Entailments

- When we utter declarative sentences, many things get communicated.
- The 'main message' and the entailments of the main message. E.g.
  1. I managed to get out of the hotel yesterday and ended up in Reno.
  2. I was in Nevada yesterday.
  3. #I managed to get out of the hotel yesterday and ended up in Reno, but I never made it to Nevada.

Pragmatic Inference (Conversational Implicature)

- Many other things get communicated in a more subtle, indirect way.
- As suggestions....
- pragmatic inference: 'reading between the lines'.
- Pragmatic inferences are:

  context-dependent, and

  cancellable (**defeasible**).

Grice's Cooperative Principle

The cooperative principle is part of a theory of how people interact with one another:

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

Grice's Conversational Maxims

- Maxim of **Quantity**:

  Make your contribution to the conversation as informative as necessary, but not more informative.

- Maxim of **Quality**:

  Do not say what you believe to be false or inadequately justified.

- Maxim of Relevance (**Relation**): Be relevant!

- Maxim of **Manner**:

  Avoid obscurity of expression. Be unambiguous, brief, and orderly.

A theoretical idealization

Not meant as a description of what people actually do.

Conversational Implicature (Simplified)

S **conversationally implicates** p when:

1. S is presumed to be observing the Cooperative Principle;
2. The supposition that S believes p is required to make S's utterance consistent with the Cooperative Principle; and
3. S believes H can figure 2 out.

Sometimes Routine

▶ **Maxim of Relation:**

A: I'm out of gas.

B: There's a gas station around the corner.

implicates

As far as A knows, the gas station is open...

Flouting the Maxims

Appearing not to cooperate, but relying on the Cooperative Principle to guide the interpretive process, e.g.

- ▶ Flouting the **Maxim of Quality**.

  A: Are you going to Paul's party?

  B: I don't like parties.

  (B is known to be a party animal.)

Flouting the **Maxim of Manner**

A: Lets get the kids something

B: OK, but I veto I-C-E-C-R-E-A-M

(B doesn't want an open discussion of the ice cream)

A: Miss Singer produced a series of sounds corresponding closely to the score of an aria from "Rigoletto."

(A thinks Miss Singer sang badly.)

- **Flouting the Maxim of Quantity:**

  Some athletes smoke **implicates** Not all athletes smoke.

- **Flouting the Maxim of Relation:**

  Alan: **Are you going to Paul's party?**
  Barb: **I have to work.**

  (Barb isn't going to Paul's Party.)

Particularized vs. Generalized Implicature

    a. Particularized conversational implicature:
- A: 'Where's John'
- B: 'The pubs are open' implicates 'John is probably in a pub'

    b. Generalized conversational implicature (GCIs)
- ▸ 'He ate some of the cookies' implicates
  'He didn't eat all of the cookies' (Default inference)

Generalized Quantity 1

GQ1: First Maxim of Quantity

Grice: "Make your contribution as informative as is required"

Q1: Heuristic: 'What isn't said, isn't'

Restriction: for sets of alternates, use of one (especially a weaker) implicates inapplicability of a another (especially a stronger).

Generalized Quantity Implicatures

- scalar: $\langle$ all, some $\rangle$: some **implicates** not all
- negative scales: $\langle$ none, not all $\rangle$
- clausal: $\langle$ since/when-p-q, if-p-q $\rangle$
- non-entailment sets: $\langle$ yellow, red.. $\rangle$

- ‘Some of the boys came’ **implicates** ‘not all’
- ‘Three boys came in’ **implicates** ‘not four
- ‘Possibly, there’s life on Mars’ **implicates** ‘not certainly’

- 'Not all of the boys came (in fact none)' **implicates** 'some'
- 'If John comes, I'll go' **implicates** 'maybe he will, maybe he won't'
- 'Her dress was red' **implicates** 'not red and blue'

Grice

GQ2: Second Maxim of Quantity
Grice: 'Do not make your contribution more informative than is required'

Q2: Heuristic: 'What isn't said is the obvious' Tendency: best interpretation to the stereotypical, most explanatory reading

Grice

'Jones drove down a road' **implicates** 'Jones drove down a hard-surfaced road''

'If you mow the lawn, I'll give you $5' **implicates** 'If you don't mow the lawn, I won't give you $5'

'John turned the switch and the motor started' **implicates** p and then q, p caused q, John intended p to cause q, etc.

