Gender parameters

How grammatical gender licenses nP-internal subjects

1. Two patterns. Many languages with grammatical gender/noun class allow possessors (Poss) and (for nouns that have them) external arguments (EA) to surface low, introduced by 'of' (see (1) and (2)). In genderless languages, this is less available as an option. Poss and EA typically surface high in DP and may control an overt correlate of subject agreement (SA) (see (3)).

(1) a. chi-tunzi ch-abwino **ch-a** **Lucy** [Chichewa]
7-picture 7-nice 7-of Lucy [adapting Carstens 1997:372]
'Lucy's nice picture' (Lucy = possessor/agent/theme) 7 = noun class (singular gender) 7

b. [$_{DP}$ chi-tunzi+Num+D [$_{NumP}$ <Num> [$_{nP}$ chabwino [$_{nP}$ cha Lucy <chitunzi>]]]
picture nice of L. (possessor or agent reading)

(2) El ataque **de Juan** a sí mismo [Spanish]
the.masc attack(masc) of Juan DOM himself [Lopez to appear pp. 4 and 13]
'Juan's attack on himself'

(3) a. **ben-im** yeni resm-*im* [Turkish]
I-gen new picture-*1S* [Kornfilt, personal communication]
'my new picture' (no 'of' strategy available)

b. [$_{DP}$ ben-im D$_{\text{u}\phi}$ [$_{NumP}$ Num [$_{nP}$ yeni <ben> resm-*im*]]] (affix-hopping puts uϕ of D on N)
I new picture-1S

c. a/the picture of Lucy (Lucy = theme/*possessor/*agent); the attack by/*of John

2. Analysis. Following Chomsky 2013, 2015, the labeling algorithm cannot identify the head in [XP, YP] configurations unless XP moves, or shared features serve as the label (see (4)a-c).

(4) a. [$_{\alpha}$ XP YP] impossible labeling configuration, as in [EA [v* [$_{VP}$ V ...]]]
b. [$_{YP}$ <XP> YP] XP raises. α can be labeled YP, as in [$_{vP}$ <EA> [v [$_{VP}$ V ...]]] *or*
c. [$_{\phi P}$ XP$^{\phi}$ YP$^{\phi}$] XP and YP share prominent features. α can be labeled ϕP,
as when T agrees with a subject in Spec, TP: [$_{\phi P}$ SU$^{\phi}$ T$^{\phi}$]

Overt concord on 'of' in Bantu languages reveals why Poss/EAs surface low in many languages with gender: shared gender features label nP with Poss/EA in situ (see (5)a-d), and (6)). Absent this possibility, nP-labeling requires Poss/EA raising; PossAgr labels DP (see (3)c).

(5) a. chi-tunzi **ch**-a Lucy b. *pre-concord*: [[of Lucy] [n$_7$ [picture$_7$]]] *agent or poss reading*
7-picture 7-of 1Lucy = [XP, YP] configuration; labelling impossible
'Lucy's picture'

c. *post-concord*: [[$_7$ of Lucy] [n$_7$ [picture$_7$]]] in situ Poss acquires g-n concord on 'of'

d. *post-labelling via 'shared prominent feature':* [$_{7P}$ [$_7$ of Lucy] [n$_7$ [picture$_7$]]]
(N-raising to D derives surface word order)

(6) **Labelling by concord**: In the configuration [XP, YP] where X or Y has intrinsic gender, concordial gender features shared between XP and YP may serve as label.

3. The grammar of concord. Concord feeds labeling and bleeds Poss/EA-raising and PossAgr, hence it is syntactic (contra Norris 2014), derived through Agree. Concord-bearers like D probe their complement domains at Merge, finding n/N. Concord on multiple items is possible since, following Nevins (2004), deactivation is a consequence of syntactic valuation. Nominal gender's

value is fixed (not determined through syntactic Agree) so it does not deactivate. As a valued, uninterpretable feature, it serves as an infinitely 'active' goal (Chomsky 2000, Boskovic 2009). Inflecting 'of' involves an (only) apparent abandonment of downward probing at Merge, since the seeming complement to 'of' in (1)/(5)a is the DP 'Lucy'. Following Toosarvandani & van Urk 2014, this DP is selected indirectly via a null, phasal P, so it transfers and 'of' cannot probe it; valuing 'of's uϕ from above is thus the only option (see also Bejar & Rezac 2009, Carstens 2016). Similarly, lacking a source of downward valuation, uϕ of A is inherited by AP and probes n/N, and uϕ–features of low items obtain number values from above when Num is merged.

4. Gender parameters. In explaining the opposing types of possessive constructions described above, the parametric choices in (7) are fundamental. I summarize the syntactic contrasts that (7)a,b yield in (8) and (9). Additional patterns emerge from variation on whether there is an inflecting 'of' in a given [+gender] language, whether the possessum raises also or instead of Poss, and other factors to be described in the accounts of Maasai and West Flemish, a.o.

(7) Gender parameters: (a) Does language L have grammatical gender? if yes, then:
(b) Does L share the gender feature of the possessum with the possessed, by concord?

(8) DP morpho-syntax in canonical Type 1 languages (Bantu, Middle Egyptian, Hindi/Urdu...)
(i) DP-internal concord on items that may include determiners, nominal modifiers, pronouns, and linkers.
(ii) lexical possessors and EAs may surface in low positions introduced by 'of'.
(iii) absence of the DP-internal subject-agreement type of inflection, henceforth PossAgr (possessor agreement).

(9) DP morpho-syntax in canonical Type 2 languages (Turkish, Hungarian, Yupik... Abney 1987)
(i) concord is absent
(ii) the highest argument raises to Spec of a high DP-internal functional category
(iii) the highest argument controls PossAgr (or Poss clitic; see den Dikken 1999).

Following Carstens (2010), a positive setting for (7a) also underlies multiple subject agreement in Bantu and Semitic languages (see (10) and (11)): N-to-D (see (1)b) makes N's gender visible to all clause-level probes and DP therefore infinitely active. Subject agreement hence patterns with DP-internal concord in being independent of Case in these languages, without recourse to a macro-parameter on whether agreement and Case are connected (Baker 2008).

(10) *pro khu*-b-ere *khu*-irukha [Lusaamia]
1pl-be-PST 1pl-run
'We were running.'

(11) al-bint-aani kaan-*ataa* *ta*-ktub-*aani* darsa-humaa [Standard Arabic]
the girls(F)-3D be+past-3FD 3F-write-D lesson-FD (D = dual)
'the two girls were writing their lesson'

5. Conclusions. Labeling theory explains how gender impacts the distribution of possessors and is thus supported. The parameter [+/-gender] strikingly partitions the syntax of possession; coupled with N-to-D, it does the same in the domain of subject agreement. Viewed as a property of *n,* gender is compatible with the Borer-Chomsky hypothesis (Kramer 2015), supporting reinterpretation of macro-parameters in micro- terms.