Coordinated subjects and Single Conjunct Agreement in Polish

GIST 6 Subjects Workshop

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*Introduction

*Coordination and agreement

There are several strategies available in resolving agreement with coordinated subjects:

Full agreement – agreement with the conjunct as a whole (&P), feature mismatch resolved according resolution rules (Corbett 1991)

Partial agreement – agreement with the closest available conjunct (with the first or highest) – First Conjunct Agreement or with the last one – Last Conjunct Agreement)

*Coordination and agreement

Arabic (Aoun et al. 1994, 1999):

- Full agreement when the subject is preverbal; single conjunct agreement when the subject is postverbal

Hindi, Tzes (Benmamoun et al. 2009)

- Non-related head final languages
- Full agreement option
- Partial agreement option available; agreement with the rightmost element of the &P in preverbal contexts

Slovenian (Marušič et al. 2007, 2009)

- Agreement with &P
- First Conjunct agreement in post-verbal subjects
- First Conjunct agreement and Highest Conjunct agreement available for pre-verbal subjects

Coordination and agreement

Serbo-Croatian (Bošković 2009)

* Agreement with &P
* FCA with post-verbal subjects; LCA with pre-verbal subjects
* Agreement for gender
* Singular agreement is unavailable, FCA/LCA option only for plural conjuncts

Russian (Bošković 2010)

* Agreement with &P
* Both FCA and LCA patterns
* Partial agreement with singular conjuncts is available

* The most common type of agreement with Polish coordinated subjects is plural agreement with Coordination Phrase
* Agreement with the whole Coordination Phrase is used both in pre-verbal and post-verbal contexts

1) a. Chłopiec i dziewczynka weszli   do pokoju

   boy$_{M.SG}$ and girl$_{F.SG}$ came$_{3.V.PL}$ to room

   b. Do pokoju   weszli   chłopiec i dziewczynka
      to room   came$_{3.V.PL}$ boy$_{M.SG}$ and girl$_{F.SG}$

   'A boy and a girl came into the room'

* If the conjuncts have different φ-properties, Polish uses resolution rules to avoid conflict

* **Person resolution**

[1st person] > [2nd person] > [3rd person]

* If one of the conjuncts has the features which are higher in the hierarchy, they determine the features of the whole &P

2) a. Ty   i **ja**   jesteś**my**   zupełnie inni
        You and   I   **are**$_{1PL}$ completely different
        'You and I are completely different

    b. **Ty** i on   jesteś**cie**   zupełnie inni
        You and him   **are**$_{2PL}$ completely different
        'You and him are identical'

*Polish data
Agreement resolution

Gender resolution (Corbett 1991:284-286)

* Polish has three genders in the singular: **masculine** (sometimes divided into masculine animate, inanimate and personal), **feminine**, **neuter**, and two genders in the plural: **virile** (masculine personal) and **non-virile** (the rest)

* Predicate agreement with coordinated subjects proceeds according to gender resolution rules:

I. If the subject includes a masculine personal conjunct, the predicate will be in the virile form

3)   **Brat**   i   siostra   **weszli**   do pokoju

     brother$_{M.PERS}$ and   sister$_{FEM}$ **went**$_{VIR.PL}$ in room

     'A brother and a sister went into the room'

Gender resolution (Corbett 1991:284-286)

II. If the subject includes the features **masculine** and **personal**, whether these are syntactic or semantic, the predicate may be in the virile form

4) Mama,   córeczka i   **wózek**   **ukazali**

   Mother$_F$, daughter$_F$ and   **pram$_{M.INANIM}$**   showed$_{VIR.PL}$

   się nagle

   REFL suddenly

   'A mother, a daughter and a pram suddenly appeared'

Gender resolution (Corbett 1991:284-286)

III. If the subject includes a **masculine animate** conjunct, the predicate may be in the masculine personal form

5) **Pies**   i   **kot**   **jedli**   na podwórzu

     dog$_M$ and   **cat**$_M$ **were.eating**$_{VIR.PL}$ on yard

     'The dog and the cat were eating in the yard'

IV. Otherwise the predicate will be in the **non-masculine personal** form

6) Siostry   i   matka   **czytały**

    Sisters$_{FEM}$ and   mother$_F$ **were reading**$_{NVIR.PL}$

    'The sisters and the mother were reading'

First Conjunct Agreement

* This strategy is used in post-verbal subjects and is largely unconstrained. It is allowed with both plural and singular conjuncts:

7) Do pokoju   weszli/weszła   Maria i Jan

In room   came$_{3.VIR.PL}$/came$_{3.FEM.SG}$ Mary and John

'Mary and John came into the room'

8) Turniej   zdominowały   tenisistki

Tournament   dominated$_{PAST.3PL.NON-VIR}$ tennis-players$_{NON-VIR.PL}$

 i   tenisiści

and   tennis-players$_{VIR.PL}$

'Female and male tennis players dominated the tournament'

Last Conjunct Agreement

The same sentences with the SVO word order are, however, ungrammatical and require plural agreement with gender resolution:

9) Jan i Maria   weszli/*weszła   do pokoju

    John and Mary   came$_{3.vir.pl}$/*came$_{3.fem.sg}$ in room

    'Mary and John came into the room'

10) Tenisiśći   i   tenisistki

     tennis-players$_{FEM.PL}$ and   tennis-players$_{MASC.PL}$

     zdominowali/*zdominowały   turniej

     dominated$_{PAST.3PL.VIR/*NON-VIR}$ tournament

     'Female and male tennis players dominated the tournament'

In fact, Citko (2004) claims that Last Conjunct Agreement in Polish is not available at all.

