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Author(s): Joseph Aoun and Yen-hui Audrey Li

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Squibs and Discussion

ON SOME DIFFERENCES
BETWEEN CHINESE AND
JAPANESE *WH*-ELEMENTS

Joseph Aoun

*University of Southern
California*

Yen-hui Audrey Li

*University of Southern
California*

The similar behavior of quantificational expressions (QPs) and *wh*-elements in Chinese and Japanese has been extensively discussed in the literature. For instance, in standard active sentences containing two QPs, one QP necessarily has scope over another QP that it c-commands (see, among other works, S. F. Huang 1981, C.-T. J. Huang 1982, Hoji 1985, Aoun and Li 1989). Thus, in the Chinese sentence (1) and the Japanese sentence (2), the subject QP must have scope over the object QP.

- (1) (Yaoshi) yige ren piping meigeren . . .¹
if one man criticize everyone
'(If) someone criticized everyone . . . '
- (2) Dareka-ga daremo-o semeta.
someone-NOM everyone-ACC criticized²
'Someone criticized everyone.'

In other words, in standard active sentences in Chinese and Japanese, a QP cannot "cross" a c-commanding QP and take scope over the c-commanding QP.³ Japanese extends this restriction to *wh*-elements: a *wh*-element cannot "cross" a c-commanding QP, as noted by Hoji (1985).⁴ In contrast to the acceptable Chinese sentence (3), the Japanese sentence (4) is not grammatical because the *wh*-element cannot "cross" the c-commanding QP to take its scope in the (Spec of) Comp position.

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¹ See Aoun and Li 1989 for the constraints on the distribution of QPs in subject position due to the specificity constraint on subjects.

² The following abbreviations are used: NOM = nominative, ACC = accusative, TOP = topic, QU = question marker, NM = nominalizer.

³ In contrast to standard active sentences that do not involve scrambling, sentences containing scrambled QPs have additional possibilities: a QP c-commanded by a scrambled QP can have scope over it. (See Hoji 1985.)

⁴ In Chinese and Japanese, *wh*-elements are not fronted in *wh*-questions: they stay in situ.

- (3) Meigeren dou maile shenme?
 everyone all bought what
 'What did everyone buy?'
- (4) *Daremo-ga nani-o kaimasita ka?
 everyone-NOM what-ACC bought QU
 'What did everyone buy?'

For the sake of completeness, we would like to point out that in both Chinese and Japanese, a QP cannot "cross" and have scope over a c-commanding *wh*-element (see May 1985, Hoji 1985, Aoun and Li 1993a):

- (5) Shei qingle meigeren? (unambiguous)
 who invited everyone
 'Who invited everyone?'
- (6) Dare-ga daremo-o (unambiguous)
 who-NOM everyone-ACC
 syootaisimasita ka?
 invited QU
 'Who invited everyone?'

The facts discussed so far are summarized in table 1.⁵

In Aoun and Li 1989 the interaction of a QP with a c-commanding QP (see (a) in table 1) and a c-commanding *wh*-element (c) is made to follow from the Minimal Binding Requirement (MBR), which requires variables to be bound by the most local potential \bar{A} -binder. In (a) and (c) the QP would cross the c-commanding operator in order to have scope over it; this crossing triggers a violation of the MBR.⁶

The contrast in (b) of table 1 can also be traced to an MBR

⁵ It is also impossible for a *wh*-element to cross a c-commanding *wh*-element in Japanese (Nishigauchi 1990, Lasnik and Saito 1992, Watanabe 1991, among others), although it is possible in Chinese (Huang 1982):

- (i) Ni xiang-zhidao [shei xihuan shenme]?
 you wonder who like what
 'What(y), you wonder who likes y?'
- (ii) Kimi-wa [dare-ga dono hon-o tosyokan-kara
 YOU-TOP who-NOM which book-ACC library-from
 karidasita ka] siritai no? (Watanabe 1991:24)
 checked out QU know-want QU
 *'For which book *x*, you want to know who checked out *x*
 from the library?'

Table 1 thus can be generalized to table 2.

The contrast between (i) and (ii) can be subsumed under *wh*-island effects, the facts of which, however, are too complicated to be clearly presented here. For more facts about Japanese and an account for them, see Watanabe 1991 and the references cited there. Also see Tsai 1992 for an account of the contrast between Chinese and Japanese.

⁶ Schematically, the following configuration violates the MBR:

- (i) Op_i . . . Op_j . . . x_i . . .

