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GENDER CONFUSION: IT'S NOT (JUST) ABOUT SEX

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1. INTRODUCTION

Usual view: ϕ -features are interpretable at most in one position, where they are inherent.

Use gender as a diagnostic because it clearly distinguishes formal and semantic feature values on the one hand and inherent and non-inherent features on the other.

I will look at some cases of interaction between gender agreement and semantic interpretation (the so-called *mixed agreement* patterns) in order to argue for the following points:

- All ϕ -features are valued and interpretable in the syntactic component. Only some of them are interpretable at LF as well. Inherent features are not necessarily LF-interpretable, and LF-interpretable features are not necessarily inherent
- As all ϕ -features are valued, I will propose an agreement algorithm based on the standard notion of *unification*
- Mixed agreement patterns in *gender confusion* arise from the appearance of non-inherent semantic ϕ -features

Agreement is different from pronoun coreference, where both the antecedent and the pronoun have features that are interpretable (= “interpretable at LF”, i.e., having a semantics).

2. WHAT IS GENDER?

Gender/noun class: An inherent property of a noun affecting its agreement patterns.

- (1) a. Eta strannaja kniga porazila nas. Russian
 this-F strange-F book.F impressed-F us-ACC
This strange book impressed us.
- b. Etot strannyj roman porazil nas.
 this-M strange-M novel.M impressed-M us-ACC
This strange novel impressed us.
- c. Eto strannoe proizvedenie porazilo nas.
 this-N strange-N oeuvre.N impressed-N us-ACC
This strange oeuvre impressed us.

The gender of the head noun determines the inflection on the attributive adjective, determiner and predicate.

2.1. Gender patterns

Gender can be semantic and formal (syntactic, morphological...):

- Semantic gender of a noun is determined by the properties of entities belonging to its extension (e.g., sex, animacy, non-flesh food – see Corbett 1991)

Acknowledgments: Many thanks, as usual, to Eddy Ruys for many a fruitful discussion, and to Alya Asarina and David Pesetsky for sharing with me their work in progress.

- Formal gender is random or determined by some morphological properties of the noun (e.g., its declension class)
- Gender systems seem to always have a semantic core

The Omotic language Dizi, a.k.a. Maji (Allan 1976 via Corbett 1991) and the Salish language Halkomelem (Steriopolo and Wiltschko 2008):

- **feminine gender**: animates whose reference is distinctly female and diminutives
- **masculine gender**: the residue

Russian (Corbett 1991):

- **nouns denoting males are masculine**
- **nouns denoting females are feminine**
- declinable nouns of the declensional type I (in his terminology) are masculine
- declinable nouns of the declensional types II and III are feminine
- declinable nouns of the declensional type IV are neuter
- animate indeclinable nouns are masculine
- inanimate indeclinable nouns are neuter
- the gender of acronyms is determined by the gender of the head

Important: sex is not the only real-life characteristic determining semantic gender; animacy, rationality, size or more exotic divisions (non-flesh food in Dyirbal (Dixon 1982:178))

In mixed systems there is always room for **gender confusion** (see below)

NB: A noun may acquire a different gender in the plural: thus in French, *amour*, *délice* and *orgue* are masculine in the singular and feminine in the plural (Grevisse 2006:715-717, §461)

2.2. Gender covariance

The gender of a noun may determine the inflection of a variety of items:

- attributive modifiers
 - determiners
 - predicates
 - relative pronouns
 - pronouns
- } agreement

GB: **φ-feature covariance** is assumed to be semantic for pronouns and syntactic otherwise.

However, even clause-internal “syntactic” agreement can be semantic:

- (2) *Sa Majesté est inquiet/inquiète.* French
 3FSG-POSS majesty.F is worried-M/F
His Majesty is worried.

If the referent of the subject DP *sa majesté* is male, it may (though it doesn't have to) trigger masculine agreement on the predicate.

NB: Mixed agreement patterns are not limited to gender – number (cf. Sauerland and Elbourne 2002 on British English collective nouns) and person (Harmer and Norton 1957:270 via Corbett 2006:132) may also show such effects

3. GENDER CONFUSION: MIXED AGREEMENT PATTERNS

When the sex (or other relevant semantic properties) of the referent of definite specific DP is known, agreement can be determined by the gender defined on semantic grounds:

- (3) *Náša vrač – umnica.* Russian
 our-FSG doctor.M clever.person
Our doctor is very clever.

Although the noun *vrač* ‘doctor’ is inherently masculine, feminine marking is possible on the determiner, attributive modifiers and the predicate (constrained by **Agreement Hierarchy**)

In different languages and idiolects different options for gender confusion arise:

- Russian: any agreement can be semantic
- German: only pronouns can co-vary semantically
- French: only pronouns and predicates may co-vary semantically
- Spanish titles: syntactic agreement only DP-internally

This is one locus of cross-linguistic variation.