Willim (2012: 238) and Kallas (1993: 64-66), on the other hand, claim that Last Conjunct agreement is available in Polish, but only with a single referent, or when the conjuncts are abstract:

11) Jej   pewność   życiowa   i   zupełny   brak
her   confidence$_{F.SG.}$ life$_{ADJ.F}$ and   complete   lack$_{M.SG}$
wahań   działał   na niego   uspokajająco
doubts   acted$_{MASC.SG}$ on him   calmingly

'Her confidence in life and complete lack of doubt had a calming effect on him'

12) Teraz   ojciec   i   pan   domu
now   father$_{M.SG}$ and   man$_{M.SG}$ house$_{M.SG}$
jest   na miejscu
is$_{MS.G}$ in place

'Now the father and the master of the house is here'

* A search conducted on the sample from the Polish IPI PAN Corpus (http://korpus.pl) (a sample of 30m segments) revealed that Last Conjunct Agreement is indeed available in Polish.

* I have extracted 192 instances of singular agreement with coordinated pre-verbal subjects in Polish. A short summary of the results is given below:

	No. of items	%
Same gender conjuncts	140	73%
Different gender -agreement	29	15%
Different gender +agreement	23	12%
Total	**192**	**100%**

Table 1: A summary of results with respect to types of agreement

By far the most frequent type of conjunction which triggered singular agreement was coordination of two phrases with the same gender:

13) Ich **wola** i **wiedza** **gwarantowała**
their **will**$_{F.SG}$ and **knowledge**$_{F.SG}$ **guaranteed**$_{3SG.F}$
nieśmiertelność.
immortality$_{ACC}$
'Their will and knowledge guaranteed immortality'

14) **Lipiec** i **sierpień** **upłynął** w pracy
July$_{M.SG}$ and **August**$_{M.SG}$ **passed**$_{3SG.M}$ at work
strażaków pod znakiem szerszeni
firefighters$_{GEN}$ under sign hornets$_{GEN}$
'For the firefighters, July and August were marked by hornets'

15) **Zamieszanie** i **rozprzężenie** **wzrastało**
Confusion$_{N.SG}$ and **disorder**$_{N.SG}$ **increased**$_{3SG.N}$
z każdą chwilą
with every$_{INST}$ moment$_{INST}$
'Confusion and disorder increased by the minute'

If two nouns of different genders are conjoined, singular agreement is also possible. However, it is decidedly less marked with verbs which do not show inflection for gender (e.g. in the present or future tense)

16) **Wieś** i **rolnictwo** dłużej takiej polityki nie **wytrzyma**
country$_{F.SG}$ and agriculture$_{N.SG}$ longer such policy$_{GEN}$ not stand$_{3SG}$
'The country and the agriculture will not bear with such policy for long'

17) **Śpiew** i **muzyka** **rozwesela** serca
singing$_{M.SG}$ and music$_{F.SG}$ amuses$_{3.SG}$ hearts
'Singing and music amuses the heart'

18) **Remont** **i** **modernizacja** **zamknie** się kwotą 1,34 mln zł
Renovation$_{M.SG}$ **and** modernization$_{F.SG.}$ **will.close**$_{3SG}$ REFLl amount 1.34m zl
'Renovation and modernization will cost 1.34m zl'

But:

19) **Remont** i **rozbudowa** **pozwoliłyby** na zyskanie
renovation$_{M.SG}$ and extension$_{F.SG}$ enable$_{3SG.NON-VIR}$-PRT for gaining
dodatkowej powierzchni
additional space
'Renovation and extension will enable (us) to gain additional space'

There were, however, a few instances of singular agreement for gender in cases where the conjuncts differed in gender features

20)	**Ciekawość i zniecierpliwienie rosło**
	Curiosity$_{F.SG}$ and impatience$_{N.SG}$ grew$_{N.SG}$
	z godziny na godzinę,
	from hour to hour
	'Curosity and impatience were growing by the hour'

21)	Jej **głos** i **zachowanie** **było** odpychające
	Her **voice$_{M.SG}$** and **behavior$_{N.SG}$** **was$_{N.SG}$** repulsive
	'Her voice and behavior were repulsive'

22)	Kłaniali się nisko, jak **obyczaj** i **etykieta**
	Bowed$_{3PL.VIR}$ REFL low as **custom$_{M.SG}$** and **etiquette$_{F.SG}$**
	nakazywała
	ordered$_{F.SG}$
	'They bowed low, as the custom and etiquette demanded'

Apart from data extracted from the corpus, Polish also shows Last Conjunct Agreement with coordinated numeral phrases, especially when >5 numerals are involved:

23) Pięciu   mężczyzn   i   dwie   **kobiety**
     Five$_{V.ACC}$ men$_{PL.V.GEN}$ and   two   **women$_{NOM.PL.F}$**
     weszły do pokoju
     came$_{3.PL.F}$ in room
     'Five men and two women came into the room'

 The >5 numeral on its own triggers default 3.SG.N agreement:

24) Pięciu   **mężczyzn**   **weszło**   do   pokoju
     five**men$_{GEN.PL}$**   **came$_{3.SG.N}$**   in   room
     'Five men came into the room'

A short recapitulation:

* The most common type of agreement with conjoined phrases is agreement with the whole &P and resolution of features

* First Conjunct Agreement is available with post-verbal subjects

* Last Conjunct Agreement is also available; however, it is highly constrained:

    * Most often appears with abstract or mass nouns
    * The least marked option is when both conjunct have the same gender
    * It is also possible for conjunct with different genders; however , shows best results when the form of the verb is not inflected for gender

*Reconciling Polish data
Existing theories

Marušič et.al. (2007, 2010a, 2010b)

The analysis of conjunct agreement in Slovenian is based on Chomsky's (2000) Agree operation and relies on a number of crucial assumptions:

* Conjunction (Boolean) Phrase computes the number feature based on its conjuncts.

* However, it **does not compute gender feature**

* They follow the **two-step approach to Agree** (based on Benmamoun, Bhatia, and Polinsky 2010), where probing and establishing the Agree relation happens in syntax, while copying of the features takes place at PF, after linearization.

