Semantics & Pragmatics SoSe 2022

Lecture 16: Implicature

30/06/2022, Christian Bentz

Overview

Tutorial Week 7

In Exercise 1, the Challenge test sentence "It's not true, this must be Santa Claus" doesn't seem like a valid response to "I heard someone knock on the door. This might be Santa Claus." From my point of view, that's not how this response would work in natural language ('-I heard someone knock on the door. This might be Santa Claus. - Ah yes, that must be him!').

Well, yes, for reasons of politeness people will probably use an affirmative "yes" rather than being downright confrontative and say "it's not true". But this actually does not change the fact that you are challenging the strength of modality by providing the stronger "must" instead of "might".

Tutorial Week 7

For example (2) in exercise 2, the glossing states that the marker "-bugege" is used when stating a "generally known fact". But facts are treated as indirect evidentials in the WALS chapter, so how can this be compatible with the marker being a direct evidential in the exercise?

(1)   na mini   wa-bugege
       I   today come-PRES.PARTICIPATING.EV
       'I am coming today.' (I am participating in the action or making a statement of a generally known fact.)

When a person is involved in an action, they would typically express this by a direct evidential. The only reference to "facts" in WALS chapter 77 I can find is: "Indirect evidentials are used when the speaker was not a witness to the event but learned of it after the fact." If you are involved in an action then you witness it yourself, rather than learn of it after the fact.

Section 1: Historical Overview

Historical Background

"Pragmatics is a field that is in many ways grounded in semantics. Many of its fundamental principles have been developed in reaction to semantic principles or problems of semantic analysis; for example, **Grice** developed his **theory of implicature** in order to address the semantic analysis of the natural-language equivalents of the logical operators (such as *and* and *or*)."

Birner (2012), p. x.

Historical Overview

"[...] while it is no doubt true that the formal devices [of formal semantic frameworks] are especially amenable to systematic treatment by the logician, it remains the case that there are very many **inferences and arguments**, expressed in natural language and not in terms of these devices, which are nevertheless valid. [...] I shall therefore inquire into the general conditions that, in one way or another, apply to conversation as such [...]"

Grice (1975), p. 23-24.
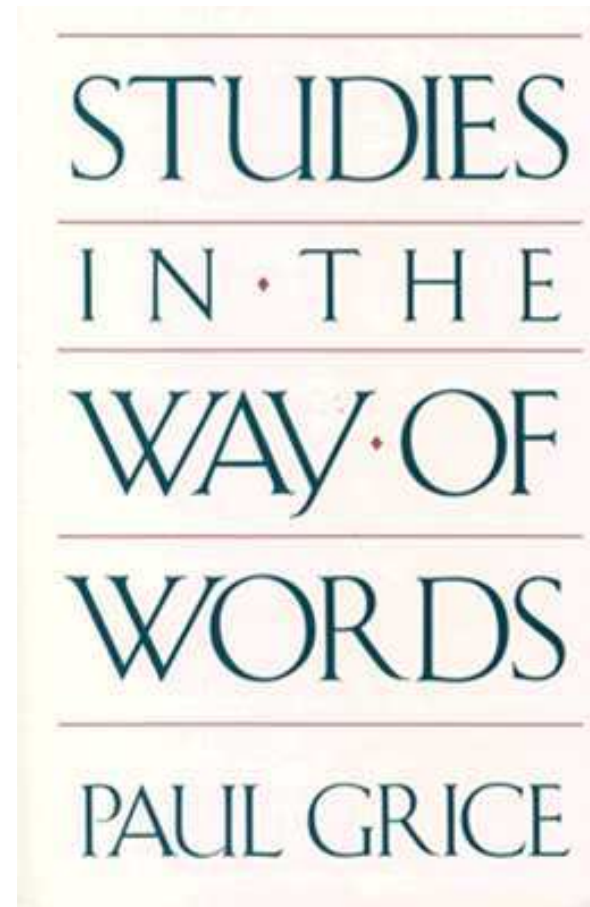
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Section 2: Grice's Maxims of Conversation

The Cooperative Principle

"Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged."
Grice (1975), p. 26.

