

A Study on Derivation of Rhetorical Questions from a Pragmatic and Acquisition Perspective*

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1. Introduction

Rhetorical Questions (RQs) have been the subject of linguistic inquiry for some time. Some researchers treat RQs as negative/positive assertions. Others view RQs as Ordinary Questions (OQs). Matsuya (2014), which focuses on RQs with *nani* (= *what*) from the database CHILDES, states that the output of RQs is slower than those of OQs and negative assertions in Japanese: OQ and negative assertion utterances started from 2;02.11 and 2;08.19, respectively. No QR output was found, which means the acquisition of RQs might begin later than at the age of preschoolers. If RQs were identical to OQs or negative assertions, children would start to utter the former around the same time as the latter. This paper attempts to clarify syntactic, semantic, and pragmatic differences between RQs and OQs, which will influence the acquisition of these constructions, and to design the derivation of RQ in the framework of the Minimalist Program (Chomsky 1995, 2000). Section 2 briefly reviews representative literature on RQs. Section 3 considers the queries of these previous studies and tries to capture what triggers *wh*-movement in RQs. Section 4 suggests the derivation of RQs. Section 5 states the conclusion.

2. Previous Studies

RQs have been argued mainly in the two aspects: one is that RQs are identical to statements with negative/positive polarities. The other is that RQs are variants of OQs. According to Sadock (1971, 1974), RQs are assertions of positive/positive polarity as in (1): (1a) and (1c) are equivalent to (1b) and (1d), respectively.

- (1) a. Who understands English?
- b. No one understands English.
- c. Who doesn't understand English?
- d. Everyone understand English.

Sadock (1971:224)

Han (2002:220-221) suggests that RQs become negative/positive assertions by the post-LF derivation mapped onto semantic interpretation and the cancellation of negation as summarized in (2).

- (2) a. What has John done for you?
- b. $\neg \exists x[\text{thing}'(x) \rightarrow \text{done}'(\text{John}', x)]$
 ← after the post-LF derivation
- c. What hasn't John done for you?
- d. $\forall x[\text{thing}'(x) \rightarrow \text{done}'(\text{John}', x)]$
 ← after the post-LF derivation and the cancellation of negation

In opposition to the above views, Caponigro and Sprouse (2007) demonstrate that RQs are similar to OQs semantically. Through the presentation of the following counter examples, Caponigro and Sprouse (2007) point out that that RQs are not equivalent to negative statements, which cannot receive answers as in (3b). As seen in (3a), Speaker or Addressee can give the answer to the RQ.

- (3) a. SPEAKER: You should stop saying that Luca didn't like the party last night.
 After all, who was the only one that was still dancing at 3 am?
 ADDRESSEE or SPEAKER: Luca.
- b. SPEAKER: You should stop saying that Luca didn't like the party last night.
 After all, Luca was the only one that was still dancing at 3 am!
 ADDRESSEE or SPEAKER: #Luca.

Caponigro and Sprouse (2007:124)

In addition, Caponigro and Sprouse (2007) state that RQs can allow only positive answers as in (4): the negative answer is disallowed. In other words, they say that the RQs' answer set is not necessarily empty and throw doubt on Ladusaw (1979) and Gutiérrez-Rexach (1997), who analyze RQs as OQs whose answer set is empty.

- (4) a. SITUATION: Mina helped Luca when he was in trouble and both the Speaker and the Addressee are aware of that. Now Luca adores Mina for helping him.

SPEAKER: It's understandable that Luca adores Mina. *After all, who helped him when he was in trouble?*

ADDRESSEE or SPEAKER: Mina/#Nobody

- b. SITUATION: All faculty members voted for the current chair months ago and now everyone is complaining about him to the students. Both the Speaker and Addressee are students.

SPEAKER: They should stop complaining about the chair to us. *After all, who voted for him?*

ADDRESSEE or SPEAKER: (All of) them/#Nobody

Caponigro and Sprouse (2007:124)

Sprouse (2007) provides suggestive evidence that RQs can undergo some rigid *wh*-movement. Consider the following Japanese examples. Regardless of the types of *wh*-words, an argument or an adjunct, (5a) and (5b) display island effects, which are observed in languages with overt *wh*-movement like English. Consequently, (5a) and (5b) cannot obtain RQ interpretations.

