A study of the disjunction particles and *wh*-elements in Malayalam, Sinhala, and Japanese

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[Background] It has been noted that Malayalam, Sinhala and Japanese have a lot in common regarding formation of existential quantifiers out of *wh*-elements; more specifically, a disjunction particle with a *wh*-element makes an existential quantifier as in (1), (2), and (3). As (4), (5), and (6) indicate, *oo*, *də* and *ka* are employed to coordinate phrases by disjunction in Malayalam, Sinhala, and Japanese respectively. In addition, the disjunction particles can be used as Yes/No question particles clause-finally in all the three languages, examples of which are omitted here.

Despite the similarities, there are differences between the two languages. First, the order of case and disjunction particles is different: a case particle precedes each *oo* in Malayalam as in (4) while (at least) one case particle must appear after the rightmost *ka* in Japanese as in (6). Sinhala is not clear because it does not show overt case as in (5). A second difference is that in the case of formation of existential quantifiers, a disjunction particle can be separated from a *wh*-element in Malayalam as in (7), but not in Japanese or Sinhala as in (8) and (9).

Moreover, there is an important difference regarding *wh*-questions although all the three languages are *wh*-in-situ and show insensitivity to (non-*wh*) islands. That is, Malayalam is different from Japanese and Sinhala in terms of *wh*-islands; that is, it can violate them like Chinese as in (10). As mentioned already, *oo* can function as a Yes/No question particle, but not as a *wh*-question particle, so *aarə* 'who' must take the matrix scope across a *wh*-island in (10). Corresponding Japanese and Sinhala examples are unacceptable as in (11)*a* and (12)*a*. These are notable differences among the three languages. This presentation attempts to explain all these differences.

[Proposal] The difference regarding *wh*-islands follows from two parameters. The first one based on Cable (2010) is whether a nominal *wh*-element is raised to D^0, where a Q feature lies. In languages such as English and Malayalam, a *wh*-element is overtly raised to D^0 after Agree to function as a *wh*-interrogative phrase, the whole of which later Agrees with C^0. In contrast, languages such as Japanese and Sinhala do not require such movement, which allows a nominal *wh*-element to remain NP, and a Q feature to project its own projection, i.e. QP. We further propose that Q^0 (which is *də* in Sinhala but phonologically null in Japanese) makes a *wh*-element a *wh*-interrogative phrase by binding in the languages.

The parameter explains why Japanese and Sinhala are insensitive to islands except *wh*-islands. They allow Q^0 to be base-generated at the edge of an island, and the entire island, i.e., QP, is (covertly) raised or pied-piped to C-spec. This is why *wh*-questions in those languages appear insensitive to the Subjacency condition. However, Q^0 cannot be base-generated at the edge of a *wh*-island because the embedded C (i.e., Yes/No question particles, which are morphologically identical to the disjunction particles, *ka* and *də*) in (11)*a* and (12)*a* is also a potential binder of *wh*-elements; accordingly, Q^0 cannot bind them, hence, *wh*-island violation.

In contrast, Malayalam requires Agree between Q^0 and a *wh*-element, which requires the two in the same phase. Thus, the strategy employed in Japanese and Sinhala cannot be adopted to escape islands. However, Malayalam resorts to an alternative strategy to license *wh*-interrogative phrases inside islands. We propose that Foc^0, which is also employed in disjunction and existential quantifier formation in Malayalam as will be discussed below, is base-generated at the edge of an island. Here comes a second parameter. FocP optionally licenses *wh*-interrogative C in Malayalam. What is more, the relation between Foc^0 and *wh*-interrogative phrases is established by alternative semantics (Rooth 1985 among others), so any type of island including a *wh*-island can be circumvented in Malayalam (like Chinese). Japanese and Sinhala can resort to FocP too to overcome *wh*-islands, but an additional QP is necessary in the matrix clause as in (11)*b* or (12)*b* because FocP does not license *wh*-interrogative C in the two languages. This phenomenon is generally called the additional-*wh* effect, and many languages employ this strategy.

The difference of word order between disjunction particles and case morphemes in Malayalam and Japanese is explained as follows. We propose *ka* and *də* are D^0 and a *wh*-element is NP in the composition of existential quantifiers in Japanese and Sinhala, which is why the two cannot be separated as in (8) and (9). Similarly, the rightmost *ka* in disjunction phrases is D^0 in Japanese, so it c-selects NP, which is the second disjunct, i.e., Bill in (6), and then merges with DP, which is the first disjunct, i.e., John (i.e., asymmetric coordination). The final *ka* is D^0, so it needs Case, which is why a case morpheme follows the final disjunction particle in Japanese as in (6). We regard non-final *ka* as agreement reflex after D^0 Agrees with DP at the spec, so it carries no semantic function.

