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A special *mahalo* to Charles-James Bailey for introducing our Departmental *Working Papers* in 1969

SUBJECT AND PIVOT IN SYMMETRICAL-VOICE LANGUAGES: EVIDENCE FROM AMPENAN SASAK

PETER SCHUELKE

Symmetrical voice is a syntactic phenomenon in which a language has at least two default transitive patterns that are not derived from each other. Each transitive pattern represents a distinct voice which selects a particular core argument as the pivot. This paper proposes that subject and pivot are distinct categories which can be diagnosed by examining a series of properties involving subjects and pivots. Whereas the pivot is privileged for extraction through wh-fronting or relative clause gapping, the subject argument of a transitive construction can act as the antecedent for a reflexive pronoun and manifests wide scope with respect to variable binding. The distinct properties of subject and pivot are demonstrated in Ampenan Sasak, a symmetrical-voice Austronesian language spoken on Lombok, Indonesia.

1. INTRODUCTION. This paper proposes that subject and pivot are distinct categories in symmetrical-voice languages. As I will show, the contrast is observable through investigating prominence asymmetries and availability of extraction. The tests proposed in this paper are not theory-specific and should be easily translatable into any theory of formal syntax, although they do not make direct reference to syntactic structure per se. The properties of subject and pivot are demonstrated in Ampenan Sasak, a symmetrical voice, Austronesian language of Indonesia. Ampenan Sasak is noteworthy in the typology of symmetrical voice languages as it does not use verbal morphology to mark voice contrasts.

The paper begins by discussing transitivity and the distinction between core and non-core arguments. Properties of prominence are introduced, beginning with subject prominence tests in asymmetrical voice alternations in a language like English, before moving on to symmetrical voice alternations, testing the pivot with extraction, and the interface of subject and pivot. Then, symmetrical voice alternations in Ampenan Sasak are outlined, followed by the main analysis which uses the proposed diagnostics of prominence and extraction to show that the Ampenan Sasak symmetrical-voice system makes a formal distinction between subject and pivot. Ampenan Sasak is of note to typologists as its symmetrical voice alternations are accomplished without the use of verbal voice morphology—a feature typically associated with symmetrical voice languages.

2. PROPERTIES OF THE SUBJECT. This section establishes some properties of prominence which can be used to test if an argument is the subject in a construction with two core arguments. I adopt the convention of referring to constructions with a sole core argument as "intransitive" and constructions with two core arguments as "transitive" (Arka 2005). Sentences with three core arguments are "ditransitive;" however, this paper focuses on intransitive and transitive sentences. For further discussion of the typology of ditransitive constructions consult Malchukov, Haspelmath, and Comrie 2010.

Example (1) shows the three basic sentences types in English.

- (1) Basic Sentence Types in English
- a. INTRANSITIVE The judge laughed.
- b. TRANSITIVE

 Bill ate the chicken.
- c. DITRANSITIVE Liz gave Bill a book.

In example (1), sentence (a) is intransitive with a single core argument: *the judge*. Example (1b) is transitive with two core arguments: *Bill* and *the chicken*. Sentence (1c) is ditransitive with three core arguments: *Liz, Bill,* and *the chicken*.

The distinction between core arguments and non-core arguments is often subtle (Arka 2005/2007). For the purposes of this paper, I will take the key feature of a core argument to be that its relation to the verb is not mediated by an interceding meaning-bearing element, such as a preposition. Thus, I take *Bill* to be a core argument in (1c), but not in *Liz gave a book to Bill*, where its relationship to the verb is established via the preposition *to*.

Subjects and direct objects are both core arguments. They can be distinguished from each other based on their relative prominence in the sentence, where prominence is defined with respect to the standard relational hierarchy: Subj > Dir Object > As demonstrated in previous work, beginning with Keenan (1976), a more prominent argument manifests a variety of reliable properties relating to the interpretation of co-reference and scope (among other phenomena), to be discussed shortly.

