What agrees, why and how: A view from Austronesian

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1 Introduction

⊕ **The questions**

- How are Ā-Agree relations realized in narrow syntax?
- What is the relationship between Agree and Move? Is Move necessary?
- Is [uφ] the only type of probe that triggers φ-feature agreement?
- Can different Ā-operations be driven by the same probe?

▹ **Insights from Austronesian**

- When targeting the same goal, an Ā-Agree relation may bundle with other Agree relations and be spelled out as a single verbal affix.
  - ▹ This mechanism can be viewed as a design for indicating the grammatical role of the goal of an Ā-probe (e.g. topics, REL-phrases).
  - ▹ A similar design is seen in typologically diverse discourse configurational languages.
- Move is not a necessary outcome of Agree; the optionality is seen within western Austronesian.
- φ-feature agreement can be triggered by Agree with an Ā-probe.
  - ▹ **Implication**: φ-feature agreement may be a mechanism for indexing the goal of any Agree relation.
- Different Ā-operations may be driven by a single, flat Ā-probe.
  (See Miyagawa 2009; van Urk 2015; Baier 2018; Aravind 2019 for details)
  - ▹ This approach offers a simpler solution to the fluid extraction asymmetry observed in a group of discourse configurational languages.

2 The phenomenon

▹ Many western Austronesian languages display a crosslinguistically unusual voice system known as **Austronesian-type voice** or **Philippine-type voice**.

  ▹ In these languages, the Ā-extraction constraint of a given clause is subject to the form of verbal morphology, (1).

(1) *Tagalog relativization*

a. Sino ang [$_{RC}$ b<**um**>ili/*-in/*-an/*i- ng keyk]?
who LK [$_{RC}$ buy<AV>/*PV/*LV/*CV ID.CM$_2$ cake]
'*Who* is the one that bought cakes?' **[Actor Voice]**

b. Ano ang [$_{RC}$ bi-bilih-**in**/*<um>/*-an/*i- ni Lia]?
what LK [$_{RC}$ CONT-buy-PV/*AV/*LV/*CV PN.CM$_1$ Lia]
'*What* is the thing that L will buy?' **[Patient Voice]**

c. Nasaan ang [$_{RC}$ bi-bilih-**an**/*<um>/*-in/*i- ni Lia ng keyk]?
where LK [$_{RC}$ CONT-buy-LV/*AV/*PV/*C PN.CM$_1$ Lia ID.CM$_2$ cake]
'*Where* will be the place where L bought cakes?' **[Locative Voice]**

d. Sino ang [$_{RC}$ **i**-bi-bili/*<um>/*-in/*-an ni Lia ng keyk]?
who LK [$_{RC}$ CV-buy/*AV/*PV/*LV PN.CM$_1$ Lia ID.CM$_2$ cake]
'*Who* is the one that L will buy cakes *for*?' **[Circumstantial Voice]**

▹ In simple transitives like (1)

  ▹ Actor Voice (AV) is obligatory for **EA** extraction (1a).
  ▹ Patient Voice (PV) is obligatory for **IA** extraction (1b).
  ▹ Locative Voice (LV) is obligatory for **locative** extraction (1c).
  ▹ Circumstantial Voice (CV) is obligatory for **benefactive** extraction (1d).
    ▹ Extraction of other types of adjuncts (e.g. instrument, purpose) or DPs that are structurally low (e.g. theme in causatives, ditransitives, or controls) also take this affix.

▹ The same set of verbal morphology is also obligatory in finite declaratives:

(2) *Tagalog*

a. B<um>ili si AJ ng keyk mula kay Lia para kay Joy.
buy<AV> PN.PIVOT AJ ID.CM$_2$ cake P$_1$ PN.CM$_2$ Lia P$_2$ PN.CM$_2$ Joy
'*AJ* bought cake from Lia for Joy.' (AV)

b. Bi-bilih-in ni AJ ang keyk mula kay Li para kay Joy.
CONT-buy-PV PN.CM$_1$ AJ PIVOT cake P$_1$ PN.CM$_2$ Li P$_2$ PN.CM$_2$ Joy
'AJ will buy *cake* from Li for Joy.' (PV)

c. Bi-bilih-an ni AJ ng keyk si Li para kay Joy.
CONT-buy-LV PN.CM$_1$ AJ ID.CM1 cake PN.PIVOT Li P$_2$ PN.CM2 Joy
'AJ will buy cake from *Li* for Joy.' (LV)

d. I-bi-bili ni AJ ng keyk mula kay Li si Joy.
CV-CONT-buy PN.CM1 AJ ID.CM2 cake P$_1$ PN.CM2 Li PN.PIVOT Joy
'AJ will buy cake from Li for *Joy*.' (CV)

▹ Analogous to the mapping seen in (1),

- ▹ In **AV**, the **EA** is marked in a special marker labeled as PIVOT (2a).
- ▹ In **PV**: the **IA** bears the marker (2b).
- ▹ In **LV**: the **locative** bears the marker (2c).
- ▹ In **CV**: the **benefactor** bears the marker (2d).

(3)

	a. AV	b. PV	c. LV	d. CV
external argument	**Pivot**	CM$_1$	CM$_1$	CM$_1$
internal argument	CM$_2$	**Pivot**	CM$_2$	CM$_2$
locative	P$_1$	P$_1$	**Pivot**	P$_1$
benefactor	P$_2$	P$_2$	P$_2$	**Pivot**

▹ In other words, voice morphology indexes the grammatical role of pivots in declaratives and that of REL-phrases in RCs.

▹ Core traits of this voice system

(4) a. **A syntactically pivotal phrase**: One phrase per CP is designated the pivot and realized in a particular morphological form and/or structural position, regardless of its original grammatical function or thematic role.

b. **Fluid extraction restriction**: Ā-extraction (relativization, including pseudo-clefting) is limited to the pivot phrase of a given clause.

c. **Articulated verbal morphology**: Four-way affixal morphology on the verb alters for the choice of the pivot, including options for taking certain non-core phrases as pivots.

d. **Marking of nonpivot phrases**: Nonpivot phrases carry a fixed case-marking regardless of the voice type of the clause.

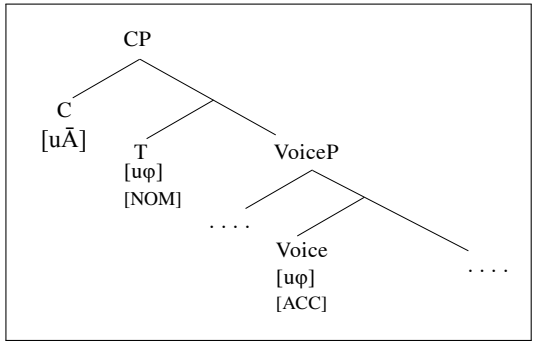
e. **One-to-many mapping between voice and pivot selection**: the mapping is not conditioned simply by case or thematic role.

⊕ Core questions
- ▹ What does pivot-marking mark?
- ▹ What is the nature of the four-way morphology (AV/PV/LV/CV)?
- ▹ What gives rise to the fluid extraction constraint in (1)?

▹ **A revised Ā-agreement approach to Austronesian-type voice**

- ▹ Pivot-marked phrases are *topics*
- ▹ The four-way morphology is a mechanism that indicates the grammatical role of *topics* and *relativized phrases*.
  - ▹ **Descriptively:**
    - ▹ "AV" indicates the topic/REL-phrase is the *subject*.
    - ▹ "PV" indicates the topic/REL-phrase is the *DO (2nd highest DP)*.
    - ▹ "LV" indicates the topic/REL-phrase is a *locative phrase*.
    - ▹ "CV" indicates the topic/REL-phrase is *none of the above*.
  - ▹ **Proposal:** What gives rise to a system like this?

(5)



▹ **The recipe**

(a) **[uφ] on T**, probing the highest DP (i.e. subject).

(b) **[uφ] on matrix Voice**, probing the closest DP (i.e. DO).

(c) **A specific type of P** that selects only locative phrases.

(d) **[uĀ] on C**: a flat Ā-probe that can be satisfied by either [TOP] or [REL], sat on a head distinct from T, labled as C in (5).

▹ **Proposal: how it works**

When a phrase is probed simultaneously by [uĀ] and by (a), (b), or (c), the bundling of the two Agree relations is spelled out as a single voice affix.

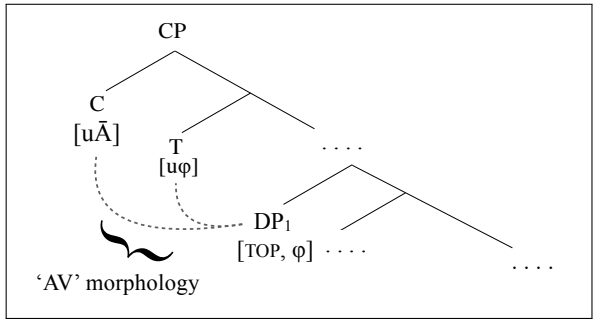
▹ Namely, when a topic/REL-phrase agrees also with [uφ] on a certain head, the bundle of the Ā- and the A-Agree relations is spelled out as voice morphology.

