Symmetrical Voice in Western Subanon*

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1. Introduction

It has long been recognized that languages vary in systematic ways with respect to what is often called 'alignment'—the partitioning of the two arguments of a transitive verb based on morphosyntactic properties shared with the sole argument of an intransitive verb. As standardly described, alignment admits just two options. In one system, dubbed 'accusative,' subjects of intransitive verbs and subjects of transitive verbs share morphosyntactic properties not associated with direct objects. In so-called 'ergative' systems, in contrast, subjects of intransitive verbs and direct objects of transitive verbs manifest similarities that set them apart from subjects of transitive verbs.

S-IV	S-TV	S-IV	DO
	DO	S-TV	
'Accusative' alignment		'Ergative' alignment	

Figure 1: Two language types.

In recent years, the traditional picture of alignment has been challenged by the discovery of a previously unnoticed option, which has come to be known as 'symmetrical voice' (Himmelmann 2002, Foley 2007, Chen & McDonnell 2019). Ubiquitous in the languages of the Philippines, symmetrical voice is characterized by the presence of competing transitive patterns. Consider in this regard the following two sentences from Western Subanon, a Philippine language with approximately 125,000 speakers in the Zamboanga Peninsula.

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Western Subanon has the classic properties of a symmetrical voice language. First, as illustrated in the two examples below, it has two transitive patterns—one highlighting the agent argument and the other signaling the prominence of the patient argument. We will translate *saging* as plural in our examples, even though it can also have a singular interpretation. (CM = case marker; AV = agent voice; PV = patient voice)[1]

(1) a. Agent voice
Mig-oit og bata' nog saging.
AV-bring CM child CM banana
'A child brought bananas.'

b. Patient voice
Pig-oit nog bata' og saging.
PV-bring CM child CM banana
'A child brought bananas.'

Consistent with the claim that the two patterns are transitive, both arguments in each sentence must be overtly expressed, and both carry case marking (*og* and *nog*) that is typically associated with core arguments rather than obliques. Moreover, each pattern has its own distinctive verbal prefixes (*mig-* and *pig-*), neither of which appears to be derived from the other.

Symmetrical voice thus differs from the contrast between a transitive pattern and its passive counterpart, as well as the contrast between a transitive pattern and the corresponding anti-passive.

(2) English
a. Transitive
The man saw the dog.

b. Passive
The dog was seen by the man.

[1] As explained in the appendix, voice markers in Western Subanon are also mood markers: *mig-* and *pig-* indicate a voice contrast in the realis mood, while *mog-* and *pog-* have this function in the irrealis.

(3) Yidiɲ (Australia); data from Andrews (1985:132-33)

a. Transitive

Wagud^{y}a-ŋgu guda:ga wawa:-l.
man-ERG dog.ABS see-PST
'The man saw the dog.'

b. Anti-passive

Wagu:d^{y}a gudaga-nda/-la wawa:-d^{y}i-n^{y}u.
man.ABS dog-DAT/LOC see-ANTIP-PST

In each of these pairs, the verb in the second sentence is morphologically more complex than its transitive counterpart in the first sentence, which therefore appears to be more basic. Moreover, one argument in the second sentence is oblique—the agent in a passive pattern and the patient in an anti-passive, as shown by the presence of a preposition or postposition that does not appear in the first sentence.

This paper has two purposes. On the one hand, we seek to describe the particular system of symmetrical voice found in Western Subanon. On the other hand, we propose to make sense of the facts of Western Subanon in an 'emergentist' framework that breaks with traditional functional and formal approaches to the problem of alignment.

We will proceed as follows. Section 2 will offer a brief introduction to the emergentist approach to alignment, with a focus on accusative and ergative systems of case marking. In section 3, we turn our attention to case and voice in Western Subanon in an attempt to see how these systems fit into the larger typological picture for human language. Sections 4 and 5 examine the language's pattern of agreement and relativization, while section 6 focuses on the so-called 'goal voice.' The paper ends with some brief concluding remarks.

2. An emergentist approach to alignment

The key tenet of emergentism is that the properties of complex systems reflect the interaction of more basic factors and forces. Foremost among those forces in the case of language is the effect of processing pressures on shaping the mapping between form and meaning. For the purposes of this paper, we take form to consist of a string of inflected words; we represent the relevant aspects of meaning with the help of a simple predicate-argument structure (*r* = *Robin*).

(4)

Form		Meaning
Robin arrived	⇐⇒	ARRIVE
		<*r*>

The particular factor which we will focus on here involves the role of predictability—a key facilitator in both production and comprehension (Kaan 2014, Christiansen & Chater 2016, Phillips & Ehrenhofer 2015, Rabagliati, Gambi & Pickering 2016). Put simply, the processor benefits from knowing where to begin and what may lie ahead.

As a starting point for what follows, we assume that all mappings between form and meaning start with a simple template, called a *semantic base*, whose presence can be reliably predicted in essentially every sentence that is produced or encountered in any language (O'Grady 2019). That template consists of a predicate and a single argument position, as depicted below, with PRED standing for 'predicate' and the symbol β representing the minimal required argument (henceforth the 'base argument').

