

## MaxElide and Elliptical Feature Agreement

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**MaxElide:** Merchant (2008) proposes a constraint on ellipsis, called MaxElide, that ellipsis must target the largest constituent possible if the elided constituent contains an A'-trace (Sag 1976, Williams 1977, Lasnik 2001, Takahashi and Fox 2005, among others). Assuming that (1a) is the source of the VP-ellipsis (1b) and sluicing (1c), only sluicing is possible. The impossibility of VP-ellipsis is attributed to MaxElide.

**Ellipsis Phrase (EP):** However, it is unclear under Merchant's analysis what having an A'-trace has to do with MaxElide. This paper provides a syntactic analysis of MaxElide, which attributes MaxElide effects to locality of agreement between a probe and E(lliptical) features. Following Merchant (2001, 2006), I assume that some functional head bears an E feature for ellipsis (i.e. C for sluicing and  $v$  for VP-ellipsis) whenever the complement of the E feature is e-GIVEN. Merchant's (2001) e-GIVENness requires roughly that the ellipsis clause and antecedent clause mutually entail each other, modulo  $\exists$ -type shifting. Departing from Merchant's analysis, I propose that there exists an *optional* maximal projection beyond CP, called Ellipsis Phrase (EP), and ellipsis is possible only when an EP is present in the clause. The EP bears an uninterpretable and unvalued  $uE$  feature [ $uE$ : ], probing the E feature in the functional heads to agree with, as shown in (2). Consider an example in (3). C bears an E feature because its complement TP is e-GIVEN; that is, each conjunct entails  $\exists y[John\ met\ y]$ . If C[E] agrees with [ $uE$ : ], sluicing is derived in (3a). VP is also e-GIVEN, since each conjunct entails  $\exists x\exists y[x\ met\ y]$ , so  $v$  bears an E feature. Agreeing with [ $uE$ : ],  $v[E]$  would elide its complement VP in (3b). If EP is not merged with CP, no ellipsis occurs in (3c).

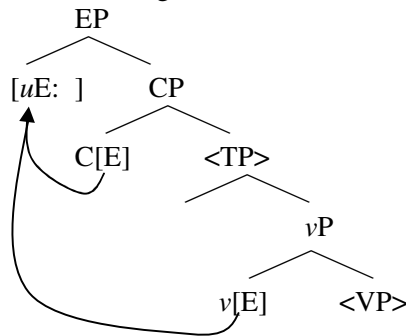
**Deriving MaxElide:** The fact that VP-ellipsis is prohibited in (3b) suggests that the E feature agreement needs to be further constrained. I propose that only the closest E feature can agree with  $uE$  (Chomsky 2000), and this agreement has an effect at the PF interface; PF-deletion only applies to the complement of the E feature agreed with. The E feature in functional heads is interpretable:  $v[E]$  is a voice feature and C[E] is the [wh, Q] feature (cf. Merchant 2001), so the E features which fail to agree with  $uE$  would not crash the derivation. With this proposal in mind, let us reconsider (3a-b). The closest head to  $uE$  is C[E], so only C[E] is licensed to elide its complement TP. Thus, sluicing is derived (3a).  $v[E]$  fails to agree with  $uE$ , explaining why VP-ellipsis is impossible (3b). If TP is not e-GIVEN and/or sluicing is impossible, the next closest head, which is  $v[E]$ , would agree with  $uE$ . In this case, VP-ellipsis becomes available. Let us consider (4a-b). In (4a), TP is not e-GIVEN due to a different subject *Mary* in the second conjunct. In (4b), with *whether*, the C head does not have the [wh, Q] feature, so no E feature is available in C. Therefore,  $uE$  agrees with  $v[E]$  for VP-ellipsis. The derivation of MaxElide effects is summarized in (5).

**A/A'-trace:** Merchant (2008) claims that MaxElide is void if wh-movement leaves an A-trace, which is why both sluicing and VP-ellipsis appear to be possible in (6a-b) (Lasnik 2001). This is not the correct generalization. The current analysis predicts only sluicing is possible, as in (6a), since C[E] agrees with  $uE$ . I argue that what appears to be VP-ellipsis in (6b) is also an instance of sluicing. Since *do*-support is unavailable in subject wh-question, *DID* must be emphatic. A focused constituent is not deletable, so *DID* is pronounced even if it is within the TP-deletion, as shown in (7b). The source of deletion in (6b) is different from that of deletion in (6a) where the emphatic *do* does not exist and the TP is elided, as in (7a).

