

Monotonicity in Syntax

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Take-home message

Monotonicity beyond semantics

- ▶ Ongoing work on morphology (cf. Sophie Moradi's talk)
- ▶ This talk: **syntax**

Unification via monotonicity

- ▶ Monotonicity unifies distinct syntactic phenomena.
- ▶ Monotonicity cuts across linguistic domains.

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Outline

- 1 Monotonicity in movement
 - Ban against improper movement
 - Corollary: Ban against improper selection
- 2 Monotonicity in agreement: Omnivorous number
- 3 Where else do we find monotonicity?

A-displacement and A'-displacement

- ▶ Phrases do not always surface where they are interpreted
⇒ **movement/displacement**
- ▶ **A-movement phenomena (more local)**
 - (1) a. John was attacked *t*.
b. John seems *t* to have *t* cut the carrot.
- ▶ **A'-movement phenomena (less local)**
 - (2) a. This girl, John thinks that Mary likes *t*.
b. Who does John think *t* might *t* cut the carrot?

Ban Against Improper Movement

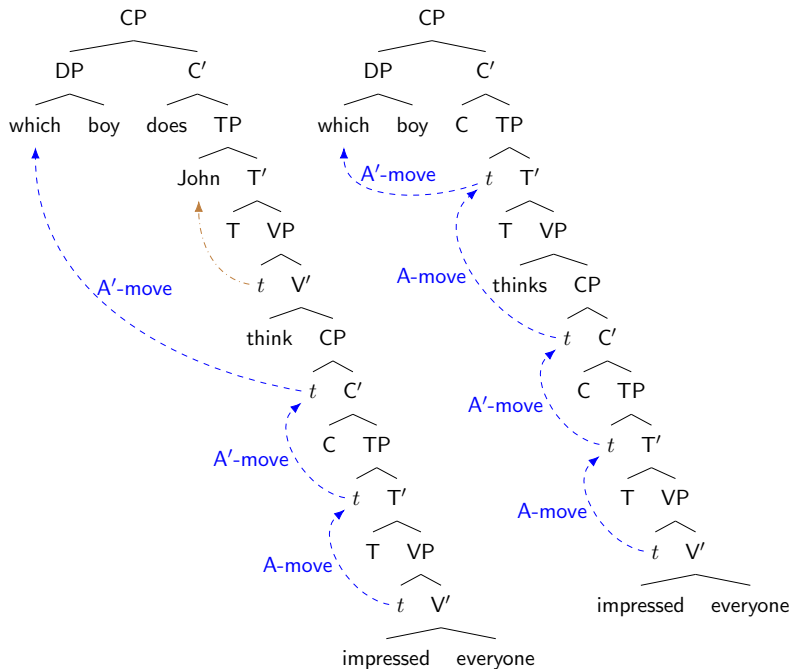
Once a phrase undergoes A'-movement,
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Why should there be a ban against improper movement?

- ▶ Formalisms vary in how they derive this ban.
- ▶ But they usually require extra stipulations.
- ▶ **A different take**
 - ▶ Monotonicity shows up a lot (semantics, morphology).
 - ▶ Maybe syntax cares about monotonicity, too?

Monotonicity + locality = Ban Against Improper Movement

Locality hierarchy: A-move < A'-move

Derivation:

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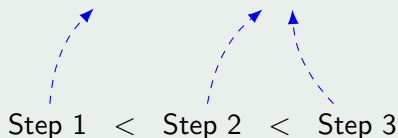
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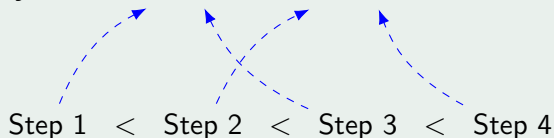
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Derivation:



A welcome corollary: Ban Against Improper Selection

- ▶ Selection combines heads with their arguments.
- ▶ Selection is even more local than A-movement:

Select < A-move < A'-move

- ▶ **Corollary:**
Once a phrase undergoes any movement, it can no longer select an argument or be selected as an argument.
- ▶ Most syntacticians believes this to be a universal of syntax.

Omnivorous number (Nevins 2011)

- ▶ In some languages, verbs agree with **subject and object**
- ▶ Some of these languages display **omnivorous number**.

