

Global case splits via local Agree*

Emily Clem · University of California, San Diego · eclem@ucsd.edu

Myopia in Grammar · Universität Leipzig · June 14, 2024

1 Introduction

- In a global case split, the case of an argument can only be determined by comparing the features of both arguments in the clause

- In Shawi (Kawapanan; Peru) ergative appears on the subject only when it is at least as high as the object on the person hierarchy $1 > 2 > 3$

- (1) a. 2SG → 1SG: no ergative (Bourdeau 2015: 27)

ɪwara kema(*-ri) nu'wi-r-an-ku.
yesterday 2(*-ERG) tell.off-IND-2-1.O
'You told me off yesterday.'

- b. 1SG → 2SG: ergative (Bourdeau 2015: 24)

ɪwara ka-ri-nke pera-ra-(w)-nke.
yesterday 1-ERG-2.O call-IND-1-2.O
'I called you yesterday.'

- This might lead to the assumption that such patterns require a global evaluation of all of the nominals in a clause

- OT approaches to global case splits (e.g. de Hoop and Malchukov 2008)
- Configurational case rules¹

- (2) Configurational ergative rule (Baker 2015: 49)

If there are two distinct NPs in the same spell out domain such that NP1 c-commands NP2, then value the case feature of NP1 as ergative unless NP2 has already been marked for case.

- (3) Potential configurational rule for Shawi ergative

If there are two distinct NPs in the same spell out domain such that NP1 c-commands NP2, and NP1 is at least as high as NP2 on the person hierarchy $1 > 2 > 3$, then value the case feature of NP1 as ergative unless NP2 has already been marked for case.

- These approaches fail to capture the fact that global case splits show hallmarks of Agree

- The typology of global case splits closely resembles the typology of person hierarchy effects found in agreement (e.g. the Person-Case Constraint (PCC), inverse marking)
- Dependent case marking can directly reflect or be accompanied by the realization of the ϕ -features of the other nominal in the clause

- **Claim:** Global case splits arise via Agree when a probe is local to multiple goals

- The ability of the probe to agree with multiple goals is restricted by the ϕ -features of those goals (Béjar 2003, Béjar and Rezac 2009, a.m.o)
- Feature transfer under Agree is bidirectional, meaning that the features of both the probe and goal are modified as the result of each instance of Agree (Chomsky 2001, Pesetsky and Torrego 2001, 2007, Clem 2019, a.m.o.)
- When a probe successfully agrees with a second goal, it passes along features of the first goal, and these features are realized as dependent case morphology (Deal 2010, Clem 2019)

- Under an Agree-based approach, the computation of global case splits is highly local and requires no truly global evaluation

- **Roadmap:**

- §1: Introduction
- §2: Evidence for Agree in global case splits
- §3: Against a global evaluation for case splits
- §4: Modeling global case splits via local Agree
- §5: Conclusion

*This talk represents joint work with Amy Rose Deal. We thank Luis Ulloa for confirming key pieces of Shawi data as well as for helpful discussion about the language. For feedback on the project at various stages, we are grateful to András Bárány, Andrew Garrett, Peter Grishin, Peter Jenks, Line Mikkelsen, Zachary O'Hagan, Ethan Poole, audience members at UC Berkeley's Syntax and Semantics Circle and UC San Diego's Syntax and Semantics Babble, and two anonymous LI reviewers.

¹See Bárány and Sheehan 2024 for a recent argument against modeling global case splits via configurational case rules.

2 Evidence for Agree in global case splits

2.1 Hierarchy patterns in global case splits

- Global case splits exhibit multiple different types of hierarchy effects
- ▶ The attested hierarchy effects mirror patterns found elsewhere in agreement, such as in the PCC
- The PCC restricts the person of two arguments in the same domain
 - Classically holds between two objects in a ditransitive
 - Can instead hold between subject and object
- The PCC is often analyzed via Agree by assuming a single probe that is local to multiple goals
 - The first goal can bleed agreement with the second goal
- The PCC comes in multiple varieties (Strong, Weak, etc.) that are attested in global case splits
- In global case splits, rather than certain person combinations of arguments being ruled out entirely, certain person combinations instead result in a lack of case marking

2.1.1 Strictly descending PCC

- Strictly descending (or ultrastrong; Nevins 2007) PCC: The subject must be at least as high as the object on the hierarchy $1 > 2 > 3$
- In a global case split, only if this hierarchy is obeyed can the subject be marked with ergative case

(4) Strictly descending PCC global split pattern

Sbj.	Obj.	Sbj. Case
1	2	ERG
1	3	ERG
2	1	∅
2	3	ERG
3	1	∅
3	2	∅
3	3	ERG

- Shawi (Kawapanan; Peru) shows a strictly descending PCC global split with ergative case

- When the object outranks the subject in person, the subject is unmarked
- When the subject is at least as high as the object in person, the subject may be marked ergative
 - * Ergative is obligatory when the object is 2nd person
 - * Ergative is seemingly “optional” when the object is 3rd person (see Appendix B for more details)

(5) Ergative impossible when object outranks subject

a. 2SG→1SG (Bourdeau 2015: 27)

I'wara kema(*-ri) nu'wi-r-an-ku.
yesterday 2-ERG tell.off-IND-2-1.O
'You told me off yesterday.'

b. 3PL→1PL.EXCL (Bourdeau 2015: 27)

Ya'wan-(r)usa(*-ri) kete-r-in-kui.
snake-PL-ERG bite-IND-3-1PL.EXCL.O
'Snakes bit us.'

c. 3SG→2SG (Bourdeau 2015: 28)

Pitru(*-ri) nate-r-in-(n)ke.
Peter-ERG trust-IND-3-2.O
'Peter trusts you.'