* They allow for **split φ-probes** – T can probe for gender and number separately

* The probe can **first target** either the Boolean Phrase or the conjunct

Reconciling Polish data
Existing theories

Combination of these assumptions results in all the observable agreement patterns in Slovenian:

* Targeting the BooleanP first and probing for gender and number together results in default masculine agreement for gender and plural for number

* Targeting first the BooleanP and then the conjunct (split φ-probe) results in Highest-CA (when copying of the features happens before PF) or in Closest-CA (copying after PF)

* Targeting the Cojunct first results in either the Highest-CA or Closest-CA

However:

* If two singular phrases are conjoined, agreement with the BooleanP is forced and the result is masculine dual default

* If the conjuncts contain **>5 numerals**, they have no φ-features whatsoever and trigger default singular neuter agreement

*Reconciling Polish data
Existing theories

Bošković (2009, 2010)

Bošković analyzes conjunct agreement in both Serbo-Croatian and Russian. He also assumes the Agree framework of Chomsky (2000, 2001), but introduces a number of additional assumptions and changes:

* He assumes that Serbo-Croatian has a 'truly grammatical' gender (i.e. dissociated from semantics) and that such gender is an **uninterpretable** feature. Only personal nouns such as *man, woman, boy* etc. exhibit 'natural' gender (connected with their real-world meaning), and that such gender is in turn an **interpretable** features

* Following Pestesky and Torrego (2007) , he assumes that uninterpretable features can be **both valued and unvalued** (contra Chomsky 2000, 2001), and that uninterpretable features must be deleted before they enter semantics.

* Gender features of the probe (the verb) are uninterpretable and unvalued (so must be valued in the course of derivation in order to be deleted), while the features on the target (the NP) are uninterpretable but valued (and so can be deleted)

Bošković (2009, 2010)

* A head X can probe for features more than once (Primary and Secondary agree)

* T/Part in Serbo-Croatian is an unsplit φ-probe and probes for gender and number at the same time (can target, however, two different goals)

* Following Bejar (2003), he assumes Matching/Valuation distinction and argues that in some cases Matching can fail to result in Valuation

* Move is viewed as a complex operation involving Matching, Valuation and pied-piping; if there are two candidates for movement, however, pied-piping fails, which prevents valuation (following Bejar 2003)

* He assumes, after Marušič et. al (2007), that in Serbo-Croatian &P does not compute the gender feature, only number

* For Russian, Bošković claims that &P not only does not compute the gender feature, but it can also be optionally specified for number

* If X is optionally specified for an uninterpretable feature, this feature of X can be deleted

*Reconciling Polish data
Deriving Polish facts

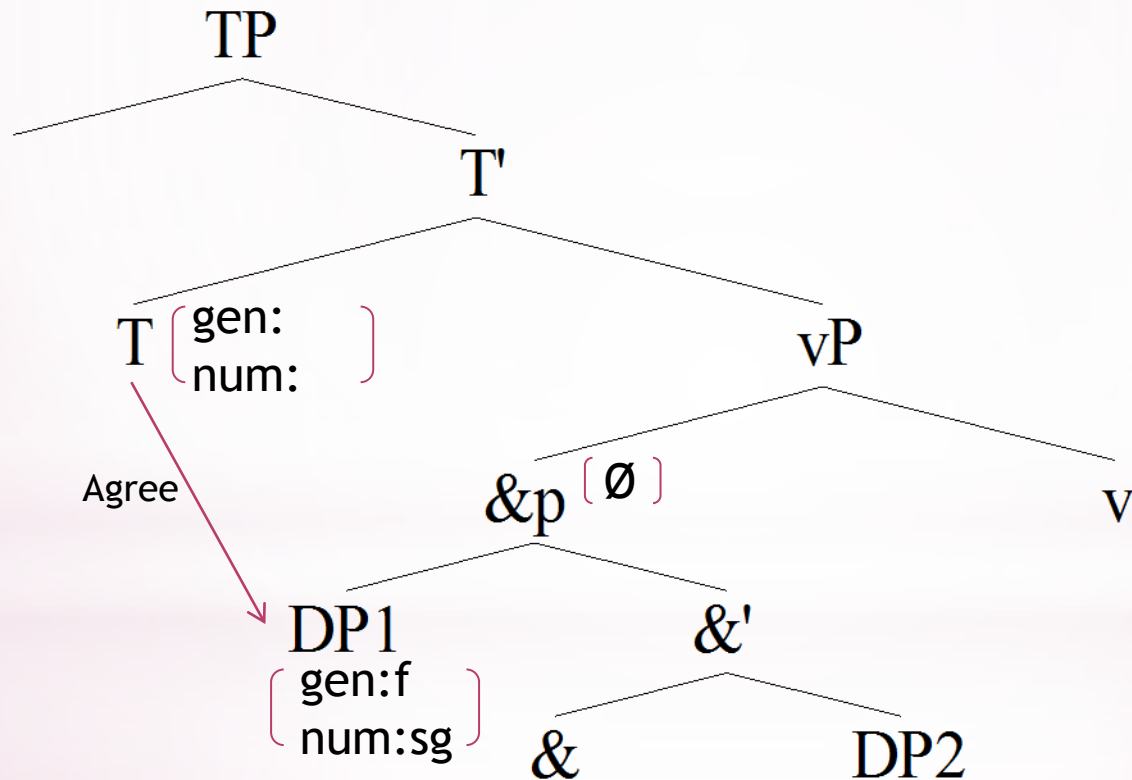In order to position Polish within these theories, additional assumptions have to established:

* Maintaining the distinction between valued and unvalued uninterpretable features

* Following Bošković (2009) and Willim (2000:324), I assume that semantic (notional) gender in Polish is an interpretable feature, while grammatical gender is uninterpretable

* Abstract and mass nouns have uninterpretable gender, while animate and count nouns exhibit interpretable gender (as in Fábregas and Pérez 2008 for Spanish)

* Presence of a numeral in a phrase marks it with an unintepretable gender (gender being parasitic on number, as claimed in Alexiadou et al. (2007), De Vincenzi & Di Domenico (1999), or in Miechowicz-Mathiasen (2011) for Polish)

* &P in Polish does not compute the gender feature and it is optionally specified for number

