

AGREEMENT: FORMAL MODELS AND FURTHER QUESTIONS

Archi agreement project: Introductory seminar
Surrey, January 16, 2012

Maria Polinsky
Harvard University

Agreement patterns

- Typical cases of **verb agreement** involve a relation between a verb and an NP within the verb's clausal domain

Agreement patterns

- Typical cases of **verb agreement** involve a relation between a verb and an NP within the verb's clausal domain
- Special cases:
 - Extended domain as in Long Distance Agreement
 - Reduced domain as in Closest Conjunct Agreement

Agreement patterns

- Syntactic debates about agreement:
 - Nature of agreement categories
 - Interaction between agreement and Case
 - Ways of modeling agreement

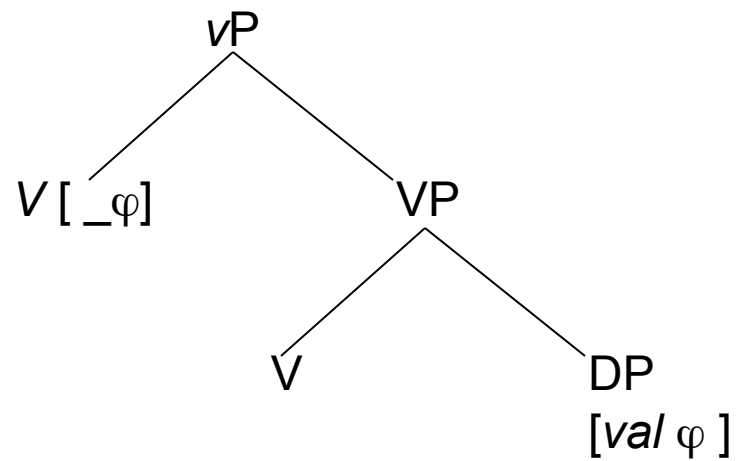
Agreement in a nutshell

- Conventional Minimalist formalization in terms of Agree (Chomsky 2000, 2001)

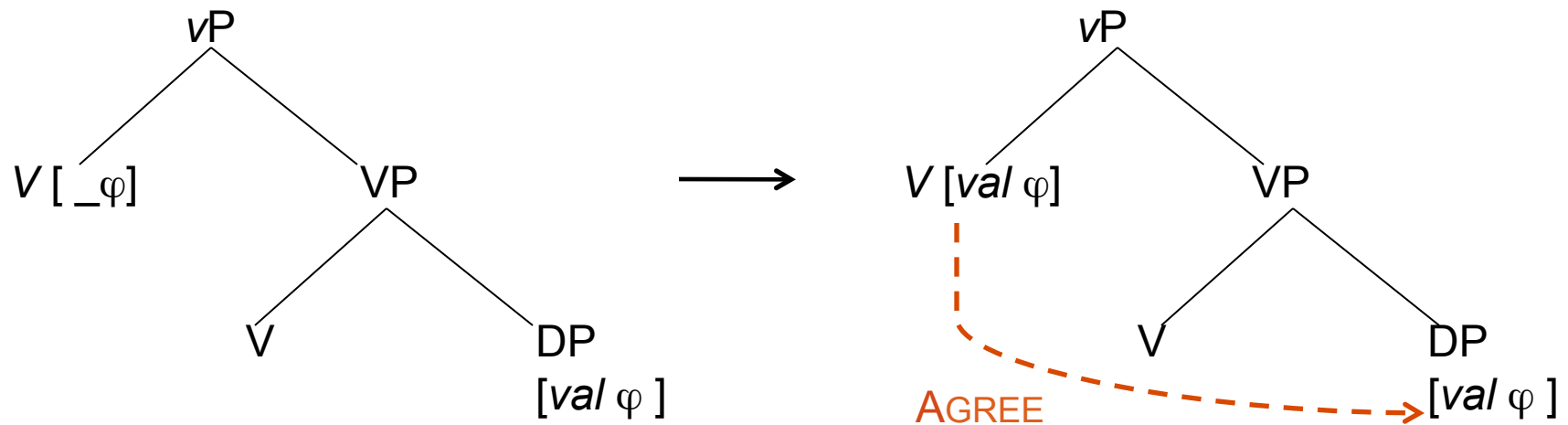
Agreement in a nutshell

- Conventional Minimalist formalization in terms of Agree (Chomsky 2000, 2001)
- Agree is a relation between a functional head and a DP that is established in the syntax:
 - A functional head with unvalued phi-features (*probe*) searches downwards into its c-command domain for a DP with valued phi-features (*goal*)

By way of illustration



By way of illustration



Ensuing questions

- What is the content and geometry of phi-features?