Kroeger (1993b) discusses the controversial history of the notion of subject in Tagalog, a symmetrical-voice language. He identifies three approaches to identifying the subject in symmetrical-voice languages. The first approach is that the argument selected by voice is the subject (Bloomfield 1917, Blake 1925). The second approach is that there is no subject in a symmetrical-voice language such as Tagalog (Foley and Van Valin 1984). The third approach is that the actor is the subject in every voice (Carrier-Duncan 1985, Schachter 1976, 1977). Contrary to Kroeger (1993b), based on the properties of subject prominence, I endorse the third approach, the actor is the subject is in every voice. In formal approaches to syntax, prominence is often equated with an NP's position in syntactic structure (with a more prominent argument c-commanding its less prominent counterparts). However, it is also possible to think of prominence in more general terms by examining its effects in particular phenomena, as suggested by Keenan. I focus here on two tests for prominence.

The first diagnostic of prominence involves the relationship between a reflexive pronoun and its antecedent, which must be more prominent. To illustrate this, let's take the uncontroversial example of English, which manifests the asymmetry exemplified below. (Following tradition, I use co-indexing to indicate co-reference.)

- (2) English Reflexive Binding
- a. Direct object reflexive, subject antecedent: *Liz_i pinched herself_i*.
- b. Reflexive subject, direct object antecedent: **Herself_i pinched Liz*_j*.

Here we see that the patient reflexive pronoun, *herself*, can take the agent argument, *Liz*, as its antecedent, but that the reverse relationship is impossible. This asymmetry supports the view that the agent is the subject--i.e., the more prominent argument.

A second test for prominence involves a scopal asymmetry in the availability of variable binding (also known as the "distributed" or "one-to-one" reading) for the pronoun in patterns such as the following.

- (3) Variable Binding in English Active Sentence UQ with AGENT/SUBJECT
- a. *Every mother*_i *loves her*_{i/j} *child*. READINGS: distributed and non-distributed

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UQ with PATIENT/OBJECT

b. *Her_i mother loves every child**_{*i/j*}. READING: non-distributed

In (3a), two interpretations are available: (a) a reading in which *her* refers to some unnamed person (irrelevant for our purposes), and (b) a "distributed," "one-to-one," or "bound variable" reading in which the referent of the pronoun varies with the individual members of the set denoted by the quantified NP (roughly, each member of the set of mothers loves her own child). The availability of the distributed reading when the UQ is associated with the agent is evidence that the agent is more prominent than the patient, consistent with the traditional view that it is the subject. In contrast, the pronoun cannot be interpreted this way in (b), where *her* is part of the agent noun phrase and the UQ is associated with the patient—the argument traditionally taken to be the direct object.

This asymmetry in available interpretations is reversed in passive sentences.

(4) Variable binding in English Active and Passive

ACTIVE (transitive)

UQ with AGENT/SUBJECT

a. Every mother, loves $her_{i/j}$ child.

READINGS: distributed and non-distributed

UQ with PATIENT/OBJECT

b. *Her_i mother loves every child**_{i/j}. READINGS: non-distributed

PASSIVE (intransitive)

UO with AGENT/ADJUNCT

c. Her_i child is loved by every mother $*_{i/j}$.

READINGS: non-distributed

UO with PATIENT/SUBJECT

d. Every child_i is loved by her_{i/i} mother.

READINGS: distributed and non-distributed

(5) Variable Binding Interpretations

M = mother C = child

a. distributed b. non-distributed c. non-distributed $M \longrightarrow C$ $M \longrightarrow C$ $M \longrightarrow C$ $M \longrightarrow C$ $M \longrightarrow C$ (one-to-one) (all-to-one) (one-to-all)

In the active examples (4a and 4b), the distributed reading is available only when the UQ is associated with the agent. However, matters are very different in the English passive-voice construction. When the UQ is associated with the agent of a passive, as in (4c), only a non-distributed interpretation is available. This is evidence that the agent of an English passive is not the subject. However, in passive constructions, both readings are available when the UQ is on the patient, as in example (4d). The patient is more prominent in the passive: it is the subject.

3. PROPERTIES OF THE PIVOT IN SYMMETRICAL VOICE. Symmetrical voice is an understudied phenomenon in linguistic typology. Across languages, voice alternations have many forms, but they serve a similar function: to focus or background information for pragmatic purposes. Symmetrical-voice languages can be characterized as having at least two distinct transitive patterns (Riesberg 2014:10), which

are not derived from each other.¹ In addition to focusing or backgrounding information, symmetrical-voice alternations also select a single pivot per clause which is privileged for extraction through *wh*-fronting or relative-clause gapping.

