Béjar & Rezac (2009)
Syntax Project Discussion
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1 Introduction

- Phenomenon analyzed: Agreement systems with:
  - (partial) Person hierarchy (PH),
  - preferred agreement with internal argument (IA)
- B&R analyze these patterns syntactically (as opposed to morphologically)

(1) (B&R (1),p36) Assumptions

a. Intervener-based locality (Rizzi 1990), relativized to features (Chomsky 1995): Agree for a feature [F] is sensitive only to other elements with [F]

b. A fine-grained approach to cyclicity, where every syntactic operation defines a cycle and thus a potential feeding-bleeding relationship (Rezac 2003)

c. A fine-grained approach to φ-features (specifically person or π-features), and especially φ-probes, associating with each person value (π-value) a different feature structure and thus a different locality class (Béjar 2003)

- Two innovations: Cyclic Agree, and Added-Probe

2 Person Hierarchies and External Argument–Internal Argument Interaction

- Core agreement is *controlled* by an argument
- B&R are interested in a subset of languages where *controller* $\neq$ *subject*: *e.g.*, Basque, Georgian, Karok, Ezra.

(2) (Table 1, p39)

EA	IA	Controller	π agreement
1	2	IA	2
2	1	IA	1
3	1	IA	1
2	3	EA	2
1	3	EA	1

- PH partially explains (2). $(1, 2 > 3)$
- PH can't explain the preference for IA agreement (IA > EA)
- IA preference suggests that Agree-IA and Agree-EA are ordered (*cyclic Agree*)

(3) (4, p39) $[_{\text{vP}}$ EA [v+Agr $[_{\text{VP}}$ V + IA]]]

- One probe on v ensures that Agree-IA bleeds Agree-EA

3 The Theory of Cyclic Agree and Person Hierarchy–Driven Agreement Displacement

3.1 Articulated Probes, Feature-Relativized Locality, and Person Licensing

- Agree-IA occurs before Agree-EA (*cyclic expansion*)
- Agree requires matching:

(4) (5, p 41) Matching is a relation that holds of a probe P and a goal G. Not every matching pair induces Agree. To do so, G must (at least) be in the domain D(P) of P and satisfy locality conditions. The simplest assumptions for the probe-goal system are shown [below:]

a. Matching is feature identity.

b. D(P) is the sister of P.

c. Locality reduces to closest c-command.
(Chomsky 2000:122)

- (4) generates cyclic expansion and standard locality patterns

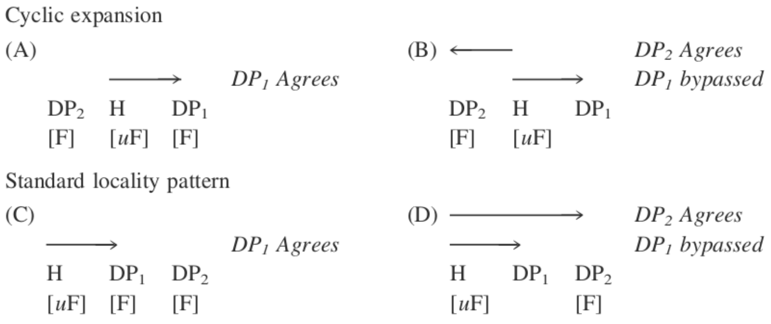


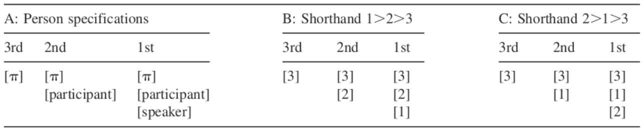
Figure 1: (Fig 1, p42) Locality patterns

Parameter 1. Probe height can be high (T) or low (v) (or both?)

- φ bundles (and, by extension π bundles) are organized into subsets that reflect semantic entailment.