▹ Each combination below is spelled out as a specific verbal affix:

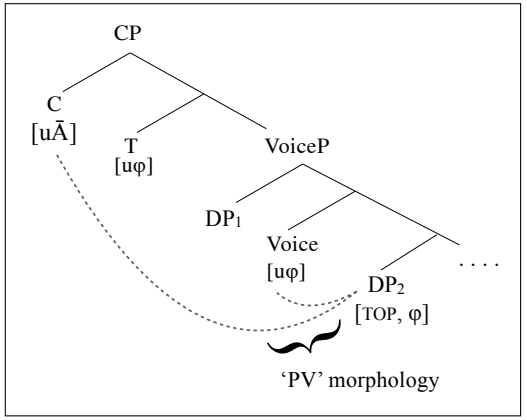
AV	spell-out of the bundle of the Agree relations with (a) and with (d)
PV	spell-out of the bundle of the Agree relations with (b) and with (d)
LV	spell-out of the bundle of the Agree relations with (c) and with (d)
CV	spell-out of the Agree relation with (d)

↪ Voice indexes the convergence of **topic agreement** with (a) **subject agreement**, (b) **object agreement**, (c) **locative agreement**, or (d) **nothing else**.

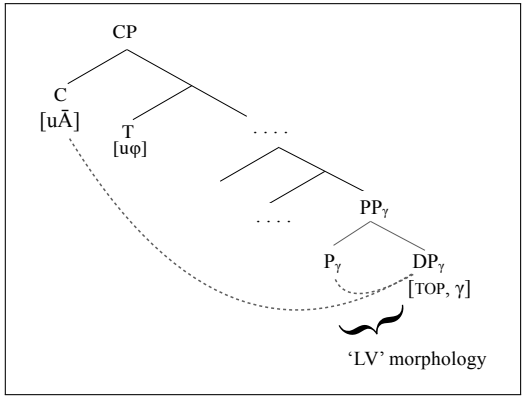
(6) *AV: When the topic is also the subject*



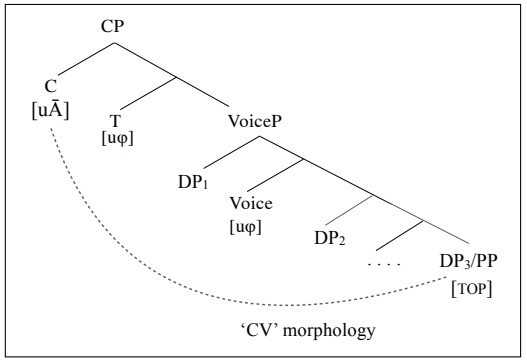
(7) *PV: When the topic is also the DO (2nd highest DP per CP)*



(8) *LV: When the topic is also the locative*



(9) *CV: When the topic agrees with no other probes*



▹ **Two loci of variation within this group of languages**

1 Whether the goals of (a)-(d) trigger φ-feature agreement on the verb (i.e. whether φ-features of topics/subjects/DOs are spelled out)

2 Whether topics undergo overt movement

▹ **Non-Austronesian parallels**

- ▹ Similar voice systems attested in western Nilotic and Caucasian
  - ○ Verbal morphology indexing the Agree relations probing topics/*wh*-/REL-phrases
  - ○ Different Ā-operations trigger the same set of agreement morphology on the verb, giving rise to a 'pivot-only' extraction constraint
- ▹ Similar topic-oriented φ-feature agreement attested in Romance, Mixtec, Bantu, and Nilotic.

◇ **Roadmap**

3 How voice works in Austronesian as topic-indicating morphology

3.1 Voice behaves like agreement hosted in the C domain

3.1.1 Voice behaves like agreement morphology

▹ Voice morphology obligatorily appears on the highest verbal head per CP.

- ▹ All the rest of the verbal heads carry default (DEF) voice marking.

(10) *Puyuma*

a. Ku=beray-ay na walak kana bu'ir.
1S.NOM=give-LV DF.PIVOT child DF.ACC taro
'I *gave* the child the taro.'

b. Ku=talam-ay ∅-beray na walak kana bu'ir.
1S.NOM=try-LV DEF-give DF.PIVOT child DF.ACC taro
'I *tried* to give the child the taro.'

c. Ku=trakatrakaw-ay talam ∅-beray na walak kana bu'ir.
1S.NOM=secretly-LV DEF-try DEF-give DF.PIVOT child DF.ACC taro
'I *secretly* tried to give the child the taro.'

▹ The property and structural height of this (highest) head can vary.

- ▹ E.g., CV morphology may appear on various types of heads and indicates the pivot is a non-locative adjunct or a low DP, (7).

(11) *Paiwan (Wu 2013)*

a. *Voice on subject control verb*

'u-s<in>i-patagilj=anga=sun a sapay ta kaitang.
1SG.NOM-CV-PRF-begin=COS=2S.PIVOT LK <DEF>cultivate ACC field
'I have started to cultivate the field for *you*.' (CV)

b. *Voice on manner adverb*

'u-s<in>i-galju a tjavac ti ina.
1SG.NOM-CV-<PRF>slowly LK <DEF>walk PIVOT mother
'I walked slowly with *mother*.' (CV)

c. *Voice on abilitative modal*

Si-'a-caqu a lanqgui a kasiw.
CV-STAT=be.able.to LK swim<DEF> PIVOT wood

'I am able to swim by means of the *woods*.' (CV)

d. *Voice on the first lexical verb in SVCs*

'u-s<in>i-vaik a qaljup ta vavuy ti Kapi.
1S.NOM-CV-PRF-go LK <DEF> ACC wild.pig PIVOT Kapi

'I went hunting wild pigs with *Kapi*.' (CV)

e. *Voice on control verb*

'u-si-RuqeRuq tjay Kapi a ∅-pa-vay tjay Kivi a pakiawi
1S.NOM-CV-force ACC Kapi LK DEF-CAU-give ACC Kivi PIVOT money

'I have forced Kapi to give Kivi *money*'.' (CV)

▹ **What does this constraint tell us?**
  ▹ Austronesian-type voice may not be valency-indicating affixes hosted within individual VoiceP.

3.1.2 The locus of voice is high

▹ Voice morphology is hosted *higher* than Aspect.

  ▹ Voice affixes insert into aspect morphology rather than the verbal stem, (12):

(12) a. *Puyuma*

Da-deru i Atrung dra patraka.
<AV>PROG-cook PN.PIVOT Atrung ID.ACC meat

'Atrung is cooking meat.' (AV)

b. *Paiwan (Chang 2006)*

Siu-siup ti Zepul nu Siaw.
<AV>HAB-suck PN.PIVOT Zepul IRR.TEMP <AV>soup

'Zepul sucks (it) when she eats soup.' (AV)

◦ Assuming the Mirror Principle (Baker 1985; Harley 2013), this indicates Austronesian-type voice is hosted in a projection *higher* than Aspect.

  ▹ Since these are tenseless languages, the insertion fact above indicates voice morphology is hosted high in the left periphery

    ▹ This correlates with the fact that voice inflects for mood.

    ▹ It also reinforces the view that AN-type voice is not valency-indicating morphemes hosted within individual VoicePs
    (Chung 1994; Peason 2005; Chen 2017; contra Aldridge 2004, Rackowski & Richards 2005).

▹ Voice morphology inflect for mood.

(13) *Puyuma*

a. Ku=beray-ay i Senten dra paysu.
1S.NOM=give-LV.IND PN.PIVOT Senten ID.ACC money

'I gave *Senten* money.' (LV indicative)

b. Beray-i i Senten dra paysu!
give=LV.IMP PN.PIVOT ID.ACC money

'(You) give *Senten* money!' (LV imperative)

  ▹ As Mood is standardly assumed to be hosted in the C domain
  (e.g. Rivero & Terzi 1995; Han 2001; Noonan 2007), this suggests voice is hosted high.

3.2 Pivot phrases behave like topics

⊕ **The next question**
  ▹ What does the pivot marker mark?
    ▹ **Recall**: this marker can mark various phrases ranging from core arguments to adjunct-like phrases, as seen in (2).

▹ Pivots behave like *topics*.

- See Shibatani (1998), Richards (2000), Pearson (2001, 2005), Rackowski (2002), Erlewine (2014), Chen (2017), Paul & Massam (2020) for a similar topic analysis for pivots.

▹ This analysis is consistent with the observation that voice – which indexes the designation of pivots – is hosted in the left periphery.