* Following Bošković (2009) and Bejar (2003), I assume that ambiguity in establishing pied-piping leads to failure in valuation
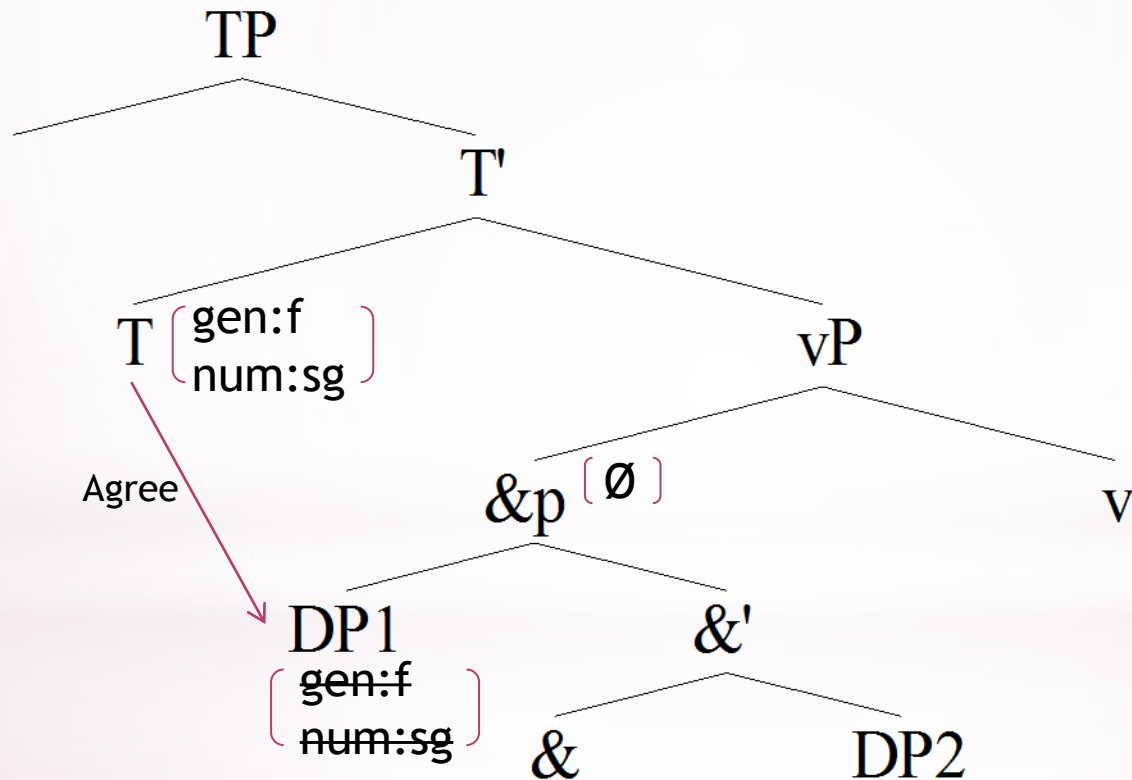
*Reconciling Polish data
Deriving Polish facts