3.1. What gender confusion is not

Certain agreement mismatches between the subject and the predicate suggest that agreement is not purely syntactic:

- (4) a. “Mamen’ka **plačut**,” – šepnula ona... Russian
 mother cry-3PL whispered-3F 3FSG
“Mother is crying,” – she (the maid) whispered. (Turgenev, Nakanune, ‘On the Eve’, 1860 via Corbett 2006:3)
- b. Moj brat tam toža **žyli**.
 my-MSG brother.M there also lived-PL
My brother and his family also lived there. (Talitsk dialect of Russian, Bogdanov 1968 via Corbett 2006:155)

No overt features of the subject lead us to expect plural marking on the predicate here but it can be argued that plural marking reflects an honorific feature in (3a) and a null associative morpheme (cf. Daniel and Moravcsik 2005) in (3b).

4. THE *N OF AN N* CONSTRUCTION

The construction in (5), known as *N of an N* or as a *binominal NP* (Milner 1978, Ruwet 1982, Abney 1987, Napoli 1989, Aarts 1994, 1998, Bennis, Corver and den Dikken 1998, etc.):

- (5) a. this idiot of a doctor
 b. a beauty of a car

NB: I will mostly disregard here the fact that this string has been claimed (Napoli 1989, Doetjes and Rooryck 2003, den Dikken 2006 and earlier work) to correspond to two different structures with different interpretations: comparative and attributive, but see section 9.

The *N of an N* construction is another productive environment for mixed agreement (Milner 1978, Ruwet 1982, Español-Echevarría 1997, 1998, García and Méndez 1998, 2000, Hulk and Tellier 1999, 2000, Casillas Martínez 2003, Doetjes and Rooryck 2003, den Dikken 2006). When N_1 and N_2 belong to different genders, gender mismatches frequently occur:

- (6) a. ton phénomène de fille French
 your-M phenomenon.M of daughter.F
your phenomenal daughter
- b. ton vache de mari
 your-M cow.F of husband.M
your bastard of a husband

With animate N_2 , the determiner may show syntactic or semantic agreement. With inanimate N_2 syntactic agreement on the predicate appears to be strongly preferred, although semantic agreement (according to Milner 1978:193 citing Grevisse) is also possible (no exx. found):

- (7) a. **Cette** horreur de maquillage te défigure complètement.
 this-F horror.F of makeup.M 2SG-ACC disfigure-3SG completely
This horrible makeup completely spoils your face.
- b. **Cet** amour de voiture sera présenté au salon d' hiver.
 this-M love.M of car.F be-FUT-3SG presented-M at+DEF salon of winter
This adorable car will be presented at the winter exhibition.
- c. **Cette** saloperie de chauffe-bain est dangereux.
 this-F muck.F of water-heater.M is dangerous-M
This bloody water-heater is dangerous.

It is **claimed** that the predicate must agree with N₂, irrespective of which noun the determiner agrees with (Milner 1978:193):

- (8) Mon/ma vache de frère s' est arrangé(*e) pour être pris(*e).
 my-M/F cow of brother REFL-be-PRES-3SG arranged-M/*F for be-INF taken-M/*F
My bastard of a brother arranged it for himself to be busy.

However, Hulk and Tellier 1999 provide examples, where this is not the case (see also (7b)) and Doetjes and Rooryck 2003 claim that the contrast is due to the comparative vs. attributive ('pure degree') interpretation of the construction:

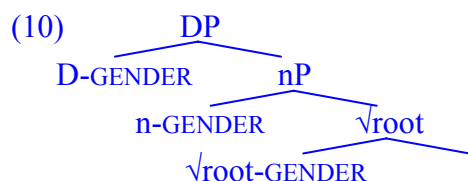
- (9) a. Ce bijou d' église romane a été reconstruit(*e). comparative
 this-M jewel.M of church.F Roman-F has been rebuilt-M/*F
This jewel of a Roman church was rebuilt.
- b. Ce bijou de Marie est absolument exquis*(e). 'pure degree'
 this-M jewel.M of Marie.F is absolutely marvelous-F/*M
This amazing Marie is absolutely marvelous.

I suspect that animacy plays a major role in this.

NB: N₁ can be modified by a very restricted list of adjectives, all of which are affective (*affreux, satané, sacré, foutu, fichu, beau, franc, abominable, sale*, etc.). It would be interesting to see which genders they can appear in.

5. DISTRIBUTED GENDER HYPOTHESIS

Steriopolo and Wiltschko 2008: gender is distributed inside the xNP:



Agreement can be determined by any of the following types of gender:

- **√root-GENDER**: the semantic gender as determined by the semantics of the noun itself (e.g., *mother* or *cow*)
- **n-GENDER**: grammatical gender assigned arbitrarily (generally, to inanimates, but also to some animates)
- **D-GENDER**: semantic gender corresponding to the sex of the referent of the DP; the semantics of the noun itself is compatible with either (the so-called *common gender* nouns)

NB: Grammatical gender is assigned to n⁰ because nominalizing suffixes usually have a gender specification.