Note: Importantly, Grice does *not* conceptualize this principle and the resulting maxims as a set of *deontic statements* – i.e. conversational rules that everybody should adhere to – but rather as a general **conversational expectation** (a "conversational baseline") that (normally) both the speaker and the hearer know about.

Grice's Maxims

▶ The Maxim of **QUALITY**

▶ The Maxim of **QUANTITY**

▶ The Maxim of **RELATION (or RELEVANCE)**

▶ The Maxim of **MANNER**

Grice (1975), p. 26-28.

The Maxim of **Quality**

Try to make your contribution one that is true:
1. Do not say what you believe to be false.
2. Do not say that for which you lack adequate evidence.

Grice (1975), p. 27.

(2) A: John managed to brake his car and get arrested for arrousing public annoyance when he was drunk last night.
B: Yeah, he is smart like that.

(3) A: What is that horrendous noise outside?
B: That's probably Gozilla walking through our garden.

The Maxim of **Quantity**

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

Grice (1975), p. 26.

(4) A: What time is it?
     B: Time to shine.

(5) A: What time is it?
     B: 12:32 and 14 seconds, Central European Time.

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The Maxim of **Relation**/**Relevance**

Be relevant.

Grice (1975), p. 27.

(6) A: Can you tell me where the post office is?
     B: I'm a stranger here myself.

Note by Grice: "Though the maxim itself is terse, its formulation conceals a number of problems that exercise me a good deal: questions about what different kinds and focuses of relevance there might be, how these shift in the course of talk exchange [...]"

The Maxim of **Manner**

Be perspicuous.[1]

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

Grice (1975), p. 27.

(7) A: He opened the door, and she gave him the key.
(In a situation where the door-opening happened after the key was given.)

---

[1]"Clear and easy to understand", https://dictionary.cambridge.org/dictionary/english/perspicuous.

[2]"The fact of using too many words and therefore being boring or difficult to read or listen to", https://dictionary.cambridge.org/dictionary/english/prolixity.

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Failure to Fulfill a Maxim

There are different ways in which a participant of a communicative interaction might fail to fullfill a given maxim:

- ► They might **quietly violate a maxim**; in some cases, they will be liable to mislead.

- ► They might **opt out** from adhering to either the maxim, or the cooperative principle more generally (or both).

- ► They might be faced by a **clash**, i.e. it is impossible to adhere to one maxim without not adhering to another, e.g. a clash between Quality and Quantity.

- ► They might **flout** a maxim, that is obviously failing to fulfill it. If none of the above ways of failure to fulfill a maxim seems relevant, the hearer has to take this last possibility into account.

Grice (1975), p. 30.

Example: Failure to Fulfill Maxims

A politician is campaigning to be elected. She is convinced that reducing income taxes is the right way to go forward. However, her party has still not decided internally whether reducing income taxes is going to be on the agenda after a successful election. In this context, the politician is interviewed by a reporter.

(8)   Reporter: Is your party finally going to reduce income taxes if elected?

(9)   Politician: Yes, this is what we stand for. (**quiet violation**)

(10) Politician: I won't answer this question. (**opt out**)

(11) Politician: We are still deciding on the matter. I'm hopeful that yes, but I cannot tell you for sure. (**opt out**/**clash**)

(12) Politician: I personally think this is a good idea. (**flouting** the maxim of relevance)

Conversational Implicature

Conversational Implicature

Conversational implicatures are a type of *pragmatic inference* about *what is said* by the speaker (literal meaning) in relation to what they actually *intend to convey* (communicative intention).

(13) A: Can you tell me where the post office is?
      B: I'm a stranger here myself.

Pragmatic inference by A:

► I assume that B is participating in a *rational conversation*, i.e. adhering to the *cooperative principle* and the *maxims* (if possible).

► B seems to be violating the maxim of relevance.

► I assume we both know (it is part of our common ground) that strangers are unlikely to know the locations of particular places.

► I come to the pragmatic inference that the conversational implicature of B's statement is a more polite way of saying: "No, I cannot."

Kroeger (2019), p. 143.

