Directed caused accompanied motion events in Sudest, an Oceanic language with classificatory verbs

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This chapter explores the expression of directed caused accompanied motion events (directed CAM) in Sudest, an Austronesian language of Vanatina and Yeina Islands, Papua New Guinea. Directed CAM expressions in Sudest typically involve a caused motion verb in combination with a directional element, which can be a directional verb, associated motion prefix, or deictic enclitic. In the majority of cases, the caused motion verb is selected from a set of verbs that can be described as 'classificatory verbs', a type of verbal classifier. The Sudest verbs mean 'get' and are selected based on properties of the object referent, including consistency, flexibility, fullness, and number. Sudest is unique among the Austronesian languages as it is the only attested language of the family that has verbal classifiers.

Keywords: Austronesian, Oceanic, Papua New Guinea, Milne Bay Province, the Massim, verbal classifiers, classificatory verbs, associated motion, directional verb, directed caused accompanied motion

1. Introduction

Sudest (Glottocode sude1239) is an Austronesian language spoken in Milne Bay Province, Papua New Guinea. It is an Oceanic language that belongs to the Nimoa-Sudest family of the Papuan Tip cluster (Lynch et al., 2002). The language is spoken by approximately 3,700 people on the islands of Vanatina (also known as Sudest or Tagula) and Yeina, some 320 kilometres from the Papua New Guinea mainland.[1]

1. Speaker numbers are based on total inhabitants of the islands taken from the 2011 census (Papua New Guinea National Statistical Office, 2014).

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This chapter investigates the semantic domain of directed caused accompanied motion (directed CAM) events in Sudest. Hellwig et al. (this volume) define such events as comprising four meaning components: motion, causation, accompaniment, and directness. Sudest does not possess mono-morphemic verbs like English *bring* and *take*, which lexicalize directed CAM events. Instead, the various components of a directed CAM event are distributed across the verb complex and, in some cases, across clauses. In contrast to the other languages discussed in this volume excluding Dëne Sųłiné (Hellwig & Jung, this volume), the majority of directed CAM expressions in Sudest are not built around one or two verbs but rather a set of classificatory verbs, all meaning 'get', onto which directional morphemes are added. Selection of a classificatory GET verb is based on properties of the referent of the object argument – the theme participant in the case of directed CAM events.

The chapter is organized as follows: § 2 discusses the data and methodology used to investigate directed CAM events in Sudest and § 3 introduces typological characteristics of Sudest and outlines grammatical information relevant to the discussion of directed CAM events. Sections 4 and 5 turn to the analysis of directed CAM expressions: § 4 describes the directed CAM expressions with classificatory GET verbs and § 5 outlines minor strategies for encoding directed CAM events. Section 6 then provides a summary of the frequencies of the different encoding strategies and, finally, § 7 presents concluding remarks.

2. Data and method

The present analysis is based on corpus data that includes narratives, procedurals, some conversational data, and stimuli tasks.[2] Stimuli data in the corpus were collected using the Family Problems Picture Task (Carroll et al., 2009), the PUT-TAKE task (Bowerman et al., 2004), and the CUT-BREAK task (Bohnemeyer et al., 2001). The majority of recordings come from speakers of the central dialect of Sudest spoken on the central north coast of Vanatina from Njenja village to Araetha village and in and around Pamela village on the south coast. The corpus was transcribed and translated in conjunction with native speakers using ELAN[3] (Wittenburg

2. The corpus was collected during fieldtrips to Vanatina between 2014 and 2016 with some additional elicitation data collected in 2017 and 2018 by telephone. All data were collected in the villages of Vuwo and Uyeuye on the central north coast of the island.

3. Max Planck Institute for Psycholinguistics, The Language Archive, Nijmegen, The Netherlands. Further information can be found at: https://tla.mpi.nl/tools/tla-tools/elan/.

et al., 2006) and Toolbox[4] and is in the process of being archived in The Language Archive.[5] The corpus contains nine and a half hours of time-aligned, transcribed, and interlinearized texts which equates to 9,246 intonation units.[6]

Directed CAM expressions were identified in the Sudest corpus by searching the gloss and English free translation tiers for translational equivalents and the text and interlinearized tiers for Sudest words and morphemes. Each directed CAM expression was then annotated in a dedicated tier in the corpus which noted both the verb stem(s) involved and morphosyntactic properties of the particular construction. In total, 88 directed CAM events were identified in the corpus. The analysis presented in this chapter is primarily based on the corpus data with supplementary elicitation evidence used where relevant.