(5) PRED
<β>

The essential claim is simply this: the processor begins its work with the assumption that every sentence that it interprets or produces will contain (at least) one predicate with (at least) one argument.[2]

2.1 Extending the semantic base

It is easy to see how a simple intransitive sentence such as *Robin arrived* aligns with the semantic base, but what about more complex patterns, including transitive clauses, that have two or more arguments?

There are two obvious strategies for extending the semantic base in order to accommodate transitivity. One is to add a second-argument position, leaving the base-argument in the first-argument position.

[2] The argument in the semantic base is thematically and topically unspecified: it could ultimately be either an agent or a patient, depending on the choice of predicate; it could be used to convey new or old information; it could be definite or indefinite; and so on.

(6) Addition of a second-argument position

PRED PRED
<β> ⇒ <β _>
↑
added argument position

The other option is to extend the semantic base in the opposite direction by adding a first-argument position.

(7) Addition of a first-argument position

PRED PRED
<β> ⇒ <_ β>
↑
added argument position

The labels 'first' and 'second' refer to an item's place in argument structure, not to its linear position in the sentence (the two need not coincide, although they often do). Regardless of word order, the agent of a transitive verb always occupies the first position in the argument structure by virtue of its role as the starting point (instigator) of the event.[3]

Both strategies for building out the semantic base yield the same dyadic argument structure —the hallmark of prototypical transitivity.

(8) PRED
<1 2>

As we will see next, however, the manner in which this expansion is accomplished underlies a good deal of the syntactic variation and complexity associated with alignment. The syntax of case is a good place to begin.

[3] Moreover, as noted by Bornkessel-Schlesewsky & Schlesewsky (2009: 41), an entity can typically take on a patient role only after it has been acted upon by an agent. In a sentence such as *Mary wrote a book*, for example, the book becomes the patient only through the agency of Mary.

2.2 The role of case

Following O'Grady (2019), we propose that the job of case is to single out the added argument position, thereby indicating how the semantic base has been expanded to accommodate transitivity.

(9) Case Marking

•The base argument carries the language's unmarked case (often zero).

•The added argument carries a phonologically more complex case form.

The suggestion that the predictable base argument carries the language's unmarked case is consistent with the well-established typological generalization that the most expected elements are expressed with a minimum of phonological complexity (e.g., Hawkins 2014: 15-16).

(10) Expectedness

The likelihood of a minimally expected form is proportionate to its degree of expectedness.

Let us now consider the consequences that follow from this view of sentence building and case.

Accusative languages

Accusative languages are characterized by a system of case marking that includes an overt affix for direct objects and a less elaborate (usually null) marker for subjects of transitive and intransitive verbs. Turkish works this way, with the accusative suffix *-ü* for the added second argument in a transitive pattern and a null nominative suffix for the first argument in both transitive and intransitive sentences.

(11) Turkish (Nominative = Ø; Accusative = *-ü*)

a. Intransitive verb PRED
Hasan ayrıl-dı. <β>
Hasan.NOM leave-PST.3SG CM: Ø
'Hasan left.'

b. Transitive verb PRED
Hasan öküz-**ü** al-dı. <β _>
Hasan.NOM **OX**-ACC buy-PST.3SG CM: Ø *-ü*
'Hasan bought the ox.'

This is the system one would expect if accusative languages accommodate transitivity by adding a second-argument position to the semantic base.

(12) Addition of a second-argument position

PRED		PRED
<β>	⇒	<β _>
1		1 **2**
Nom		Nom **Acc**

In accordance with our Case Marking principle, the item in the base-argument position is minimally inflected (left bare, in fact), whereas the added argument in the second position is associated with an overt case marker.

Table 1. Case marking in a classic accusative language

Argument	Case
Base argument:	nominative (Ø)
Added (second) argument:	accusative (overt; *-ü* in Turkish)

Ergative languages

Ergative languages have a case-marking profile that is characterized by the use of an overt affix for the subject of a transitive verb, and a phonologically simpler (often null) marker for a direct object and for the subject of an intransitive verb. West Greenlandic works this way, with the suffix *-p* on the first argument of a transitive verb, but no visible marking on either the sole argument of an intransitive verb or the second argument of a transitive verb.

(13) West Greenlandic (Ergative = *-p*; Absolutive = Ø)

a. Intransitive verb PRED

Oli	sinippoq.	<β>
Oli.ABS	sleep.3SG	CM: Ø

'Oli sleeps.'

b. Transitive verb PRED

Oli-**p**	neqi	neri-vaa.	<_ β>
Oli-ERG	meat.ABS	eat-3SG.3SG	CM: -*p* Ø

'Oli eats meat.'

This pattern of case marking is what one would predict for a language in which a first-argument position is added in order to build on the semantic base.

(14) Addition of a first-argument position

PRED		PRED
<β>	⇒	<_ β>
1		**1** 2
Abs		**Erg** Abs

Consistent with our proposal, an overt suffix is associated with the first-argument position in transitive patterns, while arguments occupying the base position (the sole argument of an intransitive verb and the second argument of a transitive verb) are left bare.

