

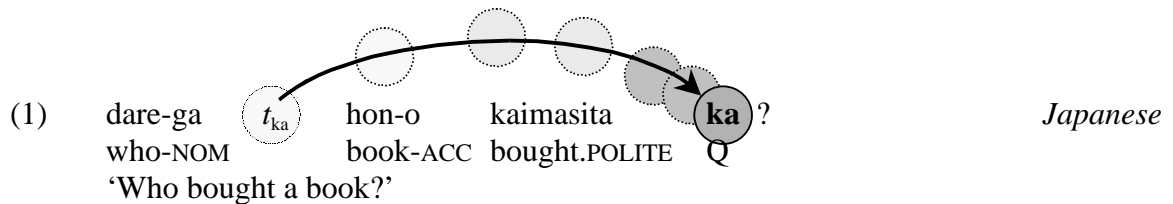
The movement of question particles*

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1. The proposal

This paper argues that in a question like (1) (from Japanese), a question particle (*ka*) undergoes syntactic movement from a clause-internal position (by the *wh*-word) to the clause periphery (i.e., into the complementizer system).¹



After reviewing evidence for this movement in Japanese, we will turn to look at other languages. We will see evidence for an analogous movement in Sinhala, and then discuss semantic motivations for this “Q-movement.”

2. Evidence part one: Intervention effects in Japanese

Hoji (1985) observed that certain things cannot intervene between a *wh*-word and the complementizer level of a well-formed interrogative clause. For example, the question in (2a)—where *John-ka Bill* ‘John or Bill’ stands (hierarchically) between the *wh*-word and the CP-level of the clause—sounds odd. However, if the word order is changed, as in (2b), the question is fine, with the same meaning as intended in (2a).

* Many thanks are due to the patient consultants who helped me with the judgments reported here, particularly Dileep Chandralal, Ansela Gunawardana, Kumara Henadeerage, and Shigeru Miyagawa. This paper is a (heavily) condensed version of Hagstrom (1998).

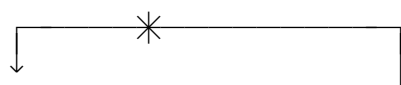
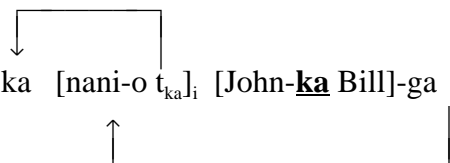
¹ A similar analysis was anticipated by Yanagida (1995).

- (2) a. ?* [John-**ka** Bill]-ga **nani**-o nomimasita **ka**?
 John-or Bill-NOM **what**-ACC drank **Q**
 ('What did John or Bill drink?')
- b. **nani**-o_i [John-**ka** Bill]-ga t_i nomimasita **ka**?
what-ACC John-or Bill-NOM drank **Q**
 'What did John or Bill drink?'

It turns out that things which contain the morpheme *ka* (the same as the question morpheme) tend to have this effect, including disjunctive *ka* (2) and *ka* in *dareka* 'someone' (3).^{2,3}

- (3) a. ?? dare**ka**-ga **nani**-o nomimasita **ka**?
 someone-NOM **what**-ACC drank **Q**
 ('What did someone drink?')
- b. **nani**-o_i dare**ka**-ga t_i nomimasita **ka**?
what-ACC someone-NOM drank **Q**
 'What did someone drink?'

The hypothesis proposed in (1), that the question particle *ka* moves from a position next to the *wh*-word to its overt position at the end of the clause, can provide an explanation for this fact. Suppose that movement occurs when motivated by the need to check formal features, and that only the closest element with the relevant feature is eligible for movement ("Attract Closest," Chomsky 1995). If we assume that the question particle *ka* shares (at least) the relevant feature with the disjunction particle *ka* in (4) (=2)), the hypothesis illustrated in (1) derives the grammaticality pattern Hoji observed. In a well-formed question, the question particle will have to move from next to the *wh*-word to the clause periphery. In (4a), however, the disjunctive *ka* is closer to the attracting CP-level head than the question particle *ka*. In (4b), on the other hand, the *wh*-word—and *ka*—have scrambled to a position higher than the disjunctive *ka*, at which point the question particle *ka* is the closest *ka* to the attracting head at the clause periphery.

