On Quantification over Question
a Case Study of Exhaustification in Japanese

Yurie Hara
Japan Society for Promotion of Science
Kyoto University
University of Massachusetts, Amherst

September 23rd, 2006, Sinn und Bedeutung 2006

Introduction
Levels Wide-scope Non-boolean Japanese Int vs. Ext Summary Conclusion References

Wh-Questions

Another contrast between dake-wa and dake-ga is found in question formation:

- dake-ga is acceptable in a wh-question while dake-wa is not.

(2) a. JOHN-dake-ga nani-o kai-mashi-ta-ka?
   John-only-Nom what-Acc buy-Hon-Past-Q
   ‘What did only John buy?’

b. *JOHN-dake-wa nani-o kai-mashi-ta-ka?
   John-only-Con what-Acc buy-Hon-Past-Q

Goal

This paper

- supports the idea that the exceptive meaning denoted by dake is a conventional implicature.
- shows that the wa-marked element takes scope higher than a proposition.

Portner and Yabushita (1998)

- A subordinate subject under an attitude predicate obtains different scope interpretations depending on:
  - whether the subject is Nominative-marked or;
  - Contrastive/Topic-marked

(1) a. JOHN-dake-ga kuru to omotte-ita.
   John-only-Nom come Comp thought
   ‘I thought that only John would come.’

b. JOHN-dake-wa kuru to omotte-ita.
   John-only-Con come Comp thought
   ‘I thought that as for only John, he would come.’
**Kuno 1999**

*dake* primarily asserts the affirmative proposition while it secondarily asserts the negative one.

(3)

\[ \text{JOHN-} \text{dake-ga kita.} \]

John-dake-Nom came.

*primary:* (affirmative) John came.

*secondary:* (negative) No one else came.

---

**Yoshimura 2005**


**Yoshimura (2005)**

Japanese *dake* asserts the prejacent (affirmative) proposition and entails the exceptive (negative) meaning.

---

**Conventional Implicature**

I equate the notion of ‘entailment’ in Horn [2002] and Yoshimura. [2005] to ‘conventional implicature’ in the sense of Potts [2005].

(3) is analyzed as having two independent meanings:

1. an assertion
2. a conventional implicature.

(3)

\[ \text{JOHN-} \text{dake-ga kita.} \]

John-dake-Nom came.

a. Assertion: John came.

b. conventional implicature

(‘entailment’ in Horn 2002 and Yoshimura 2005):

No one else came.

---

**Assumption**

Yoshimura’s (2005) proposal is based on Horn’s [2002] assumption:

(4) Only the assertional content can be a complement of a higher functor.
Example: Affirmative

(5) a. In order to make an around-world trip, you will need
b. English-speaker
   good
   (i) ‘It’s OK if you can speak English.’
   (ii) ‘It’s OK if you cannot speak any other languages.’
   (Yoshimura 2005)

What’s embedded under the conditional is the affirmative content, ‘you can speak English’.
(5–b) would be infelicitous if the negative/exceptive meaning is embedded under a conditional.
Hence, the affirmative content is the primary assertion.

Example: Negative

If the context prefers that the negative proposition to be an argument, the use of dake turns out to be infelicitous.

(6) #Nihongo-speaker, shuushoku de
   deki-nakat-ta. Because,
   a. #I couldn’t get a job because I can speak Japanese.
   b. Intended (unavailable): ‘I couldn’t get a job because I cannot speak any other languages.’ (Satoshi Tomioka, p.c.)

The negative/exceptive meaning ‘I cannot speak any other languages’ cannot be under the scope of because.
The negative/exceptive meaning is a conventional implicature.

Interim Summary 1

(7) Interpretation of dake α:
   a. α holds; and
   b. No other alternatives from the set of relevant contrasts C other than α hold.
       (assertion)
       (conventional implicature)

A sentence containing dake involves two commitments:
- the positive one expressed by the prejacent proposition
- the negative one expressed by the exhaustive semantics of dake.

What’s Next?

What happens when dake is used with wa?
Post-propositional level

Portner and Yabushita [1998]
The *wa*-marked element serves as a link to the information expressed by the sentence.

Hara [2005, 2006]
The use of *wa* introduces the operator CON which takes the embedded proposition.
CON generates a conventional implicature which indicates a limitation of the speaker’s knowledge.

Tomioka [2006]
Contrastiveness operates on speech acts, not propositions.

---

Scope

(1) a. JOHN-dake-*ga* kuru to omotte-ita.
John-only-Nom come Comp thought
‘I thought that only John would come.’
b. JOHN-dake-*wa* kuru to omotte-ita.
John-only-Con come Comp thought
‘I thought as for only John that he would come.’

- the *wa*-marked subject is structurally higher than the embedded sentence.
- As a consequence, the exhaustification expressed by *dake* in (1-b) also takes wide scope with respect to the embedded proposition.