Ensuing questions

- What is the content and geometry of phi-features?
- What matters more, the goal or the probe?

Ensuing questions

- What is the content and geometry of phi-features?
- What matters more, the goal or the probe?
- What happens when features do not get valued?

agreement features

Phi-features

- Well-established:
 - [person]
 - [number]
 - [gender]

Phi-features

- Well-established:
 - [person]
 - [number]
 - [gender]
- Somewhat more tentative:
 - [status] (honorification)
 - [wh-agreement]

Not all phi-features are created equal

- Person agreement never appears on adjectives

Not all phi-features are created equal

- Person agreement never appears on adjectives
- Probing for [person] and [number]/[gender] occurs in separate derivation steps

(Anagnostopoulou 2003, Béjar 2003, Chomsky 2000, Laka 1993, Shlonsky 1989, Sigurdsson 1996, Taraldsen 1995, a.o.)

Not all phi-features are created equal

- Person agreement never appears on adjectives
- Probing for [person] and [number]/[gender] occurs in separate derivation steps

(Anagnostopoulou 2003, Béjar 2003, Chomsky 2000, Laka 1993, Shlonsky 1989, Sigurdsson 1996, Taraldsen 1995, a.o.)

- [person] is probed first

Not all phi-features are created equal

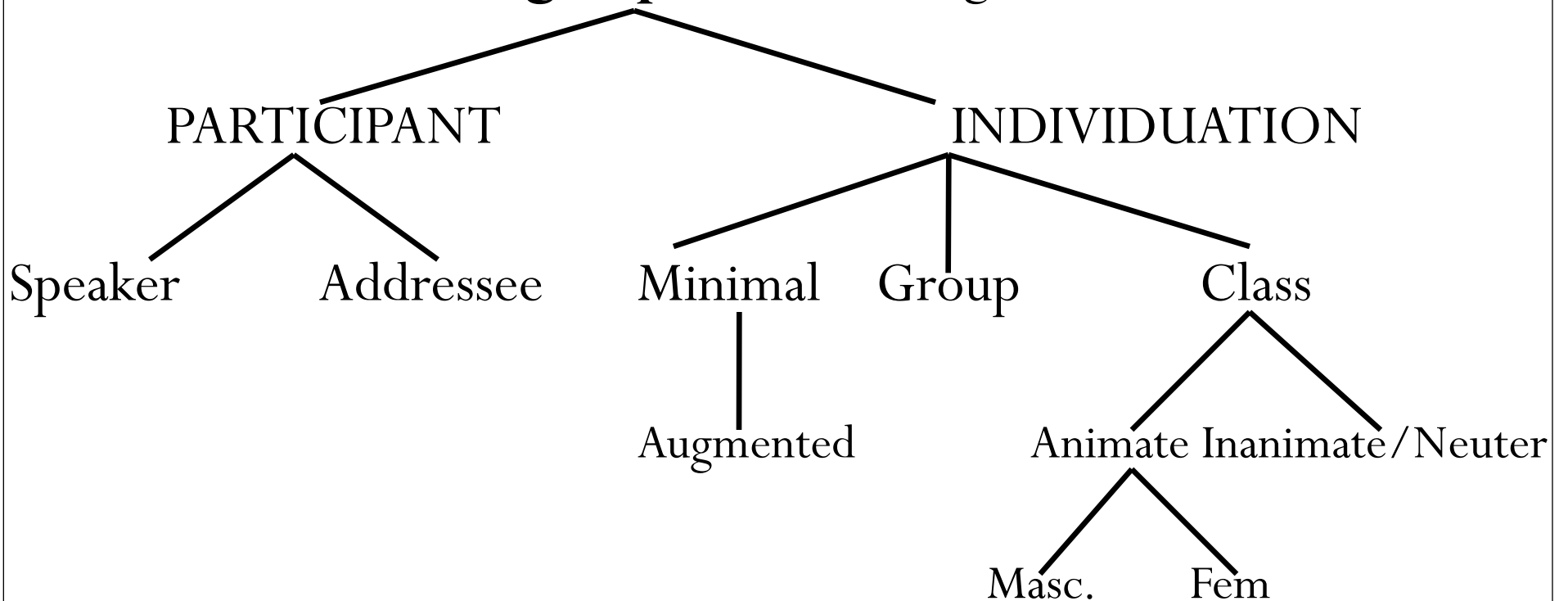
- phi-features are internally structured in a hierarchical way