More than one gender can be present, but the topmost always wins.

No constraints on possible combinations of gender features are made explicit; the semantics of gender features is not spelled out.

5.1. How the system works

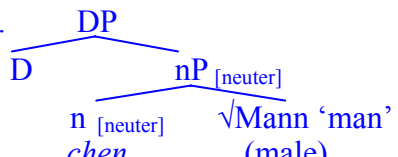
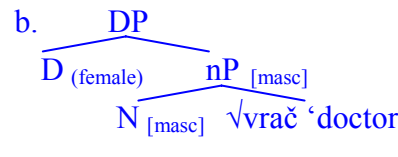
Strictly semantic gender systems (Tamil, Dizi, Halkomelem) result from only $\sqrt{\text{root}}$ **gender** being projected. This is also the gender of sex-differentiable humans (or animates) in mixed gender systems. Common nouns (e.g., *orphan* in Russian) have no $\sqrt{\text{root}}$ gender.

Grammatical gender results from the introduction of the n-node.

NB: It is self-evident that the gender of a given simplex (without an overt n) noun is not arbitrary within a given language (e.g. *house* is masculine in Russian, but neuter in Dutch). Therefore, some information about gender must be encoded on the root.

Finally, some nouns denoting animate/human beings are unspecified for gender and can have referents of either sex (e.g., *sibling*, *spouse*). When the referent of the DP is known (i.e., **D-gender** is projected) they can trigger non-default agreement.

When more than one gender is projected, the higher one wins.

- (11) a.  b. 

Hybrid nouns agree either grammatically or semantically \Rightarrow overriding is not obligatory?

5.2. Issues

It would seem that the presence of discourse gender does not depend on whether the referent can be established, but rather on the particular $\sqrt{\text{root}}$ -n combination. A DP denoting a female but with a non-hybrid noun as a head cannot agree as a feminine noun does:

- (12) a. Naš(a) vrač prišla vovremja.
our-M/F doctor came-F on.time
Our doctor arrived on time.
- b. [pointing at a woman]
Etot/*ëta čelovek nam očen' pomog(*la).
this-M/F human.M us-DAT very helped-M/F
This person has helped us a lot.

Steriopolo and Wiltschko 2008: Non-hybrid nouns do not project the D-gender. However, it is then unclear how D-gender is linked to the sex of the referent.

Semantic agreement need not occur on the level of the DP, as attributive adjectives may agree semantically as well:

NB: Moreover, arguably the predicate xNP in (13a) does not refer and therefore has no discourse referent.

- (13) a. Ivanova – xorošaja vrač. Russian
Ivanova good-FSG doctor.M
Ivanova is a good doctor.
- b. Lučšaja vrač goroda ežednevno zaxodit k nemu.
best-FSG doctor.M city-GEN daily visits towards him
The best doctor of the city visits him daily.

(14)

```
graph TD
    DP[DP] --- D[M]
    DP --- n1[n]
    n1 --- AP[Ugender]
    n1 --- n2[n]
    AP --- D2[D]
    AP --- n3[n]
    D2 --- D3[D]
    n3 --- n4[n]
    n4 --- root[root]
```

DP
D_[M]
n_P
AP_[Ugender]
n_[fem]
root
zanatli ‘artisan’

NB: Rothstein 1980: adjective agreement depends on its semantic category, some observations by Alya Asarina and David Pesetsky, p.c., lead in the same direction

- In other words, AP agreement can be determined by either n-gender (up) or D-gender (down), and from the overt gender on the determiner it can be inferred that D-gender is projected even in the former case (n-gender is, obviously, always there).

Sauerland 2004: ϕ -features are interpretable only in one position: on ϕ . Everywhere else they appear as a result of syntactic agreement:

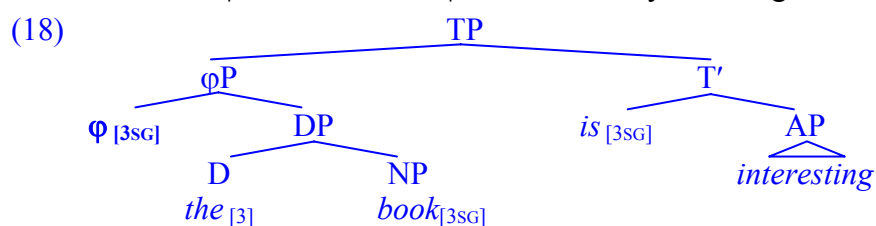
- Interpreted features in ϕ receive a purely presuppositional interpretation (cf. Cooper 1979 on pronouns, Heim and Kratzer 1998):

- The semantics of ϕ -features makes it imperative that ϕ be inserted as a sister to the DP

