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Neuter is a lonely gender[1]

The goal:

- to challenge the view that the neuter gender is an anomaly in the gender system (for example, in Slavic languages) (e.g., Wechsler and Zlatić 2003; Arsenijević 2016; Despić 2017, among others)

The proposed alternative:

- the neuter gender in languages like Czech exhibits the expected behaviour of a semi-lexical feature associated with a nominal from the lexicon
- the syntactic behaviour of other genders is based on a more complex functional structure, possibly a result of a grammaticalization process tied to (re-)emergence of animacy
- diagnostic tests used to identify gender in fact target the complex feature structure, not grammatical gender per se

1 Why so much ado about neuter

What is gender:

- according to some authors, gender is akin to classifiers in classifier languages (e.g., Borer 2005)
- for other authors, gender is a grammatical feature associated with n (e.g., Kramer 2015) or a late insertion index associated with the root (e.g., Acquaviva 2014)
- the debated distinction between grammatical and semantic gender, and other aspects of mapping syntactic structures won't play a central role in this presentation (but see, for example, Kučerová 2018)

[1] Some of the question presented in this talk have been on my mind since my undergraduate thesis (Kučerová, 2000), and there are many people to thank for their discussion of related ideas over the years. The work has benefited from two grants funded by the Social Sciences and Humanities Research Council of Canada (#435-2013-1756, PI: Susana Béjar; co-investigators: Ivona Kučerová and Arsalan Kahnemuyipour, Copular agreement systems; #435-2016-1034 ; PI: Ivona Kučerová, Grammatical vs semantic features: the semantics-morphology mapping, and its consequences for syntax). I am grateful to Petr Karlík, Jarmila Panevová, Saša Rosen, Vladimír Petkevič Oldřich Uličný, Jitka Bartošová, Susana Béjar, Adam Szczegielniak for literally years of discussions. Special thanks go to my students who have taught me about Afro-Asiatic languages: Aya Zarka, Ethan Stollar, Aniqa Faiz, Jamie Yu, Anne Houser, Audrey Ho, Torin Ong. Intellectually I am indebted mainly to the work of Paolo Acquaviava, Hagit Borer, Morris Halle, Roman Jakobson, Ora Matushansky, David Pesetsky, Mark Baker, Susana Béjar, Elizabeth Cowper, Abdelkader Fassi Fehri, Heidi Harley, Ruth Kramer, Ian Roberts, Daniel Harbour, Andres Holmberg, Jonathan Bobaljik, Alan Munn, Betsy Ritter, Martina Wiltschko and Susi Wurmbrand. Special thanks go to Betsy Ritter and Alan Munn. The responsibility for the remaining errors and unresolved puzzles falls entirely upon me.

1.1 Puzzle: Agreement with coordinated neuter conjuncts

- descriptively, Czech is a four-way gender system (manifested in agreement and distinct declension classes)
  - masculine animate
  - masculine inanimate
  - feminine
  - neuter

Morphosyntactic correlates of gender:

- in languages like Czech, the central language of this talk, gender correlates with declension paradigms (with more than one declension paradigm per gender) and has a one-on-one morpho-syntactic correlate in agreement and concord within and outside of a noun phrase (more examples in the appendix)

(1) *Singular nominative paradigm (Standard Czech)*

a. t-**en** roztomil-**ý** průvodce spal
that.NOM.M.SG cute.NOM.MA.SG guide.NOM.3.M.SG slept.PP.M.SG
'that cute guide slept'

b. t-**a** roztomil-**á** nájemnice spal-**a**
that.NOM.F.SG cute.NOM.F.SG female_renter.ACC3.F.SG.NOM.3.F.SG slept.PP.F.SG
'that cute female renter.ACC3.F.SG slept'

c. t-**o** roztomil-**é** děvče spal-**o**
that.NOM.N.SG cute.NOM.N.SG girl.NOM.3.N.SG slept.PP.N.SG
'that cute girl slept'

d. t-**en** star-**ý** hrad shořel
that.NOM.M.SG old.NOM.MI.SG castle.NOM.3.M.SG burned_down.PP.M.SG
'that old castle burned down'

(2) *Singular accusative paradigm (Standard Czech)*

a. t-**oho** roztomil-**ého** průvodce
that.ACC.M.SG cute.ACC.MA.SG guide.ACC.3.M.SG
'that cute guide'

b. t-**u** roztomil-**ou** nájemnici
that.ACC.F.SG cute.ACC.F.SG female_renter.ACC3.F.SG
'that cute female renter'

c. t-**o** roztomil-**é** děvče
that.ACC.N.SG cute.ACC.N.SG girl.ACC.3.N.SG
'that cute girl'

d. t-**en** star-**ý** hrad
that.ACC.M.SG old.ACC.MI.SG castle.ACC.3.M.SG
'that old castle'