Foley (2007) recognizes two basic types of voice alternations: symmetrical and asymmetrical. An asymmetrical voice alternation is exemplified by the active-passive alternation found in languages such as English.

(6) English active-passive alternation

ACTIVE VOICE (transitive)

a. Liz ate the fish.

PASSIVE VOICE with *by*-phrase (intransitive)

b. The fish was eaten by Liz.

PASSIVE VOICE without *by*-phrase (intransitive)

c. The fish was eaten.

The active sentence, (6a), contains two core arguments; thus, the construction is transitive. The agent of (6a) is the subject, and the patient is the grammatical object. (6b) and (6c) each contain only one core argument, *the fish*; thus, the construction is intransitive. In the passive voice construction, (6b), the patient is the subject, and the agent is now both oblique and optional (adjunct). (6c) demonstrates the optionality of the *by*-phrase in (6b).

Passivization involves a reduction in transitivity, as well as a restructuring of the mapping between thematic roles and grammatical relations. In the passive voice, the former non-subject patient becomes the grammatical subject and former agentive subject is realized (if at all) as an oblique-marked noun phrase, in a "by-phrase."

In a symmetrical-voice alternation, there is no reduction in transitivity. Symmetrical-voice alternations do not result in a change to the relative prominence of the agent and patient. In both transitive patterns, the agent is the prominent argument (the subject). It can therefore serve as the antecedent of a reflexive pronoun and (when accompanied by a universal quantifier) can have scope over a pronoun, resulting in a bound variable/distributed interpretation (Keenan 1976). The transitive patterns are schematized in figure 1.

FIGURE 1. Two transitive patterns in a symmetrical-voice language

SUBJECT OTHER CORE ARGUMENT
Actor Voice: AGENT PATIENT
Patient Voice: AGENT PATIENT

The subject is always the agent in symmetrical-voice alternations, but the pivot will depend on the voice. The agent displays properties of the subject in all voices, such as acting as the antecedent to a reflexive pronoun. Each voice selects a pivot, which has privileged status with respect to extraction, called A-bar movement in a generative framework (Radford 1997). Extraction can be observed in *wh*-fronting and relative clause formation, as illustrated in the following examples from English.

- (7) A-Bar Extraction in English
- a. Relative Clause Gap (object)This is the book that [I think Bill read _____]

¹ Philippine-type languages were taken as the prototype by the first linguists to write about symmetrical voice (Himmelmann 2002, Foley 2007). "Philippine-type" is better categorized as a subtype of symmetrical voice.

b. Wh-Question Gap (object)
What do you think [Bill ate _____]?

In transitive constructions of a symmetrical-voice language, the agent/subject is the pivot in the actor voice (AV), and the patient/object is the pivot in the patient voice (PV). This relationship is schematized below.

FIGURE 2. Intersection of Subject and Pivot (Pivot in bold)

SUBJECT OTHER CORE ARGUMENT

Actor Voice: AGENT PATIENT
Patient Voice: AGENT PATIENT

The subject may be extracted in AV and the other core argument, the object, may be extracted in PV. In some languages, such as Tagalog (Bondoc 2017), the subject can extract from every voice, while the object may only extract in PV.

4. VOICE ALTERNATIONS IN AMPENAN SASAK. Ampenan Sasak is a variety of Sasak, an Austronesian language spoken on the island of Lombok in Indonesia. Voice alternations in Ampenan appear to be distinct from the alternations described in other varieties of Sasak (Shibatani 2008).

Ampenan Sasak has an Actor Voice, a Patient Voice, and a Passive Voice. Example (8) demonstrates the voice paradigm. The AV and PV are both transitive constructions while the passive is intransitive. I will use reflexive binding and variable binding to show the symmetrical and transitive nature of AV and PV in contrast the intransitive passive voice. The passive may optionally express the agent through a *siq*-marked *by*-phrase.

