Implicature Unsuspendable

Japanese Contrastive wa

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Introduction

This paper

- analyzes Japanese Contrastive Topic along with the theory of compositionality of the scalar implicature computation (Chierchia 2001).
- argues that the contrastive meaning that emerges with Topic marking *wa* in Japanese is a conventional implicature.

Japanese Contrastive Topic

(1) a. Dare-ga paatii- ni ki-ta-ka?
(Who came to the party?)

b. JOHN-**wa** ki-ta
John-Top come-Past

‘As for John, he came.’
(Implicature: I don’t know about others)

c. JOHN-ga ki-ta.
John-Nom come-Past

‘John came.’ (complete answer)

Hara 2004

Contrastive Topics always induce scalar implicatures that express the uncertainty of the alternatives (Hara To appear)

(2) CONTRASTIVE(<B, T>) $\Leftrightarrow$

a. B(T) (assertion)

b. $\forall$ T'[[T'$\in$ALT$_C$(T) & B(T') entails B(T) & B(T) doesn't entail B(T')] $\rightarrow$ $Poss(\neg$B(T'))] (implicature)

(5) CONTRASTIVE(<B, T>)
$\exists$T$'$[T$'$ $\in$ALT$_C$(T) & B(T$'$) entails B(T) & B(T) doesn't entail B(T$'$)] (presupposition)

This is similar to but not the quite same as Büring's (1997) analysis of German Topic-Focus contour

Japanese Contrastive Topic

- The propositions that do not have the stronger alternatives
  are not compatible with Contrastive Topics.

(3) # Minna-**wa** kita.
  Everyone-CTop came
  (no implicature is possible)

- The asserted proposition ‘Everyone came’ is the strongest (most informative) among the alternatives
  (‘Some people came’, ‘Most people came’ etc.)
- There is no room to implicate.
- Not compatible with Contrastive *wa*.

Conventional Implicature

- In Grice (1975), implicatures are divided into two types:
- Conversational
- Conventional

Question Is the scalar implicature that arises with *wa* conversational or conventional?

My answer Conventional

Argument 1: Detachability

Grice (1975) says:

- Conversational implicature: undetachable
- Conventional implicature: detachable

Argument 1: Detachability

The implicature with *wa* is detachable since it depends on the particular lexical item *wa*.

(1) a. Dare-ga paatii- ni ki-ta-ka?
(Who came to the party?)

b. JOHN-**wa** ki-ta
John-Top come-Past
'As for John, he came.'
(Implicature: I don't know about others)

c. JOHN-ga ki-ta.
John-Nom come-Past
'John came.' (complete answer)

Argument 2: Uncancellability

Grice (1975) also says

- Conversational implicature: cancellable
- Conventional implicature: uncancellable

The implicature with *wa* is non-cancellable as we have seen.

(3) # Minna-**wa** kita.
Everyone-CTop came
(no implicature is possible)

Argument 3: *Wa* in DE

- It is a well-observed fact that a conversational scalar implicature is suspended in a DE context.

(4) a. 'John read 3 books.'
(Scalar Implicature: not 4)

b. 'If John reads 3 books, he passes.'
(Local Scalar Implicature Lost → He will pass even if he reads 4.)

Chierchia 2001

- Scalar implicatures are compositionally computed
- The computation of the strong values (plain meaning + implicature) must be subject to the Strength Condition.

(5) Strength Condition:
The strong value cannot become weaker than the plain value

Chierchia 2001: Implicature and DE

(4b) 'If John reads 3 books, he passes.'
(Natural interpretation: He will pass even if he reads 4.)

Chierchia says

- If we keep a locally computed implicature in a DE context, it would yield a weakening of information.
- Therefore, it must be removed in a DE context

Let us go through how the weakening takes place step by step.

Chierchia 2001

- the local conversational implicature
  $|x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)| \not\geq 4$
- if it were not removed, the strong value of the whole sentence would be
  $[|x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)| \geq 3 \wedge |x :$
  $\mathbf{read}(j)(x) \wedge \mathbf{book}(x)| \not\geq 4] \rightarrow \mathbf{pass}(j)$
- Now, let us compare this with the plain meaning of the whole sentence,
  $|x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)| \geq 3 \rightarrow \mathbf{pass}(j)$

Plain meaning

	local		global
	$\lvert x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x) \rvert \geq 3$	pass(j)	$\lvert x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x) \rvert \geq 3 \rightarrow \mathbf{pass}(j)$
John read 2	0	1	1
John read 2	0	0	1
John read 3	1	1	1
John read 3	1	0	0
John read 4	1	1	1
John read 4	1	0	0

Strong meaning

	local		global
	$\lvert x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)\rvert \geq 3 \wedge \lvert x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)\rvert \not\geq 4$	pass(j)	$[\lvert x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)\rvert \geq 3 \wedge \lvert x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)\rvert \not\geq 4] \rightarrow \mathbf{pass}(j)$
John read 2	0	1	1
John read 2	0	0	1
John read 3	1	1	1
John read 3	1	0	0
John read 4	0	1	1
John read 4	0	0	1

Weakening

	plain	strong
	$\lvert x : \textbf{read}(j)(x) \wedge \textbf{book}(x)\rvert \geq 3 \rightarrow \textbf{pass}(j)$	$[\lvert x : \textbf{read}(j)(x) \wedge \textbf{book}(x)\rvert \geq 3 \wedge \lvert x : \textbf{read}(j)(x) \wedge \textbf{book}(x)\rvert \not\geq 4] \rightarrow \textbf{pass}(j)$
John read 2	1	1
John read 2	1	1
John read 3	1	1
John read 3	0	0
John read 4	1	1
John read 4	0 ←Stronger!!	1

Weakening

- The plain meaning is stronger than the strong meaning.
- This violates the Strength Condition
- Therefore the implicature must be removed.
- Consequently, in a DE context, only the plain meaning is retained for the subsequent computation.