(Harley & Ritter 2002, McGinnis 2005, Béjar & Rezac 2009, Coon & Preminger 2010; Preminger 2011)

Hierarchies

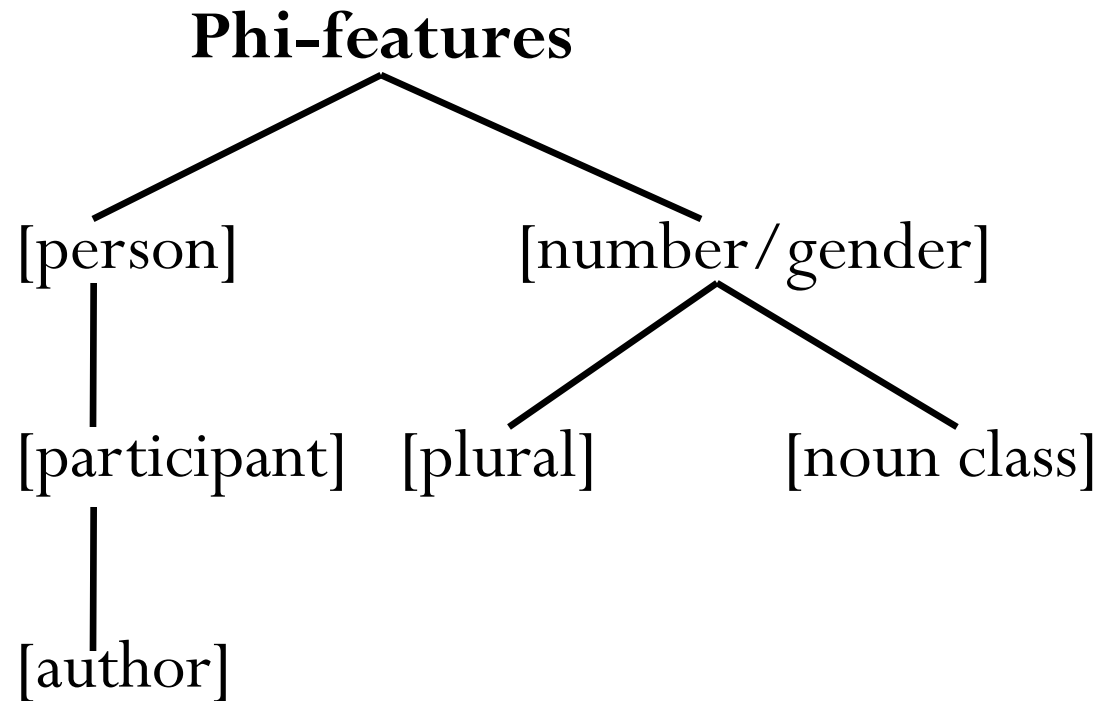
Feature geometry (Harley & Ritter 2002)

Referring Expression (=Agreement/Pronoun)



Hierarchies

Phi-feature Hierarchy



What about 3 person?

- 3 person noun phrases are not empty or invisible: they simply lack the nodes labeled [author], [participant], [plural], [specified noun class]

Partial agreement

- When agreement indexes only a subset of the phi-features of a given DP, it is typically [person]-agreement that goes missing

(Baker 2008, 2011, Bhatt & Walkow to appear)

Partial agreement

- When agreement indexes only a subset of the phi-features of a given DP, it is typically [person]-agreement that goes missing

(Baker 2008, 2011, Bhatt & Walkow to appear)

- Why person?

