Is Rhetorical Question Pragmatic?*

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1. Introduction

Rhetorical questions (henceforth, RQs) are interrogative sentences that are interpreted as assertion. For example, the *yes-no* interrogative sentence in (1a) can be construed as the negative assertion, '*Syntax is not easy*,' as well as the question that seeks information (ordinary question (henceforth, OQ)). Similarly, the *wh*-question (1b) has the RQ interpretation '*Nobody understands English*,' in addition to the reading of OQ.

(1) a. Is syntax easy?
    b. Who understands English?

A number of analyses have been proposed in order to explain the mismatch between the form and meaning in RQ, namely the fact that RQ has the form of interrogative sentence while it is construed as an assertion. A prevailing view is that the mismatch is pragmatic in nature: RQ has the structure identical to OQ in syntax and semantics, and the assertive flavor is brought about by pragmatics (Ladusaw (1979); Gutiérrez-Rexach (1997); Rohde (2006); Caponigro and Sprouse (2007)) or interaction between semantics and pragmatics (Guerzoni (2004)).

The pragmatic view entails that there is no syntactic difference between OQ and RQ. For example, Fujii (2015) demonstrates that rhetorical *wh*-movement behaves in the same way with ordinary *wh*-movement with respect to constraints on movement such as the Complex NP Constraint[1], and concludes that these facts support the pragmatic view:

(2) a.   After all, what did he buy *t*? (RQ)

    b. *After all, what did he meet the man who bought *t*? (RQ) (Sprouse
        2007: 573)

On the other hand, there are syntactic approaches to RQ that assume that it has a syntactically different structure from OQ (Sadock (1974, 1978); Progovac (1993); Han (2002)[2]). The aim of this article is to provide support to the latter view pointing out syntactic characters of RQ, and to propose a new syntactic analysis.

This article is organized as follows. In section 2, I briefly review the proposal of Caponigro and Sprouse (2007) in order to introduce the idea of the pragmatic view, and point out that it cannot explain Neg-Raising in RQ. In section 3, I will propose an alternative syntactic analysis of RQ based on Coniglio and Zegrean's (2012) cartographic approach to illocutionary force. Section 4 demonstrates that the proposed analysis accounts for Neg-Raising, scopal property of negation, and sensitivity to constraints on movement in RQ. Section 5 is a conclusion.

2.The Pragmatic View
2.1 Caponigro and Sprouse (2007)

This section reviews a pragmatic approach to RQ, picking up Caponigro and Sprouse (2007) as a typical example of the pragmatic view.

As for the semantics of RQ, Caponigro and Sprouse (2007) assume with Groenendijk and Stokhof (1989) that the denotation of an interrogative sentence is a function that maps possible worlds into a partition. Each of the partitions represents the set of possible worlds where an answer to the interrogative sentence is true. Suppose, for example, Andrea and Luca are in the domain of universe. Then, the denotation (intension) of *Who walks* will be the partition in (3).

(3)   [[Who walks?]] =

{w: Andrea and Luca walk in w}
{w: Andrea walks in w}
{w: Luca walks in w}
{w: Nobody walks in w}

The top cell represents the set of possible worlds in which Andrea and Luca walks, the second is the set of possible worlds in which Andrea, but not Luca walks, and so on. Similarly, the denotation of *Does Luca walk?* is the partition that contains the sets of possible worlds in which Luca walks and the set of possible worlds in which Luca doesn't walk.

(4) [[Does Luca walk?]] =

| {w: Luca walks in w} |
| {w: Luca doesn't walk in w} |

Given the semantics of interrogatives above, Caponigro and Sprouse propose that the meaning of OQ and RQ as in (5): The denotation (extension) of RQ in a possible world w is identical to that of OQ in w, the true answer to the question in w.

(5) $[[RQ]]^w = [[OQ]]^w$

On the other hand, they try to derive differences between OQ and RQ from the knowledge of the speaker and addressee. Adopting Stalnker's (1978) Common Ground, they propose the condition that determines whether an interrogative sentence is used as OQ or RQ. Suppose that we have the set of the beliefs of the speaker (SB) and the set of the beliefs of the adressee (AB), as in (6).