3.2.1 Evidence from discourse

In question-answer sequences with a clear discourse topic, the topic must be placed as pivot in the answer.

(14) *Tagalog: four ways to answer (14a)*

a. Na saan ang kutsara ni Maria?
NA where PIVOT spoon PN.POSS Lia
'Where is *Lia's spoon*?' **(Discourse topic: Lia's spoon)**

b. Gamit ni Lia (ang kutsara).
use.PV PN.CM$_1$ Lia (PIVOT spoon)
'Lia is using *(it/the spoon)*. **(Topic as a theme pivot)**

c. I-p<in>ang-ka-kain ni Ryan (ang kutsara).
CV-PANG<PRF>-RED-eat PN.CM$_1$ Ryan (PIVOT spoon)
'Ryan is eating with *(it/the spoon)*' **(Topic as an instrument pivot)**

d. Na-kita=ko=[ng k<in>uha ni Ivan (ang kutsara)].
PRF.PV-see=1SG.CM$_1$=[LK steal<PV.PRF> PN.CM$_1$ Ivan (PIVOT spoon)]
'I saw that Ivan stole *(it/the spoon)*. **(Topic as an embedded pivot)**

e. Na kay Peter (ang kutsara).
NA with Peter (PIVOT spoon)
'*The spoon* is with Peter.' **(Topic as an existential pivot)**

(15) *Puyuma*

a. Makakuta i Pilay uninan?
AV.what.happen PN.PIVOT Pilay today
'What did *Pilay* do today?' **(Discourse topic: Pilay)**

b. Deru (pro) dra abay.
<AV>cook (3SG.PIVOT) ID.ACC rice.ball
'*She* cooked rice balls'. **(Topic as pivot-marked)**

c. *Tu=deru-aw na abay.
3.NOM=cook-**PV** DF.PIVOT rice.ball
(intended: 'She cooked *rice balls*).' **(Topic as not pivot-marked)**

3.2.2 Evidence from binding facts

▹ Promotion-to-pivot shows typical Ā- and not A-properties.

A-properties	Ā-properties	AN
No reconstruction for Principle C	Reconstruction for Principle C	Yes
New antecedents for anaphors	No new antecedent for anaphors	No
No Weak Crossover	Weak & Weakest Crossover	Yes

▹ The binding parameters in five Philippine-type AN languages are consistent (see §9.2 in the appendices; Chen 2017; Pearson 2001).

▹ This suggests pivots are Ā-elements (and not subjects).

▹ This follows from the fact that AN-type voice behave like agreement morphology hosted in the C domain.

▹ A comparison with Dinka.

These binding facts do differ from those in Dinka, where topics also display subject properties (van Urk 2015).

A-properties	Ā-properties	Dinka	AN
No reconstruction for Principle C	Reconstruction for Principle C	No	Yes
New antecedents for anaphors	No new antecedent for anaphors	Yes	No
No Weak Crossover	Weak & Weakest Crossover	No	Yes

→ Topics show both A- and Ā properties in Dinka but only Ā-properties in AN.

▹ Promotion-to-pivot triggers no argument structure alternation.

Given Relativized Minimality, a topic need not render the highest DP to agree with [uTOP]. Accordingly, topics should be possible to occupy any structural heights and be either PPs or DPs.

▹ As predicted, being a pivot/topic does *not* alter its binding relation, (16).

(16) *Tagalog*

a. Nag-pa-pa-ligo=ako kay Ivan ng sarili niya.
AV.PRF-RED-bathe=1SG.NOM PN.ACC Ivan ID.ACC REFL 3SG
'I made *Ivan* bathe *himself*.' (AV)

b. P<in>a-pa-ligo=ko si ivan ng sarili niya.
CAU<PRF.PV>-RED-bathe=1SG.NOM PN.PIVOT Ivan ACC REFL 3SG
'I am making *Ivan* bathe *himself*.' (PV)

c. I-p<in>a-li-linis=ko kay juan ang kanyang sarili.
CV-CAU<PRF>RED-clean=1SG.NOM PN.ACC Juan PIVOT 3SG REFL
'I asked *Juan* to clean *himself*.' (CV)

▹ See Chen (2017) for more binding tests on Puyuma, Amis, Seediq, and Tagalog.

3.3 A separate subject/NOM position

▹ Consistent with the facts above, this group of languages display a case marker (CM_1) that shows the hallmarks of nominative case.

3.3.1 CM_1 is unique per CP and unavailable in infinitives

▹ Unlike inherent ergative case (17), CM_1 (labeled as NOM in the preceding data) cannot mark EAs in embedded infinitives, (18).

(17) *ERG as available to embedded EA*

a. Alaweru-k hai-ts axos disi-ka.
Alaweru-ERG 1sg-ERG child.ABS hit-CAU
'Alaweru made *me* hit the child.' (Guirardello 1999) (Trumai)

b. Imakiupi kupi jesus-ya emaputi yonpa-pi makiu-ya teuren.
bad do Jesus-ERG CAU try-PST Satan-ERG frust
'S unsuccessfully tried to make *J* do bad.' (Abbott 1991) (Macushi)

(18) *CM_1 as unavailable to embedded EA*

a. Sa-pa-pi-nengneng aku tu/*nu ising k-una pusi.
CV-CAU-PI-see 1SG.CM_1 ACC/*CM_1 doctor PIVOT-that cat
'I will ask *the doctor* to look at the cat.' (Amis)

b. S-p-tinun=mu ∅/*na robo ka lukus.
CV-CAU-weave=1SG.CM_1 ACC/*CM_1 Robo PIVOT clothes
'I asked *Robo* to sew the clothes.' (Seediq)

c. I-p<in>a-nakaw=ko kay/*ni juan ang kotse.
CV-CAU<PRF>-steal=1SG.CM_1 PN.ACC/*PN.CM_1 PIVOT car
'I asked *Juan* to steal the car.' (Tagalog)

d. ku=*Tu=pa-saletra-anay kan sawagu i senten.
1SG.CM_1=*3.CM_1-CAU-slap=CV SG.PIVOT Senten
'I asked him/her to slap Senten.' (Puyuma)

3.3.2 CM_1 is available to theme in unaccusatives

CM_1 marks both the highest EAs in unergatives/transitives and highest IAs in unaccusatives (19)-(20).

(19) *Tagalog*

a. Ni-lakar-an ni Ivan ang daan.
PRF-walk-LV PN.CM_1 Ivan PIVOT road
'Ivan walked on the road.' (CM_1 on unergative subjects)

b. H<in>ulug-an ni Ivan ang swimming pool.
fall<PRF>LV PN.CM_1 Ivan PIVOT swimming pool
'Ivan fell into the swimming pool.' (CM_1 on unaccusative subjects)

(20) *Seediq*

a. P-puyas-an na laqi ka sapah=mu.
IRR-sing-LV CM_1 child PIVOT house-1SG.POSS
'The children will sing in my house.' (CM_1 on unergative subjects)

b. H-huqil-an na riso nii ka Paran.
IRR-die-LV PN.CM_1 young.man this PIVOT Paran
'This young man will die in Paran.' (CM_1 on unaccusative subjects)

▹ See Chen & Fukuda (2017) for similar data from more languages.

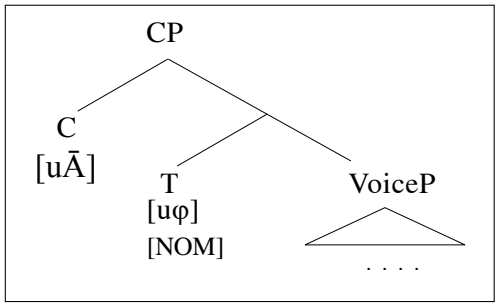
▹ This observation also argues against the ergative approach to these languages, which assumes CM_1 marks inherent ERG.

▹ **Proposal**

Philippine-type Austronesian languages possess an ordinary subject position distinct from topic position (21):

- ▹ **[uφ] on T**, probing the highest DP.
  - ▹ Agree with this feature is accompanied by NOM-licensing.
- ▹ **[u$\bar{A}$] on a different head (C)**, probing topics/REL-phrases.

(21)

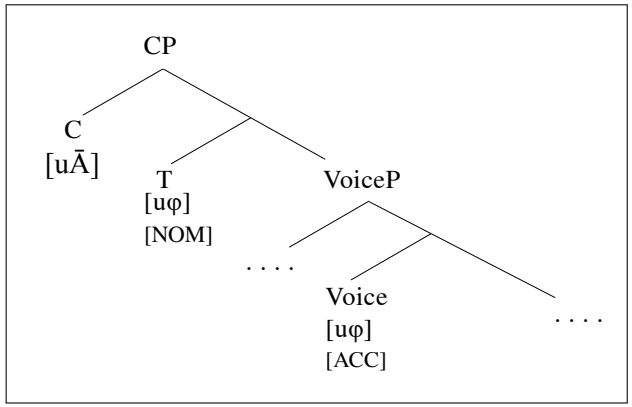


4 'Voice' tracks the Agree relations probing topics and REL-phrases

- **The big picture**
  - "AV" appears when the pivot/REL-phrase is the highest DP per CP
  - "PV" appears when the pivot/REL-phrase is the 2nd highest DP
  - "LV" appears when the pivot/REL-phrase is a locative phrase
  - "CV" appears when the pivot/REL-phrase is anything else (e.g. low DPs, adjuncts)

- **Proposal**: the design of voice (Ā-agreement) in Austronesian.