- in plural agreement, the distinction between feminine and masculine inanimate is neutralized in agreement

(3) 4-way gender system in singular[2]:

a. Viděla jsem Marii namalovanou na obraze.
saw.PP AUX.1SG Marie.F.SG.ACC painted.F.SG.ACC on picture
'I saw Marie depicted in the painting.'

b. Viděla jsem Petra namalovaného na obraze.
saw.PP AUX.1SG Petr.MA.SG.ACC painted.MA.SG.ACC on picture
'I saw Petr depicted in the painting.'

c. Viděla jsem hrníček namalovaný na obraze.
saw.PP AUX.1SG teacup.MI.SG.ACC painted.MI.SG.ACC on picture
'I saw a teacup depicted in the painting.'

d. Viděla jsem kotě namalované na obraze.
saw.PP AUX.1SG kitten.N.SG.ACC painted.N.SG.ACC on picture
'I saw a kitten depicted in the painting.'

(4) 3-way gender system in plural:

a. Dívky byly namalované na obraze.
girls.F.PL.NOM were.F/MI.PL painted.F/MI.PL.NOM on picture
'Girls were depicted in the painting.'

b. Chlapci byli namalováni na obraze.
boys.MA.PL.NOM were.MA.PL painted.MA.PL.NOM on picture
'Boys were depicted in the painting.'

c. Hrníčky byly namalované na obraze.
teacups.MI.PL.NOM were.F/MI.PL painted.F/MI.PL.NOM on picture
'Teacups were depicted in the painting.'

d. Děvčata byla namalována na obraze.
girls.N.PL.NOM were.N.PL painted.N.PL.NOM on picture
'girls were depicted in the painting.'

- a surprising pattern emerges in agreement with singular conjuncts
- even though there is a neuter plural agreement, the agreement with two coordinated neuter singular nominals is not neuter plural but the syncretic feminine plural/masculine inanimate plural
- neuter thus differs from other genders that display an expected plural agreement pattern

(5) a. Maruška a Františka byly namalovány na obraze.
Maruška.F.SG.NOM and Františka.F.SG.NOM were.F/MI.PL painted.F/MI.PL.NOM on picture
'Maruška and Františka were depicted in the painting.'

b. Talířek a hrníček byly namalovány na obraze.
saucer.MI.SG.NOM and teacup.MI.SG.NOM were.F/MI.PL painted.F/MI.PL.NOM on picture

[2]Demonstrated on object-oriented depictives to highlight distinction between inanimate and animaate masculine; masculine animate and inanimate is syncretic in nominative.

'A saucer and a teacup were depicted in the painting.'

c. Petr a Pavel byli namalováni na
Petr.MA.SG.NOM and Pavel.MA.SG.NOM were.MA.PL painted.MA.PL.NOM on
obraze.
picture
'A saucer and a teacup were depicted in the painting.'

d. Kotě a štěně *byla/ byly
kitten.N.SG.NOM and puppy.N.SG.NOM *were.N.PL/ were.F/MI.PL
*namalována/ namalovány na obraze.
*painted.N.PL.NOM/ painted.F/MI.PL.NOM on picture
'A kitten and a puppy were depicted in the painting.'

- neuter plural agreement with a coordination is possible only when both conjuncts are neuter plural

(6) Děvčata a štěňata byla namalována na obraze.
girls.N.PL.NOM and puppy.N.PL.NOM were.N.PL painted.N.PL.NOM on picture
'Girls and puppies were depicted in the painting.'

- existing literature on Slavic attributes the behaviour either to markedness or gender underspecification, largely because of neuter plural being syncretic with feminine singular[3]
- in Czech, agreement with a neuter plural nominal in nominative is syncretic with feminine singular
- but in other cases feminine singular and neuter plural agreement/concord within a DP clearly depart

(7) a. Pozorovali jsme tu malou dívku.
watched AUX.1PL this.F.SG. good.F.SG. girl.F.SG.ACC
'We watched the small girl.'

b. Pozorovali jsme ta malá děvčata.
watched AUX.1PL this.N.PL small.N.PL girls.N.PL.ACC
'We watched the small girls.'

- also, in agreement with non-nominative nominals attested in agreeing depictives, the neuter plural agreement pattern clearly emerges as distinct from feminine singular

(8) Accusative agreement:

a. Viděla jsem Marii namalovanou na obraze.
saw.PP AUX.1SG Marie.F.SG.ACC painted.F.SG.ACC on picture
'I saw Marie depicted in the painting.'

b. Viděla jsem děvčata namalovaná na obraze.
saw.PP AUX.1SG girls.N.PL.ACC painted.N.PL.ACC on picture
'I saw girls depicted in the painting.'

