CAN CLOSEST CONJUNCT AGREEMENT BE DERIVED IN THE SYNTAX PROPER?

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OVERVIEW OF THE TALK

• Closest-Conjunct Agreement (CCA) in South Slavic: Experimental Evidence
• Modeling the basic patterns (closest-conjunct agreement and highest conjunct agreement)
• Distributed vs purely syntactic approaches to CCA
• Further constraining the theory: sandwiched agreement (two probes, one on each side)

IS THE MAN WHO IS TALL HAPPY?

• Chomsky 1975: Syntax refers to hierarchical, not linear order; when it comes to auxiliary movement; learners prefer hierarchically-based generalisations
• Corbett 1983: South Slavic languages show cases of agreement based on linear order: when two noun-phrases are conjoined, the verb can sometimes agree with the linearly closest one
• Bock & Miller 1991: English speakers show cases of agreement based on linear order, called ‘attraction’, with the plural complement of noun phrases (e.g. the key to the cabinets are)
• How experimentally robust is linear conjunct agreement in South Slavic morphosyntax? Is it distinct from attraction?

METHODOLOGY:
ELICITED PRODUCTION

Participant sees model sentence

Participant sees replacement noun phrase (&P) displayed onscreen

Participant produces new sentence aloud and then clicks mouse

Responses recorded, classified, tabulated
METHODS AND MATERIALS

- Nine &P combinations of two genders; 6 items per condition
- All NPs inanimate and plural; dependent variable = gender agreement on participle
- 54 distractor items (18 RCs, 18 QNPs, 18 epicene nouns)
- Exp 1a: SV configurations (preverbal subjects), n=30 * 6 sites
- Exp 1b: VS configurations (postverbal subjects), n=30 * 6 sites
- Design and methodology identical across sites with local adaptation of vocabulary and morphosyntax
- Participants 18-22, not linguistics students; native speakers who grew up in region tested

CHOOSING THE AGREEMENT STRATEGY

- The ‘default’ or ‘resolution’ value for conjuncts with mixed genders is masculine
- When a &P has M+F, N+M, etc, and we see masculine agreement, we can’t tell if it’s default agreement or closest-conjunct agreement
- However, in the combinations N+F and F+N, there are three distinct options: first-conjunct agreement (hierarchical), closest-conjunct agreement (linear), and default agreement (resolution/prescriptive)
- (In VS contexts, the first-conjunct is the closest conjunct)

LINEAR AGREEMENT IS ROBUST GIVEN &PS (FN/NF)

Results for SV condition (where first and closer diverge)

LINEAR AGREEMENT IS ROBUST GIVEN &PS (FN/NF)

Results for SV condition (where first and closer diverge)

GIVEN A HIERARCHICAL &P

SV
- Linearly closest conjunct

VS
- Linearly closest conjunct

Distal conjunct still hierarchically higher
Distal conjunct hierarchically lowest

Given a hierarchical &P

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6
7
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**IF &PS WERE FLAT…**

- **SV**
  - Linearly closest conjunct preferred
  - Distal conjunct “three nodes away”
  - BUT IF HIERARCHICAL...
  - Distal conjunct still hierarchically higher

- **VS**
  - Linearly closest conjunct preferred
  - Distal conjunct “three nodes away”
  - Distal conjunct hierarchically lowest

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**&PS AREN’T JUST FLAT: DISTAL CONJUNCT AGREEMENT**

If &Ps were just flat, then the distal conjunct in both SV and VS conditions should be equally produced/judged

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**SO WHERE CAN LINEARITY TRUMP HIERARCHY?**

- In one principled corner of the grammar, in one small corner of the world
- An intense research focus is how to model the variability in agreement strategies within a restricted model of possibilities (Boskovic 2009, Puskar & Murphy 2014, Marusic et al 2007/2015)
- These can be grouped into **purely syntactic** approaches to CCA versus **distributed** approaches to CCA

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- Key idea: ConjP doesn’t have its own gender
- Two-step Agree: Agree-Link vs Agree-Copy
- A Probe may establish a relation with a Goal (e.g. Pesetsky & Torrego 2007), but the actual copying takes place post-syntactically (see also Bhatt & Walkow 2013)
- Participles enact Agree-Link with ConjP, but depending on how and when Agree-Copy takes place, different parts of ConjP may be targeted