Table 2. Case marking in a classic ergative language

Argument	Case
Base argument:	Absolutive (Ø)
Added (first) argument:	Ergative (overt; -*p* in West Greenlandic)

A generalization

An intriguing side-effect of this approach to alignment is the dissociation of case from grammatical relations, contrary to the long-standing tradition. By considering accusative languages only, it is easy to think that case functions as a marker of grammatical relations, with the nominative reserved for the subject and the accusative for the direct object. However, there is no such one-to-one mapping in ergative languages, where the subject of an intransitive verb and the direct object of a transitive verb carry the same case.

(15) Case Marking (all languages)

- The base argument carries the language's unmarked case (often zero).
- The added argument carries a phonologically more complex case form.

3. Case and voice

Now let us return to Western Subanon, starting with the patterns that were first used in section 1 to exemplify symmetrical voice.

(16) a. Agent voice

Mig-oit	og	bata'	nog	saging.
AV-bring	CM	child	CM	banana

'A child brought bananas.'

b. Patient voice

Pig-oit	nog	bata'	og	saging.
PV-bring	CM	child	CM	banana

'A child brought bananas.'

How can Western Subanon (and other languages like it) be integrated into the typology of alignment? More specifically, do systems of symmetrical voice constitute a radically different option for mapping meaning onto form, or do they simply exploit a hitherto unnoticed option in the same system of alignment that has produced accusative and ergative languages? We argue for the latter possibility. A first clue comes from case marking.

3.1 Case in Western Subanon

There are two reasons to believe that *og* represents the unmarked case form in Western Subanon. First, it is phonologically less complex than *nog*. Second, it is used to mark the sole argument of an intransitive verb, which necessarily corresponds to the base argument. The literal meaning of *gotow*, which appears in many of our examples, is 'person'.

(17) Mig-lunip **og** **gotow** kolabung.
AV-dive CM man yesterday
'A man dove yesterday.'

If we assume that case has exactly the same function in symmetrical voice languages that it does in other types of languages, the case system of Western Subanon can be laid out as follows.

Table 3. Case marking in Western Subanon

Argument	Case
Base argument:	*og*
Added argument:	*nog*

By following the case marking clues, we can infer that there are two ways to expand the semantic base in Western Subanon. The first option is exemplified by the 'agent voice' pattern in (16a), repeated here with new glosses for the case markers: β for the case marker associated with the base argument and + for the case marker that indicates the added argument.

(18) Option 1: Addition of a second-argument position
Mig-oit **og** bata' **nog** saging.
AV-bring **β** child **+** banana
'A child brought (some) bananas.'

Here, the minimal case form *og* appears on the agent argument *bata'* 'child,' suggesting that a second-argument position has been added. Consistent with this idea, we see that the second argument (the patient *saging* 'banana') is accompanied by the phonologically more complex case marker *nog*.

(19) Addition of a second-argument position

PRED		BRING
<β>	⇒	<β _>
		og ***nog***

By the same reasoning, the 'patient voice' pattern in (16b), repeated below as (20), should manifest the other option for expansion of the semantic base—addition of a first-argument position.

(20) Pig-oit **nog** bata' **og** saging.
PV-bring **+** child **β** banana
' A child brought the bananas.'

In this pattern, *nog* appears on the first argument *bata*' 'child,' indicating that it is linked to the added position. In contrast, *og* is used with the patient (*saging* 'banana'), which should therefore occupy the base-argument position.

(21) Addition of a first-argument position

PRED		BRING
<β>	⇒	<_ β>
		nog *og*

If this characterization is correct, then the case system of Western Subanon is identical to the systems found in accusative and ergative languages: a minimal case form picks out the base argument and a phonologically more complex marker introduces the added argument.[4,5]

(22) Case Marking

- The base argument carries the language's unmarked case (*og*).
- The added argument is marked by a phonologically more complex case affix (*nog*).

3.2 Voice in Western Subanon

What then is the function of voice in Western Subanon? It is common to think of voice affixes in Philippine language as a type of thematic-role marker, with the agent voice signaling the

[4] The case paradigm for proper nouns and pronouns is somewhat richer, as it makes a three-way distinction that includes a contrast between non-base first arguments and non-base second arguments. For common nouns, or course, *nog* is used for both types of non-base arguments.

	Proper noun	3rd singular pronoun
Base argument	si	ion
Non-base first argument	ni	non
Non-base second argument	diani	dianon

[5] In symmetrical-voice languages without case, the base argument may be identified by its position in the sentence. In Balinese, for instance, the base argument appears in the privileged pre-verbal position (Wechsler & Arka 1998).

syntactic and semantic prominence of the agent argument and the patient voice carrying out a parallel function when the patient argument is prominent. We reject this analysis.

On the view we propose, the role of voice is to identify the base-argument position. Thus, the job of *mig-* (the so-called 'agent voice' prefix) is simply to signal that the base argument is associated with the first-argument position.

(23) Mig-oit **og** **bata'** nog saging.
VOICE-bring **β** child + banana
'A child brought bananas.'

In this particular example, of course, the first argument also happens to be an agent. However, it is easy to tease apart the two notions and to see that *mig-* targets first arguments, not agents. The key evidence comes from intransitive patterns such as the following, in which the verb's sole argument is not an agent, despite the presence of *mig-*.

