

**On the early and late insertion of roots and its consequences to gender-marking variation**  
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Distributed Morphology literature (Marantz 2001, Arad 2003) argues that roots lack category and syntactic features. However, recent work on gender and number-marking languages frequently arrives at the conclusion that grammatical gender must be a property of the nominal representation stored in the lexicon (Steriopolo and Wiltschko 2008, Kramer 2009), while other authors argue that it is a property of a higher functional head (Ritter 1993, 1995, Kramer 2015). In addition, some authors, most notably Harley (2014), argue for roots being able to take syntactic complements (contra Alexiadou 2014, Svenonius 2014, a.o.). We argue that the theoretical disagreement has an empirical underpinning. Roots may have syntactic features but this structural property interacts with derivational timing: if a root does not have any active syntactic features, then it must be Late Inserted. In contrast, roots with active syntactic features must be inserted early in order for those features to be available to syntactic computation. The empirical picture gets further complicated by the fact that the geometry of features on roots does not necessarily match the geometry of features in the extended functional domain. The empirical evidence comes from gender marking in Polish profession attributive nouns (PPAN).

While Polish common nouns display a three-way gender system, PPANs may only be masculine or feminine. There are three types of PPANs: Type I makes a systematic morphological distinction between masculine ( $\emptyset$ ) and feminine (primarily *-ka*) endings (kurier+ $\emptyset$  ‘courier.M’ vs kurier+ka ‘courier.F’). Type II and III are asymmetric: type II appears masculine and lacks feminine counterparts (premier ‘PM.M’ vs \*premier+ka ‘PM.M’); type III is inherently feminine and lacks masculine counterparts \*guwernant ‘governess.M’ vs guwernant+ka ‘governess.F’).

In addition, while all agreeing elements in the extended projection of nouns of type I and III must agree in gender with the noun, the extended projection of type II nouns may exhibit a mixed agreement. If the noun PM refers to a male, agreeing elements within DP are masculine (1a). However, the noun PM may refer to a female as well and then the agreeing elements may be feminine, as in (1b), while the noun itself appears to be masculine.

- (1) a. Ten nasz Premier b. Ta nasza Premier  
       that.M our.MPM.M           that.F our.F PM.M

The questions that arise are: (i) why do only nouns of type II allow the mixed pattern, as in (1), and (ii) why are nouns of type II and III resistant to gender variation?

We argue that the data provide evidence that there are two types of roots: (i) those that contain indices that trigger lexical determination (Acquaviva 2008, 2014), and (ii) those that contain actual grammatical features. We further argue that an index and a feature on a root can be associated with an agreement feature. Crucially, the root specification determines *when* the root gets inserted in the structure: Indexed roots (i) are always Late Inserted, whereas feature specified roots (ii) are Early Inserted. This timing distinction has consequences for the agreement properties of the extended functional projection and in turn provides evidence for the proposed model.

In this model, Early insertion is the equivalent of the old intuition that roots project functional architecture, whereas Late Insertion is that the equivalent of the intuition that Lexical items are inserted into a pre-constructed structural configuration. The paper thus contributes to the growing body of literature that explores how lexical feature variation affects properties of narrow syntax derivation and its interfaces (Miyagawa 2010, Wiltschko 2014).

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