

On the (non-)interpretability of the edge: Defectiveness, Activeness and Legibility

The notion of ‘edge’ is central to Chomsky’s (2000, 2001, 2004, 2005) model of phase-cyclic spell-out. According to the Phase Impenetrability Condition, a subpart of the syntactic object is periodically transferred at points defined by the phase heads, identified as C and v^* . Since the transferred objects may not be internally convergent (that is, they may contain as yet unvalued uninterpretable features), crashing will arise at the phase level unless there is a position to which active (= unvalued) features can ‘escape’ in order to avoid transfer/spell-out. This position is the phase edge, providing a sanctuary for active features. Without such a position, there could be no long-distance (i.e. cross-phasal) dependencies, since there would be no way to extend the life of active features beyond the immediate phase level.

There is thus a strong, implicational link between the presence of active, unvalued features within a phase domain and the presence of a phase edge. Active features must move to the edge, in order to be accessible for valuation by higher phase heads. This will occur whenever a phase head is unable to Agree with (and thus deactivate) a formal feature F within its domain. Assuming with Chomsky (2001) that Agree requires complete Match, only those phase heads with a complete probe of the relevant kind will be able to value F in their domain. Those phase heads without a complete probe – so-called ‘defective’ probes/heads – will therefore induce raising-to-edge, in order that unvalued F can evade transfer and remain accessible to higher heads. That is, we derive (1) from the logic of Chomsky’s phase theory.

- (1) a. Defective phase heads have active edges;
b. Non-defective (‘complete’) phase heads have inactive edges.

In this paper, I show that (1) makes a number of predictions about exactly when, and where, a phase edge will be legible to the interfaces – both PF and LF. Since active edges are those which contain unvalued features, they cannot be interpreted; they are illegible to the interfaces (by Full Interpretation). That is, in the case of (1a), the edge is precisely that part of the phase which *cannot* be interpreted. Only the edges of *non*-defective phase heads are thus predicted to be legible at the interface and available for interpretation, thus providing possible reconstruction sites at LF (for scope-binding) and possible realization sites at PF (for pronunciation and linearization). I demonstrate the validity of this prediction with a case study from each interface – order-preservation effects at PF (specifically, Holmberg’s Generalization), and the connection between ‘pure-EPP movement’ (Lavine & Freidin 2002, Nevins & Anand 2003, Chomsky 2005) and ‘edge semantics’ at LF.

I. Linearization and shape-conservation. As is well known, short Object Shift (OS) in Germanic displays a verb-object (VO) order-preservation constraint, known as Holmberg’s Generalization (HG), cf. Holmberg 1986, 1999. In the VO languages, OS is barred across an in-situ verb, as in (2); in other words, the derived order must reinstate the base order (VO). By contrast, the OV languages exhibit no such restriction, cf. (3): short scrambling of the object may occur irrespective of the finiteness of the main verb, yielding both OV and, with V2-raising, VO orders alike (‘anti-HG’ effects):

- (2) a. *Nemandinn las (bókina) ekki (bókina)* (Icelandic/VO)
The-student read (the-book) not (the-book)
b. *Nemandinn hefur (*bókina) ekki lesið (bókina)*
The-student has (the-book) not read (the-book)

- (3) a. *Der Student las (das Buch) nicht (das Buch)* (German/OV)
 The student read (the book) not (the book)
 b. *Der Student hat (das Buch) nicht (das Buch) gelesen*
 The student has (the book) not read (the book)

This property of OS (head-complement order preservation) seems unique to this type of movement, since it clearly does not hold of standard A- and A'-type movement, cf. (4) (where italics indicate unpronounced trace-copies):

- (4) a. A man arrived (*a man*)
 b. John was rescued (*John*)
 c. John, I like (*John*)
 d. Which book did you read (*which book*)

The observation is a simple (but awkwardly nontrivial) one: some types of movement conserve head-complement ‘shape’, whereas others do not. Existing accounts of such shape-preservation phenomena, such as the linearization-based account of Fox & Pesetsky 2005, the OT approach of Müller 2000, 2001, and the representational approach of Williams 2003, have problems reconciling these facts (in particular, the A-movements in (2) vs. (4a-b)). I argue that Chomsky’s complexity-reducing conception of phases makes possible a simple, cyclic linearization algorithm that draws a principled line in exactly the right place between shape-breaking and shape-preserving movement, which can be stated as follows:

- (5) Shape-preserving movement is phase-internal;
 Shape-breaking movement is cross-phasal.

Due to (1), intermediate phase-edge landing sites are invisible to the interface, so that escaping a phase implies escaping the shape effects imposed within a phase by the linearization algorithm. Object Shift terminates in a non-defective edge position (spec- v^*), and is thus subject to order-preservation – it is legible to PF, by (1b). By contrast, passive/unaccusative raising proceeds via a defective v (Chomsky 2001), and is thus unavailable for PF interpretation (linearization), by (1a).

II. ‘Edge’ semantics. The statement in (1) predicts that edge positions will be interpretable in *two* cases: (i) where Agree is complete (and thus deactivation obtains, yielding an inactive, interpretable edge), and (ii) where Agree is not involved at all and the edge position is created purely by EPP (the ‘Edge Feature’ of Chomsky 2005). I argue that (i) and (ii) are both robustly attested and that they correspond, respectively, to (i) scope/binding positions and to (ii) discourse/information-structural positions (topic, focus, etc.) – the two species of ‘edge semantics’ (Chomsky 2004, 2005). I pursue’s Kitahara (2002) suggestion that LF-interpretation occurs in the position of Case-valuation; this covers all Agree-type dependencies (φ , *wh*, etc.) once Case is viewed as a generalized activation feature. Drawing on data from Dutch, Hindi, Japanese and Russian, a principled distinction is drawn between obligatory (Agree-driven) and optional (EF-driven) edge positions: both are legible by (1b), but the latter positions are forced to be associated with additional, discourse-interpretive effects on grounds of interface economy (cf. Reinhart 1995, Fox 2000, Chomsky 2001). I claim that topic-prominence results from satisfying obligatory EPP-features via the EF mode of movement: the resultant edge position is thus legible for both binding and discourse interpretation, and any inactive element may raise to it (in principle and in practice), unlike subject-prominent languages (where the obligatory EPP-position is an Agree-position and thus discourse-neutral, i.e. legible only for scope/binding).