (28) is rather vacuous. All it says is, "be cooperative." It doesn't explain *what it means to be cooperative*…
- All the punch to Grice's theory lies in the way in which he spells out what it means to be cooperative.
- More precisely, Grice claimed that the principle in (28) entails that conversational participants *must* follow a *series of conversational 'maxims' (rules)*.
- These rules were grouped into four categories, as follows:

(29) **The Maxim of Relation (The Maxim of Relevance)**

"Be relevant"

In plain language:

In a rational conversation, people don't just make random statements.
Rather, there's generally some **topic** of conversation,
and people's statements are **relevant** to that topic.

(30) **Illustration of Maxim of Relevance**

In the following conversation, Person 4 is not 'behaving cooperatively':

Person 1: How about that test yesterday?
Person 2: Yeah, question 3 was really hard!
Person 3: I thought that question 5 was kind of ambiguous!
Person 4: *** My aunt had her gall bladder removed!**

(31) **The Maxims of Quality**

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

In plain language:

In a rational, *cooperative* conversation, people don't assert something if either:
(a) they know that it's false, or
(b) they have no idea whether or not it's true.

(32) **Illustration of Maxims of Quality**

In the following conversation, Person 2 is not 'behaving cooperatively':

Person 1: I need to know the capital of Kazakhstan.
Person 2: Oh, it's Almaty.
Person 1: Amazing! How did you know that?
Person 2: **Oh, I don't know that. I have know idea what the capital is.**
Person 1: Well, do you know the capital of Uzbekistan?
Person 2: Sure, it's Samarkand.
Person 1: Really?
Person 1: **No way.**

(33) **The Maxims of Quantity**

a. "Make your contribution to the conversation as informative as required."
b. "Do not make your contribution *more* informative than is required."

In plain language:

In a rational, cooperative conversation, people will provide as much information as they can **without violating the other 'maxims'**

(34) **Illustration of the Maxims of Quantity**

In the following conversations, Person 2 is not 'behaving cooperatively':

Person 1: What are your parents' names?
Person 2: **Michael.**

Person 1: Who's coming to the party?
Person 2: **Bill, and Mary and Tom.**
Person 1: Really, Tom's coming?
Person 2: **No. But, Bill and Mary are.**

(35) **The Maxims of Manner**

Convey information efficiently. That is:
a. "be brief"
b. "be orderly"

In plain language:

In a rational, cooperative conversation:
(a) people do not use overly circuitous language to express simple ideas
(b) people put a sequence of utterances in some kind of 'logical order' (in a story, it is generally that earlier events are introduced before later events).

(36) **Illustration of the Maxims of Manner**

In the following conversations, Person 2 is not 'behaving cooperatively':

Person 1: "What are you eating?"
Person 2 (eating bread): **"Wheat seeds crushed into a powder, mixed with water and bacteria, and then submitted to high temperature."**

Person 1: "What did you do this weekend?"
Person 2: "When I got picked to sit next to the king at Medieval Times, I threw up all over him. When I went to bed that night, I slept with his crown on my head. On Sunday, I went with my father to Medieval Times. When the king was bent over helping me, I stole his crown. I got really sick from the chicken." (*i.e., the sentences of the story are in a random order.*)

(37) **The Maxims Beyond Conversation**

- A key idea of Grice's was that the Cooperative Principle (28) and its consequent 'maxims' (29)-(35) were **not specific to language.**
- Rather, these principles and maxims applied to **all forms of cooperative exchange.**
- The fact that these principles and maxims apply to conversation was taken to be a derivative fact, one that followed from the core fact that **all conversation is a cooperative exchange.**

a. Illustration of the 'Maxims' in a Non-Linguistic Domain

Suppose you are helping me build a house. It follows that:

(i) You will not just stand there knitting a sweater.
(Maxim of Relation)

(ii) If I ask you for some nails, you won't hand me bent and rusted ones.
(Maxim of Quality)

(iii) If I ask you for a hammer, you will hand me one, but not three.
(Maxim of Quantity)

(iv) If I ask you for a hammer, you will hand one as directly as possible, and not by walking around the structure three times first.
(Maxim of Manner)