3. Typological characteristics and grammatical background

Sudest has typical Oceanic SVO constituent order. It is predominantly head-marking and has nominative-accusative argument alignment. The S/A argument is obligatorily marked by a subject proclitic on the verb and the O argument can be optionally indexed on the verb by an object enclitic.[7] The verb complex has just under two dozen pre- and post-verbal slots (Sheppard, 2020). For the current investigation, relevant morphemes include associated-motion and manner-of-causation prefixes, causative and transitivizing morphemes, and directional enclitics.

This section provides an outline of the grammatical features that play a role in the expression of directed CAM events. The lexical core of the majority of directed CAM expressions are the classificatory verbs which are introduced in § 3.1. Spatial adpositions used to overtly mark goals, recipients, and sources are introduced in § 3.2. Section 3.3 introduces the verbal elements used to express directedness and § 3.4 outlines the manner-of-causation prefixes.

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4. https://software.sil.org/toolbox/

5. The corpus will soon be available at https://hdl.handle.net/1839/a67b355f-a22d-4e86-a95d-e41a2674e196.

6. Each text example reproduced in this chapter is cited by the text it comes from and the intonation unit. Stimuli tasks are labelled for the specific stimuli task (e.g., 'fp_stimuli' is the family problems stimuli task) and examples from elicitation are cited as 'e' for 'elicitation' with the date of recording. There is no intonation unit reference for elicitation data as the majority are not text-audio aligned.

7. =ø is used for clarity in examples with no overt indication of the object argument by an object index or lexical NP. The use of this convention does not indicate a presupposition that a zero marker is actually present.

3.1 Classificatory verbs

Classificatory verbs are a type of verbal classifier (Aikhenvald, 2000, p. 149).[8] They are a set of verbs in a paradigmatic relationship that alternate to 'classify the referent of a noun in S function (for intransitive verbs) or O function (in intransitive verbs)' (Kilarski, 2013, p. 40). Classificatory verbs are comparatively rare cross-linguistically (Aikhenvald, 2000, p. 153). Aikhenvald (2000, p. 153) identifies two types: verbs that classify the referent of S/O on the basis of inherent properties (e.g., animacy, consistency, flexibility, number, rigidity, shape) and verbs that classify the referent on the basis of its orientation or stance in space (e.g., standing, sitting, lying, hanging) and associated inherent properties (e.g., tall, strong, squat, weak, etc.). The first type of classificatory verbs is attested in a number of language families across North America (Hellwig & Jung, this volume; Mithun, 1999), while verbs of the second type, which categorize the referent of S/O based on orientation and associated properties, are found across a range of Papuan languages (Aikhenvald, 2000; Foley, 1986). The Sudest classificatory verbs, also referred to as 'GET verbs' in the following discussion, belong to the first type and categorize the referent of O based on its inherent properties. Sudest appears to be the only Oceanic language, or indeed Austronesian language, attested to have classificatory verbs (cf. Aikhenvald, 2000, pp. 153, 171).[9]

The classificatory function of some of the Sudest GET verbs was first noted by Anderson (1992) and Anderson and Ross (2002) and the current set of classificatory verbs are discussed in more detail in Sheppard (2020). The classificatory verbs are presented in Table 1.

There are ten GET verbs in total that group into seven semantic categories based on inherent properties of the referent of O (Sheppard, 2020). The categories of rigid entity, flexible entity, and container-and-contents each have two members which make a distinction for singular and plural referents. The categories of tools with handles, boats, and fire contain one verb stem each which are used with singular referents only. The final verb, *tako*, can be used with any type of plural referent

8. Classificatory verbs are usually included in typologies of nominal classification, e.g., Aikhenvald (2000, 2004), Fedden and Corbett (2017); Grinevald (2004), and Kilarski (2013). Grinevald (2000: 68), however, excludes them from her classification on the basis that they are "a covert lexical means of nominal classification" and are on par with selection criteria of 'non-classificatory' verbs such as English ingesting verbs (e.g., *eat* and *drink*).