Table 1

	<i>Chinese</i>	<i>Japanese</i>
(a) QP/QP	no crossing	no crossing
(b) QP/ <i>wh</i>	crossing OK	no crossing
(c) <i>wh</i> /QP	no crossing	no crossing

effect. Numerous authors have claimed that *wh*-elements in Chinese and Japanese are polarity items linked to their licensors for appropriate interpretation: they are interrogative when linked to a question operator (Aoun and Li 1993b, Cheng 1991, Kim 1991, Kuroda 1965, Li 1992, Nishigauchi 1990, Tsai 1992, Watanabe 1991). According to Aoun and Li (1993a:chap. 7), a question operator in Japanese is base-generated with the *wh*-element and subsequently moves to the appropriate scope position.⁷ In contrast, Chinese does not base-generate the question operator with the *wh*-element. Instead, it is base-generated in a question projection (see Aoun and Li 1993b). Schematically, at S-Structure (3)–(4) can be represented as in (7)–(8).⁸

(7) Question Op . . . QP . . . *wh*

(8) Question Op_i . . . QP . . . [_i *wh*]

After quantifier raising applies at LF, (7)–(8) will have the following representations:

(9) Question Op . . . QP_j . . . *x_j* . . . *wh*

(10) Question Op_i . . . QP_j . . . *x_j* . . . [_i *wh*]

Table 2

	<i>Chinese</i>	<i>Japanese</i>
(a) QP/QP	no crossing	no crossing
(b) QP/ <i>wh</i>	crossing OK	no crossing
(c) <i>wh</i> /QP	no crossing	no crossing
(d) <i>wh</i> / <i>wh</i>	crossing OK	no crossing

⁷ Different considerations lead Watanabe (1991) to suggest a similar analysis for Japanese. Tsai (1992) reaches a conclusion similar to the one presented here.

⁸ These representations indicate hierarchical relations: the first element c-commands the second and so on. Linear ordering is disregarded for the sake of simplicity.

The Japanese structure in (10) violates the MBR: the raised QP_j is the most local potential \bar{A} -binder for both variables x_i and x_j . In contrast, the Chinese structure in (9) is well formed with respect to the MBR because the question operator does not undergo movement.⁹

If the above account is correct, the contrast in (b) of table 1 can be traced to the difference in the position where a question operator is base-generated: it is base-generated with the *wh*-element in Japanese but not in Chinese. One may wonder what evidence would lead the language learner to assume that in a given language, the question operator is base-generated with the *wh*-element or not. The evidence may be provided by the way these languages form quantificational expressions and the (im)possibility of a quantifier being separated from the related NP.

First, consider the formation of quantificational expressions. In Japanese, *wh*-elements can be combined with certain particles to become existential quantifiers (11a), universal quantifiers (11b), and negative polarity items (11c) (see, among others, Kim 1991, Kuroda 1965, Nishigauchi 1990, Watanabe 1991).

- (11) a. dare-ka
 who
 ‘someone’
 b. dare-mo
 who
 ‘everyone’
 c. dare-mo
 who
 ‘anyone’

Chinese, in contrast, employs the same form (the *wh*-element) but links this form to different licensors, which are not gener-

⁹ For the purpose of the discussion concerning (9)–(10), the MBR is to be construed as relevant only to movement relations, as pointed out by a reviewer. However, Aoun and Li (1993a,b) generalize the application of the MBR to all operator-variable relations. (For details, see the works cited.)

In this connection, a reviewer indicates that the addition of a *wh*-phrase *c*-commanding the QP improves sentences with the structure in (10), as originally pointed out by Kim (1991):

- (i) Dare-ga [dareka-ga nani-o katta to] itta ka?
 who-NOM someone-NOM what-ACC bought COMP said QU
 ‘Who said that someone bought what?’

This seems to indicate that if a *wh*-element (wh_1) is absorbed into another *wh*-element (wh_2), no movement takes place from wh_1 . Rather, movement of the question operator may be assumed to take place from wh_2 . In this respect, Chomsky (1992:66, n. 46) notes that LF *wh*-raising has been eliminated in favor of the Absorption operation.

ated with the *wh*-elements (see Li 1992):

- (12) a. Ta gen shei shuohua ma?
 he with whom speak QU
 'Did he speak to someone?'
 (*Yes/No* question licenses an existential quantification interpretation.)
- b. Shenme ta dou yao.
 what he all want
 'He wants everything.'
 (The distributor *dou* licenses a universal quantification interpretation.)
- c. Ta bu xihuan shenme.
 he not like what
 'He does not like anything.'
 (Negation licenses a negative polarity, an existential interpretation.)

In addition to exhibiting this morphological difference, Chinese and Japanese differ in the availability of quantifier floating. In Japanese a quantifier can be base-generated with an NP and be moved away from its base position. (13a) is an example of a quantifier in its base position, and (13b) is an example of a quantifier moved away from this position (both examples from Comrie 1987:2).

- (13) a. John-ga san-satu-no-hon-o katta.
 John-NOM three-volume-GEN-book-ACC bought
 'John bought three books.'
- b. San-satu John-ga hon-o katta.
 three-volume John-NOM book-ACC bought

The Chinese counterpart of (13b) is not possible, however, indicating that Chinese does not have quantifier floating:

- (14) a. Zhang maile sanben shu.
 Zhang bought three-volume book
- b. *Sanben Zhang maile shu.