So far, we know that Grice proposed that rational conversation follows the 'maxims' laid out above…

… his key insight was seeing how attention to those common sense 'maxims' can provide an explanation for how many conversational implicatures arise…

(38) **The Key Idea Behind the Classic Gricean Account**

A conversational implicature is an inference which arises from and is validated by:

a. The fact that the speaker uttered a sentence S with asserted content *p*.

b. **The assumption that the speaker is observing the conversational maxims.**

c. (possibly, certain background facts drawn from general world knowledge)

In the following section, we will illustrate this claim by examining a range of specific cases…

3. Some Case Studies in Deriving Implicatures

(39) **Example 1**

a. Dialog: Joe: Who is coming to the party? Tom: Bill is coming to the party.

b. Implicature (of Tom's utterance): No one else but Bill is coming to the party.

c. Deriving the Implicature
The following reasoning is done by the other conversational participants:

- Tom has said only that Bill is coming. He has *not* said that Sue/Jim/Lou is.
- **Tom is following the Maxim of Quantity**. Therefore, Tom's statement was 'as informative as possible without breaking the other maxims'.
- If Tom had also said Sue/Jim/Lou were coming, he would have made a more informative statement.
- Since Tom *didn't* say that Sue/Jim/Lou were coming, **it must be because such a statement would violate some other maxim.**
- Since saying "Sue/Jim/Lou are coming" would have a relevant statement, and also 'orderly', it must be that **such a statement would have violated the Maxims of Quality.**
- Therefore, Tom either believes that "Sue/Jim/Lou are coming" is not true, or he doesn't have sufficient evidence to assert it.
- **However, Tom is assumed to *know* who is coming to the party.** Therefore, for every person x, Tom knows whether x is coming to the party.
- **T**herefore, the fact that Tom *didn't* say "Sue/Jim/Lou are coming" must be because **Tom knows that it is not true.**
- **THEREFORE: Sue/Jim/Lou are not coming to the party. Only Bill is.**

Important Side-Note:
The reasoning above relies upon the following assumptions:
(i) Tom is cooperative, and so is following the Maxim of Quantity.
(ii) Tom knows who is coming to the party.

Therefore, if we drop either of those assumptions from the discourse, the reasoning no longer goes through, and the implicature is not generated!
(i) If we assume that Tom is trying to keep the full party list secret, then his utterance in (39a) no longer has the implicature in (39b).
(ii) If it is known that Tom only has *partial* knowledge of who is coming to the party, then his utterance in (39a) no longer has the implicature in (39b).

(40) **Example 2**

a. Dialog: Joe: Are you coming to the party?
Sue: I have work.

b. Implicature (of Sue's utterance): Sue is not going to the party tonight.

c. Deriving the Implicature
The following reasoning is done by the other conversational participants:

- Sue has said only that she has to work.
- **Sue is following the Maxim of Relevance**, and so her utterance is relevant to answering the question at hand, which is "Are you coming to the party or not?"
- Therefore, since she is being relevant, Sue intends her utterance to convey an answer to that question.
- **The fact that Sue has to work is only relevant to the question at hand *if her work conflicts with the party.***
  (After all, if there were no conflict, why would she mention it at all? It would be like saying "I drive a Subaru.")
- Therefore, by making her statement, Sue intends to convey that her work conflicts with the party.
- Therefore, Sue cannot come to the party.

Important Side-Note:

The reasoning above relies upon the following key assumption:

(i) The fact that Sue has to work is only relevant to the question if her work conflicts with the party.

Therefore, if we drop this assumption from the discourse, the reasoning no longer goes through, and the implicature is not generated!