Sauerland's claim: his approach allows him to handle a variety of phenomena:

- Split agreement of *committee*-nouns in British English (Sauerland and Elbourne 2002)
- Singular agreement with quantifiers
- Politeness forms: the use of 3SG or 2PL for polite second person
- English singular *they*
- Plural pronouns in the Russian comitative construction (Vassilieva and Larson 2001)

All instances of ϕ -features not in ϕ P result from syntactic agreement:

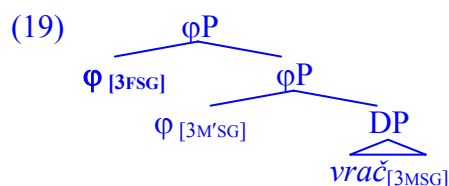


Elsewhere features can be either inherent and then uninterpretable (e.g., gender on nouns) or inserted wherever required by the morphosyntax of a particular language (e.g., gender on adjectives) and also uninterpretable.

Features on ϕ should match ϕ -features elsewhere.

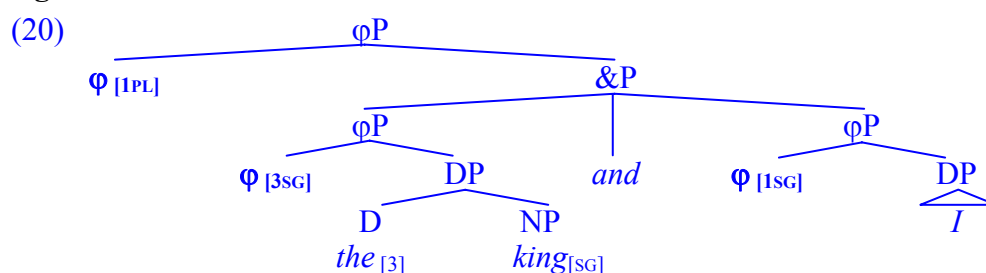
Sauerland is mostly concerned with the semantics of ϕ -features. However, his work addresses some of the issues relevant here.

Russian hybrid nouns of the *doctor*-type are handled via iteration of ϕ Ps:



The feature [M'] in the lower instance of ϕ is not interpreted and only serves to license *vrač* 'doctor', which is listed in the lexicon with an uninterpretable feature [M].

Agreement with coordinate xNPs:



NB: There is no claim made as to how the features of the higher ϕ are semantically obtained from the features of the coordinated ϕ Ps, but it is not really relevant here.

6.2. Predictions

Predicate agreement will always be with the semantic gender (the sex of the referent) because of the Minimal Link Condition (Chomsky 1995), which Sauerland uses to (partially) account for the Agreement Hierarchy (Corbett 1983, 1991, 2006):

(21) Minimal Link Condition

Agreement is always with the closest phrase that has a feature of the right category.

Thus Sauerland's proposal cannot account for syntactic agreement in the predicate position.

Agreement with the *N of the N* construction is likewise predicted to be semantic:

NB: Both issues can be dealt with on the assumption that the predicate need not agree with the highest ϕ P of the subject. However, the Agreement Hierarchy is then not predicted either.

- (8) Mon/ma vache de frère s' est arrangé(*e) pour être pris(*e).
 my-M/F cow of brother REFL-be-PRES-3SG arranged-M/*F for be-INF taken-M/*F
My bastard of a brother arranged it for himself to be busy.

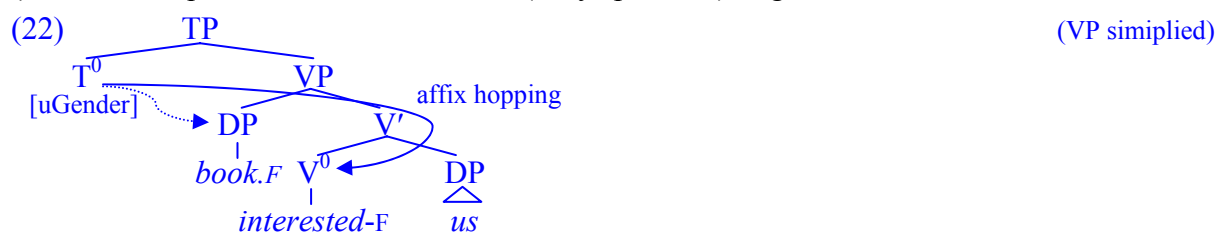
Like with the distributed gender hypothesis, semantic and/or mixed agreement inside the xNP is not predicted:

- (15) b. % ovi privatne zanatlije
 this-MPL private-FPL artisans
these private artisans

Semantic features are introduced only at the ϕ P-level, elsewhere valued features are assumed to be non-contradictory

7. WHAT IS SYNTACTIC AGREEMENT?

Minimalist agreement: a head possessing uninterpretable ϕ -features probes its sister and its ϕ -features acquire values of the nearest (fully specified) target:



Obviously, this approach cannot work *as is*:

- (23) a. Je trouve ce livre intéressant. French
 I find this-M book.M interesting-M
I find this book interesting.
- b. Je trouve cette nouvelle intéressante.
 I find this-F novella.F interesting-F
I find this novella interesting.