[3]Most literature looks at Serbo-Croatian but the pattern there plays out somewhat differently than in Czech. See Wechsler and Zlatić 2003; Alsina and Arsenijević 2012; Arsenijević 2016; Despić 2017 for details.

(9) Dative agreement:

a. Věřila jsem Marii namalované na obraze.
trusted.PP AUX.1SG Marie.F.SG.DAT painted.F.SG.DAT on picture
'I trusted Marie depicted in the painting.'

b. Věřila jsem děvčatům namalovaným na obraze.
trusted.PP AUX.1SG girls.N.PL.DAT painted.N.PL.DAT on picture
'I trusted girls depicted in the painting.'

1.2 Neuter as a default gender as an explanation of the coordination pattern?

Neuter as a default gender:

- neuter cross-linguistically displays properties of a morphological realization of a default gender value (see, for instance, Wechsler and Zlatić 2003; Kramer 2009; Arsenijević 2016; Despić 2017, among others)
- in the absence of a suitable goal (in Czech: Nominative DP; NOM) agreeing predicates are marked as N.SG (failed Agree; Béjar 2003 and much follow up work)
- predicates with quirky subjects, sentential subjects, and infinitival subjects, weather predicates, impersonal passives etc.

(10) Udělalo se mu špatně.
made.PP.[N.SG] REFL him sick.ADV
'He became sick.'

(11) Pršelo.
rained.PP.[N.SG]
'It rained.'

(12) Tancovalo se.
danced.PP.[N.SG] REFL
'They danced.'

(13) Učit se na zkoušku bylo nudné.
to-study REFL at exam was.PP.[N.SG] boring.[N.SG]
'To study for an exam was boring.'

- can we use the observation that neuter is used as the morphological default in the absence of a suitable probe as an explanation for the coordination facts?
- proposed, for example, in Despić (2017) for Serbo-Croatian

Feature resolution in mixed gender coordinations:

(14) (modelled after Panevová and Petkevič 1997):

1st conjunct	2nd conjunct	gender
MA	α	MA, where $\alpha \in \{$MA, MI, F, N$\}$
MI	α	MI/F, where $\alpha \in \{$MI, F, N$\}$
F	α	MI/F, where $\alpha \in \{$MI, F, N$\}$
N.SG	N.SG	MI/F
N.SG	N.PL	MI/F
N.PL	N.PL	N

(15) Petr a Pavla randili.
Petr.MA.SG and Pavla.F.SG dated.PP.MA.PL
'Peter and Paula dated.' MA + F = MA

(16) Kotě a pes jedli ze stejné misky.
kitten.N.SG and dog.MA ate.PP.MA.PL from same bowl
'The kitten and the dog ate from the same bowl.' N + MA = MA

(17) Kotě, kočka a pes jedli ze stejné misky.
kitten.N.SG cat.F.SG and dog.MA ate.PP.MA.PL from same bowl
'The kitten and the dog ate from the same bowl.' N + F + MA = MA

(18) Kotě a dobytek jedly ze stejné misky.
kitten.N.SG and cattle.MI.SG ate.PP.MA.PL from same bowl
'The kitten and the cattle ate from the same bowl.' N + MI = MI

(19) Kotě a kočka jedly ze stejné misky.
kitten.N.SG and cat.F.SG ate.PP.F.PL from same bowl
'The kitten and the dog ate from the same bowl.' N + F = F

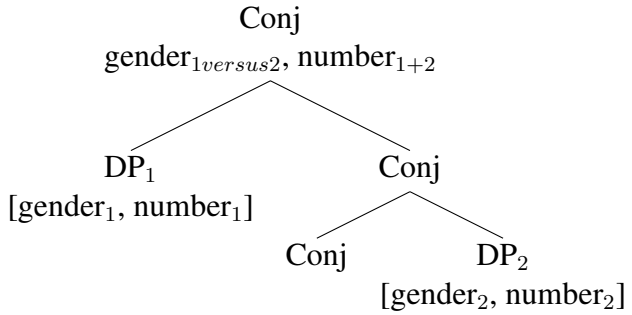
(20) Kočka a dobytek jedly ze stejné misky.
cat.F.SG and cattle.MI.SG ate.PP.MI/F.PL from same bowl
'The kitten and the dog ate from the same bowl.' F + MI = MI/F

A toy model of feature resolution (for demonstration purposes only)

- based on the coordination facts, we can construe a model that follows a number of rules
- the label of the coordinated DP separately tracks number and gender, where the value of gender is comparison based (see, for example, the entailment system in Béjar 2000 and another system of feature comparison in Deal 2016) and the value of number is additive (e.g., because it is based on on semantic plurality, Munn 1993; Bošković 2009; Bhatt and Walkow 2013)[4]

[4]In this manner, gender behaves like person which is not surprising because as we see gender resolution is a side product of person resolution. Thanks to Alan Munn for bringing my attention to the parallel. For theories that account for this contrast by proposing that features of a coordinated DP are computed as a combination of morpho-syntactic and semantic features see (Farkaş and Zec, 1995; King and Dalrymple, 2004; Heycock and Zamparelli, 2005, among others). For agree-only based proposals see, e.g., Marušič et al. (2015).