The Chicken-and-Egg (Probe-and-Goal) relationship

Which expression matters?

- **What matters (more)...
the goal or the probe?**

Which expression matters?

- **What matters (more)...
the goal or the probe?**
- More traditional view (Chomsky 1995, 2000)
the probe is crucial, and the presence of overt
phi-agreement licenses noun phrases
 - Makes agreement and Case more similar
 - Makes Agree reminiscent of spec-head agreement
 - Is more at odds with theory neutral approaches

Which expression matters?

- **What matters (more)...
the goal or the probe?**
- **Current view** (Bittner & Hale 1996, Preminger 2011a, b)
the presence of a noun phrase licenses phi-agreement with the appropriate probe
 - Makes agreement and Case more different
 - Much more consistent with theory neutral approaches
 - Allows agreement to be case-discriminating

Agreement and Case

The relationship between agreement and Case

- Two main views:
- Agreement and Case are tightly related (Baker 2008)
- Agreement and Case are separate and subject to different principles (Bobaljik 2007, a.o.)

Agreement and Case are linked

- Baker 2008: two main parameters in agreement:
 - (1) Looking up or down in the structure
 - (2) Linked to Case valuation or not

Agreement and Case are linked

- Baker 2008: two main parameters in agreement:
 - (1) Looking up or down in the structure
 - (2) Linked to Case valuation or not
- CDAP: Case-Dependency of Agreement Parameter
 - F agrees with DP/NP **in person** only if F values the Case feature of DP/NP or vice versa
 - CDAP can be on or off, hence parametric variation

Agreement and Case are linked

- CDAP “on” : single agreement (as in IE lgs)

Agreement and Case are linked

- CDAP “on” : single agreement (as in IE lgs)
- CDAP “off” : multiple agreement (e.g., Bantu)

Agreement and Case are linked

- CDAP “on” : single agreement (as in IE lgs)
- CDAP “off” : multiple agreement (e.g., Bantu)
- Only applies to agreement in [person]
 - May also apply to [wh] agreement for those languages where the [wh] feature is linked to [person]
(Northwest Caucasian, see O’ Herin 2002, Caponigro & Polinsky 2011)

Agreement and Case are unrelated

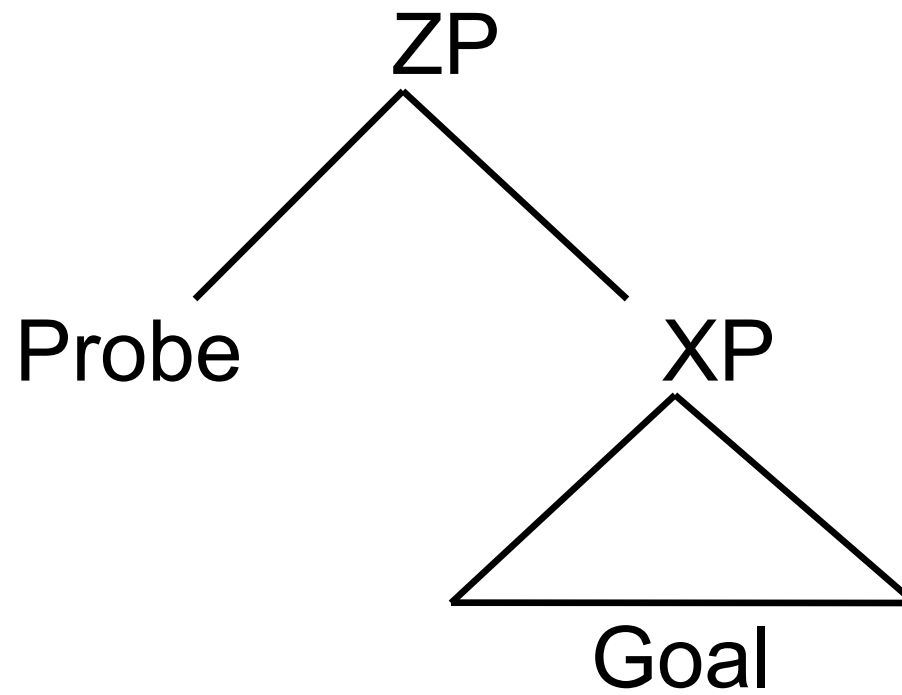
- More grounded empirically:
 - Accounts for languages with quirky case (e.g., Icelandic)
 - Explains why agreement is case-discriminating
 - Absence of accusative languages with ergative agreement (Corbett 2006, Bobaljik 2008)