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Examples of Conversational Implicatures

Grice (1975), p. 31-37 gives a range of examples to illustrate the workings of conversational implicature. He therefore distinguishes three "groups" of conversational implicatures:

► **Group A**: Examples in which **no maxim is violated**, or at least in which it is not clear that any maxim is violated.

► **Group B**: Examples in which **a maxim is violated**, but its violation is to be explained by a clash with another maxim.

► **Group C**: Examples which involve **exploitation**, i.e. a *maxim is flouted* for the purpose of deliberately creating a conversational implicature.

Group A: No Violation

Examples in which **no maxim is violated**, or at least in which it is not clear that any maxim is violated.

Context:

A stands next to his car, which is immobilized. B approaches him and asks what is the matter.

Utterance(s):

(14)   A: I am out of petrol.
       B: There is a garage around the corner.

Conversational implicatures (of B's utterance):

► The garage sells petrol.

► The garage is (or maybe) open.

Note: The assumption here is that people in the A "position" would generally understand the conversational implicature(s). Hence, the maxim of relevance is not violated.

Group A: No Violation

Examples in which **no maxim is violated**, or at least in which it is not clear that any maxim is violated.

Context:

Two persons A and B have a conversation about a person C who they both know.

Utterance(s):

(15)   A: C doesn't seem to have a partner these days.
       B: He/she has been paying a lot of visits to New York lately.

Conversational implicatures (of B's utterance):

► He/she might have a partner in New York.

Note: The assumption here is that people in the A "position" would generally understand the conversational implicature(s). Hence, the maxim of relevance is not violated.

Group B: Violation due to Clash

Examples in which **a maxim is violated**, but its violation is to be explained by a clash with another maxim.

Context:
A is planning a trip to France and would like to visit a person C. A has a conversation about this with B.

Utterance(s):

(16)   A: Where does C live?
        B: Somewhere in the South of France.

Maxim violated (in B's utterance):
Quantity 1 (less information than required due to clash with Quality)

Conversational implicatures (of B's utterance):

► I don't know the exact name of the place where C lives.

Group C: Exploitation/Flouting of Maxim

Examples which involve **exploitation**, i.e. a *maxim is flouted* for the purpose of deliberately creating a conversational implicature.

Context:

A is a professor writing a letter of recommendation to B to recommend a student C for a philosophy job.

Utterance(s):

(17)   A: Dear B, C's command of English is excellent, and he has attended tutorials regularly. Kind regards, A.

Maxim flouted:

Quantity 1

Conversational implicature:

► I cannot recommend C as a philosopher.

Group C: Exploitation/Flouting of Maxim

Examples which involve **exploitation**, i.e. a *maxim is flouted* for the purpose of deliberately creating a conversational implicature.

Context:
A and B are colleagues sharing an office. A keeps constantly asking B for the time.

Utterance(s):

(18)   A: What time is it now?
       B: 12:32 and 14 seconds, Central European Time. No, wait, 15 seconds, no, 16 seconds ...

Maxim flouted:
Quantity 2

Conversational implicature:

► Stop asking me about the time.

Group C: Exploitation/Flouting of Maxim

Examples which involve **exploitation**, i.e. a *maxim is flouted* for the purpose of deliberately creating a conversational implicature.

Context:

A and B have a conversation about C.

Utterance(s):

(19)   A: C managed to brake his car and get arrested for arrousing public annoyance when he was drunk last night.
B: Yeah, he is smart like that.

Maxim flouted:

Quality 1

Conversational implicature:

► He is not smart. (Irony)

Group C: Exploitation/Flouting of Maxim

Examples which involve **exploitation**, i.e. a *maxim is flouted* for the purpose of deliberately creating a conversational implicature.

Context:
A is in love with B.

Utterance(s):

(20)   A: You are the apple of my eye.

Maxim flouted:
Quality 1

Conversational implicature:

▶ I like you very much. (Metaphor)

Group C: Exploitation/Flouting of Maxim

Examples which involve **exploitation**, i.e. a *maxim is flouted* for the purpose of deliberately creating a conversational implicature.

Context:
A and B have a conversation about the president.

Utterance(s):

(21) A: I read the president played poker with the Queen.