9. Suppletive pairs of verbs that make a distinction for singular/plural subjects (for intransitive verbs) and objects (for transitive verbs) are attested in other Oceanic languages, including 'get' in Nimoa (Sheppard, 2020, p. 213) and 'take' in Sobei (Sterner & Ross, 2002, p. 178). However, such sets do not mark further distinctions based on other qualities of an argument referent.

Table 1. Sudest classificatory verbs

Singular obj.	Plural obj.	Object category
wo	*mban*	rigid entity (e.g., stones, trees, fruit and vegetables, empty bowls and pots, humans, most animals, some abstract nouns)
li	*langa*	flexible entity (e.g., cloth and clothing, leaves, paper, string, empty baskets)
thɨn	*bigi*	container and contents; contents in container; object with multiple parts (e.g., full baskets and pots, books, tables)
thagha		tools with handles (e.g., axe, adze, hammer)
yambi		boats (e.g., canoes, sailing canoes, and boats)
yengge		fire
	tako	general plural used for any group of two or more items

including ones that can also occur with the rigid entity, flexible entity, and plural container-and-contents stems. The rigid entity verbs *wo* and *mban* occur with the widest range of object referents and are labelled for the property shared by most but not all types of referents they occur with. The container-and-contents GET verbs are used both when the referent is a container with contents (e.g., a basket containing bananas) but also when talking about a referent that is known to be contained (e.g., bananas in a basket) that would otherwise occur with a different GET verb.

Examples (1) to (4) illustrate some of the distinctions shown in Table 1. When functioning as independent verbs, the GET verbs encode events in which an agent obtains a theme or, in some cases, already has physical possession of the theme (i.e., is already holding it). The GET verbs can be considered source-oriented verbs (cf. Margetts et al., accepted). This can be observed by the fact that locative adjuncts, when present, can only be read as having the semantic role of source, as in (1) and (4).[10]

(1) *ela=ma* *i=**thɨn**=a*[11] *buku=ma e* *tebol=ma vwata-e*
woman=DET 3SG=**GET.SG.CNTR**=YA book=DET PP table=DET top-3SG.POSS
'the woman gets the book from the table top' (cb_stimuli_101116 052)

10. All Sudest examples in this chapter are presented using the orthography set out in Anderson and Anderson (1991) which has been widely adopted by Sudest speakers. The voiced velar nasal /ŋ/ is written as *ng*, the voiced dental fricative /ð/ as *th*, the voiced velar fricative /ɣ/ as *gh*, and the mid central vowel/schwa /ə/ as *ɨ*. Superscripts for prenasalized, labialized, and prenasalized labialized consonants are written as ordinary letters (e.g., /^{m}b/ as *mb*, /m^{w}/ as *mw*, /^{ŋ}g^{w}/ as *nggw*). See Anderson and Ross (2002) for a description of Sudest phonology.

11. The function(s) of the enclitic *=ya* and its allomorph *=a* is currently unclear. Anderson and Ross (2002, p. 340) analyse *=ya* as a focus marker but its apparent phonological conditioning does not appear to support such an analysis.

(2) *i=**bigi**=nggi=ya* *buku=nggi=ma*
3SG=**GET.PL.CNTR**=3PL=YA book=3PL=DET
'she gets the books' (put_stimuli_191015_01_02 035)

(3) *ra=**thagha*** *kelumo*
1INCL=**GET.SG.TOOL** axe
'they get an axe' (sago_101214 013)

(4) *ma=ma* *mandumbunga=ma* *va* *ve=**yengge**=ø*
bird=DET k.o.bird=DET REM.PST 3SG.INT=**GET.SG.FIRE**=3SG
Rogha
place.name
'the bird, the mandumbunga bird, got it (fire) from Rossel Island'
(mandumbunga_061215 078–9)

Cross-linguistically, it is common for verbal classifiers to occur in expressions of handling and transfer (see, e.g., Aikhenvald, 2000; Hellwig & Jung, this volume; Kilarski, 2013; Mithun, 1999). In the corpus, GET verbs account for 12 percent of all verb stems. As well as occurring as independent verbs meaning 'get', the classificatory verbs also occur in many compound and multi-verb constructions that express events of handling and transfer (e.g., 'give', 'hang', 'put', 'send')[12] and directed CAM events for which they combine with directional verbs (§ 4.1).

