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28 Applicative constructions in languages of western Indonesia

Abstract: This chapter provides an overview of applicative constructions in a sample of eight Austronesian languages of western Indonesia. Following an orientation to the languages (§ 2) and the forms of their applicatives affixes (§ 3), we describe the semantic and syntactic properties of applicative constructions according to possible roles for the applied phrase. These include beneficiaries and recipients (§ 4), instruments and themes (§ 5), goals, locations, and addressees (§ 6), and other roles found in transitivity constructions, e.g. content phrases and stimuli (§ 7). For each type, we note the syntactic status of the AppP and any companion phrase (the participant expressed as P in a corresponding base construction), and semantic characteristics of the AC and compatible base verbs. We find that all languages of the sample allow a beneficiary AppP and a theme companion phrase to both be expressed as core arguments in ditransitive clauses. However, when the AppP is an instrument or goal, some languages require that the companion phrase be realized as an oblique or unexpressed. Remaining sections discuss lookalike constructions where an applicative suffix shows only an aspectual or semantic effect (§ 8), and describe interactions between applicatives and causative morphology (§ 9) as well as applicatives and voice (§ 10).

1 Introduction

In this chapter we examine a sample of Austronesian languages of a region that we refer to as *western Indonesia*, which includes Malayo-Polynesian languages spoken in Malaysia, Brunei, and many parts of western and central Indonesia (Sumatra, Java, Kalimantan, Sulawesi, Bali, and Lombok).¹ In these languages, applicative constructions (ACs) are typically marked by one of a small number of verbal affixes that while serving many

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Table 1: Language Sample.

Language	Subgroup	Location	Sources
Toba Batak	Batak (Sumatran)	North Sumatra	van der Tuuk (1971 [1864–1867])
Nasal	Sumatran	Bengkulu	McDonnell fieldnotes
Sundanese	Sundic	West Java	Truong fieldnotes
Salako (Kendayan)	Malayic	Borneo	Adelaar (2005)
West Coast Bajau	Greater Barito	Sabah	Miller (2007)
Sasak	Bali-Sasak-Sumbawa	Lombok	Khairunnisa & McDonnell (in prep)
Pendau	Celebic	Central Sulawesi	Quick (2007)
Makasar	South Sulawesi	South Sulawesi	Jukes (2020)

non-applicative functions are clearly separate from voice morphology. To explore the range of diversity and commonality found within applicative systems in this region, we describe the syntax and semantics of ACs and applicative lookalikes in a sample of eight western Indonesian languages, listed here with their ISO 639–3 codes and glottocodes: Toba Batak [bbc/bata1289], Nasal [nsy/nasa1239], Sundanese [sun/sund1252], Salako [knx/kend1254], West Coast Bajau [bdr/west2560], (Ampenan) Sasak [sas/sasa1249], Pendau [ums/pend1242], and Makasar [mak/maka1311]. These languages all belong to the Malayo-Polynesian branch of the Austronesian family. While this selection of languages represents a convenience sample, limited in part by the availability of the relevant information, these languages are not closely related to one another and are geographically dispersed across major islands and island groupings of western Indonesia and eastern Malaysia.

This paper is organized as follows. Section 2 presents general information about the languages examined and their basic morphosyntax. This includes a critical description of transitive alternations often coded on the verb, which we refer to as voice. Section 3 gives a general introduction to the applicative suffixes in the languages of the sample. The following four sections describe ACs according to the semantic roles which map to the phrase licensed by the applicative marker. These include beneficiaries and recipients (Section 4), instruments and themes (Section 5), goals, locations, and addressees (Section 6), and other types of participants (Section 7). Section 8 describes morphological lookalikes in which an applicative suffix appears on the verb without resulting in a change in argument structure. Section 9 describes how applicative suffixes combine with causative morphology and other affixes. Section 10 discusses how voice and applicative morphology are used together in these languages. A conclusion follows in Section 11.

2 The languages and their basic morphosyntactic properties

The eight languages included in the sample for this chapter are listed in Table 1, along with basic information including genetic subgroup, geographic location and the sources we have primarily drawn on in the descriptions that follow. The authors have firsthand experience working with Sundanese, Nasal, and the Ampenan variety of Sasak, which differs to some extent from the varieties described in Austin (2001).

The western Indonesian languages in this sample range from moderately agglutinative (e.g. Pendau with the potential to have several prefixes and suffixes) to relatively isolating (e.g. Ampenan Sasak which at most can take a single prefix and single suffix). There is little to no casemarking and arguments of the verb are often unrealized when their reference is recoverable in the discourse. In general, core arguments are unmarked, while obliques are marked with a preposition. Intransitive predicates may be unmarked or marked with one of several affixes that express different semantic properties, such as stative, dynamic, reciprocal, non-volitional among others. Transitive predicates are typically marked for voice.

The voice systems of western Indonesian languages, however, differ in important ways from well-known voice systems with active-passive or ergative-antipassive alternations (see Chen & McDonnell 2019 for a recent summary). With some exceptions, these systems have been labeled *symmetrical voice*, which involve a two-way distinction between A-oriented and P-oriented transitive constructions. These constructions have been described as ‘symmetrical’ because they show little difference in terms of morphosyntactic complexity, syntactic transitivity, and frequency in discourse (Arka 2003, Himmelmann 2005, Riesberg 2014). While there are a number of salient similarities among the voice systems in the eight languages of the sample, there is considerable variation even in the principal components of symmetrical voice. Consider the examples from Toba Batak in (1).²

(1) Toba Batak, Voice alternations (Schachter 1984: 127–128)

- a. Man-jaha buku guru i.
AV-read book teacher DEF
‘The teacher read a book.’
- b. Di-jaha guru buku i.
PV-read teacher book DEF
‘A teacher read the book.’

² In examples, we have generally kept the orthographic conventions of original sources, but adopted unified glossing conventions throughout.

In A-oriented constructions, the predicate is typically marked by a prefix that contains a homorganic nasal that assimilates to—and in some cases replaces—the first consonant in the root to which it attaches.³ The abstract nasal segment is represented as *N*, and the AV prefix in Toba Batak is *maN-*. In this chapter, A-oriented constructions are referred to as A-Voice (AV) because they privilege A (i.e., the most agent-like argument in a transitive construction), which is *guru* ‘teacher’ in (1a). The P argument *buku* ‘book’ is unmarked and is considered a core argument.

Likewise, P-oriented constructions may be marked with various prefixes (e.g. *di-* in Toba Batak) and are referred to as P-Voice (PV) as they privilege P (i.e., the most patient-like argument in a transitive construction), which is *buku* ‘book’ in (1b). The A argument *guru* ‘teacher’ is unmarked and is considered core. The privileged argument in each construction has been referred to by many names (e.g. pivot, trigger, primary argument), but here we will follow the Indonesianist tradition (e.g. Musgrave 2001, Riesberg 2014) and refer to it as the *subject*. Since the core argument that is not privileged can be P as in (1a) or A as in (1b), the label ‘object’ is not appropriate. Thus, we again follow the Indonesianist tradition and refer to this argument as the *non-subject core argument* or simply *non-subject*.

The examples from Toba Batak demonstrates symmetrical voice clearly: the two transitive constructions are equally marked by prefixes *maN-* AV and *di-* PV, respectively, and there is no apparent difference in transitivity between the two. Furthermore, Wouk (1984) finds that in small corpus of narratives, AV and PV have similar frequencies: PV makes up 52% and AV 48% of transitive constructions.⁴ However, the voice systems in the languages in the sample—and in western Indonesia more generally—vary along several dimensions. In this section, we focus on two: (i) the marking of non-subject A arguments and (ii) (overt) voice morphology.

In regards to (i), Sundanese marks both AV and PV constructions with prefixes *N-* and *di-*, respectively, as in (2). However, the A argument in PV is most commonly marked by a preposition *ku* ‘by’, as in (2b).

(2) Sundanese, Voice alternations (Truong fieldnotes)

- a. Asep m-(b)euli baju.
A. AV-buy clothes
‘Asep bought clothes.’
- b. Baju di-beuli ku Asep.
clothes PV-buy by A.
‘Asep bought clothes.’

³ In examples where the first consonant of the root has been replaced by the homorganic nasal prefix, we include the underlying segment in parentheses for clarity, e.g. *m-(b)euli* for the A-oriented form of *beuli* ‘to buy’ in example (2a) below.

⁴ These percentages include only cases where the predicate was marked by *maN-* or *di-*.

On the surface these examples look to be an active-passive alternation, but there are syntactic properties (e.g. the ability for A to bind P arguments in PV; see Kurniawan 2013 and Kroeger & Riesberg 2023) as well as discourse properties (e.g. AV and PV have similar frequencies in discourse) that call such an analysis into question.

In regards to (ii), the PV in West Coast Bajau, for example, is not overtly marked by morphology, while AV is prefixed with *N-*, as in (3). Miller (2007), however, analyzes PV as being marked by a null prefix $\emptyset$.

(3) West Coast Bajau, Voice alternations (Miller 2007: 135–136)

- a. Azizy boi n-(s)embali sapi' e dilaw.
A. CMPL AV-slaughter cow DEM yesterday
'Azizy slaughtered the cow yesterday.'
- b. Boi $\emptyset$ -sembali Azizy sapi' e dilaw.
CMPL PV-slaughter A. cow DEM yesterday
'Azizy slaughtered the cow yesterday.'

In Salako, PV is also unmarked when the non-subject A argument is realized, but it is marked with a proclitic *di=* when it is not realized.⁵ In the Nasal examples in (4), PV is unmarked when A is first or second person, as in (4a), and optionally marked with a dedicated prefix when A is third person, as in (4b).

(4) Nasal, PV marking (McDonnell fieldnotes)

- a. lahan ni kak khadu kam=suah.
field that PFV finish 1PL.EXCL.NSBJ=[PV]burn
'We already burned the field.'
- b. lahan ni kak khadu (di-)suah=nyo.
field that PFV finish PV-burn=3SG
'He already burned the field.'

Pendau shares similarities to Nasal with several additional layers of complexity. Pendau distinguishes two sets of voice prefixes, a realis set and an irrealis set. Additionally, there are irrealis PV constructions for first and second person non-subject A arguments, which appear in the preverbal position without a dedicated voice prefix (see Quick 2007: 374–375).