(22) B: Interesting, I'm sure he didn't play with a full deck though.[3]

Maxim flouted:
Manner (Ambiguity)

Conversational implicature:

► I'm suggesting that the president might not be playing with a full deck normally.

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[3]*to not play with a full deck* is an idiom meaning *to not be very smart*.

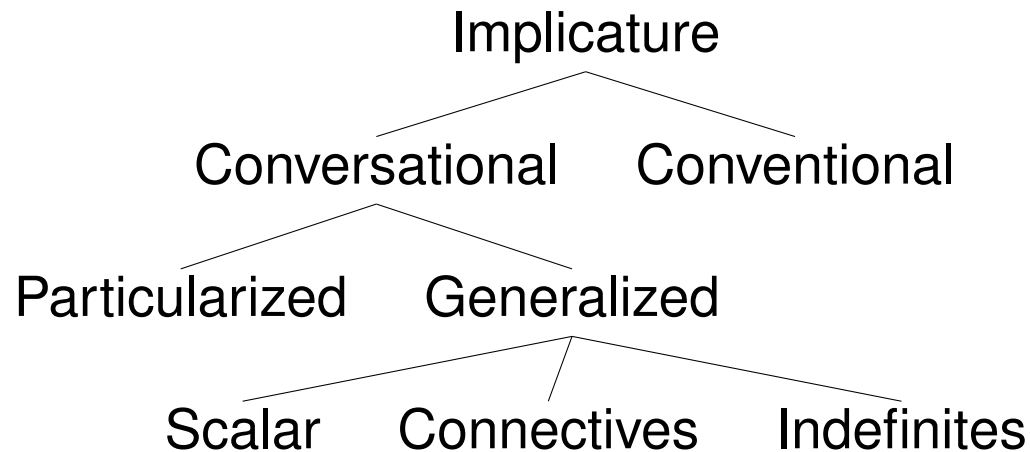# Section 3: Types of Implicature

Types of Implicature

The following types of implicature are discussed in Kroeger (2019), p. 146-147.

```
                        Implicature
                       /          \
          Conversational            Conventional
            /        \
  Particularized     Generalized
                      /    |    \
               Scalar  Connectives  Indefinites
```

Particularized Conversational Implicatures

"[...] the intended inference depends on particular features of the **specific context** of the utterance."

Kroeger (2019), p. 146.

Implicature
Conversational Conventional
Particularized Generalized
Scalar Connectives Indefinites

(23)   A: Can you tell me where the post office is?
        B: I'm a stranger here myself.

(24)   A: C managed to brake his car and get arrested for arrousing
        public annoyance when he was drunk last night.
        B: Yeah, he is smart like that.

(25)   A: Where does C live?
        B: Somewhere in the South of France.

Generalized Conversational Implicatures

"This type of inference **does not depend on specific features of the utterance context**, but is instead normally implied by any use of the triggering expression in ordinary contexts."

Kroeger (2019), p. 146.

We will discuss three subtypes of Generalized Conversational Implicatures here:

- ► **Scalar** Implicatures

- ► Implicatures of Sentence **Connectives**

- ► Implicatures of **Indefinite** Noun Phrases

```
              Implicature
          _____|_____
   Conversational      Conventional
   _____|_____
Particularized  Generalized
            _____|_____
        Scalar  Connectives  Indefinites
```

Scalar Implicatures

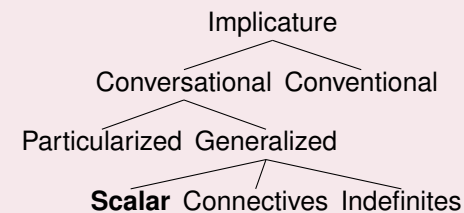"A widely discussed type of generalized conversational implicature [i.e. **scalar implicature**] involves **non-maximal degree modifiers**, that is, words which refer to intermediate points on a scale."

Kroeger (2019), p. 146.

```
                    Implicature
                   /          \
      Conversational          Conventional
         /         \
Particularized    Generalized
                  /         \
           Scalar  Connectives  Indefinites
```

(26) The water is *warm*.
GENERALIZED IMPLICATURE: The water is not hot.