(5) a. Semantic entailment
speaker $\Longrightarrow$ participant $\Longrightarrow$ person $(1 > 2 > 3)$
addressee $\Longrightarrow$ participant $\Longrightarrow$ person $(2 > 1 > 3)$

b. Syntactic feature structure



A: Person specifications			B: Shorthand 1>2>3			C: Shorthand 2>1>3		
3rd	2nd	1st	3rd	2nd	1st	3rd	2nd	1st
[π]	[π] [participant]	[π] [participant] [speaker]	[3]	[3] [2]	[3] [2] [1]	[3]	[3] [1]	[3] [1] [2]

Parameter 2. speaker or addressee but not both can be lexicalized as a feature.

- interpretable and uninterpretable features are articulated

Parameter 3. π probes can be:
flat ([u3]),
partially articulated $\begin{pmatrix}[u3] & [u3]\\ [u2], & [u1]\end{pmatrix}$, or
fully articulated $\begin{pmatrix}[u3] & [u3]\\ [u2], & [u1]\\ [u1] & [u2]\end{pmatrix}$

- When a probe P matches a goal G
  - If P is more specified than G, the unmatched portion of P remains active.
  - otherwise, P is rendered inactive

3.2 Cyclicity and Agree

- Derivations are sequences of instances of Merge and Agree.
- Merge$(\alpha, \beta) = \{\alpha, \{\alpha, \beta\}\}$ iff α selects β
  - [DM: This assumption is the linchpin of the entire account.]
- Since the label is a copy of one of a head, it can probe and Agree.

(6) Derivation of a transitive vP (16, p48)
Step 0: VP constructed as $\{\mathrm{V}, \{\mathrm{V}, \mathrm{IA}\}\}$; v becomes locus
Step 1: Merge(v, VP) = $\{\mathrm{v}_I, \{\mathrm{v}, \{\mathrm{V}, \{\mathrm{V}, \mathrm{IA}\}\}\}\}$
Step 2: Agree(v_I , IA)
Step 3: Merge(vP, EA) = $\{\mathrm{v}_{II}, \{\mathrm{EA}, \{\mathrm{v}_I, \{\mathrm{v}, \{\mathrm{V}, \{\mathrm{V}, \mathrm{IA}\}\}\}\}\}\}$
Step 4: Agree(v_{II} , EA), if there is still a probe on v_{II}

- v selects the EA, so v projects when EA is merged.
- Nishnaabemwin is used to demonstrate cyclic Agree.
  - Low π probe
  - Addressee is lexicalized
  - Full π probe

(7) Nishnaabemwin core agreement pattern (2 > 1 > 3)

EA	IA	Controller	π agreement
1	2	IA	2
2	1	EA	2
3	1	IA	1
3	2	IA	2

(8) "Derivation" of agreement (Table 3, p50)

EA→IA	2				1			
2	—				v_{II}	EA	v_{I}	IA
					([u3])	[3]	[u3]—[3]	
					([u1])	[1]	[u1]—[1]	
					[u2]—[2]		[u2]	
1	v_{II}	EA	v_{I}	IA	—			
	([u3])	[3]	[u3]—[3]					
	([u1])	[1]	[u1]—[1]					
	([u2])		[u2]—[2]					
3	v_{II}	EA	v_{I}	IA	v_{II}	EA	v_{I}	IA
	([u3])	[3]	[u3]—[3]		([u3])	[3]	[u3]—[3]	
	([u1])		[u1]—[1]		([u1])		[u1]—[1]	
	([u2])		[u2]—[2]		~~[u2]~~		[u2]	

- Cyclic Agree also predicts (or allows for a good analysis of) *second-cycle effects* which we see in Georgian

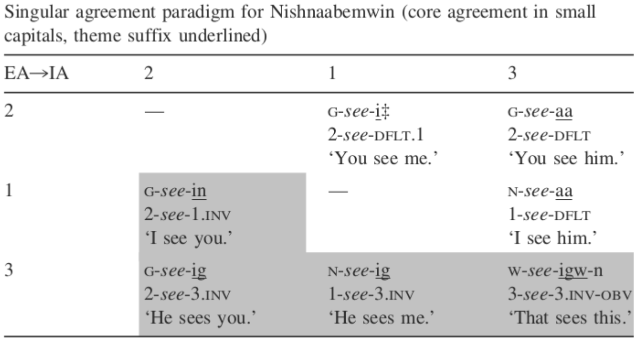
(9) (18, p51) *Georgian*
a. m- xedav -s
1.I see x
"He sees me."
b. v- xedav
1.II see
"I see him."