(6) a.   SB = {p : p is a belief of the speaker}
     b.   AB = {p : p is a belief of the addressee}

Common Ground of the speaker and the addressee (CG_{S-A}) is defined as the intersection of SB and AB: the belief mutually held by the speaker and the addressee.

(7) CG_{S-A} = {p : p is mutually believed by the speaker and the addressee}

Caponigro and Sprouse (2007) define OQ and RQ in terms of SB, AB, CG_{S-A}.

A question Q is OQ if and only if the speaker does not have beliefs about the complete true answer to Q. In contrast, a question Q is RQ if and only if the speaker and the addressee mutually believe the true answer to Q. More formally, OQ and RQ are defined as follows:

(8) a.   Q is an OQ iff $[[Q]]^w \in$ SB
    b.   Q is an RQ iff $[[Q]]^w \in CG_{S\text{-}A}$

Suppose, for example, (1a) is uttered under the circumstance in which the speaker and the addressee mutually believe that syntax is not easy. Then, (1a) satisfies the condition in (8b) and is interpreted as RQ since the answer to the question in (1a), *syntax is not easy*, is included in $CG_{S\text{-}A}$. On the other hand, when the speaker does not know whether syntax is easy or not, the answer to (1a) is not included in SB, and the interrogative sentence is construed as OQ.

Notice that the analysis above claims distinction between RQ and OQ is pragmatic in nature (i.e, they are distinguished by the knowledge shared by the discourse participants), and that RQ is identical to OQ in syntax and semantics. This view is to some extent shared by other pragmatic approaches. For example, Rohde (2006) explains properties of RQ in terms of shared knowledge in Common Ground. I will argue in section 2.2 that they are empirically inadequate.

2.2 A Problem of the Pragmatic View

As discussed in section 2.1, the pragmatic view predicts that there are no syntactic differences between OQs and RQs. This subsection shows that this prediction is not borne out, pointing out that the pragmatic camp cannot explain asymmetry between OQ and RQ with respect to Neg-Raising.

Neg-Raising (henceforth, NR) is a phenomenon in which matrix negative marker is interpreted in the embedded clause. For example, the matrix negative marker *not* in (9) can take scope in the embedded infinitival clause, and (9) obtains NR interpretation as in (9b) in addition to the matrix negative reading as in (9a).

(9) Jack doesn't want to be arrested.
    a. 'It's not the case that Jack wants to be arrested.' (not > want)
    b. 'Jack wants not to be arrested.' (want > not)   (Sadock (1974:80))

NR is restricted to certain class of predicates (NR-predicates). While *want* allows NR as in (9), *hope* does not permit NR; hence (10) cannot be paraphrased as in (10b). The predicates like *hope* that do not allow NR are called non-NR predicates.

(10) Jack doesn't hope to be arrested.
    a. 'It's not the case that Jack hopes to be arrested.' (not > hope)
    b. * 'Jack hopes not to be arrested.' (*hope > not)   (Sadock (1974:80))

Sadock (1974) points out that rhetorical *yes-no* sentences have embedded negative interpretation only when the embedded clauses are complements to the matrix NR predicates. For instance, when the complement clause is embedded by the NR-predicate *want* in the interrogative sentence as in (11), it has embedded rhetorical reading as in (11b).

(11) Does Jack want to be arrested?
    a. 'It's not the case that Jack wants to be arrested.' (not > want)
    b. 'Jack wants not to be arrested.' (want > not)   (Sadock (1974:80))

In (12), contrastively, the matrix verb *hope* is a non-NR predicate, and it does not have the embedded negative interpretation.

(12) Does Jack hope to be arrested?
    a. 'It's not the case that Jack hopes to be arrested.' (not > hope)
    b. * 'Jack hopes not to be arrested.' (*hope > not)   (Sadock (1974:80))

The contrast between (11) and (12) suggests that NR takes place in (11) but not in (12).

The RQ reading in (11b) is problematic to approaches that assume that the denotation of RQ is identical to that of OQ, the set of possible answers. These approaches predict that the embedded rhetorical reading in (11b) is one of the possible answers to the question in (11). However, this prediction is incorrect, as demonstrated in (13).

(13) a.   Does Jack want to be arrested?
　　 b.   i.　　Yes, Jack wants to be arrested.
　　　　　ii.　　No, Jack doesn't want to be arrested.
　　　　　iii.?? No, Jack wants not to be arrested.

