Flexible search conditions on Agree-probes

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1 Introduction

- ***Search condition updates:***
  A recurring theme across various influential proposals of the complex and articulated operation Agree is the idea that a probe can change its search condition across the course of the derivation (Béjar 2003; Georgi 2010; Béjar and Kahnemuyipour 2017; Deal 2024: a.o.).

- ***Directionality:***
  Probes have been proposed to become both more picky and less picky. *Dynamic interaction* (Deal 2024) and *interaction reduction* (Bárány 2024) involve probes becoming *more* picky. While with *probe impoverishment/reduction* (Béjar 2003; Béjar and Kahnemuyipour 2017) probes become *less* picky.

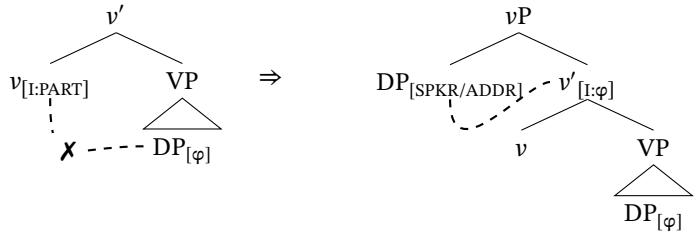
- ***Trigger:***
  Probes have been proposed to update upon both failed and successful Agree: for successful Agree see Deal (2024); Bárány (2024), for *failed* Agree see Béjar (2003); Georgi (2010); Béjar and Kahnemuyipour (2017).

- ***Widening upon failed Agree:***
  I will introduce my own proposal which I refer to as *probe relaxation* and define in (1). Probe relaxation adopts the interaction and satisfaction model of Agree, but is heavily inspired by the flexible probes in Béjar (2003); Béjar and Kahnemuyipour (2017).

Proposal:
Probe relaxation, defined in (1), as a mechanism by which probes update their search condition upon failed first-cycle Agree.

(1) *Probe relaxation:*
If an Agree probe on head H bears an interaction condition X (where X $\neq$ [φ] and X geometrically entails [φ]) and first-cycle Agree fails because there is no DP that bears X in the domain of H, the probe relaxes its interaction condition to [φ] upon reprojection.

(2) *Example of probe relaxation:*



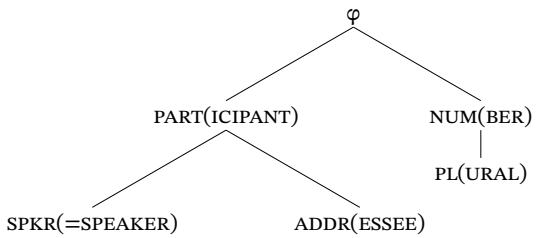
- ***Predicted typology:***
  Assuming the definition in (1) and a standard feature geometry, we predict (at least) three distinct patterns:
  1. [SPKR]⇝[φ] (Enxet Sur; Elliott (2021))
  2. [ADDR]⇝[φ] (Quechua; Julca Guerrero (2008))
  3. [PART]⇝[φ] (Kamaiurá; Seki (2000))

- ***Today:***
  1. **Operation Agree:** background on the model of Agree
  2. **Case studies:** three case studies from unrelated languages which show empirical and theoretical support for probe relaxation
     - **1.** Enxet Sur (Elliott 2021): *empirical* evidence for probe relaxation
     - **2.** Huaylas Quechua (Julca Guerrero 2008): *empirical* evidence
     - **2.** Kamaiurá (Seki 2000): *theoretical* evidence for probe relaxation
  3. **Implications for Agree:** notes on relaxation:
     - total vs. gradual relaxation (is *all* relaxation to [φ]?)
     - predicted typology (gender, number, etc.)
     - reprojection (v' or v_{ii})
  4. **Conclusion**

2 Ingredients for model of Agree

❶ ***Feature geometries:***
Following Harley and Ritter (2002); Béjar (2003) I assume that features on DPs are organized into hierarchical geometries as in (3).

(3)



❷ ***Interaction and satisfaction model of Agree (Deal 2015, 2024)***

⇒ ***Interaction:***
The interaction condition on the probe determines with which DPs a probe may Agree. I define interaction as in (4).[1]

(4) *Interaction:*
A φ-probe *interacts* with a DP when at least one feature on the DP matches the interaction condition. Once a probe interacts with a DP, it copies its entire φ-geometry (overcopying).

⇒ ***Satisfaction:***
The satisfaction condition determines which feature, upon Agreeing with a DP, will halt a probe. Once a probe copies a feature from a DP that matches its satisfaction condition, Search ceases. I define satisfaction in (5).