(8) Ampenan Sasak voice paradigm

ACTOR VOICE (transitive)

a. aku talet ambon né. 1SG plant cassava the I plant the cassava.

PATIENT VOICE (transitive)

b. siq-k talet ambon né.

AGT-1SG plant cassava the
I plant the cassava.

PASSIVE VOICE (intransitive)

c. ambon né te-talet (siq-k)
cassava the PASS-plant by-1SG
The cassava is planted (by me).

FIGURE 3. Ampenan Sasak Voice Alternations

	SUBJ	VERB	OBJ	OBL
AV:	A	V	P	
PV:	siq-A	V	P	
PASSIVE:	P	te-V		(siq-AGENT.NP)

The AV has a subject-verb-object word order (henceforth AVP), and the PV has the same AVP word order. They differ in that, in the PV, the agent must be marked as non-pivot. Non-pivot agent marking is a common feature of symmetrical voice languages (Erlewine, Levin, and Coppe Van Urk 2017). In Ampenan Sasak, non-pivot agent marking is accomplished by using the genitive enclitic pronoun and it is the only morphological feature which indicates symmetrical-voice alternations.

Because they are clitics, the genitive pronouns in Ampenan Sasak are bound morphemes and must be attached to a host. The host can be an aspectual particle, such as *wah* 'PERFECT', if the construction is inflected for tense or aspect. However, if no aspectual particle is available to host the non-pivot agent, as in the unmarked present tense, then the 'by-phrase particle' *siq* hosts the non-pivot agent clitic. If the agent in the PV is a common noun or proper noun, then the full noun phrase is expressed clause finally— in an additional *siq*-marked phrase. This same particle can also be used to express the optional agent phrase in the passive voice, in which case it is syntactically non-core. Simply put, *siq* marks non-pivot agents.

(9) Non-pivot agent marking in Ampenan Sasak

PV: SIMPLE PRESENT, PRONOUN

a. siq-k talet ambon né.

AGT-1SG plant cassava the
I plant the cassava.

PV: SIMPLE PRESENT, PROPER NOUN

b. siq-n talet ambon né siq Udin.

AGT-3 plant cassava the AGT Udin

Udin plants the cassava.

PV: PERFECT, PRONOUN

c. wah-k talet ambon né.

PFT-1SG plant cassava the
I have planted the cassava.

PV: PERFECT, PROPER NOUN

d. wah-n talet ambon né siq Udin.

PFT-3 plant cassava the AGT Udin

Udin has already planted the cassava.

REFLEXIVE BINDING

The first diagnostic of symmetrical-voice alternations in Ampenan Sasak is reflexive binding. Example (10a–f) demonstrates the reflexive binding patterns in Ampenan Sasak.

(10) Refelexive Binding in Ampenan Sasak

AV: NP-A REFL-P

a. *Udin tekiq diriq-n*.

Udin pinch self-3SG.GEN

Udin pinched himself.

AV: REFL-A NP-P

b. *diriq-n tekiq Udin.
self-3sG.GEN pinch Udin
*Udin pinched himself (himself cannot co-index with Udin)

PV: NP-A REFL-P

c. siq-n tekiq diriq-n siq Udin.

AGT-3sg pinch self-3sg.gen AGT Udin
Udin pinched himself.

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PV: REFL-A NP-P

d. *siq-n tekiq Udin siq diriq-n.

AGT-3SG pinch Udin AGT self-3SG.GEN

*Udin pinched himself

NOTE: *siq-diriq-n tekiq Udin is also unacceptable

PASSIVE: NP-A REFL-P

e. *diriq-n te-tekiq siq Udin.
self-3SG.GEN PASS-pinch by Udin
*Himself was pinched by Udin (dirign can't refer to Udin)

PASSIVE: REFL-A NP-P

f. Udin te-tekiq siq diriq-n. Udin PASS-pinch by self-3SG.GEN ?/*Udin was pinched by himself

In AV and PV, the agent noun phrase acts as an antecedent for the patient reflexive; in generative terms the agent noun phrase binds the patient reflexive, as demonstrated in (10a) and (10c). When the reflexive pronoun is the agent in AV and PV, the sentence is ungrammatical, as demonstrated in examples (10b) and (10d). In both AV and PV, only the agent can act as the antecedent for the reflexive pronoun. AV and PV yield the same reflexive binding patterns because the agent is more prominent; the agent is subject in both AV and PV.