*Derivation of First Conjunct Agreement
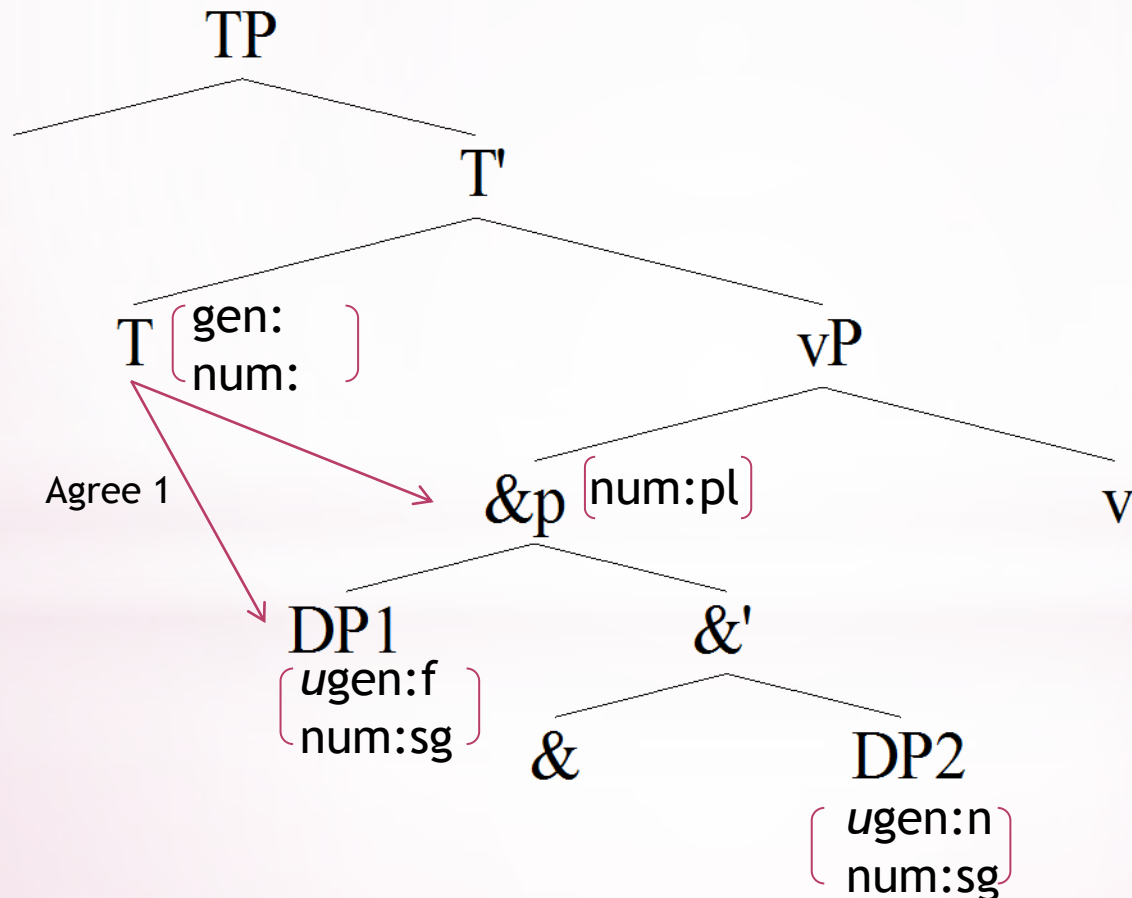
*Derivation of First Conjunct Agreement
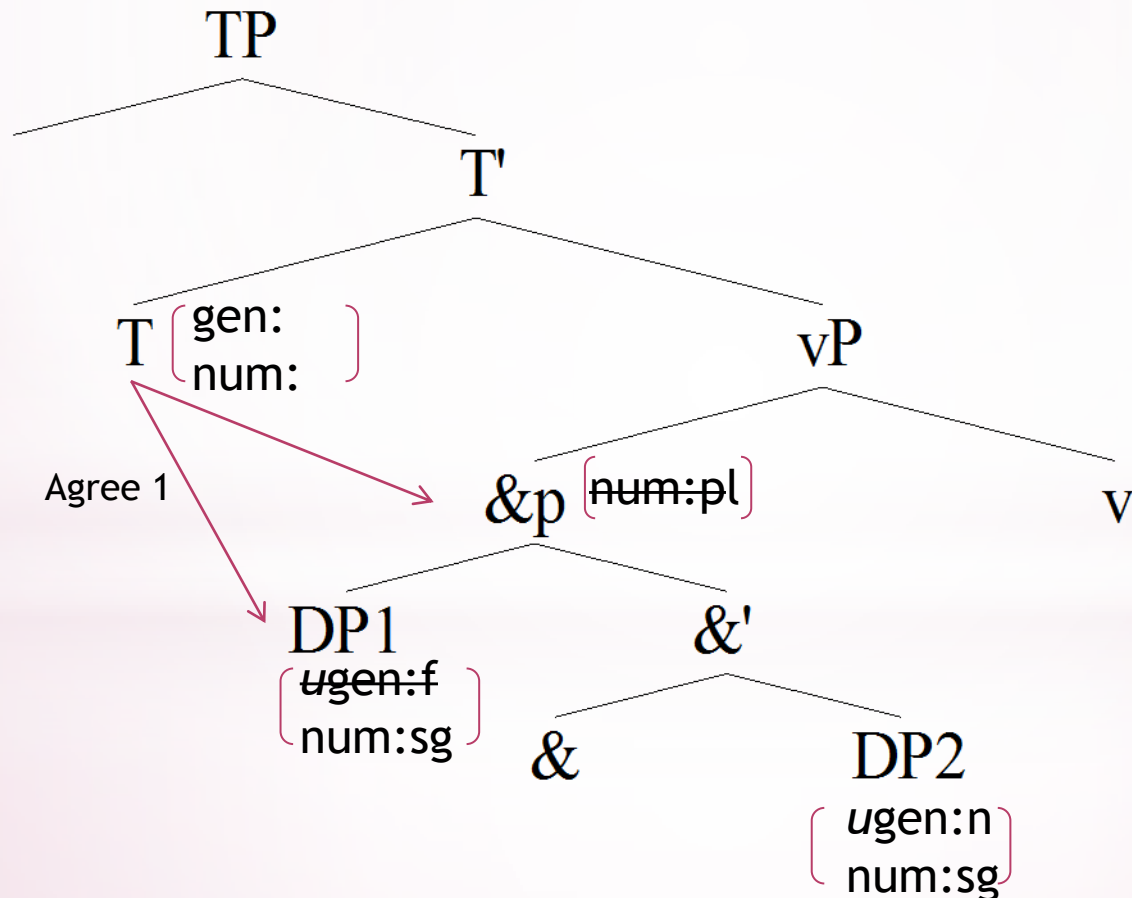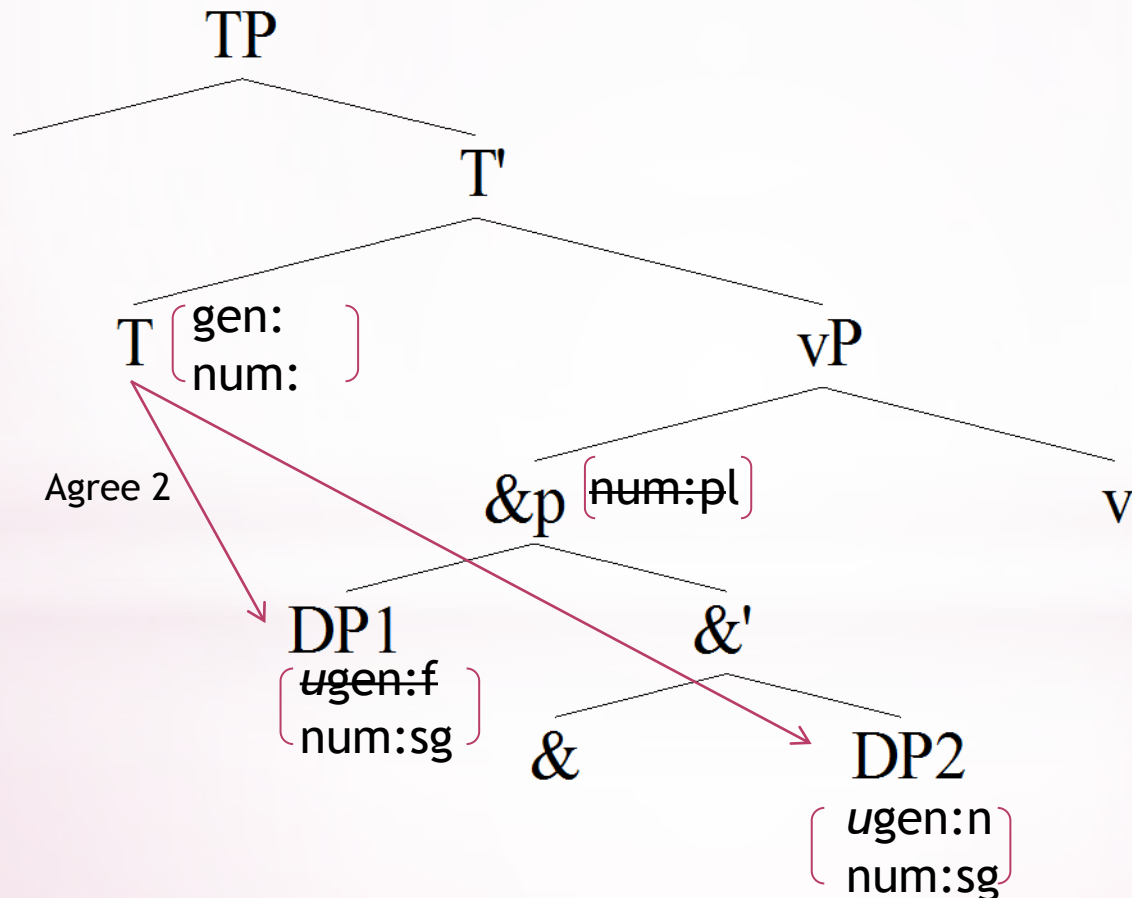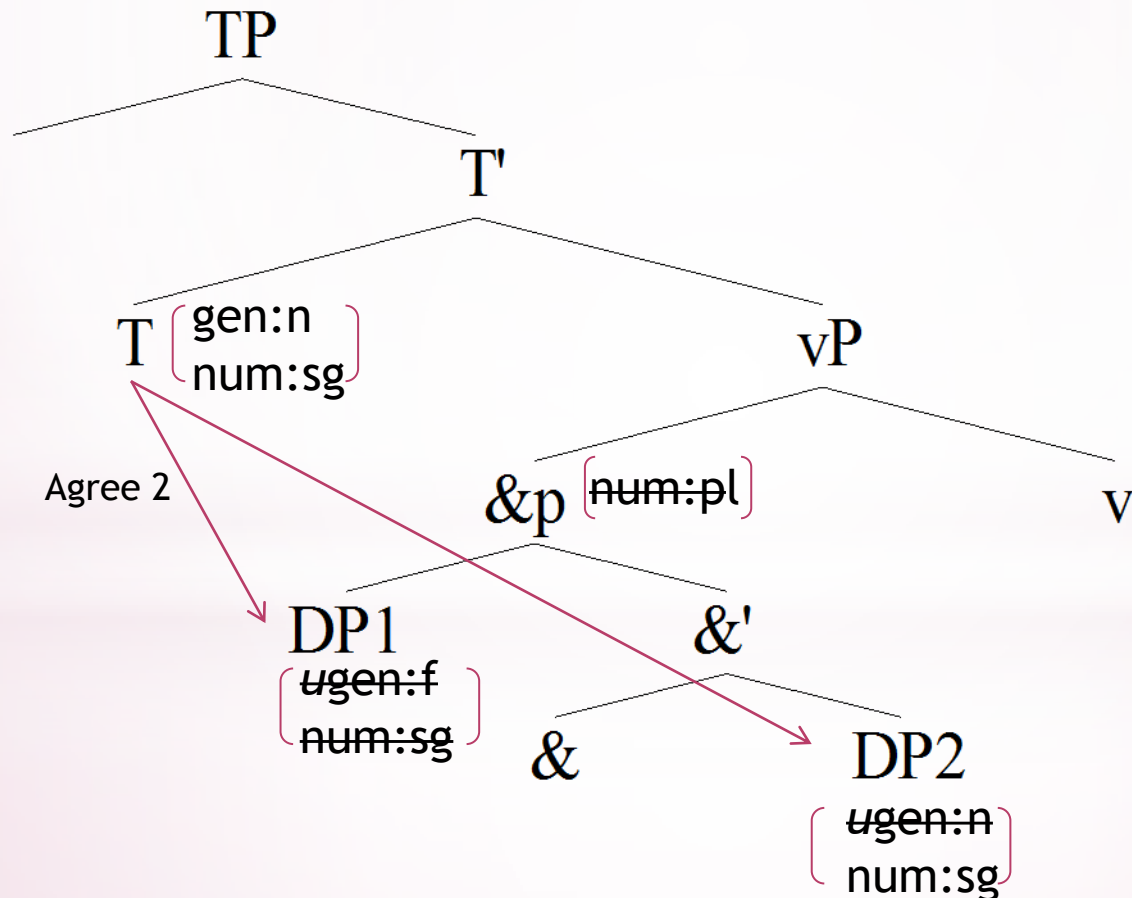
*Derivation of Last Conjunct Agreement with abstract nouns