(27) It is *possible* that we are related.
GENERALIZED IMPLICATURE: It is not necessarily true that we are related.

(28) *Some* of the boys went to the rugby match.
GENERALIZED IMPLICATURE: Not all of the boys went to the rugby match.

(29) John has *most* of the documents.
GENERALIZED IMPLICATURE: John does *not have all* of the documents.

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Implicatures of Connectives

Whenever **sentence connectives** (e.g. and, or, if... then, etc.) are used, they can give rise to implicatures beyond their truth-conditional content, i.e. beyond their logical meaning of $\wedge$, $\vee$, $\rightarrow$, etc.

Kroeger (2019), p. 146.
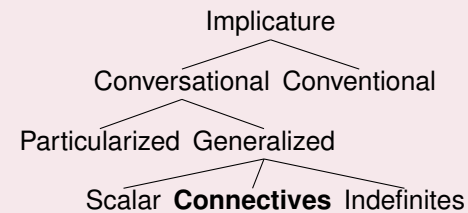
Implicature

Conversational Conventional

Particularized Generalized

Scalar **Connectives** Indefinites

(30) Susan gave Peter the key *and* Peter opened the door.
STANDARD LOGIC: Gspk $\wedge$ Opd $\equiv$ Opd $\wedge$ Gspk[4]
GENERALIZED IMPLICATURE: She gave him the key *and then* he opened the door.

(31) Peter is *either* Susan's brother *or* her boyfriend.
STANDARD LOGIC: B_1ps XOR B_2ps[5]
GENERALIZED IMPLICATURE: The speaker does not know whether Peter is Susan's brother or boyfriend.

---

[4]The equivalence holds true due to the principle of commutativity. Translation key: Gxyz: x gives y z; Oxy: x opens y; p: Peter; s: Susan; k: the key; d: the door.
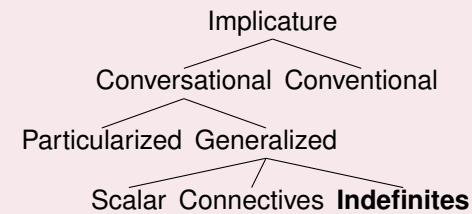[5]Translation key: B_1xy: x is y's brother; B_2xy: x is y's boyfriend.

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Implicatures of Indefinites

"The **indefinite article** can trigger generalized conversational implicatures concerning the possessor of the indefinite NP, with different implicatures depending on whether the head noun is *alienable* or *inalienable*. How to account for this difference is somewhat puzzling."

Kroeger (2019), p. 147.

```
                            Implicature
                     ┌──────────┴──────────┐
           Conversational              Conventional
        ┌────────┴────────┐
  Particularized      Generalized
                ┌──────────┼──────────┐
             Scalar   Connectives   Indefinites
```

(32) I walked into a house. (alienable)
      GENERALIZED IMPLICATURE: The house was not my house.

(33) Arthur is meeting a woman tonight. (alienable)
      GENERALIZED IMPLICATURE: The woman is not Arthur's wife or close relative.

(34) I broke a finger yesterday. (inalienable)
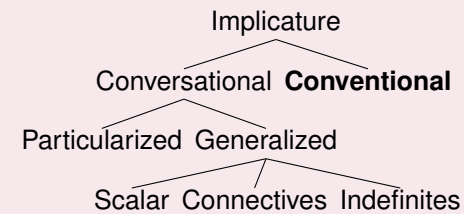   GENERALIZED IMPLICATURE: The finger was my finger.[6]

---

[6]The last example seems special to English though. In German, it would sound strange to say "Ich habe gestern einen Finger gebrochen," exactly because the implicature in this German sentence is that it is *not* my finger, if it was, you would say "Ich habe *mir* gestern einen Finger gebrochen."

Conventional Implicatures

"[...] **conventional implicatures** are part of the **conventional meaning of a word or construction**. This means that they are not context-dependent or pragmatically explainable [in contrast to conversational implicatures], and must be learned on a word-by-word basis."