In Ampenan Sasak and Makasar, the situation is more extreme. In Ampenan Sasak, there still appears to be an opposition between A-oriented and P-oriented constructions, but the predicate is typically unmarked; it is only optionally marked by the AV prefix *N-* (see Khairunnisa 2022). Rather, transitive alternations are signaled through

⁵ The construction marked with *di=* is likely a separate passive construction, although Adelaar (2005) does not label it as such.

a combination of word order and the marking of A arguments. Consider the examples in (5).

(5) Ampenan Sasak, Transitive alternations (Khairunnisa & McDonnell in prep)

- a. Andi_i paléq(=ne_i) aku.
 A. chase(=3) 1SG
 'Andi chased me.'
- b. Aku siq=ne_i paléq siq Andi_i
 1SG AGT=3 chase AGT A.
 'Andi chased me.'

In the A-oriented construction in (5a), A occurs in the preverbal position with cross-referencing of an optional second position pronominal clitic and is considered the subject. P occurs post-verbally and is considered the non-subject argument. In the P-oriented construction in (5b), P is in the preverbal position and is considered the subject, while A occurs post-verbally and is marked with the agent marker *siq*. A is also cross-referenced on a second position pronominal clitic. In both constructions, the A argument is co-referential with a second position clitic that invariably expresses A. Since this alternation is not marked on the verb, voice may not be the most appropriate term, but functionally these constructions are analogous to AV and PV constructions in the other languages of the sample.⁶

Finally, Makasar has been described differently than the rest of the languages of the sample. According to Jukes (2013, 2020), Makasar has an unmarked, basic transitive clause alongside several marked constructions. In the basic transitive clause, the verb receives no verbal marking, but A and P arguments are indexed with pronominal clitics, as in (6).

(6) Makasar, Transitive construction

- ku=kanre=i taipa=nu
 1=eat=3 mango=2F.POSS
 'I eat your mangoes.'

Makasar additionally has a number of verbal prefixes that are analogous to voice prefixes in the other languages of the sample, although Jukes (2013) describes these prefixes as *valency-signaling* prefixes. These include two prefixes that are analogous to AV: *aN(N)*- and *aN*-. The formal differences between these prefixes is that *aN(N)*- triggers nasal substitution of the first consonant of the root, whereas *aN*- does not. *aN(N)*- marks a so-called semi-transitive clause where P is *not* indexed on the verb and may not be definite, as in (7).

⁶ Khairunnisa (2022) provides a more detailed description of the different properties of the second position clitic and the preverbal A or P argument.

- (7) Makasar, Semi-transitive construction (Jukes 2020: 257)

angng-(k)anre=a' taipa
 STR-eat=1 mango
 'I eat mangoes'

The prefix *aN-* marks Actor Focus, where A must occur in the preverbal position but is not indexed on the verb. Rather, P is indexed, as in (8). See Jukes (2020: 240–242) for further discussion of argument indexing in Makasar.

- (8) Makasar, Actor-focus construction (Jukes 2020: 269)

kongkong am-buno=i_i miong=ku_i
 dog AF-kill=3 cat=1.POSS
 'A dog killed my cat.'

Laskowske (2016) analyzes a closely related language, Bugis, as having a symmetrical voice system. Under this analysis, the basic transitive clause is a P-oriented construction, while the semi-transitive and Actor Focus constructions would be A-oriented constructions. It is not necessary in this chapter to decide whether a particular voice system is considered symmetrical, but it is helpful to see that while the languages in our sample have diverse systems for marking transitive constructions, there are clear similarities that allow for a more or less straightforward comparison.

In addition to transitive alternations in at least seven languages in the sample, many of the languages have a 'true passive' construction with the exception of Pendau and Toba Batak. The passive may have a dedicated affix, as in West Coast Bajau (*-in-*), Amepenán Sasak (*te-*), Makasar (*ni-*), and Salako (*di-*), or it may be marked with the PV prefix, as in Nasal and Sundanese. (See Chen & McDonnell 2019 for a discussion of the difficulties in teasing apart PV and passive constructions in languages that mark both constructions with the same affix).

Languages in the sample vary in terms of word order. With the exception of Ampenan Sasak and Makasar, the non-subject argument is typically adjacent to the verb, forming a constituent that we refer to as the *predicate complex*. The subject typically has a freer distribution and in these six languages it may occur before or after the predicate complex. However, each language has a preferred word order. Toba Batak, exemplified in (1), is typically subject-final, as is West Coast Bajau. However, in West Coast Bajau, PV clauses more typically have subject-final order, while AV clauses typically have subject-initial order (Miller 2007: 146–157). The other languages are predominately subject-initial, including Nasal, Pendau, Sundanese, and Salako. In Ampenan Sasak and Makasar there does not appear to be strong evidence for a predicate complex. Ampenan Sasak is predominately subject-initial. Makasar is canonically predicate-initial, although the order of NP arguments after the predicate in transitive clauses is apparently completely free.

Such arguments are indexed on the verb, and in cases where there are two third person arguments indexed with pronominal clitics, the order of NPs does not resolve any ambiguity (Jukes 2020: 231).

Finally, Pendau is unique in the sample as it has a number of *stem-former* prefixes. These prefixes, which have the shapes *pong-*, *po-*, *pe-*, and *popo-* (and allomorphs showing vowel harmony), have no semantic content of their own, but form an augmented stem which can then take voice, applicative, and other derivational prefixes (Quick 2007: 99–108). The use of stem-former prefixes is found in many Austronesian languages of the Philippines and Sulawesi (see e.g. the discussion of stem-formers in Himmelmann & Wolff 1999).

3 Applicative morphology

In this chapter, we generally follow Zuñiga & Creissels' (this volume) definition of applicative construction (AC) with the following key properties: (i) an AC is contrasted with a base construction (BC) in that an AC shows additional overt morphological marking, (ii) the applicative marker licenses an applied phrase (AppP) that expresses a non-agentive semantic role that either cannot be expressed in the BC or is expressed as an oblique phrase, and (iii) the participant encoded as A or S in the BC is encoded as A in the AC (if it is expressed).

Each language of the sample has from one to three verbal affixes that mark ACs, which are listed in Table 2. In two languages—West Coast Bajau and Ampenan Sasak—there is only one applicative suffix. The other six languages have at least two applicatives, each of which licenses AppPs with different semantic roles. One suffix licenses beneficiary and instrument AppPs and the other licenses goal and locative AppPs (with the exception of Salako, which does not appear to mark instrumental AppPs at all). However, for AppPs with other semantic roles such as stimulus or content, there is no such specialization in the morphology (see Section 7). In addition to two applicative suffixes, Sundanese makes use of a circumfix, *pang-* *-keun* that is used exclusively for substitutive benefactive constructions. We treat this form as a circumfix (as opposed to a separate prefix and a suffix) because it has a distinct semantic meaning that is not compositional, and it is extremely productive across verbal forms in Sundanese. Note that certain less productive ACs found in languages of the sample also require the use of a fossilized prefix or stem-forming prefix in addition to an applicative suffix (see Section 9 below).

Phonologically conditioned allomorphy is found for a number of these affixes. The Salako suffix *-AN* may show rounding of the vowel to [ɔ] (written as *à*) and/or preposition of the final nasal (written as *tn*) depending on the shape of the root (Adelaar 2005: 30–32). For this reason, Adelaar represents the applicative suffix as an abstract form written with capital letters. The vowels in Makasar *-ang* and *-i* coalesce with an iden-

tical stem-final vowel, which also triggers a shift from penultimate to final stress, e.g. *jappa+ang* → *jappáng* ‘walk with’ (Jukes 2020: 102). The vowel in West Coast Bajau *-an* harmonizes with preceding /o/ or /e/ in the stem. It also weakens after a stem-final vowel, coalescing with stem-final /o/, and being centralized to [ə] following stem-final /e/ (Miller 2007: 54). Both stem and affixal consonants may undergo assimilatory processes at a morpheme boundary. In Toba Batak, a sequence consisting of a morpheme-final stop, nasal or fricative and morpheme-initial /h/ is realized as a geminate stop, e.g. *di+dalan+hon* → *didalatton* ‘he carries out’ (Nababan 1981: 61). The Sundanese circumfix *pang-* *-keun* causes a voiceless obstruent (and sometimes /b/) in stem-initial position to become a nasal, as in *teundeun* ‘to place’ → *pang-neunduen-keun* ‘to place for s.o.’.

Table 2: Applicative suffixes by semantic role of AppP.

Language	Suffix	Semantic role			
		BEN	INST	GOAL	LOC
Toba Batak	<i>-hon</i>	✓	✓		
	<i>-i</i>			✓	✓
Nasal	<i>-kun</i>	✓	✓		
	<i>-i</i>			✓	✓
Sundanese	<i>-keun</i>	✓	✓		
	<i>-an</i>			✓	✓
	<i>pang- -keun</i>	✓			
Salako	<i>-AN</i>	✓			
	<i>-I?</i>			✓	✓
West Coast Bajau	<i>-an</i>	✓	✓	✓	✓
Ampenan Sasak	<i>-an</i>	✓		✓	✓
Pendau	<i>-a'</i>	✓	✓		
	<i>-i</i>			✓	✓
Makasar	<i>-ang</i>	✓	✓		
	<i>-i</i>			✓	✓

Applicatives in these languages are predominantly *optional* because the phrase corresponding to the AppP in a BC may be expressed as an oblique, most commonly with a prepositional phrase. In a few cases, however, the applicative is obligatory as there is no (monoclausal) equivalent BC. These exceptions are noted in the sections below. Throughout the paper, we are also concerned with the semantic participant expressed by the P argument in a BC, and its syntactic realization in the corresponding AC. We refer to this participant as the *companion phrase* to the AppP in describing the syntax of ACs. While this chapter is focused on ACs marked with the affixes described here, it is important to note that these morphemes are highly polyfunctional. Besides forming ACs and applicative lookalikes, they also form causative constructions, and function to derive transitive verbs from non-verbal bases. In a few languages of the

sample, they also form comparative constructions. For more on the non-applicative functions of applicative morphology in western Indonesian languages, see Truong & McDonnell (2022).