- *m-* spells out first cycle (v_I) 1Sg agreement.
- *v-* spells out second sycle (v_{II}) 1Sg agreement.
- B&R express this in vocabulary insertion rules.

(10) (21, p52)
a. First-cycle vocabulary item: $m \leftrightarrow [3\text{-}2\text{-}1]/[\_]_{\mathrm{v}}$
b. Second-cycle vocabulary item: $v \leftrightarrow [3\text{-}2\text{-}1]/[\_]_{\mathrm{v}}[\ldots]_{\mathrm{v}}$

3.3 Nishnaabemwin: The core probe

- B&R reiterate their analysis of the Nishnaabemwin core agreement pattern
- They point out that Inverse marking needs to be addressed



Singular agreement paradigm for Nishnaabemwin (core agreement in small capitals, theme suffix underlined)

EA→IA	2	1	3
2	—	G-*see*-i‡ 2-*see*-DFLT.1 ‘You see me.’	G-*see*-aa 2-*see*-DFLT ‘You see him.’
1	G-*see*-in 2-*see*-1.INV ‘I see you.’	—	N-*see*-aa 1-*see*-DFLT ‘I see him.’
3	G-*see*-ig 2-*see*-3.INV ‘He sees you.’	N-*see*-ig 1-*see*-3.INV ‘He sees me.’	W-*see*-igw-n 3-*see*-3.INV-OBV ‘That sees this.’

Figure 2: (Table 4, p 53)

4 Person Licensing and the Added Probe

4.1 Inverse Contexts: Person-Licensing Failure and Repair

(11) (13, p46) *Person-Licensing Condition (PLC)*
A π-feature [F] must be licensed by Agree of some segment in a feature structure of which [F] is a subset.

- Inverse contexts leave EA π features unlicensed.
- In languages with PH-driven agreement, Inverse contexts (π-IA> π-EA) show special morphology.
  - Nishnaabemwin, Mohawk, and Basque: IA controls core agreement, extra agreement is added for EA
  - Kashmiri: EA controls core agreement, IA is in a special case (R-case)
- these reflect two repair strategies: *added-probe* and *R-case* respectively.
- In fact, *R-case* is just a different spellout of *added-probe*
- The basis of both of the strategies is “Property P”

(12) (23, p56)*Property P*
If the core probe α on Agr has property P, a probe is added to Agr upon Agree by α.

- (at least) The languages in question have two varieties of v heads: v and v^P
- If IA>EA, the derivation only converges with v^P
  - Inverse marking (Nishnaabemwin, etc) spells out the added probe
  - R-Case is the case assigned by v^P
- If EA>IA, the derivation crashes with v^P
- [DM: Why doesn’t agreement with EA trigger an added probe?]

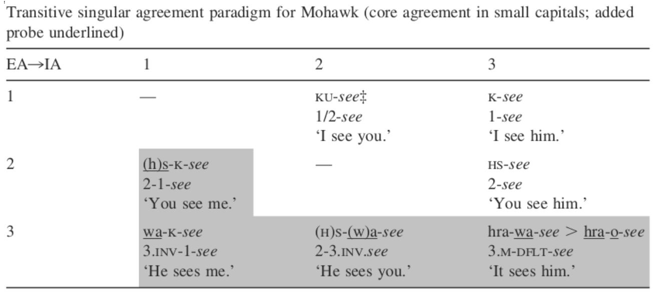
(13)

Context	v/v^P	Result
Direct	v	Converge
Inverse	v	Crash (PLC)
Direct	v^P	Crash (unchecked [uF])
Inverse	v^P	Converge w/ special morphology