**Optional EPs:** Under the assumption that the presence of EPs is optional, we can account for various possibilities of VP-ellipsis in (8). Suppose that there is an EP in the matrix clause, as in (8a). The matrix VP is e-GIVEN, so the matrix  $v[E]$  agrees with  $uE$ . The matrix VP-ellipsis is derived. Suppose that there is an EP in the embedded clause, but not in the matrix clause in (8b). The embedded VP is e-GIVEN, and the embedded  $v[E]$  agrees with  $uE$  in the embedded EP. The embedded VP-ellipsis is derived. If there is no EP in the sentence, (8c) is derived. Let us reconsider (1). Sluicing over VP-ellipsis in the matrix clause is straightforward. (1c) is derived when the matrix clause has an EP. The matrix C[E] agrees with  $uE$ , which results in sluicing, as in (9). The matrix VP-ellipsis is blocked in (1b), since  $v[E]$  cannot agree with  $uE$ . Note that it is possible that only the embedded clause has an EP (i.e. no ellipsis in the matrix clause).  $uE$  in the embedded EP agrees with C[E], and deletion of the embedded TP is predicted to be possible in (10), contrary to fact. Merchant (2001) argues that the SpecCP position must be pronounced to license sluicing

in English, which rules out (10) where the intermediate SpecCP is occupied by a covert wh-operator. I argue that C still bears an E feature and agrees with  $uE$  in (10). Although C[E] would license sluicing, the ellipsis is unavailable due to inaudible wh-phrase in the intermediate SpecCP position. This prevents the next closest head  $v$  from agreeing with  $uE$  for VP-ellipsis in (11).

- (1) They said they heard about a Balkan language, but I don't know  
 a. which they said they heard about  $t^A$ .  
 b. \*which they did <say  $t'$  they hear about  $t^A$ >. VP-ELLIPSIS  
 c. which <they said  $t'$  they heard about  $t^A$ >. SLUICING (Merchant 2008: (26))
- (2) The E feature agreement



- (3) John met someone, but he doesn't remember  
 a.  $[_{EP} [uE:C] [_{CP} \text{who } C[E] <\text{he met } t^A>]]$ .  
 b. \* $[_{EP} [uE:v] [_{CP} \text{who he did } v[E] <\text{meet } t^A>]]$ .  
 c.  $[\emptyset [_{CP} \text{who he met } t]]$ .
- (4) a. *Chris* can play hockey, but I don't know  $[_{EP} [uE:v] [_{CP} \text{which sports } \textit{Mary} \text{ can } [_{vP} v[E] <\text{play } t^A>]]]$ .  
 b. John claimed he met a Red Sox player last night, but he can't prove  $[_{EP} [uE:v] [_{CP} \textit{whether} \text{ he did } [_{vP} v[E] <\text{meet a Red Sox player last night}>]]]$ .
- (5) Derivation of MaxElide effects  
 XP is elided at PF if i) there is an EP in the same clause that dominates XP, ii) XP is e-GIVEN, and iii) the sister head of XP bears an E feature which agrees with  $[uE: ]$ .
- (6) Some student solved the problem, but I don't know  
 a.  $\text{who } <[_{TP} t^A <[_{VP} t^A \text{ solved the problem}>]>$ .  
 b.  $\text{who DID } [_{TP} t^A <[_{VP} t^A <[_{VP} \text{ solve the problem}>]>]$ .
- (7) a. ... who C[E] <solved the problem> (=6a)  
 b. ... who C[E] <DID solve the problem> (=6b)
- (8) a. Ben knows that she invited Klaus, but  $[_{EP} uE [_{CP1} \text{her father doesn't } v[E] <\text{know } [_{CP2} \text{she invited Klaus}>]]]$ .  
 b. Ben knows that she invited Klaus, but  $[_{\emptyset} [_{CP1} \text{her father doesn't know } [_{EP} uE [_{CP2} \text{she did } v[E] <\text{invite Klaus}>]]]]]$ .  
 c. Ben knows that she invited Klaus, but  $[_{\emptyset} [_{CP1} \text{her father doesn't know } [_{\emptyset} [_{CP2} \text{she invited Klaus}]]]]]$ .
- (9)  $[_{EP} [uE:C] [_{CP} \text{which } C[E] <\text{they did } v[E] \text{ say } [_{CP} \text{they heard about } t^A>]]]$ .



AGREE

- (10) \* $[_{\emptyset} [_{CP} \text{which they said } [_{EP} [uE:C] [_{CP} t' C[E] <\text{they heard about } t^A>]]]]]$ .  
 (11) \* $[_{\emptyset} [_{CP} \text{which they said } [_{EP} [uE:C] [_{CP} t' \text{ they did } v[E] <\text{hear about } t^A>]]]]]$ .