(6) Ergative obligatory when subject outranks 2nd person object

a. 1SG→2SG (Bourdeau 2015: 24)

I'wara ka-ri-nke pera-ra-(w)-nke.
yesterday 1-ERG-2.O call-IND-1-2.O
'I called you yesterday.'

b. 1PL.EXCL→2PL (Bourdeau 2015: 24)

Kiya-ri-nke(ma) au-ra-i-nkema kampita.
1PL.EXCL-ERG-2PL.O hit-IND-1PL.EXCL-2PL.O 2PL
'We hit you.'

(7) Ergative “optional” with 3rd person object

a. 1PL.EXCL→3SG (Bourdeau 2015: 31)

Kiya(-ri) na'wan-(r)a-i Pitru.
 1PL.EXCL-ERG miss-IND-1PL.EXCL Peter
 ‘We miss Peter.’

b. 2SG→3SG (Bourdeau 2015: 31)

Kema(-ri) paki-r-an mi'ne.
 2-ERG break-IND-2 mocaahua
 ‘You broke the mocaahua.’

c. 3SG→3SG (Bourdeau 2015: 33)

Pitru(-ri) iwa-r-in pepekunu.
 Peter-ERG steal-IND-3 necklace
 ‘Peter stole a necklace.’

(8) Strictly descending PCC global split pattern

Forward			Reverse		
Sbj.	Obj.	Sbj. Case	Obj.	Sbj.	Obj. Case
1	2	ERG	1	2	ACC
1	3	ERG	1	3	ACC
2	1	∅	2	1	∅
2	3	ERG	2	3	ACC
3	1	∅	3	1	∅
3	2	∅	3	2	∅
3	3	ERG	3	3	ACC

2.1.2 Weak PCC

- Another commonly attested PCC pattern is the Weak PCC

- Forward: Either the object must be third person or both arguments must be local person
- Reverse: Either the subject must be third person or both arguments must be local person

- Kolyma Yukaghir (Yukaghir; Siberia) shows a reverse weak PCC global split with accusative case

- If the subject is third person, the object is marked with accusative case
- If the subject is local person, the object must also be local person to be marked with accusative case

(9) Reverse Weak PCC global split pattern

Sbj.	Obj.	Obj. Case
1	2	ACC
1	3	∅
2	1	ACC
2	3	∅
3	1	ACC
3	2	ACC
3	3	ACC

- The PCC is known to exhibit both forward and reverse (Stegovec 2020) directions
 - Forward PCC: The person of the subject is restricted based on the person of the object (i.e. object can bleed subject agreement)
 - Reverse PCC: The person of the object is restricted based on the person of the subject (i.e. subject can bleed object agreement)
- Global case splits also exhibit this forward and reverse directionality
 - In the forward direction, the object person can bleed case marking on the subject
 - In the reverse direction, the subject person can bleed case marking on the object
- Shawi shows a forward strictly descending PCC: the subject must rank at least as high as the object to get ergative case
- Kashmiri (Indo-Aryan; India/Pakistan) shows a reverse strictly descending PCC: the object must rank at least as high as the subject to get accusative case (called “dative” in the literature; see Appendix A for data)

- (10) a. 3SG→1SG (Maslova 2003: 93)
 tet kinnī met-**kele** kudede-m.
 your whip me-ACC kill-TR.3SG
 ‘Your whip has killed me.’
- b. 1SG→2SG (Maslova 2003: 95)
 met tet-**ul** kudede-t
 I you-ACC kill-FUT(TR.1SG)
 ‘I will kill you.’
- c. 1SG→3SG (Maslova 2003: 89)
 met mēmē iqī.
 I bear be.afraid(TR.1SG)
 ‘I am afraid of the bear.’

2.1.3 Summary of hierarchy effects in global splits

- Global case splits show a similar range of hierarchy effects to what is found in the PCC
 - Strictly descending, weak, and strong (see Appendix A) varieties
 - Forward (ergative) and reverse (accusative) directions

(11) Hierarchy types in global case splits

	Ergative (Forward)	Accusative (Reverse)
Strong PCC	Shiwilu	Yurok
Weak PCC	??	Kolya Yukaghir
Strictly descending PCC	Shawi	Kashmiri

- Hierarchy effects in the PCC are typically taken to reflect a single probe that agrees with multiple goals
- The existence of the same hierarchy effects in global case splits suggests that Agree between one probe and multiple goals also underlies global splits

2.2 Agreement on nominals in global case splits

- Case marking in languages with global case splits sometimes directly reflects or is accompanied by the realization of the ϕ -features of the other nominal in the clause

- This ϕ -agreement that seemingly holds between nominals is another indication that Agree is involved in global splits
- In Shawi, regular object agreement morphology can be realized on the subject (OAg-on-S) only when it is marked with ergative case

- When the subject is ergative, an object agreement suffix can appear on the subject in addition to the verb
- When the subject is not ergative, OAg-on-S is impossible

(12) OAg-on-S with ergative 1PL.EXCL→2PL (Bourdeau 2015: 24)

Kiya-ri-**nkema** au-ra-i-**nkema** kampita.
 1PL.EXCL-ERG-2PL.O hit-IND-1PL.EXCL-2PL.O 2PL
 ‘We hit you.’