(22)



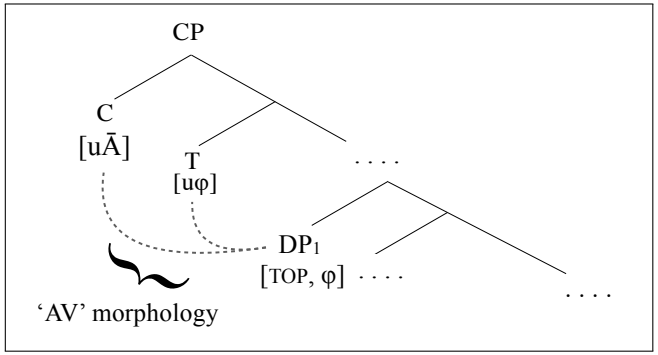
- **Assumption:** When a phrase is probed by both [uĀ] and another probe, the bundle of the two abstract Agree relations is spelled out as voice morphology.

AV: when topic agreement converges with subject agreement
PV: when topic agreement converges with object agreement
LV: when topic agreement converges with locative agreement
CV: when topic agreement converges with no other Agree relations

4.1 Actor Voice

- Spell-out of the bundle of **the Agree relation with [uĀ]** and that with **[uφ] on T**

(23) *AV: When the subject is also the topic*



- Possible triggers of AV include:
  - EAs in unergatives/transitives/ditransitives/causatives/controls (24a-b)
  - IAs in unaccusatives/detransitives (24c-d)

(24) *Puyuma*

a. M-uarak na walak i arasip.
AV-dance DF.PIVOT child LOC Arasip
'Atrung danced in Arasip.' (AV unergatives)

b. M-ekan na bangsaran dra patraka.
AV-eat DF.PIVOT young.man ID.ACC meat
'The young man ate some meat.' (AV transitives)

c. M-u-ekan na patraka.
AV-DETR-eat DF.PIVOT meat
'The meat was eaten up.' (AV detransitives)

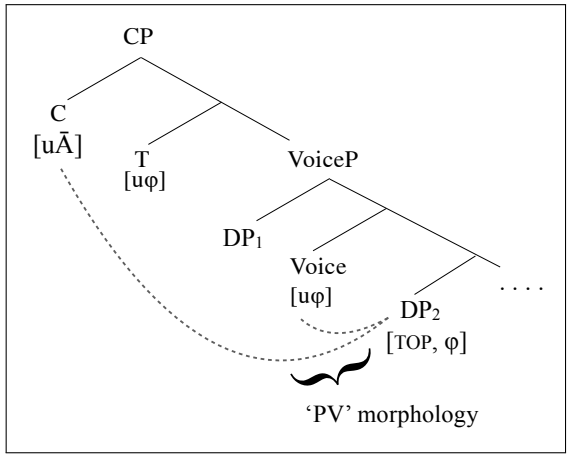
d. M<in>atray na bangsaran.
AV<PRF> DF.PIVOT young.man
'That young man died.' (AV unaccusatives)

- **Consistent with the facts above . . .**
  - Intransitives of any type can be marked in AV.
  - Embedded EAs (e.g., causees, controlles) cannot trigger AV agreement as they are not the highest DP per CP (see §4.2).

4.2 Patient Voice

▹ Spell-out of the bundle of **the Agree relation with [uĀ]** and that with **[uφ] on matrix Voice**

(25) *PV: When the DO is also the topic*



▹ Possible triggers of PV include:

- **IAs** in simple transitives (26a)
- **Causees** (26b), **controllee**, **recipients in DOCs** (26c)
- *But not*: themes in causatives/DOCs/controls (DPs lower than the above)

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(26) *Amis*

a. Tangtang-en ni Lisin k-u titi.
cook-PV PN.NOM Lisin PIVOT-that pork
'Lisin will cook *that pork*.' (PV transitives)

b. Pa-pi-takaw-en aku k-una wawa t-una paysu.
CAU-PI-steal-PV 1SG.NOM PIVOT-that child ACC-that money
'I will ask *that child* to steal that money.' (PV causatives)

c. Pafeli-en aku k-una wawa t-una paysu.
give-PV 1SG.NOM PIVOT-that child ACC-that money
'I gave *the child* that money.' (PV ditransitives)

▹ **Consistent with the facts above . . .**

▹ Intransitives cannot be marked in PV (since they have no *objects*).

▹ (Abstract) object agreement is also assumed to be **unique per clause** and target only the **2nd highest DP** (i.e. highest DP below matrix Voice) (Baker 2012; Deal 2019).

(27) *Amharic object agreement*

a. Ləmma l-Almaz məs'əhaf-u-n sət't'-at.
Lemma DAT-Almaz book-DEF-ACC give-(3MS)-3FO
'Lemma gave the book to *Almaz*.' (Baker 2012:258)

b. Aster was-a-n as-metaɨʧ-ññ.
Aster ball-DEF.ACC CAU-hit-3FEM.S-1SG.O
'Aster made *me* kick the ball.' (Duncan & Aberra 2009)

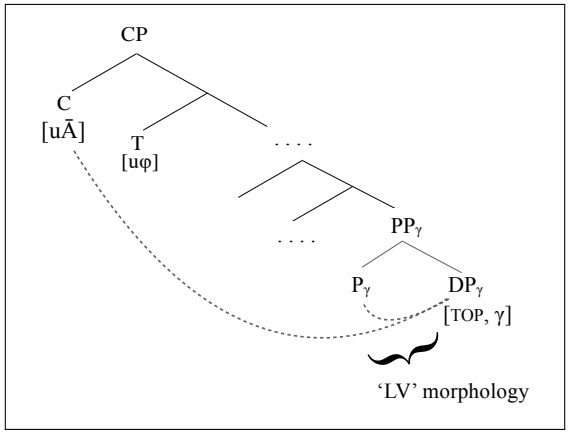
→ In DOC, object agreement probes the **recipient** and not the theme.

→ In causatives, object agreement probes the **causee** and not the theme.

4.3 Locative Voice

▹ Spell-out of the bundle of **the Agree relation with [uĀ]** and that with **P_{LOC}**

(28) *LV: When the locative is also the topic*



▹ Possible triggers of LV are restricted to locative phrases, including:

- Locative adjuncts in any constructions (29a-b)
- Sources/goals in prepositional datives (29d)

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(29) *Paiwan (Ferrell 1969:202; Chang 2006:195, 74)*

a. Qalup-an nua caucau tua vavuy a gadu.
hunt-LV CM$_1$ man CM$_2$ pig PIVOT mountain
'The man hunts while pigs in *the mountains*' (LV transitives)

b. P<in>a-pana-an a icu a i maza ni palang tay kui
CAU<PRF>-shoot-LV PIVOT this LK LOC here PN.NOM Palang PN.ACC Kui
ta zua venan.
ACC that deer
'Palang made Kui shoot that deer *here*.' (LV causatives)

c. '<in>aLap-an ti zepul ta za paysu ni lavakaw.
<PRF>take-LV PN.PIVOT Zepul ACC that money NOM Lavakaw
'Lavakaw took money from *Zepul*.' (LV ditransitives)

▹ **Consistent with the facts above . . .**

▹ Locative phrases in various Philippine-type Austronesian languages are marked with a specific preposition *i* that does not mark other types of adjuncts.

4.4 Circumstantial Voice

▹ Spell-out of **the Agree relation with [uĀ]** (when the goal agrees with no other probe).