The target of agreement is obviously higher than the probe; given that some adjectives can be shown to be unergative, the problem is not likely to be reasoned away.

DP-internal agreement (concord) is another thorny issue, for the same reasons.

Hence approaches based on feature-unification or sharing (Gazdar et al. 1985, Shieber 1986, Pollard and Sag 1994, Pesetsky and Torrego 2007, etc.) have been proposed:

Russian:

- (24) a. korova $\left[\begin{array}{l} \text{PERSON: 3} \\ \text{NUMBER: SG} \\ \text{GENDER: F} \\ \text{CASE: NOM} \end{array} \right]$ myčala $\left[\begin{array}{l} \text{SUBJ} \left[\begin{array}{l} \text{NUMBER: SG} \\ \text{GENDER: F} \\ \text{CASE: NOM} \end{array} \right] \\ \text{TENSE: PAST} \end{array} \right]$ 'a cow mooed'

b.	<i>korova</i>	$\begin{bmatrix} \text{PERSON: 3} \\ \text{NUMBER: SG} \\ \text{GENDER: F} \\ \text{CASE: NOM} \end{bmatrix}$	<i>myčit</i>	$\begin{bmatrix} \text{SUBJ} \begin{bmatrix} \text{NUMBER: SG} \\ \text{PERSON: 3} \\ \text{CASE: NOM} \end{bmatrix} \\ \text{TENSE: PRES} \end{bmatrix}$	‘a cow is mooing’
c.	* <i>korova</i>	$\begin{bmatrix} \text{PERSON: 3} \\ \text{NUMBER: SG} \\ \text{GENDER: F} \\ \text{CASE: NOM} \end{bmatrix}$	<i>myču</i>	$\begin{bmatrix} \text{SUBJ} \begin{bmatrix} \text{NUMBER: SG} \\ \text{PERSON: 1} \\ \text{CASE: NOM} \end{bmatrix} \\ \text{TENSE: PRES} \end{bmatrix}$	

When feature values for the subject and the predicate are compatible, unification is possible.

Conceptual problem: these approaches do not reflect the basic **asymmetry in agreement** – ϕ -features are inherent only to some nodes (xNPs).

Implementational problem: gender confusion (and other feature mismatches) are predicted to be impossible:

- (3) *Naša vrač – umnica.* Russian
 our-FSG doctor.M clever.person
Our doctor is very clever.

Likewise, these approaches cannot deal with the *N of an N* construction:

- (7) c. *Cette saloperie de chauffe-bain est dangereux.*
this-F muck.F of water-heater.M is **dangerous-M**
This bloody water-heater is dangerous.

The predicate does not show agreement with the formal features of the subject.

8. PROPOSAL

Unification pushed to its logical limit: ϕ -features are interpretable **in all positions** though not necessarily at the LF-interface (combination of Sauerland's proposal with various unification formalisms):

- (25) a. $\llbracket \text{FEMALE} \rrbracket = \lambda f . \lambda x : x \text{ is female} . f(x)$
 b. $\llbracket \text{MALE} \rrbracket = \lambda f . \lambda x : x \text{ is male} . f(x)$
 c. $\llbracket 1 \rrbracket = \lambda f . \lambda x : x \text{ contains the speaker} . f(x)$
 etc.

In other words, ϕ -features are identity functions that are undefined if the external argument of the one-place predicate they apply to does not satisfy the relevant semantic condition. Unlike in Sauerland's proposal, here semantic features are **identity functions on predicates**.

Presupposition: overt articles and demonstrative have no existential import, which is due to a choice function introduced higher (cf. Winter 2001, 2005)

In addition we have the following cross-linguistically valid implicature:

- (26) a. $\llbracket \text{FEMALE} \rrbracket \Rightarrow [F]$
 b. $\llbracket \text{MALE} \rrbracket \Rightarrow [M]$

In other words, semantic features override inherent grammatical features (cf. Corbett 1979 et seq.), which have no semantic content (but see section 10).

NB: Obviously, as noted above, semantic features are not restricted to the sex of the referent, but are determined by the genders of a given language. Number presumably functions in the same way.