Chierchia 2001

Two separate application rules for DE and non-DE contexts

(6) Strong Application
Suppose $\alpha = [\beta\ \gamma]$, where β is of type <a,b> and γ of type a. Then:

$$[\![[\beta\ \gamma]]\!]^S$$

$$\begin{cases} [\![\beta]\!]^S([\![\gamma]\!]^S), \text{if } [\![\beta]\!]^S \text{is not DE} \\ [\![\beta]\!]^S([\![\gamma]\!]) \wedge \neg([\![\beta]\!](\gamma^{ALT})), \text{otherwise} \end{cases}$$

✎ S is removed

wa and implicature

The implicature induced by *wa*, however, cannot be suspended in a DE context.

(7) * John-ga hon-o 3-satsu-**wa**
John-Nom book-Acc 3-Class-Top
yom-eba, goukaku-suru.
read-if, pass-do
'If John reads [3]$_{\text{Topic}}$ books, he passes.'

wa and implicature

- if the local implicature induced by *wa*, $Poss(|x : \mathbf{read}(j)(x) \wedge \mathbf{book}(x)| \not\geq 4)$, were a conversational implicature
- it should be removed and only the plain meaning would be passed on to the subsequent computation
- If it is conventional, it will resist within a DE context
- This violates the Strength Condition, therefore it is predicted that (7) is unacceptable.
- In fact, (7) is unacceptable; therefore the implicature induced by *wa* must be conventional.

Global Implicature

How about the global implicature for (7)?

(7) * John-ga hon-o 3-satsu-**wa**
John-Nom book-Acc 3-Class-Top
yom-eba, goukaku-suru.
read-if, pass-do
'If John reads $[\ 3]_{\text{Topic}}$ books, he passes.'

- the proposition
  $|x : \textbf{read}(j)(x) \wedge \textbf{book}(x)| \geq 3 \rightarrow \textbf{pass}(j)$
- a stronger scalar alternative
  $|x : \textbf{read}(j)(x) \wedge \textbf{book}(x)| \geq 2 \rightarrow \textbf{pass}(j)$
- $Poss(\neg[|x : \textbf{read}(j)(x) \wedge \textbf{book}(x)| \geq 2 \rightarrow \textbf{pass}(j)])$
  could be an implicature

Global Implicature should be possible

- Moreover, the global implicature is possible in other cases.
- *wa*-marked phrase in a complement clause.

(8) minna-wa kuru-to
Everyone-Top come-Comp
omowa-nakat-ta.
think-Neg-Past
'I didn't think [everyone]$_{\text{Topic}}$ would come.'

"Everyone comes" does not have a stronger alternative.
The local implicature is impossible.

Global Implicature should be possible

Globally speaking,

- $\neg$**think**$(\forall x[$**person**$(x)][$**come**$(x)])$ indeed has a stronger scalar alternative
- $\neg$**think**$(\exists x[$**person**$(x)][$**come**$(x)])$
- implicature $Poss(\neg\neg$**think**$(\exists x[$**person**$(x)][$**come**$(x)]))$ "I thought some people would come".

So here, we DO need a global implicature.

Movement of Implicature Operator

- Proposal: An island-sensitive movement of an implicature operator, which is part of the lexical meaning of *wa*.
- What does *wa* do?
- At the base position, *wa* generates scalar alternatives (e.g.{one, some, most, every}) and introduces an implicature operator.

(9) $[_{\mathrm{CP}}\ [_{\mathrm{NegP}}\ [_{\mathrm{CP}}\ [_{\mathrm{XP}}\ \mathrm{Op}\ [_{\mathrm{XP}}$ everyone $]^{ALT}$-wa
$]$ came Comp $]$ think Neg$]$ Past $]$ (8)

Movement of Implicature Operator

The implicature operator moves to the clause-initial position, and computes the implicature by picking an alternative stronger than the plain meaning.

(10) $[_{\text{CP}}$ Op $[_{\text{NegP}}$ $[_{\text{CP}}$ $[_{\text{XP}}$ t $[_{\text{XP}}$ everyone] ^{ALT}-wa] came

Comp] think Neg] Past] (8)

Island violation

This movement is blocked if *wa* is inside an adjunct clause.

(11) $[_{CP}$ Op $[_{AdjunctP}$ John-Nom book-Acc $[_{XP}$ t $[_{XP}$ 3

*

$]$ ^{ALT}-wa $]$ read if $]$ pro passes $]$ (7)

(7) becomes unacceptable for the following reasons:

1. a *wa*-marked sentence must induce an implicature
2. the local computation of implicature yields a weakening
3. the global computation of implicature is blocked due to the island violation

Conclusion

- *wa*-induced implicature is conventional implicature since...
- The implicature is detachable
- The implicature is uncancellable
- The implicature cannot be removed in a DE-context
- Further I have proposed that movement of implicature operator that correctly explains why *wa* cannot be used within an downward-entailing adjunct clause.

Reference

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