(21)



(22) The gender computation in the coordination label where the number is plural:

a. neuter only, i.e., no valued gender value detected → MI/F.PL
b. only 'unmarked', i.e., not masculine animate but valued, gender detected (masculine inanimate, feminine) → MI/F.PL
c. marked valued gender detected (masculine animate) → MA.PL
d. when all conjuncts are neuter plural, there is no systematic computation; instead, the values of number and gender get copied

Suspect:

- in singular, gender is a four-way system and the regular plural system is a 3-way system → why is the plural gender reduced to a two-way system in the coordinations (in the derivational part)?
- why do we need the extra line where neuter plural is not result of the same derivational mechanism?

Neuter plural not really semantic plurality?

- it has been proposed that neuter plural is not a plurality based on individuals but instead it is a collective or such (e.g., Arsenijević 2016)
- however, Czech neuter plural nominals do not exhibit any semantically irregular behaviour
- they take regular numerals that combine with count nouns, i.e., numerals counting individuals, instead of special numerals used for kinds, collectives and mass nouns

(23) a. tři štěňata
three puppies
'three puppies (individuals)'
b. troje štěňata
three puppies
'three kinds of puppies'

(24) a. *tři listoví
three foliage.COLL/MASS
'three foliages (individuals)'
b. troje listoví
three foliage.COLL/MASS
'three kinds of foliage'

- they combine with distributive predicates and trigger plural agreement in quantifiers like many, all
- the pattern is especially visible in Colloquial Czech that displays syncretism across feminine, inanimate masculine and neuter plural gender forms
- neuter plural patterns with other plurals, not with singulars or collectives

(25) a. všechna/ všechny děvčata
all.N.PL/ all.SYNC_PL girls
'all girls'
b. *každá děvčata
every.N.PL girls.N.PL
'*every/each girls'
c. každé z děvčat
every from girls
'each of the girls/every one from the girls'

(26) a. všechny dívky
all.F.PL girl.F.PL
b. *každé dívky
every.F.PL girls.F.PL
'every/each girls'
c. každé z děvčat
every from girls
'each of the girls/every one from the girls'

(27) a. všechno listoví
all.N.SG foliage.COLL
'all foliage'
b. každé listoví
every.N.SG foliage.COLL
only as 'every/each kind of foliage'
c. každé z listoví
every from foliage.COLL
'each/every of the foliage kind'

Interim conclusion:

- Czech neuter displays a default gender property in agreement patterns but also an unexpected behaviour in agreement with coordinations
- the coordination pattern cannot be attributed to syncretism with feminine singular, neither does Czech neuter plural display irregular semantic properties
- neuter plural nouns behave like regular count nouns; coordination would be the only environment in which neuter plural nouns didn't correspond to semantic plurality

1.3 Feature resolution is not about gender

- the problem is that the assumption that coordination label refers directly to gender and number features cannot be correct
- as discussed in Kučerová (2017), the reported resolution pattern is attested only when the agreeing predicate probes for person feature (e.g. Czech past participles)
- when the probe only has unvalued gender and number feature (for example adjectival predicates), feature resolution changes
- for combinations of inanimate genders speakers provide one agreement form but judge it as downgraded
- for combinations of masculine animate and neuter, speakers fail to identify plausible agreement (agreement gaps; labelled as ⊛)[5]

Feature resolution without a person probe (adjectival predicate agreement)

(28) Petr a Pavla byli unavení.
Petr.MA.SG and Pavla.F.SG were.PP.MA.PL tired.PP.MA.PL
'Peter and Paula were tired.' MA + F = MA

(29) Pes a kočka byli unavení.
dog.MA.SG and cat.F.SG were.PP.MA.PL tired.PP.MA.PL
'A/the dog and a/the cat were tired.' MA + F = MA

(30) ??Kočka a kotě byly unavené.
cat.F.SG and kitten.N.SG were.PP.F.PL tired.PP.F.PL
'A/the cat and a/the kitten were tired.' F + N = ??MI/F

(31) ??Dobytek a kotě byly unavené.
cattle.MI.SG and kitten.N.SG were.PP.MI.PL tired.PP.MI.PL
'The cattle and the kitten were tired.' MI + N = ??MI/F

(32) ??Dobytek a kočka byly unavené.
cattle.MI.SG and cat.F.SG were.PP.MI.PL tired.PP.MI.PL
'The cattle and the cat were tired.' MI + F = ??MI/F

(33) ⊛ Pes a kotě byli ??unavené/ ??unavení/
dog.MA.SG and kitten.N.SG were.PP.MA.PL tired.PP.MI/F.PL/ tired.PP.MA.PL/
??unavená.
tired.PP.N.PL
Intended: 'A/the dog and a/the kitten were tired.' MA.SG + N = ???