---

Interim Summary 2

(1-b) JOHN-dake-*wa* kuru to omotte-ita.
John-only-Con come Comp thought
‘I thought as for only John that he would come.’

(8) Interpretation of (1-b):
a. I thought as for John that he would come; and
b. It is not the case that I thought as for other people that they would come.

- The use of *wa* generates a meaning at some post-propositional level.
- Hence, when *dake* is used with *wa*, the exhaustification takes place at some level higher than the propositional level.
What happens when *dake-wa* is used with *wh*-questions?

![Image of slide](image.png)

**Example**

(9) Which dish did every guest make?
   a. (Every guest made) pasta. (narrow-scope)
   b. (Every guest made) his favorite dish. (functional)
   c. Al (made) the pasta; Bill, the salad; and Carl, the pudding. (pair-list)

(10) Which dish did most guests make?
   a. Pasta. (narrow-scope)
   b. Their favorite dish. (functional)
   c. #Al (made) the pasta; Bill, the salad. (pair-list)

**Pair-list**

**Krifka’s (2001) proposal**

The only operation involved in speech acts is conjunction.

**Motivation**

A pair-list reading of a *wh*-question is possible only with a universal quantifier.

**Conjunction**

The pair-list reading is derived by universal quantification over the question act.

It is possible since universal quantification is reduced to conjunction.

(11) Which dish did every guest make? (Krifka 2001)

\(\equiv\) For every guest \(x\): Which dish did \(x\) make?

\(\equiv\) Which dish did Al make, and which dish did Bill make, and which did Carl make?
Disjunction

- Other quantifiers like *most* cannot operate over question acts, and
- They fail to have a pair-list reading (13).
- They involve disjunction.

(12) #Which dish did most guests make? (Krifka 2001)
⇔ For most guests x: Which dish did x make?
⇔ Which dish did Al make and which dish did Bill make, or
  which dish did Al make and which dish did Carl make, or
  which dish did Bill make and which dish did Carl make?

Conversational Game

Speech acts as moves in conversational games

Speech acts lead from one set of social commitments to another set.
(Wittgenstein, 1958)

- Conjoined acts [A & A'](s) →
  - the union of the commitments that A(s) and A'(s) would have led to:
  - A(s) ∪ A(s')
  - the same type

    Which dish did Bill make? –The salad.
  b. Which dish did Al make? And which dish did Bill make?
    Al (made) the pasta, and Bill the salad.

Why no Disjunction?

- A disjunction of A and A' at the state s →
  - a set of commitment states which we would have to understand
disjunctively,
  - {A(s), A(s')}
  - higher type
  - difficult to keep track of

(14) Have you ever been to Sweden or have you ever been to
  Germany? (Krifka, 2001)

Negation

- Krifka [2001] further argues that negation is not involved in the
  algebra of speech acts.
- If negation were available, then we could derive disjunction from
  the combination of conjunction and negation by De Morgan’s law:
  ¬[A&Α'] = ¬A ∪ ¬A'.
It's possible to quantify into question acts. However, conjunction is the only operation involved in the computation of speech acts. Neither negation or disjunction is possible.

\[(\text{2-b}) \quad \text{\textit{John-only-\textit{Con}}} \quad \text{\textit{what-Acc buy-Hon-Past-Q}}\]

The use of -\textit{wa} forces the exhaustification by \textit{dake} to take place over question acts. \textit{dake-wa} triggers negation of alternative acts. This is not a valid move in terms of conversational games.

\[(\text{15}) \quad \text{Intended Interpretation of (2-b)}
\begin{align*}
\text{a. } & \text{As for John, what did he buy and} \\
\text{b. } & \text{#It is not the case that as for other people, what did they buy?}
\end{align*}\]

Following Groenendijk and Stokhof (1984), Krifka categorizes question-embedding verbs into \textit{intensional} and \textit{extensional} verbs. Intensional verbs allow a pair-list reading only with a universal quantifier. Extensional verbs can have a pair-list reading with other quantifiers as well.

\[(\text{16}) \quad \begin{align*}
\text{a. } & \text{Doris asked which dish } \checkmark \text{ every guest}/\# \text{most guests made. (intentional)} \\
\text{b. } & \text{Doris found out which dish } \checkmark \text{ every guest}/\checkmark \text{ most guests made. (extensional)}
\end{align*}\]

Intensional verbs \textit{directly embed a question act}, hence pattern like matrix questions. The quantified NP \textit{most guests} attempts to quantify into question acts. \textit{Most guests} involves disjunction, which is not a valid operation for speech acts.
Extensional

(18) Doris found out [most guests [TA [Quest [which dish they made]]]]

- Extensional verbs introduce a type-shifting operator TA
- TA shifts the question act into the set of propositions that are true answers to the question act.
- Consequently, extensional verbs support quantifiers other than a universal quantifier because their complements are Boolean objects.