(ii) Let's assume that Sue has a morning job. It's really grueling, and so she parties every night that she has work in the morning. **If we make this assumption, then her utterance in (40a) actually carries the *opposite* implicature from what is in (40b).**

(41) **Example 3**

a. Dialog: Joe: Is Tom a good student?
Sue: He's very well dressed.

b. Implicature (of Sue's utterance): Tom is not a good student.

c. Deriving the Implicature
The following reasoning is done by the other conversational participants:

- Sue has said only that Tom is very well dressed.
- **Sue is following the Maxim of Relevance**, and so her utterance is relevant to answering the question at hand, which is "Is Tom a good student."
- Therefore, Sue intends her utterance to convey an answer to that question.
- A salient legitimate way to answer the question would be to list the positive qualities of Tom as a student.
(*e.g.* "His homeworks are perfect, he always asks great questions in class, *etc.*")
- Therefore, Sue's utterance is intended as one that lists the positive qualities of Tom as a student.
- **Sue is following the Maxim of Quantity**. Therefore, Sue's statement was 'as informative as possible without breaking the other maxims'.
- If Sue had also listed other positive qualities of Tom, she would have made a more informative statement.
- Since Sue *didn't* list these other positive qualities, **it must be because such a statement would violate some other maxim.**
- Since listing these other positive qualities would have a relevant statement, and also 'orderly', it must be that **such a statement would have violated the Maxims of Quality.**
- Therefore, Sue either believes that statements listing these positive qualities of Tom are not true, or she doesn't have sufficient evidence to assert it.
- **However, Sue is assumed to *know* whether Tom has these positive qualities.**
Therefore, Sue knows whether it's true to say that "Tom has perfect homeworks, and always asks great questions."
- **T**herefore, the fact that Sue *didn't* say "Tom has perfect homeworks and always asks great questions" must be because **Sue knows that it is not true.**
- **THEREFORE: For any other imaginable positive quality of a student, Tom does not have that quality. And so, Tom is not a good student.**

(42) **Example 4**

a. Dialog: Joe: Did Sarah sing at the party?
Sue: She made a series of tonal sounds with her mouth.

b. Implicature (of Sue's utterance): Sarah's singing at the party was horrible.

c. Deriving the Implicature
The following reasoning is done by the other conversational participants:

- Sue has said only that "Sarah made a series of tonal sounds with her mouth."
- **Sue is following the Maxim of Relevance**, and so her utterance is relevant to answering the question at hand, which is "Did Sarah sing at the party."
- Therefore, Sue intends her utterance to convey an answer to that question.
- Making a series of tonal sounds with the mouth is (essentially) the act of singing.
- **Sarah is following the Maxim of Manner**, and so her utterance was as brief as possible.
- If Sue had simply said that "Sarah sang", she would have made an even briefer statement (and one which was also relevant).
- Since Sue *didn't* make this briefer statement, **it must be because such a statement would violate some other maxim (namely, Quality).**
- Therefore (**following reasoning similar to what we've already seen**), it must be that Sue believes that "Sarah sang" is false or otherwise misleading.
- Given that Sue has asserted that Sarah *did* make a series of tonal sounds with her mouth, it must be that this act somehow fell short of a true act of singing.
- One obvious way in which such an act would not qualify as 'signing' is if it were simply so bad that one might wonder whether the act was signing at all (rather than just making random sounds with the mouth).
- **Therefore, Sarah might have sang at the party, but it was so bad that Sue doubts whether it could quality as signing. Thus, Sarah sang very badly.**

(43) **Example 5**

a. Advertisement: "Campbell's soup has 30% less salt."

b. Implicature: Campbell's has 30% less salt than competing soups.

c. Deriving the Implicature
The following reasoning is done by the other conversational participants:

- **The advertisers are following the Maxim of Relevance**, and so their utterance (ad) is relevant to answering the question at hand, which is "Which soup should I buy: Campbells or some other soup?"
- Therefore, the advertisers intend their utterance to convey an answer to that question.
- A salient legitimate way to answer the question would be to list the advantages that Campbell's soup has over its competitors.
(*e.g.* "Campbell's soup is cheaper, and tastes better.")
- **Therefore, the advertisers' utterance is intended as one that lists the advantages of Campbell's soup over its competitors.**
- The advertisers' utterance can only be an answer of this sort if it is elliptical for the more explicit statement "Campbell's soup has 30% less salt *than its competitors.*" (*i.e.*, and not the Great Salt Lake).
- Therefore, the advertiser is intending to convey that Campbell's soup has 30% less soup than its competitors.
- Assuming I believe what the advertiser says, **Campbell's soup has 30% less soup than its competitors.**