Omnivorous number: √ for agreement

If subject or object is plural, verbal agreement is plural.

S	O	V
sg	sg	sg
sg	pl	pl
pl	sg	pl
pl	pl	pl

(3) g- xedav- t
 2NDOBJ- saw- PL

Georgian (Nevins 2011:950)

1 I saw y'all

2 We saw you

3 We saw y'all

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A curious typological gap...

Unattested: $\wedge$ for agreement

If subject or object is singular, verbal agreement is singular.

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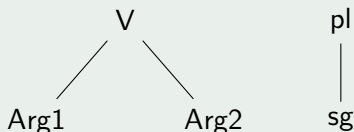
Syntactic explanations of this fact exist, but

- ▶ they are complicated, and
- ▶ they require **different machinery** from movement constraints.

The monotonicity perspective

- ▶ start with syntactic derivation (again)
- ▶ both arguments must receive number before V does
- ▶ but number values of arguments are independent of each other

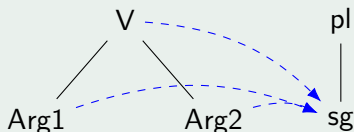
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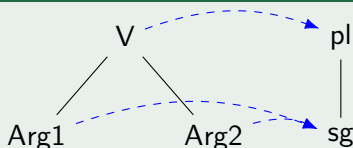


Uniform agreement

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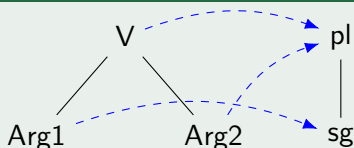


Resolved agreement
(this will be important!)

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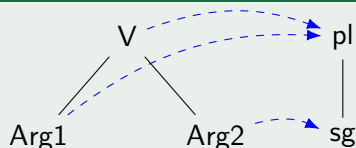


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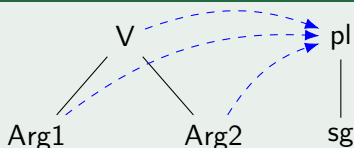


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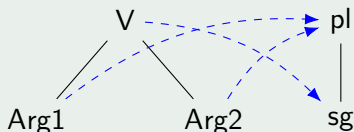


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Impossible

But what if...?

- ▶ We could have used the **dual** of one of those hierarchies.
- ▶ We could we have replaced monotonicity with **antitonicity**.
- ▶ Either one allows for $\wedge$ -agreement.

Why these orders? A methodological principle

- ▶ Objections correct, can vary these parameters freely
 - ▶ But dual/antitonicity do not allow for resolved agreement
 - ▶ Only under the given hierarchy
do all attested agreement patterns form a natural class.
-
- ▶ As project develops, will learn more about
what hierarchies may look like $\Rightarrow$ stronger constraints

Monotonicity in morphology

- ▶ Adjectival gradation (Graf 2019)
- ▶ Pronoun syncretism (Graf 2019)
- ▶ Case syncretism (Graf 2019)
- ▶ Case stem syncretism (Graf 2019)
- ▶ Tense syncretism (Sophie Moradi's talk)
- ▶ Resolved gender agreement (Sophie Moradi's talk)
- ▶ Person-number syncretism (Sophie Moradi, in progress)
- ▶ Inverse marking (Sophie Moradi, in progress)

Monotonicity in syntax

- ▶ Ban Against Improper Movement/Selection (this talk)
- ▶ Williams Cycle (in paper version of talk)
- ▶ Ban Against Improper Case (in paper version of talk)
- ▶ Omnivorous number (this talk)
- ▶ Person Case Constraint (Graf 2019)
- ▶ Gender Case Constraint (Graf 2019)
- ▶ Adjunct Island Constraint (Graf 2013)
- ▶ Coordinate Structure Constraint (to be written up)
- ▶ Keenan-Comrie hierarchy (to be written up)
- ▶ Freezing effects (to be written up)

Conclusion

- ▶ Monotonicity goes beyond semantics
- ▶ Unified perspective on seemingly unrelated phenomena

The general approach

linguistically motivated hierarchies + monotonicity = bingo

- ▶ **Current weakness**
free choice of hierarchies $\Rightarrow$ need to find hard constraints

Thanks

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References

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