(13) OAg-on-S impossible with non-ergative 2SG→1SG (Luis Ulloa, p.c.)

I’wara kema(*-ku) nu’wi-r-an-ku.
 yesterday 2(*-1.O) tell.off-IND-2-1.O
 ‘You told me off yesterday.’

- In Kolya Yukaghir, the form of accusative case morphology depends on the person of the subject (a type of subject agreement on the object, SAg-on-O)
 - When the subject is 3rd person, the form of the accusative marker is *-gele*²
 - When both subject and object are local person, the form of the accusative marker is *-ul*
 - Recall that when the subject is a local person and the object is 3rd person, there is no accusative marking due to the weak PCC pattern

²I set aside here the case marker *-le* that is found on indefinite 3rd person objects when the subject is 3rd person. The *-gele/-le* alternation in 3→3 contexts could be easily modeled by assuming context sensitivity to a definiteness feature on the object.

- (14) a. 3SG→1SG (Maslova 2003: 93)
 tet kinnī met-**kele** kudede-m.
 your whip me-ACC kill-TR.3SG
 ‘Your whip has killed me.’
- b. 1SG→2SG (Maslova 2003: 95)
 met tet-**ul** kudede-t
 I you-ACC kill-FUT(TR.1SG)
 ‘I will kill you.’

- The sensitivity of morphology on one argument to the ϕ -features of another argument in the clause suggests an Agree dependency
 - The fact that this morphology is tied to the presence of case marking further suggests a close connection between case marking and ϕ -Agree

3 Against a global evaluation for case splits

- We have seen two pieces of evidence that global case splits involve Agree
 - Global splits show the same type of hierarchy effects found in patterns of agreement, such as the PCC
 - Case morphology in languages with global splits can directly reflect or be accompanied by the realization of the ϕ -features of the other nominal in the clause
- Under analyses of global case splits that involve a global evaluation of the nominals in the clause, these properties of global splits are simply coincidental
- OT approaches to global splits rely on a trade-off between indicating the grammatical role of a nominal and maximizing economy
 - de Hoop and Malchukov (2008): when DISTINGUISHABILITY is ranked above ECONOMY nominals must satisfy DISTINGUISHABILITY through case morphology if they are not sufficiently distinct in a canonical way (e.g. subject outranking object in person)
- This approach predicts (a subset of) the reverse PCC patterns (accusative split patterns) but not the forward ones (ergative split patterns)
 - Canonical subjects are as high as objects in person

- Canonical subjects should resist case marking due to ECONOMY
- Patterns such as Shawi’s where subjects are marked ergative only when they are at least as high in person as the object are not predicted

- This approach does not predict any connection between OAgr-on-S/SAgr-on-O and case marking
- A configurational approach to global splits would have to stipulate the hierarchy as part of the configurational case rule

- (15) Potential configurational rule for Shawi ergative
 If there are two distinct NPs in the same spell out domain such that NP1 c-commands NP2, and NP1 is at least as high as NP2 on the person hierarchy $1 > 2 > 3$, then value the case feature of NP1 as ergative unless NP2 has already been marked for case.

- Baking hierarchies into configurational case rules raises multiple issues
 - It misses the connection between identical hierarchy effects in agreement
 - It weakens the predictive power of the theory if the types of additions that could be made to case rules are not constrained in some way
- This type of approach also predicts no connection between OAgr-on-S/SAgr-on-O and case marking
- These approaches that involve a global evaluation of nominals in global case splits fall short
- An Agree-based approach that is highly local and involves a fine-grained cyclicity in the derivation can overcome these challenges
- Aside: The typology of hierarchy effects found in global splits as well as the OAgr-on-S and SAgr-on-O patterns present a challenge for previous (local) Agree-based approaches to global case splits (e.g. Béjar and Rezac 2009, Keine 2010, Georgi 2012, Bány 2017, Bány and Sheehan 2024) – feel free to ask me in the Q&A!

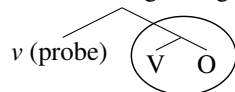
4 Modeling global case splits via local Agree

4.1 Theoretical background

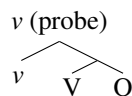
- I assume privative, geometrically organized ϕ -features (Harley and Ritter 2002, Béjar 2003)
 - 1st person: [SPKR,PART, ϕ]
 - 2nd person: [PART, ϕ]
 - 3rd person: [ϕ]
- I assume a fine-grained approach to cyclicity in the derivation where each ordered instance of an operation (Merge, Agree) defines a cycle (Rezac 2004)
 - Under this type of approach, a probe can enter into various cycles of Agree (i.e. Cyclic Agree; Béjar 2003, Rezac 2003, 2004, Béjar and Rezac 2009)
 - When initially Merged, a probe agrees into its c-command domain; if not satisfied on this first cycle of Agree it can enter into an additional cycle of Agree by:
 - * Probing further past its first goal
 - * Undergoing *cyclic expansion*, expanding its search space to include its specifier

(16) Cyclic expansion (Béjar 2003, Rezac 2003, 2004, Béjar and Rezac 2009), probe domains circled