Ways of implementing agreement in models

Structural Conditions and Mechanisms

- Agree (c-command)
- Covert or overt checking
- Locality

Agree



Typical cases

- Subject Verb agreement in SVO languages.

Typical cases

- Subject Verb agreement in SVO languages.
- Agreement in Expletive Argument chains.

Typical cases

- Subject Verb agreement in SVO languages.
- Agreement in Expletive Argument chains.
- Agreement in VSO languages.

Typical cases

- Agreement asymmetries in languages such as Arabic (full agreement in SVO / partial agreement in VSO) and French (participial agreement).

Typical cases

- Agreement asymmetries in languages such as Arabic (full agreement in SVO / partial agreement in VSO) and French (participial agreement).
- Cases of multiple agreement in Bantu (and other languages such as Arabic).

Typical cases

- Agreement asymmetries in languages such as Arabic (full agreement in SVO / partial agreement in VSO) and French (participial agreement).
- Cases of multiple agreement in Bantu (and other languages such as Arabic).
- Long Distance Agreement (Tsez, Hindi)

General consensus

- Approaches may vary but there seems to be a consensus that agreement is a syntactic relation subject to syntactic conditions.

General consensus

- Approaches may vary but there seems to be a consensus that agreement is a syntactic relation subject to syntactic conditions.
- The output may be subject to morpho-phonological operations (PF) but PF's role is secondary (due to how the relevant features are spelled-out? or performance factors?)
 - Stay tuned for Closest Conjunct Agreement (CCA)

Phrasal accounts under Agree

- Agree-based accounts assume a single configuration for agreement

Phrasal accounts under Agree

- Agree-based accounts assume a single configuration for agreement
- Agreement must be local

Phrasal accounts under Agree

- Agree-based accounts assume a single configuration for agreement
- Agreement must be local
- Outstanding issue: what happens when a local relationship is disrupted (so called intervention)?

Locality

- Agreement has to take place in a local domain

Locality

- Agreement has to take place in a local domain
- Local domains for agreement, case, scope and movement do not match

Locality

- Agreement has to take place in a local domain
- Local domains for agreement, case, scope and movement do not match
- Agreement domain: the (verbal) complement to a lexical verb

(Bobaljik & Wurmbrand 2005)

Locality

- English: Anaphors exhibiting agreement must have a local antecedent:

The student believed [himself/*myself is clever]

- Intervention can lead to the loss of locality, hence disruption of agreement

Special cases

Long-distance agreement

- Agreement appears to cross a clausal domain
(true LDA occurs in bi-clausal structures)

Long-distance agreement

- Agreement appears to cross a clausal domain (true LDA occurs in bi-clausal structures)
- The goal is at the left edge of the lower clause
 - e.g., as topic or focus/wh-element

LDA illustrated: Tsez

enir	[uža: magalu	ba:c' rułi]	b-iyxo
mother	[boy bread.III.ABS	ate].IV	III-know
'The mother knows (that) the boy ate the bread'			