(34) ⊛ Psi a Děvčata byli ??unavené/ ??unavení/
dogs.MA.PL and kitten.N.SG were.PP.MA.PL tired.PP.MI/F.PL/ tired.PP.MA.PL/
??unavená.
tired.PP.N.PL
Intended: 'The dogs and the girls were tired.' MA.PL + N.PL = ???

[5] Or a derivation crash, if you wish. Thanks to Alan Munn for suggesting this symbol.

Syncretism at play?

- could the successful resolution involve syncretism or some other morphological process that 'saves the day'?
- morphological explanation unlikely
- PP forms highly syncretic but there is syncretism in the adjectival paradigm as well
- in fact, the downgraded forms *are* syncretic forms
- note also, that the morphological distinction between MA and N is the same for past participles and adjectives, yet only the adjectival agreement has a gap

Gender resolution as a side-product of person agreement

- irrespective of how agreement with coordinations and related constructions work, coordination feature resolution patterns are not about a syntactic operation targeting a grammatical gender feature
- instead, the coordination patterns and the irregular behaviour of neuter is a side-product of a syntactic process targeting the person feature (see Kučerová 2017 for a detailed argumentation)
- that is, the problem is not with neuter gender as such but with the association of neuter and person
- other grammatical genders bundle with the person feature (or may bundle) but neuter does not

Questions arising:

- why doesn't neuter bundle with person as well?
- or perhaps better, why do the other genders bundle or may bundle with person?
- not all 3-way or 3plus-way gender systems display bundling of grammatical gender with other features
- why do we see feature bundling of grammatical gender with person in Czech but not, let's say, in German?

2 Feature bundling as a result of grammaticalization of animacy?

Observation:

- languages that display a special behaviour of grammatical gender features, meaning, languages where grammatical gender appears to bundle with other features within the extended nominal domain (primarily, person, number but also case, for example in Moroccan Berber), are languages in which there is a distinct gender value for an animate gender
- furthermore, in the two language families behind this talk (Slavic & Afro-Asiatic), the animate gender (masculine animate) arose as part of grammaticalization of an older gender system

Grammaticalization for animacy

- historically, noun classes in Proto-Indo-European were originally based on animacy (±animacy)
- grammatical gender as a three-way distinction emerged only in their later development, with the animate gender splitting into feminine and masculine (Brugmann, 1891; István, 1959; Matasović, 2004, among others)
- animacy in some Slavic languages re-emerged only later; for Czech, the change took place from the 15th to the 16th century (see e.g., Lamprecht 1986, 133–137)

Syntax of grammaticalization?

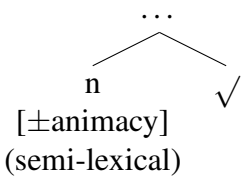
- grammaticalization as a process that creates a more complex functional structure, both syntactically and semantically
- von Fintel (1995): lexical or semi-lexical categories get grammaticalized as functional categories/meanings
- Roberts and Roussou (2003): the process of grammaticalization is technically based on head movement
- since functional heads are bundles of feature or maybe a single feature, I suggest that grammaticalization can arise via feature movement as well

Grammaticalization of gender

- technically, a feature movement of semi-lexical gender feature to a higher functional projection
- the proto-Indo-European gender system was closely tied to lexical semantics → lexical-functional representation (not a genuine syntactic feature, yet)

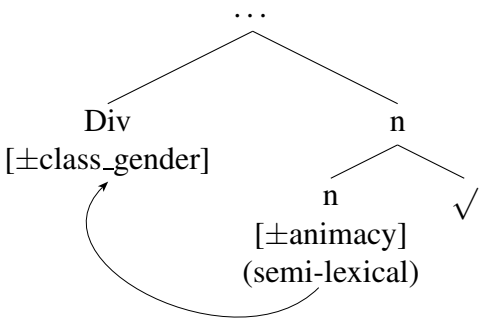
- technically, a gender index associated with the root or perhaps a nominalizing feature associated with n[6]

(35) A simplified structure of proto-Indo-European gender



- if all grammaticalization involves head or feature movement to a higher functional projection, then the emergence of grammatical gender system as a three way system must have involved a feature movement from n to a higher functional projection
- adopting Borer (2005), such a movement targeted the Div head, the locus of nominal countability and classifiers
- $\rightarrow$ emergence of a grammatical gender as a classifier (still preserved in languages like German or Icelandic)