3.2 Spatial adpositions

Goal and source participants can be overtly expressed by adjuncts, most frequently prepositional or postpositional phrases (PP). The two adpositions *e* and *we* are both used to encode adjuncts with the semantic roles of goal, source, or recipient. Examples (5) and (6) show the PPs headed by the preposition *e* 'to, from, with' with the semantic roles of source and goal respectively.

(5) *i=wo=ø* ***e*** ***mbwa=ko*** ***tine***
3SG=GET.SG.RIGD=3SG **PP** **water=DIST** **inside**
'she gets it (a fish) from the water' (mandumbunga_061215 028)

(6) *lolo=ko* *i=thin-kitho* *thiyo=ma* ***e*** ***umbwa=ma*** ***yangga***
person=DIST 3SG=GET.SG.CNTR-hang rope=DET **PP** **tree=DET** **branch**
'the person hangs the rope on the tree branch' (put_stimuli_231015 010)

The adposition *we* 'to, from, with' is analysed as an ambiposition as it can occur either before or after the lexical object of the PP (Libert, 2006). The ambiposition can take one of the pronominal object indexes which agrees with the number and

12. The GET verbs show signs of grammaticalization in some compound verbs with handling semantics in the form of semantic bleaching (Sheppard, 2020).

person of the object of the PP. It obligatorily takes object indexes when the object of the phrase is first or second person, but the object indexes are optional with third person objects when a nominal object is present. The ambiposition is most frequently used for PPs with the semantic role of recipient, as in (7) where it is used prepositionally, or for animate referents which have the role of source, as in (8) where it is used postpositionally.

(7) *umoru* *i=wo-giya* *bigi* ***we=ya*** ***wevo***
young.man 3SG=GET.SG.RIGD-give something **PP=YA** **young.woman**
'the young man gives something to the young woman' (dating_081015 081)

(8) *vethi=wo* *umu* ***Sabali*** ***une*** ***we=nggi***
3PL.INT=GET.SG.RIGD lime **place.name** **friends** **PP=3PL**
'they get lime from their Sabari friends' (kula_exchange_101214 026–8)

If an inanimate source or goal is expressed by a PP that does not take a nominal object, the ambiposition *we* 'to, from, with' is used rather than the preposition *e* 'to, from', as in (9).

(9) *i=wo* *gaeba* *i=wo-mban=a* *nggama=ma* ***we=ø***
3SG=GET.SG.RIGD wooden.dish 3PL=GET-put=YA child=DET **PP=3SG**
'she got a wooden dish (and) put the child in it' (crab_girl_081115 041–2)

3.3 Directedness

Directionality can be expressed by a directional motion verb (§ 3.3.1), an associated motion prefix (§ 3.3.2), and/or a directional enclitic (§ 3.3.2).

3.3.1 *Directional verbs*

Intransitive directional motion verbs play a large role in the expression of directed CAM events. The verbs encode the path of motion of the event. Table 2 lists common directional verbs. Of all the attested directional verbs, only *mena* 'come' encodes deictic motion (towards the deictic centre).

Table 2. Common directional verbs

mena	'come'	*ri*	'go (from)'
nja	'go down'	*ru*	'go in'
njaniya	'go down (from)'	*voro*	'go up'
njogha	'go back, return'	*vutha*	'arrive'
raka	'go (PL)'*	*vuva*	'go first, precede'
ranggi	'go out'	*wa*	'go'

* *Raka* 'go (PL)' can only occur with a plural subject unlike *wa* 'go' which occurs with both singular and plural subjects.

In directed CAM expressions, directional verbs occur with transitive verbs that encode caused motion, either in compound verbs (10) or multi-verb constructions in which the transitive verb and directional verb are separately inflected (11).

