

A Type-Mismatch Approach to the Distribution of Floating Quantifiers

1 Asymmetries in Q-Floating: Q-floating shows interesting asymmetries in English. First of all, there is a subject/object asymmetry. The subject permits Q-floating, while the object does not, as shown in (1-2). However, if the object is followed by a predicative constituent, Q-floating is permitted. The second asymmetry shows up in this case: Q-floating is permitted if the predicate bears a predicative relation with the object, but not with the subject (Mailing 1976). In (3a) *arrogant* forms a predicative relation with the object, while in (4a) it bears a predicative relation with the subject, and the former permit Q-floating, but the latter does not, as shown in (3b) and (4b). This paper explores the possibility of explaining the asymmetries by utilizing a type-mismatch approach, along with the A-movement approach.

- (1) a. All the students have read the book. b. The students have all read the book.
(2) a. I like all the students. b. *I like the students all.
(3) a. He considered all his friends to be arrogant. b. He considered his friends all to be arrogant.
(4) a. He impressed all his friends as arrogant. b. *He impressed his friends all as arrogant.

2 A-Movement Approach to Q-floating and Remaining Problems: Sportiche (1988) claims that Q-floating is licensed when A-movement takes place. In this approach, the grammaticality of (3a) can be explained if the object undergoes movement to SPEC-V (Chomsky 2015), or moves to SPEC of a transitive head (Bowers 2003). Let us suppose that *his friends* moves to SPEC-Tra(nsitive Head), leaving *all* behind. If so, *all* can be floated, as illustrated in (5).

- (5) [_{VP} he [_{CONSIDER} \emptyset_{TP}] v [_{TP} his friends_i ~~consider~~ \emptyset_{TP} [_{VP} ~~consider~~ [_{TP} all t_i to be arrogant]]]]

In this approach, the ungrammaticality of (4b) is not surprising, considering that it does not permit passivization. Sentence (6) is not grammatical, which means the object cannot undergo A-movement. Hence, Q-floating is not permitted in (4b). This line of approach also sheds light on the contrast between (7) and (8). The object control predicate permits Q-floating, while the subject control predicate does not. Interestingly, the former allows passivization, whereas the latter does not, as shown in (9a-b). These considerations lead us to generalize that if there is an A-movement, there can be a floating Q.

- (6) *All his friends were impressed as arrogant.
(7) Frank persuaded the boys all to leave. (8) *Frank promised the boys all to leave.
(9) a. All the boys were persuaded to leave. b. *All the boys were promised to leave.

However, A-movement is not a necessary and sufficient condition: it is just a necessary condition. Movement does not produce a floating Q in many cases. (2b) is a case in point. According to Chomsky (2015), object shift takes place even in simple transitive constructions. However, (2b) is ill-formed. Furthermore, (10a-b) are ill-formed although A-movement takes place (Bobaljik 2003, Bošković 2004). To make matters complicated, well-formed sentences are generated if the floating quantifiers are followed by a PP (Janke and Neeleman 2005). For instance, (11) is grammatical, although (10a) is not. Sentence (12a-b) show the same point: if the direct object is followed by the PP *under the sheet*, a well-formed sentence can be generated.

- (10) a. *The students arrived all. b. *They were arrested all.
(11) We arrived *all* in one piece.
(12) a. *You could see the mattresses all.
 b. You could see the mattresses all under the sheet.