*Reconciling Polish data
Deriving Polish facts

*Derivation of Last Conjunct Agreement with abstract nouns

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*Derivation of Last Conjunct Agreement with abstract nouns

For Bošković (2009) , the ambiguity of pied-piping and the resulting lack of valuation results from the fact that Serbo-Croatian allows for extraction of the first conjunct from coordinated phrases.

This seems to be true also for Polish

25) ?Książki$_k$ Paweł kupił   [t_k i płyty]

     books   Pawel bought   and CDs

     'Pawel bought books and CDs'

This means that, in principle, both the &P and the first conjunct are pied-pipable. The second conjunct, however, is not:

26) *Książki$_k$ Paweł kupił   [płyty i t_k]

     books   Pawel bought   CDs and

     'Pawel bought books and CDs'

*Reconciling Polish data
Deriving Polish facts

The derivation proposed by Bošković and assumed here predicts that Last Conjunct Agreement would be unavailable when conjuncts with mixed numbers are involved. This seems to be confirmed for Polish:

27) *Melodie   i   śpiew   rozwesela serca

Melodies$_{F.PL}$ and   singing$_{3SGM}$ amuses$_{3SG}$ hearts

'Melodies and singing amuse the heart'

This, however, seems not to be true for sentences where numeral phrases are conjoined:

28) Pięciu chłopców i jedna dziewczynka weszła$_{F.SG}$ do pokoju

Five$_{V.ACC}$ boys$_{GEN}$ and one$_F$ girl$_{F.NOM}$ came$_{F.SG}$ in room

'Five boys and one girl came in room'

The fact, however, that Polish >5 numerals trigger default $_{3.SG.N}$ agreement, seems to indicate that they lack φ-features (or at least that they cannot trigger the expected 3.PL.M agreement). This in turn, would explain their availability in mixed number contexts.