(13) shows that (13b-i) and (13b-ii) are candidates for the answer to (13a), but the embedded negative sentence in (13b-iii), which has the embedded negative interpretation, is not. Accordingly, the denotation of (13a) includes a partition of the set of possible worlds {w: Jack wants to be arrested in w} and {w: Jack doesn't want to be arrested in w}, but not {w: Jack wants not to be arrested in w}. Thus, the pragmatic analyses cannot explain why the embedded negative interpretation is allowed in (11).

3. The Proposed Analysis

This section proposes a syntactic analysis of RQ, based on Coniglio and Zegrean's (2012) cartographic approach to illocutionary force, which is outlined in section 4.1. Section 4.2 and 4.3 presents the structure of rhetorical *wh*-questions and rhetorical *yes-no* questions, respectively. If the analysis is on the right track, it will be concluded that there is no pragmatic process that changes OQ into RQ, and RQ is syntactically generated in the form of RQ.

3.1 Syntax of Illocutionary Force: Coniglio and Zegrean (2012)

Rizzi (1997) claims that the CP domain is split into four functional projections, ForceP, TopP, FocP, and FinP.

(14) $[_{ForceP}$ Force $[_{TopP}$ Top $[_{FocP}$ Foc $[_{FinP}$ Fin $[_{TP}$ ⋯]]]]

ForceP is the projection that conveys information about clause type (declarative, interrogative, imperative, and etc.). Coniglio and Zegrean (2012) claim that ForceP is further divided into two projections, ILL (Illocutionary Force) and CT (Clause Type).

(15) $[_{\text{ILLP}}$ ILL $[_{\text{CTP}}$ CT $[_{\text{TopP}}$ Top $[_{\text{FocP}}$ Foc $[_{\text{FinP}}$ Fin $[_{\text{TP}}$ ⋯]]]]

CT is a projection that specifies the clausal type, whereas ILL encodes speaker's intension in producing an utterance (i.e., whether the sentence is uttered as assertion, question, direction, or others). A direct consequence of splitting up Force into CT and ILL is to open a way to analyze indirect speech act syntactically. Let us see (16) for illustration of division of labor of ILL and CT.

(16) a. Call the police! (ILL= directive / CT= imperative)
     b. Could you call the police? (ILL= directive / CT=interrogative)
                                        (Coniglio and Zegrean (2012: 234))

Although the former is imperative but the latter is interrogative, both (16a) and (16b) are uttered as direction (ordering toward the hearer that he or she should call the police). The mismatch between the form and meaning found in (16b) is accounted for by postulating that in (16b) ILL involves an interpretable feature [iDir(ective)] and CT has [iInterr(ogative)].

Coniglio and Zegrean further claim that their analysis correctly explains distribution of discourse particles in Italian and German. As shown by Italian examples in (17), although both (17a) and (17b) are imperative sentences, only the former has the effect of weakening the order by virtue of the discourse particle *pure*.

(17) a. Chiama   pure la   poliza!
         call.Imp Prt   the   police
         'Call the police! (if you feel like it)'   (Coniglio and Zegrean (2012: 235))
     b. Chiama   la   poliza!

        call.Imp   the   police
        'Call the police!'   (Coniglio and Zegrean (2012: 238))

According to Coniglio and Zegrean, *pure* in (17a) serves as a modifier that
weaken directional force encoded in ILL. However, distribution of *pure* is
regulated not by ILL but by CT: As shown by (18), *pure* cannot be used in an
interrogative sentence even when it has illocutionary force of direction.

  (18) Puoi   (*pure) chiudere la   finesta?
      can.2sg Prt   close   the window
      'Can you close the window?'   (Coniglio and Zegrean (2012: 238))

Coniglio and Zegrean explain these facts by proposing that discourse particles
have uninterpretable features that agree with interpretable features in ILL and
CT. Suppose, for example, that *pure* has uninterruptable features [uDir] and
[uImp(erative)]. These features must be deleted by [iDir] in ILL and [iImp] in CT
as in (19a). However, when ILL and CT involve [iDir] and [iInterr] respectively,
the [uImp] feature in *pure* cannot be deleted and causes crash at the interfaces.