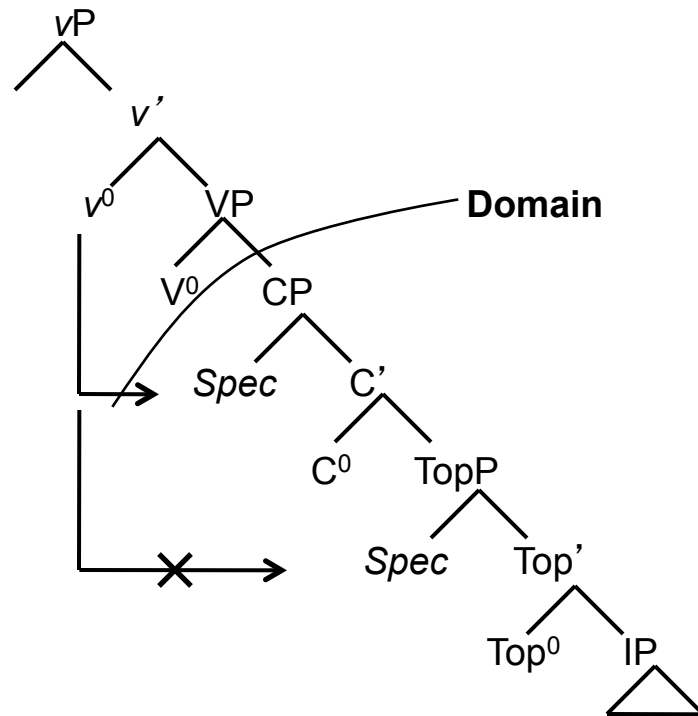
LDA illustrated: Tsez

enir [uža: magalu ba:c' rułi] b-iyxo
mother [boy bread.III.ABS ate].IV III-know
'The mother knows (that) the boy ate the bread'

- LDA can occur only with the absolutive DP
- No interveners
- No crossing of clauses
- The LDA goal is Topic

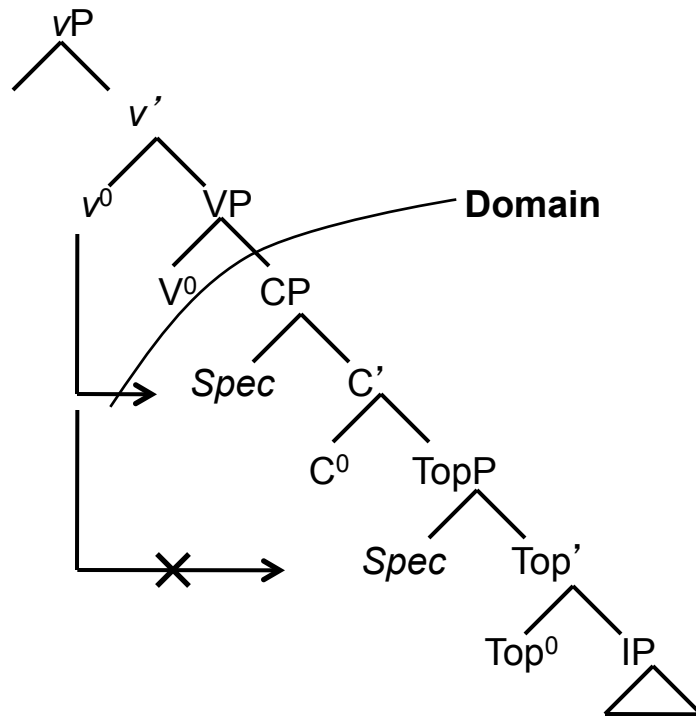
(Polinsky & Potsdam 2001; Polinsky 2003)

How LDA works

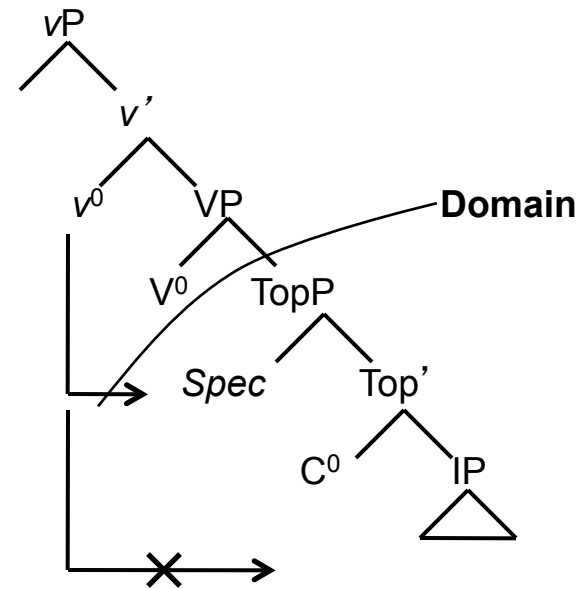


Agreement with $SpecCP/*SpecTopP$

How LDA works



Agreement with SpecCP/*SpecTopP



Agreement with SpecTopP

True LDA is different from restructuring

- LDA found in several Nakh-Dagestanian languages
 - Tsez, Khwarshi, Avar

True LDA is different from restructuring

- LDA found in several Nakh-Dagestanian languages
 - Tsez, Khwarshi, Avar
- LDA should be distinguished from restructuring: two verbs form a complex predicate (can be discontinuous) & there is only one clausal domain