▹ Possible triggers of CV:

- DPs that are structurally low (30a-c)
- Non-locative adjuncts (30d-f)

(30) *Paiwan*

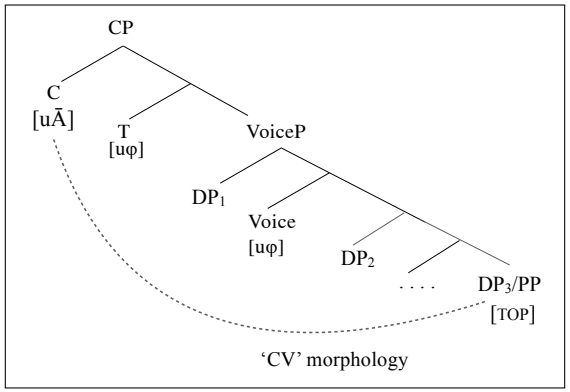
a. Si-qihul=si' hiya' 'i' ∅-pa-patas ku' ruas.
CV-force=2SG.NOM 3SG.ACC LK AV-CAU-write PIVOT book
'You forced him to read *the book*.' (CV controls)

b. Ku=s<in>i-pa-'alup tay palang a icu a vavuy.
1SG.NOM=CV<PRF>-CAU-hunt ACC Palang PIVOT this LK boar
'I made Palang hunt *this wild pig*.' (CV causatives)

c. 'u-s<in>i-vaik a qaljup ta vavuy ti Kapi.
1S.NOM-CV-PRF-GO LK <AV> ACC wild.pig PIVOT Kapi
'I went hunting wild pigs with *Kapi*.' (CV SVCs)

d. 'u-s<in>i-patagilj=anga=sun a sapay ta kaitang.
1SG.NOM-CV-PRF-begin=COS=2S.PIVOT LK <AV>cultivate ACC field
'I have started to cultivate the field for *you*.' (CV transitives)

(31) *CV: When the topic is none of the above*



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▹ In this view, Austronesian-type voice constitutes Ā-agreement morphology that tracks the Agree relations probing topics and REL-phrases.

- ▹ "AV" better characterized as 'Subject Topic Construction'
- ▹ "PV" better characterized as 'Object Topic Construction'
- ▹ "LV" better characterized as 'Locative Topic Construction'
- ▹ "CV" better characterized as 'Circumstantial Topic Construction'

▹ This system can be viewed as *discourse-configurational* in the sense of Lee & Thompson (1980), Kiss (1995), and Miyagawa (2009, 2017).

5 The design of Austronesian-type Ā-agreement: A typological view

- **How unusual is this design?**
  - Similar systems attested in Nilotic and Caucasian
    - Verbal morphology indexing the Agree relations probing topics, *wh*-, and/or REL-phrases
    - Different Ā-operations trigger the same set of agreement morphology on the verb, giving rise to a 'pivot-only'-like extraction constraint

5.1 Western Nilotic

(32) a. *Kurmuk (Anderson 2015)*

t̪áarák ꜜbóor-ú d̪ɛ̀ɛl kʌ̀ ŋìɪr.
person skin-PST.SUBJ.T goat PREP knife
'*The man* skinned a goat with a knife. (Subject Topic)

b. d̪ɛ̀ɛl bóor-út̪-ì ŋʌ̀ t̪áarák kʌ̀ ŋìɪr.
goat skin-PST-OBJ.T NOM person PREP knife
'The man skinned *the goat* with a knife.' (Object Topic)

c. ŋìɪr bóor-út̪-ꜜí d̪ɛ́ɛl ŋʌ̀ t̪áarák
knife skin-PST-OBL.T goat NOM person
'The man skinned a goat with *the knife*.' (Oblique Topic)

(33) *Dinka (van Urk 2015: 61)*

a. Àyén à-càm cuı̤̂n nḛ̀ pǎal.
Ayen 3s-eat.SV food P knife
'*Ayen* is eating food with a knife.' (Subject Voice (Topic))

b. Cuı̤̂n à-cɛ́ɛm Áyèn nḛ̀ pǎal.
food 3s.eat-OV Ayen.GEN P knife
'Ayen is eating *the food* with a knife.' (Object Voice (Topic))

c. Pǎal à-cɛ́ɛmḛ̀ Áyèn cuı̤̂n
knife 3s-eat.OBLV Ayen.GEN food
'Ayen is eating food with *a knife*.' (Oblique Voice (Topic))

- **Core traits of the Nilotic voice system** (Anderson 2015; van Urk 2015)

(34) a. **Three-way verbal morphology** indicating the grammatical role of the topic (i.e. subject | DO | others)
b. Nominative-accusative-style case system
c. A 'Last resort'-style Oblique topic constructions
d. Voice obligatorily present on the highest verbal head with default marking on all lower heads (35)
e. Same set of agreement morphology present in Ā operations (36).

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(35) *Dinka (van Urk 2015: 61, 84, 96)*

a. Cuı̤̂n à-cɛ́ɛm Áyèn nḛ̀ pǎal.
food 3s.eat-OV Ayen.GEN P knife
'Ayen is eating *the food* with a knife.' (Object Voice)

b. Cuı̤̂n à-dɔ́ɔc Bôl câam
food 3s-do.quickly.OV Bol.GEN eat.NF
'Bol is eating *the food* quickly.' (Object Voice)

c. Cuı̤̂n a-cı́ı̤ Áyèn [$_{vP}$ câam nḛ̀ pâal].
food 3s-PRF.OV Ayen.GEN eat.NF P knife
'Ayen has eaten *the food* with a knife.' (Object Voice)

(36) *Dinka*

a. Yè ŋà cé̤ cuı̤̂n câam?
be who PRF.SV food eat.NF
'*Who* has eaten the food?' (Subject *wh*-question)

b. tíŋ [CP cé̤ Bòl tı̤̂ıŋ]
woman.CS PERF.SV Bol see.NF
'*the woman* that has seen Bol' (Subject relativization)

c. Yè ŋó̤ cí̤ı Bôl câam?
be what PRF.OV Bol.GEN eat.GEN
'*What* has Bol eaten?' (Object *wh*-question)

d. tíŋ [CP cı̤̀ı Bôl tı̤̂ıŋ]
woman.CS PERF.OV Bol.GEN see.NF
'*the woman* that Bol has seen' (Object relativization)

* * * * * * * * * * * * * * * * * * * *

5.2 Abaza (Caucasian)

▹ A similar voice system is observed in Abaza (Caucasian), which possesses an ergative case system.

(37) *Abaza (Arkadiev & Caponigro 2020)*

a. [awaʔa j-ʕa-ta-χa-kʷa-z]
there REL.SUBJ-CSL-LOC-remain-PL-PST.NFIN
'Those who remain there are the Abaza.' (Subject RC (S))

b. [a-phʷəspa j-lə-s-tə-z] a-ĉ̣a
DEF-girl REL.SUBJ-3SG.F.IO-1SG.ERG-give-PST.NFIN DEF-apple
'the apple I gave to the girl.' (Subject RC (O))

c. [a-phʷəspa ĉ̣a lə-z-tə-z] a-ĉ̣'k̩ʷən
DEF-girl apple 3SG.F.IO-REL.NSUBJ-give-PST.NFIN DEF-boy
'The boy who gave an apple to the girl.' (Nonsubj RC (A))

d. [ĉ̣a z-s-tə-z] a-aphʷəspa
apple REL.NSUBJ-1SG.ERG-give-PST.NFIN DEF-girl
'the girl whom I gave an apple.' (Nonsubj RC (IO))

e. d-hʷa [jəʐ-zə-b-χʷʕa-z]
3SG.H.ABS-say(IMP) 3SG.N.ABS-REL.NSUBJ-BEN-2SG.F.ERG-buy-PST.INFIN
'Say whom you bought it for!' (Nonsubj RC (AO))

f. [a-karbəǯ'-kʷa ʔa-də-r-baχ-wa-z] a-baq̇
DEF-brick-PL REL.LOC-3PL-ERG-CAUS-dry-IPF-PST.NFIN DEF-shed
'the shed where bricks are made.' (Locative RC)

g. [l-an d-an-ʕa-j-χ] asqan
3SG.F.IO-mother 3SG.H.ABS-REL.TMP-CSL-go-RE DEF.time
'at the time when her mother came back.' (Temporal RC)

h. [d-š-š'ṭa-z] a-pš-ta
3SG.H.ABS-REL.MNR-lie-PST.NFIN 3SG.N.IO-be.like-ADV
d-š'ṭalχə-n
3SG.H.ABS-lie.down-RE-PAST.FIN
'He lay down like he lay before.' (Manner RC)

▹ The same verbal morphology (*j-*) used for both S and O (i.e. subject) relativization.

▹ Relativization of non-subject DPs (A/IO/AO) share a distinct affix (*z-*).

▹ Extraction of different types of adjuncts employ different extraction affixes (37f-h).

▹ **Summary: A mini typology of voice distinctions**

	Subjects	Direct objects	Lower DPs	Locatives	Other adjuncts
Austronesian	Voice 1	Voice 2	Voice 4	Voice 3	Voice 4
Dinka/Kurmuk	Voice 1	Voice 2	?	Voice 3	
Abaza	Voice 1	Voice 2 (ERG and other DPs)		Voice 3	(many other Voices)

* *

▹ Similar to the cases seen above, Abaza employs verbal morphology that indexes the grammatical role of the goal of an Ā-probe (i.e. [uRel]).