Grammatical ϕ -features can be inherent ($[iF]$, i.e., gender features on nouns, number features on number affixes) or not ($[uF]$, i.e., person features on verbs):

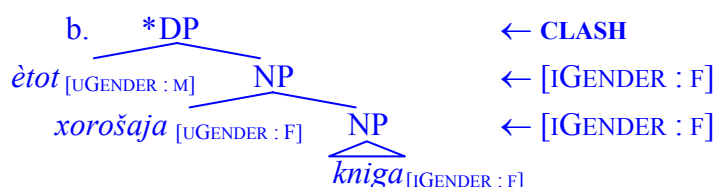
(27) Agreement algorithm

- a. If X bears the semantic feature [G] yielding the inherent feature [iF₁] and Y bears the inherent feature [iF₂], the mother of X bears [G][iF₁] (= semantic specification can override inherent grammatical features)
- b. If X bears the feature [uF] and Y bears the feature [iF], then the mother of X and Y bears the feature [iF]
- c. If X bears the feature [F] (inherent or not) and Y bears the feature [G] (inherent or not), X and Y can be merged if the values of [F] and [G] are not contradictory
- d. A node interpreted as a proposition may not bear non-inherent features.
- e. If a node is interpreted as a proposition, its inherent features are reset to zero after verification.

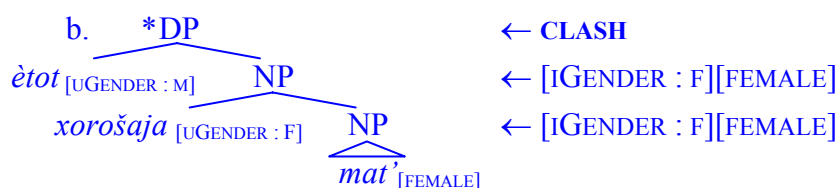
The latter two points have to do with the fact that when an *e* argument slot is saturated, the ϕ -features of this argument do not percolate any further. It is simplified in that it presupposes that all predicates are one-place.

8.1. Simple cases**(a) inanimate noun bearing a grammatical gender:**

- (28) a. *ètot xorošaja kniga
this-M good-F book.F

**(b) animate noun denoting a sexed individual**

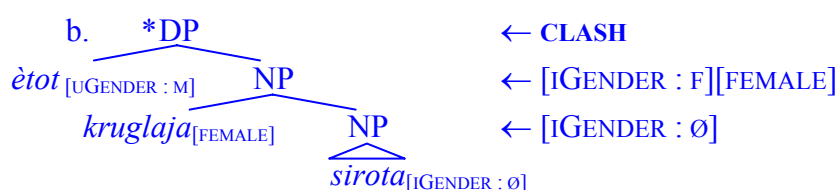
- (29) a. *ètot xorošaja mat'
this-M good-F mother.F



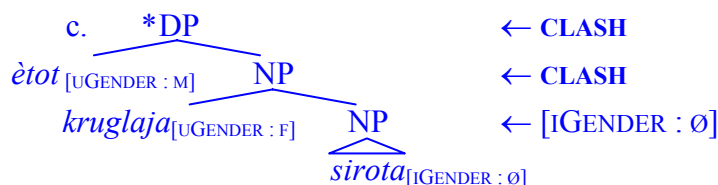
The combination of a subject with a predicate obviously works in the same way.

(c) animate noun unmarked for gender (the so-called *common gender nouns*):

- (30) a. *ètot kruglaja sirota
this-M total-F orphan



Non-inherent gender cannot override lack of gender specification:



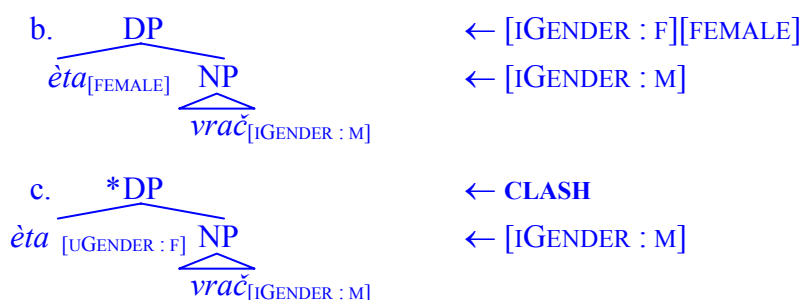
The unvalued inherent gender feature gets set by the valued semantic feature. The semantic feature cannot override a non-inherent feature, hence the clash.

8.2. More complex cases: DP-internal agreement of hybrid nouns

As discussed above, [+ human] nouns not specified for sex may show mixed agreement.

- (31) a. *èta* *vrač*
 this-F doctor.M
 this (female) doctor

The semantic feature [FEMALE] appears on the demonstrative, overriding the inherent feature of the NP and yielding feminine agreement. A semantic feature is required to resolve gender clash:

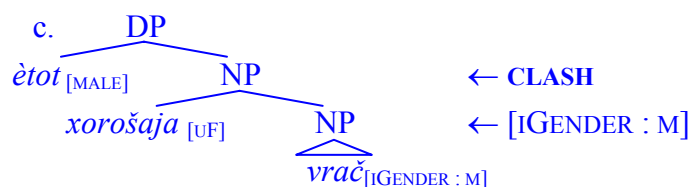


Return to syntactic agreement is impossible, yielding Corbett's Agreement Hierarchy:

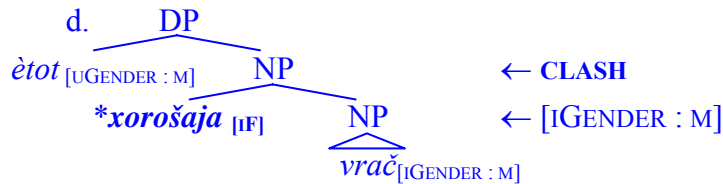
- (32) a. **ètot* *rajonnaja* *vrač*
 this-M district-F doctor.M



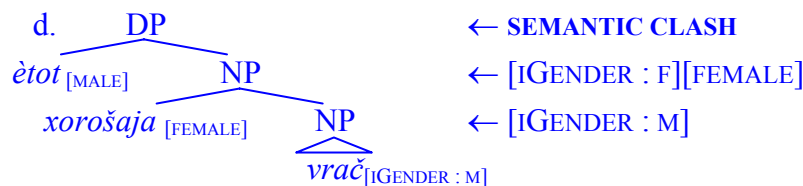
Two contradictory grammatical features cannot be combined:



Only a non-inherent gender feature can appear on a non-noun (and it's still in contradiction):



Two semantic gender features cannot be combined:



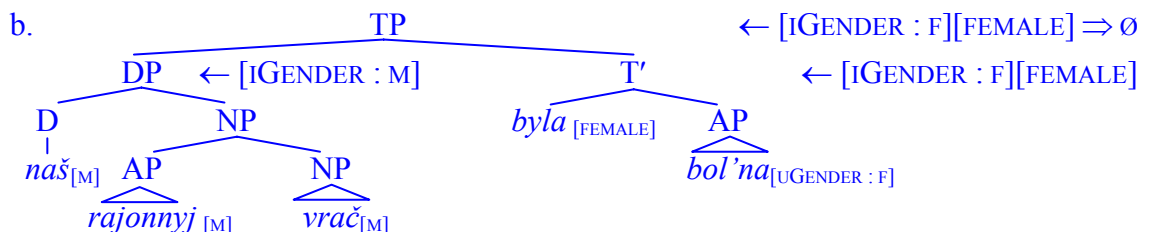
No derivation of the ungrammatical (32a) is possible.

8.3. Even more complex a case: predicate agreement of hybrid nouns

A hybrid noun is inherently specified for gender, but not for the sex of the referent:

- (33) a. Naš rajonnyj vrač byla bol'na.
 our-M district-M doctor.M was-F sick-F
Our district doctor was sick.

The feature [FEMALE] is introduced where gender switch occurs:



No gender switch within the predicate is possible, because:

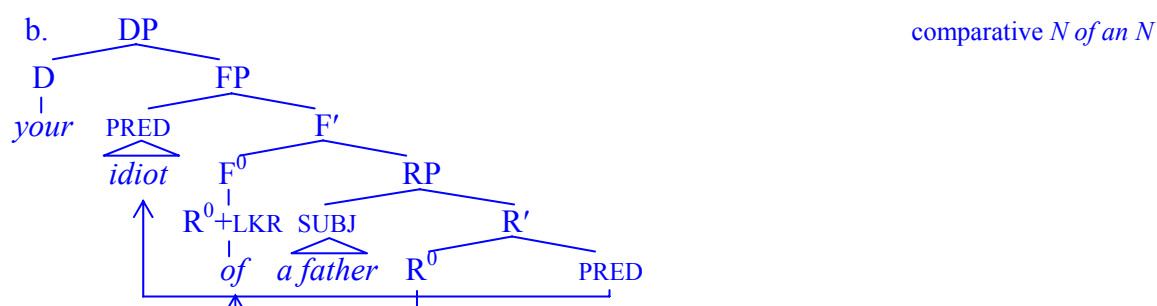
- if two non-inherent features ([uF]) are merged, they must have the same value
- a semantic feature cannot override a non-inherent feature

Corbett's Agreement Hierarchy is fully predicted.

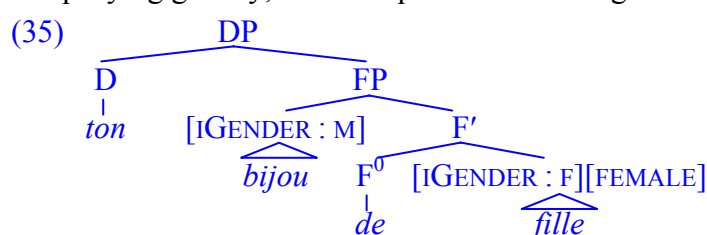
9. THE *N OF AN N* CONSTRUCTION REVISITED

It is generally assumed that the *N of an N* construction involves syntactic complementation in some form or another (Doetjes and Rooryck 2003, den Dikken 2006:198):



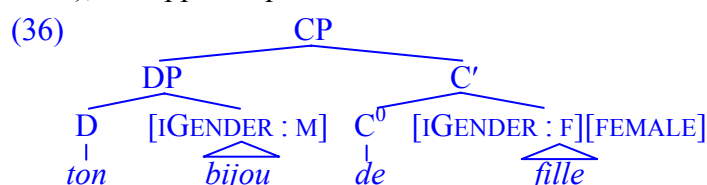


Simplifying grossly, from the point of view of gender agreement, the structures look like this:



Our resolution rules predict that FP should inherit the feature complex [IGENDER : F][FEMALE] and the determiner must show feminine agreement. This is not always correct.