(36) A simplified structure of emergence of the classifier gender system

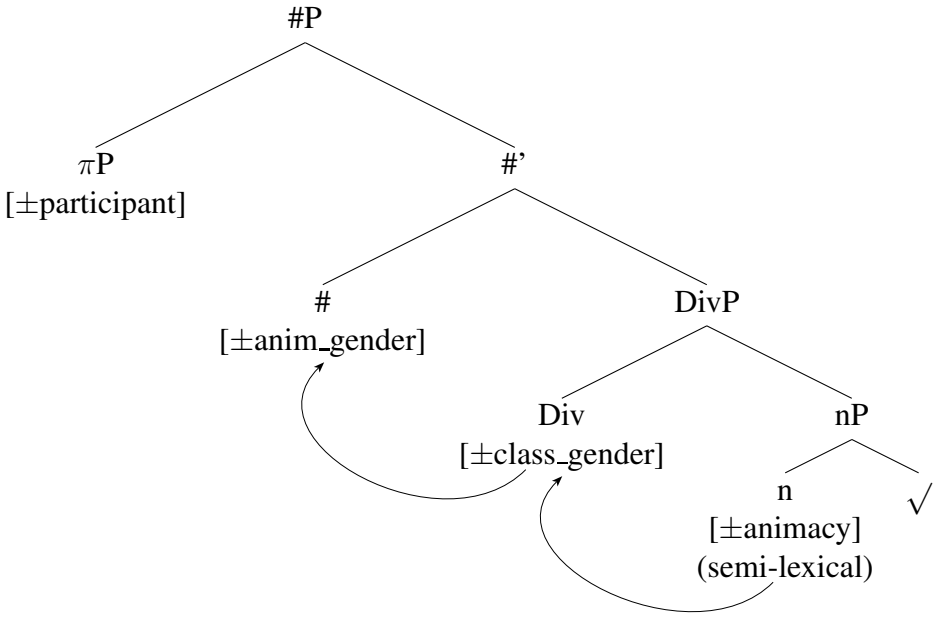


- the emergence of animacy triggered yet another round of feature movement $\rightarrow$ to the cardinal projection (#P of Borer 2005)
- crucially, the #P projection is also the locus of the person feature (den Dikken, 2019)[7]
- that is, the second feature movement brings the gender feature to the local domain of the person feature

[6]This effectively looks like the type of representation proposed for gender, for example, by Kramer 2009, 2015; Acquaviva 2014, 2019

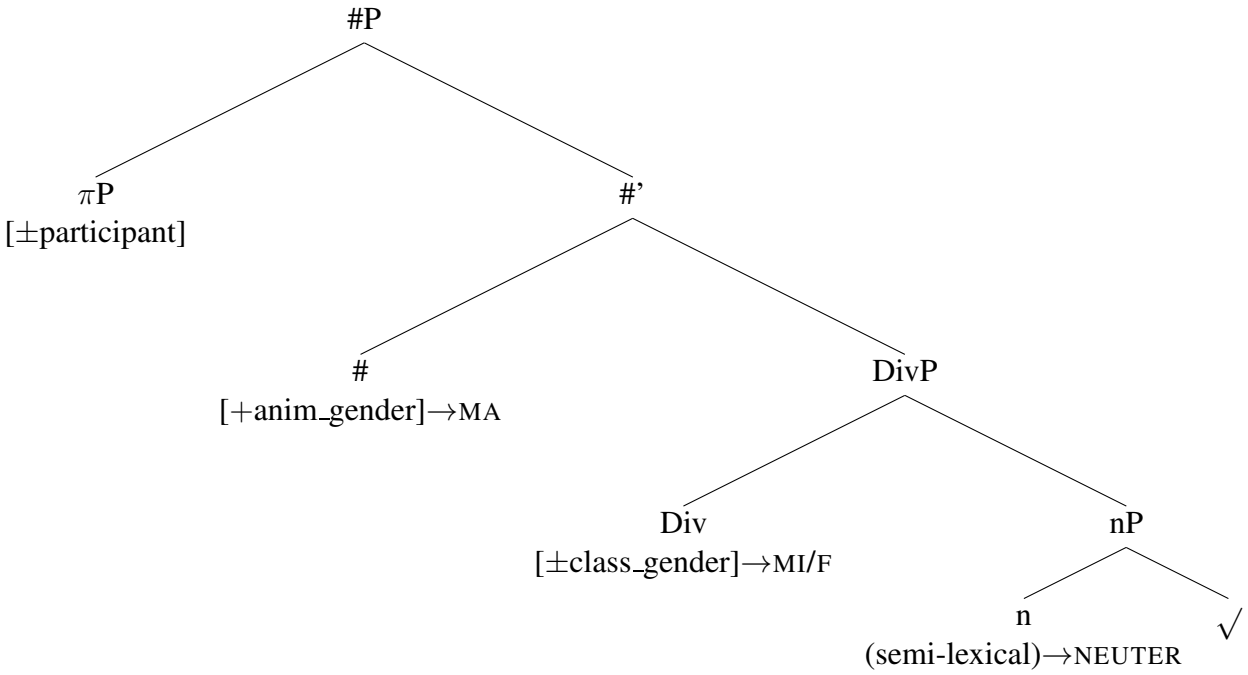
[7]den Dikken (2019) argues for πP to be in the specifier of DivP, however, his structure collapses Borer's Div and Cardinal (#) projection.