Important Side-Note

- Many cases of false advertising are *not* cases where companies make an explicit claim which is false.
- Rather, in many such cases, the advertiser has said something which is literally/technically *true*, but which *strongly invites* a **conversational implicature** that is in fact false.
- A classic, but most likely apocryphal example is the case of the "tuna/salmon that won't turn pink in the can", and urban legend that is discussed at 'snopes.com':

http://www.snopes.com/business/market/pinkcan.asp

4. Two Key Predictions of the Classic Gricean Account

Recall that the central claim made by the Gricean theory of implicatures is the following:

(44) **The Key Idea Behind the Classic Gricean Account**

A conversational implicature is an inference which arises from and is validated by:
a. The asserted content of the speaker's utterance.
b. **The assumption that the speaker is observing the conversational maxims.**
c. (possibly, certain background facts drawn from general world knowledge)

This core assumption makes (at least) two key accurate predictions regarding so-called 'implicatures'.

(45) **First Key Prediction: Implicatures are 'Defeasible'**

- If *p* is an 'implicature' of "S", then it follows that *p* is not really a part of the asserted content of "S".
- Rather, *p* is simply an inference that listeners draw, based upon the assumption that the speaker is obeying the conversational maxims.
- **Therefore, a sentence of the form "S and not p" should be logically consistent. It should not sound like a 'straight-up contradiction'.**

a. Examples:

(i) John: Who is coming to the party?
Sue: Bill is. **And also Lou.**

(ii) John: Are you coming to the party tonight?
Sue: I have to work. **But, I can come afterwards.**

(iii) John: Is Tom a good student?
Sue: He is really well dressed. **And, yes, he's the best student in class.**

(iv) Campbell's has 30% less salt, b**ut, it's still the saltiest soup you can buy.**

b. Key Contrast: *You cannot consistently negate S and the asserted content of S*

(i) John: Who is coming to the party?
Sue: Bill and Joe are. ***But Bill isn't.**

(ii) John: Is Tom a good student?
Sue: He is a really well dressed. ***But, his clothes are awful.**

Side-Note:

- We've already been using 'defeasibility' as a key test of whether something is an implicature or not (see (1c)).
- The Gricean theory of implicatures explains why 'defeasibility' is such a key property of these kinds of inference.

(46) **Second Key Prediction: Implicatures are 'Reinforceable'**

- If *p* is an 'implicature' of "S", then it follows that *p* is not really a part of the asserted content of "S".
- **Therefore, a sentence of the form "S and p" should be informative. It should not sound like a 'straight-up redundancy'.**

a. Examples:

(i) John: Who is coming to the party?
Sue: Bill is. **And nobody else.**

(ii) John: Are you coming to the party tonight?
Sue: I have to work. **So, no I can't come.**

(iii) John: Is Tom a good student?
Sue: He is really well dressed. **But, he's the worst student in class.**

(iv) Campbell's has 30% less salt **than all its competitors.**

b. Key Contrast: *You cannot felicitously conjoin "S" with the asserted content of S. Doing so sounds weirdly redundant.*

(i) John: Who is coming to the party?
Sue: Bill and Joe are. ***And Bill is.**

(ii) John: Are you coming to the party tonight?
Sue: I have to work. *** And, I gotta work.**

Conclusion: The predictions in (45) and (46) seem to be accurate.

Therefore, we can now use these two properties – *defeasibility* and *reinforceability* – as tests of whether or not something is an implicature….

(47) **Interim Summary**

Thus far, we've seen the following:

- H.P. Grice proposed a theory of speaker interaction, whereby contributions to a conversation must satisfy the maxims in (29) – (35).

- H.P. Grice proposed that (conversational) implicatures can be viewed as inferences that are (crucially) based upon the assumption that speakers are following the maxims in (29) – (35).

- For a number of 'case studies', we have seen that we can indeed derive an observed implicature from the assumption that the speakers in question are following the maxims in (29) – (35).

- The proposal that implicatures are inferences of this sort predicts that they should exhibit the following key properties:

(i)	defeasibility	("S and not p" is consistent)
(ii)	reinforceability	("S and p" does not sound redundant)

So, with all this in hand, let's see how this theory of implicature might help us address the puzzles surrounding "or", "some" and numerals in Section 1…