Maxim of Quality: Don't say what you don't have adequate evidence to support (or believe to be false)

Moore's Paradox: Obama was elected, but I don't believe it.

Maxim of Manner:
Grice: "Be perspicuous", specifically, "avoid obscurity of expression, avoid prolixity" (Grice's M1 & M4)

Manner Heuristic: 'What's said in an abnormal way isn't normal' Restriction: abnormal = marked (prolix or non-colloquial); thus double-negation, repetition, use of marked alternates, e.g.

'It's not impossible that Φ' implicates 'Φ is rather unlikely'.

'It is possible that Φ' implicates 'Φ is somewhat unlikely'.

'He ran and ran and ran' implicates 'He ran fast and far'

'The corners of Sue's lips turned slightly upward' implicates 'Sue didn't exactly smile'

More examples of Implicature

'Bill caused the car to stop' implicates 'Bill actions were less directly involved in making the car stop than would have been Q2-implicated by 'Bill stopped the car' '

'He ordered a beverage' implicates 'He ordered something other than might have been Q2-implicated by 'He ordered a drink'

More examples of Implicature

- He is meeting a woman tomorrow night.

  Content: He is meeting X ; X is a woman.

  Relevance: how he describes the person he's meeting: most salient woman in the set of possible referents; by not referring to her unambiguously, the inference is drawn that the woman isn't his wife

More examples of Implicature

- I must inform you that X.

  Content: X

  Relevance: makes the issue of whether I am required to inform you relevant. Sets up scale:

  ⟨ delightfully do , freely do , willingly do , obligatorily do ⟩

  I don't want to tell you this.

More examples of Implicature

'On the \$2.98 lunch, you get soup or salad' implicates not both.

- ▶ You can get soup without salad.
- ▶ You can get salad without soup.
- ▶ ~~You can get both soup and salad.~~
- ▶ 'On the \$2.98 lunch, you get soup and salad' entails both.

More examples of Implicature

'There may be extraterrestial life.' **implicates** 'I don't know if there is.'

'Kim likes either Sandy or Bo' **implicates** 'Kim doesn't like both'

More examples of Implicature

A: Are you going to the Big Game?

B: Is the Pope catholic? (reconcile this with **relevance**)

cf.

B: I'm sick.

If B is sick then ϕ.

$\phi = $ B can't go to the Big Game.

$\phi = $ B can't address A's issue now.

$\phi = $ ...

Speech Acts

A speech act is an act that a speaker performs when making an utterance, including the following:

- A general act (**illocutionary act**) that a speaker performs, analyzable as including:

  locutionary acts: the uttering of words,

  propositional acts: making reference and predicating, and

  illocutionary force: a particular intention in making the utterance.

- **perlocutionary act:** The production of a particular **effect** in the addressee.

Speech Acts

A speech act – an act a speaker performs when making an utterance, e.g.

> A **statement** (**assertion**): an illocutionary act that has the assertive illocutionary point of claiming that some proposition is true.
>
> A **query**: an illocutionary act that has a directive illocutionary point of attempting to get the addressee to supply information.
>
> A **command**: an illocutionary act that has the directive illocutionary point of getting another to do or not to do something.

Types of Sentence Meaning

Speech Act	Clause Type	Function
Assertion	Declarative	conveys information is true or false
Question	Interrogative	elicits information
Orders	Imperative	causes others to behave
Requests		in certain ways

What we do by uttering a sentence of a given type:

- ▶ Declarative: (assert a **proposition**)

  GWB nominated Gonzalez
- ▶ Interrogative: (ask a **question** (issue a directive to reply))

  Did GWB nominate Gonzalez?
- ▶ Imperative: (issue a **directive** to act)

  Nominate Gonzalez!

- ▶ The meaning of the declarative sentence **'GWB is Texan'** is the **proposition** that maps a location **l** onto **true** just in case the individual born unto GHWB and BB is one of the Texans at **l**.
- ▶ The meaning of the interrogative sentence **'Is GWB Texan?'** is the **question** of whether the proposition that the individual born unto GHWB and BB is one of the Texans at **l** is true at **l**.

Performatives

Some verbs allow an act to be performed simply with the right declarative sentence.

I promise that I will pay you back on Tuesday.

I hereby pronounce you husband and wife.