- (5) a. *_{[IP} John-wa _{[Adj} kare-no okusan-ga nani-o katta kara]
John-Top he-Gen wife-Nom what-Acc bought because
okoru-to iui-no)?
get.angry-Comp saying-Q

‘What would John get angry because his wife bought?’

“There is nothing such that John would get angry because his wife bought that thing.”

- b. *[_{IP} John-wa [_{Adj} kare-no okusan-ga naze atarasii doresu-o John-Top he-Gen wife-Nom why new dress-Acc katta kara] okoru-to iu-no]?

bought because get.angry-Comp saying-Q

‘Why would John get angry because his wife bought a new dress?’

“There is no reason such that John would get angry because his wife bought a new dress for that reason.”

- c. [_{IP} John-wa [_{CP} ano Hanako-ga anna misede nani-o katta-to] John-Top that Hanako-Nom that store what-Acc bought-Comp iu-no]?

saying-Q?

‘What does John say that a person like Hanako bought at that kind of store?’

“There is no thing such that John says that a person like Hanako would have bought that thing at that kind of store.”

Sprouse (2007:574)

Moreover, Sprouse (2007) emphasizes the Principle of Minimal Compliance (PMC) effect in the island effect observed in the above Japanese RQs as in English OQs. (6a) is a case of island effect because the in-situ *wh*-word, *who*, covertly moved. (6b), where another *wh*-word is added, is immune to island violation of PMC (7).¹ *What* in (6b) can be located in the embedded sentence without *wh*-movement for feature checking. Sprouse (2007) points out a similar phenomenon in Japanese RQs as seen in (8). (8b) with the additional *wh*-word, *dare*, avoids the adjunct island effect and becomes more acceptable than (8a).

- (6) a. *What do you wonder who bought?
b. Who wonders who bought what?

Sprouse (2007:575)

- (7) Principle of Minimal Compliance

For any dependency D that obeys constraint C, any elements that are relevant for determining whether D obeys C can be ignored for the rest of the derivation for purposes of determining whether any other dependency D' obeys C.

Richards (1998:601)

- (8) a. *[_{IP} John-wa [_{Adj} kare-no okusan-ga nani-o katta kara]
John-Top he-Gen wife-Nom what-Acc bought because
okoru-to iui-no]?
get.angry-Com saying-Q
'What would John get angry because his wife bought?'
"There is nothing such that John would get angry because
his wife bought that thing."
b. ?[_{Dare-ga} [_{Adj} John-no okusan-ga nani-o kata kara]
who-Nom John-Gen wife-Nom what-Acc bought because
okoru-to iui-no]?
get.angry-Com saying-Q
'Who would get angry because John's wife bought what?'
"There is nothing person and no thing such that that person
would get angry because John's wife bought that thing."

Sprouse (2007:575)

3. Some Queries on wh-movement of RQs

Following on the previous research, we may safely say that RQs are similar to OQs syntactically and semantically. Specifically, RQs seem to undergo

wh-movement for checking some formal feature. However, I have three questions as to *wh*-movement in RQs. First, I wonder whether all *wh*-words, both *wh*-argument and *wh*-adjunct, show adjunct island violations in Japanese, where covert *wh*-movement takes place and is said to avoid adjunct island effect in OQs. I would like to raise an objection to Sprouse’s (2007) remark. Compare (9a) with (8a), which is repeated as (9b). (9a) with a non-tensed adjunct phrase does not show island violation. Following Uriagereka (1988, 2011) and citing the examples (10), Boeckx (2012) claims that no island is absolute and that the extraction of *wh*-words from the non-tensed and syntactically-low hierarchical adjunct is more acceptable.

- (9) a. John-wa [_{adj} nani-o manabu tame ni] daigaku ni hairu to iu-no?
 John-Top what-Acc study in order to university enter-Past saying-Q
 ‘What would John enter the university in order to study?’
 ‘There is nothing such that John would enter the university in order to study.’
- b. *[_{IP} John-wa [_{Adj} kare-no okusan-ga nani-o kata kara]
 John-Top he-Gen wife-Nom what-Acc bought because
 okoru-to iui-no)?
 get.angry-Comp saying-Q
 ‘What would John get angry because his wife bought?’
 ‘There is nothing such that John would get angry because
 his wife bought that thing.’
- (10) a. *Who did John leave the room [because Mary kissed __]?
 b. What did John drive Mary crazy [whistling __]?
 c. What did John leave the room [whistling __]?
 d. Which book did John design his garden [after reading __]?
 e. What are you working so hard [in order to achieve __]?
 f. Who did John travel to England [to make a sculpture of __]?