(5) *Satisfaction:*
A φ-probe is *satisfied* when it copies a feature from a DP that matches its satisfaction condition.

❸ ***Probe relaxation:***
Recall the definition from above, repeated in (6). Probe relaxation differs from previous accounts in that the only trigger for relaxation is failed first-cycle Agree.

(6) *Probe relaxation:*
If an Agree probe on head H bears an interaction condition X (where X ≠ [φ] and X geometrically entails [φ]) and first-cycle Agree fails because there is no DP that bears X in the domain of H, the probe relaxes its interaction condition to [φ] upon reprojection. *[=(1)]*

⇒ ***Failed first-cycle Agree:***
It is important that probe relaxation only occur upon failed first-cycle Agree. This is because: i) it is tied to reprojection and ii) probes should not update their search condition upon failed subsequent cycles of Agree if earlier cycles were successful.

3 Enxet Sur

- ***Verbal agreement in Enxet Sur:***
Enxet Sur is an Enlhet-Enenlhet (or Mascoyan) language spoken by roughly 3,800 people in El Gran Chaco Paraguayo. It exhibits a complex agreement pattern of 1st person omnivorous agreement but, when no 1st person is present, the subject controls agreement (Elliott 2021) (7).

(7) *Generalization of Enxet Sur verbal agreement:*
If there is a 1st person in the clause, it controls agreement on the verb for person and number. In the absence of a 1st person argument, the subject controls agreement.

(8) **Singular agreement paradigm in Enxet Sur declarative Mood:**

	1 Agent	FEM(2/3)	MASC(2/3)	∅ (unacc.)
1 Patient	✗	*e-* 1.OBJ	*e-* 1.OBJ	*e-* 1.OBJ
FEM(2/3)	*ek-* 1SUBJ	∅- F	*ap-* M	*a-* F.STAT
MASC(2/3)	*ek-* 1.SUBJ	∅- F	*ap-* M	*ap* M.STAT
∅ (unerg.)	*ek-* 1.SUBJ	∅- F	*ap-* M	✗

[1] Note that my definitions of interaction and satisfaction are not precisely those assumed in Deal (2015) or Deal (2024).

- The agreement marker is dependent on the Mood of the clause, as outlined in (9). 1st person object agreement markers are shaded.

(9) *Pronominal prefix paradigms in Enxet:*

Person	Declarative	Irrealis	Participial
1SG	*ek-*	*a-*	*sek-*
1PL	*neg-*	*ag-*	*neg-*
F	*∅-*	*ka-*	*ap-*
M	*ap-*	*e-*	*ap-*
2PL/IMPR	*kél-*	*kól-*	*kél-*
1SG.OBJ	*e-*	*he-*	*se-*
1PL.OBJ	*eg-*	*heg-*	*seg-*

3.1 Analysis

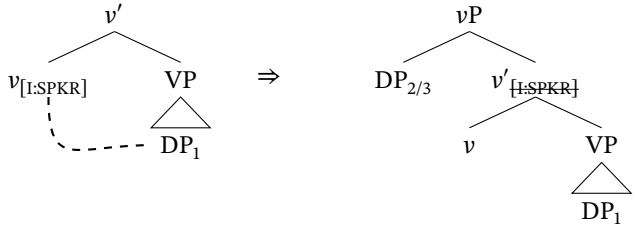
- ***The probe in Enxet Sur:***
  I locate the probe in Enxet Sur on *v* to derive the difference between 1st person subject (second-cycle) and object agreement (first-cycle). Further, the probe bears the conditions in (10) upon Merge but, if Agree fails, the probe relaxes to bear the conditions in (11).[2]

(10) *Enxet probe:*
$v_{[\text{INT: SPKR, SAT: } \varphi]}$

(11) *Relaxed Enxet probe:*
$v_{[\text{INT: } \varphi, \text{ SAT: } \varphi]}$

- ***1st person object agreement:***
  With 1st person objects, the probe is satisfied in the first cycle of Agree and there is no subsequent Agree or searching of the structure. This is because 1st persons bear [φ] (and [SPKR]) the satisfaction condition on the probe.

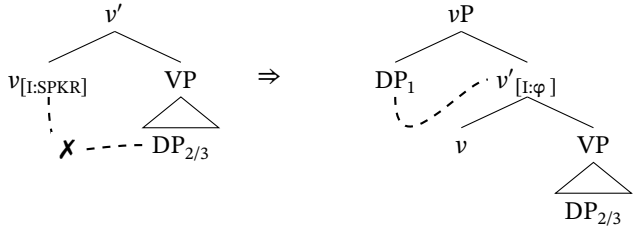
(12) **Derivation of 1st person object agreement:**



[2]The satisfaction condition is [φ] because only one argument ever controls agreement and there is no evidence of double Agree.