  (19) a.   [$_{ILL}$ ILL$_{[iDir]}$ [$_{CT}$ CT$_{[iImp]}$ [··· pure$_{[uDir][uImp]}$···]]]
      b. *[$_{ILL}$ ILL$_{[iDir]}$ [$_{CT}$ CT$_{[iInterr]}$ [··· pure$_{[uDir][uImp]}$···]]]

Thus, incompatibility of *pure* with the interrogative sentence in (18) is attributed
to the fact that [uImp] in *pure* cannot be licensed in (18), which has structure
like (19b).

3.2 Rhetorical Wh-Questions

    Let us consider the structure of rhetorical *wh*-questions based on Coniglio and
Zegrean's framework. According to Rizzi (1997), the landing site of a *wh*-phrase is
the Spec of FocP. I assume that this is true of rhetorical *wh*-questions, and postulates
that both ordinary *wh*-questions and rhetorical ones have structures like (20).

(20) a. Who understands English?

    b. [$_{\text{ILL}}$ ILL [$_{\text{CT}}$ CT [$_{\text{TopP}}$ Top [$_{\text{FocP}}$ Who$_i$ Foc [$_{\text{FinP}}$ Fin [$_{\text{TP}}$ t_i understands English]]]

I propose that there are two variants of *wh*-words: the *wh*-word involving [uQues(tion)] and [uInterr], and the one that has [uAsser(tion)] and [uInterr]. These features distinguish OQ and RQ with respect to syntactic structures: A *wh*-word with [uQues] can occur only in an interrogative sentence that has the illocutionary force of question, while that with [uAsser] can be generated only in an interrogative sentence that has assertive illocutionary force. The former is an interrogative *wh*-phrase, and the latter is a rhetorical one. The structures involving the two *wh*-phrases are represented as in (21).

(21) a. [$_{\text{ILL}}$ ILL$_{\text{[iQues]}}$ [$_{\text{CT}}$ CT$_{\text{[iInterr]}}$ [$_{\text{TopP}}$ Top [$_{\text{FocP}}$ Who$_{\text{i[uQues] [uInterr]}}$ Foc [$_{\text{FinP}}$ Fin [$_{\text{TP}}$ t_i understands English]]] (OQ)

    b. [$_{\text{ILL}}$ ILL$_{\text{[iAssert]}}$ [$_{\text{CT}}$ CT$_{\text{[iInterr]}}$ [$_{\text{TopP}}$ Top [$_{\text{FocP}}$ Who$_{\text{i[uAsser] [uInterr]}}$ Foc [$_{\text{FinP}}$ Fin [$_{\text{TP}}$ t_i understands English]]] (RQ)

A *wh*-phrase that has [uQues] and [uInterr] functions as a *wh*-interrogative operator, and (21a) is paraphrased as *I ask who understands English*.

    How is (21b) interpreted? I propose the semantics of the *wh*-phrase that has [uAsser] and [uInterr] as follows:

(22) A *wh*-word involving [uAsser] refers to one of the possible answers to the corresponding *wh*-word involving [uQues].

Let us assume, for example, that the set of possible answers to *who* is {*John*, *Mary*, *John and Mary*, *Nobody*}. Then *who* with [uAsser] picks out one of the elements of the set as its denotation. Accordingly, (21b) is interpreted as *I assert that nobody understands English* when *nobody* is selected as the denotation of the *wh*-word. Note that this system also predicts that non-negative elements like *John* or *Mary* can be the denotation of the rhetorical *who*, and an affirmative

interpretation like *I assert that John understands English* will be derived. Section 4.2 show that this prediction is borne out.

3.3 Rhetorical Yes-No Questions

Let us next consider the structure of rhetorical *yes-no* questions. According to Radford (2016), the interrogative marker *whether* occurs in the matrix *yes-no* question in Shakespearean English as in (23).

(23) a. Whether had you rather lead mine eyes or eye your master's heels?

(Mrs Page, *Merry Wives of Windsor*, III.ii)

  b. Whether dost thou profess thyself a knave or a fool?

(Lafeu, *All's Well That Ends Well*, IV.v)

(cited in Radford (2016: 206)))

Radford claims that this data suggests that matrix *yes-no* questions in present day English also contains the phonologically empty *yes-no* question operator (Op_{YNQ}) in the Spec of CP.

