A Probe-Goal Analysis of Null Arguments
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[Intro] This paper proposes an account of a null subject phenomenon in terms of the probe-goal system under Chomsky's (2008) feature-inheritance system (hereupon, FIS), and gives a unified account for Italian pro-drop and German topic-drop phenomena.

[FIS] The FIS assumes that a phase head C has two probe features, an edge-feature (EF) and Agree (φ)-features, that T inherits φ-features from C as in (1) (C-to-T-inheritance; henceforth, CTI) (p.148), and that φ-probe is subject to minimal search (p.142), but EF-probe is not (p.151). On the CTI, Richards (2007) argues that it is operative at the domain where the edge and nonedge (complement) of a phase are transferred separately. Hence, it is predicted that the CTI becomes inoperative at the domain where the edge and nonedge of a phase are transferred at once. Given that such an at-once-Transfer is the most appropriate manner of Transfer in verb second (V2) environments (Goto 2010 and Obata 2010), we can expect (2) as a natural consequence of Richards’ argument.

[Proposal] I propose that in addition to EF and φ-features, C can enter a derivation with an E(lipsis)-feature, which makes it possible for an element to be deleted at PF (see (3)), and an element assigned an E-feature can be deleted at PF through an E-feature assignment which is implemented in terms of EF-probing by C or φ-probing by T.

[Prediction] The present system makes the prediction under (2) that while an E-feature is inherited from C to T with φ-features in a non-V2 language such as Italian, it is not inherited to T but stays on C in a V2 language such as German, as shown in (4) and (5). Thus, E-feature assignment is implemented by φ-probe in (4) and by EF-probe in (5).

[Analysis] Given (4) in Italian, the null subject sentence (6) (where [e] indicates the empty subject corresponding to a third person pronoun egli 'he/she') is derived as in (7). As soon as C with φ-features and an E-feature are introduced into the derivation ((7a)), both features are inherited by T from C ((7b)) and φ-features on T enter into a probe-goal relation with egli, which is in the minimal search domain of T ((7c)). Given that the probe-goal relation makes it possible not only to value uninterpretable features on T and egli but also to assign an E-feature to the agreeing element, egli can delete at PF ((7d)). Under the present analysis, the impossibility of the null object sentence (8) is explained as follows: since φ-probe is subject to minimal search, it is impossible to assign an E-feature to the downstairs object beyond the intervening subject; hence the object cannot be null at PF. Unlike Italian, given (5) in German, it is expected that not only a subject but also an object can be freely null: since EF-probe can seek any goal in its domain without involving minimal search, it can freely assign an E-feature to an element in its domain. This prediction is in fact borne out by (9). Specifically, this analysis can also explain the ungrammaticality of (10) as follows: since an EF on C is satisfied by jetzt,
EF-probe is deactivated, so that it is impossible to assign an E-feature to the arguments in its domain; hence neither the subject nor the object can be null at PF.

[Consequences] The mechanism of PF-deletion developed so far not only gets rid of pro but also unifies the pro-drop phenomenon and the topic-drop phenomenon under the FIS.

(1) \( C_{[\text{EF}]} \ldots T_{[\text{\theta}]} \)

(2) C-to-T feature-inheritance does not take place in the V2 environment.

(3) \( C_{[\text{\theta}[\text{EF}]][\text{E}]} \ldots T \)

(4) \( C \ldots T_{[\text{\theta}[\text{E}]} \)

(5) \( C_{[\text{EF}][\text{E}]} \ldots T \)

(6) [e] parla. 'He/She is speaking.'

(7) a. \( C_{[\text{\theta}][\text{E}]} \left[ T_{[\nu^{\ast} \text{egli parla}]} \right] \)
   b. \( C \left[ T_{[\text{\theta}[\text{E}]} \left[ \nu^{\ast} \text{egli parla} \right] \right] \)
   c. \( C \left[ T_{[\text{\theta}][\text{E}]} \left[ \nu^{\ast} \text{egli parla} \right] \right] \)
   d. \( C \left[ T_{[\text{\theta}]} \left[ \nu^{\ast} \text{egli [E] parla} \right] \right] \) (Strike-through indicates deletion)

(8) *Alla fine della vacanza il bel tempo ha invogliato [e] a restare.
   'At the end of the vacation the nice weather has induced one to stay.'

(9) a. (Ich) habe es gestern gekauft.
   (I) have it yesterday bought
   b. (Dass) habe ich gestern gekauft.
      (that) have I yesterday bought

    now recognize (I) that not
   b. Jetzt kenne'(ich) *(dass) nicht.
      now recognize (that) not

Selected References