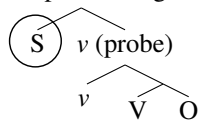
a. Probe is merged; Agree



b. Probe projects



c. Spec is merged; Agree



- I adopt an *interaction & satisfaction* model of Agree (Deal 2015, 2024)
 - A probe's satisfaction condition determines what features will cause a probe to halt its search
 - A probe's interaction condition states what features it will copy—and this may change over the course of a derivation (“dynamic interaction”)
- I follow Deal 2024 in assuming that hierarchy effects arise when a first goal (G1) bleeds Agree w/ a second goal (G2)
 - Method one: G1 **satisfies** the probe, probing halts.
 - Method two: G1 **dynamically interacts** with the probe, changing its interaction specification in a way that prevents Agree with G2

4.2 Deriving hierarchy effects in global splits

- The hierarchy effects in global splits can be derived by manipulating interaction and satisfaction conditions
- I illustrate the basic approach here with the strictly descending pattern of Shawi

(17) Shawi hierarchical global case split

Ergative appears when the subject is at least as high as the object on the person hierarchy $1 > 2 > 3$ and both arguments are in the same syntactic domain. Otherwise, subjects are nominative (morphologically unmarked).

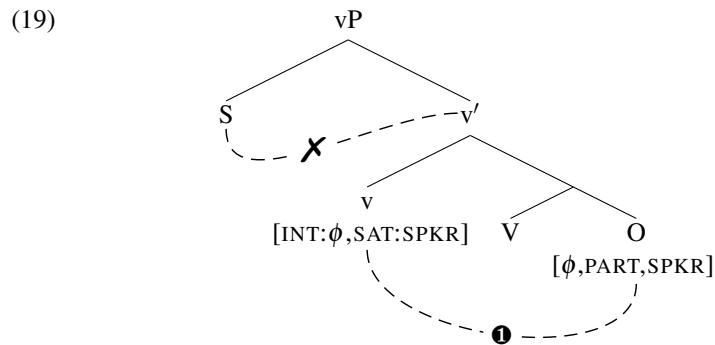
- This “strictly descending” PCC pattern can be modeled as follows (Deal 2024):
 - Satisfaction by the feature [SPKR]
 - Dynamic interaction of the feature [PART]
 - The forward direction of Shawi's PCC pattern suggests that the object can bleed agreement with the subject
 - This suggests a low probe that first agrees with the object
 - I will assume this probe is on v
- Generalization: **ergative appears when the subject is the second goal for v**

- When the object is 1st person, it bears the feature [SPKR] and satisfies the v probe

- v does not agree with the subject
- There is no ergative case

(18) 1st person object: no ergative (Bourdeau 2015: 27)

- Γ wara kema(*-ri) nu'wi-r-an-ku.
yesterday 2-ERG tell.off-IND-2-1.O
'You told me off yesterday.'
- Ya'wan-(r)usa(*-ri) kete-r-in-kui.
snake-PL-ERG bite-IND-3-1PL.EXCL.O
'Snakes bit us.'

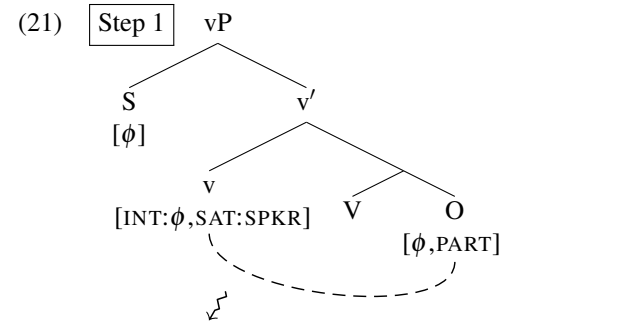


- When the object is 2nd person, the feature [PART] interacts dynamically

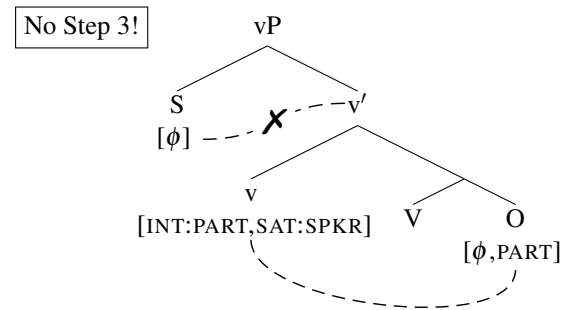
- If the subject is 3rd person (and so lacks [PART]), it will not interact with v and there will be no ergative case

(20) 3→2: no ergative (Bourdeau 2015: 28)

- Pitru(*-ri) nate-r-in-(n)ke.
Peter-ERG trust-IND-3-2.O
'Peter trusts you.'



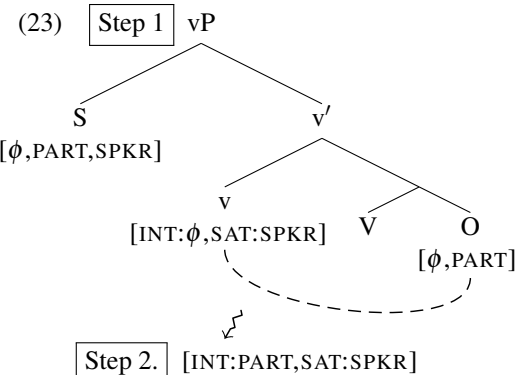
Step 2. [INT: PART, SAT: SPKR]

