

A Non-Movement Analysis of A-not-A Questions in Mandarin Chinese

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The by-now standard analysis of A-not-A questions in Mandarin Chinese posits the movement of a question operator from INFL to the specifier of CP (Huang 1991, Huang et al. 2009). This analysis is based on two claims: that A-not-A questions can be long distance (1) and that A-not-A questions are sensitive to islands (2).

However, as McCawley (1994) shows, A-not-A questions cannot be long distance and (1) actually has a parenthetical reading (3); when a verb does not allow parenthetical reading, the claimed long-distance reading is also unavailable (4).

This paper shows that McCawley is correct. It shows that variable binding is not possible across the supposed matrix clause and the supposed embedded clause, showing that they are two separate sentences, (5). Therefore, A-not-A questions cannot be long distance and involve no movement. The island effects are just apparent and the ungrammaticality must be due to other reasons. I suggest, for instance, the ungrammaticality of (2) is due to the fact that the subject of *is better* cannot be a question.

This paper proposes a non-movement analysis that (i) spells out a detailed mechanism of reduplication that correctly generates all the grammatical A-not-A forms, ruling out all ungrammatical ones; (ii) provides a compositional semantics using only common combinatorial rules and lexical items; (iii) gives a natural account for all the facts related to A-not-A questions.

(i) Generating the correct form. I propose that the question operator (Q) is at INFL and does not move. Q consists of two morphemes: NEG and RED, (6). The structure in (6) first linearizes (7a). Then RED reduplicates a prosodic unit that is adjacent to it. Finally, RED dislocates to the left of Neg by a cross-linguistic constraint banning adjacent morphemes that are identical (Menn & MacWhinney 1994, Yip 1998), giving rise to the surface word order of A-not-A (7c).

In (8) whose prosodic structure is shown in (9), RED can copy the first syllable, giving the first variant of the A-not-AB type (10); alternatively, RED can copy the first foot, giving the second variant of the A-not-AB type (11); RED can also copy the whole phonological phrase, giving the AB-not-AB type, (12). The AB-not-A type (13) derives from the AB-not-AB type by ellipsis. Adjunct adverbials cannot be reduplicated, (14), which is because RED can only copy verbal elements. Cases where the apparent adjunct prepositions are reduplicated actually involves applicative verbs, and real adjunct prepositions cannot be reduplicated, as will be shown. RED cannot cross an adjunct to reduplicate the verb (15), because reduplication, as a phonological process, is subject to linear adjacency.

(ii) Compositional semantics. Neg has the normal semantics of sentential negation (16a); RED is an identity function (16b); the denotation of Q is derived by combining Neg and RED via set formation (16c) (Alonso-Ovalle 2005). The proposition denoted by VP saturates the argument of Q, giving the set of propositions which is the semantics of questions (Hamblin 1973).

(iii) Accounting for the facts. One of the major facts discussed widely by the literature about A-not-A questions is the distribution of adjuncts (Ernst 1994, Law 2006). Some adjuncts can appear to the left of the A-not-A form, such as the temporal adjunct (17), while some cannot, such as the manner adjunct (18). Under the new analysis, (18) is ungrammatical because the manner adjunct cannot quantify into questions. (17) is good because *jintian* ‘today’ is a sentence-internal topic which can quantify into questions (Krifka 2001). I show that all the adjuncts compatible with A-not-A questions can be topics while all the incompatible adjuncts cannot.

Other facts involve the claimed weak-island effects in A-not-A questions with quantifier subjects (Hagstrom 2006) and the non-existence of specific reading of indefinite objects (Gasde 2004). I dispute these facts and show data that weak islands effects are not real and both specific and non-specific readings are available in A-not-A questions. I show that the new analysis accounts for these facts.

Implications This paper has two theoretical implications. First, Mandarin Chinese poses no challenge to the cross-linguistic generalization that yes-no questions do not involve movement of the question marker. Second, the analysis proposed for Mandarin can be applied to other languages which involve a sentence-internal question marker. For instance, it can be easily on languages that use the disjunction marker to mark a yes-no question (Jayaseelan 2008), because the semantics of Q proposed in this paper, (16c), is exactly the same as the semantics for the disjunction word *or* as proposed in (Alonso-Ovalle 2005). Also, for some languages that use a negative marker to mark yes-no question, such as archaic Chinese, a possible analysis might be to posit a covert RED.

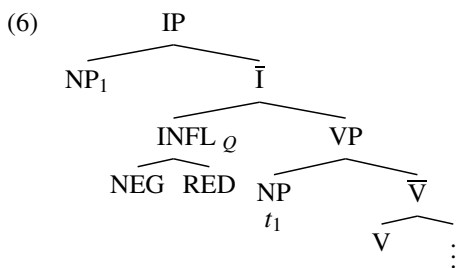
(1) Ni juede [ta hui bu hui shengqi]?
 2SG feel 3SG will not will get-angry
 ‘Do you think he will be angry?’