- (4) a.  ka [John-**ka** Bill]-ga [nani-o t_{ka}] nomimasita = (2a)
- b.  ka [nani-o t_{ka}]_i [John-**ka** Bill]-ga t_i nomimasita = (2b)

3. Evidence part two: Island effects in Japanese—or a lack thereof


It is well known that Japanese allows *wh*-words inside of movement islands. One example of this is given in (5). This poses an immediate problem for the hypothesis that

² As far as I know, this fact was first remarked upon by Miyagawa (1997).

³ Things which are formed with *mo* are also generally "interveners" of this kind, although not always as strongly. We can take this to mean that *ka* shares with *mo* whatever property it has that makes it intervene in *wh*-questions.

the question particle *ka* moves from a position next to the *wh*-word to the clause periphery, since islands block movement. It must therefore be the case that if *ka* is moving in (5), it must be moving from *outside* of the island, as illustrated in (6).

- (5) Hiro-ga [Sue-ni **nani-o** ageta hito-ni] aimasita **ka**?
 H-NOM S-DAT **what-ACC**gave man-DAT met.POL Q
 ‘*What did Hiro meet [the man that gave *t* to Sue]?’

- (6) [**island** ... nani ...] ... *t*_{ka} ... ka ?
- 
- The diagram shows a curved arrow starting from the *t*_{ka} position inside the island boundary and pointing to the *ka* position outside the island boundary.

Of course, if we suppose that—in just those cases where the path of movement would cross an island boundary—the particle can start from outside the island, we run the risk of making islands useless for diagnosing movement. However, it turns out that there is a way to detect this movement, by using the emphatic particle *ittai*.

When *ittai* is combined with a *wh*-word, as in (7), it gives the question a meaning like ‘*wh* in the world’.⁴

- (7) John-ga **ittai** *t*_{ka} **nani-o** kaimasita ka?
 John-NOM **ittai** **what-ACC** bought.POL Q
 ‘What in the world did John buy?’

Our diagnostic is based on premise that in (7), the question particle *ka* originated in a position by *ittai* and moved to the clause periphery, leaving *ittai* behind.⁵ If this is true, we can use *ittai* to localize the place where *ka* moved *from*. In support of the idea that *ittai* must be generated with *ka*, note the following fact: It is possible to drop the question particle in a simple *wh*-question like (8a). However, with *ittai*, this is no longer possible (8b).

- (8) a. Hiro-ga nani-o tabeta?
 H-NOM what-ACC ate
 ‘What did Hiro eat?’
 b. ?? Hiro-ga **ittai** nani-o tabeta?
 H-NOM **ittai** what-ACC ate
 (‘What in the world did Hiro eat?’)

If we suppose that *ittai* marks the position from which the question particle moved, we expect that if we use *ittai* with a question word inside an island, the result should be ungrammatical. This is because *ittai* tells us unambiguously that the question particle had to have moved from inside the island to its surface position at the edge of the

⁴ Pesetsky (1987) discusses *ittai* at some length, proposing that *wh*-words in combination with *ittai* are explicitly not restricted by context (“non-D-linked”). Note, however, that D-linking *per se* plays no role in the analysis being developed here. In particular, being non-D-linked does not force *wh*-words to move (since here, it is the question particle and not the *wh*-words which move).

⁵ There is an additional complication introduced by the fact that *ittai* itself can be scrambled (like a numeral quantifier; cf. Miyagawa 1989). This means that the overt position of *ittai* does not necessarily mark the base position of the question particle, but instead sets an upper bound for it. Also, Q appears to move successive-cyclically, and *ittai* can be stranded in an intermediate position (either because *ittai+ka* move together part of the way or because *ittai* is base-generated next to a derived position of *ka*). See Hagstrom (1998, ch. 2) for more discussion.

clause. And indeed, such questions are ungrammatical (9). Interestingly, these questions are grammatical if *ittai* is just outside the island, as in (10).

- (9) * Hiro-ga [Sue-ni **ittai nani-o** ageta hito-ni] aimasita **ka?**
 H-NOM S-DAT **ittai what-ACC** gave man-DAT met.POL **Q**
 ('What in the world did Hiro meet the man that gave *t* to Sue?')
- (10) Hiro-ga **ittai** [Sue-ni **nani-o** ageta hito-ni] aimasita **ka?**
 H-NOM **ittai** S-DAT **what-ACC** gave man-DAT met.POL **Q**
 'What in the world did Hiro meet the man that gave *t* to Sue?'