(10) *thambwa bigi-bigi va a=**mban-mena** iya=ke*
what/which RED-thing REM.PST 1SG=**GET.PL.RIGD-come** DEM=SPKR.PROX
e lo nggolo=ke
PP POSS.CLF2.1SG house=SPKR.PROX
'those things, I brought them into my house'
(child_and_giant_201015 115–6)

(11) *vethi=**mban**=a uye-uye i=**mena***
3PL.INT=**GET.PL.RIGD**=YA RED-pot 3SG=**come**
'they get empty pots, they come (to Vanatina)'
(kula_exchange_101214 035–6)

3.3.2 *Associated motion prefixes*

Associated motion (AM) morphemes introduce a motion subevent to the verbal predicate in which they occur and can be categorized by whether they indicate a motion event as occurring prior to, subsequent to, or concurrent with the main event expressed by the verb stem (Koch, 1984; Wilkins, 1991). In some cases, the AM morphemes also specify directionality of the motion sub-event, such as motion 'approaching', 'away', 'back' or 'towards the speaker' (Guillaume, 2016; Koch, 1984).

There are three AM prefixes in Sudest that distinguish prior, concurrent, and subsequent motion. Serial verb constructions with 'sequential' (Lynch et al., 2002, p. 47) or 'associated motion' (Cleary-Kemp, 2015, p. 134) semantics are widespread in Oceanic languages and are comparable to constructions with AM morphemes indicating prior motion (i.e., 'go and'). Associated motion markers in individual Oceanic languages are also discussed in several recent works, including Dryer (2013) on the Lemakot dialect of Kara, Meier (2020) on Mono-Alu and Schokkin (2021) on Paluai (see also Seifart, this volume, for discussion of AM morphemes in the South American language Bora). There is a cross-linguistic tendency for these morphemes to be historically derived from motion verbs used in serial verb constructions (Guillaume & Koch, 2017). In Sudest, the prior and subsequent prefixes are derived from the manner-specific motion verbs *ruku* 'run', and *yo* 'fly' respectively, both of which still function as independent verbs. The subsequent AM prefix *la-* 'and go' likely derives from the Proto-Papuan Tip verb **laqo* 'walk' (Schlossberg, 2012, p. 119) and may be historically related to the Sudest verb *longga* 'walk'.

The prior motion prefix *ruku-* 'go and (V)' expresses a motion event that occurs before the main event encoded by the verb stem and is directed towards the location where the main event takes place, as in (12).

(12) *nggora utowo va i=**ruku**-wo kin*
like stingray REM.PST 3SG=**go.and**-GET.SG.RIGD spear
'like Stingray, he went to get the spear' (feast_of_the_fish_271015 149)

The concurrent motion prefix *yo-* '(V) while going' encodes a motion event that occurs simultaneously to the event of the verb, as in (13) and (14). The motion subevent specifies concurrent motion in a direction. This can be observed in (14) in which the prefix combines with the classificatory GET verb *bigi* 'get (PL container-and-contents)' to express a motion in a direction, in this case *e market* 'to market'.

(13) *rumbu-nji=ko elisari mbe i=dage=engge we=nggi*
grandparent/child-3PL.POSS=DIST old.woman still 3SG=speak=just PP=3PL
*"hu=**yo**-utu-utu hu=nja=wo=na"*
2PL=**while.going**-RED-speak 2PL=go.down=thither=ADDR.PROX
'their grandmother, the old woman always tells them: "talk while you are going (and) you go down there"' (mandumbunga_061215 058–9)

(14) *thi=**yo**-**bigi** e market vethi=sel*
3PL=**while.going**-**GET.PL.CNTR** PP market 3PL.INT=sell
'they take them (baskets of produce) to market to sell'
(fp_stimuli_191015_07 157)

The subsequent motion prefix *la-* '(V) and go', shown in (15), encodes a motion event that occurs after the event expressed by the verb stem and is directed away from the location where the main event occurs.

(15) *wevo=ko va i=**la**-ghavatha*
young.woman=DIST REM.PST 3SG=**and.go**-dress
'the young woman dressed and went away (from the village)'
(bush_betelnut_011115 128–9)

Directed CAM interpretations arise frequently with the concurrent and prior AM prefixes (*yo-* 'while going', *la-* 'and go') when they combine with transitive verbs expressing a caused motion event, particularly with the GET verbs (§ 4.2). However, this is not the case for verb complexes with the prior AM prefix (*ruku-* 'go and') which does not give rise to a directed CAM interpretation because the motion event specified by the prefix occurs prior to the caused motion event encoded by the verb, as is illustrated by the example above in (12).

