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Gender & PRO

Gender agreement of predicates and quantifiers in infinitives suggests, **(i)**, that movement analyses of control (Hornstein 1999, etc., Kayne 2002) do not eliminate the need for PRO, and, **(ii)**, that, in gender languages, PRO is like any other DP in having a Gender head that must be specified, either from within the DP or from the context (the latter being the case for DP_PRO as well as for overt personal pronouns). We illustrate this with facts from Icelandic, Italian and Polish. Much as case agreement in Icelandic infinitives (Sigurðsson 1991, 2008; see also Landau 2008), the gender agreement facts studied here suggest that PRO is partly feature independent, thus irreducible.

The question of how the Icelandic case facts bear on movement approaches to control has been widely debated, without any clear consensus (see, e.g., Landau 2003, Boeckx & Hornstein 2004). Quantifiers and adjectival predicates in infinitives have another property, though, that indicates that PRO may have "a life of its own": They show obligatory gender agreement even in the absence of an overt controller, as in (1) (where, for simplicity, the NOM case of the predicate *þreytt/þreyttur* is not glossed).

(1) Það var leiðinlegt [að vera svona **þeytt/þreyttur** í gær].   *Icelandic*
     it   was.3SG annoying to   be   so   tired.F.SG/M.SG in yesterday
     'It was annoying (for me) to be so tired yesterday.'

Gender agreement of this sort is widespread, commonly seen in for example Romance and Slavic languages, as exemplified in (2) and (3).

(2) È   stato fastidioso [essere così **stanca/stanco** ieri].   *Italian*
     is.3SG been annoying   be   so   tired.F.SG/ M.SG   yesterday
(3) Okropnie (mi)   było   [być tak **zmęczoną/zmęczonym** wczoraj].   *Polish*
     annoying (me.DAT) was.3SG be   so   tired.F.SG/ M.SG   yesterday

On a specific reading, as in (1)–(3), FEM.SG is obligatory for a female speaker, whereas MASC.SG is obligatory for a male speaker. This phenomenon is distinct from default gender marking in infinitives with generic or arbitrary reading (MASC.SG in Icelandic and Polish, MASC.PL in Italian, cf. Rizzi 1986). It is parallel to gender agreement in simple finite clauses with a "non-overtly gendered gender antecedent", such as 1st and 2nd person pronouns (and pro), as in (4) (parallel facts obtain in Italian and Polish):

(4) Ég var **þreytt/þreyttur** í   gær.   *Icelandic*
     I   was.3SG tired.F.SG/M.SG in yesterday
     'I was tired yesterday.'

The intriguing question raised by these facts is, plainly: How does the gender feature penetrate the predicates in (1)–(4)?

We propose an analysis with the following premises: **(i)**, adjectival predicates and quantifiers do not agree "on their own"; like attributive adjectives they agree with a gender-valued DP, either an overt or a silent one; **(ii)**, the gender-valued DP in question is PRO in (1)–(3) and the (non-overtly-gender-marked) 1SG pronoun *ég* 'I' in (4)); **(iii)**, Gender is not a lexical feature but a parametric functional feature (Kayne 2006; as other macro-parameters, the Gender Parameter 'generates' many hierarchically arranged micro-parameters, cf. Roberts & Roussou 2001, Biberauer et. al 2010, but we set that aside here).

Gender languages, we argue, have an unvalued Gender feature, G_α, in the left edge of any DP:

(5) [_DP … G_α … [_NP …]]

The value of G_α can be decided in a number of ways. First, if NP contains a lexical root, such as French feminine *mer* 'sea' or Italian masculine *mare* (cf. Kayne 2006) the noun containing the root ($[_N \sqrt{}\text{-n}]$), enters an idiomatic DP-internal Agree relation with G_α (("$[_N \sqrt{}\text{-mer}]$ agrees with G_{FEM}", etc.). Second, if NP does not contain any lexical root, as in personal pronouns and PRO/pro, the value of G_α is decided under control, either by an overt or a covert antecedent.

We see valuation of G_α under overt control across CP-boundaries at work in (6)–(7).

(6) Mynd**in**$_i$ er skemmtileg. Ég sá **hana**$_j$/*hann$_j$/*það$_j$ í gær.   *Icelandic*
     movie-the.F is fun.F   I   saw "her".F/*M/*N   in yesterday
     'The movie is fun. I saw **it** yesterday.'

(7) María$_i$ er skemmtileg.   Ég sá **hana**$_j$/*hann$_j$/*það$_j$ í gær.   *Icelandic*
     Mary is fun.F   I   saw her.F/*M/*N   in yesterday
     'Marie is fun. I saw **her** yesterday.'

Gender semantics is invisible in the local syntactic derivation of the sentence "I saw her/it yesterday". That is, the pronoun *hana* 'her/it' enters the derivation as a lexically empty and a featurally non-specified DP-shell of the form (5), copying the formal value FEM.SG from its overt antecedent in the course of the derivation, regardless of its semantic interpretation (cf. Kratzer 1998, in a different framework). At the semantic (C-I) interface, the FEM.SG value is interpreted as referring to a female being in (7); in (6) it is not.

A Gender antecedent (as e.g. *myndin* in (6)) and a gendered pronoun referring to it can be separated by a number of full CPs (this is not demonstrated here due to space limitations). The Gender D-edge feature is like an antenna, downloading or copying gender marking from its closest plausible antecedent (we will explicate the notion "closest plausible"). When the antecedent is non-overtly gender marked, as the pronoun *ég* 'I' in (4), the gender algorithm nevertheless interprets it as gendered, passing the so interpreted gender value on to the predicate (*þreytt(ur)* in (4)) under Agree. The same applies to PRO in the infinitives in (1)–(3).

What is the gender interpretation of *ég* in (4) and of PRO in (1)–(3) based on? We adopt the idea that the C-domain is rich (Rizzi 1997), and that it contains a Speaker feature as a C-probe, entering a +/− Agree relation with Spec-T (see Bianchi 2006, Giorgi 2010, Sigurðsson 2011, reviving some of the basic insights in Ross 1970). We also argue that it is this feature that is the gender antecedent of *ég* in (4) and of PRO in (1)–(3). This is sketched for PRO in (8) (SP$_G$ = "Speaker Gender", set by pragmatic context scanning, cf. Sigurðsson 2011).

(8) $[_{CP} \ldots \text{SP}_G \ldots [_{TP} \text{PRO} \ldots \text{tired}]]$
         |_____| |_____|
              Agree   *Agree*

The facts in (1)–(3) and (6)–(7) show, (**i**), that PRO can be syntactically feature specified even in the absence of an overt controller, and (**ii**), that gender can be controlled and copied from outside of CP − crucially, though, via phase edges. Evidently, movement approaches to control (reducing controlled PRO to a copy) do not eliminate the need for PRO and control.

The Speaker feature in the C-domain and the Gender feature in the D-domain are edge linkers in the sense of Sigurðsson 2011. Extending Sigurðsson's approach we argue that all phases are equipped with edge linkers that enable syntax to compute elements of a phase in relation to the next phase up or to the speech act context (adopting the suggestion that DPs are phases, see Chomsky 2007, inter alia). We also argue that edge linkers have visible phase-internal effects (e.g., gender agreement) but are themselves invisible at the phase edge by necessity. We present evidence from Germanic, Romance and Slavic languages that the D-edge Gender feature itself is never lexicalized although it may have radically visible phase-internal effects.