29) Pięciu   chłopców   **weszło/*weszli**   do pokoju

     Five$_{V.ACC}$ boys$_{GEN}$ **came$_{3.SG.N/}$*$_{3.PL.M}$** in room

     'Five boys came into the room'
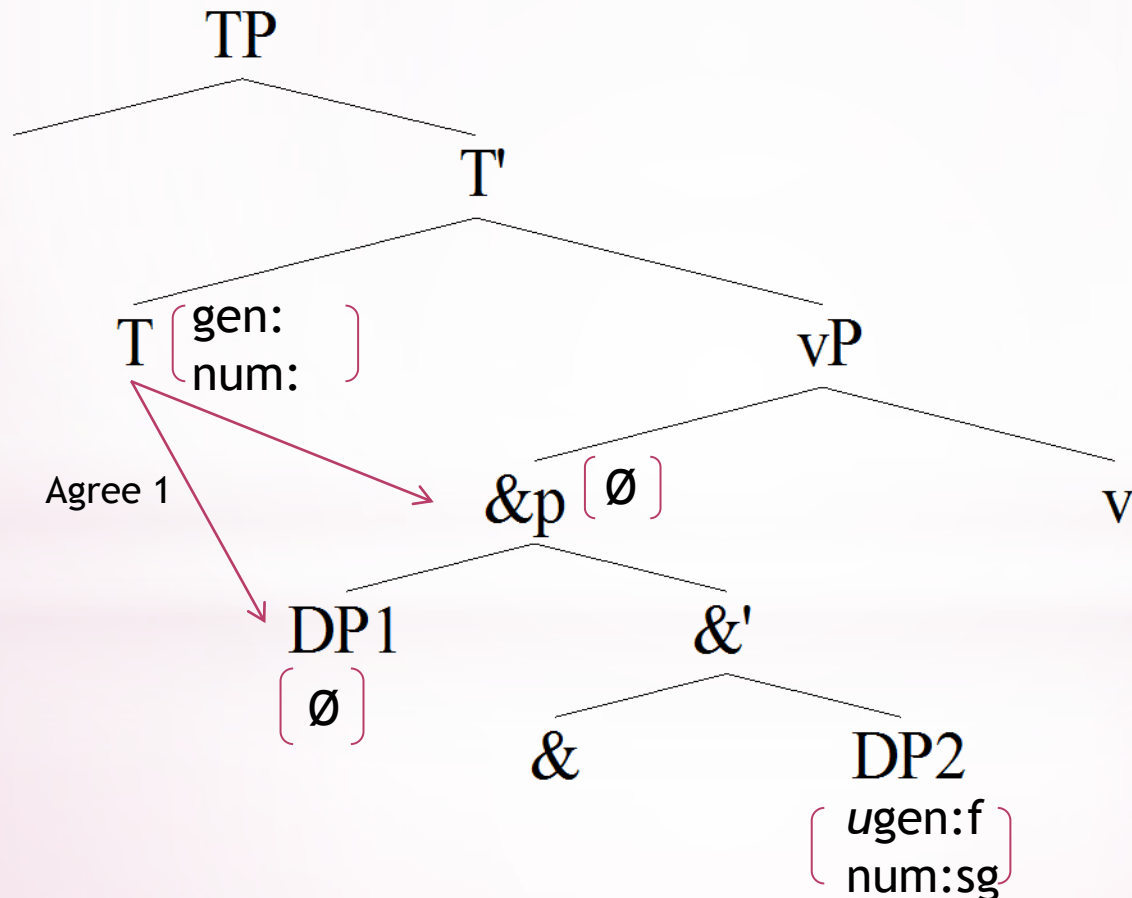
On the other hand, when one of the conjuncts involves a phrase with<5 numeral, the sentence again seems ungrammatical:

30) Trzej   chłopcy   i   jedna   dziewczynka
     Three$_{V.NOM}$ boys$_{V.NOM.3PL}$ and   one$_F$ girl$_{F.NOM}$

     weszli/??weszła   do   pokoju

     came$_{3.PL.V\ /??F.SG}$ in   room

     'Three boys and one girl came into the room'