Kroeger (2019), p. 148.

```
                              Implicature
                              /        \
             Conversational          Conventional
             /          \
     Particularized    Generalized
                       /     |      \
               Scalar  Connectives  Indefinites
```

(35) Susan was born in Stuttgart *and* Peter was born in Entringen.
IMPLICATURE: – (natural language "and" is here used like $\land$).

(36) Susan gave Peter the key *and* Peter opened the door.
GENERALIZED CONVERSATIONAL IMPLICATURE: She gave him the key *and then* he opened the door.

(37) Susan was born in Stuttgart *but* Peter was born in Entringen.
CONVENTIONAL IMPLICATURE: In contrast to what was said before, Peter was born in Entringen.[7]

---

[7]Remember that both *but* as well as *and* are translated into standard logic as $\land$.

Further Examples: Conventional Implicature

(38)   Alfred has *still* not come
       CONVENTIONAL IMPLICATURE: His arrival is expected (has been expected since some time).

(39)   I was in Paris last spring *too*.
       CONVENTIONAL IMPLICATURE: Some other person was in Paris last spring.

(40)   *Even* Bart has passed the test.
       CONVENTIONAL IMPLICATURE: Bart was among the least likely to pass the test.

Beware: "Conventional implicatures turn out to have very similar properties to certain kinds of presuppositions, and there has been extensive debate over the question of whether it is possible or desirable to distinguish conventional implicatures from presuppositions."

Kroeger (2019), p. 149.
See also definitions and examples here:
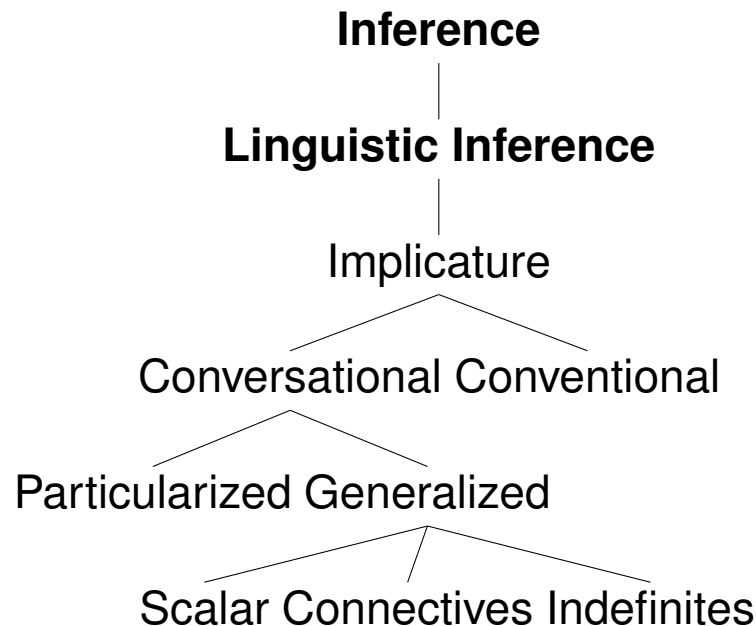https://plato.stanford.edu/entries/implicature/#ConvConvImpl

Section 4: Identification of Implicatures

Linguistic Inference

The different kinds of implicatures discussed above can be seen as a subcategory to the more general process of **linguistic inference**, which is itself a subcategory to **inference in general**.

Inference
|
Linguistic Inference
|
Implicature
/   \
Conversational Conventional
/   \
Particularized Generalized
/   \
Scalar Connectives Indefinites

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Linguistic Inference

In order to decide whether a certain utterance gives rise to a **linguistic inference** – as opposed to an **inference drawn more generally** based on our world knowledge – we have to ask: if a person (of whom we assume that they are intuitively aware of the Gricean maxims) communicates a proposition p, would the utterance of p by itself (though still against the backdrop of our world knowledge) give us reason to believe that another proposition q also holds?

(41) Susan's boss treated her badly, *and* she quit her job.

LINGUISTIC INFERENCE (GENERALIZED CONVERSATIONAL IMPLICATURE):
She quit her job *after and as a consequence of* her boss treating her badly.