▹ Just like topicalization and relativization in Dinka share the same set of voice morphology (36)-(37), the verbal affixes in (38) are also seen in *wh*-questions in Abaza.

(38) *Abaza (O'Herin 1993)*

a. j-'a-ka-sa-ja?
SUBJ.WH-DIR-LOC-fall(AOR)-QN
'What fell?' (Subject *wh*-question (ABS S))

b. j-'a-b-g-ja?
SUBJ.WH-DIR-3SG.F.ERG-bring(AOR)-QN
'What did you bring?' (Subject *wh*-question (ABS O))

c. w-'a-z-re-ha-ja?
3SG.M.ABS-DIR-NSUBJ.WH-CAU-FEAR(AOR)-QN
'What frightened you?' (Non-subj *wh*-question (ERG A))

d. j-z-ze-b-x'a0da?
3SG.N.ANS-NSUBJ.WH-BEN.APPL-2SG.F.ERG-buy(AOR-QH)
'Whom did you buy it for?' (Non-subj *wh*-question (applied O))

e. we-z-ps-wa-da?
2SG.M.ABS-NSUBJ.WH-look-IPF-QH
'Whom are you looking at?' (Non-subj *wh*-question (indirect O))

* *

▹ In all three languages, we see different Ā-operations sharing the same set of verbal morphology.

Austronesian	topicalization, relativization
Dinka (Nilotic)	topicalization, relativization, *wh*-questions
Abaza (Caucasian)	topicalization, relativization, *wh*-questions

5.3 An alternative approach to the Austronesian 'pivot-only' extraction restriction

▹ **Recall**: The same set of voice morphology is obligatory in RCs.

▹ In this environment, voice morphology indicates the grammatical role of the REL-phrase (rather than that of the topics).

(39) *Tagalog relativization*

a. Sino ang [$_{RC}$ b<**um**>ili/*-in/*-an/*i- ng keyk]?
who LK [$_{RC}$ buy<AV>/*PV/*LV/*CV ID.CM$_2$ cake]
'*Who* is the one that bought cakes?' **[Actor Voice]**

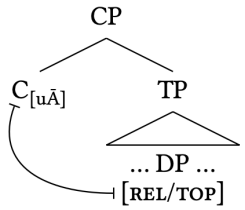
b. Ano ang [$_{RC}$ bi-bilih-**in**/*<um>/*-an/*i- ni Lia]?
what LK [$_{RC}$ CONT-buy-PV/*AV/*LV/*CV PN.CM$_1$ Lia]
'*What* is the thing that L will buy?' **[Patient Voice]**

c. Nasaan ang [$_{RC}$ bi-bilih-**an**/*<um>/*-in/*i- ni Lia ng keyk]?
where LK [$_{RC}$ CONT-buy-LV/*AV/*PV/*C PN.CM$_1$ Lia ID.CM$_2$ cake]
'*Where* will be the place where L bought cakes?' **[Locative Voice]**

d. Sino ang [$_{RC}$ **i**-bi-bili/*<um>/*-in/*-an ni Lia ng keyk]?
who LK [$_{RC}$ CV-buy/*AV/*PV/*LV PN.CM$_1$ Lia ID.CM$_2$ cake]
'*Who* is the one that L will buy cakes *for*?' **[Circumstantial Voice]**

▹ I argue that the apparent extraction constraint derives from topicalization and relativization as driven by a single, flat, Ā-probe (41).

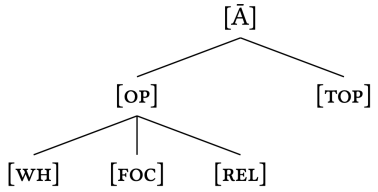
(40)



▹ Baier (2018): Ā-features ([WH], [REL], [FOC], [TOP]) are hierarchically arranged. Probes may be relativized to different places on this hierarchy.[1]

▹ That is, a probe may be satisfied by an Ā-feature (represented [uĀ]), or a feature lower down on the hierarchy, like [REL].

(41) *Ā-feature geometry (Aravind 2018; Baier 2018)*



▹ In this view, 'pivot-only' is essentially not an *extraction constraint*, but the same set of agreement morphology shared by topicalization and relativization.

▹ See van Urk (2015) and Miyagawa (2009) for the same solution for Dinka's and Kilega's extraction restriction.

6 Internal variation and external parallels

⊕ **Two implications**

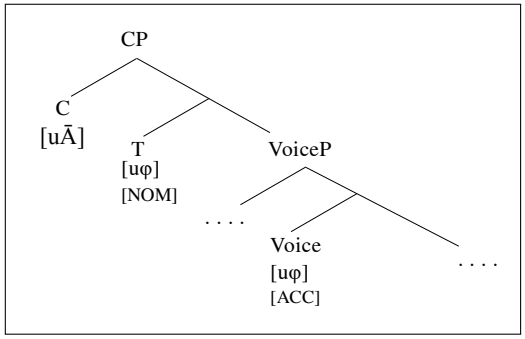
▹ Morphological agreement is optional following Agree

▹ Move is optional following Agree

6.1 Morphological agreement is not necessary after Agree

▹ **Prediction**: We should see φ-feature of topics, subjects, and/or DOs spelled out on the verb – as these phrases are the goal of the probes in (42).

(42) *The design of Ā-agreement in Austronesian*



[1] See also Kuno (1973) for a similar insight, who observed that relativization and topicalization in many languages cannot co-occur in the same clause.

[2] These morphemes are commonly analyzed as clitic pronouns, but an agreement analysis has also been proposed for some languages (see, e.g. Chang 1997; Ochiai 2009).

- This prediction is borne out. Many Philippine-type languages display φ-features of the *topics* and *subjects* on the verb.[2]
  - Co-occurrence of topic/pivot agreement and subject agreement[3]

(43) *Seediq*

a. Wada=ku m-ege ∅ lukus ka yaku.
PERF=1SG.TOP AV-give ACC clothes PIVOT 1SG
'I have donated clothes.' (Actor Voice)

b. Wada=ku=na bbe-un na Pawan ka yaku.
PST=1SG.PIVOT=3SG.SUBJ hit-PV NOM Pawan PIVOT 1SG
'Pawan hit me.' (Patient Voice)

(44) *Puyuma*

a. Tu=trakaw-ay=yu dra paysu kan Senten_i.
3.SUBJ=steal-LV=2SG.TOP ID.ACC money PN.NOM Senten
'*Senten* stole money from you.' (LV)

b. Tu=atel-ay ku=tranguru (kana ladru)$_i$.
3.SUBJ=fall-LV 1SG.POSS.PIVOT-head (DF.NOM mango)
'*It/the mango* fell on my head.' (LV)

(45) *Kapampangan (Kitano 2006:90)*

a. Su-sulagpo=ya ing ayup.
PROG-fly.AV=3SG.PIVOT SPEC.SG bird
'The bird is flying.' (Actor Voice)

b. Seli=ne nitang tau ing bale.
buy.PV=3SG.TOP+3SG.SUBJ that.NOM-LK man PIVOT house.
'That man bought the house.' (Patient Voice)

- An object series is also attested in some Philippine-type languages:

(46) *Bunun (Huang 1997:309, 371)*

a. M-adu'=ik=su'
AV-like=1SG.TOP=2SG.OBJ
'I like(d) you.' (AV transitives)

b. Ma-saiv=ik=su' tasa' ahil.
AV-give=1SG.TOP=2SG.OBJ one book
'I give/gave *you* a book.' (AV ditransitives)

c. Na=ni'=ik ma-saiv=su' haimangsut.
FUT=NEG=1SG.TOP AV-give=2SG.OBJ thing
'I will *not* give *you* anything.' (Negated AV ditransitives)

→ This series is unique per clause and targets recipients and not themes in ditransitives (46b), analogous to Amharic object agreement (27a).

→ Topic agreement 'climbs' to the nagator; object agreement does not (c).

- The presence of these sets of φ-feature agreement lends support to the assumption that abstract topic agreement, subject agreement, and object agreement are presented in these languages.

> - Languages displaying φ-feature agreement of these goals can be viewed as both agreement-based and discourse configurational.

* *

6.2 φ-feature agreement triggered by topics

- Topic-driven φ-feature agreement reported in at least four language families (including Austronesian):
- Ripano (Romance) (Rossi 2008:86,87)

(47) a. Tu nghe mme ti pij-u tropp-e cunfidenz-e.
you.M with me REFL take-SG.M too.much-SG.F confidence-SG.F
'*You* take too much liberty with me.' (φ-agreement with subject topic)

b. L-u preta cunzacr-e ll'-ostia.
the-SG.M priest.SG.M consecrate-3SG.F the-host.SG.F
'The priest consecrates *the Host*.' (φ-agreement with object topic)

- See D'Alessandro (2020) for more detail about Ripano's topic-driven φ-agreement.