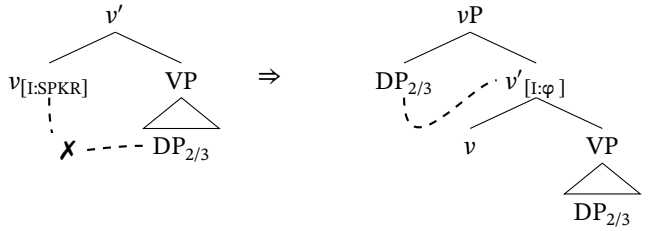
- ***1st person subject agreement:***
  1st person subject agreement is derived through a relaxed probe which then searches its specifier to Agree with the EA. The probe is also satisfied, but in the second cycle of Agree.

(13) **Derivation of 1st person subject agreement:**



- ***Non-1st-person subject agreement:***
  This is handled straightforwardly through a probe that relaxes upon failed first-cycle Agree and Agrees with the EA. The probe simply Agrees with its specifier and stops (because there's nothing else to see and [SAT: φ]).

(14) **Non-1st-person subject agreement:**



3.2 An intransitive agreement split in Enxet Sur

- ***Why probe relaxation?***
  A valid question is why one should adopt probe relaxation for such an analysis. An equally viable alternative analysis could be that 1st person object morphology is only the realization of [SPKR] while 1st person subject agreement is the realization of [φ] from the object and [SPKR] from the subject.

- ***Differentiating analyses:***
  What would differentiate an analysis of this sort from the current analysis is

a case where there is no object, but still 1st person subject agreement. Such a case are unergative intransitives (15).

(15) *Intransitive split in Enxet intransitives (Elliott 2021: p.306):*

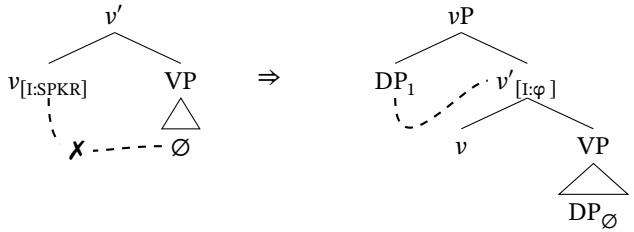
a. **ek**-paqmet-chek
1SG-chat-DECL
'I spoke' ("active" intransitive)

b. **e**-sam-chek
1SG.STAT-bad-DECL
'I am bad/evil' ("stative" intransitive)

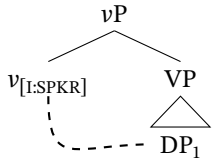
- ***Intransitive split in Enxet:***
Elliott (2021) argues that this is not an "active/stative" split for the same reasons I have argued that many have argued that "active/stative" are really a morphological manifestation of the unergative/unaccusative split (Kroeger 1990; Mithun 1991; Payne 1994; Duncan 2017; Ershova 2017; Ko 2020).

- ***Probe relaxation accounts for intransitive splits:***
Probe relaxation, in fact, directly captures these types of intransitive splits because the picky probe treats null objects the same as any object that does not meet the interaction condition: it skips over them (16).

(16) **1st person unergative:**



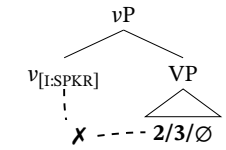
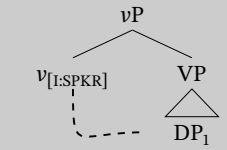
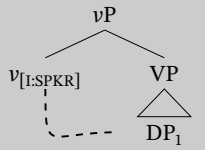
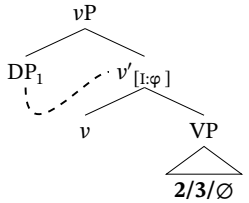
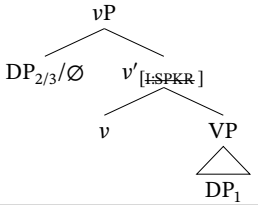
(17) **1st person unaccusative:**



An important parallel

- ***Derivational parallels:***
Empirically speaking, we see a direct parallel between 1st person transitives and intransitives: same agreement based on the position of the 1st person. Under this account, there is also a derivational parallel as shown in (18).

(18) *Derivational parallels:*

	1st person subject:	*1st person object:*	*1st person unaccusative:*
Step 1:			
Step 2:			

4 Quechua

- Huaylas Quechua (Julca-Guerrero 2008) exhibits the [ADDR]-counterpart of Enxet (setting aside some complications), with a twist: there's no subject/object morphological distinction (19). 2nd person agreement surfaces as *-nki* for both objects and subjects.