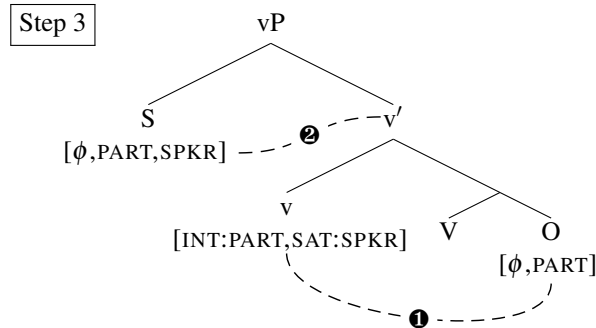


- But if the subject is 1st person (i.e. bearing [PART]), it will interact with v and be marked ergative

(22) 1→2: ergative (Bourdeau 2015: 24)

- Γ wara ka-ri-nke pera-ra-(w)-nke.
yesterday 1-ERG-2.O call-IND-1-2.O
'I called you yesterday.'



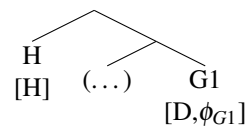


4.3 From agreement to case

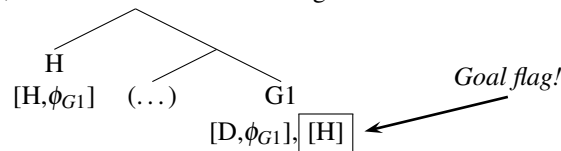
- Feature exchange under Agree is bidirectional (Chomsky 2001, a.m.o.)
 - Goal-to-probe feature transfer: *valuation*
 - Probe-to-goal feature transfer: *goal flagging* (Deal to appear)
 - Basic claim: *case marking is a type of goal flagging*
 - Pesetsky and Torrego 2001: nominative case as a [T] feature on a nominal, gotten via Agree with T (i.e., NOM morphology reflects goal-flagging by T)
- Proposal: a probe flags a goal with **all** of the features it bears at the time of Agree
- Because the features on a probe are augmented via valuation, the goal-flag bundle transmitted to later goals will reflect features of earlier goals
 - In this way, feature transfer under Agree is transitive

(24) Schematic of valuation and goal-flagging in multi-goal Agree

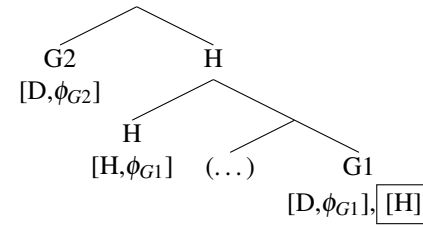
a. Merge H



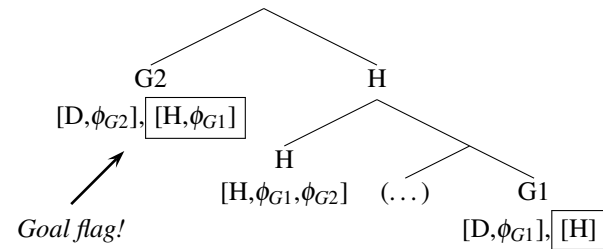
b. H agrees with G1, bidirectional feature exchange



c. Cyclic expansion: H projects, Merge G2



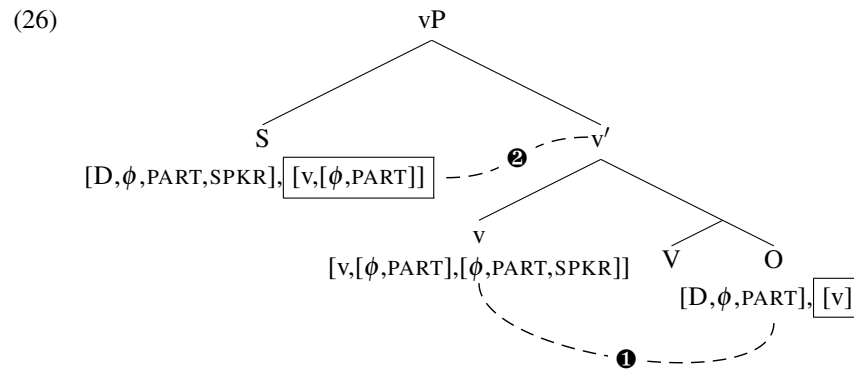
d. H agrees with G2, bidirectional feature exchange



- Exponence of the goal-flag feature bundle (all or in part) gives rise to morphological case
 - This follows quite a lot of work in assuming that features like [NOM], [ERG], [ACC], etc, are not true syntactic primitives (e.g. Kiparsky 2001, McFadden 2004, Deal 2010, Caha 2013, Pesetsky 2013, Bárány 2017, Clem 2019) — case markers instead spell out more primitive syntactic features
 - Under the current proposal, those features are ϕ -features and probe category features
- Dependent cases, like ergative, are the spell out on a second goal of features transferred from the first goal
- Two key properties of the Shawi data fall immediately into place:
 - Ergative only appears when the subject is the second goal for Agree with v
 - OAgr-on-S only appears if the subject is ergative

(25) 1SG→2SG: ergative (Bourdeau 2015: 24)

ɪ'wara ka-ri-**nke** pera-ra-(w)-nke.
 yesterday 1-ERG-2.O call-IND-1-2.O
 'I called you yesterday.'