This is just the pattern we expected, supposing that *ittai* marks the bottom of the movement chain, and supports the idea illustrated in (6) that when the *wh*-word is inside the island, the path of movement for the question particle starts outside the island.

4. Combining islands and intervention effects

In section 2 we discovered that placing an “intervenor” (e.g., the *ka* in *dareka* ‘someone’) along the path of Q-movement causes a Japanese question to be ill-formed. In section 3, we found evidence that when a *wh*-word is embedded inside a movement island, the path of Q-movement starts at a point just outside the island. These two discoveries make a further prediction: Q-movement should be insensitive to intervenors if they are *inside* an island. That is, a word order which causes an intervention effect in matrix contexts should actually *improve* when embedded in a movement island. Perhaps surprisingly, this prediction is borne out:

- (11) Mary-wa [John-**ka** Bill-ga nani-o katta ato de] dekakemasita **ka?**
 Mary-TOP John-or Bill-NOM what-ACC bought after left.POLITE **Q**
- (12) Mary-wa [nani-o_i John-**ka** Bill-ga t_i katta ato de] dekakemasita **ka?**
 Mary-TOP what-ACC John-or Bill-NOM bought after left.POLITE **Q**
 'Mary left after John or Bill bought what?'

Both orders above are well-formed. Compare this to the contrast between (2a–b).

5. Ok, maybe you're right about Japanese, but so what?

We have now made what might seem to be a fairly small point: There is evidence that in Japanese, the question particle *ka* which appears at the end of questions moves there from a position inside the clause. We will now turn to the task of showing that this is a more general phenomenon, that it in fact occurs in other languages. Further, as we will discuss in the final section, there is reason to think it has a semantic motivation—in which case, Q-movement is a more general property of question formation in human language (one which is just easier to see in some languages than it is in others).

Let us turn our attention to Sinhala, an Indo-European language spoken in Sri Lanka. Sinhala is in many ways structurally similar to Japanese (though historically unrelated), being an SOV, *wh*-in-situ language. (13) gives an example of a *wh*-question in this language. There are three things to notice: first, the question word remains in situ. Second, the question word (clause-internally) is followed by the Q morpheme *də*; and finally, the verb in *wh*-questions takes on a special form indicated by the verb-final “*e*”.⁶

⁶ When the verb does not bear the *-e* morphology, it generally ends in “*a*” (cf., e.g., (14)).

- (13) Chitra **mokak də** gatte? Sinhala
 Chitra **what Q** bought-E
 ‘What did Chitra buy?’

First, we should establish that the *də* particle in (13) is in fact the analog to the Japanese question particle *ka*. We will look at three reasons to think that they correspond. First, the particle in question is used to form indefinites from *wh*-words in both languages (14–15). Second, this particle is used to form yes-no questions from declaratives in both languages (16–17). Finally, this particle is used in a disjunctive capacity in both languages (18–19).

- (14) Chitra **mokak də** gatta. Sinhala
 Chitra **what Q** bought
 ‘Chitra bought something.’

- (15) **dare-ka**-ga hon-o kaimasita. Japanese
who-Q-NOM book-ACC bought.POL
 ‘Someone bought a book.’

- (16) Chitra ee potə gatta **də**? Sinhala
 Chitra that book bought **Q**
 ‘Did Chitra buy that book?’

- (17) Taroo-ga hon-o kaimasita **ka**? Japanese
 Taroo-NOM book-ACC bought.POL **Q**
 ‘Did Taro buy a book?’

- (18) mahatteəṭə tee **də** koopi **də** oonə? Sinhala
 gentleman-DAT tea **Q** coffee **Q** necessary
 ‘Do you (sir) want tea or coffee?’

- (19) John-**ka** Bill-(**ka**-)ga hon-o katta. Japanese
 John-**Q** Bill-(**Q**-)NOM book-ACC bought
 ‘John or Bill bought books.’

Even though Sinhala *də* and Japanese *ka* are analogous, they (crucially) appear in different places in *wh*-questions: in Japanese, *ka* appears at the end of the question, whereas in Sinhala *də* appears next to the *wh*-word, clause-internally. Of course, the idea is that Sinhala and Japanese are showing us two sides of the same movement; Sinhala shows us the particle *before* it moves to the clause periphery (covertly), while Japanese shows us the particle *after* having moved to the clause periphery (overtly).