Performative verbs.

Felicity Conditions.

More examples of Implicature

Indirect Speech Acts:

Can you pass the salt...

Why don't you move to California...

Questioning the hearer-based preconditions of act A implicates the speaker wants the hearer to do A:

- Is the salt near you?
- Can you reach the salt?

Grice

Asserting the speaker-based preconditions of act A implicates the speaker wants the hearer to do A:

I want the salt.

I want you to pass the salt.

I'd like you to pass the salt.

Pragmatic Inference vs. Entailment

▶ From 'All Stanford students eat tofu and drink Jamba Juice'
  you can draw the inference that 'All Stanford students eat
  tofu' in any context, any time, anywhere.

► By contrast:

A: Do you want to go out for a walk?
B: It's dark out. [A infers that B doesn't want to go out]

A: Is it time to go Trick-or-Treating yet?
B: It's dark out. [A infers that B thinks it's time for Trick-or-Treat]

More Pragmatic Inference

- A: Do you want to go to the Big Game?
  B: Is the pope catholic?
- A: Do you want to go to the Big Game?
  B: Do you think I'm crazy?

Pragmatic Inference vs. Entailment

#My friend Kim is a bachelor; (but) in fact Kim is married.
  Bo has fifty bucks, in fact he's got a hundred.
  It's cool in here, in fact it's freezing.

Pragmatic Inference vs. Entailment

Conversational Implicature is defeasible (cancellable);
Entailment is not.

Conversational Implicature is non-detachable; entailment is
detachable.

The Status of **Or**

- Are there two words **or** in English (inclusive and exclusive)?
- You're allowed in if you're a Stanford student or if you live in Palo Alto.

  (fine to be both)
- On the $3.50 lunch, you're allowed to have a soup or a salad.

  (only one or the other)

Conclusion

- ▶ Pragmatic provides the beginnings of an account of what's communicated beyond what's literally said.
- ▶ Most work builds on Grice's pioneering work developing the theory of conversational implicature.
- ▶ This work uses the Cooperative Principle and the 4 maxims as an idealization.
- ▶ It seeks to explain why some of what gets communicated is cancellable (only suggested), depends on context, and has to be calculated.

What is said vs. What is meant.

▶

Special Entailments? Semantic Presuppositions

- 'Kim has stopped eating Vindaloo' entails 'Kim used to eat Vindaloo'.
- 'Kim hasn't stopped eating Vindaloo' entails 'Kim used to eat Vindaloo'.
- A semantic presupposition of a sentence **S** is an entailment of **S** that is also entailed by the **S**'s negation.

Famous Presuppositions

- The present King of France is bald.
- The present King of France isn't bald.
- There is a present king of France.
- When did Jones stop beating his wife?

The Limits of the 'Entailment' Analysis

▶ 'Has Kim stopped eating Vindaloo?' presupposes 'Kim used to eat Vindaloo'.

▶ 'Hasn't Kim stopped eating Vindaloo?' presupposes 'Kim used to eat Vindaloo'.

But questions aren't propositions and hence don't have entailments.

Same for directives: 'Stop eating Vindaloo!'

Accommodation

Eye Witness Testimony

[show video of car approaching intersection]

How fast was the car going when it approached the stop sign?

Witness will testify that there was a stop sign.

Elizabeth Loftus

Pragmatic Presuppositions

- **Use conditions** (sometimes called **felicity conditions**)
- Use of a **t**-pronoun (French **tu**) vs. a **v**-pronoun (French **vous**) pressuposes a certain social relation or familiarity between speaker and hearer.
- Many languages (e.g. Japanese, Korean) have **honorific** affixes that can be placed on verb forms that indicate socially required respect between the speaker and (the denotation of) the verb's subject.

Truth Conditions and Felicity

How do we deal with utterances whose felicity conditions fail?

Could be a semantic issue. (cf. semantic accounts of: **The (present) King of France is bald.**)

Could be a pragmatic issue – a matter for the theory of language use.

Entailments?

- Does 'Kim has 50 bucks' entail 'Kim doesn't have more than 50 bucks'?
- Does 'It's cool in here' entail 'It's not freezing cold in here'?
- Does 'It's hot in here' entail 'I want you to open the window'?
- Does 'There's a drinking fountain next door' entail 'I think the drinking fountain is working'?
- ...