- In (26), when v agrees with the object and then the subject, the object's features are transferred to the subject as part of a goal flag bundle

- The object is flagged with the feature $[v]$
- The subject is flagged with the bundle $[v, [\phi, PART]]$

- Ergative case and OAgr-on-S **both** reflect the goal-flag bundle on the subject

- Ergative case realizes the feature $[\phi]$ on a nominal (category $[D]$) that already bears its own ϕ -features
- OAgr-on-S realizes the remaining ϕ features of the object in the context of the category feature $[v]$

(27) Shawi ergative case vocabulary item

$ri \leftrightarrow \phi / - [\phi, D]$

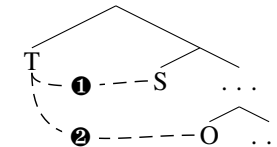
(28) Shawi 2SG object agreement vocabulary item

$nke \leftrightarrow [PART, v]$

4.4 Capturing variation in global splits

- The range of hierarchy effects found in global case splits can be captured with two points of variation
 - The location of the probe relative to the goals → ergative (forward PCC) vs. accusative (reverse PCC) pattern
 - The features of the probe → different varieties of hierarchy effects (Strong, Weak, etc.)
- A reverse/accusative pattern (Kashmiri) can be derived by locating the probe on T instead of v
 - The probe will encounter the subject first
 - The features of the subject (G1) will be able to bleed agreement with the object (G2)
 - If Agree is successful, the subject's features will be transferred to the object, resulting in accusative case

(29) Dependent accusative: T agrees with subject and then object



- A high probe will also be able to result in SAgr-on-O in languages with a reverse PCC pattern
- Different varieties of hierarchy effects (Strong, Weak, etc.) can be derived by changing the interaction and satisfaction conditions
- A Weak PCC pattern (Kolyma Yukaghir) can be derived by changing the probe's satisfaction condition
 - If the probe is insatiable (i.e. no satisfaction condition) it will never stop probing after encountering the first goal
 - If $[PART]$ still interacts dynamically (as in Shawi), a local person G1 will require a local person G2

(30) Modeling hierarchy effects in global splits

	Forward (ERG) Probe on <i>v</i>	Reverse (ACC) Probe on T
Strong	<i>Dep. case when O is 3</i>	<i>Dep. case when S is 3</i>
[SAT:PART]	Shiwilu	Yurok
Weak	<i>Dep. case except in</i>	<i>Dep. case except in</i>
[SAT:-]	3>PART	PART>3
[PART] [↑]	??	Kolyma Yukaghir
Strictly descending	<i>Dep. case when S ranks at least as high as O</i>	<i>Dep. case when O ranks at least as high as S</i>
[SAT:SPKR] [PART] [↑]	Shawi	Kashmiri

5 Conclusion

- Despite the appearance of global evaluation in global case splits, no truly global calculation of case is needed
 - Hierarchy effects and OAgr-on-S/SAgr-on-O reflect local Agree relations
 - Fine-grained cyclicity in the derivation alters the case-assigning properties of the probe as each goal is encountered
- Global case splits thus reflects a series of highly local derivational steps
- Looking beyond global case splits, this Agree-based view of case assignment is able to capture patterns of dependent case more broadly
 - Dependent case is the realization on a second goal of features from a first goal

Appendix A: More hierarchy patterns in global case splits

Strong PCC

- Strong PCC global split pattern:
 - Forward: The subject is ergative only when the object is third person
 - Reverse: The object is accusative only when the subject is third person

(31) Strong PCC global split pattern

Forward			Reverse		
Sbj.	Obj.	Sbj. Case	Obj.	Sbj.	Obj. Case
1	2	∅	1	2	∅
1	3	ERG	1	3	ACC
2	1	∅	2	1	∅
2	3	ERG	2	3	ACC
3	1	∅	3	1	∅
3	2	∅	3	2	∅
3	3	ERG	3	3	ACC

- Shiwilu (Kawapanan; Peru) shows a forward strong PCC global split with ergative case
 - When the object is local person, the subject is unmarked
 - When the object is 3rd person, the subject can be marked with ergative case
- (32) No ergative with local person objects
 - 1SG→2SG (Valenzuela 2011: 100)
Kwa tek-susu-lle.
1SG CAUS-grow.up-1SG>2SG
'I raised you.'
 - 2PL→1SG (Valenzuela 2011: 100)
Ma'ki'na kenmama' lumer-lama'u'ku?
why 2PL laugh.at-NFUT.2PL>1SG
'Why did you (plural) laugh at me?'

(33) Ergative with 3rd person objects

a. 1PL.EXCL→3PL (Valenzuela 2011: 100)

Kuda=**ler** aperku-tu-dek-llidek pu'yek.
 1PL.EXCL=ERG not.share-VAL-3PL.O-1PL.EXCL>3PL fishing
 'We (exclusive) did not share the fishing with them.'

b. 3SG→3SG (Valenzuela 2011: 105)

Kishu(=**ler**) ka'-lli nana isha.
 Jesús=ERG eat-NFUT.3SG that paujil
 'Jesús ate the paujil (a species of curassow).'

(36) Strictly descending PCC global split pattern

Forward			Reverse		
Sbj.	Obj.	Sbj. Case	Obj.	Sbj.	Obj. Case
1	2	ERG	1	2	ACC
1	3	ERG	1	3	ACC
2	1	∅	2	1	∅
2	3	ERG	2	3	ACC
3	1	∅	3	1	∅
3	2	∅	3	2	∅
3	3	ERG	3	3	ACC

• Yurok (Algic; USA) shows a reverse strong PCC global split with accusative case

- When the subject is a local person, the object is unmarked
- When the subject is 3rd person, singular local person objects are marked with accusative case

(34) No accusative with local person subject

2SG→1SG (Robins 1958: 21, as cited in Georgi 2012: 307)

keʔl nek ki newoh-paʔ
 2SG.NOM 1SG.NOM FUT see-2>1SG
 'You will see me.'