(24) **Mig**-layas og tubig.
VOICE-flow β water
'Some water flowed.'

(25) **Mig**-dupi' kolabung.
VOICE-rain yesterday
'It rained yesterday.'

We therefore conclude that *mig-* indicates the association of the base argument with the first-argument position, regardless of whether the verb is transitive or intransitive and regardless of the thematic role of the first argument. For this reason, we will henceforth refer to 'agent voice' as 'first-argument voice' (1V), summarizing its function as follows.

(26) First-argument voice (1V): the base argument occupies the first-argument position.

Intransitive	Transitive
PRED	PRED
<**β**>	<**β** _>
1	**1** 2

By the same reasoning, it follows that the role of *pig-* (the so-called patient voice) should be to indicate that the base argument is associated with the second-argument position. In other words, patient voice is really just second-argument voice (2V), with the function depicted below.

(27) Second-argument voice (2V): the base argument occupies the second-argument position.

Intransitive	Transitive
NA	PRED
	<_ **β**>
	1 **2**

This proposal fits well with our previous observation about voice morphology on intransitive verbs: we do not find the prefix *pig-* on intransitives because verbs of this type do not have second arguments.

4. Agreement

A defining feature of languages in which verbs agree with a single argument is a strong tendency for the target to correspond to the base argument.

(28) Default Agreement

The unmarked agreement type targets the base argument.

We see the effects of this generalization in both accusative and ergative languages.

4.1 Agreement in accusative and ergative languages

Since the base argument in an accusative language lies in the *first*-argument position (section 2.2), single-argument agreement should target the 'subject.' Turkish illustrates such a system of agreement.

(29) Turkish

a. **Hasan** ayrıl-**dı**.

	PRED
Hasan.NOM leave-PST.3SG	<**β**>
'Hasan left.'	*Agr*↷

b. **Hasan** iki öküz-ü al-**dı**.

				PRED
Hasan.NOM	two	ox-ACC	buy-PST.3SG	<**β** _>
'Hasan bought the ox.'				*Agr*↷

The targeting of the base argument gives a different result in ergative languages. Because the base argument in those languages is associated with the second-argument position in transitive sentences, agreement can target the subject of an intransitive verb and the direct object of a transitive verb, as happens in Pashto.[6]

(30) Pashto (data from Babrakzai 1999:78 & 103)

a. **xəza** də-daftar-na raɣ-**a**.

			PRED
woman	POSS-office-from	came-3FSG	<**β**>
'The woman came from the office.'			↼Agr

b. ma **xəza** wəlid-**a**.

			PRED
I.Erg	woman	saw-3FSG	<_ **β**>
'I saw the woman.'			↼Agr

4.2 Agreement in Western Subanon

Western Subanon manifests number agreement in an unusual way—it nasalizes the final consonant of the voice prefix. In the second of the following examples, the final segment of *mig-* is nasalized to reflect the plurality of the verb's lone argument. (Nasalization of the final consonant of the voice prefix can also be triggered by an initial nasal consonant in the root for reasons unrelated to plural marking; we are careful to avoid such patterns here.)

[6] For a discussion of ergative languages such as Enga that have agreement with first arguments only, see O'Grady (2019).

(31) Intransitive pattern

a. Singular argument (no agreement)

Mig-lunip og gotow.
1V-dive β man
'The man dove.'

b. Plural argument (agreement)

Ming-lunip og **gotow-anan**.
1V.PL-dive β man-PL
'The men dove.'

But what about transitive clauses?

If Western Subanon fits the typological profile for default agreement, then this process should simply target the base argument. Moreover, if we are right that the language has two types of transitive patterns, one with the base argument in the first-argument position and the other with the base argument in the second-argument position, we should find voice-related variation in the choice of agreement target. As the next examples show, this is exactly what happens.

In transitive patterns with first-argument voice, the first argument triggers plural agreement.

(32) First-argument voice

a. Singular first argument with plural second argument (no agreement)

Mig-alap og gotow nog kayu-anan.
1V-take β man + wood-PL
'A man took many pieces of wood.'

b. Plural first argument and singular second argument (agreement marked by *ming*-)

Ming-alap og **gotow-anan** nog kayu. PRED
1V.PL-take β man-PL + wood <β _>
'Some men took a piece of wood.' *Pl Agr*↑

In transitive patterns with second-argument voice, in contrast, the verb agrees with the second argument.

(33) Second-argument voice

a. Plural first argument and singular second argument (no agreement)

Pig-alap nog gotow-anan og kayu.
2V-take + man-PL β wood
'Some men are getting a piece of wood.'

b. Singular first argument and plural second argument (agreement marked by *ping-*)

Ping-alap nog gotowog **kayu-anan**. PRED
2V.PL-take + man β wood-Pl < _ β>
'A man is getting many pieces of wood.' ↼*Pl Agr*

We thus see in Western Subanon exactly the system of agreement found in accusative and ergative languages—the verb agrees with its base argument.