3.3.3 *Directional enclitics*

Deictic orientation of an event can be encoded by one of two directional enclitics: *=ma* 'hither (towards deictic centre)' and *=wo* 'thither (away from deictic centre)'. Such morphemes are common throughout the Oceanic languages and are

historically derived from deictic directional verbs in serial verbs (Ross, 2004, p. 301). The example in (16) shows instances of both enclitics in a passage of direct speech in which a grandmother instructs her granddaughters to go back to the watering hole and bring the strange man they found there back to her.

(16) *i=nga "hu=njogha=**wo** vohu=vanggu=**ma**=ø ra=thuwe=ø"*
3SG=say 2PL=go.back=**thither** 2PL.INT=lead=**hither**=3SG 1INCL=see=3SG
'she said "you go back thither to bring him back hither (to me), we (will) look at him"' (mandumbunga_02_181016 273)

The enclitic *=wo* 'thither' typically collocates with directional verbs (§ 3.3.1) and, consequently, is only attested with a directional verb in directed CAM expressions, as in (17).

(17) *thi=vanggu-ru=**wo**=ø e dibula*
3PL=lead-go.in=**thither**=3SG PP jail
'they lead him away into jail' (fp_stimuli_201015_04 033)

3.4 Manner-of-causation prefixes

Prefixes that specify the manner in which an action is carried out – thereby also often indicating the type of instrument used – are a common feature of the Papuan Tip languages (Bradshaw, 1982; Capell, 1943; Ezard, 1978;). It is generally accepted that the manner-of-causation prefixes,[13] like the directional enclitics, grammaticalized from verb stems in serial verb constructions (Bradshaw, 1982; Crowley, 2002; Ozanne-Rivierre & Rivierre, 2004; Verkerk & Frostad, 2013). In a number of Papuan Tip languages, some or all manner-of-causation prefixes have gone on to develop a causativizing function and sometimes completely lose their manner-of-causation sense (Bradshaw, 1982).

There are 15 manner-of-causation prefixes attested in Sudest (Sheppard, 2020, p. 191). The prefixes most frequently occur with verbs of breaking (18) and caused motion (19).

(18) *amala=ko i=**vo**-bebe=ya karot=ko e umbwa*
man=DIST 3SG=**by.spearing**-break=YA carrot=DIST PP stick/tree
'the man breaks the carrot with a stick (by stabbing)' (cb_stimuli_051016_02_02 074)

13. These are also often called 'classificatory' prefixes (Capell, 1943; Ezard, 1978) and sometimes 'instrumental' prefixes (Olson, 1992) in the Papuan Tip literature.

(19) *i=la-**vuri**-linggi-thavwi=ø*
3SG=and.go-**w.feet**-pour-accidentally=3SG
'she accidentally kicked it (a bucket) over and walked away'
(put_stimuli_231015 053)

The prefixes can also have a causativizing function with intransitive directional verbs while retaining their manner-of-causation sense. In (20), the addition of the prefix turns the motion verb into a caused motion verb.

(20) *wevo=ma* *i=**mwana**-ranggi=ya* *kup=ma*
young.woman=DET 3SG=**by.hand**-go.out=YA cup=DET
'the young woman takes out the cup with her hands'
(cb_stimuli_101116 016)

While the addition of a prefix to most types of directed CAM expressions is grammatical, either as a manner-specific causativizer with an intransitive verb or simply to specify the manner-of-causation with a transitive root, they do not play a major role in the expression of directed CAM in the corpus (see § 5.3 for a discussion of manner-of-causation prefixes in derived transitive verbs expressing directed CAM events).

Section 3 introduced the paradigm of classificatory GET verbs, and outlined ways of expressing directionality that are used when encoding directed CAM events in Sudest. It also presented the manner and valence-changing properties of the manner-of-causation prefixes. The next two sections turn to a discussion of directed CAM expressions. Section 4 describes constructions which involve the GET verbs, the most common type of directed CAM expressions in the language. Section 5 presents a discussion of minor strategies and verbs used in the encoding of directed CAM events.