(35) Accusative with 3rd person subject

3SG→1SG (Robins 1958: 21, as cited in Georgi 2012: 307)

yoʔ nek-ac ki newoh-peʔn
 3SG.NOM 1SG-ACC FUT see-3SG>1SG
 'He will see me.'

Reverse strictly descending PCC

• Strictly descending PCC global split pattern:

- Forward: The subject is ergative only when it is at least as high as the object on the hierarchy 1>2>3 (Shawi)
- Reverse: The object is accusative only when it is at least as high as the subject on the hierarchy 1>2>3 (Kashmiri)

• Kashmiri (Indo-Aryan; India/Pakistan) shows a reverse strictly descending PCC global split with “dative” case

- When the subject outranks the object in person, the object is unmarked
- When the object is at least as high as the subject in person, the object is marked dative

(37) No dative when subject outranks object

a. 1SG→2SG (Wali and Koul 1997: 155, as cited in Bány 2017: 107)

b_i chu-s-ath tsi parina:va:n
 I.NOM be.M.SG-1SG.SBJ-2SG.OBJ you.NOM teaching
 'I am teaching you.'

b. 2SG→3SG (Wali and Koul 1997: 155, as cited in Bány 2017: 107)

tsi chi-h-an su parina:va:n
 you.NOM be-2SG.SUB-3SG.OBJ he.NOM teaching
 'You are teaching him.'

(38) Dative when object is as high as subject

a. 2SG→1SG (Wali and Koul 1997: 155, as cited in Bány 2017: 107)

tsi chu-kh me parina:va:n
 you.NOM be.M.SG-2SG.SBJ 1.DAT teaching
 'You are teaching me.'

b. 3SG→2SG (Wali and Koul 1997: 155, as cited in Bány 2017: 107)

su chu-y tse parina:va:n
 he.NOM be.M.SG-2SG.OBJ you.DAT teaching
 'He is teaching you.'

- c. 3SG→3SG (Wali and Koul 1997: 156, as cited in Bárány 2017: 107)

su vuch-i t̄amis
 he.NOM see-3SG he.DAT
 ‘He will see him.’

Appendix B: Third person objects in Shawi and locality in Agree

- Ergative is seemingly “optional” with 3rd person objects in Shawi
- The availability of ergative case on the subject depends on the position of the 3rd person object

- (39) a. SOV: ergative optional (Barraza de García 2005: 159)

Pituru(-ri) Kusi awe-r-in
 Pedro-ERG Jose hit-IND-3
 ‘Pedro hit Jose.’

- b. OSV: ergative obligatory (Barraza de García 2005: 159)

Kusi Pituru*(-ri) awe-r-in
 Jose Pedro-ERG hit-IND-3
 ‘Pedro hit Jose.’

- This fact is independent of subject person – in SVO order, ergative is always “optional”

- (40) Ergative “optional” with 3rd person object

- a. 1PL.EXCL→3SG (Bourdeau 2015: 31)

Kiya(-ri) na’wan-(r)a-i Pitru.
 1PL.EXCL-ERG miss-IND-1PL.EXCL Peter
 ‘We miss Peter.’

- b. 2SG→3SG (Bourdeau 2015: 31)

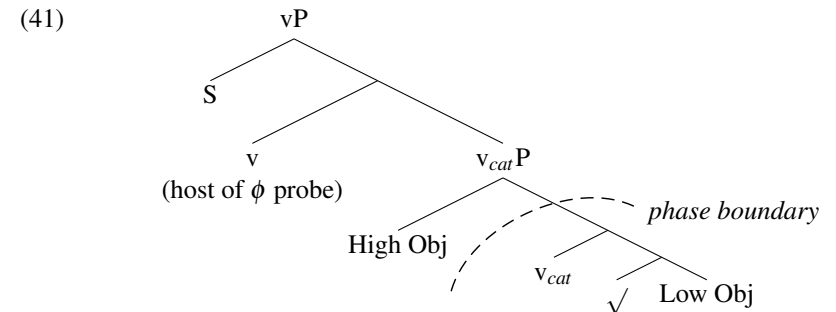
Kema(-ri) paki-r-an mi’ne.
 2-ERG break-IND-2 mocahua
 ‘You broke the mocahua.’

- c. 3SG→3SG (Bourdeau 2015: 33)

Pitru(-ri) iwa-r-in pepeku.
 Peter-ERG steal-IND-3 necklace
 ‘Peter stole a necklace.’