(19) **2nd persons consistently control agreement:**

a. kuya-**nki**
love-**2**
'You love him/her.' (Julca-Guerrero 2008: 9b, 25)

b. kuya-shu-**nki**
love-2INV-**2**
'S/he loves you.' (Julca-Guerrero 2008: 11, p. 26)

- When no 2nd person is present, the subject simply controls agreement (20).

(20) **Subject controls agreement in absence of 2nd person:**

a. kuya-**a**
love-**1**

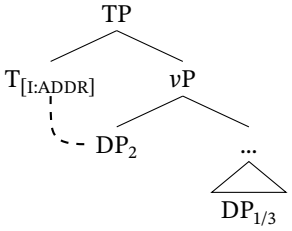
'I love him/her.' (Julca-Guerrero 2008: 9b, p. 25)

b. maqa-ma-**n**
hit-1INV-**3**

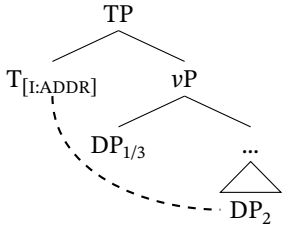
'S/he hits me.' (Julca-Guerrero 2008: 8b, p. 24)

- I propose that the probe in Quechua on T (Myler 2017) Merges with the conditions: [I:ADDR,S:φ]. Upon failed Agree, the probe relaxes to [I:φ,S:φ].
- ***2nd person omnivority:***
2nd person preference is derived by a probe that can skip over intervening non-Addressee DPs as in (21b). The 2nd person will control agreement regardless of whether it's the subject or the object.

(21) a.

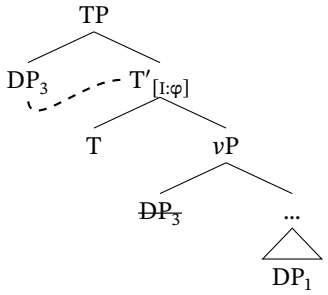


b.

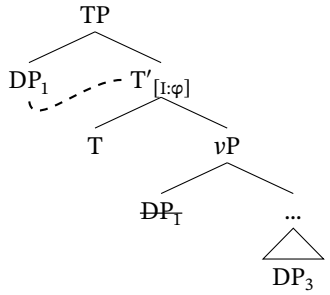


- ***Subject agreement:***
If there is no 2nd person, first-cycle Agree fails and the probe relaxes its search condition to [φ]. In addition, following Myler (2017), the probe raises the subject to spec,TP. Here, it simply Agrees with what is in its specifier.

(22) a.



b.



5 Kamaiurá

- Kamaiurá (Tupi-Guarani; Brazil, 600) exhibits three separate agreement patterns that display complex interplay with one another (23) (Seki 2000): i) 1>2>3 direct/inverse agreement, ii) intransitive split, and 1>2 portmanteau.

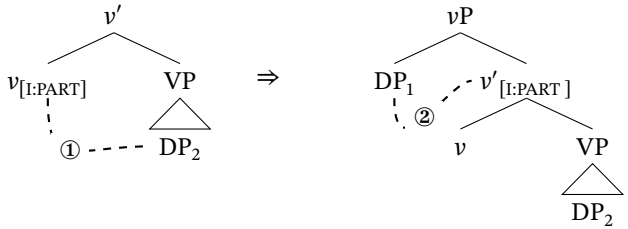
(23) **Kamaiurá verbal agreement paradigm:**

	1 Agent	2	3	∅ (unacc.)
1 Patient	✗	*je-* 1.OBJ	*je-* 1.OBJ	*je-* 1.OBJ
2	*oro-* 1>2	✗	*e-* 2.OBJ	*e-* 2.OBJ
3	*a-* 1.SUBJ	*ere-* 2.SUBJ	***o-*** **3.SUBJ**	***i-*** **DFLT**
∅ (unerg.)	*a-* 1.SUBJ	*ere-* 2.SUBJ	***o-*** **3.SUBJ**	✗

5.1 Portmanteau in 1>2

- Assuming a probe with the initial conditions *v*[I:PART,S:SPKR] and relaxation [PART]⇝[φ], this derives double Agree in 1>2 and 1>2 only. This is the only cell in the Kamaiurá paradigm where a portmanteau form surfaces (24).