I assume that the position of Op_{YNQ} in the cartographic hierarchy is the Spec of FocP, and a *yes-no* question has the structure like (24).

(24) a. Is syntax easy?

  b. $[_{ILL}$ ILL $[_{CT}$ CT $[_{TopP}$ Top $[_{FocP}$ Op_{YNQ} Foc $[_{FinP}$ $[_{Fin}$ is$][_{TP}$ syntax easy $]]]$

Just as *wh*-phrases, I propose that Op_{YNQ} has two variants: one involves [uQues] and [uInterr] (i.e. ordinary Op_{YNQ}) and the other that involves [uAsser] and [uInterr] (i.e. rhetorical Op_{YNQ}). Then, the structure of ordinary *yes-no* question and that of rhetorical one is given as in (25a) and (25b), respectively.

(25) a. $[_{ILL}$ ILL$_{[iQues]}$ $[_{CT}$ CT$_{[iInterr]}$ $[_{TopP}$ Top $[_{FocP}$ $Op_{YNQ[uQues][uInterr]}$ Foc $[_{FinP}$ $[_{Fin}$ is$][_{TP}$ syntax easy$]]]$ (OQ)

  b. $[_{ILL}$ ILL$_{[iAssert]}$ $[_{CT}$ CT$_{[iInterr]}$ $[_{TopP}$ Top $[_{FocP}$ $Op_{YNQ[uAsser][uInterr]}$ Foc $[_{FinP}$ $[_{Fin}$ is$]$ $[_{TP}$ syntax easy $]]]$ (RQ)

(25a) is paraphrased as *I ask whether syntax is easy*.
   The semantics of Op_{YNQ} is defined as in (26).

   (26) Op_{YNQ} involving [uAsser] refers to one of the possible answers to Op_{YNQ} involving [uQues].

Suppose that the denotation of *wheter* and Op_{YNQ} is the set of the positive and negative values, {Affirmative, Negative}. Given that, the rhetorical Op_{YNQ} refers to one of the member of the set. When Negative is selected, the operator is interpreted as a negative operator like *not*, and (25b) is construed as *I assert that it is not the case that syntax is easy.*[3]

4. Consequences

   This section sees consequences that are brought about by the proposed analysis. I will show that it can account for NR, non-negative interpretation, scope of negation, and sensitivity to constraints on movement in RQ.

4.1 Neg-Raising

   In section 2.2, I have demonstrated that NR takes place in RQ and this fact cannot be explained by the pragmatic approaches that assume that RQ is identical to OQ in their semantics. This subsection shows that the fact is accounted for by the analysis proposed in section 3.

   We have seen that an RQ sentence allows embedded negative interpretation when the matrix verb is an NR predicate as in (11), repeated here as (27).

   (27) Does Jack want to be arrested? (^{OK}want > not)

   I assume with Collins and Postal (2014) that an NR sentence is derived by extracting the negative marker from the embedded clause to the root clause. Then, the structure of (11), repeated here as (28a), is represented as in (28b).

   (28) a. Jack does not want to be arrested. (^{OK}want > not)

b.   Jack does not$_i$ want [t_i to be arrested]

Based on this idea, I claim that Op$_{YNQ}$ involving the [uAsser] feature can be extracted from the embedded clause to the root clause in a rhetorical *yes-no* sentence. The structure of (27) is given as in (29), where Op$_{YNQ}$ that is interpreted as *not* is extracted from the embedded clause.

(29) [$_{ILL}$ ILL$_{[iAssert]}$ [$_{CT}$ CT$_{[iInterr]}$ [$_{TopP}$ Top [$_{FocP}$ Op$_{YNQi\ [uAsser][uInterr]}$ Foc [$_{FinP}$ [$_{Fin}$ does] [$_{TP}$ Jack want [$_{TP}$ t_i to be arrested]?

In other words, availability of embedded interpretation in (27) is due to the fact that extraction of Op$_{YNQ}$ is available in (29).

It will be further predicted that when the matrix verb is a non-NR predicate, Op$_{YNQ}$ that is interpreted as *not* cannot be extracted from the embedded clause, so that the embedded rhetorical interpretation is not yielded.