6. Evidence for Q-movement in Sinhala

We can also find Sinhala-internal evidence for the hypothesis that the *də* particle moves from a clause-internal position to a clause peripheral position.⁷ First, there are certain situations in which the *də* particle can appear overtly at the edge of the clause. One such

⁷ Others who have made versions of this argument include Gair (1983), Gair & Sumangala (1991), Kishimoto (1991, 1992, 1998), Sumangala (1992), Whitman (1997), and Yanagida (1995).

context is given in (20–21),⁸ where a question is embedded under the verb *dannəwa* ‘know’.⁹

- (20) Ranjit [**ka**u **də** aawe kiyəla] dannəwa. *Sinhala*
 Ranjit **who** **Q** came-**E** that know
 ‘Ranjit knows who came.’
- (21) Ranjit [**ka**uru aawa **də** kiyəla] dannəwa.
 Ranjit **who** came **Q** that know
 ‘Ranjit knows who came.’

Notice that the question particle, when it appears at the edge of the clause, does so at the expense of the *-e* marking on the verb. That is, the *-e* suffix on the verb only appears when *də* is not after the verb. This looks just like what we might expect of a feature-driven movement: the *-e* suffix reflects an “unchecked morphological feature” that will drive the movement of the *Q* morpheme. When that movement occurs overtly, the feature is checked off and the corresponding morphology does not appear. Furthermore, the verb which shows the *-e* morphology marks the clause at which the question word takes scope: In (22), the embedded verb is marked with *-e* and the embedded clause is a question; in (23), the matrix verb is marked with *-e* and it is a matrix question.

- (22) Ranjit [**ka**u **də** aawe kiyəla] dannəwa.
 Ranjit **who** **Q** came-**E** that know
 ‘Ranjit knows who came.’
- (23) Ranjit [**ka**u **də** aawa kiyəla] danne?
 Ranjit **who** **Q** came that know-**E**
 ‘Who does Ranjit know came?’

The idea is that Japanese *ka* and Sinhala *də* are in some sense the same particle, and following the same movement path in *wh*-questions. In Sinhala, we can see something that we were unable to see in Japanese: where the particle moves *from*. Remember that in section 3, we were able to see this indirectly in Japanese with the help of the *ittai* particle, but Sinhala allows us to see this directly. Consider (24a–b), which have a *wh*-word inside an adjunct island. We find that when *də* is inside the island (24a), the resulting question is ungrammatical, while when *də* is just outside the island (24b), the question is fine. Under the hypothesis being developed here, this is because the path between *də* and the clause periphery in (24a)—but not in (24b)—would have to cross the island boundary. The same thing is shown for a complex noun phrase island in (25a–b).

- (24) a. * [Chitra **monəwa** **də** kanə koṭə] Ranjit pudumə unee?
 Chitra **what** **Q** ate when Ranjit surprise became-**E**
 (‘Ranjit was surprised when Chitra ate what?’)

⁸ If there is a meaning difference between (20) and (21), it is very subtle. Kumara Henadeerage (p.c.) suggested that (20) is more likely to involve a single, specific person, but a more systematic investigation remains to be done.

⁹ Kishimoto (1998) also cites *səkə-kəṛənəwa* ‘doubt’, and *parikṣaa-kəṛənəwa* ‘look into’ as verbs which have this property of allowing overt movement of *də* in their complement, and *əhuwa* ‘asked’ as verb which does not. Gair & Sumangala (1991) characterize the clauses in which *də*-movement can happen overtly as expressing ‘general doubt,’ although they do not elaborate further. An interesting possibility is that verbs which take an extensional complement (which would include *know*, *doubt*, but would not include *ask*) are those which allow the overt movement.

- b. [Chitra **monəwa** kanə koṭə] **də** Ranjit pudumə unee?
Chitra **what** ate when **Q** Ranjit surprise became-**E**
'Ranjit was surprised when Chitra ate what?'
- (25) a. * oyaa [Chitra **kaa-ṭe** **də** dunnə potə] kieuwe?
you Chitra **who-DAT** **Q** gave book read-**E**
'(You read the book that Chitra gave to whom?)'
- b. oyaa [Chitra **kaa-ṭe** dunnə potə] **də** kieuwe?
you Chitra **who-DAT** gave book **Q** read-**E**
'You read the book that Chitra gave to whom?'