5. The syntax of relativization in Western Subanon

Relative clauses have long served as an important diagnostic of a language's alignment. In this phenomenon, we also see evidence of a universal tendency for syntactic operations to be organized around base arguments.

(34) Default Relativization

The unmarked relative-clause type targets the base argument.

5.1 Relativization in accusative and ergative languages

As documented by well-known typological work (e.g., Keenan & Comrie 1977, Hawkins 2004), accusative languages favor relativization of subjects of intransitive and transitive verbs—arguments that are associated with the base-argument position in languages of this type. Korean is a case in point.

(35) Korean

a. Relativization of the subject of an intransitive verb

[_ul-eun] namja PRED
cry-PST man <**β**>
'the man who cried' *Rel*↱

b. Relativization of the subject of a transitive verb

[_chaeg ilg-eun]	namja	PRED
book read-PST	man	<**β** _>
'the man who read the book'		*Rel*↱

Many accusative languages, including Korean, permit the relativization of non-subject arguments as well. However, patterns of this type show signs of being harder to process and to acquire (Hawkins 2004: 169ff, Kim & O'Grady 2016, Bornkessel-Schlesewsky & Schlesewsky 2009: 22), consistent with a preference for subject relativization.

Now let us consider ergative languages, in which the base argument occupies the second-argument position in transitive clauses—leading to the prediction that direct objects should be more accessible than subjects to relativization in those sentence types. (The sole argument of an intransitive verb should of course also be highly relativizable, since it occupies the base-argument position in its clause.) Tongan is one of many ergative languages that exhibits this profile, as it directly relativizes subjects of intransitive verbs and direct objects, but not subjects of transitive verbs. (Relativization in the latter case requires a resumptive pronoun.)

(36) Tongan (from Otsuka 2001: 191-92)

a. Relativization of the base argument of an intransitive verb

E fefine	[na'e	'alu _	ki Tonga]	PRED
the woman	PST	go	to Tonga	<**β**>
'the woman who went to Tonga'				*Rel*↱

b. Relativization of the base (second) argument of a transitive verb

E fefine	['oku	'ofa'i	'e	Sione	_]	PRED
the woman	PRS	love	ERG	Sione		<_ **β**>
'the woman who Sione loves'						↼*Rel*

c. Relativization of the added (first) argument of a transitive verb (disallowed)

*E siana	[na'a	langa	_ 'a	e	fale]	PRED
the man	PST	build	ABS	the	house	<_ **β**>
'the man who built the house'						**Rel*↱

5.1 Relativization in Western Subanon

If Western Subanon follows accusative and ergative languages in favoring relativization of the base argument, then we would expect strong voice-related effects. This seems to be right. Relativization of the sole argument of an intransitive verb is of course unproblematic.

(37) Relativization of the subject of an intransitive verb

gotow [nog mig-languy _]	PRED
man REL 1V-swim	<**β**>
'a man who swam'	*Rel*↶

Crucially, in transitive clauses with first-argument voice, only the first argument can be relativized, consistent with its association with the base-argument position.

(38) First-argument voice

a. Relativization targets the first argument (agent) – allowed

gotow [nog	mig-oit	_	nog	kolatas] PRED
man REL	1V-bring		+	paper <**β**_>
'a man who brought some paper'				*Rel*↶

b. Relativization targets the second argument (patient) – disallowed

*kolatas [nog	mig-oit	og	gotow _]	PRED
paper REL	1V-bring	β	man	<β _>
'some paper that a man brought'				↼*Rel*

Similarly, with second-argument voice, which associates the base argument with the second-argument position, only that argument can be relativized.

(39) Second-argument voice

a. Relativization targets the second argument (patient) – allowed

kolatas [nog	pig-oit	nog	gotow _]	PRED
paper REL	2V-bring	+	man	<_ **β**>
'some paper that a man brought'				↼*Rel*

b. Relativization targets the first argument (agent) – disallowed

*gotow [nog	pig-oit	_	og kolatas]	PRED
man REL	2V-bring		β paper	<_ β>
'a man who brought some paper'				*Rel*↶

In sum, Western Subanon shows exactly the same pattern of base-oriented relativization that we find in accusative and ergative languages. Apparent variation across the language types simply reflects the location of the base-argument in a transitive clause, as independently indicated by case marking. In accusative languages, the base argument is in the first-argument position—hence the preference for subject relatives. In ergative languages, it is associated with the second-argument position, which results in a preference for direct object relatives in transitive clauses. In symmetrical voice languages, the position of the base argument varies depending on the choice of voice, leading to the relativization contrasts observed in Western Subanon: an exclusionary preference for targeting the first argument in first-argument voice and the second argument in second-argument voice. Our proposed typological generalization thus holds.

(40) Default Relativization

The unmarked relative-clause type targets the base argument.

6. 'Goal voice'

So far, we have focused on the question of how the semantic base can be expanded to accommodate patterns that have both an agent argument and a patient argument. But it is well known that Western Subanon also allows a variety of other patterns, including the two below, which involve an agent and a goal. (APPL = an applicative suffix that permits the goal to function as a core argument; see Appendix 1.)