Boeckx (2012:24)

Second, I wonder whether English has no RQs with multiple *wh*-words and does not display PMC effect in RQs, as (11d) illustrated. There is evidence for RQs with multiple *wh*-words in English, as below (personal communication with Patricia Hironymous). In (12), the past tense verb, *brought*, is used while the modal, *would*, is used in (11d). (12) is acceptable because the action of the proposition is completed by the past tense. I guess that the completed event and the appropriate context, more specifically the proposition which the speaker and addressee share and believe, are necessary to make RQs with multiple *wh*-words.

(11) a. Chinese

Shei hui dai shenme lai bisai ne?

who will bring what to competition Q?

‘Who will bring what to the competition?’

“Nobody would bring anything to the competition.”

b. Japanese

Dare-ga nani-o paatii-ni mottekita-to iu-no?

who-Nom what-Acc party-to bring-Comp saying-Q

‘After all, who will bring what to the party?’

“Nobody will bring anything to the party.”

c. Russian

V principe, kto prineset čto na tvoju večerinku?

after all who will.bring what to your party

‘After all, who will bring what to your party?’

“Nobody will bring anything to the party.”

d. English

*After all, who would bring what to the party?

Sprouse (2007:573)

(12) CONTEXT: Everyone agrees to bring something to the party. No one brings anything there. Everyone has arrived and the speaker is looking at an empty table.

SPEAKER: So, who brought what to the party?

Third, what triggers *wh*-movement in RQs at all? Can we treat the formal feature for *wh*-movement in RQs as the same one in OQs? Now let us turn to Caponigro and Sprouse (2007). They claim that RQs differ from OQs only pragmatically. Focusing on Common Ground (CG) as a set of propositions presenting what the participants should share and believe in a discourse, they propose Common Ground_{S-A} (CG_{S-A}) (13) and the conditions, which RQs and OQs must comply with, as in (14) and (15), respectively. Condition (14) expresses that a question Q is defined as an OQ under the case that the answer is not among the Speaker's Beliefs.² Condition (15) says that a question Q can be a RQ if the answer is a part of the CG_{S-A}: both the Speaker and the Addressee should share the true complete answer to it for the interpretation of RQs.

(13) CG_{S-A} = {p: p is mutually believed by the Speaker and the Addressee}
Caponigro and Sprouse (2007:130)

(14) Q is an OQ if and only if $\Downarrow Q^w \notin SB$
Caponigro and Sprouse (2007:130)

(15) Q is a RQ if and only if $\Downarrow Q^w \in CG_{S-A}$
Caponigro and Sprouse (2007:131)

The findings in this section are summarized as follows. First, especially in Japanese RQs, a non-tensed adjunct phrase, which is located in the low hierarchy syntactically does not seem to be an island for *wh*-movement or a phase in the

Minimalist program's term (Chomsky 2000).³ Second, the proposition which both the speaker and the addressee share and believe can play an important role in derivation of RQs.

4. RQ Derivation for the Proposition

Based on the characteristics of *wh*-movement in RQs argued above, I would like to suggest the following RQ derivation under the Minimalist Program (Chomsky 1995, 2000). Consider the following example. Both *Mother*, speaker, and *Taro*, addressee, share and believe the proposition that he did not study anything at the university, as shown in (16a). They confirm this situation via the interaction using an RQ. Let us assume that RQ *wh*-words are equipped with interpretable proposition feature and uninterpretable *wh*-feature unlike OQ *wh*-words with interpretable Q-feature and uninterpretable *wh*-feature. Additionally, let us hypothesize that an RQ complementizer, e.g. *iu-no*, owns an uninterpretable Q-feature as well as an EPP feature like an OQ complementizer. *Wh*-movement in RQs is triggered for checking these features at the interface between syntax and pragmatics. The process of proposition-feature checking in RQs by way of *wh*-movement is depicted as in (16b).

(16) a. CONTEXT: Taro is so lazy and always stays at home, playing the computer games all day long. Of course, he does not go to university at all during this semester. Taro's mother knows his remissness well. At the end of the semester, his mother asks him in this manner.