(19) TA(QuestionAct) = \{ p : p is a true answer to QuestionAct \}

Japanese

- A parallel pattern is observed for Japanese exhaustification.
- The intentional verb kii ‘ask’ cannot embed a wh-question which contains dake-wa,
- while the extensional verb wakat ‘find out’ can.

(20) a. *Mary-wa [ano-mise-de JOHN-dake-wa nani-o kat-ta-ka]
Mary-Top that-store-at John-only-Con what-Acc buy-Past-Q
Bill-ni kii-ta (intentional)
Bill-Dat ask-Past

b. Mary-wa [ano-mise-de JOHN-dake-wa nani-o kat-ta-ka]
Mary-Top that-store-at John-only-Con what-Acc buy-Past-Q
wakat-ta (extensional)
find.out-Past
‘Mary found out as for only John what he bought at that store.’

Embedded Question acts

(20-a) *Mary-wa [ano-mise-de JOHN-dake-wa nani-o kat-ta-ka]
Mary-Top that-store-at John-only-Con what-Acc buy-Past-Q
Bill-ni kii-ta (intentional)
Bill-Dat ask-Past

dake is quantifying into a question act, which results in negating alternative question acts.
As a consequent, (20-a) is predicted to be unacceptable since it involves an illicit operation over speech acts.

True Answers

(20-b) Mary-wa [ano-mise-de JOHN-dake-wa nani-o kat-ta-ka]
Mary-Top that-store-at John-only-Con what-Acc buy-Past-Q
wakat-ta (extensional)
find.out-Past
‘Mary found out as for only John what he bought at that store.’

- The TA operator shifts the question act into the set of propositions.
- Therefore, the operation involved is simply a quantification over the set of propositions;
- Hence, the negation introduced by dake can licitly operate over the set;
- It yields the negative meaning ‘it is not the case that as for other people, Mary found out what they bought.’
I take Yoshimura's analysis that meaning of *dake* involves two commitments; affirmative and negative.

The use of *dake-wa* indicates the exhaustification at a higher level than the proposition.

Hence, when *dake-wa* is used in a matrix question, it attempts to exhaustify over question acts (i.e., negating alternative acts).

This operation is not valid since negation cannot take scope over a question act.

---

*(21)*  
JOHN-dake-
wa kita.  
John-only-Con came.

*(22)* I make an assertion only about John with respect to the question 'Who came?' and I assert that John came.

---

When *dake* is absent, the implicature of *wa* can be overtly expressed or strengthened.

*(23)*  
a. JOHN-wa kita. Mary-mo kita kamoshirenai.  
John-Con came. Mary-Add came might  
'John came. Mary might have come, too.'

b. JOHN-wa kite, Mary-wa ko-nakat-ta.  
John-Con came. Mary-Con come-Neg-Past  
'John came, and Mary didn’t come.'

---

When *dake* is present, the continuation is perceived as redundant.

*(24)*  
a. #JOHN-dake-wa kita. Mary-mo kita kamoshirenai.  
John-dake-Con came. Mary-Add came might

b. #JOHN-dake-wa kite, Mary-wa ko-nakat-ta.  
John-dake-Con came. Mary-Con come-Neg-Past
Biscuit Conditional

(25) If you’re hungry, there’s pizza in the fridge. [Siegel, To appear]

(26) If you’re hungry, there is a (relevant) assertion that there’s pizza in the fridge. [Siegel, To appear]

(27) a. If I have your attention now, (there’s a relevant question:) what do you want for dinner?
   b. Before you go, (there’s a relevant command:) remember to call when you get there.
   c. If you want to talk about weird co-workers, (there’s a relevant exclamation:) what a pervert Len is! [Siegel, To appear]

Potential Literal Acts

(28) Whenever you get hungry, there’s pizza in the fridge. (Chris Potts p.c. to Siegel [To appear])

Potential Literal Acts At any time t at which you get hungry, there is/will be a (relevant) assertion that there’s pizza in the fridge.

Speech Acts At any time t at which you get hungry (PERFORMED ASSERTION) there’s pizza in the fridge

- The speaker certainly will not be performing the assertion at any time t at which the listener gets hungry.

(29) a. Whenever you get there, remember to call me.
   b. ??Whenever I have your attention, what do you want for dinner?
There seems to exist a strong parallel between
- the availability of a pair-list reading in Wh-Q with a non-universal quantifier
- the distribution of dake-wa in Wh-Q

Matrix wh-Q
- no pair-list reading
- dake-wa is ungrammatical

Embedded wh-Q
- pair-list reading available only for extensional predicates
- dake-wa is grammatical only with extensional predicates

The parallel suggests that there is a certain constraint with respect to quantification over question acts.


But, unfortunately, there are apparent exceptions with other speech acts.

Maybe, the question might be reduced to: why is a potential literal act of question available for assertions and commands, but not for question acts?