Contrastives and Gricean Principles

Yurie Hara

University of Delaware/University of Massachusetts, Amherst

Amsterdam Colloquium
December 19-21, 2005

Contrastive-marking

- Contrastive meaning can be represented just by prosody as in German (Topic-Focus contour) and English (B-accent)

(1) /ALLE Politiker sind NICHT\ korrupt
all politicians are not corrupt

'It is not the case that all politicians are corrupt.'($\neg\forall$)

[Büring, 1997]

Japanese

- Contrastive meaning can be represented by the combination of prosody and morphology as in Japanese (*-wa*) and Korean (*-nun*).

(2) a. Who passed the exam?

b. MARY-wa ukat-ta
Mary-Con pass-Past
'[Mary]$_{Con}$ passed.'
(I don't know about others)

Büring 1997

- In Büring [1997], a contrastive-marked sentence implicates there exist some unanswered questions

(1) /ALLE Politiker sind NICHT\ korrupt
all politicians are not corrupt

- 'It is not the case that all politicians are corrupt.'($\neg\forall$)
(Open questions: How many are corrupt? Are most of them corrupt? etc.)
- *'No politicians are corrupt.' (*$\forall\neg$)
(No uncertainty: unavailable reading)

Uncertainty

(3) #ZEN'IN-wa kita.
Everyone-Con came
'[Everyone]$_{Con}$ came.'

Removing exhaustivity

- Contrastive-marking seems to remove exhaustive interpretation.

(4) Who passed the exam?

a. MARY-ga ukat-ta.
Mary-Nom pass-Past
'Mary passed.'
(Only Mary passed.)

b. MARY-wa ukat-ta
Mary-Con pass-Past
'[Mary]$_{Con}$ passed.'
(I don't know about others.)

Contrastives can be used with a fully resolving answer

- Questions can be completely resolved.
- What is prohibited is to have positive answers for **all** the alternatives.

(5) Among John, Maria and Bill, who came to the party?

a. /JOHN und MARIA\ sind gegangen, (aber) /BILL
John and Maria are gone, but Bill
ist NICHT\ gegangen.
is not gone
'John and Mary came, but Bill didn't come.'

b. */JOHN und MARIA\ sind gegangen, (aber) /BILL
John and Maria are gone, but Bill
ist GEGANGEN\.
is gone
'John and Mary came, but Bill came.'

Japanese

(6) Among John, Mary and Bill, who came to the party?

a. John-to Mary-**wa** ki-te/takedo,
John-and Mary-Contrastive come-and/Past.but,
Bill-**wa** ko-nakat-ta.
Bill-Contrastive come-Neg-Past
'[John and Mary]$_{Con}$ came, and/but Bill$_{Con}$ didn't come.'

b. *John-to Mary-**wa** ki-te/takedo,
John-and Mary-Contrastive come-and/Past.but,
Bill-**wa** ki-ta.
Bill-Contrastive come-Past
'[John and Mary]$_{Con}$ came, and/but Bill$_{Con}$ came.'

Summary

- Contrastive-marking seems to involve *uncertainty* implicatures.
- It also removes Exhaustive interpretations
- However, Contrastive-marking can be used when the speaker is certain about alternatives
  (when the speaker has an exhaustive answer)
- Contrastives are used
  1. when the speaker is not sure about alternatives
  2. when the speaker knows that the alternatives are false.

Goal

1. Contrastive-marking induce implicatures.
   - Implicature computation of Contrastive-marking takes place locally at each conjunct.
2. Connect Contrastiveness with Gricean Principles.
   - Implicatures induced by Contrastives are very similar to Gricean implicatures.
   - My analysis is in accordance with recent proposals on Exhaustivity by Spector [2003] and Schulz and van Rooij [(in press)], which analyze scalar implicatures as exhaustive interpretations.

Hara 2004

- In Hara [2004], a contrastive-marked sentence presupposes that there exist some stronger scalar alternative to the assertion
- it implicates that it is possible that the stronger alternative is false.

Structured Meaning Approach

(7) MARY-wa passed.

- Modeling after Structure Meaning Approach [von Stechow 1990 among others],
- Prosodic marking on *Mary* creates a partition into B (background) and F (focus)

(7) $\underbrace{\text{MARY}}_{F}\text{-wa } \underbrace{\text{passed}}_{\text{B}}$

Structured Meaning Approach

(7) $\underbrace{\text{MARY}}_{F}\text{-wa } \underbrace{\text{passed}}_{\text{B}}$

- B is obtained through lambda abstraction over the asserted proposition using a designated variable [c.f./ Kratzer 1990].