(30) *[$_{ILL}$ ILL$_{[iAssert]}$ [$_{CT}$ CT$_{[iInterr]}$ [$_{TopP}$ Top [$_{FocP}$ Op$_{YNQi\ [uAsser][uInterr]}$ Foc [$_{FinP}$ [$_{Fin}$ does] [$_{TP}$ Jack hope [$_{TP}$ t_i to be arrested]?

This prediction is borne out: We have seen that the embedded negative reading in RQ is not allowed when the matrix predicate is the non-NR predicate *hope*, as in (12), repeated as (31).

(31) Does Jack hope to be arrested? (*hope > not)   (=(12))

4.2 Non-Negative RQ

As discussed in section 3.2, the proposed analysis allows non-negative interpretation in RQ since a rhetorical *wh*-word can refer to an individual that is a possible answer to an ordinary *wh*-word. Although RQs are typically interpreted as a negative assertion, it is not the case that they are always interpreted negatively. The italicized sentence in (32b) is paraphrased as *Mina helped him when he was in trouble*.

(32) 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.

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

　　c.　ADDRESSEE or SPEAKER: Mina / #Nobody

<div align="right">(Caponigro and Sprouse (2007: 124))</div>

Given that the universe of discourse includes *John* and *Mina*, the set of possible answer to *who* is {John and Mina, John, Mina, Nobody}. Then, one element of the set is chosen as the denotation of the rhetorical *who* in (32b). Since picking up *Mina* as the denotation of the rhetorical *wh*-word is the only option that is compatible with the situation in (32a), the italicized sentence in (32b) is construed as *I assert that Mina helped him when he was in trouble*.

4.3 Scope of Negation

In section 4.2, I have claimed that Op_{YNQ} is located in the Spec of FocP. This proposal predicts that negation in RQ takes higher scope than an item in TP. (33) shows that *must* and *should* take higher scope than *not* in decretive sentences.

(33) a. John must not eat the cake
　　　　'It is obligatory for John not to eat cake.' (must > not)
　　b. John should not leave.
　　　　'It is obligatory for John not to leave.' (should > not) (Han (2002: 224))

In contrast, *must* and *should* generated in RQ sentences take lower scope than negation.

(34) a. Must John say anything?
　　　　'It is not obligatory for John to say anything.' (not > must)
　　b. Should John do the homework?
　　　　'It is not obligatory for John to leave.' (not > should) (Han (2002: 224))

These contrasts are explained by the proposed analysis: In RQ, Op_{YNQ} is generated in FocP and it c-commands *must* or *should* located in Fin. Accordingly, negation in RQ scopes over these modal auxiliaries.

(35) $[_{ILL} ILL_{[iAssert]} [_{CT} CT_{[iInterr]} [_{TopP} Top [_{FocP} Op_{YNQ[uAsser][uInterr]} Foc [_{FinP} [_{Fin} must][_{TP}$ John say anything]]]

4.4 Constraints on Movement

As mentioned in section 1, Fujii (2015) claims that the pragmatic view is supported by the fact that extraction of a rhetorical *wh*-phrase is sensitive to the Complex NP constraint (CNPC) as shown in (2), repeated here as (36), since the pragmatic view assume that OQ and RQ do not differ in syntax.

(36) a. After all, what did he buy *t*? (RQ)
b. * After all, what did he meet the man who bought *t*? (RQ)

(Sprouse 2007: 573)

However, the sensitivity to constraints on movement is also accounted for by my proposal. According to the proposed analysis, RQ and OQ do differ in syntax, but the only syntactic difference is the feature-composition of the *wh*-word: whether it involves [uQues] or [uAsser]. In other words, rhetorical *wh*-phrases and ordinary ones are identical beyond these features, and ordinary and rhetorical *wh*-phrases share the property in which they have to undergo *wh*-movement to the Spec of FocP. It follows that rhetorical *wh*-movement is constrained by the CNPC just like ordinary one.

This observation is also attested by the *that*-trace effect, which prohibits extraction of a *wh*-phrase from an embedded subject position when the trace follows the complementizer *that*.

(37) a. SITUATION: You know that John said that someone finished the book, but you don't know who is it. You say:
b. I am really curious: Who$_i$ did John say t_i finished the book?

    c. ? I am really curious: Who$_i$ did John say that t_i finished the book?