- San Martin Peras Mixtec (Mixtec) (Ostrove 2018:220)

(48) a. Rà$_i$-xá'antsya rà Juan$_i$ chìkí.
he-cut.PRES he Juan tuna
'*Juan* is cutting tunas.' (φ-agreement with subject topic)

b. Rí$_i$-xá'antsya rà Juan chìkí$_i$.
it.AML-cut.PRES he Juan tuna
'Juan is cutting *tunas*.' (φ-agreement with object topic)

- Kilega (Bantu) (Baker 2003:113)

(49) a. Omakuli mo-a-seny-ire olukwi.
woman.1 AFF-1.S/T-chop-EXT wood.11
'*The woman* chopped wood.' (φ-agreement with subject topic)

b. Olukwi si-lu-li-seny-a bakali.
wood.11 NEG11.S-PRES-chop-FV women.2
'Women do not chop *wood*.' (φ-agreement with object topic)

⊕ **Implications**

- Either an A- or Ā probe (e.g. [uTOP] may trigger φ-feature agreement.
- φ-feature agreement may be a universal tool for indexing the goal of any probe.

* *

6.3 Move is not a necessary outcome of Agree

- In Abaza (Caucasian), Ā-agreement morphology (e.g. *z-*) is present irregardless of whether a *wh*-phrase stays in-situ or undergoes overt Ā-movement (O'Herin 1993:35).

(50) *Abaza (O'Herin 1993:45, 37)*

a. Dizda kitab y-z-ima-m?
who book 3SI-NSUBJ.WH-have-NEG
'Who doesn't have a book?' (*Wh*-fronting)

b. S-kitab dizda y-na-z-axu?
1s-book who 3SI-PV-NSUBJ.WH-take
'Who took my book?' (*Wh*-in-situ)

- This optionality mirrors the word order variation in western Austronesian.
  - Languages with the Austronesian-type four-way Ā-agreement display variation in whether or not the topic/pivot occupies a designated position.

Topic-final type

(51) *Malagasy (Pearson 2005:389–390)*

a. Mamono ny akoho amin'ny antsy ny mpamboly.
AV.kill DET chicken with-DET knife DET farmer
'The farmer is killing the chickens with the knife.' (AV)

b. Vonoin' ny mpamboly amin'ny antsy ny akoho.
PV.kill DET farmer with-DET knife DET chicken
'The chickens, the farmer is killing with the knife.' (PV)

c. Amonoan' ny' mpamboly ny akoho ny antsy.
CV.kill DET farmer DET chicken DET knife
'The knife, the farmer is killing the chickens (with it).' (CV)

→ I assume this word order derives from topicalization followed by predicate fronting (Pearson 2001, 2018; Rackowski & Travis 2000).

Topic in-situ type

(52) *Paiwan (Ferrell 1979:202)*

a. Q<m>alup a caucau tua vavuy i gadu tua vuluq.
<AV>hunt PIVOT man CM$_2$ pig LOC mountain OBL spear
'The man hunts whilde pigs in the mountains with a spear.' (AV)

b. Qalup-en nua caucau a vavuy i gadu tua vuluq.
hunt-PV CM$_1$ man PIVOT pig LOC mountain OBL spear
'The man hunts while pigs in the mountains with a spear.' (PV)

c. Qalup-an nua caucau tua vavuy a gadu tua vuluq.
hunt-LV CM$_1$ man CM$_2$ pig PIVOT mountain OBL spear
'The man hunts while pigs in the mountains with a spear.' (LV)

d. Si-qalup nua caucau tua vavuy i gadu a vuluq.
CV-hunt CM$_1$ man CM$_2$ pig LOC mountain PIVOT spear
'The man hunts while pigs in the mountains with a spear.' (CV)

▹ **Flexible word order type**

There are also languages that display flexible word order among nominals:

(53) *Puyuma (Teng 2008: 148)*

a. P<en>anguter dra dare' na markataguin.
<AV>grab ID.ACC soul DF.PIVOT couple
'The couple grabbed some soil.' (AV)

b. P<en>anguter na markataguin dra dare'.
<AV>grab DF.PIVOT couple ID.ACC soul
'The couple grabbed some soil.' (AV)

▹ Note, importantly, that all three types of languages display the same type of voice morphology and Ā-extraction restrictions in relativization.

⊕ **Implication**

▹ Move might not be a necessary outcome of Agree with [uTOP] – just like the optionality observed with wh-in-situ.

▹ Since topics overtly marked in most Philippine-type languages, overt movement is not necessary.

7 Conclusion and implications

⊕ **Summary:** How are Philippine-type AN languages discourse configurational?

(54) *Seediq*

Wada=ku=na bbe-un na Pawan ka yaku.
PST=1SG.TOP=3SG.SUBJ hit-PV NOM Pawan TOP 1SG
'Pawan hit me.' (Patient Voice)

→ Overt topic marker (*ka*)
→ Topic-driven φ-agreement on the verb (=*ku*)
→ Verbal morphology (PV) indexing the grammatical role of topics
→ Subjects also trigger φ-agreement (=*na*)

⊕ **Take-home message**

▹ Discourse configurational languages may employ articulated verbal morphology indexing the Agree relations probing *topics*, *wh-*, and/or *REL-phrases*.

- This design is independent of case alignment and observed both in accusative and in ergative languages.
- It can be viewed as a strategy for indicating the grammatical role of the goal of an Ā-probe.

⊕ **What do Austronesian languages tell us about Agree and Move?**

- How are Ā-Agree relations realized in narrow syntax?
  ▹ Bundles of abstract Agree relations may be built in to verbal morphology when targeting the same goal.
- What is the relationship between Agree and Move? Is Move necessary?
  ▹ Move is not a necessary outcome of Agree with [uĀ] ([uTOP]); the optionality is seen in western Austronesian.
- Is [uφ] the only type of probe that triggers φ-feature agreement?
  ▹ φ-agreement can be triggered by Agree with either an A- or Ā-probe.
    ▹ **Implication**: φ-agreement may be a means for indexing the goal of any Agree relations.
- Can different Ā-operations be driven by the same probe?
  ▹ This proposal offers a simple solution to a fluid extraction constraint (e.g. (1)) observed in a group of discourse configurational languages.

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9 Appendices

9.1 Case pattern and voice-pivot mapping

(55) *Mapping between voice morphology and pivot selection*

	a. AV	b. PV	c. LV	d. CV
Highest DP (subject)	**Pivot**	CM_1	CM_1	CM_1
2nd highest DP (DO)	CM_2	**Pivot**	CM_2	CM_2
locative phrases	P_1	P_1	**Pivot**	P_1
anything else*	P_2 or CM_2	P_2 or CM_2	P_2 or CM_2	**Pivot**

- **Pivot of "AV"**: external argument in simple transitives/unergatives/ditransitives; internal argument in unaccusatives; causer in causatives
- **Pivot of "PV"**: internal argument of simple transitives; causee in causatives; recipient in ditransitives (in some languages); controlle in object controls
- **Pivot of "LV"**: ordinary locative phrases, recipient in ditransitives (in some languages)
- **Pivot of "CV"**: theme in ditransitives; theme in causatives; theme in object controls; instrument; benefactor; reason; purpose; manner; degree; comitative, etc.

9.2 Binding facts

- Dinka (Nilotic) has been shown to lack A/Ā-distinction where Spec CP is simultaneously a topic and a subject position (van Urk 2015).

A-properties	Ā-properties	Dinka	AN
No reconstruction for Principle C	Reconstruction for Principle C	No	Yes
New antecedents for anaphors	No new antecedent for anaphors	Yes	No
No Weak Crossover	Weak & Weakest Crossover	No	Yes

  - Promotion-to-pivot in Dinka shows both A- and Ā-properties.
  - Promotion-to-pivot in Philippine-type languages (Puyuma, Amis, Seediq, Tagalog, Malagasy) shows only Ā-properties (Chen 2017; Pearson 2001).