4 Beneficiaries and recipients

As mentioned in the previous section, all eight languages in our sample have an AC that licenses a beneficiary and/or recipient AppP. Descriptions of the languages in the sample do not distinguish between beneficiary and recipient, but the vast majority of examples from grammatical descriptions refer to recipients. Despite this, we follow the terminology of the descriptions of western Indonesian languages and refer to them as benefactive applicative/AC. In all but Sundanese, benefactive applicatives may only attach to a subset of transitive bases, including roots with the meanings ‘bring’, ‘take’, ‘make’, ‘buy’, ‘search’, ‘cook’. However, languages in the sample differ in their productivity across different roots. Consider the examples in (9) from Nasal with the suffix *-kun*. The BC is in (a), and the AC is in (b).

- (9) Nasal, Recipient AppP (McDonnell fieldnotes)
- a. Azma ny-(s)anik buwak (gin anak=nyo).
 A. AV-make snack for child=3sg
 ‘Azma made snacks for her children.’ (BC)
 - b. Azma ny-(s)anik-kun anak=nyo buwak.
 A. AV-make-APPL child=3sg snack
 ‘Azma made her children snacks.’ (AC)

In the BC, the recipient is expressed in an adjunct PP, which also occurs in Sundanese, Toba Batak, and West Coast Bajau. In Makasar and Salako, marking the recipient with a PP is only possible with an apparently borrowed preposition *untu/untuk* ‘for’ from Indonesian. For Makasar, it is apparently only used by younger speakers of the language (Jukes 2020: 315). In Ampenan Sasak the oblique PP is possible with a preposition *umaq*, but it is apparently rare and has only come about in elicitation (Khairunnisa & McDonnell in prep). Finally, Quick (2007) does not report an oblique PP construction, and we did not find any instances of a preposition that would mark a recipient or beneficiary.

Sundanese differs from the other languages in the sample with two different benefactive applicatives: *-keun* and *pang-keun*. The prior is much less productive as an applicative. It is restricted to a small number of the transitive bases, and licenses a recipient AppP, as in (10). It may also act as a causative, as in (11).

(10) Sundanese, Benefactive *-keun* (Hanafi 1997: 23)

- a. Udi m-(b)uka panto keur kuring.
 U. av-open door for 1SG
 'Udi opens the door for me.'
- b. Udi m-(b)uka-keun kuring panto
 U. AV-(b)uka-APPL 1SG door
 'Udi opens the door for me.'

(11) Sundanese, Causative *-keun* (Truong fieldnotes)

- a. Jandela peupeus.
 window break
 'The window breaks / is broken.' (BC)
- b. Abi m-(p)eupeus-keun jandela.
 1SG AV-break-CAUS window
 'I broke the window.' (Causative)

The benefactive applicative circumfix *pang- -keun* is much more productive, occurs with a wide-range of intransitive and transitive bases, and licenses a substitutive beneficiary AppP. However, when the *pang- -keun* benefactive applicative attaches to an intransitive base, such as *peupeus* 'break' in (11a), the AC is *not* monotransitive as we might expect. Instead, the construction is ditransitive, as in the example in (12).

(12) Sundanese, Beneficiary AppP (Truong fieldnotes)

- Euis di-pang-meupeus-keun kalapa ku abi.
 E. PV-APPL-break-APPL coconut by 1SG
 'I broke open a coconut for Euis.' (AC)

While the BC is intransitive, the AC is ditransitive and appears to have undergone both causativization *and* applicativization. One may think that the prefixal element of the circumfix *pang-* is a benefactive applicative, but this is not the case. The prefix *pang-* never occurs on its own as a benefactive applicative, and with transitive bases *pang- -keun* does not have a causative meaning. See examples in (13) below.

In all languages, the benefactive AC may be ditransitive. While few descriptions (i.e. Quick 2007, Miller 2007, Jukes 2013) discuss the core/oblique status of the beneficiary/recipient AppP and patient/theme companion phrase, both may be considered core since they are unmarked (i.e. not in a PP) in all eight languages.

Languages in the sample differ somewhat in how the benefactive AC interacts with voice. Seven of the eight languages allow benefactive applicatives in AV. Sundanese has a general constraint on ditransitive constructions, which must occur in PV for a majority of verbal bases. In the example in (13) below, the recipient is the subject and the theme is *balanjaan* 'shopping purchases'.

(13) Sundanese, Beneficiary AppP expressed as possessed NP (Truong fieldnotes)

- a. Icih ny-(c)okot duit.
 I. AV-take money
 'Icih took the money.' (BC)
- b. Indung di-pang-nyokot-keun balanja-an ku Udi.
 mother PV-APPL-take-APPL shopping-NMLZ by U.
 'Udi took the shopping purchases (in the house) for mother.' (AC)

When this construction occurs in AV, it is most often monotransitive with a theme or patient being selected as the P argument. If the beneficiary is overtly mentioned, it is most commonly expressed as the possessor of the theme or patient NP, which is shown in (14) below. Note that the beneficiary may also be unrealized when understood from context or overtly expressed as a PP (see Nasal examples in (20)–(21) below).

(14) Sundanese, Beneficiary AppP (Truong fieldnotes)

- Udi m-(p)ang-nyokot-keun balanja-an indung.
 U. AV-APPL-take-APPL shop-NMLZ mother
 'Udi took mother's shopping purchases (in the house for her).' (AC)

In examples like (14), the beneficiary is understood to be the same entity as that expressed by the possessor, likely resolved through pragmatic inference. While these possessive benefactive AC constructions are common cross-linguistically (Kittilä & Zúñiga 2010: 19–20), they have not been reported in other languages in our sample. They have been reported in at least one other western Indonesian language, Balantak (see van den Berg & Busenitz 2012: 100–101).

In AV constructions in Pendau, the recipient AppP and its companion phrase may occur in either post-verbal position, as in (15).

(15) Pendau, Recipient AppP (Quick 2007: 305)

- a. Nong-oli-a' io vea a'u.
 AV.RLS.SF.TR-buy-APPL 3SG rice 1SG
 'I bought him rice.' (AC)
- b. Nong-oli-a' vea io a'u.
 AV.RLS.SF.TR-buy-APPL rice 3SG 1SG
 'I bought him rice.' (AC)

In the remaining six languages in the sample, the recipient AppP occurs before the companion phrase in AV, as we saw in (9b).

The status of the beneficiary/recipient AppP in PV or passive constructions is not reported for Makasar, Toba Batak, or Salako. However, in the languages for which we can describe this property, the beneficiary/recipient AppP must be the subject, as in the examples from Nasal in (16) and West Coast Bajau in (17).

- (16) Nasal, Recipient AppP in PV
 anak=nyo di-sanik-kun Azma buwak.
 child=3SG PV-make-APPL A. snack
 'Azma made her children snacks.' (AC)
- (17) West Coast Bajau, Recipient AppP in PV and passive (Miller 2007: 278–280)
- a. Boi Ø-sembali emma'=ku kambing e ta' Saiman.
 CMPL PV-slaughter father=1SG.NSBJ goat DEM LOC S.
 'My father slaughtered the goat for Saiman.' (BC)
- b. Boi Ø-sembali-an emma'=ku Saiman kambing tu.
 CMPL PV-slaughter-APPL father=1SG.NSBJ S. goat DEM
 'My father slaughtered (for) Saiman the goat.' (AC)
- c. Saiman boi s<in>embali-an kambing le' emma'=ku.
 S. CMPL <PASS>slaughter-APPL goat LOC father=1SG.POSS
 '(For) Saiman was slaughtered a goat by my father.' (AC)

In both languages it does not appear to be possible for the patient companion phrase to be subject in either a PV or a passive construction (see Miller 2007: 280 for discussion of West Coast Bajau). In Pendau, either the AppP or the patient companion phrase may occur in the preverbal position, as in (18). In his description of these examples, Quick (2007: 291–292) states that the recipient AppP *io* 3SG is the subject whether it is in the preverbal subject position as in (18a) or the patient companion phrase is in the preverbal position as in (18b). It is unclear to us why this is the case.

- (18) Pendau, Recipient AppP in PV (Quick 2007: 292)
- a. io ni-po-gabu-a'='u vea
 3SG PV.RLS-ST.FA-cook-APPL=1SG.NSBJ raw.rice
 'I cooked rice for him/her.' (AC)
- b. vea ni-po-gabu-a'='u io
 raw.rice PV.RLS-ST.FA-cook-APPL=1SG.NSBJ 3SG
 'I cooked rice for him/her.' (Passive AC)

In Makasar, both arguments in transitive constructions are indexed on the verb, as in the BC in (19a). However, the maximum number of arguments indexed on the verb is two, and in ditransitive constructions, it is the A argument and the recipient that are indexed (Jukes 2020: 314–315). In the AC, the verb is suffixed with *-ang*, and the recipient/beneficiary AppP is indexed on the verb (but the patient/theme argument is not).

(19) Makasar, Recipient AppP (Jukes 2020: 314–315)

- a. ku=balli=i baju=a
1=buy=3 shirt=DEF
'I bought the shirt.' (BC)
- b. ku=balli-ang=ko baju.
1=buy-APPL=2FAM shirt
'I bought you a shirt.' (AC)

As mentioned in Section 2, arguments of the verb are commonly unrealized in the languages of the sample. In benefactive ACs, it is possible—and even common in the case of Ampenan Sasak—for the beneficiary/recipient AppP to be unrealized (Khairunnisa & McDonnell in prep). In such cases the benefactive meaning is still present in the clause. Consider the Nasal example in (20). Sundanese is the only other language that we know of where this is possible, the remaining five languages do not report this possibility.

(20) Nasal, Unrealized recipient AppP (McDonnell fieldnotes)

- Azma ny-(s)anik-kun buwak.
- A. AV-make-APPL snack
'Azma made snacks (for them).' (AC)

In Nasal and Sundanese benefactive ACs, it is possible for the beneficiary/recipient AppP to occur as an oblique PP even though the verb is suffixed with the benefactive applicative, as in Nasal in (21).

(21) Nasal, PP Recipient AppP (McDonnell fieldnotes)

- Azma ny-(s)anik-kun buwak gin anak=nyo.
- A. AV-make-APPL snack for child=3SG
'Azma made snacks for her child.' (AC)

Thus, it is possible for the beneficiary to occur in a PP with an applicative suffix on the verb, as in (21), or without an applicative suffix, as in (9a). In some sense, the double marking of the applicative and the preposition may call into question the applicative function of the suffix in such constructions. However, if the recipient argument is unmarked, the applicative suffix must be present, as in (9b), and if the applicative suffix is present but the recipient is unrealized, the AC must be interpreted as benefactive, as in (20).⁷ Taken together these properties provide evidence that these affixes indeed mark ACs.