NON-LINGUISTIC INFERENCES:
Susan is searching for a new job.
Susan's job is available again.
Susan's boss is a jerk.
etc.

Note: The *non-linguistic inferences* could become *linguistic inferences*. For instance, if this sentence is uttered in reply to the question whether there is a job available in the respective company. Then there would be a *particularized conversational implicature*: Susan's job is available again.

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Entailment, Presupposition, and Implicature

Given that we have established the difference between linguistic and non-linguistic inferences, **implicature** is one of several possible **linguistic inferences**. The others we will discuss are **entailment** and **presupposition**.
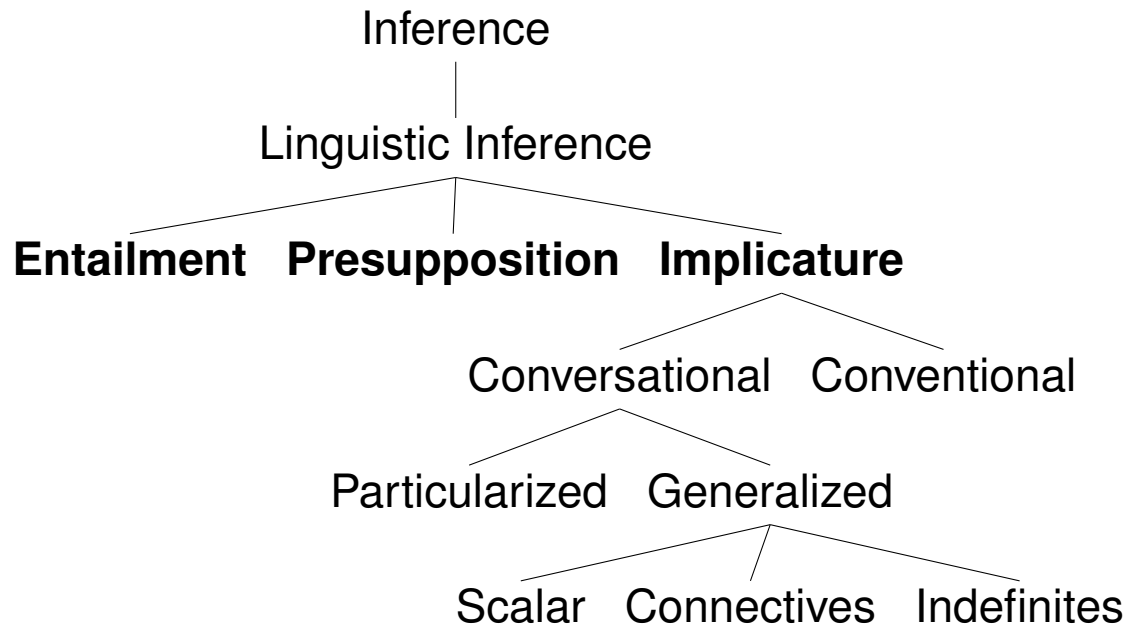
Inference
|
Linguistic Inference
|
Entailment   Presupposition   Implicature
|
Conversational   Conventional
|
Particularized   Generalized
|
Scalar   Connectives   Indefinites

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Entailment

"**Entailment** is a type of [linguistic] inference. We say that proposition p "entails" proposition q if p being true **makes it certain** that q is true as well."

Entailments thus require that:

1. whenever *p* is true, it is logically necessary that *q* is also true;

2. whenever *q* is false, it is logically necessary that *p* is also false;

3. these relations follow from the meanings of *p* and *q*, independent of the context of utterance.

Kroeger (2019), p. 36-38.

Note: Typically, the symbol ⊨ is used for "semantic entailment" (i.e. based on model-theoretic truth evaluation), and the symbol ⊢ for "syntactic entailment" (i.e. based on the syntactic clauses of a logical language).

Entailment: Examples

(42) John *killed* the wasp. (lexical)
ENTAILMENT: The wasp died.

(43) I *broke* your Ming dynasty jar. (lexical)
ENTAILMENT: Your Ming dynasty jar is broken.