4. Directed CAM expressions with classificatory verbs

The majority of directed CAM expressions in the corpus involve one of the classificatory GET verbs which encodes caused motion in combination with a directional element. Accompaniment is only implied in the majority of these constructions. Each construction, however, automatically includes specific information about the theme participant (e.g., number, rigidity, flexibility, fullness, emptiness, etc.) by way of the GET verb which is selected based on properties of the theme. These constructions make up approximately three quarters of all directed CAM tokens in the corpus (65 tokens or 73.9%).

The remainder of § 4 outlines the four types of directed CAM expressions involving GET verbs in the order of their frequency in the corpus: § 4.1 describes

constructions with directional verbs, § 4.2 describes verb complexes with the AM prefixes, and § 4.3 discusses verb complexes with directional enclitics. Finally, § 4.4 describes the relationship between GET verbs and manner of transporting themes.

4.1 Classificatory verbs with directional verbs

The most common types of directed CAM expressions consist of a GET verb and a directional verb. The GET verb and directional verb can either form one compound verb (§ 4.1.1) or be separately inflected multi-verb constructions (§ 4.1.2).[14]

4.1.1 *Directional compound verbs*

Compound verbs consisting of a GET verb followed by a directional verb account for a third of all directed CAM expressions in the corpus (28 tokens or 31.8%) and are the single most common encoding strategy used to express directed CAM events in the corpus. In GET-directional verb constructions, the GET verb expresses caused motion and the directional verb specifies the directionality of the event. Examples (21) and (22) illustrate this type of construction. In (21), the goal is not overtly marked but is retrievable from context while (22) includes a source PP.

(21) *thela ne i=yo na ve=**wo-njogha**-vara*
who FUT 3SG=fly and 3SG.INT=**GET.SG.RIGD-go.back**-really
la-ma boda=ko?
POSS.CLF2-1EXL.POSS relative=DIST
'who will fly and bring back our relative?' (bush_betelnut_011115 098)

(22) *kero thi=**bigi-ranggi**=ya ghaningga=ke e*
already 3PL=**GET.PL.CNTR-go.out**=YA food=SPKR.PROX PP
uma=ko tine
garden=DIST inside
'they already took the (contained) food out from the garden'
(fp_stimuli_201015_01 138)

The semantic component of accompaniment is generally not entailed but rather pragmatically implicated in these compounds and depends on the scale of the event. The implicature arises only when the distance scale of the caused motion is such

14. These constructions possibly constitute instances of nuclear-layer and core-layer serialization respectively. The term 'compound verb' is used over 'nuclear-layer serialization' here as not all contiguous verb-verb sequences satisfy generally accepted criteria for the identification of serial verb construction (e.g., the stem *ra* 'put' cannot function as an independent verb). Similarly, the term 'multi-verb construction' is used to be maximally inclusive as there are currently no clear formal criteria to support an analysis of core-layer serialization for these constructions.

that the agent has to move through space themselves. This is illustrated by the near-identical sentences in (23).

(23) a. *wevo=ma* *i=**thin-ru*** *le* *bogisi e*
young.woman=DET 3SG=**GETSG.CNTR.SG-go.in** POSS.CLF2 box PP
mbwanganggila tine
doorway inside
'the young woman puts her box in(to) the doorway'
(put_stimuli_191015_02_02 103–5)

b. *wevo=ma* *i=thin=a* *le* *bogisi*
young.woman=DET 3SG=GET.SG.CNTR=YA POSS.CLF2 box
*ve=**thin-ru*** *e* *nggolo mbwanganggila tine*
3SG.INT=**GET.SG.CNTR-go.in** PP house doorway inside
'the young woman gets the box (and) carries/takes it into the house's doorway'
(put_stimuli_191015_02_02 054–5)

The examples in (23a) and (23b) both describe caused motion events involving a box being taken through a doorway using the compound verb *thin-ru* 'get (SG container-and-contents)-go in', meaning 'put in(side)' or 'take in(side)'. The two sentences come from the same speaker describing two separate stimuli videos. In (23a), the speaker describes a non-accompanied caused motion event in which a woman stands just outside a doorway with a suitcase beside her; she picks up the suitcase, leans over, and places the suitcase just inside the doorway. In the second example in (23b), the speaker describes an identical situation but in this instance the agent picks up the suitcase and walks through the doorway and into the adjoining room while carrying the suitcase. Thus, whether a GET-directional construction encodes a directed CAM event or not is generally ascertained from contextual knowledge and is not entailed by the construction.