⁷ Analogous constructions have been described at length in Standard Indonesian (see e.g. Cole & Son 2004).

5 Instruments and themes

Six of eight languages in our sample have an AC that licenses an instrument AppP: Toba Batak, Nasal, West Coast Bajau, Sundanese, Pendau, and Makasar. In all six languages in which instrumental ACs are attested, the applicative suffix used is the same as the one that licenses a beneficiary/recipient AppP.⁸ Instrumental ACs are not reported for Salako or Ampenan Sasak. The base verb in an instrumental AC is commonly transitive. Examples with base verbs meaning ‘to hit’, ‘to strike’, ‘to chop’, and ‘to buy’ are frequently found, but also attested are ‘to spear’, ‘to shoot’, ‘to scoop up’, ‘to pay for’, ‘to write’, ‘to make’, and ‘to kill’. Two examples are given below.

(22) Sundanese, Instrument AppP (Truong fieldnotes)

- a. Udi ny-(c)oel sambel maké témpé.
U. AV-scoop chili.sauce AV.use soybean.cake
‘Udi scooped up chili sauce using (a piece of) soybean cake.’ (BC)
- b. Udi ny-(c)oel-keun témpé kana sambel.
U. AV-scoop-APPL soybean.cake onto chili.sauce
‘Udi used (a piece of) soybean cake to scoop up chili sauce.’ (AC)

(23) Toba Batak, Instrument AppP (van der Tuuk 1971 [1864–1867]: 103)

- a. mangombak tanggurung ni horbo dohot indalu
AV.strike back of buffalo with rice.pestle
‘to strike the back of a buffalo with a rice pounder’ (BC)
- b. mangombak-kon indalu tu tanggurung ni horbo
AV.strike-APPL rice.pestle onto back of buffalo
‘to strike a rice pounder on the back of a buffalo’ (AC)

As seen in these examples, the companion phrase for an instrument AppP is typically a patient or goal (i.e., an endpoint of directed motion). In BCs, this patient/goal participant is the P argument. The instrument is realized as an oblique PP or adverbial phrase, if it is expressed.⁹ In Nasal, West Coast Bajau, and Toba Batak, it appears that instrumental ACs are exclusively monotransitive. Sundanese follows the same pattern with a single exception; when *-keun* is suffixed to *beuli* ‘buy’ the AC is ditransitive. As seen in the AC examples above, the instrument AppP is an unmarked core argument and the companion phrase is expressed as an oblique PP. Following Zúñiga & Kittilä (2019), we refer to these as *remapping* ACs because the companion phrase shows a change in coding compared to the BC.

⁸ In Sundanese, the *-keun* suffix marks instrumental ACs as well as benefactive ACs with certain verbs.

⁹ Instruments may also be expressed as the complement of the verb meaning ‘to use, to wear’, e.g. Sundanese *maké*. In some languages, this verb appears to be grammaticalized as a preposition.

In Pendau, all instrumental ACs are ditransitive and are only found in PV. In such constructions, the instrument AppP and the companion phrase are both considered core arguments, as in (24).

(24) Pendau, Instrument AppP (Quick 2007: 297–298)

- a. *Paee ro-sunung nijimo nu=uram.*
 rice PV.IRR-burn 3PL.NSUBJ INSTR=medicine
 ‘They burned (or smoked) the rice with medicine (for medicinal purposes).’
 (BC)
- b. *Uram ro-po-sunun-a’ nijimo paee*
 medicine PV.IRR-SF.INSTR-burn-APPL 3PL.NSUBJ rice
 ‘They burned (or smoked) the rice with medicine (for medicinal purposes).’
 (AC)

In the BC in (24a), the patient argument *paee* ‘rice’ is the subject. The instrument *uram* ‘medicine’ is expressed with the genitive case marker *nu=*, which also marks instruments. In the AC in (24b), the instrument AppP is the subject and the patient companion phrase is a postverbal core argument. The companion phrase does not receive any marking, which suggests that it is not oblique. In Makasar, it also appears that instrumental ACs are ditransitive (see Jukes 2020: 315–316), as in (25).

(25) Makasar, Instrument AppP (Jukes 2020: 316)

- anjo selek=a na=buno-ang=i bali=a*
 that kris=DEF 3=kill-APPL=3 enemy=DEF
 ‘He killed the enemy with that kris. (AC)’

In languages with instrumental ACs, it is not reported whether the instrument AppP has a special pragmatic status. However, in Sundanese, we find that the instrumental AC is preferred over the BC if the instrument represents salient or unexpected information; this is especially the case in PV, where the instrument AppP is the subject (see further discussion of the realization of AppPs as subject in Section 10 below).

In five of the six languages that have instrumental ACs—Toba Batak, Nasal, West Coast Bajau, Sundanese, and Makasar—the same applicative marker can also license a theme AppP, i.e. an entity which changes location in a directed motion event. No clear examples of theme AppPs are found in Salako, Pendau, and Ampenan Sasak (however, see the discussion below in Section 7, where the product of a bodily function verb may be considered a theme).

Instrument AppPs in these languages share semantic characteristics with themes, because instruments used for chopping, hitting, and similar actions are directed along a path of motion (see also Kroeger 2007). However, we note that this is not true for all bases; in ACs formed with verbs like ‘buy’ the instrument AppP (typically some type of currency) is not necessarily in motion. In these languages, we find multiple types of

constructions in which applicative marking coincides with a theme AppP. These are discussed below according to properties of the base verb. First, theme AppPs are found in ACs with transitive bases that describe an action of directed motion, e.g. ‘to pelt/throw (at)’, ‘to spray (at)’, ‘to shoot (at)’. The companion phrase in these cases is a goal which is expressed as the P argument of the BC. The theme in a BC is an oblique if it is expressed. ACs in which a theme is selected as an AppP are monotransitive and considered remapping, with the companion phrase expressed as an oblique PP. An example from West Coast Bajau is given in (26) with the verb *seput* ‘spray’. In the BC in (26a) the goal *using e* ‘the cat’ is the P argument, and no theme argument is expressed. In the AC in (26b), the theme *dalit* ‘venom’ is the AppP and is realized as core argument, while the goal companion phrase is expressed as an oblique PP with the locative preposition *ta’*.

(26) West Coast Bajau, Theme AppP (Miller 2007: 290)

- a. Using e ai Ø-seput soo dilaw.
 cat DEM PFV PV-spray snake yesterday
 ‘A snake sprayed the cat (with venom) yesterday.’ (BC)
- b. Ai Ø-seput-an soo dalit ta’ using e
 PFV PV-spray-APPL snake venom LOC cat DEM
 ‘A snake sprayed venom at the cat.’ (AC)

Van der Tuuk (1971 [1864–1867]: 104) describes a similar alternation in Toba Batak for verbs *mamodil* ‘to shoot with a gun (AV)’ and *mangultop* ‘to shoot with a blowpipe (AV)’. In both cases, the goal (i.e. the target of the shot) is the P argument. When suffixed with the applicative *-hon*, the AppP of “*mamodilhon* is the bullet or that which acts as such, as, for example, *inal* [‘wooden rod for shooting at birds’]”, and the AppP of “*mangultop-hon* is the arrow (*nakkat*)” (van der Tuuk 1971 [1864–1867]: 104). Van der Tuuk goes on to state that the AppP with these same verbs may be the instrument, i.e. a blowpipe and gun, respectively. The companion phrase in these ACs is the goal.

Second, theme AppPs are found in ACs with base verbs that describe an act of locomotion. Such ACs are found in Toba Batak and West Coast Bajau. In this type of AC, the theme is semantically similar to a comitative or causand. The base verb in such ACs may be intransitive or transitive, as illustrated below.

If the base verb is an intransitive locomotion verb, the AC is monotransitive, and the theme AppP is licensed as a core argument. For example, in Toba Batak, the verb suffixed with the applicative *makkabakkon* means ‘to fly away with (s.t.)’ and takes as a core argument the entity that is flown with (van der Tuuk 1971 [1864–1867]: 1977). This verb is formed by the addition of the AV prefix *maN-* and the applicative *-hon* to the intransitive verb root *habang* ‘to fly’.

If the base verb is transitive, the AC is monotransitive and considered remapping, with the theme AppP realized as a core argument and the companion phrase (a goal or path) expressed as an oblique PP. Examples are given from West Coast Bajau in (27) and (28).

(27) West Coast Bajau, Theme AppP (Miller 2007: 238)

- a. Aku boi n-(s)embet Azizy engko' surat.
 1SG CMPL AV-chase A. with letter
 'I chased Azizy with the letter.'
- b. Aku boi n-(s)embet-en surat e ta' Azizy.
 1SG CMPL AV-chase-APPL letter DEM loc A.
 'I rushed the letter to Azizy.'

(28) a. West Coast Bajau, Theme App (Miller 2007: 237)

- Ai Ø-keta Pirik suang e.
 PERF PV-cross P. river DEM
 'Pirik crossed the river.'
- b. Ai Ø-keta-an Pirik using e pe dembila' suang.
 PERF PV-CROSS-APPL P. cat DEM to.there across river
 'Pirik carried the cat across the river.'

Note that in (27b) the AppP, *surat e* 'the letter', is semantically similar to a comitative or causand. The meaning of (27b) is similar to 'I chased Azizy *with the letter*' or 'I caused *the letter* to chase Azizy.' Likewise in (28b), the AppP, *using e* 'the cat', is semantically similar to a comitative or causand. In the situation described in (28b), the agent crosses the river together with the cat and in doing so causes the cat to cross the river.

Third, the applicative suffix is also found on bases that normally select a theme as the P argument when the verb is unsuffixed. Thus, there is no change in the participant selected as P in the marked construction, however there is usually a semantic emphasis on the event as an act of directed motion. This type of construction is found with certain verbs of transfer in Sundanese, West Coast Bajau, Toba Batak, and Makasar e.g. 'send/send to', 'to give', 'to push'. For instance, with the Sundanese verb *surung* 'push', both the unaffixed form and the form suffixed with *-keun* take a theme as P. However, the applicative verb is only used if the event described is an act of directed motion. Consider the example in (29).

