Parametrization of Quantificational Determiners and Head-Internal Relatives

This paper proposes that quantificational determiners come in two varieties, one which makes use of feature checking and the other that relies on binding, and that the typology of head-internal relative clauses (HIRC) is sensitive to this parametrization of quantificational determiners, once the existence of HIRC is made possible by an independent parameter.

Challenge: Our point of departure is the observation by Kondo 81 that HIRC, absent in the Nara Period, appeared in Old Japanese during the Heian Period. This change correlates with the loss of wh-movement (Watanabe to appear) during the Heian Period, which supports the line of analysis that invokes essentially the same movement/feature-checking mechanism for HIRC as for wh-in-situ, as in Watanabe 92. This idea, however, is challenged by languages like Chinese on the one hand, and by languages like Imbabura Quechua, on the other hand. Chinese has wh-in-situ but lacks HIRC. Imbabura Quechua has obligatory wh-movement but allows HIRC. What is going on?

Aoun & Li (1993) argue that the Chinese problem is solved by observing that Chinese lacks quantificational particles that attach to wh-indefinites in languages like Modern Japanese. Assuming that a similar, albeit abstract particle is responsible for movement/feature-checking of wh-in-situ and HIRC, the absence of HIRC in Chinese follows.

But this cannot be the end of the story, because there is a variety of HIRC which does not involve movement or feature-checking but relies on unselective binding. Lakhota HIRC, which does not exhibit island effects (Williamson 87), is analyzed by Bonneau 92 as making use of unselective binding. Why can't Chinese choose the unselective binding strategy to make HIRC possible? Bonneau points to the determiner that comes with HIRC (as well as with ordinary NP) in Lakhota as the unselective binder. The account of the absence of HIRC in Chinese now seems complete, since Chinese lacks the determiner system.

At this point, however, we should ask a deeper question of why things are as they are. That is, why must quantificational particles induce movement/feature-checking while determiners are unselective binders? If things were the other way round, we would find Lakhota HIRC sensitive to islands and Modern Japanese HIRC violating subjacency, contrary to fact. We need a more principled answer.

Typology of determiners: I would like to propose that quantificational particles are determiners after all, and that binding and feature checking are the two modes provided by UG to form association of quantificational determiners with nominal predicates which is needed for quantification. So, the contrast between Modern Japanese and Lakhota with respect to HIRC is now reformulated as the question of parametrization of determiners.

Treating quantificational particles as determiners points us to an interesting difference between the two types of quantificational determiners: quantificational particles in Modern Japanese are selective whereas determiners in Lakhota are not. Thus, the particle ka in Modern Japanese, which forms an existential quantifier, can only attach to wh-indefinites, as in (1).

(1) a. Dare-ka-ga kita. "Someone came."
   who-ka-nom came
   man-ka-nom

(1b) is ill-formed, because the particle ka cannot combine with an ordinary NP. Determiners in Lakhota, on the other hand, do not show such a restriction. The examples in (2) illustrate the definite determiner ki and the indefinite determiner wa3.

(2) a. [wicbagèski] [mathó wa3kté. "The man killed a bear."
   man the bear a kill
b. [Mary owiwa3agètè] he ophewathu3 "I bought the quilt that Mary made."
   Mary quilt a make the dem I-buy

The choosiness of the Modern Japanese quantificational particles can be explained by the requirement that these quantificational particles must undergo checking with a wh-indefinite. Assuming that feature checking does not involve categorial features (Chomsky 00), the relation between the determiner and an NP in Lakhota cannot be established by checking. It must involve unselective binding.

To sum up so far, the island-sensitivity of HIRC is correlated with whether determiners can combine only with wh-indefinites or not. It is not the case, though, that every language with
binding determiners has HIRC. The correlation of the loss of wh-movement and the appearance of HIRC in Old Japanese becomes relevant here. Lakhota (Williamson 84), too, has wh-in-situ. Thus, both for languages with binding determiners and for those with checking determiners, the availability of HIRC depends on some other in-situ strategy. For languages with binding determiners, wh-in-situ indicates the possibility of long-distance binding by an operator either in C° or in D° (see Tsai 94 for unselective binding of wh-in-situ in Chinese). For checking determiner languages, things are a little more complicated.

**Focus connection:** Let us consider the problem posed by Imbabura Quechua, which is that it has a quantificational particle as in (3), but its HIRC cannot be built on the mechanism for wh-in-situ, since wh-in-situ is not allowed, as shown in Cole & Hermon 94.

(3) **Pi-pash** shamurka. "Someone came."

who-even came

Interestingly, however, Imbabura Quechua has a system of in-situ focus called validators (Cole 82). In (4), the focus is marked by the validator **mi**.

(4) Kan-paj ushi-wan Agatu-pi-**mi** tupari-rka-ni. "I meet your daughter in Agato."

you-of daughter-with Agato-in-foc meet-past-l

I would like to suggest that Imbabura Quechua recruits the in-situ focus strategy for its HIRC. It is interesting to note that some quantificational particles can also be used as scalar focus particles. That is true of the Imbabura Quechua particle **pash** in (3). Modern Japanese, too, has such a particle **mo**, illustrated in (5).

(5) Dono **gakusei-**mo kita. "Every student came."

which student-even came

These particles function as the probe in their quantificational use as in (6a). In their focus use, they function as the goal, undergoing checking with the Foc° head as in (6b).

(6) a. [Det **pr**t [ ... wh-indef ... ] quantification

b. Foc° [... **pr**t ... ] focus

Suppose that HIRC in checking determiner languages requires checking between the internal head of the relative clause and the determiner which takes CP as its complement, and that the internal head also has a checking determinant. In other words, the checking determinant is involved in HIRC both as a probe and as a goal, as schematically shown in (7), which combines the two uses with respect to checking in (6).

(7) [[[CP ... [dp NP Det] ... ] Det] goal     probe

Both of these determiners are abstract, as the Imbabura Quechua example in (8) shows.

(8) [Wambra wagra-ta randishka] ali wagra-mi "The cow that the boy bought is a good cow-validator good cow."

The island-sensitivity of the Imbabura Quechua HIRC (Cole & Hermon 94) confirms that the relation in (7) is indeed established by checking.

**Selective References**