(8) a. $\text{B}=\lambda x \in D_e.[\![\textbf{Mary}_1\ \textbf{passed}]\!]^{g,h^{1/x}}$
$= \lambda x \in D_e.\textbf{passed}(h^{1\rightarrow x}(1))$
$= \lambda x \in D_e.\textbf{passed}(x)$

b. $\text{F}= m$

Wa-implicatures

(7) $\underbrace{\text{MARY}}_{F}$-wa $\underbrace{\text{passed}}_{\text{B}}$

(9) CONTRASTIVE(B)(F)

a. asserts: B(F)

b. presupposes: There's a scalar alternative B(F') stronger than B(F)

c. implicates: In some of the speaker's epistemic worlds, B(F') is false.(=$\Diamond\neg$B(F'))

Horn Scale

(7) Mary-wa passed.

- I rely on Horn's scale to determine the stronger alternative.
- e.g. <some, all>, $< m, m \oplus p >$

(10)
a. B(F)=**passed**(m)
b. F'= $m \oplus p$
c. B(F')=**passed**($m \oplus p$)

Uncertainty meaning

(7) Mary-wa passed.

(9) CONTRASTIVE(B)(F)

a. asserts: B(F)

b. presupposes: There's a scalar alternative B(F') stronger than B(F)

c. implicates: In some of the speaker's epistemic worlds, ¬B(F') is true.(=◇¬B(F'))

(11) a. Stronger Scalar Alternative: B(F')=**passed**$(m \oplus p)$

b. Induced implicatures: ◇¬**passed**$(m \oplus p)$

c. ≈I don't know about Peter.

Initial Puzzle

- Now, how does the local computation overcome the initial problem?

(12) Who passed the exam?

a. MARY-wa ukat-te/takedo, PETER-wa ukara-nakat-ta
Mary-Con pass-and/Past.but, Peter-Con pass-Neg-Past
'[Mary]$_{Con}$ passed and/but [Peter]$_{Con}$ didn't pass.'

b. *MARY-wa ukat-te/takedo, PETER-wa ukat-ta
Mary-Con pass-and/Past.but, Peter-Con pass–Past
'[Mary]$_{Con}$ passed and/but [Peter]$_{Con}$ passed.'

Good case: implicature & assertion compatible

(13) MARY-wa $\underbrace{\text{passed,}}_{B_1}$ but PETER-wa $\underbrace{\text{didn't pass.}}_{B_2}$

(14) a. $B_1 = \lambda x.\textbf{passed}(x)$

b. $F_1 = m$

(15) a. Assertion of the first conjunct entails:
believe($B_1(F_1)$) (=**believe**(**passed**(m)))

b. Interpretation of CONTRASTIVE($B_1(F_1)$):
$\Diamond\neg\, B_1(m \oplus p)$

c. Assertion + Implicature: $\Diamond\neg$ **passed**(p)

d. Assertion of the second conjunct (in terms of B_1) entails:
believe($\neg B_1(p)$) (=**believe**($\neg$**passed**(p)))

e. $\Diamond\neg$ **passed**(p) and **believe**($\neg$**passed**(p)) are compatible.

Bad case: implicature & assertion incompatible

(16) *Mary-wa $\underbrace{\text{passed,}}_{B_1}$ but Peter-wa $\underbrace{\text{passed.}}_{B_2}$

(17) a. $B_1 = \lambda x.\textbf{passed}(x)$

b. $F_1 = m$

(18) a. Assertion of the first conjunct entails:
believe($B_1(F_1)$) (=**believe**(**passed**(m)))

b. Interpretation of CONTRASTIVE($B_1(F_1)$):
$\Diamond\neg\, B_1(m \oplus p)$

c. Assertion + Implicature: $\Diamond\neg$ **passed**(p)

d. Assertion of the second conjunct(in terms of B_1) entails:
believe($B_1(p)$) (=**believe**(**passed**(p)))

e. $\Diamond\neg$ **passed**(p) and **believe**(**passed**(p)) are incompatible!

Interim Summary

- Implicatures of Contrastive are computed at each conjunct
  - Simple uncertainty does not correctly characterize all the distributional patterns of Contrastive-marking.
  - Contrastive-marking can be used even when the speaker is certain about all the alternatives.
- The induced implicatures are very similar to conversational scalar implicatures of Grice.

Connection to exhaustivity

- Implicatures by Contrastive-marking are similar to Gricean implicatures.
- Contrastive-marking seems to remove exhaustive interpretation.

(4) a. Who passed the exam?

b. MARY-ga ukat-ta.
Mary-Nom pass-Past
'Mary passed.' (exhaustive answer)

c. MARY-wa ukat-ta
Mary-Con pass-Past
'[Mary]$_{Con}$ passed.'