(29) Sundanese, Directed motion construction with *-keun* (Truong fieldnotes)

- a. Keur abi ulin ka lapang aya Pak Haji keur ny-(s)urung roda.
 while 1SG play to field exist mister Haji while AV-push cart
 'When I was playing at the field, Pak Haji was there pushing his cart.'
 (unmarked)
- b. Udi tos ny-(s)urung-keun mobil ka imah.
 U. already AV-push-APPL car to house
 'Udi is done pushing the car to the house (i.e. it is now at the house).' (marked)

In (29a), the unsuffixed verb *nyurung* is used because the act described does not direct the theme towards some endpoint.¹⁰ In (29b), the verb suffixed with *-keun* is used because the event represents an act of directed motion. The completive marker *tos* can only be used with this verb if the theme has already undergone the intended change in location. A similar example is given by van der Tuuk for the Toba Batak verb *tongos* ‘to send’. This verb may take a theme (e.g. *sorat* ‘letter’) as a core argument whether or not it bears the applicative suffix *-hon*, but the suffixed verb is preferred when directed motion is emphasized and a recipient or goal “is either stated or in the mind of the speaker” (van der Tuuk 1971 [1864–1867]: 104).

6 Goals, locations, and addressees

The applicative affix that licenses goals, locations, and addressees in the majority of languages differs from those that license the semantic roles discussed thus far (i.e. instruments, themes, beneficiaries, recipients). We refer to these as goal ACs. The only exceptions are West Coast Bajau and Ampenan Sasak, both of which have a single applicative suffix *-an*. Goal ACs occur on intransitive and transitive bases in seven of the eight languages. In Makasar, the goal applicative *-i* appears to only attach to intransitive bases, but Jukes (2020) does not explicitly state this restriction. Common intransitive bases to which the goal applicative attaches include some activity verbs (e.g. ‘swim’, ‘jump’), posture verbs (e.g. ‘sit’, ‘stand’), bodily function verbs (e.g. ‘cough’, ‘vomit’), and verbs of speaking among others. For all languages except for Makasar, transitive verbs include ‘put’, ‘pour’, ‘plant’, ‘teach’, and ‘pay’. Consider the examples from West Coast Bajau in (30)–(32).¹¹

(30) West Coast Bajau, Locative AppP (Miller 2007: 283)

- a. Sesok e ai pe-rekot ta' jing.
 house.lizard DEM PFV INTR-stick LOC zinc
 ‘The house lizard has stuck to the zinc.’ (BC)
- b. Ai Ø-rekot-on sesok jing e.
 PFV PV-stick-APPL house.lizard zinc DEM
 ‘The house lizard has stuck to the zinc.’ (AC)

¹⁰ The term *Pak Haji* refers to a distinguished man who has completed a religious pilgrimage.

¹¹ Miller (2007: 283) states that the suffix *-an* applies “vacuously” and is optional in the BC without any change in the argument or oblique (see Section 8 for discussion). Thus, in (31a), it is possible to use the *-an* suffix without any change in argument structure. However, in (31b), the ditransitive construction requires the applicative suffix *-an*.

(31) West Coast Bajau, Goal AppP (Miller 2007: 285, slightly modified)

- a. Ai Ø-enna'(-an)=ni gula' diam kupi'.
 PFV PV-place-APPL=3SG.NSBJ sugar inside coffee
 '(S)he put sugar in the coffee.' (BC)
- b. Ai Ø-enna'-an=ni kupi' e gula'.
 PFV PV-place-APPL=3SG.NSBJ coffee DEM sugar
 '(S)he put sugar in the coffee.' (AC)

(32) West Coast Bajau, Addressee AppP (Miller 2007: 286)

- a. "Buat-in do' aku bue' susu, too' bana kelong=ku
 make-PV.IMP EMPH 1SG water milk dry very throat=1SG.NSUBJ
 tu," Ø-bara'=ni m-aku.
 DEM PV-tell=3SG.NSBJ LOC-1SG
 "Make me some milk, I am very thirsty," she said to me.' (BC)
- b. Bila teko me-ruma' bara-an=ni emma'=ni
 when arrive LOC-house PV-tell-APPL=3SG.NSBJ father=3SG.POSS
 uun jomo mu' lawa' bana.
 exist person there beautiful very
 'When she arrived home, she told her father that there was a very handsome man there.' (AC)

In these examples, the locative in (30), goal in (31), and addressee in (32) are expressed in oblique PPs in the BC, but as the AppP, they are unmarked core arguments in the AC. In West Coast Bajau, the goal AC shows an increase in transitivity in each case compared to the BC. In Nasal, transitivity increases when the applicative attaches to intransitive bases and a limited number of transitive bases. Compare the examples of the transitive base *ajakh* 'teach' in (33) to *takhuk* 'plant' (34).

(33) Nasal, Goal AppP, valence-increasing AC (McDonnell fieldnotes)

- a. yo agi ng-ajakh baso Nasal khan anak=ku.
 3SG PROG AV-teach language Nasal with child=1SG.POSS
 'I am teaching Nasal to my child.' (BC)
- b. yo agi ng-ajakh-i anak=ku baso Nasal.
 3SG PROG AV-teach-APPL child=1SG.POSS language Nasal
 'I am teaching my child Nasal.' (AC)

(34) Nasal, Locative AppP, remapping AC (McDonnell fieldnotes)

- a. be-bibai-an n-(t)akhuk jagung di sawah.
 DISTR-woman-DISTR AV-plant corn LOC rice.paddy
 'The women planted corn in the rice paddy.' (BC)

- b. be-bibai-an n-(t)akhuk-i sawah khan jagung.
 DISTR-woman-DISTR AV-plant-APPL rice.paddy with corn
 'The women planted corn in the rice paddy.' (AC)

In the BC in (33a), P expresses what is being taught, while the goal companion phrase (i.e. the person being taught) is an oblique PP. In the AC, both the goal and the companion phrase are unmarked and the construction is ditransitive.

In the BC in (34a), P is expressed as a core argument and the location companion phrase (if it is expressed) occurs in an oblique PP. In the goal AC in (34b), the locative is expressed as an unmarked core argument while the companion phrase (if it is expressed) occurs in an oblique PP. Sundanese goal ACs are similar to Nasal. Some transitive bases result in a ditransitive AC, while others are considered remapping. However, it is unclear how transitive bases pattern when suffixed with a goal applicative in Salako and Toba Batak.

Pendau behaves similarly to West Coast Bajau in increasing transitivity in all goal ACs with the additional complication that the goal applicative suffix *-i* only increases the transitivity of transitive bases when it co-occurs with a stem-former prefix, which was mentioned in Section 2. The AC in (35) requires both the stem-former and the goal applicative *-i*.

(35) Pendau, Locative AppP with stem-former (Quick 2007: 301)

- a. bau 'uo ni-alap ni=kai ri=payangan.
 fish yonder PV.RLS-take PN=grandfather LOC=boat
 'The grandfather took the fish in the boat.' (BC)
- b. payangan ni-pong-alap-i ni=kai bau 'uo
 boat PV.RLS-SF.TR-take-APPL PN=grandfather fish yonder
 'The grandfather took the fish in the boat.' (AC)

Another exceptional example is found in Pendau where the AppP in goal ACs may also occur in a PP. According to Quick (2007: 300), this PP can even be the subject, evidenced by its preverbal position in (36).

(36) Pendau, Locative AppP in PP (Quick 2007: 300)

- ri=bongkarong='u ni-pong-soput-i='u
 LOC=hut=1SG.POSS PV.RLS-SF.TR-shoot-APPL=1SG.NSBJ
 'I shot (it) at/beside my hut.' (AC)

7 Other applied arguments

When applicative suffixes attach to intransitive bases, they often licence a P argument that takes on various semantic roles. Such transitivity ACs are common across all eight languages. In many cases, there is no clear monoclausal BC equivalent. To express the same semantic role in a BC, a subordinate clause or parallel clause often must be used.

With bases that describe acts of speaking and cognition, an applicative suffix commonly licenses a content AppP that is realized as the P argument. The referent of the AppP may be a topic, proposition, or reported speech. An example is given from Sundanese with the verb *carios* ‘talk’ in (37) below. Other examples include Toba Batak *mang-hata-hon* ‘to talk about’ from *hata* ‘word, talk’ (see Schachter 1984: 103) and Sasak *pikir-an* ‘to think about’ from *pikir* ‘to think’ (Khairunnisa & McDonnell in prep).

(37) Sundanese, Content AppP (Truong fieldnotes)

- a. Abi ny-(c)arios ka mama, “Ma, abi hoyong miliarian damel.”
1SG AV-talk to mother mom 1SG want AV.look.ITER work
‘I said to my mother, “Ma, I want to look for work.”’ (BC)
- b. Hayang urang kempel ny-(c)arios-keun pa-damel-an.
let 1PL gather AV.talk-APPL NMLZ-work- NMLZ
‘Let’s meet up and talk about the job.’ (AC)

A number of languages also show an applicative alternation with the verb meaning ‘to tell (a story)’. This is found in Salako, where *ba-curità* means ‘to tell (intr.)’ but *ny-(c)urità-?àtn* means ‘to tell (s.t.)’, and also in Sundanese, i.e. *ny-(c)arita* ‘to tell a story’ cf. *ny-(c)arita-keun* ‘to tell (s.t.)’, to tell about (s.t.)’. A similar derived verb is found in Makasar, i.e. *pau-ang* ‘to tell (s.t.)’ from *pau* ‘story’.

With verbs describing emotional states or responses, applicative suffixes commonly license a stimulus AppP that is realized as the P argument. This is found in Toba Batak, Nasal, Sundanese, Sasak, Pendau and Salako. In corresponding BCs in these languages, the stimulus may be realized as an oblique PP, as in the Salako example in (38) but in some cases there is no monoclausal equivalent to the AC as in the Sasak example in (39).