My informants point out that the *that*-trace effect is seen in RQ as well as OQ. The sentences in (38b, c) are RQs, and the *that*-trace sequence in (38c) is worse than (38b).

  (38) a. Everybody knows that John said that nobody finished the book, and you want to emphasize to the hearer again that, according to John, there is no such person that finished the book. You say:

     b. After all, who$_i$ did John say t_i finished the book?

     c. ? After all, who$_i$ did John say that t_i finished the book?

The data in (37) and (38) shows that the *that*-trace effect is seen in RQ as well as in OQ.

5. Conclusion

    The pragmatic approach to RQ proposed Caponigro and Sprouse (2007) assumes that RQ has the same structure as OQ in syntax and semantics, and attributes their difference in interpretation to pragmatic factors, such as Common Ground. This approach, however, cannot explain syntactic characters of RQ such as availability of NR in RQ. As an alternative analysis, I proposed a syntactic analysis of RQ based on Coniglio and Zegrean's (2012) cartographic approach, which assumes that information on clause type and illocutionary force is encoded in the syntactic structure through the dedicated projections CT and ILL. This alternative not only explains availability of NR but also accounts for scopal property of negation, non-negative interpretation, and sensitivity to constraints on movement in RQ.

Nobushige Ishigouka, Takayuki Kimura, Hirokazu Tsutumi, and Daisuke Sato. All remaining errors and inadequacies are, of course, my own.

Notes

[1] One might argue that rhetorical *wh*-phrases cannot be extracted out of finite clauses, and that unacceptability in (2b) is reduced to clause-boundedness. However, as Fujii argues, (i) shows that long-distance extraction of the rhetorical *wh*-phrase is possible.

(i) What$_i$ has Max ever believed that Matt does well t_i?
  'There is no such thing that Max ever believed that Matt does well.'
  (Bhatt (1998: 3))

Therefore, we should attribute the unacceptablility of (2b) to the CNPC.

[2] One might wonder whether Han (2002) should be included in the syntactic camp. Han claims that RQ is obtained by mapping the *wh*-phrase to a negative quantifier "as a result of post-LF derivation." According to Han, RQ reading is derived by mapping *what* in the LF-representation of an interrogative sentence as in (ia) onto *nothing* as in (ib).

(i) a. [$_{CP}$ what$_i$ has [$_{TP}$ John done t_i for you]]?
  b. [$_{CP}$ nothing$_i$ has [$_{TP}$ John done t_i for you]]

If this kind of "post-LF derivation" is subsumed under syntactic computation, Han's analysis can be seen as a syntactic one.

[3] One may wonder whether it is possible that the positive value Affirmative is selected as the denotation of Op$_{YNQ}$ and *Is syntax easy?* is interpreted as *I assert that that syntax is easy.* I have to admit that the proposed analysis derives such pattern, but in reality rhetorical yes-no question requires an answer of the opposite polarity.

(i) a. After all, does everybody like ice-cream?
  b. No. / #Yes.   (Caponigro, Ivan, and Jon Sprouse (2007: 132))

(ii) a. After all, doesn't everybody like ice-cream?
  b. Yes. / #No.   (Caponigro, Ivan, and Jon Sprouse (2007: 132))

I leave this problem for my further research.

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Is Rhetorical Question Pragmatic?*

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Rhetorical questions (henceforth, RQs) are interrogative sentences that are interpreted as assertion. In the previous literature, it has been claimed that RQ has the structure identical to ordinary questions (OQs) in syntax, and the assertive flavor is brought about by pragmatics (Ladusaw (1979); Gutiérrez-Rexach (1997); Guerzoni (2004); Rohde (2006); Caponigro and Sprouse (2007)).

This article points out that the pragmatic view that assumes that RQ and OQ do not differ in syntax and semantics cannot explain Neg-Raising in RQ, and proposes an alternative syntactic analysis of RQ based on Coniglio and Zegrean's (2012) cartographic approach to illocutionary force, which claims that information on clause type and illocutionary force is encoded in the syntactic structure through the dedicated projections CT and ILL. I will demonstrate that this alternative not only explains availability of Neg-Raising but also accounts for scopal property of negation, non-negative interpretation, and sensitivity to constraints on movement in RQ.