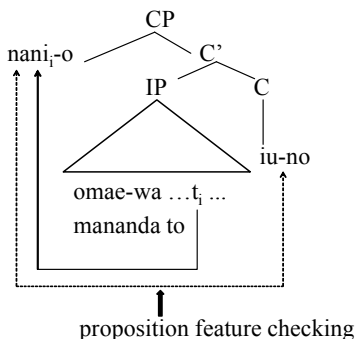
MOTHER: Omae-wa kongakki daigaku-de nani-o mananda to iu-no?

You-Top this semester university-at what-Acc study Comp saying-Q
'What did you study at the university this semester?'

TARO: Nani-mo.

'Nothing.'

b.



As observed above, checking a proposition feature requires satisfying pragmatic conditions such as CG_{S-A} . It might take time for children to acquire pragmatic competence. This is why acquisition of RQs shows slower progress than OQs and negative statements. In addition, the small number of RQ utterances could be due to the derivation for proposition-feature checking under the pragmatic competence.⁴

5. Concluding Remarks

To recapitulate, I demonstrated that Japanese RQs can avoid violating adjunct island like OQs when the adjunct is non-tensed and in the low hierarchy position. Derivation of RQs is motivated for feature-driven movement, proposition-feature checking, which is possible when pragmatic conditions are satisfied. The syntactic difference between Japanese RQs and OQs is that *wh*-movement of the former is sensitive to tensed CP not to non-tensed CP. Checking a proposition feature is enabled to function by pragmatic competence to satisfy pragmatic conditions such as CG_{S-A} . These syntactic and pragmatic factors could make the acquisition of RQs delayed.

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1 Richards (1998) defines the notion of Relevance as follows. For the details of PMC, see Richards (1998).

- (i) An element X is relevant to determining whether a dependency D with head A and tail B obeys constraint C if
 - a. X is along the path of D (that is, X=A, X=B, or A c-commands X and X c-commands B). and
 - b. X is a member of the class of elements to which C makes reference.

Richards (1998:601)

2 The definitions of Speaker's Beliefs (SB) and Addressee's Beliefs as follows.

- (i) Speaker's Beliefs:
SB = { p: p is a belief of the Speaker }

Caponigro and Sprouse (2007:130)

- (ii) Addressee's Beliefs:
AB = { p: p is a belief of the Addressee }

Caponigro and Sprouse (2007:130)

3 Note that Japanese RQs do not display adjunct island violations in non-tensed and lower hierarchical adjunct (see (9a)), while English RQs do as in (i) (personal communication with Patricia Hironymous). Regardless of the types of adjunct clauses, CP is a phase to *wh*-movement in English RQs while it could not in Japanese RQs. We need to study matters related to the Phase-Impenetrability Condition and EPP in more depth.

- (i) * What would John enter the university [_{Adj} [_{CP} in order to study]]?
- (ii) Phase-Impenetrability Condition

In phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

Chomsky (2000:108)

- (iii) The head H of phase Ph may be assigned an EPP-feature.

Chomsky (2000:109)

4 The Data from CHILDES

	RQs	OQs	NAs	age
Hamasaki	0	5	0	2;0-3;4
Ishii	0	777	7	0;8-3;8
MiiPro/ArikaM	0	287	12	2;11.28-5;0.17
MiiPro/Asato	0	87	4	3;0.1-5;1
MiiPro/Nanami	0	390	13	2;11.28-5;0.17
MiiPro/Tomito	0	136	6	2;11.27-5;1.23
Miyata/Aki	0	695	12	1;3-3;0
Miyata/Ryo	0	206	11	1;3-3;0
Miyata/Tai	0	167	3	1;3-3;0
Noji	0	344	10	0;0-7;0
Ota/Hitomi	0	0	0	1;00.21-2;00.07
Ota/Kenta	0	0	0	1;05.18-2;06.07
Ota/Takeru	0	0	0	1;04.23-2;00.19
Stanford/e	0	0	0	
Stanford/emi	0	0	0	0;10.14-1;04.07
Stanford/har	0	0	0	1;01.14-1;06.07
Stanford/kaz	0	0	0	1;00.17-1;03.15
Stanford/ken	0	0	0	1;00.04-1;05.26
Stanford/tar	0	0	0	1;02.07-1;11.02
Total	0	3094	78	

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