Postverbal *gwai* in Cantonese: A syntactic approach to rhetorical questions

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Introduction Rhetorical questions (RQs) have long been considered a pure pragmatic issue, which usage is subject to context and cooperative principles like Grice's Maxim. However, recent studies offer a new insight into RQs, arguing that RQs may be analysed syntactically (Spago 2016, Nakashima 2018, Tang 2022a). These studies echo the discovery of the treetop structure in syntax-pragmatics interface (Beyssade & Marandin 2006, Heim et al. 2016, Miyagawa 2022). In this paper, I focus on the syntax of typical RQ formed by postverbal negative marker *gwai* (literally "ghost") and its interaction with sentence-final particles (SFPs) and intonation in (Hong Kong) Cantonese.

Proposal Sentences formed by *gwai* are traditionally considered RQs and a colloquial form to express negation (Matthews & Yip 1994, Lee & Chin 2007). Always accompanied by question particle *me* ((1) for example), RQs with *gwai* can be classified as "rhetorical yes-no questions" in Han (2002)'s system. I argue that *gwai* is base generated within vP (or ModP) as a suffix of the main verb (or modal), and it must Agree with the top-most speaker phrase (SpkP), addressee phrase (AdrP) and commitment phrase (ComP) above CP (following the peripheral structure proposed by Miyagawa 2022), as shown in (2). The supporting evidence is shown below.

(1) gaaming sik   gwai geoifaat me.
    Kaming know ghost syntax   SFP
    Intended: 'Kaming does not know syntax.'

(2) $[_{SpkP} [_{AdrP} [_{ComP} \cdots [_{TP} [_{vP} \text{gwai}]]]]]$
    Agree

1. Properties of *gwai* Postverbal *gwai*'s core meaning is negation and denial (cf. Winterstein et al. 2018). However, it is different from the typical negative marker *m* in Cantonese in the sense that *gwai* expresses a strong subjectivity from the speaker, so that it may co-occur with the subjective adverbial *gai ngo waa* in (3). Also, *gwai* can only be used in informal register (Tsang 1991), seen as impoliteness and rudeness. It can even be replaced by obscenity words like *nan* ("penis") with same functions but in a more uncourteous manner. It shows that *gwai* is sensitive to the non-honorific context, in which the addressee is identified as a peer to the speaker. Besides, the major function of *gwai* is for the speaker to commit him/herself negatively to the proposition. All these properties are related to some treetop elements, and obviously *gwai* is quite low such that it appears postverbally on a suffixal position, leading to a mismatch of form and function (cf. politeness marker *-mas-* in Japanese, Miyagawa 2017). The agreement analysis may give a reasonable account for this phenomenon.

(3) gai ngo waa, gaaming (sik   gwai / ??m sik)   geoifaat.
    As I   say Kaming know ghost / not know syntax
    'In my opinion, Kaming does not know syntax.'

2. Root requirement *Gwai* is very strongly root sensitive. It resists all kinds of subordinate clauses, including relative clause in (4) and adverbial clause in (5). And it cannot be embedded with any type of verbs, even for type A verbs in Hooper & Thompson (1973)'s classification, as shown in (6). It is quite different from the case for *-mas-* in Japanese since it may appear in if-clauses and some embedded clauses, though in a very restrictive manner. I attribute the strong root sensitivity of *gwai* to its agreement with the highest SpkP, whereas *-mas-* only marks the addressee. The SpkP can never appear in any non-root context, conforming to the subjectivity hypothesis on embeddability proposed by Pan (2015). (7) is a pseudo example of *gwai* being embedded. I adopt Tang (2022a)'s analysis that *ngo gokdak* is grammaticalized as an adverbial phrase, which adjoins to the SpkP to express speaker's subjective opinion.

(4) *sik   gwai geoifaat ge jan…
    know ghost syntax   DE person
    'The one who doesn't know syntax…'

(5) *janwai gaaming sik   gwai geoifaat…
    because Kaming know ghost syntax
    'Because Kaming does not know syntax…'

(6) *gaaming waa ngo sik   gwai geoifaat.
    Kaming say I   know ghost syntax
    'Kaming said that I don't know syntax.'

(7) ngo gokdak keoi sik   gwai geoifaat.
    I   think s/he know ghost syntax
    'For me, s/he does not know syntax.'

