

Directional Asymmetry in Agreement and Case-Marking: Deriving Greenberg's Universals 33 and 41

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In this paper, I argue that the relation between verb and object is more local in OV order than in VO order. In generative syntactic terms, object in the specifier position is closer to the head (verb) than that in the complement position, contra the general assumption that complement is the most typical position to be governed by the head.

(1) [specifier [head complement]]

It is argued that the asymmetry in the distance to the head gives rise to the directional asymmetry in agreement and case-marking in world's languages, known as Greenberg's (1963) implicational universals, number 33 and 41.

Typologically, case-marking is overt in OV languages more often than in VO languages, as Greenberg (1963) formalizes as an implicational universal number 41 in (2).

(2) If in a language the verb follows both the nominal subject and nominal object as the dominant order, the language almost always has a case system.

This observation can be tested by an analysis of the data in Dryer (2005) and Iggesen (2005). 86 out of 105 OV languages (81.9%) have two or more morphological cases. The 19 counterexample languages (18.1%) might seem to obscure the correlation between word order and case-marking. However, 17 out of these 19 languages have noun-adjective order, which can be one of the head-complement pairs (Lehmann (1973), Vennemann (1974), cf. Dryer (1992)). This fact shows that these languages have at least some head-initial (VO-like) character. Moreover, although it has not been claimed in Greenberg's universal no. 41 in (1), the majority of VO languages (74 out of 104 languages, 71.2%) have no morphological case-marking. These data show that head-complement order generally correlates with morphological case-marking.

This fact is in conflict with the traditional idea that complement is the most typical governed position to which Case is assigned. In the government and binding theory (Chomsky (1981)), it is argued that verb gives a semantic (thematic) role to and properly governs its argument in the complement position, but not that in the specifier position. For example, a transitive verb assigns its theme role and accusative case to its complement as in [*write songs*]. In the minimalist framework, Kayne (1994) argues that O in OV languages has been moved from the complement position to a specifier position of the V head, as shown in (3) where the original position of the moved complement is outlined.

(3) [**object** [verb *object*]]

If we take the standard assumption that specifier is less local to the head than complement, we would have no explanation for the question why the object in a less local position to the verb is more likely to be case-marked than that in the most local position.

We can solve this problem of asymmetric case-marking if we assume that specifier is more local to the head than complement. This idea is supported by another local relation between head and its dependent, namely, agreement, which has been assumed to hold between head and its specifier. For example, subject is in the specifier position of Infl(ection), showing subject-auxiliary agreement. The asymmetry of locality between specifier-head and head-complement is supported by another implicational universal observed by Greenberg (1963) (no. 33), which is formulated as in (4).

(4) When number agreement between the noun and verb is suspended and the rule is based on order, the case is always one in which the verb precedes and the verb is in the singular.

This is paraphrased by Kayne (2011) as in (5).

- (5) When verbal number agreement is suspended in an order-sensitive way, it's always when the verb precedes the NP.

Kayne shows examples of Italian past participle agreement in (6) and (7).

- (6) Li ho visti. ('them I-have seen(m.pl.)')
(7) *Ho visti loro. ('I-have seen(m.pl.) them')

The past participle *visti* can agree with preceding *li* as in (6) but not with following *loro* as in (7). Greenberg's universal no. 33 in (4) or (5) with the data such as (6) and (7) supports our claim that specifier position is closer to the head than complement position.

In summary, the directional asymmetry in agreement and case-marking comes from the fact that agreement and case-marking are governed by the same locality of specifier-head relation. The next question is why specifier is closer to its head than complement. In a nutshell, specifier and head make left-branching structure (when there is no overt complement) while head and complement make right-branching structure. From the definition, head is non-branching X^0 (non-projecting) category, and specifier or complement is (potentially) branching category. Specifier-head construction derived from complement movement to specifier position has left-branching structure at the interface between syntax and phonetic form (PF), if we assume that silent copy of the moved category is invisible at PF, as shown in (8), where invisible category and brackets are italicized.

- (8) $[[_{YP} \dots] [X^0 [_{YP} \dots]]] \rightarrow [[_{YP} \dots] X^0]$

I argue that the phonological distance between YP and X^0 in left-branching structure is shorter than that between X^0 and YP in right-branching structure $[X^0 [_{YP} \dots]]$. This idea of asymmetry of distance between specifier-head and head-complement is supported by a number of phonological and morphological phenomena (Tokizaki (2008)). I will show some of the data to show that the asymmetry of phonological distance derives the directional asymmetry in agreement and case-marking.

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