On the other hand, if the determiner forms a constituent only with N_1 (Doetjes and Rooryck 2003), the opposite prediction is made:



NB: The exact category of *de* and the relation between N_1 and N_2 (adjunction or not) is not relevant yet.

Determiner agreement is in the fact the reason why Doetjes and Rooryck 2003 propose that the determiner forms a constituent with N_1 . There are, however, other reasons to do so.

Bos 2009: genitive superlatives behave as if the possessor is merged with the noun rather than above the superlative:

- (37) my best book
 a. =the best among my books
 b. ≠the book that is the best and mine

However, an alternative analysis, based on Herdan and Sharvit 2005, is also possible:

- (37) c. =mine among the best books defined by different comparison classes

Observation: in the *N of an N* construction, the superlative is indefinite, supporting the claim that this alternative strategy is used:

- (38) a. my idiot of a/*the best friend
 b. my idiot of a/*the husband
 c. my idiot of a/*the younger brother

(38b) is fully compatible with the speaker having only one husband or younger brother ever, which suggests that the noun is not interpreted relationally here.

The same facts obtain in Dutch.

10. CONCLUSION

Not all inherent features are semantic, nor are all semantic features inherent. Gender provides a very good diagnostic for differentiating those.

The probe-goal mechanism seems insufficient for dealing with such instances of agreement as DP-internal agreement (a.k.a. concord) and agreement between a subject and a non-verbal predicate, to say nothing about mixed agreement (“gender confusion”).

A unification formalism was proposed that accounts for both standard and mixed agreement.

Directions for future research:

- Determiner agreement in the *N of an N* construction and its interaction with its interpretation and syntactic structure (with animacy taken into consideration)
- As noted by David Pesetsky, p.c., the two Russian modifiers that show gender in the plural (*dva/dve* ‘two’ and *oba/obe* ‘both’) never agree in semantic gender. One possible explanation is that they may not introduce semantic features. If correct, this factor can be used to account for some of the cross-linguistic variation in loci of semantic agreement
- Investigation into ϕ -feature covariance with pronouns (see also section 12), under ellipsis (sloppy identity) and with focus (*Only I really know my parents*)
- Conjunct agreement and non-canonical agreement targets

11. THE CHOICE OF A FORMALISM

The introduction of the semantic feature [FEMALE] can be done in a variety of ways:

- a syntactic head corresponding to the semantic feature [FEMALE] is merged in the relevant position
- the semantic feature [FEMALE] can be introduced wherever feminine agreement is present (instead of the [UGENDER : F] feature) – the option chosen here
- predicates may not be marked with the feature [FEMALE] (while DP-internal items may); instead, an additional projection (ϕ P) is introduced over the DP in order to ensure semantic agreement of the predicate

Options (i) and (iii) violate the Inclusiveness Condition (Chomsky 1995:225) and, moreover, predict it to be possible to have the presupposition that the subject denotes a female referent while having masculine agreement throughout, which does not seem to be the case. Hence option (ii) was chosen.

Prediction: quantified xNPs do not allow mixed agreement on the determiner (seems true)

12. THE SEMANTIC SIDE OF AGREEMENT

Pronoun covariance appears to argue that gender and number features always have a semantic base:

(39) Comment est le livre? – Il est ennuyeux. French
 how is the-M book.M 3MSG is boring-M
How is the book? – It is boring.

No real-world property corresponds to the [masculine] feature of the pronoun, and it cannot be uninterpretable because then our agreement rules fail.

Possible alternative solution: pronouns are determiners (Postal 1969) whose NPs are elided (Elbourne 2002). Note that NP-ellipsis can happen in absence of a linguistic antecedent:

- (40) a. [examining a friend's new dress (neuter in Russian)]:
 Ja včera kupila takoe že.
 1SG-NOM yesterday bought-FSG such-NSG PRT
I bought the same one yesterday.
- b. [standing on the quai of the Seine (feminine in Russian), pointing at the river]:
 Kakaja ona krasivaja!
 what-FSG 3FSG-NOM beautiful-FSG
How beautiful it is!

The elided NP may be the salient noun describing the relevant referent (linguistic antecedents take preference) or the semantic gender feature (for animates only). The same solution should then apply to relative pronouns, which may also show syntactic or semantic agreement.

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