The reflexive-binding pattern observed in AV/PV is the reverse of the passive constructions. The passive voice example (10e) is ungrammatical because the agent is the intended antecedent and the patient is the reflexive pronoun. This can be taken as evidence that the agent is not the subject of a passive-voice construction. Figure 4 summarizes the reflexive binding facts in Ampenan Sasak.

Voice	Arrangement	Grammaticality Judgement
AV	NP-A REFL-P	grammatical
AV	REFL-A NP-P	ungrammatical
PV	NP-A REFL-P	grammatical
PV	REFL-A NP-P	ungrammatical
PASS	NP-A REFL-P	ungrammatical
PASS	REFL-A NP-P	weird or ungrammatical

FIGURE 4. Reflexive binding in Ampenan Sasak

VARIABLE BINDING

The other diagnostic of subjecthood in Ampenan Sasak involves the availability of the distributed reading in a transitive construction in which one argument is associated with a UQ and the other contains a genitive pronoun. The potential readings are reproduced here for convenience, where the B represents "boss" and the W represents "worker" in sentences such as *every boss loves her worker* (readings a and b are available) and *her boss loves every worker* (only reading c is available).

Examples (11a-d) demonstrate the availability of distributed, or bound variable, interpretations in the AV and PV in Ampenan Sasak.

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(11) Variable binding in AV/PV in Ampenan Sasak

AV: UQ with AGENT/SUBJECT

a. *selapuq bos kangen anak buah-n*. every boss love worker-3SG.GEN

Every boss loves her worker.

READINGS: distributed (one-to-one) and non-distributed (all-to-one)

AV: UQ with PATIENT/OBJECT

b. *bos-n kangen selapuq anak buah*. boss-3sG love every worker

Her boss loves every worker.

Readings: non-distributed (one-to-all)

PV: UQ with AGENT/SUBJECT

c. *siq-n kangen anak buah-n siq selapuq bos*.

AGT-3SG love worker-3SG.GEN AGT every boss

Every boss loves her worker.

Reading: distributed (one-to-one) and non-distributed (all-to-one)

PV: UQ with PATIENT/OBJECT

d. siq-n kangen selapuq anak buah siq bos-n.

AGT-3SG love every worker AGT boss-3SG.GEN

Her boss loves every employee. Reading: non-distributed (one-to-all)

In both the AV and PV, when the UQ is associated with the agent and the genitive pronoun is associated with the patient, a distributed reading is available, as in examples (11a) and (11c). This is evidence that the agent is more prominent than the patient in AV and PV; thus the agent is the subject of both AV and PV. However, when the UQ is associated with the patient, only a, non-distributed, one-to-all reading is available in both AV and PV, as in examples (11b) and (11d). These results are reversed in passive constructions, as demonstrated in examples (12a) and (12b).

(12) Variable binding in passive voice in Ampenan Sasak

PASSIVE: UQ with AGENT/ADJUNCT

a. *anak buah-n te-kangen siq selapuq bos.* worker-3sg.gen Pass-love by every boss

His worker is loved by every boss. Reading: non-distributed (all-to-one)

PASSIVE: UQ with PATIENT/SUBJECT

b. selapuq anak buah te-kangen siq bos-n.

every worker PASS-love by boss-3SG.GEN

Every employee is loved by his boss.

Reading: distributed (one-to-one) and non-distributed (all-to-one)

In a passive construction such as (12a), in which the UQ is associated with the agent, only a non-distributed reading is available. In contrast, when the UQ is associated with the patient of a passive, a distributed reading is available, as in (12b). The fact that the distributed reading is only available in a passive if the patient is associated with the UQ is evidence that the patient is more prominent. The patient is the subject of passive voice.

In sum, the agent is the prominent argument of both AV and PV patterns, while the patient is the prominent argument of a passive-voice construction. Figure 5 summarizes the distributed and non-distributed readings among the different voices in Ampenan Sasak.

