

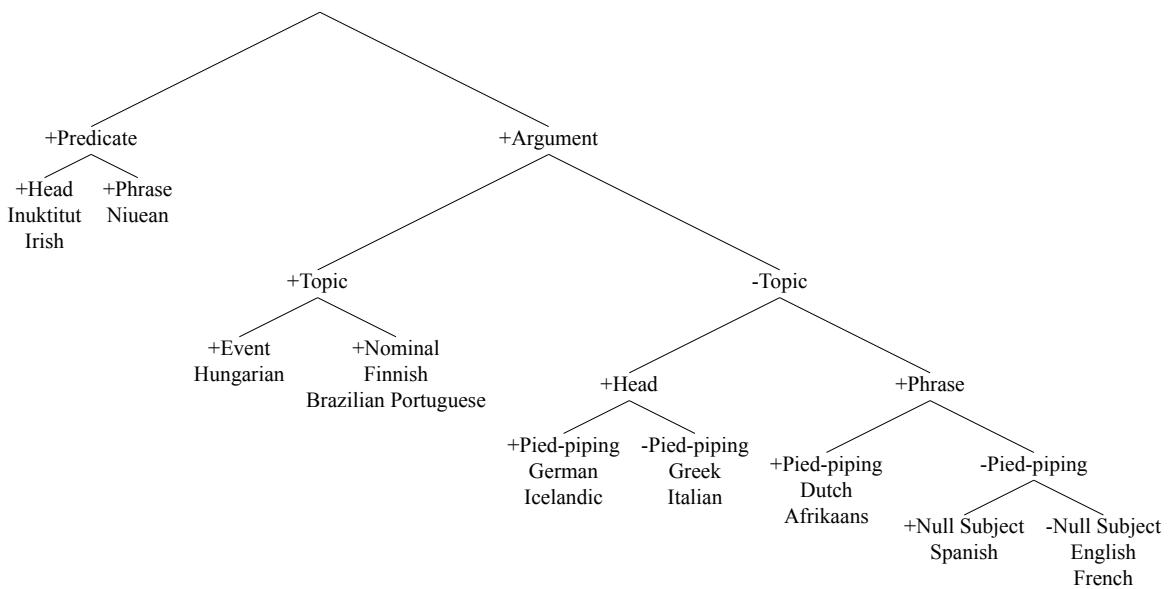
How to Organize Parameters: Accounting for Alternations in EPP Type

The Extended Projection Principle (EPP) was proposed by Chomsky (1981, 1982) to account for why subjects are obligatory in English clauses. I define the EPP as the obligatory move of some element into the inflectional domain. A variety of EPP types have been identified cross-linguistically: (a) Massam and Smallwood (1997) argue that the EPP in Niuean is checked by VPs; (b) Alexiadou and Anagnostopoulou (1998) argue that the EPP can vary in the size (X° or XP) of the element that checks it; (c) Davies and Dubinsky (2001) argue for a contrast between D- and V-prominent EPP; and (d) Richards and Biberauer (2005) claim that the EPP pied-pipes the entire vP in some Germanic languages. The EPP can thus vary in three dimensions: (a) nominal or predicate, (b) head or XP , and (c) pied-piping or not. Researchers have attempted to organize this variation by developing typologies that cross-classify two or three different parameters. For example, Biberauer (2010) argues that both verbal and nominal EPP each fully cross-classify with the size of the element that moves. This results in the range of languages shown in the table below.

	no V movement	V°-movement	VP-movement
no D movement	<i>unattested</i> no movement	<i>Celtic</i> V -to-T	<i>Niuean</i> vP to spec,TP
D°-movement	<i>unattested</i> D -to-T	<i>Null Subject Languages</i> V_D -to-T	<i>Malagasy</i> D -to-T vP to spec,TP
DP-movement	<i>English</i> DP to spec,TP	<i>French</i> DP to spec,TP V -to-T	

However, differences between languages are in reality more fine-grained. Although there is evidence of broad classes, like the difference between predicate-sensitive and argument-sensitive EPP, there is also wide variation within each broad class. This suggests that the parameters are organized hierarchically (cf. Dresher 2009 or Roberts 2012), perhaps as in (1), rather than in a fully cross-classified typology. We can make predictions about how these parameters are realized in language based on the structure of the hierarchical typology.