(24) **Derivation of 1>2 portmanteau**

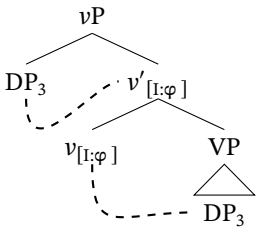
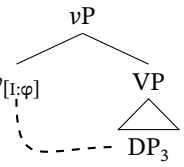
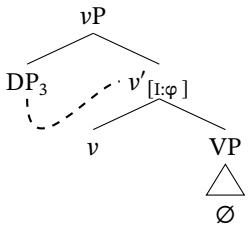


5.2 3rd person intransitive split

- ***3rd person intrans. split:***
Unlike in Enxet Sur, in Kamaiurá, an intransitive split shows up for *all* persons. 3>3 and 3rd person unergative agreement are the same, to the exclu-

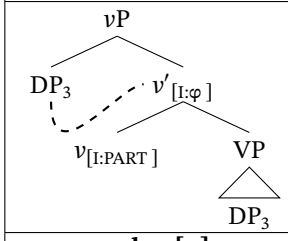
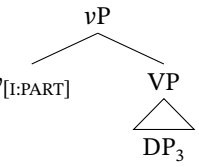
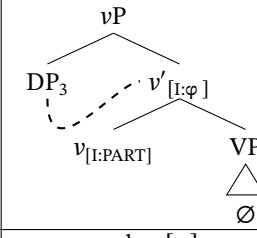
sion of 3rd person unaccusative agreement. A vanilla interaction and satisfaction model does not derive the correct split (25)

(25) **Vanilla int/sat and 3rd person split:**

3>3	3rd unacc.	3rd unerg.
		
!!probe: [φ,φ]	probe: [φ]	probe: [φ]

- ***Probe relaxation handles this well:***
  Probe relaxation correctly groups the 3>3 and 3rd person unergative together to the exclusion of 3rd person unaccusatives. This is because in 3>3 and 3>∅, probe relaxation treats an object that can't agree the same regardless of whether it's 3rd person or null.

(26) **Int/sat + probe relaxation and 3rd person split:**

3>3	3rd unacc.	3rd unerg.
		
probe: [φ]	probe: ___	probe: [φ]

- ***Pickiness and double Agree:***
  Languages like Kamaiurá require both pickyness to derive the 3rd person split *and* double Agree to derive the 1>2 portmanteau. This is not viable in Béjar (2003) or Béjar and Rezac (2009) and therefore, probe relaxation is required for this pattern (explicit exposition found in Appendix).

6 Discussion and conclusion

- ***Case studies:***
  The three case studies presented show the initial typologically predicted patterns of probe relaxation. Enxet Sur shows [SPKR]⇝[φ], Quechua shows [ADDR]⇝[φ], and Kamaiurá shows [PART]⇝[φ].

- ***Gradual relaxation:***
  An open question is whether or not *all* relaxation is total (to [φ]) or if a relaxing probe can relax from [SPKR]⇝[PART], an intermediate step in the geometry. Note that this does not explode the typology, it only adds two.

- ***Nishnaabemwin:***
  A possible language like this may be Nishnaabemwin which exhibits a 2>1>3 hierarchy (Valentine 2001; Béjar 2003). Unlike Quechua, there's a hierarchical relationship between 1st and 3rd persons.

(27) *Nishnaabemwin agreement (Béjar 2003: p.104):*

a.	b.	c.
g-waab-am	**g**-waabm-in	**n**-waabm-ig(w)
2-see-DIR.TH	**2**-see-INV.TH	**1**-see-INV.TH
'You see me.'	'I see you.'	'S/he sees me.'

- ***Other Tupian languages:***
  There are other Tupian languages that do not have a portmanteau for 1>2 (Rose 2015). These have 1st person subject agreement in 1>2 and 1st person object agreement in 2>1. There is, however, still a 2>3 hierarchical relationship. These languages may be cases of [SPKR]⇝[PART].

- ***The height of reprojected probes:***
  Another open question is the height of the reprojected probe (v' (Deal 2024), v_{II} (Béjar and Rezac 2009), or even T (Béjar 2003; Georgi 2010)). For a language like Nishnaabemwin, the search domain of the probe in the second cycle seems like it must include both arguments (to derive 1>3 pref. w/o 2nd persons). But for today's case studies, the specifier seems like enough.

Appendix A: Enxet Sur data

1st person omnivorous agreement

- 1st person subject agreement is realized as *-ek* as in (28a) while 1st person object agreement is realized as *-é* as in (28b).

(28) a. **ek**-tekpog-kek xép
1SG-hit-DECL 2SG.M
'I hit you.' (1>2: 1SUBJ) (Elliott 2021: ex. 3.25a, p.141)

b. **é**-tekpog-kek xép
1SG.OBJ-hit-DECL 2SG.M
'You hit me.' (2>1: 1OBJ) (Elliott 2021: ex. 3.25b, p.141)

Simple subject-verb agreement (3>3, 3>2, 2>3)

- ***Non-1st-person subject agreement:***
In the absence of 1st persons, the subject controls agreement. This is seen in (29) where, in a MASC>FEM sentence, the subject controls agreement.