Voice	Arrangement	Reading(s)
AV	every-A his-P	both; preferred: distributed
AV	his-A every-P	non-distributed (might be due to single poss agree)
PV	every-A his-P	both; preferred: distributed
PV	his-A every-P	non-distributed
PASS	every-A his-P	non-distributed
PASS	his-A every-P	both; no preference

FIGURE 5. Variable binding in Ampenan Sasak

5. PIVOT IN AMPENAN SASAK. The pivot in a symmetrical voice language is the one noun phrase in a clause (the agent argument in AV and the patient argument in PV) which can be extracted by wh-fronting or relative-clause formation.—In transitive constructions in Ampenan Sasak, the subject may therefore be extracted from AV, and the object from PV.²

Examples (13a-d) demonstrate the relativization of transitive subject (A), transitive object (O), and intransitive subjects (S) in Ampenan Sasak.

(13) Relative clause formation in Ampenan Sasak

AV: RELATIVIZED AGENT/INSTRANSITIVE SUBJECT (S)

a. *né* kanak saq tindoq no. this child REL sleep that This is the child who is sleeping.

AV: RELATIVIZED AGENT/TRANSITIVE SUBJECT (A)

b. *né* kanak saq tendang aku (no). this child REL kick 1SG that This is the child who kicked me.

PV: RELATIVIZED PATIENT/TRANSITIVE OBJECT (O)

c. né kanak saq siq-k kapong (no). this child REL AGT-1SG hug that This is the child whom I hugged.

d. *né* kanak saq siq-n tendang siq Udin (no). this child REL AGT-3SG kick AGT Udin that This is the child whom Udin kicked.

Examples (13a–d) demonstrate that subjects can be relativized in AV, while objects can be relativized in PV. Sentences formed by relativizing the subject in a PV pattern or the object in an AV pattern were judged unacceptable by native speakers. This reflects the fact that only the pivot can be relativized in Ampenan Sasa—the subject in AV pattern and the object in a PV construction.

It is worth noting that subjects can also be relativized in intransitive AV constructions, as seen in (13a). The same pattern has been observed in Philippine languages such as Tagalog and Blaan (Bondoc 2017). Cross-linguistically, AV is the most common voice used for intransitive subjects. The most common pattern is for the intransitive subject and the transitive subject to be pivot in AV, and for the object to be the pivot of PV, a decidedly nominative-accusative pattern.³

² In some symmetrical-voice languages, only the pivot of a given construction may be extracted, in others more than just the pivot can be extracted. In Ampenan Sasak, only the pivot may be extracted.

³ See Mallinson and Blake 1981 and McGregor 2009 for further discussion of grammatical relations patterns.

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In wh-question formation, only the pivot of a clause may be fronted. Wh-question formation is demonstrated in (14a-c).

(14) Wh-question formation in Ampenan Sasak

AV: WH-AGENT/INSTRANSITIVE SUBJECT (S)

a. sai tindoq? who sleep

Who is sleeping?

AV: WH-AGENT/TRANSITIVE SUBJECT (A)

b. sai tendang kanak no? who kick child that Who kicked the child?

PV: WH-PATIENT/TRANSITIVE OBJECT (O)

d. sai siq-n tendang siq Udin? who by-3SG kick AGT Udin Whom did Udin kick?

In sum, only the subject can undergo wh movement in intransitive and transitive AV patterns. In contrast, only the direct object is eligible for this operation in PV patterns. Thus, relative clause formation and whquestion formation jointly demonstrate that only the pivot of a given voice may be extracted in Ampenan Sasak.

6. SUMMARY. In conclusion, this paper has established that subject and pivot are separate, although sometimes overlapping, categories in symmetrical voice languages. Investigating both reflexive binding and available bound-variable readings reveals that the agent is the subject of both AV and PV in symmetrical-voice languages such as Ampenan Sasak. The availability of extraction for wh-fronting and relative-clause gapping demonstrates that the subject is the pivot in AV patterns while object is the pivot in PV constructions. Finally, Ampenan Sasak exemplifies the syntactic properties associated with symmetrical-voice languages even though it does not indicate symmetrical-voice contrasts through verbal morphology, contrary to the broader typological tendency.

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