(41) Two agent – goal patterns

a. Intransitive pattern

Mig-angoy	**og**	gotow	**sog**	tinda.
1V-go	β	man	OBL	shop

'A man went to a shop.'

b. Transitive pattern

Pig-ongoy-**an**	**nog**	gotow	**og**	tinda.
2V-go-APPL	+	man	β	shop

'A man went to a shop.'

In (41a), the verb is intransitive, with an oblique goal (*tinda* 'shop') as its second argument, marked by the preposition *sog*. (We use '...' to indicate an added position that accommodates an oblique argument.)

(42) GO
<β ...>
ag goal
CM: ***og*** *sog*

As expected, the verb carries the first-argument voice prefix *mig-* (the traditionally misnamed 'agent voice'), in recognition of the fact that the agent corresponds to the base argument.

In (41b), however, the goal argument is now associated with the base-argument position, as shown by the occurrence of the case marker *og*.

(43) GO
<__ β>
ag **goal**
CM: *nog* ***og***

The status of the goal as base argument is further confirmed by its ability to trigger plural agreement in the verb.

(44) Plural agreement triggered by the goal argument

Ping-ongoy-an	nog	gotow	**og**	**tinda-anan.**
2V.PL-go-APPL	+	man	β	shop-PL

'A man went to some shops.'

A standard view in the study of Philippine languages is that patterns such as (41b) and (44) constitute a separate 'goal voice.' We reject this view. Notwithstanding the thematic role of the argument (goal rather than patient), the *-an* pattern is simply a sub-type of second-argument voice. Not only does the goal occur in the second-argument position, as depicted in (43), the verb carries the *pig-/ping-* prefix, the usual marker of second-argument voice. (We comment briefly on the role of the suffix -an in Appendix 1.)

This reasoning extends to three-argument applicative patterns such as the following, which involve a ditransitive verb.

(45)

Pig-bogay-**an**	**nog**	gotow	**og**	gina'	**nog**	bulakbulak	kolabung.
2V-give-APPL	+	man	β	mother	+	flower	yesterday

'A man gave a mother a flower yesterday.'

We propose that such patterns are formed by expanding the semantic base through the addition of two argument positions, one to the left of the base argument and the other to the right.

(46) PRED PRED
<β> ⇒ <_ β _>

Consistent with this suggestion, the middle argument in (45) (the goal *gina*' 'mother') is marked by *og*, signaling its association with the base-argument position. In contrast, the agent and patient arguments are both marked by *nog*, implying that they occupy added argument positions. (Chen 2017: 122ff provides independent evidence that the goal is indeed the second argument in patterns of this type.)

(47) GIVE
<__ β __>
ag go pat
CM: *nog og nog*

Once again, the status of the goal as base argument can be confirmed by its ability to trigger plural agreement, which no other argument in this type of pattern can do.

(48) **Ping**-bogay-an nog gotow **og** **gina'-anan** nog bulakbulak kolabung.
2V.PL-give-APPL + man β mother-PL + flower yesterday
'A man gave some mothers a flower yesterday.'

If our analysis is right, then the so-called 'goal voice' pattern in (45) and (48) is simply another example of second-argument voice, furthering our claim that there are just two voice options in Western Subanon—exactly as the language's prefixal morphology suggests. Appendix 1 discusses additional details related to voice alternations in ditransitive patterns.

7. Concluding remarks

Our objective in this paper has been to find a way to incorporate the system of symmetrical voice found in Western Subanon into a larger typology of human language. To that end, we started with the idea that processing pressures call for the creation of a semantic base, consisting of a predicate and a single argument, as the minimal foundation for any sentence that is to be produced or interpreted.

(49) PRED
<β>

The need to build out the base in order to accommodate more complex sentences, including transitive and ditransitive patterns, can proceed in different ways—through addition of a first-argument position or addition of a second-argument position (or both, in the case of ditransitive patterns).

(50)

PRED	PRED	PRED
<β _>	<_ β>	<_ β_>
↑	↑	↑ ↑
added argument position	added argument position	added argument positions

As we have seen, these options underlie the patterns of alignment that define variation in human language: the first option gives accusativity, the second leads to ergativity, and a combination of the two underlies a system of symmetrical voice with exactly the properties found in Western Subanon.

Appendix 1: More on Three-Argument Patterns

Philippine languages are well known for the intricate set of voice-related alternations found in patterns with three arguments, including the dative patterns exemplified below. (Similar three-argument patterns can be constructed involving a benefactive, a locative or an instrument.)

(1) Ditransitive patterns

a. First-argument voice

Mig-bogoy	**og**	**gotow**	sog	gina'	nog	bulakbulak.
1V-give	β	man	OBL	mother	+	flower

'A man gave a mother a flower.'

b. Second-argument voice

Pig-bogoy	nog	gotow	sog	gina'	**og**	**bulakbulak**.
2V-give	+	man	OBL	mother	β	flower

'A man gave a mother a flower.'

We assume that the goal *gina*' 'mother' in (1) is an oblique argument, consistent with the fact that it is accompanied by the pre-nominal marker *sog*. As noted earlier, we follow Chen (2017:122ff) in adopting an argument structure for these patterns that has the internal organization depicted below.[7]

(2) GIVE

<ag go pat>

As can be seen from their particular voice inflection and case marking, the sentences in (1) represent two different strategies for expanding the semantic base in order to accommodate three-argument patterns. The first strategy is exemplified in (1a), repeated here with the tell-tale case marking highlighted.