* Derivation of Last Conjunct Agreement with >5 numerals
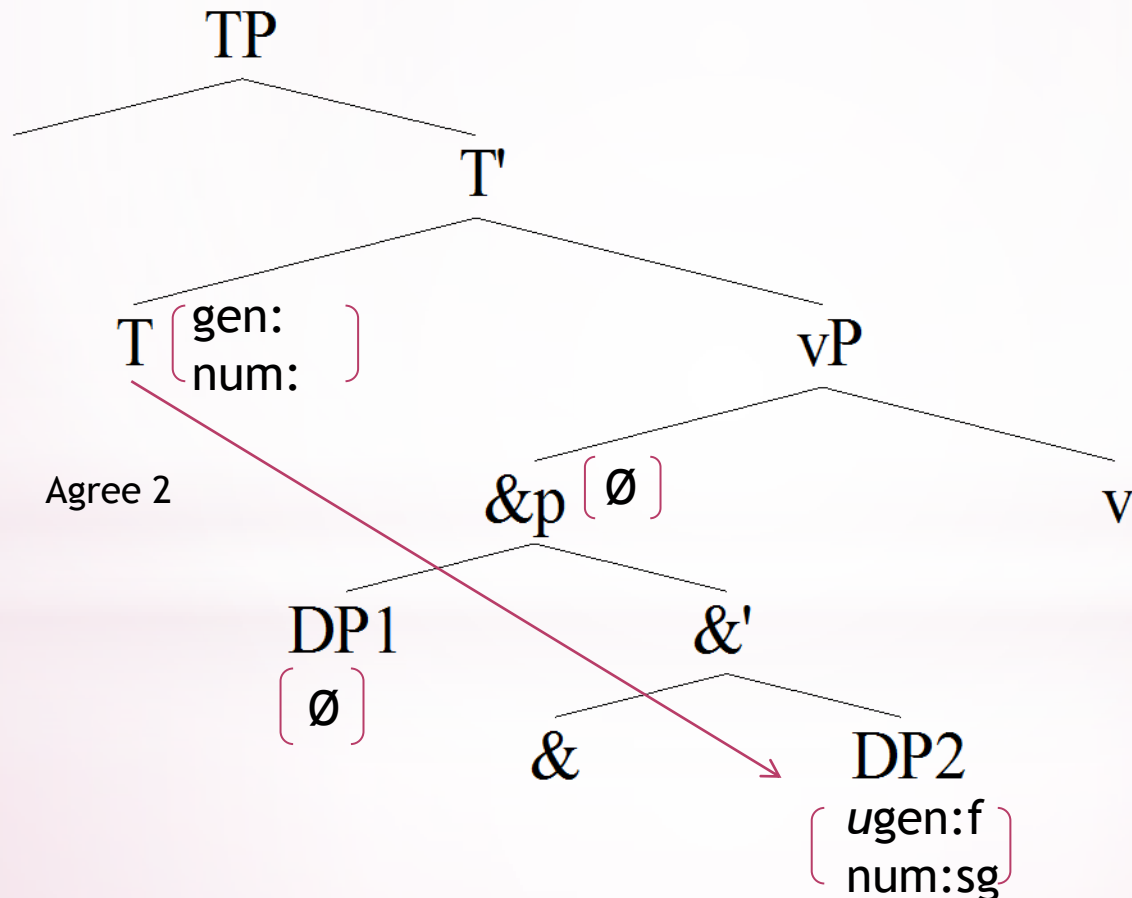
*Derivation of Last Conjunct Agreement with >5 numerals

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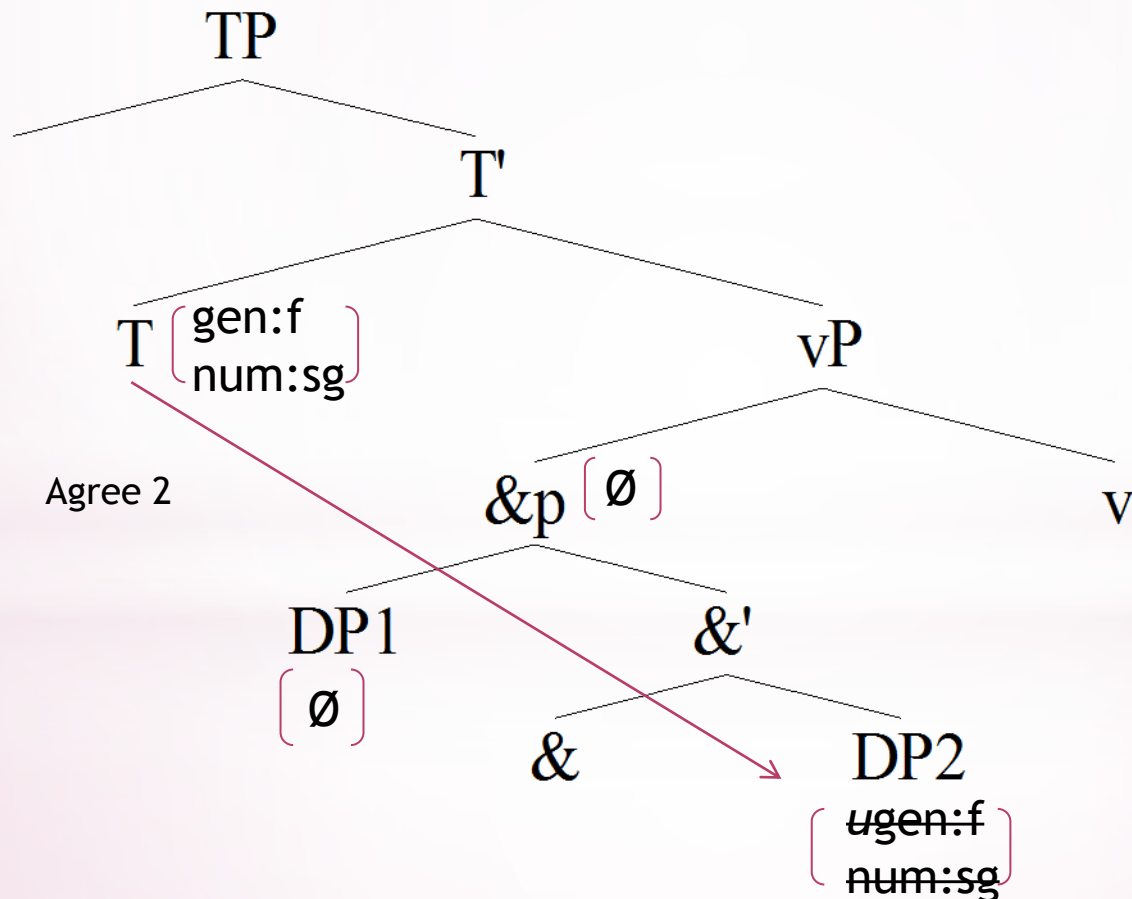
*Conclusions

* Polish employs both First Conjunct Agreement as well as Last Conjunct Agreement as alternatives to agreeing with the whole ConjP

* Last Conjunct Agreement is possible with abstract or mass nouns or with conjuncts including numeral phrases

* The Agree-based theory of FCA/LCA of Bošković (2009,2010) can be applied to Polish, under additional asumptions:

    * Polish grammatical gender is an uninterpretable feature
    * Polish abstract nouns and mass nouns exhibit uninterpretable gender features
    * Polish numeral phrases >5 do not include phi-features and cannot participate in Agree relation

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*Thank you ☺