(2) * [S Wo qu-bu-qu Meiguo] bijiao hao?
 1SG go-not-go America more good
 ‘Is it better that I go to America?’

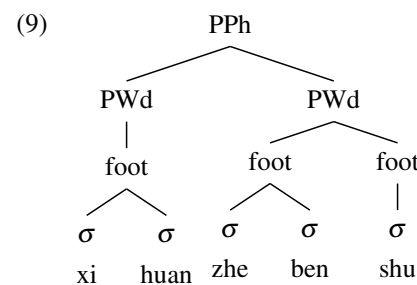
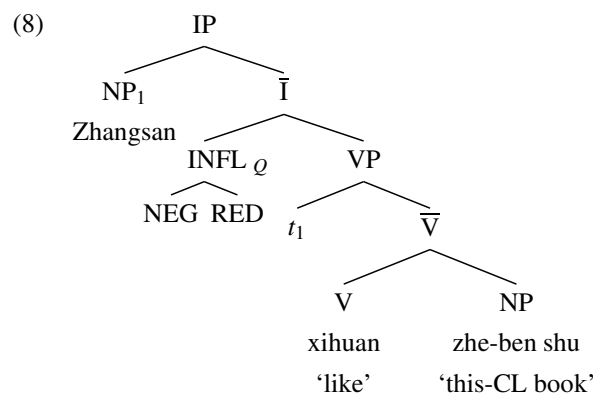
(3) Ta hui bu hui shengqi, ni juede?
 3SG will not will get-angry you feel
 ‘Will he be angry, do you think?’

(4) * Ni yiwei [ta you-mei-you faming dianhua]?
 2SG think he Asp-not-Asp invent telephone
 ‘Do you think he invented the telephone?’

(5) Meige ren_i dou juede Zhangsan_j xi-bu-xihuan ziji_{*i/j}?
 every-CL people all think Zhangsan like-not-like self
 ‘Does everyone_i think whether Zhangsan likes him_{*i}/himself?’



- (7) a. Linearize: NP₁ NEG RED V ...
 b. Reduplicate: NP₁ NEG V_{copy} V ...
 c. Dislocate: NP₁ V_{copy} NEG V ...



(10) Zhangsan xi-bu-xihuan zheben shu?
 Zhangsan RED-not-like this-CL book
 ‘Does Zhangsan like this book?’

(12) Zhangsan xihuan zheben shu bu xihuan zheben shu?
 Zhangsan RED RED RED not like this-CL book
 ‘Does Zhangsan like this book?’

(11) Zhangsan xihuan-bu-xihuan zheben shu?
 Zhangsan RED-not-like this-CL book
 ‘Does Zhangsan like this book?’

(13) Zhangsan xihuan zhe-ben shu bu xihuan?
 Zhangsan RED RED RED not like
 ‘Does Zhangsan like this book?’

(14) * Zhangsan hen-bu-hen xihuan zheben shu?
 Zhangsan RED-not-very like this-CL book

- (16) a. $[[\text{Neg}]] = \lambda p_r. \neg p$
 b. $[[\text{Red}]] = \lambda p_r. p$
 c. $[[I_Q]] = \{ \lambda p_r. \neg p, \lambda p_r. p \}$ (Set Formation)

(15) * Zhangsan xihuan bu hen xihuan zheben shu?
 Zhangsan RED not very like this-CL book

(17) Ta jintian lai-bu-lai?
 he today come-not-come
 ‘Will he come today?’

(18) * Ta luan fang-bu-fang dongxi?
 he chaotically put-not-put thing
 ‘Does he put things everywhere?’

Selected References: Ernst, Thomas (1994), “Conditions on Chinese A-not-A Questions.” *Journal of East Asian Linguistics* 3(3): 241-264. Huang, C.-T. James (1991), “Modularity and Chinese A-not-A questions.” In Carol Georgopoulos and Roberta Ishihara, eds., *Interdisciplinary Approaches to Language, Essays in Honor of S.-Y. Kuroda*, Dordrecht: Kluwer Academic Publisher, pp. 305-332. Huang, C.-T. James, Y.-H. Audrey Li, and Yafei Li (2009), *The syntax of Chinese*. Cambridge University Press. Krifka, Manfred (2001), Quantifying into Question Acts. *Natural Language Semantics* 9: 140. McCawley, James (1994), “Remarks on the Syntax of Mandarin yes-no Questions.” *Journal of East Asian Linguistics* 3(2): 179-194.