Finally, it is worth pointing out that these islands block overt movement as well as covert movement. In (26) we see examples showing that the “pseudocleft” construction (which right-dislocates a constituent) cannot extract something from inside an island. (27) shows that leftward scrambling cannot occur out of an island.

- (26) a. lankaave ayə t_i kanne bat_i.
Sri Lanka-GEN people eat-E rice
'It's rice that Sri Lankans eat.'
- b. * oyaa [Chitra t_i dunnə potə] kieuwe Ranjit-ṭə_i.
you Chitra gave book read-E Ranjit-DAT
'(It was to Ranjit_i that you read [the book that Chitra gave t_i])'
- c. * [Chitra t_i kanə koṭə] Ranjit pudumə unee maalu_i.
Chitra ate when Ranjit surprised became-E fish
'(It was fish_i that Ranjit was surprised [when Chitra ate t_i])'
- (27) a. Ranjit-ṭə_i, oyaa dannəwa [Chitra t_i ee potə dunna kiyəla]
Ranjit-DAT, you know Chitra that book gave that
'To Ranjit, you know Chitra gave that book'
- b. * Ranjit-ṭə_i, oyaa [Chitra t_i dunnə potə] kieuwa
Ranjit-DAT, you Chitra gave book read
'To Ranjit, you read the book Chitra gave'

7. Premodern Japanese

It is interesting to note also that in earlier Japanese, the question particle was positioned clause-internally (28a)—but island-externally (28b)—just as in modern Sinhala.¹⁰

- (28) a. **tare-ka** mata hanatatibana-ni omoi-idemu. *Premodern Japanese*
who-Q again flower.orange-DAT remember-**M**
'Who will again remember (me) at the time of the mandarin orange
flower?' *(Shin Kokin Wakashū [1205]:3, Ogawa 1977:222)*

¹⁰ There were several particles in Premodern Japanese that participated in this construction (involving discontinuous particles and verbal morphology, a construction referred to traditionally as *kakari-musubi*), most of them with an emphasizing function. Sinhala too has emphatic particles that share a similar distribution to its question particles (and also induce *-e* marking on the verb), although we will not discuss the focusing phenomenon further in this paper.

- b. [ika yoo naru kokorozasi aramu hito-ni]-ka awamu to obosu.
 how kind is love have person-DAT-Q wed that think-M
 ‘[What kind of love]_i do you think you would want to marry a person that
 has t_i?’ (Taketori Monogatari [c. 900], Ogawa 1977:216,
 Whitman 1997:166)

8. Multiple questions

So far, we have only been looking at single *wh*-questions. The hypothesis is that in such questions, a particle (Japanese *ka*, Sinhala *də*) moves from a clause-internal position by the *wh*-word to a clause-peripheral position. However, this raises the question of what happens in questions like (29) below, with more than one *wh*-word.

- (29) dare-ga nani-o kaimasita ka? Japanese
 who-NOM what-ACC bought.POLITE Q
 ‘Who bought what?’

We see that there is only one *ka* in (29), surfacing at the end of the question. This suggests that there were not two Q particles (one per *wh*-word) but rather one Q particle (one per interrogative clause). If there is just one particle and two *wh*-words, where does the particle start?

This is not something we can see in Japanese because the particle movement invariably happens overtly. However, Sinhala can show us what happens at the other end of the movement chain. Accordingly, we look at multiple questions in Sinhala. (30) shows the two possibilities; in (30a), *də* follows the second *wh*-word, and the question is well-formed, while in (30b), *də* follows the first *wh*-word and the question is ungrammatical.¹¹

- (30) a. [kauru mokak də kieuwe kiyəla] dannəwa də? Sinhala
 who what Q read-E that know Q
 ‘Do (you) know who read what?’
- b. * [kau də mokak kieuwe kiyəla] dannəwa də?
 who Q what read-E that know Q
 (‘Do (you) know who read what?’)

Apparently, the question particle attaches to the lower of the two *wh*-words, moving (covertly in Sinhala) from there to the clause periphery.