(29) a. **ap**-tekpog-kek Juan semheg
M-hit-DECL Juan.M dog.F
'Juan hit the dog' (Elliott 2021: ex.5.55a, p.292)

b. **ap**-tekpog-kek Juan yátnáxeg
M-hit-DECL Juan.M horse.M
'Juan hit the horse' (Elliott 2021: ex.5.56a, p.293)

- ***Dog controls feminine agreement:***
semheg 'Dog' controls feminine agreement in all other cases, like when it is the sole argument or subject of a clause (30).

(30) *Semheg controls feminine agreement elsewhere:*
∅-paxnex-chaxch-e' semheg
F-shake-MID-DECL dog.F
'The dog was jerked'

- This 1st person agreement preference holds regardless of the features of the other argument in the clause. In (28) the other argument is 2nd person while in (31) the other argument is 3rd person.

(31) a. Remigio **ek**-weyhenchás-ak
Remigio **1SG**-give.idea-SCND
'I gave the idea to Remigio.' (1>3: 1.SBJ) (Elliott 2021: ex. 3.26a, p.141)

b. Remigio **é**-weyhenchás-ak
Remigio **1SG.OBJ**-give.idea-SCND
'Remigio gave me the idea.' (3>1: 1.OBJ) (Elliott 2021: ex. 3.26a, p.141)

- ***Singular 2nd persons control gender agreement:***
Based on Elliott (2021)'s description, 2nd person singulars do not control person agreement. Instead, they control gender agreement (32).

(32) *2nd persons control gender agreement, not person(Elliott 2021: p.137):*
yaqsa ek-tah-a ey-aney-axk-o =nak xe'
what F.PART-be-NM:IP F.PART-attend-MID-NM:IP =TC:VIS 2SG.F
ka-y'o-kx-a' ten =han **e**-y'o-kx-ak
F.IRR-follow-DUP-NM:PO then =and **M.IRR**-follow-DUP-NM:PO
xep
2SG.M
'Why do you (F) follow him, and why do you (M) follow him?'

- ***Vocabulary Items:*** I assume the VIs in (33) for the analysis of Enxet Sur. The 1st person subject/object morphemes are distinguished by the interaction condition on the probe: [SPKR] for object and [φ] for subject agreement.

(33) *Vocabulary Items for Enxet:*

ek-	↔	[SPKR] / [___]$_{v[\text{I: }\varphi]}$
neg-	↔	[SPKR, PL] / [___]$_{v[\text{I: }\varphi]}$
∅-	↔	[FEM] / [___]$_{v[\text{I: }\varphi]}$
ap-	↔	[MASC] / [___]$_{v[\text{I: }\varphi]}$
kél-	↔	[ADDR,PL] / [___]$_{v[\text{I: }\varphi]}$
e-	↔	[SPKR] / [___]$_{v[\text{I: SPKR}]}$
eg-	↔	[SPKR, PL] / [___]$_{v[\text{I: SPKR}]}$

Appendix B: Quechua

(34) *Person marking paradigm in Huaylas Quechua:*

	1SG Agent	2	3
1 Patient	—	*ma* ***-nki***	*ma* *-n*
	—	1INV **-2**	1INV -3
2	***-q***	—	*shu* ***-nki***
	1>2	—	2INV **-2**
2 FUT	***-shqa-yki***		
	1>2FUT-2		
3	*V:*	***nki***	*n*
	1	**2**	3