In contrast, since a *wh*-element must project to DP in Malayalam, an additional particle such as *oo* must be a higher functional head, Foc^0 in this proposal, so it can be separated from *wh*-elements in the formation of existential quantifiers in Malayalam as in (7). Moreover, the same *oo* appears in the rightmost *oo* position in disjunctive phrases. It merges with disjuncts, which are not NP but DP unlike Japanese or Sinhala (i.e., symmetrical coordination), so each disjunct, which is DP, needs Case as in (4).

[Conclusion and the consequences] To summarize, (nominal) *wh*-elements are always DP in Malayalam while they can be NP in Japanese and Sinhala, which is why the morphological differences in existential quantifiers and disjunctive phrases arise. Moreover, the findings indicate that natural languages have at least two kinds of strategy to save *wh*-phrases inside islands: binding and alternative semantics. Languages such as Japanese and Sinhala employ both, while languages such as Malayalam and English utilize the latter only. However, FocP cannot license *wh*-interrogative C in English, so an additional *wh*-phrase is necessary in the matrix clause, unlike Malayalam.

(1) aar-**oo** ‘somebody’; ent-**oo** ‘something’; ewiDe-(y)**oo** ‘somewhere’, etc. Jayaseelan (2001: 65) [M(alayalam)]

(2) kau-**də** ‘somebody’; kohee-**də** ‘somewhere’; kavadə-**də** ‘sometime’, etc. [S(inhala)]

(3) dare-**ka** ‘somebody’; nani-**ka** ‘something’; doko-**ka** ‘somewhere’, etc. [J(apanese)]

(4) ñaan [John-ine-(y)**oo** Bill-ine-(y)**oo**] kaNDu. [M]
I John-Acc-Disj Bill-Acc-Disj saw
‘I saw John or Bill.’ Jayaseelan (2001: 70)

(5) [John-**də** Bill-**də**] ee potə kieuw-e? [S]
John-Disj Bill-Disj that book read-e
‘Did John or Bill read that book?’

(6) Mary-ga [John(-o)-**ka** Bill-**ka**-o] tataita. [J]
Mary-Nom John(-Acc)-Disj Bill-Disj-Acc hit
‘Mary hit John or Bill.’

(7) [$_{DP}$ **aar**-uDe kuTTi-(y)e-(y)**oo]** naaya kaDiccu. [M]
who-Gen child-Acc-Disj dog bit
‘A dog bit somebody’s child.’ Jalayseelan (2001: 72)

(8) inu-ga [$_{DP}${***dare**-no kodomo-**ka**-o/**dare**-**ka**-no kodomo-o}] kannda. [J]
dog-Nom {who-Gen child-Disj-Acc/who-Disj-Gen child-Acc} bit
‘A dog bit somebody’s child.’

(9) Chitra [$_{DP}$ {***kaa**-ge amma **də** / **kaa**-ge **də** amma }] dækka. [S]
Chitra { who-Gen mother Disj / who-Gen Disj mother } saw
‘Chitra saw someone’s mother.’

(10) John [**aarə** pooy-**oo** ennə] coodiccu? [M]
John who went-whether C asked Jayaseelan (2001: 76)
‘Who did John ask whether (he) went?’, *‘John asked who went.’

(11) a. *John-wa [**dare**-ga kita **ka**.doo.**ka**] tazunemasita **ka**? [J]
John-Top who-Nom came whether asked Disj
‘*Who$_i$ did John ask whether t_i came?’

b. **Dare**-ga [**dare**-ga kita **ka**.doo.**ka**] tazunemasita **ka**? [J]
who-Nom who-Nom came whether asked Disj
‘Who asked whether who came?’

(12) a. *Gunee-tə [Ranjit **mokak** gatta **də** kiyəla] **də** daneganne oone? [S]
Gunee-Dat Ranjit what bought whether that Disj want.to.know-e
‘What does Gunee want to know whether Ranjit bought __?’

b. **kau**-tə-**də** [Ranjit **mokak** gatta **də** kiyəla] **də** daneganne oone? [S]
who-Dat-Disj Ranjit what bought whether that Disj want.to.know-e
‘Who wants to know whether Ranjit bought what ?’

[Selected References]

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