On Quantification over Question
a Case Study of Exhaustification in Japanese

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Portner and Yabushita (1998)

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

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

1. supports the idea that the exceptive meaning denoted by *dake* is a conventional implicature.
2. shows that the *wa*-marked element takes scope higher than a proposition.
3. accounts for the unavailability of *dake-wa* in wh-Q using Krifka's (2001) non-Boolean algebra of Speech Acts.

Dake

Kuno 1999

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

(3) JOHN-dake-ga kita.
John-dake-Nom came.
primary: (affirmative) John came.
secondary: (negative) No one else came.

Yoshimura 2005

- Yoshimura. [2005] provides an explanation for Kuno's [1999] observation, modeling her analysis after Horn's [2002] analysis of English *only*.

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) JOHN-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,

        b.   EIGO-dake   hanas-er-eba ii

             English-dake speak-able-if 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-dake dekiru node,   shuushoku   deki-nakat-ta.

        Japanese-dake capable because, getting.employed capable-Neg-Past

        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   (assertion)

        b.   No other alternatives from the set of relevant contrasts C other than α hold.   (conventional implicature)

- a sentence containing *dake* involves two commitments:
  - ► the positive one expressed by the prejacent proposition and
  - ► 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.

Scope

(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.

Interim Summary 2

- 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's Next?

- What happens when *dake-wa* is used with *wh*-questions?

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.

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)

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)
⇔For every guest x: Which dish did x make?
⇔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

(13)   a.   Which dish did Al make? –The pasta.
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:
- $\neg[A\&A'] = \neg A \cup \neg A'$.

Interim Summary 3

- 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.

dake-wa

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

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

(15)   Intended Interpretation of (2-b)
   a.   As for John, what did he buy and
   b.   #It is not the case that as for other people, what did they buy?

Intensional vs. Extensional

- Following Groenendijk and Stokhof (1984), Krifka categorizes question-embedding verbs into *intensional* and *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.

(16)   a.   Doris asked which dish ✓every guest/#most guests made.   (intentional)
       b.   Doris found out which dish ✓every guest/✓most guests made.   (extensional)

Intensional

(17)   *Doris asked [most guests [*Quest* [which dish they made]]] (16-a)

- Intensional verbs directly embed a question act, hence pattern like matrix questions.
- The quantified NP *most guests* attempts to quantify into question acts.
- *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]]]]   (16-b)

- 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.'

Summary

- 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.

Other acts

(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.

Intuitions

- 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.'

Intuitions

- 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

Potential Literal Acts [Siegel, To appear]

Abstract objects consisting only of propositional content and whatever illocutionary force potential can be read directly from their morphosyntactic form.

Not necessarily the actual illocutionary act that might be performed.

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.

Something special about question 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?
- assertions and commands: ambiguous between speech acts and potential literal acts
- questions: only speech acts

(29)   a.   Whenever you get there, remember to call me.
   b. ??Whenever I have your attention, what do you want for dinner?

Concluding Remarks

- 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

Concluding Remarks

- The parallel suggests that there is a certain constraint with respect to quantification over question acts.
- Given Yoshimura's (2005) semantics of *dake* and the wide-scopeness of *wa*,
  Krifka's (2001) algebra of speech acts explains the distribution of *dake-wa* in wh-questions.
- 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?

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