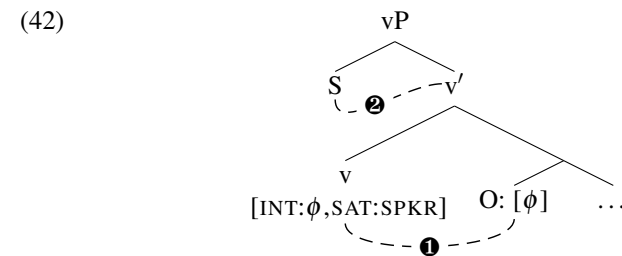
- Two options for 3rd person objects:

- Remain in the base position, inaccessible to a probe on v
- Move to a position where it is accessible to v ’s probe
 (Local person objects always move to the higher object position and are thus always accessible to the v probe)
- For concreteness, suppose the low categorizer v_{cat} projects a phase:



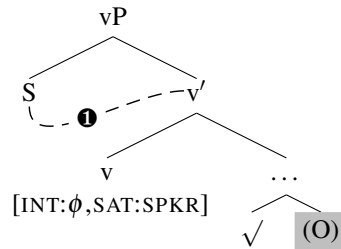
- When the 3rd person object is accessible to v ’s probe, it neither satisfies the probe nor dynamically interacts with it

- The probe agrees with the subject via cyclic expansion
- Since the subject is the second goal, it is marked with ergative case



- When the 3rd person object is not accessible to *v*'s probe (or when there is no object) the probe does not agree on the first cycle of probing
 - The probe agrees with the subject via cyclic expansion
 - Since the subject is only the first goal, it is not marked with ergative case

(43)



References

- Baker, Mark. 2015. *Case: Its principles and its parameters*. Cambridge: Cambridge University Press.
- Bárány, András. 2017. *Person, case, and agreement: The morphosyntax of inverse agreement and global case splits*. Oxford: Oxford University Press.
- Bárány, András, and Michelle Sheehan. 2024. Challenges for dependent case theory. In *On the place of case in the grammar*, ed. Christina Sevdali, Dionysios Mertyrus, and Elena Anagnostopoulou. Oxford: Oxford University Press.
- Béjar, Susana. 2003. *Phi-syntax: A theory of agreement*. Doctoral Dissertation, University of Toronto.
- Béjar, Susana, and Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40:35–73.
- Bourdeau, Corentin. 2015. Ergativity in Shawi (Chayahuita). Master's thesis, Radboud University Nijmegen.
- Caha, Pavel. 2013. Explaining the structure of case paradigms by the mechanisms of nanosyntax. *Natural Language and Linguistic Theory* 31:1015–1066.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Clem, Emily. 2019. Amahuaca ergative as agreement with multiple heads. *Natural Language and Linguistic Theory* 37:785–823.
- Deal, Amy Rose. 2010. Ergative case and the transitive subject: A view from Nez Perce. *Natural Language and Linguistic Theory* 28:73–120.
- Deal, Amy Rose. 2015. Interaction and satisfaction in ϕ -agreement. In *NELS 45: Proceedings of the Forty-Fifth Annual Meeting of the North East Linguistic Society*, ed. Thuy Bui and Deniz Özyıldız, 179–192. Amherst, MA: GLSA.
- Deal, Amy Rose. 2024. Interaction, satisfaction, and the PCC. *Linguistic Inquiry* 55:39–94.
- Deal, Amy Rose. to appear. Current models of Agree. In *Move and Agree: Towards a formal typology*, ed. James Crippen, Rose-Marie Déchaine, and Hermann Keupdjio. Amsterdam: John Benjamins.
- Barraza de García, Yris Julia. 2005. El sistema verbal en la lengua Shawi. Doctoral Dissertation, Universidade Federal de Pernambuco.
- Georgi, Doreen. 2012. A local derivation of global case splits. In *Local modeling of non-local dependencies in syntax*, ed. Artemis Alexiadou, Tibor Kiss, and Gereon Müller, 305–336. Berlin: De Gruyter.
- Harley, Heidi, and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78:482–526.
- de Hoop, Helen, and Andrej L. Malchukov. 2008. Case marking strategies. *Linguistic Inquiry* 39:565–587.
- Keine, Stefan. 2010. *Case and agreement from fringe to core*. Berlin: De Gruyter.
- Kiparsky, Paul. 2001. Structural case in Finnish. *Lingua* 111:315–376.
- Maslova, Elena. 2003. *A grammar of Kolyma Yukaghir*. Berlin: De Gruyter Mouton.
- McFadden, Thomas. 2004. The position of morphological case in the derivation: A study on the syntax-morphology interface. Doctoral Dissertation, University of Pennsylvania.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25:273–313.
- Pesetsky, David. 2013. *Russian case morphology and the syntactic categories*. Cambridge, MA: MIT Press.
- Pesetsky, David, and Esther Torrego. 2001. T-to-C movement: Causes and consequences. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 355–426. Cambridge, MA: MIT Press.
- Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: Syntactic derivation and interpretation*, ed. V. Samiiian S. Karimi and W. Wilkins, 262–294. Amsterdam: John Benjamins.
- Rezac, Milan. 2003. The fine structure of Cyclic Agree. *Syntax* 6:156–182.
- Rezac, Milan. 2004. Elements of cyclic syntax: Agree and Merge. Doctoral Dissertation, University of Toronto.
- Robins, R. H. 1958. *The Yurok language: Grammar, texts, lexicon*. Berkeley/Los Angeles, CA: University of California Press.
- Stegovec, Adrian. 2020. Taking case out of the Person-Case Constraint. *Natural*

Language and Linguistic Theory 38:261–311.

Valenzuela, Pilar M. 2011. Argument encoding and pragmatic marking of the transitive subject in Shiwilu (Kawapanan). *International Journal of American Linguistics* 77:91–120.

Wali, Kashi, and Omkar N. Koul. 1997. *Kashmiri: A cognitive-descriptive grammar*. New York: Routledge.