(38) Salako, Stimulus AppP (Adelaar 2005: 92)

- a. Berà sidi ià ka Ne? Kulup.
angry very 3 LOC PN K.
‘He was extremely angry at Kulup.’ (BC)
- b. Tarutama bapa?=e karas sidi m-(b)era-i? ià..
especially father-3.POSS hard very AV-angry-APPL 3
‘Especially his father got very angry at him. . .’ (AC) (Adelaar 2005: 86)

(39) Sasak, Stimulus AppP (Khairunnisa & McDonnell in prep)

- a. Ie takut.
3.SG afraid
'(S)he is afraid.' (BC)
- b. Ie takut-an berarak.
3.SG afraid-APPL spider
'(S)he is afraid of spiders.' (AC)

In Toba Batak, emotion verbs in this type of AC take the fossilized prefix *ha-* in addition to the applicative suffix *-i* on the verb as in *ma-tahut* 'to be afraid' > *mak-ka-tahut-i* 'to be afraid of (s.t.)' (van der Tuuk 1971 [1864–1867]: 134). In Sundanese, similar constructions require the use of the prefix *CVng-* (partial reduplication) which also indicates greater intensity, as in (40) below.

(40) Sundanese Stimulus AppP (Truong fieldnotes, based on Hanafi 1997: 22)

- a. Mariam ceurik lantaran indung=na maot.
M. cry because mother=3SG.POSS die
'Mariam cried because her mother died.' (BC)
- b. Mariam ny-(c)eung-ceurik-an indung=na.
M. AV-RDP-cry-APPL mother=3S.POSS
'Mariam cried intensely about her mother.' (AC)

In Sundanese, Makasar and Sasak, an applicative suffix licenses a P argument with intransitive base verbs describing bodily processes. Examples include Sasak *batok-an* 'to cough up (s.t.)' from *batok* 'to cough', Sundanese *utah-keun* 'to throw up (s.t.)' from *utah* 'to vomit', and Makassar *nata'-me-áng=i cera'* 'he is pissing blood' cf. *at-ta'-mea=i* 'he is urinating'. In such cases the AppP may be considered a type of theme. An example of an intransitive BC and a transitive AC with a bodily function verb is given below.

(41) Sundanese, AC with bodily function verb (Truong fieldnotes)

- a. Icih utah.
I. vomit
'Icih vomited.' (BC)
- b. Icih ng-utah-keun udang=na
I. AV-vomit-APPL shrimp=DEF
'Icih vomited up the shrimp.' (AC)

Applicative suffixes are also found on intransitive verbs of perception. For example, in Toba Batak, the intransitive verb *marnangi* means 'to have ears, to be able to hear' and the transitive applicative verb *manangikan* means 'to hear (s.t.), to listen to (s.t.)' (Van der Tuuk 1977:101). Van der Tuuk writes that the AppP of *manangihon* "is something to/for which one listens in order to catch it, either a distant sound, or a word

towards which one directs one's hearing" (1977:101). See Section 8 below for discussion of applicative suffixes used with an intensifying effect on transitive verbs of perception.

Van der Tuuk (1971 [1864–1867]: 103) also reports that Toba Batak *-hon* may license a P argument expressing a reason but does not give clear examples showing the clausal syntax of such constructions. However, ACs where the AppP expresses a reason are attested elsewhere in the region, as is the case in *Tukang Besi* (Donohue 1999) and *Bal-atank* (van den Berg & Busenitz 2012).

8 Morphological lookalikes

In western Indonesian languages we also find various cases in which the verb is marked with an applicative suffix, but no syntactic alternation or valency modulation can be identified in comparison to unmarked forms of the verb.

First, a number of verb roots only occur with an applicative suffix in predicative use. For instance, in West Coast Bajau the verb *sepak-an* means 'to kick (s.t.) backwards' but there is no non-suffixed predicate **sepak*, and *leba-an* means 'to set (s.t.) down' but there is no predicate **leba* (Miller 2007: 293). The Sundanese verb *alung-keun* means 'to throw (s.t.)', but there is no non-suffixed predicate **alung* (at least in some varieties). In these cases, which appear to result from lexicalization of root + affix, a theme participant is selected as P, and directed motion is part of the semantic meaning of the suffixed verb. Quick (2007: 288–289) writes that the Pendau verb *bagi* 'to give' does not occur without an applicative suffix. Quick shows that *bagi-i* with the goal applicative *-i* selects the theme as the subject in PV and the recipient as an additional core argument, while *bagi-a'* with the benefactive applicative *-a'* selects the recipient as the subject in PV and theme as an additional core argument.

Second, we find sets of related clauses in which the marked and unmarked clauses show no difference in argument structure or modulation in valency but instead come purely semantic difference in aspect, manner, or characteristics of the P argument.

The suffix that otherwise marks goal and locative ACs can indicate repeated, iterative, habitual or pluractional aspect without any change in argument structure. Aspectual effects of this type are found with Toba Batak *-i*, Salako *-i?*, Nasal *-i* and Sundanese *-an* (van der Tuuk 1971 [1864–1867]: 99–100, Adelaar 2005: 49–50). Aspectual effects are also attested in Makasar with *-i*, though this use is "most likely no longer productive" (Jukes 2020: 306).

Applicative suffixes can also mark intensive or careful action. This is found with transitive verbs of perception as in Salako *nanang-an* 'to watch, to look at (AV)' cf. *nanang* 'to see (AV)' (Adelaar 2005). In Toba Batak, *-hon* may be used without a change of argument structure but only intensive/emphatic meaning. Thus *pasak* means 'beat', and *pasak-kon* may mean 'beat with s.t.' (instrumental applicative function) or 'do beat s.t.' (intensive/emphatic function) (Nababan 1981: 70).

With certain verbs in Sundanese, the suffix *-keun* is associated with individuation or specificity of P. In the example given below, both *melak* and *melakkeun* mean ‘to plant’ and select the thing planted as the P argument. In (42a) the unsuffixed verb is used when the planting of rice is described in general. On the other hand, in (42b), the suffixed verb is used because the clause refers to planting of a more individuated referent, in this case, rice seeds which have been prepared by the farmer ahead of time.

- (42) Sundanese, Higher individuation of P (Truong fieldnotes, based on Kustian n.d.)
- a. M-(p)elak paré ayeuna mah di sawah, di-sebut=na ny-(s)awah
 AV-plant rice now PRT in rice.field PV-call=3SG AV-rice.field
 ‘Now planting rice in a paddy is called *nyawah* (making paddies).’
 - b. Saméméh m-(p)acul ilaharna patani sok sa-sadia-an binih
 before AV-hoe usually farmer go.ahead RDP-ready-CAUS seed
 paré heula. M-(p)elak-keun binih paré (gabah) di-sebut=na
 rice first AV-plant-APPL seed rice rice.grain PV-call=3SG
 tebar.
 make.rice.seedling
 ‘Before tilling the ground usually the farmer prepares rice seeds first. Planting the rice seeds (grains of rice) is called *tebar* (making rice seedlings).’

In Makasar, the verb *sare* ‘give’ is a ditransitive verb that takes three arguments. When the unsuffixed form of this verb is used, the theme is always indefinite, is not indexed on the verb, and may not be unexpressed; an example is shown in (43a) below. When the applicative suffix *-ang* is added to *sare*, the mapping of participant roles does not change; however there is a semantic difference in that the theme is definite; this is shown in (43b) below. There may also be a difference in syntactic properties of the theme argument, as it may now be unexpressed.

- (43) Makasar, Change in definiteness of the theme (Jukes 2020: 254)
- a. La=ku=sare=ko doe’
 FUT=1SG=give=2SG money
 ‘I’ll give you some money.’
 - b. La=ku=saré-ang=ko doek=ku
 FUT=1SG=give-APPL=2SG money=1SG.POSS
 ‘I’ll give you my money.’

A similar semantic effect is found in West Coast Bajau. The suffix *-an* is found on many bivalent and trivalent verbs in AV without a change in argument structure. Miller (2007: 293) analyses this by noting that “when the *-an*₁ suffix does occur, a specific/referential argument and/or a particular event is involved.”

Finally, lexicalized changes in verbal meaning are also frequently attested. For example, the Sundanese verb *béré* means ‘give’, while *béré-keun* means ‘to hand over’. For further examples and discussion of the semantic functions of applicative suffixes in western Indonesian languages see Truong & McDonnell (2022).

9 Applicatives combining with causatives and other affixes

In western Indonesian languages, causative constructions are typically formed by use of verbal prefixes and/or by use of the same verbal suffixes that mark applicatives. Productive causative prefixes are found in Toba Batak, Makasar and Pendau. In the first two of these three languages, causative prefixes may combine with applicative suffixes. However, in Pendau, it does not appear that causative prefixes freely combine with applicative suffixes.¹²

In Toba Batak, Van der Tuuk (1977:130) gives examples of verbs formed on transitive bases with *pa-* and *-hon* where it appears that *-hon* licenses a theme AppP, while *pa-* introduces a causer argument. Examples include *pa-pahat-ton* ‘to give (s.t.) to animals to eat’ from *pahan* ‘to eat’ and *pa-djudjuk-kon* ‘to give (s.t.) to someone to carry on the head’ from *djudjung* ‘to carry on one’s head’. However, note that *-hon* is also required to appear on certain other causative verbs formed with *pa-* in AV. These appear to be formed on intransitive or stative bases, and in such cases, the use of *-hon* does not have any licensing effect, e.g. *jóngjong* ‘to stand’ → *pa-jóngjong* ‘to make to stand (up), PV’ / *pa-jóngok-kon* ‘to make to stand (up), AV’ (Nababan 1981: 103).

In Makasar, the causative prefix *pa-* combines with both applicative suffixes *-ang* and *-i*. In some cases the applicative suffix licenses an additional definite argument, as shown in (44) below.

(44) Makasar, Causative + applicative (Jukes 2020: 290, 296)

- a. ku=pa-kanre=i bembé
 1=CAUS-eat=3 goat
 ‘I made/let him eat goat (meat).’
- b. ku=pa-kanre-ang=i bembé=a
 1=CAUS-eat-APPL=3 goat=DEF
 ‘I made/let him eat the goat.’

¹² However, see Quick (2007: 284) for one example in which *pa-* is analyzed as both a causative marker and a stem forming prefix when used with the applicative suffix *-a*’.

In other cases, it is difficult to tease apart the functions of the causative prefix and applicative suffix (see Jukes 2020: 295–297). Similar constructions are also found with the prefix *pi-* and the applicative suffixes in Makasar. The prefix *pi-* has a variety of functions; it forms causative constructions and “derives forms with meanings like ‘(examine/inspect/listen) carefully or intently’” (Jukes 2020: 299).