4.2 Added Probe

- Mohawk:
  - Direct contexts: 1 Agr slot (Core probe)
  - Inverse contexts: 2 Agr Slots (Core + Added probe)
  - + Contextual allomorphy for KU-*see*

(14) (Table 7, p59)

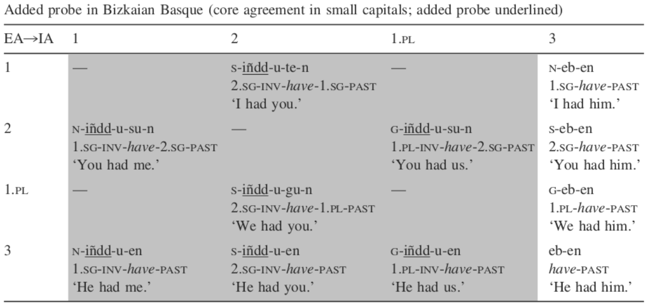


Transitive singular agreement paradigm for Mohawk (core agreement in small capitals; added probe underlined)

EA→IA	1	2	3
1	—	KU-*see*‡ 1/2-*see* ‘I see you.’	K-*see* 1-*see* ‘I see him.’
2	(h)s-K-*see* 2-1-*see* ‘You see me.’	—	HS-*see* 2-*see* ‘You see him.’
3	wa-K-*see* 3.INV-1-*see* ‘He sees me.’	(H)S-(w)a-*see* 2-3.INV.*see* ‘He sees you.’	hra-wa-*see* > hra-o-*see* 3.M-DFLT-*see* ‘It sees him.’

- Basque: $[u-3-2]$ probe
  - Direct contexts: 1 Agr prefix (Core)
  - Inverse contexts: 1 Agr prefix (Core), *iñdd-* (Added probe)

(15) (Table 9, p61)



Added probe in Bizkaian Basque (core agreement in small capitals; added probe underlined)

EA→IA	1	2	1.PL	3
1	—	S-iñdd-u-te-n 2.SG-INV-*have*-1.SG-PAST ‘I had you.’	—	N-eb-en 1.SG-*have*-PAST ‘I had him.’
2	N-iñdd-u-su-n 1.SG-INV-*have*-2.SG-PAST ‘You had me.’	—	G-iñdd-u-su-n 1.PL-INV-*have*-2.SG-PAST ‘You had us.’	S-eb-en 2.SG-*have*-PAST ‘You had him.’
1.PL	—	S-iñdd-u-gu-n 2.SG-INV-*have*-1.PL-PAST ‘We had you.’	—	G-eb-en 1.PL-*have*-PAST ‘We had him.’
3	N-iñdd-u-en 1.SG-INV-*have*-PAST ‘He had me.’	S-iñdd-u-en 2.SG-INV-*have*-PAST ‘He had you.’	G-iñdd-u-en 1.PL-INV-*have*-PAST ‘He had us.’	eb-en *have*-PAST ‘He had him.’

- Nishnaabemwin (see 2):
  - Direct contexts: 1 Agr prefix (Core), Constant theme suffix % contexutal allomorphy
  - Inverse context: 1 Agr prefix (Core), agreeing theme suffix (Added probe)

4.3 R-Case

- Kashmiri:
  - Present/Future → Nom-Acc
  - Past/Future → Erg-Nom
  - Present, Inverse: IA gets R-case (homophonous with Dative)
  - R-case, unlike Dative, disappears in Passives, which can't have PH effects (no EA)
  - R-case is the case assigned by v^P, but EA always controls agreement.

5 Questions/Issues

- Can this be done without Projection/Labelling in the narrow syntax?
- Why doesn't v^P get a third probe when it Agrees with EA?
  - Maybe v^P enters the derivation with two probes
- In an Inverse context, do we end up with three distinct instances of v? (v, v_{Agr-IA}, v_{Agr-EA})
- In Kashmiri, why are Dative and R-case homophonous?
- How do the parameters interact?