A word of caution is necessary here, however. It turns out that it is also possible to ask this question as in (31), with *də* on *both* of the *wh*-words. On its face, (31) suggests exactly the opposite of what we concluded from looking at (29).

- (31) kau də monəwa də kieuwe?
 who Q what Q read-E
 ‘Who read what?’ (requires stress on both *kaudə* and *monəwadə*)

Sumangala (1992) suggests that (31), while grammatical, is actually misleading. He points out that, while questions like (30a) have a normal “pair list” reading, whereas (31) lacks this reading (and has only a single-pair reading). Sumangala proposes (attributing

¹¹ The questions are embedded to improve their naturalness, but the matrix clause (‘Do (you) know...’) has no bearing on the point being made.

the suggestion to Jim Gair) that (31) is actually an elliptical version of a more complex question (32).¹² Sumangala points out that (32) too has only a single-pair reading.

- (32) kau **də** kiewe monəwa **də** kiewe?
 who **Q** read-E what **Q** read-E
 ‘Who read, what did s/he read?’

The conclusion to be drawn from this section (although perhaps somewhat tentatively) is that in multiple questions, the place from which the Q particle moves (at least when the question receives a pair-list reading) is next to the lower of the *wh*-words.

9. Motivating Q-movement

One question we should consider is why the Q particle *needs* to move. We hypothesized earlier that the *-e* morphology which appears on the Sinhala verb is the morphological realization of an “unchecked feature” that drives the movement, but we have not taken any steps to try to identify that feature or the role of Q in the interpretation.

The first thing to notice is that Q itself does not confer interrogativity; we know this from the fact that Q is used to form indefinites from *wh*-words (*mokak də* ‘something (S)’ and *nani-ka* ‘something (J)’ in declarative sentences (recall (14–15)). Neither, for that matter, does the feature reflected by the *-e* morphology in Sinhala, since *-e* appears in declarative, focused sentences as well.¹³

Without going into the full detail of a semantics for *wh*-questions and indefinites, we can still observe that they have existential quantification in common; *something fell* can be rendered as in (33a), whereas *what fell?* can (after Hamblin 1958) be rendered as in (33b) (which is a set of propositions of the form *x fell*).

- (33) a. $\exists x.fell'(x)$ ‘something fell’
 b. $\lambda p\exists x.p=fell'(x)$ ‘what fell?’

Essentially, we can take the *wh*-word to be restricting the range of values that *x* can take on in the answer (e.g., *kauru* ‘who (S)’ restricts *x* to being drawn from the set of humans), and take the Q particle to be contributing the existential quantification. A primary difference between (33a) and (33b) is in the location of the quantifier; in (33a), the quantifier is inside the proposition, whereas in (33b), it is outside. This correlates with what we see syntactically as well, e.g., in (34). In (34b), there is a (covert) movement of *də* to the clause periphery, high in the structure. If IP is the syntactic correlate of the semantic proposition, then *də* has plausibly been moved out of the domain of the proposition (by the point of interpretation).

- (34) a. Chitra **mokak** **də** kieuwa. *Sinhala*
 Chitra **what** **Q** read
 ‘Chitra read something.’
 b. Chitra **mokak** **də** kiewe?
 Chitra **what** **Q** read-E
 ‘What did Chitra read?’

¹² The structure of (32) is not really clear. It is, however, safe to suppose that it is not a simplex sentence.

¹³ We have not seen examples of this kind of sentence in this paper, although they have been referred to in footnote 10. The right-dislocation in (26a) is an example of a related construction, which also shows the *-e* morphology in declarative sentences, and can therefore make the same point.

This leaves us with the conclusion that the *-e* morphology reflects a feature whose task it is to pull the quantifier out of the proposition. We still must suppose that there is something (without morphological realization) that makes a sentence interrogative (for example, an interrogative complementizer) and which bears this unchecked feature that attracts quantifiers like Q. This part of the structure is presumed also to be responsible for the remaining semantic part of (33b) (the part abstracting over propositions).¹⁴

10. The size of the moving element

Kishimoto (1992), analyzing mostly the same Sinhala facts reviewed in this paper, concludes not that *də* moves to clause periphery itself, but rather that it marks the constituent which as a whole moves in covert syntax (adapting an influential proposal put forth by Nishigauchi 1990). Thus, in cases like those reviewed in section 6, where a *wh*-word is inside a movement island and *də* is attached outside, Kishimoto's proposal is that the entire island (marked by *də*) moves (covertly) to the appropriate position for interpretation (i.e., SpecCP). Most of the Sinhala data we have seen so far do not distinguish between the two proposals (particle movement and movement of the whole island).¹⁵