(37) A simplified structure of emergence of a mixed animacy-classifier gender system



- the idea is that different gender values do in fact associate with distinct functional projections[8]
- different morphological realizations then associate with these distinct structural positions

(38) Gender realization in a language like Czech



[8]This idea shares properties with the distributed gender proposal of Fassi Fehri (2017, 2018).

2.1 Consequences

- while singular nouns reflect the full idiosyncratic 4-way gender system, plural agreement refers to feature bundles, reflecting countability (div), cardinality (#), and person (for semantic plurality)
- to see how the system works, let's first look at a German-like system

Classifier gender only language

- in Borer's system, English plural marking, and I suggest that also German plural marking, instantiates countability (DIV, +count); i.e., the plural interpretation is only an implicature
- consequently, other Div based elements (e.g., English indefinite article) are in the complementary distribution with plural marking
- if German gender is located on Div, i.e., it is a classifier, we expect it to be in the complementary distribution with plural marking
- German indeed doesn't have gender in plural
- in other words, under the current proposal, the lack of gender distinction in plural in German and other languages is not a morphological fact but a syntactic fact[9]

Plural marking in Czech

- in Czech, neuter is too low in the structure to be in the complementary distribution with plural marking on Div, i.e., it can further combine (but does not have to) with +count DIV $\rightarrow$ plural marking on neuter nouns is countability
- masculine inanimate and feminine are in Div, i.e., in the complementary distribution of plural marking as countability $\rightarrow$ the plural marking with MI and F is a morphological reflex of number (cardinality)
- since person associates with a semantic index (e.g., Kučerová 2018, 2019) and semantic index underlies semantic plurality $\rightarrow$ masculine animate plural agreement is a reflex of semantic plurality

What about neuter?

- since neuter is not in Div[10], it requires Div to be countable
- consequently, singular neuter is well suited to form nominal structures that are not countable (collectives and such), and it cannot form semantic plurality without an additional structural operation $\rightarrow$ only coordination of plural neuters yields plural neuters because only plural neuters have a countable structure

[9] Russian might be this type of language as well.
[10] Here my reasoning meets Arsenijević (2016) who argues that neuter is not a classifer.

2.2 Other syntactic signs of a structurally complex gender

- since the person feature is located in the specifier of the #P (cardinality) (see, den Dikken 2019), gender feature that undergoes feature movement to # is in a local relation with number and person
- thus, we expect that grammaticalization of gender affects other syntactic features in #P

Some examples:

- emergence of animacy in the gender system of Czech is tied to changes in case system (15th to 16th century; see e.g., Lamprecht 1986, 133–137); in Polish, we also see changes in the case system displayed in numerals, e.g., (Miechowicz-Mathiasen and Dziubała-Szrejbrowska, 2012)
- in Arabic, feminine gender (in many respects the structural counterpart of Slavic neuter) when associated with a higher functional projection obtains distinct functional meanings (diminution, individuation, group formation; e.g., Fassi Fehri 2017, 2018)
- in gender systems that didn't incorporate animacy, e.g., German, gender does not interact with other features within the nominal domain

Feature movement as adjunction:

- the proposal here is that gender has developed from a lexical or a semi-lexical object to a proper syntactic feature
- consequently, we expect to see a familiar syntax behaviour
- if feature movement as part of grammaticalization yields an adjuction-like structure, we expect such complex feature structures to behave like adjuncts
- for example, Steriopolo and Wiltschko (2010) argues that in some languages gender is a modifier feature, while in others it is a projecting feature
- in fact, within the same language, what appears the same gender feature displays either of the syntactic behaviours, depending on its functional status
- for example, in some Arabic dialects (here, Levantine Arabic), the feminine gender can derive a female denoting nominal (akin to Pesetsky 2013's zh morpheme), or it can denote a higher degree of diminution
- although the morphological form is the same, only the zh-like feminine triggers feminine agreement
- the diminutive feminine is an adjunct feature, and agreement is based on the gender of the base (data from Aya Zarka, p.c.)