(35) a. *v in Quechua:*
$v_{[\text{INT: PART, SAT: SPKR}]}$

b. *T in Quechua:*
$T_{[\text{INT: ADDR, SAT: }\varphi]}$

(36) *φ-features by configuration in Quechua:*

direct	**φ on *v* = inverse marker**	**φ on T = agreement**	***v*-T morphology**
1>3	$[\text{SPKR}]_{v[\text{I: }\varphi]}$	$[\text{SPKR}]_{T[\text{I: }\varphi]}$	*Ø-V:*
2>3	$[\text{ADDR}]_{v[\text{I:}\varphi]}$	$[\text{ADDR}]_{T[\text{I:ADDR}]}$	*Ø-nki*
3>3	$[\varphi]_{v[\text{I:}\varphi]}$	$[\varphi]_{T[\text{I:}\varphi]}$	*Ø-n*
portmanteau	**φ on *v***	**φ on T**	***v*-T morphology**
1>2	$[[\text{SPKR}],[\text{ADDR}]]_{v[\text{I:PART}]}$	$[\text{ADDR}]_{T[\text{I:ADDR}]}$	*Ø-q*
1>2FUT	$[[\text{SPKR}],[\text{ADDR}]]_{v[\text{I:PART}]}$	$[\text{ADDR}]_{T[\text{I:ADDR}]}$	*shqa-yki*
inverse	**φ on *v***	**φ on T**	***v*-T morphology**
2>1	$[\text{SPKR}]_{v[\text{I:PART}]}$	$[\text{ADDR}]_{T[\text{I:ADDR}]}$	*ma-nki*
3>1	$[\text{SPKR}]_{v[\text{I:PART}]}$	$[\varphi]_{T[\text{I:}\varphi]}$	*ma-n*
3>2	$[\text{ADDR}]_{v[\text{I:PART}]}$	$[\text{ADDR}]_{T[\text{I:ADDR}]}$	*shu-nki*

(37) *Impoverishment rule for v:*
$[\varphi] \rightarrow \varnothing$ / [___]$_{v[\text{INT:}\varphi]}$

(38) *VIs for T in Quechua (final):*
a. *-q* ↔ [ADDR] / T ___ [φ]$_v$
b. *-nki* ↔ [ADDR] / $T_{\varnothing}$ ___
c. *-yki* ↔ [ADDR] / T ___
d. *-V:* ↔ [SPKR] / T ___
e. *-n* ↔ [φ] / T ___

(39) *VIs for **v** in Quechua:*
a. *-shqa* ↔ [[SPKR],[ADDR]] / *v* ___ [___]T_{FUT}
b. *-ma* ↔ [SPKR] / *v* ___
c. *-shu* ↔ [ADDR] / *v* ___
d. -∅ ↔ [___]$_v$ / elsewhere

Probe relaxation plays a central, but quite different, role in the analysis of Quechua. Probe relaxation straightforwardly derives the 2>1/3 pattern. It also derives the inverse marker by giving rise to single Agree with the object in inverse configurations, single Agree with the subject in direct scenarios, and double Agree in 1>2. From here, the impoverishment rule (which requires reference to probe relaxation) facilitates the *v* double Agree portmanteau *-shqa* which only appears in 1>2 future. 1>2 is unique because it is the only configuration in which there is double Agree, no relaxation, and therefore no impoverishment on the probe nor the insertion of an inverse marker. In 1>2 non-future contexts, the φ-features on *v* are not deleted and therefore the *-q* is inserted.

Appendix C: Conjunctive/disjunctive Match

- ***Conjunctive Match too restrictive:***
For Béjar (2003); Béjar and Kahnemuyipour (2017), the condition on Match is conjunctive. That is, all features on the goal must match all the features on the probe (no double Agree) (Béjar 2003) (40).

(40) *Outcomes of conjunctive match (adapted from Béjar 2003: p.84, ex.88):*

probe	**goal**	**match**	**Agree**
[*u*φ[*u*PART[*u*SPKR]]]	[φ]	✓	✗
[*u*φ[*u*PART[*u*SPKR]]]	[φ[PART[ADDR]]]	✓	✗
[*u*φ[*u*PART[*u*SPKR]]]	[φ[PART[SPKR]]]	✓	✓

- ***No double Agree = no portmanteau:***
A probe like this cannot account for the Guarani data because there is a portmanteau in 1>2 which requires double Agree.

- ***No widening in Béjar and Rezac (2009):***
Béjar and Rezac (2009) assume *disjunctive* Match in which each segment can Agree separately and need only Match one segment. Widening the search condition is ineffective for this model because deleting from the top of a disjunctive Match probe does not yield different outcomes (41).

(41) *Outcomes of disjunctive match and value before/after deletion:*

probe	goal	match	Agree
[$u\varphi$[uPART[uSPKR]]]	[φ]	✓	✓
[$u\varphi$[uPART[uSPKR]]]	[φ[PART[ADDR]]]	✓	✓
[$u\varphi$[uPART[uSPKR]]]	[φ[PART[SPKR]]]	✓	✓

probe	goal	match	Agree
[$u\varphi$[uPART]]	[φ]	✓	✓
[$u\varphi$[uPART]]	[φ[PART[ADDR]]]	✓	✓
[$u\varphi$[uPART]]	[φ[PART[SPKR]]]	✓	✓

probe	goal	match	Agree
[$u\varphi$]	[φ]	✓	✓
[$u\varphi$]	[φ[PART[ADDR]]]	✓	✓
[$u\varphi$]	[φ[PART[SPKR]]]	✓	✓

- ***Deletion and disjunction:***
  Further, deleting from the bottom of the probe yields the opposite effect desired (42), akin to dynamic interaction (Deal 2024).