(1)



In some cases, there appear to be alternations between different EPP types intra-linguistically, both synchronically and diachronically. These alternations provide evidence that the different EPP types are equivalent on some level. For example, Arabic alternates between two different word orders with different EPP properties. The VSO word order, which has only partial subject-verb agreement, has an EPP like English, as shown by the insertion of the expletive in spec,TP in (2). Note that Aoun, Benmamoun, and Choueiri (2010) argue that the verb raises above T in the VSO word order.

- (2) Kaana hunaaka Taalib-un fii l-hadiiqati.
 was.3M.SG there student-NOM in the-garden
 'There was a student in the garden.' [Arabic; Aoun et al. 2010: 70]

In contrast, the SVO order has rich agreement and null subjects. As wth pro-drop languages (Alexiadou and Anagnostopoulou 1998), these have an EPP checked by a D° on the verb. Similarly, Richards and Biberauer (2005) argue that the word order alternation shown in (3) can be explained by either pied-piping the entire vP (3-a) or not (3-b) in order to target the subject DP in spec,vP.

- (3) a. Ek weet dat [_{vP} sy dikwels Chopin gespeel] het.
 I know that she often Chopin played has
 b. Ek weet dat [_{DP} sy] het dikwels Chopin gespeel.
 I know that she has often Chopin played
 'I know that she often played Chopin.' [Afrikaans; Biberauer 2010: 171]

However, not all alternations are created equal. Some alternations are systematic and widespread within a language, like the Arabic and Afrikaans cases described above, whereas others are more marginal, occurring in highly restricted syntactic contexts. For example, Italian has an EPP checked by rich agreement features on the verb (Alexiadou and Anagnostopoulou 1998); however, in the second person singular subjunctive, as shown in (4), agreement is impoverished and an overt pronoun is required (Cardinaletti 2004), indicating an alternation in EPP type.

- (4) Spera che *(tu) vinca.
 hope.3sg.pres that 2sg win.pres.sbj.sg
 'S/he hopes that you win.' [Italian; M. Ippolito, p.c.]

Likewise, it is possible for a topicalized PP to check the EPP in English as an intermediate step on its way to the topic position in light locative inversion constructions, as shown in (5) (Bruno 2016).

- (5) Into the room walks Robin.

I predict that alternations that are closely related in the typological hierarchy (i.e., sisters), should be more common cross-linguistically, and also more likely to be systematic, whereas alternations across more distant portions of the typological hierarchy are more likely to be rare and, when they occur, marginal.

References. Alexiadou & Anagnostopoulou. 1998. Parametrizing AGR. *NLLT* 16:491-539. • Aoun, Benmamoun, & Choueiri. 2010. *The syntax of Arabic*. • Biberauer. 2010. Semi null-subject languages, expletives, expletive *pro* reconsidered. *Parametric variation*, ed. Biberauer, Holmberg, Roberts, & Sheehan, 153-199. • Cardinaletti. 2004. Towards a cartography of subject positions. *The structure of CP and IP*, ed. Rizzi, 124-174. • Chomsky. 1981. *LGB*. • Chomsky. 1982. *Concepts and consequences*. • Davies & Dubinsky. 2001. Functional architecture and the distribution of subject properties. *Objects and other subjects*, ed. Davies & Dubinsky, 247-279. • Dressler. 2009. *The contrastive hierarchy in phonology*. • Massam & Smallwood. 1997. Essential features of predication in English and Niuean. *Proceedings of NELS* 27, ed. Kusumoto, 263-272. • Richards & Biberauer. 2005. Explaining *expl*. *The function of function words and functional categories*, ed. den Dikken & Tortora, 115-154. • Roberts. 2012. Macroparameters and minimalism. *Parameter theory and linguistic change*, ed. Galves, Cyrino, Sändalo, Lopes, & Avelar, 320-335.