(39) a. arnab 'rabbit.M.SG' → arnub 'rabbit.DIM.M.SG'
b. (i) → arnub-i 'rabbit.DIM.M.SG-F:SG; a cute small rabbit'

(ii) → arnub-i 'rabbit.DIM.M.SG-F:SG; a female bunny'

(40) al-arnub-i nam-et b-Hodn-ii
the-rabbit.DIM.M.SG-F:SG sleep.3PST-F.SG in-lap-my
'The she-bunny slept in my lap.'

(41) al-arnub-i nam b-Hodn-ii
the-rabbit.DIM.M.SG-F:SG sleep.3M.SG.PST in-lap-my
'The cute bunny slept in my lap.'

Locality restrictions

- syntactic features and feature movement are subject to locality restrictions, and restrictions on spell-out domains
- consequently, a gender feature might project from one configuration but not another
- however, if there is an agree relation with a higher syntactic structure, such a locality restriction should be lifted
- we might see such a behaviour in certain number formations in Arabic dialects
- for example, in Lebanese and Levantine Arabic, a high location of feminine gender can form an individuating or a group forming structure but these singular structures can be pluralized only if they enter an agree relation with a higher functional head (Ouwayda, 2014; Borer and Ouwayda, 2010)

3 To conclude

- syntactic properties of gender in a language like Czech might be a result of multiple stages of grammaticalization that turned an originally lexical feature into a syntactic feature proper by a series of feature movements to higher functional projections
- the contemporary gender system reflects the gradual increase of structural complexity
- consequently, some gender features (such as Czech neuter) only display gender feature properties while genders that reflect a more complex structure building effectively form feature bundles
- the sketch of a system presented here attempts to create a predictive model of gender feature within one language but allows for modification to account for a variety of other gender systems as well

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A Basic facts about Czech agreement

- NUMBER: singular (SG), plural (PL)

- GENDER: masculine (M), feminine (F), neuter (N)
- ANIMACY: overtly marked only for masculine agreement; in plural throughout the paradigm, in singular only if there is an independent case difference: masculine inanimate (MI), masculine animate (MA)
- gender/number agreement:
  - D elements: demonstratives, pronouns
  - Adj elements: adjectives, numerals
  - verbal participles: past participle (PP), passive participle (PASSP)
- number/person agreement:
  - finite auxiliaries
  - finite main verbs
  - note: in past tense the finite auxiliary is overt only for 1 and 2 person
- case agreement:
  - D and Adj elements
  - . . . but only if modifying a noun inflected for case

(42) Viděla ∅ jsem Petra opilá/ opilého.
seen.PP.F.SG *pro* AUX.1.SG Peter.ACC.MA.SG drunk.NOM.F.SG/ drunk.ACC.MA.SG
'I saw Peter drunk.'
NOM: I was drunk; ACC: Peter was drunk

(43) *Singular paradigm (Standard Czech)*

a. t-**en** roztomil-**ý** chlapec spal
that.NOM.M.SG cute.NOM.MA.SG boy.NOM.3.M.SG slept.PP.M.SG
'that cute boy slept'

b. t-**a** roztomil-**á** kočka spal-**a**
that.NOM.F.SG cute.NOM.F.SG cat.NOM.3.F.SG slept.PP.F.SG
'that cute cat slept'

c. t-**o** roztomil-**é** kotě spal-**o**
that.NOM.N.SG cute.NOM.N.SG kitten.NOM.3.N.SG slept.PP.N.SG
'that cute kitten slept'

d. t-**en** star-**ý** hrad shořel
that.NOM.M.SG old.NOM.MI.SG castle.NOM.3.M.SG burned_down.PP.M.SG
'that old castle burned down'

(44) *Plural paradigm (Standard Czech)*

a. t-**i** roztomil-**í** chlapc-**i** spal-**i**
those.NOM.MA.PL cute.NOM.MA.PL boys.NOM.3.MA.PL slept.PP.MA.PL
'those cute boys slept'

b. t-**y** roztomil-**é** kočk-**y** spal-**y**
those.NOM.F.PL cute.NOM.F.PL cats.NOM.3.F.PL slept.PP.F.PL
'those cute cats slept'

c. t-**a** roztomil-**á** Děvčata spal-**a**
those.NOM.N.PL cute.NOM.N.PL girls.NOM.3.N.PL slept.PP.N.PL
'those cute girls'

d. t-**y** star-**é** hrad-**y** shořel-**y**
those.NOM.MI.PL old.NOM.MI.PL castles.NOM.3.MI.PL burned_down.PP.MI.PL
'those old castles burned down'

(45) Syncretism in nominative forms (not present in other case forms)

SG	D	Adj	PP	PL	D	Adj	PP
MA	-en	-ý	-∅		-i	-í	-i
F	[-a]	[-á]	[-a]		(-y)	(-é)	(-y)
N	-o	-é	-o		[-a]	[-á]	[-a]
MI	-en	-ý	-∅		(-y)	(-é)	(-y)