In all eight languages one or both applicative suffixes also forms causative constructions. The only applicative suffixes for which a causative function is not attested in the languages of the sample are Makasar *-ang* and Salako *-AN*. When the same suffix has both causative and applicative functions, the distribution of functions is largely determined by syntactic and semantic properties of the base. The use of such suffixes with stative base verbs and most intransitive dynamic base verbs commonly results in only the licensing of a causer argument. With transitive bases, and intransitive bases of certain semantic subclasses (e.g. speech, perception, emotion as described in the previous section), the use of such suffixes commonly results in the licensing of a non-A AppP. Additionally, with certain bases, a single suffix can apparently license both a causer and an AppP that is not a causand. An example is given from Sundanese in (45).

(45) Sundanese, Portmanteau use of *-an* (Truong fieldnotes)

- a. Cai hujan ng-(k)ucur=na ka solokan.
water rain AV-flow=3SG to gutter
‘Rain water flows to the gutter.’
- b. Icih ng-(k)ucur-keun cai kana gelas.
I. AV-flow-CAUS water into glass.
‘Icih poured water into a glass.’
- c. Gelas di-kucur-an cai ku Icih.
glass PV-flow-CAUS/APPL water by I.
‘The glass had water poured into it by Icih.’

Example (45a) shows that the base verb *kucur* ‘flow’ is intransitive without any suffix and takes a single S argument, *cai hujan* ‘rain water’. In example (45b), *-keun* has a causative function with *kucur*; the verb *ng-(k)ucur-keun* takes an A argument that expresses the causer *Icih*, and a P argument that expresses the causand *cai* ‘water’. On the other hand, in example (45c), the suffix *-an* with *kucur* has both a causative and applicative function. It licenses a goal AppP *gelas* ‘drinking cup’ realized as the subject, while the causand *cai* ‘water’ is realized as a core argument. In some languages, the licensing of a stimulus AppP with a base verb of perception or emotional states requires both an applicative suffix and another prefix. This was noted earlier for Toba Batak *ha-*, a fossilized prefix of unclear function, and Sundanese *CVng-*, an intensifier or simulfactive marker (see also the discussion of Makasar *pi-* in experiencer-oriented constructions above).

10 Applicatives and voice

ACs in the languages in the sample show few syntactic restrictions when combining with AV, PV, and passive voice morphology. In fact, throughout this chapter we have provided examples where the benefactive, instrumental, theme, and goal ACs occur in both AV and PV constructions in various languages. Even in Makasar, which has been described to have an asymmetrical voice system, applicative suffixes combine with the actor focus *aN*- and semi-transitive prefix *aN(N)*- (see Jukes 2020: 306). Furthermore, ACs freely combine with passive morphology in the languages that have a ‘true passive’ construction, as in Ampenan Sasak in (46).

- (46) Ampenan Sasak, Passive with Goal AppP (Khairunnisa & McDonnell in prep)
- a. Dengan tólóq babak bajur leq ramuan.
 people put bark bajur LOC potion
 ‘People put bajur tree bark in the potion.’ (BC)
 - b. Ramuan te-tólóq-an babak bajur siq dengan.
 potion PASS-put-APPL bark bajur by people
 ‘The tree bark was added to the potion (lit. made thing) by people.’ (AC)

In (46a), the BC is an A-oriented construction: A is the subject and the goal is expressed in an oblique PP. In the AC in (46b), the verb is prefixed with the passive marker *te*- and suffixed with the applicative *-an*. In this construction, the goal AppP is promoted to the subject position.

The only syntactic restriction we have noted thus far is in Sundanese where ditransitive constructions may occur in PV but not AV (see Section 4). In Pendau, Quick (2007: 304–305) notes that there are some roots that require the goal applicative *-i* in PV, as in (47a), but the same applicative cannot occur in AV, as in (47b). Quick even shows that it is ungrammatical *without* the applicative suffix *-i* in PV and ungrammatical *with* the applicative suffix in AV.

- (47) Pendau, voice restrictions on AC (Quick 2007: 304)
- a. palan ro-guntung-i=nyo
 lamp PV.IR-light-APPL=3SG.NSBJ
 ‘He/she will light the lamp.’
 - b. a’u mong-guntung palan
 1SG AV.IRR.SF.TR-light lamp.
 ‘I will light the lamp.’

A similar restriction is reported by Miller (2007: 192–193) for West Coast Bajau where the applicative suffix *-an* is required for some roots to occur in PV but are optional in AV. Such restrictions likely arise from the grammaticalization of a more general tendency for PV constructions to be higher in semantic transitivity where P (or the AppP in ACs)

is likely to be more highly individuated and affected in discourse. This is not to imply that applicatives do not occur in AV, but that there appears to be a correlation between PV and applicative affixes in at least some western Indonesian languages (see McDonnell 2016: 214–215). See also Donohue (2001) who shows that there is an overwhelming preference in *Tukang Besi* for AppPs to be subjects in discourse.

Despite a general lack of syntactic restrictions on voice in ACs across the sample, the combination of voice and applicative morphology allows a participant with a peripheral semantic role, such as a beneficiary, instrument, goal, or location among others to be the subject (see Davies 2005 for in-depth discussion of these points in Madurese). Further, it is well-known that subjects in western Indonesian languages are the syntactically privileged argument and thus play an important role in syntactic operations, such as relativization and focus (see e.g. Arka 2003, Riesberg 2014). In many of the languages of western Indonesia, such operations are restricted to the subject or at least core arguments.

In all eight languages, relativization is marked by a ‘gap’ in the relative clause, which is coreferential with the head noun, and in all but Makasar and West Coast Bajau the relative clause is introduced by some sort of linker or relativizer. With the exception of Ampenan Sasak, the ‘gap’ is restricted to the subject or in the case of Makasar a single argument in the clause (see below). In Ampenan Sasak, relativization is restricted only to core arguments (see Khairunnisa 2022: 84–87). Nasal provides a clear example of how voice and applicatives interact to allow peripheral semantic roles to head a relative clause. The examples in (48a) and (49a) demonstrate that when P is the head noun, the predicate in relative clause must be in PV. When the PV construction is marked with an applicative suffix, it is the AppP that is the head of the relative clause. In (48b), the predicate in the relative clause is suffixed with the goal applicative *-i*, and the goal AppP is the head noun. In (48b), the predicate in the relative clause is suffixed with the instrumental applicative *-kun*, and the instrument AppP is the head noun.

(48) Nasal, Instrument AppP in relative clause (McDonnell fieldnotes)

- a. tulis-an [sai di-tulis anak=ku jenu] kak ku=hapus.
 write-NMLZ REL PV-WRITE child=1SG.POSS earlier PFV 1SG.NSBJ=[PV]erase
 ‘I erased the writing that my child wrote (on the wall).’ (BC)
- b. sisai [sai di-tulis-i anak=ku jenu] kak
 wall REL PV-write-LOC.APPL child=1SG.POSS earlier PFV
 ku=bekhesih-kun.
 1SG.NSBJ=[PV]clean-CAUS
 ‘I cleaned the wall that my child wrote on.’ (AC)

(49) Nasal, Goal AppP in relative clause (McDonnell fieldnotes)

- a. manuk [sai ku=panggul jenu] lijung.
 chicken REL 1SG.NSBJ=[PV]hit earlier flee
 ‘the chicken that I hit earlier ran away.’ (BC)

- b. tungkuk [sai ku=panggul-kun khan manuk jenu] patuh.
 staff REL 1SG.NSBJ=[PV]hit-APPL with chicken earlier break
 ‘the staff that I used to hit the chicken broke.’ (AC)

In Makasar, relative clauses simply follow the head noun without a relativizer, but the end of the relative clause is typically marked with a clitic =*a* that marks definiteness. It appears that only the P argument in unmarked transitive clauses may be the head of the relative clause; when A is relativized, the verb is prefixed with the actor focus *aN*- or semi-transitive *aN(N)*- prefix (see Jukes 2020: 228). However, just as in Nasal, a peripheral semantic role may be the head of the relative clause when it is suffixed with an applicative, as in (50) where the locative AppP is the head noun and in (51) where the instrumental AppP is the head noun. These examples are analogous to Nasal examples in (48b) and (49b), respectively.

- (50) Makasar, Goal AppP in relative clause (Jukes 2020: 229)

sikola [na=mange-i=a agang=ku] baji'=i.
 school 3=go-APPL=DEF friend=1.POSS good=3
 ‘the school my friend goes to is good.’ (AC)

- (51) Makasar, Instrument AppP in Relative Clause (Jukes 2020: 229)

sele' [ni-buno-ang=a=i] tarang=i.
 kris PASS-kill-APPL=DEF=3 sharp=3
 ‘the kris he was killed with was sharp.’ (AC)

Aside from relativization, Jukes (2020: 311) points out that applicatives also allow peripheral semantic roles to be focused in Makasar, as in (52). In Makasar, arguments in canonical clauses occur after the verb, but arguments that occur in the preverbal position receive focus.

- (52) Makasar, Focused location AppP (Jukes 2020: 311)

tapper=e' ku=empo-i.
 mat=EC 1=sit-APPL
 ‘I sit on a mat.’ (AC)

West Coast Bajau has a similar focus construction that is restricted to subjects (Miller 2007: 206–207). In this construction, the subject occurs in the preverbal position and is focused, as in (53). In (53a), the P argument is the subject and thus can be focused in the preverbal position, but when the predicate is suffixed with the applicative *-an* the recipient AppP is subject and can now be focused, as in (53b). Miller (2007: 207) also demonstrates how non-subject arguments cannot be fronted in the same way. Again, with the combination of applicative and voice, peripheral semantic roles can be focused in this way because they are the subject.

(53) West Coast Bajau, Focused beneficiary AppP (Miller 2007: 206)

- a. Telumpa' e boi Ø-beli=ni ta' Kuzik.
 shoes DEM CMPL PV-buy=3SG.NSBJ LOC K.
 'She bought the shoes for Kuzik.' (BC)
- b. Kuzik boi Ø-beli-an=ni telumpa' e dilaw.
 K. CMPL PV-buy-APPL=3SG.NSBJ shoes DEM yesterday
 'She bought Kuzik the shoes yesterday.' (AC)

11 Conclusion

In this chapter, we have surveyed ACs in a sample of eight Austronesian languages of western Indonesia. While the affixes that mark ACs are polyfunctional with numerous non-applicative functions, the primary focus of this chapter is on the applicative uses of this morphology. Truong & McDonnell (2022) focus on many of the non-applicative functions.