- ConjP has its own Number, but not its own Gender
- Speakers who wish to avoid default Gender must therefore open up the lid on the ConjP and choose one of the individual conjuncts during Agree-Copy
- Key idea: linearization is post-syntactic
- If Agree-Copy happens before linearization, HCA results
- If Agree-Copy happens after linearization, CCA results
- (There is no way to choose a medial conjunct if there are 3)

THEORIES OF CONJUNCT AGREEMENT: BOSKOVIC (2009)

Multiple Agree

\[
\text{if Probe has EPP: Pied-Piping ambiguity; can't move either}
\]

Solution: do Agree again, this time with NP2:

\[
\text{This time, only } \&P \text{ can move; yielding preverbal CCA}
\]

- Disadvantage: predicts preverbal HCA to be impossible, counter to fact
- (In addition, for 3-conjuncts, predicts medial conjunct agreement…)

BHATT & WALKOW 2013: DISTRIBUTED AGREEMENT

- In Hindi/Urdu, while conjoined subjects show resolved agreement, conjoined objects show CCA
- Agreement must be partly syntactic to account for the subject/object asymmetry
- Idea: when object phi-features are not accessible within the syntax, PF mechanisms step in to furnish agreement, and these, being post-syntactic, may be sensitive to linear order

PUSKAR & MURPHY 2015: DERIVING CCA SYNTACTICALLY

(Move) > ↑Agr↑ > Merge > ↓Agr↓

Downward Agree: &P valued by NP2

Uniform order of operations within a derivation:

Move feeds upward Agree; T agrees with &P (and hence NP2)
EVALUATING
PUSKAR & MURPHY (2015)

- Correctly Rules in Preverbal HCA & Rules out Postverbal DCA
- Even rules out impossibility of Medial Conjunct Agreement in 3-conjunct coordinations
- Disadvantage: as all the action is internal to &P, faces difficulty when different agreement targets pick different parts of the conjunction...

EXPERIMENTAL DESIGN:
SANDWICHING & DEPENDENT VARIABLES

- PARTICIP1 [C1 & C2] PARTICIP2
- Split Agreement: Participle 1 agrees with C1 and Participle 2 agrees with C2
- Double HCA: Both participles agree with C1
- Double LCA: Both participles agree with C2

RESULTS: SANDWICHING OK, AND SO IS DOUBLE HCA

Yesterday were AGR [cows and calves] sent AGR to the meadow.

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SANDWICHED AGREEMENT
When agreement can be with different parts of &P

Complementizer shows CCA; main verb shows resolved agreement

Leftward participle shows CCA with NP1;
Rightward participle shows CCA with NP2

Such examples challenge models in which all CCA is computed internally to the &P

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THIS LATTER ASYMMETRY IS EASY FOR MARUSIC ET. AL

• Agree-Copy After Linearization Yields Split Agreement
• Agree-Copy Before Linearization Yields Double HCA
• Lack of Agree-Copy Yields Double Default
• There is no way in our theory to get Double DCA

PURELY SYNTACTIC THEORIES FOUNDER ON SANDWICHING

• Split agreement is already a problem necessitating revisions
• But even given those, there is no obvious syntactic way to rule in Double HCA while ruling out Double DCA
• Feature deactivation (with multiple cycles of Agree) would help rule in Double HCA, but would then rule out Double Default

THREE FUTURE EMPIRICAL PATHS WE’LL INVESTIGATE

• The Marusic et al 2015 model predicts masculine agreement to be freely available in split agreement cases (e.g. CCA on one side and default on the other). This is worth testing; it may be that we overgenerate.
• We’ve shown two ways of sandwiching; are there different results for the DP-internal adjective cases? Is concord inherently different (cf. Norris 2014)
• Slovenian already has more CCA than BCS without sandwiching; we should test the relative amount of double HCA vs split agreement in BCS

OVERALL CONCLUSIONS

• Closest-conjunct agreement is the result of external Probes that can access individual parts of the ConjP
• We’ve proposed three (and only three) strategies, based on Agree-Copy: No Agree-Copy yields default, prelinearization Agree-Copy yields HCA; postlinearization Agree-Copy yields CCA
• The real kicker comes with sandwiched agreement, which vindicates the possibility of double CCA (different results on each probe) and double HCA, which are not easily derivable in purely syntactic approaches
SELECTED REFERENCES


• Norris, Mark (2014). A theory of nominal concord. Phd, UCSC.

• Haegeman, L. & M. van Koppen. Complementizer agreement and the relation between C and T. LI 43.3: 441-454.