[7] This ordering of arguments happens to match their linear order in the examples in (1), but this is not a necessity, especially in languages (like Western Subanon) with variable word order; see section 2.1.

(3) Mig-bogoy **og** gotow **sog** gina' **nog** bulakbulak.
1V-give **β** man **OBL** mother + flower
'A man gave a mother a flower.'

GIVE
<**ag** go pat>
CM: ***og*** *sog nog*

The usual clues (first-argument voice and the case marker *og*) allow us to identify the agent *gotow* 'man' as the base argument. Since it occupies the first-argument position, we can infer that the other two argument positions have been added to the right. (As before, we use '...' to indicate a position that accommodates an oblique argument.)

(4) Expansion of the semantic base to accommodate the three-argument pattern in (3)
PRED PRED
<β> ⇒ <β ... _>
An oblique-argument position and a core-argument position are added to the right of the base-argument position.

Now consider the structure in (1b), which involves second-argument voice. It is repeated below with the case marking highlighted.

(5) Pig-bogoy **nog** gotow **sog** gina' **og** bulakbulak.
2V-give + man **OBL** mother **β** flower
'A man gave a mother a flower.'

GIVE
<ag go **pat**>
CM: *nog sog* ***og***

Here, the case marker *og* allows us to identify the patient *bulakbulak* 'flower' as the base argument, leading to the conclusion that the semantic base has been expanded by adding two argument positions to the left, as depicted below.

(6) Expansion of the semantic base to accommodate the three-argument pattern in (5)

PRED PRED

<β> ⇒ <_ ... β>

A core-argument position and an oblique-argument position are added to the left of the base-argument position.

The fact that the verb in (5) carries the second-argument voice marker suggests that the computation of voice in Western Subanon is sensitive to core argument positions, rather than just argument positions per se. Thus, second-argument voice is called for in (5), where the base argument *bulakbulak* 'flower' is associated with the second core-argument position, even though that happens to be the third argument position overall.

A third option for ditransitive patterns, discussed in the main body of our paper (section 6), involves addition of one argument position to the left of the base-argument position and another to the right.

(7) PRED PRED

<β> ⇒ <_ β _>

As we have seen, this option allows the goal to serve as base argument.

(8)	Pig-bogay-**an**	**nog**	gotow	**og**	gina'	**nog**	bulakbulak.
	2V-give-APPL	+	man	β	mother	+	flower

'A man gave a mother a flower.'

GIVE

<ag **go** pat>

CM: *nog* ***og*** *nog*

Here, the goal argument *gina*' 'mother' is marked by *og*, signaling that it occupies the base-argument position. In contrast, the agent and patient arguments are both marked by *nog*, implying that they occupy added core argument positions.

Finally, it is possible to at least make a suggestion about the role of the applicative suffix in Philippine languages. As previously noted, we have been treating the suffix *-an* as an applicative marker. The function of applicative morphology in language in general is to allow an item that

would otherwise be oblique to serve as a core argument. This is just what happens in patterns such as (8), where the goal serves as the *base* argument, around which the rest of the sentence is then built by applying the structure-building operations considered in earlier sections of this paper. Parallel patterns, not discussed here, manifest upgrading of a locative, benefactive or instrumental argument — all with the same applicative suffix, suggesting that *-an* is a generalized applicative marker.

Appendix 2: Verbal Inflection in Western Subanon

1. The mood and aspectual system

There appear to be two separate prefixal systems for the expression of voice and temporality in Western Subanon.

1.1 The mood system

The first system involves a mood-based contrast between realis and irrealis that is integrated into the voice system.

	1st argument voice	2nd argument voice
Realis	*mig-*	*pig-*
Irrealis	*mog-*	*pog-*

In the absence of an actual system of tense, the mood prefixes are used to distinguish between an event that occurs in the past or present versus one that may occur in the future. Following Kroeger (2005:163), we use the term 'realis' for the former type of event and 'irrealis' for the latter. (REA = realis; IRR = irrealis)

(1) *Mig-* and *mog-*: [*mik-* and *mok-* are allomorphic variants of *mig-* and *mog-*, respectively]

a. Realis (past event)

Mik-titi'	og bata'	nog	saging	kolabung.
1V.REA-grill	β child	+	banana	yesterday

'A child grilled a banana yesterday.'

b. Realis (current event)

Mik-titi'	og	bata'	nog	saging	numunkoni.
1V.REA-grill	β	child	+	banana	now

'A child is grilling a banana now.'

c. Irrealis (future event)

Mok-titi'	og	bata'	nog	saging	boloma'.
1V.IRR-grill	β	child	+	banana	tomorrow

'A child will grill a banana tomorrow.'

A parallel set of contrasts exists for the patient voice markers *pig-* (realis) and *pog-* (irrealis). (The latter prefix should not be confused with a homophonous imperative marker, as in *Pog-bagada* 'Wait!').