(42) *Outcomes of disjunctive match and value before/after deletion from the top:*

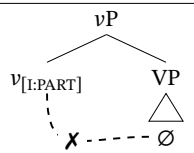
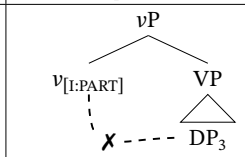
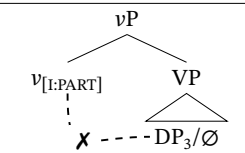
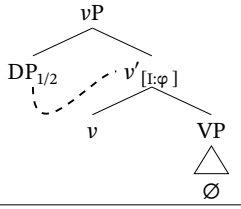
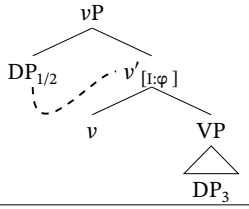
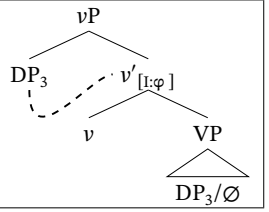
probe	goal	match	Agree
[$u\varphi$[uPART[uSPKR]]]	[φ]	✓	✓
[$u\varphi$[uPART[uSPKR]]]	[φ[PART[ADDR]]]	✓	✓
[$u\varphi$[uPART[uSPKR]]]	[φ[PART[SPKR]]]	✓	✓

probe	goal	match	Agree
[uPART[uSPKR]]	[φ]	✗	✗
[uPART[uSPKR]]	[φ[PART[ADDR]]]	✓	✓
[uPART[uSPKR]]	[φ[PART[SPKR]]]	✓	✓

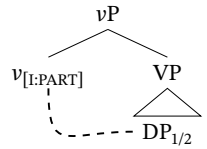
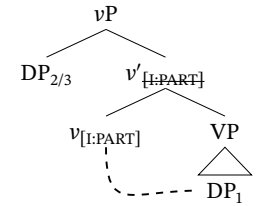
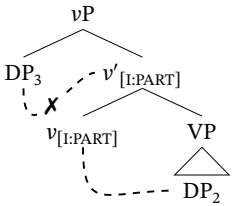
probe	goal	match	Agree
[uSPKR]	[φ]	✗	✗
[uSPKR]	[φ[PART[ADDR]]]	✗	✗
[uSPKR]	[φ[PART[SPKR]]]	✓	✓

Appendix D: Kamairuá derivations

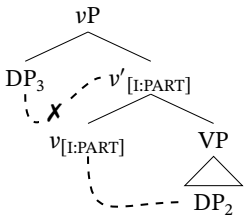
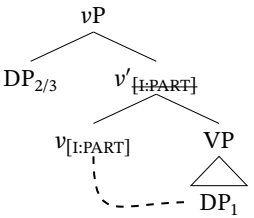
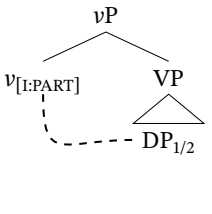
(43)

	1st/2nd person unergative:	*1st/2nd person direct:*	*3>3/3rd unergative:*
Step 1:			
Step 2:			

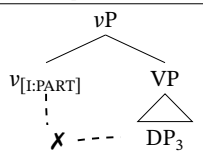
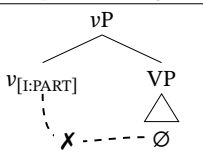
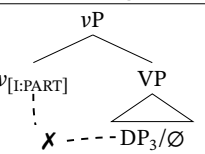
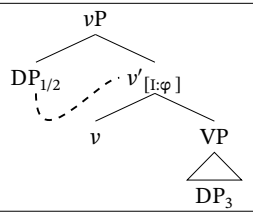
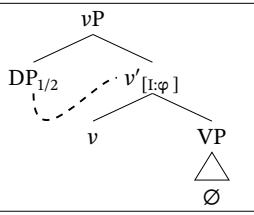
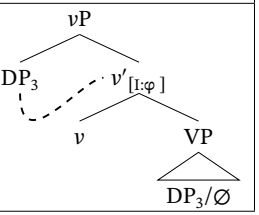
(44)

1st/2nd person unaccusative:	*1st person inverse:*	*2nd person inverse:*
		

(45) *Inverse and unaccusative derivations:*

2nd person inverse:	*1st person inverse:*	*1st/2nd person unaccusative:*
		

(46) *Direct and unergative derivations:*

	1st/2nd person direct:	*1st/2nd person unergative:*	*3>3/3rd unergative:*
Step 1:			
Step 2:			

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