Haspelmath 1996 for Godoberi and Bhatt 2005 for Hindi

Agreement and Coordination

Moroccan Arabic:

- $\check{z}a$ Omar w Karim
came. **3MS** Omar & Karim
'Omar and Karim came.'
- *Omar w Karim $\check{z}a$
Omar & Karim came. **3MS**
'Omar and Karim came.'
- [Omar w Karim] $\check{z}aw$
Omar & Karim came. **3P**
'Omar and Karim came'
- $\check{z}aw$ [Omar w Karim]
came. **3P** Omar & Karim
'Omar and Karim came'

Agreement and Coordination Moroccan Arabic:

- $\check{z}a$ Omar w Karim
came. **3MS** Omar & Karim
'Omar and Karim came.'
- *Omar w Karim $\check{z}a$
Omar & Karim came. **3MS**
'Omar and Karim came.'
- [Omar w Karim] $\check{z}aw$
Omar & Karim came. **3P**
'Omar and Karim came'
- $\check{z}aw$ [Omar w Karim]
came. **3P** Omar & Karim
'Omar and Karim came'

- Preverbal Goal: agreement has to be with the entire NP
- Postverbal Goal: agreement can be with the entire NP or with the closest conjunct

Closest conjunct agreement in Tsez

No Arabic-style positional asymmetry

- uži-ya kid-ya: y-ik' is
boy.cl1-or girl.cl2-or cl2-went
- [uži-ya: kid-ya:] b-ik' is
boy.cl1-or girl.cl2-or 1.pl-went
- ∅-ik' is uži-ya: kid-ya:
cl1-went boy.cl1-or girl.cl2-or
- b-ik' is [uži-ya: kid-ya:]
1.pl-went boy.cl1-or girl.cl2-or

‘A boy or a girl left’

Conditions on closest conjunct agreement (CCA)

- Strict locality

Conditions on closest conjunct agreement (CCA)

- Strict locality
- Adjacency (if there is intervention, only full agreement is possible)

Conditions on closest conjunct agreement (CCA)

- Strict locality
- Adjacency (if there is intervention, only full agreement is possible)
- No CCA in person

Background observations

- Coordination is asymmetric

$[_{\text{ConjP}} \text{DP}_1 [_{\text{Conj}'} [_{\text{Conj}} \&] [_{\text{DP}} \text{DP}_2]]]$

Background observations

- Coordination is asymmetric

$[_{\text{ConjP}} \text{DP}_1 [_{\text{Conj}'} [_{\text{Conj}} \&] [_{\text{DP}} \text{DP}_2]]]$

- Evidence: binding from DP_1 into DP_2

*John and his father / *his father and John*

Possible solutions

- AGREE has access to ConjP and the highest conjunct; PF chooses which one's features to express (e.g., based on the one which will give a more specific morphology)

(Van Coppen 2007, Walkow 2010)

Possible solutions

- AGREE has access to ConjP and the highest conjunct; PF chooses which one's features to express (e.g., based on the one which will give a more specific morphology)

(Van Coppen 2007, Walkow 2010)

- Agreement happens twice: first, all features are checked in syntax, second the PF chooses which features to pronounce based on adjacency

(Franck et al. 2007, Bemamoun et al. 2009, Lorimor 2008)

Thank you!

References

EXTRAS

What happens when Valuation does not occur?

Traditional view

- Looking for the result: valuation of phi-features must happen
- Agreement is obligatory, and in its absence the derivation crashes

More nuanced view

- Looking for the process: agreement is an obligatory operation but it may not need to find the appropriate target, the main requirement is that search for this target