(44) Hong Kong is *warmer than* Beijing in December. (comparative)
ENTAILMENT: Beijing is cooler than Hong Kong in December.

(45) Ringo Starr is my *grandfather*. (lexical)
ENTAILMENT: Ringo Starr is a relative of mine.

(46) John saw *either* Mary *or* Bill. (logical)
ENTAILMENT: John did not see both Mary and Bill.

Criteria and Tests

In the following, we establish a **battery of overall five tests**, which can be used to distinguish entailments from implicatures (and presuppositions in the next step).

Kroeger (2019), p. 151 pp.

	Entailment	Conversational Implicature[8]
a. Cancellable[9]	NO	YES
b. Suspendable	NO	YES
c. Reinforceable	NO	YES
d. Negation	NO	NO
e. Question	NO	NO

[8]Note that here only *conversational implicature* is included, as it is unclear whether *conventional implicatures* will behave the same, or whether these would rather fall with presuppositions.

[9]Also called *defeasible*.

Entailment vs. Conversational Implicature

Assume we have the two example utterances and respective inferences below. We will run through the different tests to establish whether these **inferences** are **entailments** or **conversational implicatures**.

(47) John killed the wasp.
INFERENCE: The wasp died.

(48) A: I ran out of petrol.
B: There is a garage around the corner.
INFERENCE: One can buy petrol there.

Note: We here use just "inference" to mean "linguistic inference".

The Cancellation-Test

If the inference can be **cancelled** by the speaker **without creating a contradiction**, we say that the inference is cancellable.

(49)   #John killed the wasp, but the wasp didn't die.
       (cancellable: NO)

(50)   There is a garage around the corner, but unfortunately you cannot buy petrol there.
       (cancellable: YES)

The Suspension-Test

If an inference is not outright cancelled (i.e. said to be false) by the speaker, it is still possible to **"suspend" a commitment to the truth or falsehood** of the inference.

(51) #John killed the wasp, but I'm not sure if it died.
(suspendable: NO)

(52) B: There is a garage around the corner, but I'm not sure if you can buy petrol there.
(suspendable: YES)

The Reinforcement-Test

If the inference can be explicitly stated by the speaker **without creating redundancy**, then the inference is said to be **reinforceable**.

(53) #John killed the wasp, and it died.
      (reinforceable: NO)

(54) B: There is a garage around the corner, and you can buy petrol there.
      (reinforceable: YES)

The Negation-Test

If the inference is **preserved under negation**, then it is said to pass the negation test.

(55)   John did *not* kill the wasp.
        INFERENCE: #The wasp died.
        (preserved under negation: NO)

(56)   B: There is *no* garage around the corner.
        INFERENCE: #You can buy petrol there.
        (preserved under negation: NO)

The Question-Test

If the inference is **preserved when a question is formulated** rather than a declarative sentence, then it is said to pass the question test.

(57) Did John kill the wasp?
      INFERENCE: #The wasp died.
      (preserved in question: NO)

(58) B: Is there a garage around the corner?
      INFERENCE: #You can buy petrol there.
      (preserved in question: NO)

Test Summary

We then summarize the test results for each inference and compare it to the template given for **entailments** and **conversational implicatures** to decide if it falls in either category.

(59) John killed the wasp.
INFERENCE: The wasp died.

cancellable: NO
suspendable: NO
reinforceable: NO
preserved under negation: NO
preserved in question: NO

→ **entailment**

(60) A: I ran out of petrol.
B: There is a garage around the corner.
INFERENCE: One can buy petrol there.

cancellable: YES
suspendable: YES
reinforceable: YES
preserved under negation: NO
preserved in question: NO

→ **conversational implicature**

Summary

Summary

▶ The **Gricean Maxims** and the **Cooperative Principle** are assumed to implicitly underlie communicative efforts in natural language.

▶ Adherence to – or violation of – the maxims and sub-maxims gives rise to **conversational implicatures**.

▶ There are different **types of conversational implicatures** (particularized and generalized ones), and also **conventional implicatures** (though their status is rather controversial).

▶ There are **systematic tests** to distinguish conversational implicatures from other **linguistic inferences** such as **entailments**.

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Thank You.

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