- Each of the eight languages in the sample has between one and three verbal affixes that marks ACs.
- The majority of languages have two applicative suffixes: one that marks beneficiary, recipient, theme, and/or instrument AppPs and another that marks locative, goal and/or addressee AppPs. Outliers include West Coast Bajau and Ampenan Sasak which have a single suffix that either marks all four of these AppP (West Coast Bajau) or all but instrumental AppPs (Ampenan Sasak).
- ACs with benefactive/recipient AppPs generally only occur with transitive bases and result in an increase in the number of core arguments, such that these ACs are ditransitive.
- Instrumental ACs license an instrument AppP. In Pendau instrumental ACs are ditransitive, but in all other languages of the sample, instrumental ACs are monotransitive and the (patient or goal) companion phrase is remapped to an oblique phrase.
- Most languages with instrumental ACs also have theme ACs marked with the same affix. The two constructions share semantic similarities in that like themes, most instrument AppPs in these languages express an entity that is directed into motion. Theme ACs are generally monotransitive in the languages of the sample.
- Goals, locatives, and addressees are typically marked with the same applicative affix. The syntax of these goal ACs is more diverse than both benefactive and instrumental ACs. With some exceptions, goal ACs may occur on intransitive and transitive bases, and with transitive bases, may either increase the transitivity or remap the AppP and the companion phrase.
- When the applicative affixes that mark instruments, recipients, goals, and locations attach to intransitive bases, they also license AppPs expressing various other semantic roles, including content, stimulus, and product of bodily process. These construc-

tions result in monotransitive ACs. For many ACs of this type there is no monocalusal BC equivalent.

- The affixes that function as applicatives may also be morphological lookalikes. Constructions marked with these affixes may not license an AppP but instead have a purely semantic effect such as indicating repeated or pluractional aspect, greater intensity or properties such as individuation, definiteness, or specificity.
- In the languages of the sample, three of the eight languages have a separate productive causative prefix. In two of these languages the applicative markers and causative prefix can freely combine. In all languages of the sample, one or both suffixes that mark ACs can also mark causative constructions. In a number of ACs, both the applicative suffix and another prefix must appear on the verb. In some cases, these appear to no longer have semantic content.
- In western Indonesian languages, the subject plays an important role in syntactic operations, and the combination of voice and applicative morphology allows peripheral semantic roles, such as beneficiaries, instruments, goals, and locations to be the subject.

Abbreviations

1	first person
2	second person
3	third person
A	most agent-like argument of transitive clause
AGT	agent marker
AC	applicative construction
APPL	applicative
AppP	applied phrase
AV	voice in which A is the privileged syntactic argument
BC	base construction
BEN	benefactive
CAUS	causative
CMPL	completive
DEF	definite
DEM	demonstrative
DISTR	distributive
EC	echo VC (epenthetic syllable)
FA	factive (stem-former)
FAM	familiar
IMP	imperative
INTR	intransitive
IRR	irrealis
ITER	iterative
LOC	locative
NEG	negative

NMLZ	nominalizer
NSBJ	non-subject core argument
P	patient-like argument of transitive clause
PFV	perfective
PL	plural
PN	personal name marker
POSS	possessive
PROG	progressive aspect
PRT	particle
PV	voice in which P is the privileged syntactic argument
RDP	reduplication
REL	relativizer
S	Single argument of intransitive clause
SF	stem-former
SG	singular
STR	semi-transitive

References

- Adelaar, K. Alexander. 2005. *Salako or Badameá: sketch grammar, text and lexicon of a Kanayatn dialect in West Borneo* (Frankfurter Forschungen zu Südostasien Bd. 2). Wiesbaden: Harrassowitz.
- Arka, I Wayan. 2003. *Balinese morphosyntax: a lexical-functional approach* (Pacific Linguistics 547). Canberra: Pacific Linguistics.
- Austin, Peter. 2001. Verbs, valence and voice in Balinese, Sasak and Sumbawan. *La Trobe Papers in Linguistics* 11(3). 47–71.
- Chen, Victoria & Bradley McDonnell. 2019. Western Austronesian Voice. *Annual Review of Linguistics* 5(1). 173–195. <https://doi.org/10.1146/annurev-linguistics-011718-011731>.
- Cole, Peter & Min-Jeong Son. 2004. The argument structure of verbs with the suffix *-kan* in Indonesian. *Oceanic Linguistics* 43(2). 339–364. <https://doi.org/10.1353/ol.2005.0003>.
- Davies, William D. 2005. The richness of Madurese voice. In I Wayan Arka & Malcolm Ross (eds.), *The many faces of Austronesian voice systems: some new empirical studies*. Canberra: Pacific Linguistics.
- Donohue, Mark. 1999. *A grammar of Tukang Besi* (Mouton Grammar Library 20). Berlin; New York: Mouton de Gruyter.
- Donohue, Mark. 2001. Coding choices in argument structure: Austronesian applicatives in texts. *Studies in Language* 25(2). 217–254. <https://doi.org/10.1075/sl.25.2.03don>.
- Hanafi, Nurachman. 1997. *A typological study of Sundanese*. Bundoora: La Trobe University PhD Dissertation.
- Himmelman, Nikolaus P. 2005. The Austronesian languages of Asia and Madagascar: Typological characteristics. In K. Alexander Adelaar & Nikolaus P. Himmelman (eds.), *The Austronesian languages of Asia and Madagascar*, 110–181. (Routledge Family Language Series). New York: Routledge.
- Himmelman, Nikolaus P. & John U. Wolff. 1999. *Toratán (Ratahan)* (Languages of the world. Materials 130). München: LINCOM Europa.
- Jukes, Anthony. 2013. Voice, valence, and focus in Makassarese. In Alexander Adelaar (ed.), *Voice variation in Austronesian languages of Indonesia*. (NUSA 54), 67–84.
- Jukes, Anthony. 2020. *A grammar of Makasar: a language of South Sulawesi, Indonesia* (Grammars and Sketches of the World's Languages. Mainland and Insular South East Asia). Leiden; Boston: Brill.

- Khairunnisa. 2022. *Diathesis, grammatical relations, and clitics in ampenan sasak*. Honolulu: University of Hawai'i at Mānoa PhD dissertation.
- Khairunnisa & Bradley McDonnell. in prep. Polyfunctionality and productivity of the verbal suffix *-an* in Ampenan Sasak.
- Kittilä, Seppo & Fernando Zúñiga. 2010. *Benefactives and Malefactives: Typological perspectives and case studies*. Vol. 92 (Typological Studies in Language). Amsterdam: John Benjamins Publishing Company.
- Kroeger, Paul. 2007. Morphosyntactic vs. morphosemantic functions of Indonesian *-kan*. In Annie Zaenen, Jane Simpson, Tracy Holloway King, Jane Grimshaw, Joan Maling & Christopher D. Manning (eds.), *Architectures, rules, and preferences: Variations on themes of Joan Bresnan*, 229–251. Stanford, CA: CSLI Publications.
- Kroeger, Paul & Sonja Riesberg. 2023. Voice and transitivity. In Alexander Adelaar & Antoinette Schapper (eds.), *The Oxford Guide to the Malayo-Polynesian Languages of South East Asia*. Oxford; New York: Oxford University Press.
- Kurniawan, Eri. 2013. *Sundanese Complementation*. Iowa City: University of Iowa PhD dissertation.
- Kustian. n.d. *Nyawa*. <https://basasunda.com/nyawa/>.
- Laskowske, Douglas. 2016. *Voice in Bugis: An RRG Perspective*. Grand Forks: University of North Dakota MA thesis.
- McDonnell, Bradley. 2016. *Symmetrical voice constructions in Besemah: A usage-based approach*. Santa Barbara: University of California, Santa Barbara PhD dissertation.
- Miller, Mark. 2007. *A Grammar of West Coast Bajau*. Arlington: The University of Texas at Arlington PhD dissertation.
- Musgrave, Simon. 2001. *Non-subject arguments in Indonesian*. Melbourne: University of Melbourne PhD dissertation.
- Nababan, P. W. J. 1981. *A grammar of Toba-Batak* (Pacific Linguistics 37). Canberra, A.C.T.: Research School of Pacific Studies, Australian National University.
- Quick, Phil. 2007. *A grammar of the Pendau language* (Pacific Linguistics 590). Canberra: Pacific Linguistics.
- Riesberg, Sonja. 2014. *Symmetrical voice and linking in western Austronesian languages* (Pacific Linguistics 646). Berlin: De Gruyter Mouton.
- Schachter, Paul. 1984. Semantic-role-based syntax in Toba Batak. In Paul Schachter (ed.), *Studies in the Structure of Toba Batak*, (UCLA Occasional Papers in Linguistics 5), 122–149.
- Truong, Christina & Bradley McDonnell. 2022. Neglected functions of western Indonesian applicatives. In Sara Pacchiarotti & Fernando Zúñiga (eds.), *Neglected syntactic functions and non-syntactic functions of applicative morphology*. Berlin; Boston: De Gruyter Mouton.
- van den Berg, René & Robert L. Busenitz. 2012. *A grammar of Balantak, a language of Eastern Sulawesi* (SIL E-Books 40). SIL. <https://www.sil.org/resources/publications/entry/49492> (29 October, 2021).
- van der Tuuk, H.N. 1971 [1864–1867]. *A grammar of Toba Batak [Tobasche spraakunst]*. Trans. by Jeune Scott-Kemball (Translation Series, Koninklijk Instituut Voor Taal-, Land- En Volkenkunde 13). The Hague: Nijhoff.
- Wouk, Fay. 1984. Scalar transitivity and trigger choice in Toba Batak. In Paul Schachter (ed.), *Studies in the Structure of Toba Batak* (UCLA Occasional Papers in Linguistics 5), 195–219.
- Zúñiga, Fernando & Seppo Kittilä. 2019. *Grammatical voice* (Cambridge Textbooks in Linguistics). Cambridge; New York: Cambridge University Press.