1.2 The aspectual system

The second system, which is in complementary distribution with the first system, is built around two morphemes: the perfective affix *-in-* and the first-argument voice marker *-um-*.

• The presence of *-in-* signals perfective aspect;[8] its absence indicates non-perfective aspect.

• The presence of *-um-* indicates first-argument voice; its absence indicates second-argument voice.

(2) a. *-um-* together with *-in-* describe a completed event in the first-argument voice

T<**um**><**in**>iti'	og	bata'	nog	saging	kolabung.
grill.1V-PFV	β	child	+	banana	yesterday

'The child grilled a banana yesterday.'

b. *-in-* without *-um-* describes a completed event in the second-argument voice

T<**in**>iti'	nog	bata'	og	saging	kolabung.
grill.PFV	+	child	β	banana	yesterday

'The child grilled a banana yesterday.'

c. *-um-* without *-in-* describes a non-past event in the first-argument voice

T<**um**>iti'	og	bata'	nog	saging.
grill.1V	β	child	+	banana

'The child will grill a banana.'

Figure 2 summarizes the affixal system of Western Subanon. (The verb form that instantiates second-argument voice in the non-perfective aspect must include the supplementary suffix *-an/-on*.)

[8] It has been suggested in work on other Philippine languages, especially Tagalog, that *-in-* is a patient voice marker that contrasts with the agent voice marker *-um-*. However, this seems implausible, at least for Western Subanon , since *-in-* can co-occur with *-um-*, as exemplified below, which should not be possible if both are voice markers.

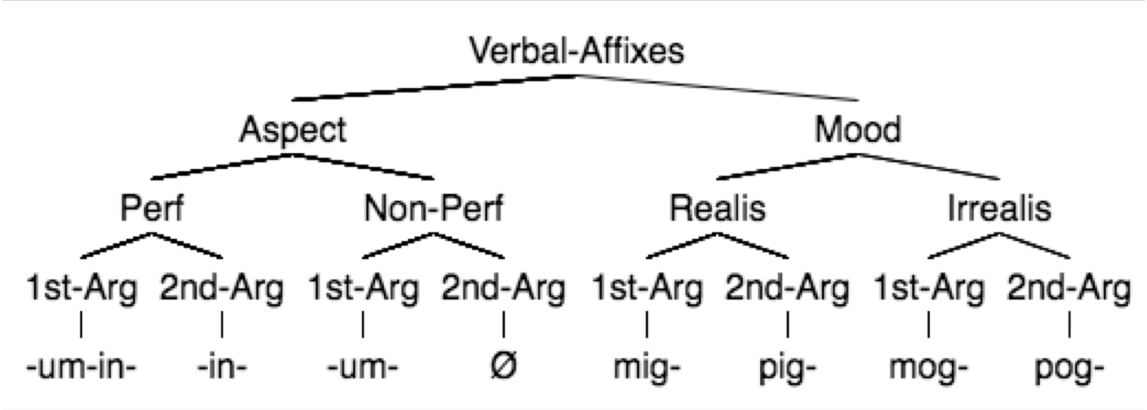

Figure 2: Summary of the affixal system of Western Subanon

2. Other contrasts

The mood system is complemented by two other types of inflection. First, repetitive events can be expressed with the help of reduplication.

(3) First-argument voice:

a. Realis

Mig-**bogbag-bogbag**	og	gotow	nog	glolonan.
1V.REA-smash-smash	β	man	+	bottle

'A man smashed/is smashing a bottle (repetitively).'

b. Irrealis

Mog-**bogbag-bogbag**	og	gotow	nog	glolonan.
1V.IRR-smash-smash	β	man	+	bottle

'A man will smash a bottle (repetitively).'

(4) Second-argument voice:

a. Realis

Pig-**bogbag-bogbag**	nog	gotow	og	glolonan.
2V.REA-smash-smash	+	man	β	bottle

'A man smashed/is smashing a bottle (repetitively).'

b. Irrealis

Pog-**bogbag-bogbag**-on	nog	gotow	og	glolonan.
2V.IRR-smash-smash-suf	+	man	β	bottle

'A man will smash a bottle (repetitively).'

Second, habituality — which is possible only in the irrealis mood — is marked by a suffix: *-an* for first-argument voice and *-on* for second-argument voice. (The *-an* in these patterns must be distinguished from the applicative suffix discussed in section 6 and Appendix 1.)

(5) First-argument voice

a. Mog-imung-**an** og gotow nog sanduk dinikitu'.
1V.IRR-make-SUF β man + ladle in.the.past
'A man used to make ladles in the past.'

b. Mog-imung-**an** og gotow nog sanduk tolipun boloma'.
1V.IRR-make-SUF β man + ladle start tomorrow
'A man will begin making ladles starting tomorrow.'

(6) Second-argument voice

a. Pog-imung-**on** nog gotow og sanduk dinikitu'.
2V.IRR-make-SUF + man β ladle in.the.past
'A man used to make ladles in the past.'

b. Pog-imung-**on** nog gotow og sanduk tolipun boloma'.
2V.IRR-make-SUF + man β ladle start tomorrow
'A man will begin making ladles starting tomorrow.'

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