- Reconstruction for Principle C

(56) *Dinka*

*Rɔ̀t-dè$_i$ à-nhiɛ́ɛr Bôl$_i$.
self-SG.3SG 3s-love.OV Bol.GEN

(intended: 'Bol loves *himeself*).' (Object Voice)

(57) a. *Amis*

Ma-palu ni Kulas cingra tu.
PV-beat PN.NOM Kulas 3SG.PIVOT REFL

'Kulas hit *himself.*' (Patient Voice)

b. *Tagalog*

Hindi p<in>igil ni Lia ang sarili niya (na
NEG <PV.PRF>control PN.NOM Lia PIVOT self 3SG.POSS (LK
k<um>ain).
eat<AV>)

'Lia cannot stop *herself* from eating.' (Patient Voice)

c. *Seediq*

S<n>pi na Watan ka heya nanaq.
dream<PRF.PV> PN.NOM Watan PIVOT 3SG REFL

'Watan dreamt of *himself*.' (Patient Voice)

d. *Puyuma*

Tu=karatr-aw tayta'aw kan Pilay.
3.NOM=bite-PV 3SG.PIVOT.REFL DF.NOM Pilay

'Pilay hit *herself*.' (Patient Voice)

▹ New antecedent for anaphors

(58) *Dinka*

Bòl$_i$ à-cíi [DP thùrá è rɔ̀t-dè$_i$] nyɔ̂ɔth [CP kè cùukù tîiŋ].
Bol 3S-PRF.OV picture P self-SG.3SG show.NF C PRF.1PL see.NF

'*Bol*, a picture of himself has shown that we have seen.' (Object Voice)

(59) a. *Amis*

*Ma-palu nira tu ci kulas.
PV-beat 3SG.NOM REFL CN.PIVOT Kulas

(intended: *Kulas*, himself has hit.') (Patient Voice)

b. *Puyuma*

*Tu=karatr-aw kantaaw i pilay.
3.NOM=bite-PV 3SG.NOM.self PN.PIVOT Pilay

(intended: 'Herself has hit *Pilay*).' (Patient Voice)

c. *Seediq*

*S<n>pi na heya nanaq ka Watan.
dream<PRF.PV> NOM 3SG REFL PIVOT Watan

(intended: 'Himself dreamt of *Watan*).' (Patient Voice)

d. *Tagalog*

Sa-sampal-in ng kanyang sarili si juan.
CONT-slap-PV ID.NOM 3SG REFL

(intended: Himself will slap *Juan*.') (Patient Voice)

▹ Types of Crossover effects

(60) *No Weak Crossover effects in Dinka*

Dhùk ébɛ́n$_i$ à-cíi thɔ́k-dè$_i$ kâac.
boy every 3S-PRF.OV goat.CS-SG.3SG bite.NF

'His$_i$ goat bit *every boy$_i$*.' (Object Voice)

▹ In contrast to that in Dinka (60), promotion-to-pivot in Philippine-type Austronesian languages shows Weak Crossover and (occasionally very marginal) Weakest Crossover effects.

(61) *Weak Crossover effects in Austronesian*

a. *Puyuma*

Ku=pubibi-ay [kantu=dawa] [tu=uma kana
1SG.NOM=sow-LV [3.POSS.ACC=millet] [3.PIVOT.POSS=field LK
maydrangan driya].
old.persons every]

'I sowed his/her$_{<i>}$ millet at *every old person's$_{<j/??i>}$ field*.

b. Sa-pi-tangtang aku [tu titi nangra] [ku siuy a cimacima a
CV-PI-cook 3SG.NOM [ACC pork 3PL.POSS] [PIVOT pot LK every LK
ina].
mother]

'I cooked her$_{<i>}$ pork with every mother's$_{<j/??i>}$ pot.' (Patient Voice)

c. *Tagalog*

M<in>amahal ng kanyang$_i$ ama ang bawat anak$_i$.
love<PV.PRF> NOM his father PIVOT every child

'His$_i$ father loves *every child$_{j/??i}$*.' (Richards 2000) (Patient Voice)

d. *Malagasy*

Namangy ny rainy ny mpianatra tsirairay omaly.
PST.PV.visit DET father-3 DET student each yesterday

'His$_i$ father visited each student$_{j/??i}$ yesterday.' (Patient Voice)

9.3 Two approaches to the Austronesian-type voice system

- **The key question**
  - What enables various types of internal arguments to extract and receive pivot-marking in PV/LV/CV?

  - **Approach A**: voice is hosted *low* within individual VoicePs as valency-rearranging affixes, promoting different IAs to the VoiceP phase edge.
  - **Approach B**: voice is hosted *high* as clause-level agreement morphology, indexing the grammatical role of the topic.

- **Approach A: Voice indexes argument structure alternation**
  - Whatever renders the pivot in PV/LV/CV is the *highest IA*.
    - In PV/LV/CV, the pivot is always the 2nd highest DP.
    - In LV/CV, the pivot is introduced *higher* than the theme.
    - **Assumption**: LV/CV morphology indicates the presence of an Applicative phrase (ApplP) above the IA.
  - In this view, voice affixes are hosted within *individual VoicePs*.
    - Aldridge (2004): Voice affixes as transitivity/applicative affixes.
    - Rackowksi & Richards (2005): Voice affixes as case agreement morphology that tracks the case of the DP agreeing with Voice (NOM, ACC, and two inherent cases (DAT, OBL) assigned by an Appl head).

* * * * * * * *

- **Approach B: Voice affix as Ā-agreement**
  - Whatever renders the pivot is the *topic* of the clause, probed by [uTOP] on a C head and carries topic-marking (PIVOT).
    - Given Relativized Minimality, a phrase doesn't need to be the highest DP to agree with an Ā-probe such as [uTOP].

(62) *Relativized Minimality* (Rizzi 1990 et seq; Starke 2001)
A syntactic relation R must involve the closest XP capable of entering into R.

- Therefore, there is no need to postulate argument structure alternation between PV and LV/CV – as a locative or instrument topic doesn't need to be the highest IA to agree with [uTOP].
  - Adjunct-like pivots in LV/CV may remain as a PP (Chen 2017, 2021).
  - This is similar to *wh*-extraction in English: an adjunct or indirect object *wh*-word need not render an applied object to enable *wh*-extraction.

(63) *English wh-extraction*
a. Who_i did you clean the room for $<t_i>$? (adjunct extraction)
b. Who_i did you give the book to $<t_i>$? (IO extraction)

- In this view, voice affixes are *clause-level agreement morphology* indexing the grammatical role of the topic/pivot (i.e. goal of [uTOP]).
  - Pearson (2001): Voice affixes as Ā-extraction morphology indexing the case position where the topic raises from.
  - Chen (2017): Voice affixes as the spell-out of different bundles of Agree relations that probes the topic (i.e. Agree relation with [uTOP] on C, [uφ] on T, [uφ] on matrix Voice, and [uφ] on P_{LOC}).

9.4 Why is Approach A disfavored?

- Placing Philippine-type voice within individual VoiceP (Approach A) would be difficult to maintain. For example:

- Treating CV-morphology as an applicative affix hosted in VoiceP gives rise to a series of issues:

1 Adverbs and modals (e.g. *quickly*, *again*, *be able to*) can take valency-indicating affixes (e.g. applicative).[4]

2 Theme in controls as applicativized *above* the controllee.

(64) *Paiwan*

Si-qihul=si' hiya' 'i' ∅-pa-patas ku' ruas.
CV-force=2SG.NOM 3SG.ACC LK AV-CAU-write PIVOT book

'You forced him to read *the book*.' (CV)

3 Theme in causatives as applicativized *above* the causee.

(65) *Paiwan*

Ku=s<in>i-pa-'alup tay palang a icu a vavuy.
1SG.NOM=CV<PRF>-CAU-hunt ACC Palang PIVOT this LK boar

'I made Palang hunt *this wild pig*.' (CV)

4 The alleged applicativization is not indicated by binding facts (Chen 2017).

(66) *Seediq*

S-p-tapaq=mu Ø heya ka heya *(nanaq).
CV-CAU-slap=1SG.NOM ACC 3SG PIVOT 3SG *(REFL)

'I asked him/her to slap *himself/herself*.' (CV)

5 Applicative affixes inflect for mood (crosslinguistically unusual)

6 Unexpected locus of voice-marking

- If CV indeed functions to introduce the pivot *above* the IA ('taro'), the affix should be attached to the embedded verb 'give' – and not the adverb 'secretly'.

(67) *Puyuma*

Ku=trakatrakaw-ay ∅-beray na walak kana bu'ir.
1S.NOM=secretly-LV AV-give DF.PIVOT child DF.ACC taro

'I *secretly* gave the child the taro.' (LV)

* *

- The solution can be much simpler under Approach B. Consider (69).

(68) *Paiwan*

'u-si-RuqeRuq tjay Kapi a ∅-pa-vay tjay Kivi a pakiawi
1S.NOM-CV-force ACC Kapi LK AV-CAU-give ACC Kivi PIVOT money

'I have forced Kapi to give Kivi *money*'.' (CV)

- **Approach**: PIVOT marks topics, and not ABS/NOM case.
  - No argument structure alternation is required for the control example above.
  - The pivot 'money' need not be applicativized *above* 'Kapi' (controllee) and 'Kivi' (recipient in DOC) to access pivot-marking.
  - CV-morphology may simply indicates the topic/pivot is something low in the clause (see §4).

- See Chen (2017) for more discussion about Approaches A and B.

[4] I follow Holmer (1996, 2004) and Chang (2009) assuming adverbs in these languages are functional heads located between C and T.