3. SFPs and intonations Normally, *gwai* may co-occur with SFPs *me* or tone 4 *aa*, which is negative-biased and may encode negative expectations towards a proposition (Lam 2014, Hara 2014), but it is incompatible with other yes-no question particles in Cantonese, as in (8). I propose that *gwai* Agrees with *me/aa* located at ComP (or a null negative operator that *me/aa* induced, cf. Choi 2022), akin to negative concord. Also, if *me* is used, it must be the high-fall tone *me* but not a high-level tone one. Lee (2021) hypothesized that a L% boundary tone expressing the speaker's subjectivity may superimpose on different SFPs, including *me* and *aa*. I adopt his idea and claim that the L% occupy the head of SpkP. Though *me* may be omitted in the sentence, the L% must be presented for *gwai* to be licensed, as shown in (9). It is obligatory to have the L% for the *gwai* sentence to be typed as an assertion. The illocutionary force of RQs is not an interrogative, but a kind of assertion (Sadock 1971 among others). The subjective L% is manifested as the [Assert] feature (Nakashima 2018, Tang 2022a). The full syntactic representation of *gwai* is shown in (10).

(8) gaaming sik gwai geoifaat (me/aa/*maa/*o ho …).
     Kaming know ghost syntax SFP   (9) gaaming sik gwai geoifaat *(↘).
     'Kaming does not know syntax.'   Kaming know ghost syntax L%

(10) [$_{SpkP}$ L%$_{[Assert]}$ [$_{AdrP}$ Ø $_{[colloquial]}$ [$_{ComP}$ me/aa/Op$_{[Neg]}$ … [$_{TP}$ [$_{vP}$ gwai]]]]]

4. Minimality effects The agreement between *gwai* and the NEG element in ComP can be seen as negative concord, which is intrinsically a kind of syntactic agreement (Zeijlstra 2004, see also Yip 2021 and ref. therein) and must obey minimality. Following Rizzi (2004)'s typology on featural Relativized Minimality (fRM), NEG elements bear quantificational feature, and it is predicted that no quantificational elements Z should intervene between *gwai* and the ComP, as in (11). The prediction is borne out. *Dak* serving as an "only" operator in (12), epistemic modal *jatding* in (13), universal quantifier in (14) and quantificational adverbs *sengjat* in (15) are prohibited since they intervene between *gwai* and NEG.

(11) fRM for *gwai*: [$_{ComP}$ NEG$_{[Qu]}$] …(*Z$_{[Qu]}$) … [$_{vP}$ gwai$_{[Qu]}$]

(12) *dak gaaming sik gwai geoifaat. (13) *gaaming jatding sik gwai geoifaat.
     Only Kaming know ghost syntax   Kaming certainly know ghost syntax
     'Only Kaming does not know syntax.'   'Certainly, Kaming does not know syntax.'

(14) *sojaujan dou sik gwai geoifaat. (15) *Keoi sengjat sik gwai geoifaat.
     Everyone DOU know ghost syntax   S/he always know ghost syntax
     'Everyone (here) does not know syntax.'   'Usually, s/he does not know syntax.'

5. Scopal interaction of NEG Though *gwai* is generated deeply within TP, its negation scope is very high. In (16), while the existential quantifier *jat joeng je* is in a temporal adjunct clause merging to the TP layer, it must take scope under the negation. Actually, the negative meaning of RQs belongs to "external negation" in the sense of Horn (1989) and Hsieh (2001). I suggest that the [Neg] feature of *gwai* is uninterpretable and it must Agree with the sentential NEG to get its value, so at LF, the negation scope would be at ComP and the ∃>~ reading is impossible.

(16) Keoi hai zou-gan jat joeng je ge sihau sik gwai jatsamjijung me.
     S/he when do-ing one CL thing DE time know ghost multi-task SFP
     Intended: 'It is not the case that when s/he is doing something, s/he is able to multi-task.'
     OK ~ > ∃   /   * ∃ > ~

Implications 1. RQ is not completely a pragmatic issue. At least for sentences with *gwai*, some overt elements related to negation and rhetorical force may be realized syntactically in top-most projections. **2**. The peripheral analysis of *gwai* may extend to other rhetorical expressions and types of RQs, for example, negative *wh*-constructions (see Cheung 2008, 2009). **3**. Through the rhetorical *gwai*, we may observe the interaction between SFPs and intonations in Cantonese, especially for the two tonal variants of question particle *me*.

Selected References Heim, Johannes, et al. 2016. Intonation and particles as speech act modifiers: A syntactic analysis. *Studies in Chinese Linguistics*. **Miyagawa, Shigeru**. 2022. *Syntax in the treetops*. **Tang, Sze-Wing**. 2022. On the syntax of rhetorical questions: Evidence from Cantonese. *Journal of East Asian Linguistics*.