Directionality and intervention in nominal concord: Evidence from Zazaki ezafe

Is nominal concord established in the syntax by Agree, the same feature copying mechanism that derives subject-predicate agreement, or postsyntactically by some other operation at PF (Mallen 1997, Carstens 2000, Baker 2008, Kramer 2009, Norris 2011)? Using our own fieldwork data, we investigate ezafe in Zazaki (Northwest Iranian, Indo-European) — a morpheme that occurs on dependents of the noun — whose form varies in number, gender, and case. We argue that this concord employs a mechanism with the properties of Agree, as restrictions on nominal concord in Zazaki echo restrictions on verbal agreement. It is sensitive to defective intervention and $\phi$-agreement is blocked with obliques. In addition, since Zazaki ezafe is sensitive to the syntactic features of material above and below it, we present an analysis that exploits the idea that Agree may operate both upward and downward (Nichols 1985, Adger 2003, Baker 2008), with a preference for the latter. As such, our proposal has repercussions for the analysis of concord and the formulation of Agree.

The ezafe morpheme. In many Iranian languages, dependents of the noun — adjectives and oblique arguments (e.g. possessors) — are introduced by the ezafe morpheme (Samiiian 1983, a.o.). While, in Zazaki, ezafe forms a constituent with the adjective (1a) or the possessor (1b), it cliticizes to the left (data not shown). Its form always varies with the $\phi$-features (gender and number) of the head noun — (1a) vs. (2a) and (1b) vs. (2b).

(1) a. [DP ju kutık $=o$ gırs] one dog =EZ.M.NOM big ‘a big dog (m.)’
   b. [DP ga $=\hat{\epsilon}$ Alik=i] ox =EZ.M.OBL Alik=OBL.M ‘Alık’s ox (m.)’
   (2) a. [DP a $=a$ spı]=e that.$f$ goat =EZ.F white=$f$ goat =EZ.F Alik=OBL.M ‘that white goat (f.)’
   b. [DP biz $=a$ Alik=i] ‘Alık’s goat (f.)’

With masculine nouns, which have a nominative-oblique case distinction, ezafe also agrees in case — but only when it introduces adjectives (3a–b). When it introduces possessors — which receive oblique case realized as the marker $=i$ — ezafe invariably takes the oblique form $=\hat{\epsilon}$ (4).

(3) a. [DP kutık $=o$ gırs] dog =EZ.M.NOM big ‘the big dog (m. nom.)’
   b. [DP kutık $=\hat{\epsilon}$ gırs]=i ‘the big dog (m. obl.)’
(4) [DP Kutık $=\hat{\epsilon}$ Alik=i] $=o$ gırs]=i gös töt wen-o. ‘Alık’s big dog (m. nom.) is eating meat.’

Basic proposal. Assuming that concord is derived by Agree (Mallen 1997, Carstens 2000, Baker 2008), we propose that the difference between adjectives and possessors arises because possessors independently receive oblique case, which ezafe Agrees with. We treat ezafe as a functional head (Ez) that takes a nominal dependent as complement. Possessors are introduced in Spec-PossP by a (null) P that assigns them oblique case (Sportiche 1998), while adjectives adjoin lower, to NP. The noun raises past both possessors and adjectives to a position below D (data not shown).

(5) a. $\phi$ [DP D N [EZP Ez [AP A]] (N)]
   b. $\phi$ [DP D N [EZP Ez [PP P DP]] (N)]
The Ez head bears unvalued ϕ- and case features. When Ez is merged with AP (5a), it probes downward into AP. Since adjectives have neither ϕ- nor case features, Ez must probe upward once EzP is merged in the noun phrase. It Agrees with N in ϕ-features and with D in case features, so that the form of ezafe covaries with the case of the entire DP (nominative or oblique). When, however, Ez merges with a possessor (5b), it can Agree downward with the oblique case feature on P, so that the form of ezafe is invariantly realized as the oblique. ϕ-agreement with the possessor is blocked, however, since obliques are inaccessible for agreement (cf. Rezac 2008, Bobaljik 2008, Preminger 2011), which can be shown independently in Zazaki (data not shown). Ez must then probe upward to Agree with N in ϕ-features. Since the valued case feature originates either below Ez (an oblique possessor) or above it (oblique case on the entire DP), Agree must be able to operate both downwards and upwards (Nichols 1985, Baker 2008).

**Intervention effects.** When there is more than one nominal dependent, they are each introduced by an ezafe that Agrees with the ϕ-features of N. Only the highest ezafe, however, can Agree in oblique case — regardless of whether it introduces an adjective (6a) or a possessor (6b). Subsequent occurrences of ezafe are realized in the nominative (=o).

(6) a. Ez \[ DP \hat{e} \] kutik \[ EzP = \hat{e} \] girs \[ EzP = o \] rnd] = i vinen-a.  
   I that dog =EZ.M.OBL big =EZ.M.NOM good = OBL.M see.PRS-1SG  
   ‘I see that big, good dog (m. obl.).’

b. Ez \[ DP \] kutik \[ EzP = \hat{e} \]  
   Alik=i] \[ EzP = o \] girs] = i vinen-a.  
   I dog =EZ.M.OBL Alik = OBL.M =EZ.M.NOM big = OBL.M see.PRS-1SG  
   ‘I see Alik’s big dog (m. obl.).’

We argue that this pattern arises from the defective intervention condition on Agree (Chomsky 2000). Regardless of whether the highest EzP values its case feature as oblique through upward or downward Agree, it acts as an intervener for all EzPs below it, which must probe upward to get case from D. Since they cannot be valued as oblique, they get default case, which in Zazaki is nominative. No intervention effect arises for ϕ-agreement, however, because valued ϕ-features originate lower than case. If N raises to its surface position through all intermediate functional projections (Travis 1984), there is a stage in the derivation for each Ez head where nothing intervenes between it and N.

**Theoretical consequences.** We have argued that concord in the Zazaki noun phrase is sensitive both to directionality and locality. These are properties of Agree, and so we conclude that the featural covariation found in nominal concord arises from this syntactic relation. If our account is on the right track, this suggests that Agree cannot be inherently directional — it is possible if the probe c-commands the goal or if it is c-commanded by it. Note, however, that Agree is triggered as soon as a licit goal is available. In a bottom-up derivation, this means that downward Agree is preferred when a choice arises, because this is the configuration is established first. As such, downward Agree takes precedence over upward Agree (cf. Béjar & Rezac 2009).