Scalar Implicatures from Exhaustivity

- Spector [2003] and Schulz and van Rooij [(in press)] derive scalar implicatures from exhaustivity.
- Scalar Implicatures are derived in two steps:
  1. Gricean Principle gives a primary weak implicature. “The speaker doesn’t know about Peter.”
  2. Competence Assumption gives a secondary strong implicature. “The speaker knows that Peter didn’t pass.”

First Step: Gricean Principle

The Gricean Principle

"In uttering *A* a rational and cooperative speaker makes a maximally relevant claim given her knowledge."
(restatement of Schulz and van Rooij [(in press)])

- The speaker knows that *A* is true and does not know more than that.
- The interpreter needs to take the speaker's knowledge to be minimal.

Knowledge

Order of Knowledge

"[A] speaker has more knowledge about *P* if she knows of more individuals that they have property *P*." [Schulz and van Rooij, (in press)]

- In the case where the speaker knows of some individuals **not** having property *P*,
- it is not counted as the speaker's knowledge with respect to *P*.

Second Step: Competence

Comparing Competence

"[I]n a world w_2 the speaker is at least as competent as in world w_1 if in w_1 the speaker considers at least as many extensions possible for question-predicate P as in w_2" [Schulz and van Rooij, (in press)]

- Informally, the less extensions the speaker considers possible, the more competent the speaker is.

Key Points

- Two steps in implicature computation.
- The state of knowledge of the speaker in which he/she **knows** that a particular individual is **not** in the extension of the property is not differentiated from the state of knowledge in which he/she **is not sure** that the individual is in the extension.
- What distinguishes those two states is the competence of the speaker.

Contrastives mark limited knowledge/competence

- Contrastive-marking lexically specifies that the Gricean Implicatures

(19) Interpreting a sentence with Contrastive-marking CONTRASTIVE(B(F))

implicates: the Gricean primary implicature

Example

(7) Mary-wa passed.

(20) CONTRASTIVE(**passed**(m)):
implicates: ¬**K**(**passed**(p))

Parallelism

- What contrastive-marking does is to indicate the limit of the speaker's knowledge with respect to the question:
  - the speaker could be not sure about other individuals.
  - the speaker could know the other individuals do not have the property.
- In Spector [2003] and Schulz and van Rooij [(in press)], the information state that the speaker is not sure of x having a property P is not distinct from the information state that the speaker knows of x not having a property P.
- This way of ordering information states goes parallel to the distribution of Contrastive-marking.

Schulz and van Rooij [(in press)] also mentions this intuition:

> *the answerer can cancel this additional [Competence] assumption by either mentioning that she is not competent or simply deviating from the standard form of answering a question (by using negation, special intonation, etc.). In this way we can correctly predict the weakening of exhaustive interpretation to 'limited-competence' inferences for such answers. [Schulz and van Rooij, (in press), section 7; p. 49]*

Presupposition

- Moreover, Contrastive-marking not only generates implicatures when possible, but **always** generate implicatures.
- Contrastive-marking is possible only in the environment that the speaker's knowledge is limited.
- There must be an effect by limiting the competence.

(21) Interpreting a sentence with Contrastive-marking CONTRASTIVE(B(F))

a. presupposes: the speaker does **not** know of **all** the individuals in the domain having the property .

b. implicates: the Gricean primary implicature

Presupposition: Example

(3) #ZEN'IN-wa kita.
Everyone-Con came
'[Everyone]$_{Con}$ came.'

- Knowing that 'Everyone came.' is true entails knowing that all the individuals are in the extension of the property $\lambda x \in D_e.x$ came.
- Removing competence assumption does not affect the interpretation since the assertion itself implies that the speaker has a maximal knowledge with respect to the property;
- hence the speaker is maximally knowledgeable, which is not compatible with the presupposition of Contrastive-marking.

Summary of the talk

1. Implicatures of Contrastive are computed at each conjunct
   - Simple uncertainty does not correctly characterize all the distributional patterns of Contrastive-marking.
   - Contrastive-marking can be used when the speaker has an exhaustive answer.
2. Contrastive-marking can be understood as marking for limited knowledge/competence
   - The order of knowledge correctly predicts the distribution of contrastive-making.
   - Contrastive lexically specifies Gricean primary (weak) implicatures.
   - It presupposes that the speaker's information state is not maximal.

Büring, D.: 1997, The great scope inversion conspiracy, *Linguistics and Philosophy* 20, 175–194

Hara, Y.: 2004, Scope inversion in Japanese: Contrastive topic require implicatures, in *Japanese/Korean Linguistics 13*, CSLI Publication

Schulz, K. and van Rooij, R.: in press, Pragmatic meaning and non-monotonic reasoning: The case of exhaustive interpretation, *Linguistics and Philosophy*

Spector, B.: 2003, Scalar implicatures: exhaustivity and gricean reasoning, in B. ten Cate (ed.), *Proceedings of the ESSLLI'03 student session*