In brief, the contrast in (b) of table 1 is traced to the morphological difference between these languages and to the availability or unavailability of quantifier floating:

- (15) Japanese, but not Chinese, allows an operator to be base-generated with the NP it is associated with and to be subsequently moved away from this NP.

(15) may also shed light on other differences between Chinese and Japanese that have heretofore gone unnoticed. A case in point may be the existence of head-internal relative clauses in Japanese (example from Watanabe 1991:(148)):

- (16) John-wa [_{NP}[_{IP} Mary-ga ringo-o
 John-TOP Mary-NOM apple-ACC
 katekita]-no]-o tabeta.
 bought-NM-ACC ate
 'John ate the apples that Mary bought.'

Head-internal relative clauses have interesting properties, an analysis of which may be found in Watanabe 1991. The essence of Watanabe's analysis is that an abstract operator is base-generated with the internal head and is subsequently moved to the Spec of Comp of the relative clause, very much like the question operator associated with the *wh*-element discussed earlier. Furthermore, Watanabe makes the following generalization: "The option of a head-internal relative seems to be available only in languages which allow in-situ *wh*-questions . . . just as a *wh*-phrase of questions remains in-situ . . ." (p. 9).

With this in mind, let us turn to Chinese. Surprisingly, even though Chinese allows in-situ *wh*-questions, it does not allow head-internal relative clauses. On the other hand, the lack of head-internal relative clauses is not surprising given (15). Recall that, according to Watanabe, the existence of a head-internal relative clause relies on the possibility of base-generating an operator with the head NP and then moving the operator out of the NP. (15) states that this option is available in Japanese but not in Chinese. The availability of head-internal relative clauses in Japanese but not in Chinese thus can be accounted for, in light of (15).¹⁰

Recapitulating, Japanese and Chinese exhibit the differences shown in table 3. In this squib we have suggested that properties (a)–(b) in this table can be understood in light of (c)–(d).¹¹

¹⁰ One may wonder why Chinese does not base-generate an abstract operator in the Spec of Comp, binding the head within the relative clause and thus allowing a head-internal relative clause. This may be due to the identification problem of the empty operator. Assume that all empty categories need to be identified (therefore interpreted) at some point in the derivation (see Tsai 1992 for the identification of empty operators via a predication relation). In Japanese the empty operator is base-generated within the NP. It is close enough to the NP to be identified (by Spec-head agreement, for instance). In Chinese, however, it is higher than the NP (c-commanding the NP) and cannot be identified via binding.

¹¹ A reviewer points out that, according to Kim (1991), *wh*-phrases in Korean lack particles as in Chinese, but they are unable to take scope over a c-commanding QP, behaving in this respect like Japanese. However, this only partially describes the facts in Korean. In addition to the Chinese-type bare *wh*-phrase noted by the reviewer, Korean can also have the Japanese-type *wh*-phrases with particles. Thus, the counterpart of *someone* may be either *nwukwu-(i)-nka* (*wh* + particle) or *nwu(kwu)* (bare *wh*) (see Kim 1991:288). Furthermore, Nam-Kil Kim (personal communication) points out that bare *wh*-forms in such cases are abbreviations of *wh*-forms plus particles.

Table 3

	Chinese	Japanese
(a) A <i>wh</i> -element can “cross” and have scope over a c-commanding QP	Yes	No
(b) Head-internal relative clauses occur	No	Yes
(c) Morphologically, particles are attached to <i>wh</i> -elements to form quantificational expressions	No	Yes
(d) Quantifier floating occurs	No	Yes

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THE INITIAL DACTYL EFFECT IN
INDONESIAN
Abigail C. Cohn
Cornell University

Numerous languages have alternating stress, assigned right to left. Although some languages maintain this alternating pattern (e.g., Warao), others distort this binary alternation, exhibiting constant initial stress (e.g., English, Polish, and Indonesian). This has been called the *initial dactyl effect*, whereby feet of the form $\acute{o}o$ occur word-initially. (See Prince 1983 and Hayes 1985 for discussion.) These two patterns are schematized in (1).

(1) # of syllables	Warao	Polish
2	óó	óó
3	oóó	oóó
4	òóóó	òóóó
5	oòóóó	<u>òóóóó</u>
6	òòóóóó	òòóóóó
7	oòòóóóó	<u>òòòóóóó</u>

The Warao pattern seems simpler, yet the Polish pattern with initial ternary feet is widely attested among the languages of the world and an adequate theory of stress must account for it. In this squib I discuss the representation of initial dactyls in light of the stress pattern of Indonesian.

In monomorphemic words Indonesian exhibits penultimate main stress, with an initial secondary stress in words of four or more syllables; in words of six or more syllables there are additional secondary stresses to the left of the main stress at two-syllable intervals (the Polish pattern), as illustrated in (2). (The facts are more complicated, since schwa cannot bear stress, but this does not affect the present discussion; see Cohn 1989.)

(2) 2	óó	cári	'search for'
3	oóó	bicára	'speak'

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