Notice, however, that having argued for a correlation between Sinhala *də* and Japanese *ka*, we have also gained an argument for the particle-movement view (against the “LF pied piping” view that would move the whole island), since in Japanese we can see the movement overtly and it is only the particle that moves. Moreover, we had cases even from within Sinhala (e.g., embedded under *dannəwa* ‘know’) that show essentially the same thing, that only the particle moves.¹⁶

11. Q “antisuperiority” and the pair-list question

Following up a little bit on the issue of pair-list readings and their relation to the movement of the Q particle, consider (35).¹⁷ This is a multiple question, but with both *wh*-words inside an island. It turns out that (35), while grammatical, does not have the normal pair-list reading associated with multiple questions, but can only be answered with a single pair.

- (35) Taroo-ga [**dare-ga nani-o** katta toki-ni] okotta **no?** *Japanese*
 Taro-NOM **who-NOM what-ACC** bought when got.angry **Q**
 ‘Taroo got angry when who bought what?’ (*PL, SP)

Recall that in section 8 it was suggested that in order to get the pair-list reading of a multiple-*wh*-question, the question particle needs to start on the lower of two *wh*-words. Notice that in (35), however, this is not possible; because both *wh*-words are in an island,

¹⁴ The semantics of *wh*-questions and indefinites are developed in much more detail in Hagstrom (1998).

¹⁵ Kishimoto (1992), using Sinhala data translated from parallel Japanese and Korean examples discussed by Choe (1987), *does* provide an argument that the whole island moves based on Weak Crossover effects. However, as pointed out by von Stechow (1996), the facts presented there do not argue for movement of the whole island in the *general* case, only in the cases in which a pronoun needs to be bound by something which does not *c-command* it on the surface (a criticism which itself is based on a parallel criticism made by Rooth 1985 against Weak Crossover evidence for movement-based accounts of focus interpretation).

¹⁶ Kishimoto (1998) takes a view much closer to that proposed here, although he does not explicitly argue against his previous proposal. He proposes that *də* is a clitic which moves to fix the scope of *wh*-phrases.

¹⁷ I take *no* in (35) to be in essence an allomorph of *ka*; which ending is chosen depends primarily on the politeness marking on the verb (*ka* goes with verbs marked with polite morphology, *no* goes with unmarked verbs). *No* is usually thought to be short for *no desu ka* (*no* = nominalizer, *desu* = ‘be’). This assumption is made (usually implicitly) in nearly all of the syntactic literature on Japanese questions.

the Q particle (*no*) must have moved from just outside the island, hence only the single-pair reading is available.^{18,19}

12. So...

If the proposal from the previous section is correct—that is, if launching the Q particle from below one of the *wh*-words in a multiple *wh*-question is crucial to getting a pair-list reading—this implies that it is not Japanese- or Sinhala-specific issue. Rather, Q-movement is a general fact about question formation in natural language. In some languages, it will be less obvious than in others, but in all languages something like Q-movement must be taking place behind the scenes.²⁰

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¹⁸ This raises the question of why (30b) does not have a grammatical single pair reading like (35) does. Shigeru Miyagawa (p.c.) tells me that some Japanese speakers report multiple questions with a single pair reading as being simply ungrammatical, and it may be that the same phenomenon occurs in Sinhala as well. The only attested single pair readings I have from Sinhala are (31) and (32), from Sumangala (1992).

¹⁹ For an analysis of why the pair-list reading might depend on moving the Q particle from below one of the *wh*-words, see Hagstrom (1998).

²⁰ For example, Bošković (1998) proposes that intervention for Q-movement is responsible for the fact that in English the multiple question *Who bought what?* resists a single-pair reading (that is, it seems to have an obligatory pair-list reading). He argues that *wh*-movement cannot cross the Q morpheme (on the assumption that the feature driving *wh*-movement appears on Q), meaning that the Q morpheme has to appear below the highest *wh*-word. This is the configuration which yields a pair-list reading, hence *Who bought what?* has an obligatory pair-list reading.

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