Unlike all other GET-directional verbs, compounds with the verbs *nja* 'go down' and *voro* 'go up' do exhibit a formal distinction between non-accompanied and accompanied caused motion expressions. Non-accompanied caused motion expressions that describe putting something down or up (e.g., placing something down or up on a shelf) obligatorily take the transitivizer *=nga* following the directional verb while accompanied caused motion expressions with these verbs do not take the transitivizer. The presence of the transitivizer does not increase the valence of the compound verb. The distinction between unaccompanied and accompanied caused motion events with the transitivizer and the two directional verbs is shown in (24) and (25). The transitivizer occurs with the two directional verbs in the sentences presented in (24a) and (25a) that describe non-accompanied caused motion events of putting a cup down on a table and lifting a leg up while seated but it is absent from the sentences in (24b) and (25b) that describe accompanied caused motion events that involve transporting a theme between villages.

(24) a. *elisari=ke* *i=**thɨn-njo=nga***[15]
old.woman=SPKR.PROX 3SG=**GET.SG.CNTR-go.down=TR**
ndeghɨ=ke *e* *ghamba* *ghanɨngga=ko* *vwata-ø*
cup=SPKR.PROX PP place food=DIST top-3SG.POSS
'the old woman puts the cup down on top of the table (lit. food's place)'
(put_stimuli_201015_01 160–2)

b. *amala=ko* *i=**wo-nja*** *iya* *ghena* *ngga=ko* *laghɨye*
man=DIST 3SG=**GET.SG.RIGD-go.down** DEM limestick ebony=DIST big
'the man takes the ebony lime stick down (to the village)'
(bwaindiya_151115 041–2)

(25) a. *lolo=ma* *i=yaku* *e* *chair=ma* *na*
person=DET 3SG=stay/sit PP chair=DET and
*i=**lɨ-voro=nga*** *gheghe*
3SG=**GET.SG.FLEX-go.up=TR** leg
'the person sits in a chair and lifts their leg up' (put_stimuli_231015 065)

b. *ve=**thɨn-voro*** *thari* *Nju*
3SG.INT=**GET.SG.CNTR-go.up** dance place.name
'he takes the dance up to Nju' (feast_of_the_fish_271015 013–14)

While intransitive stems require valence-increasing morphology in transitive compounds in some Oceanic languages (e.g., Saliba-Logea, Margetts, this volume), the fact that valence-increasing morphology is used in Sudest to specifically mark non-accompaniment in caused motion compounds is unexpected. As is the fact that it only occurs in compounds with *nja* and *voro* and not those with the other directional verbs.

All caused motion expressions with GET verbs are generally restricted to descriptions of events with non-self-moving themes. The theme can be human but only if it is physically manipulated, e.g. carried as in (21) above, manhandled (26), or led by the hand (27). In (21) above, a bird carries a woman on its back. Example (26) describes a series of pictures from a stimuli task involving police dragging a man into prison after arresting him.

(26) *mbanga=niye* *polis=ke* *thɨ=lawe=ø* *na* *i=mena* *e* *kot*
time/when=SP police=SPKR.PROX 3PL=catch=3SG and 3SG=come PP court
i=kot-vao=ke *thɨ=wo=ø*
3SG=attend.court-COMPL=SPKR.PROX 3PL=GET.SG.RIGD=3SG
*thɨ=**wo-ru**=wo=ø* *e* *prison=ke*
3PL=**GET.SG.RIGD-go.in**=thither=3SG PP prison=SPKR.PROX
'at that time, the police arrest him and he comes to court, he finishes court here, they (the police) get him, they take him into the prison'
(fp_stimuli_201015_02 176–80)

15. The open central vowel [a] in *nja* becomes the close-mid back [o] before the velar nasal *=nga*.

The example in (27) describes another stimulus picture, this time of a couple with a child walking on a path with the woman holding the child's hand.

(27) *thi=**wo-vutha*** *nggama=ke*
3SG=**GET.SG.RIGD-arrive** child=SPKR.PROX
'they bring the child/arrive with the child' (fp_stimuli_201015_01 110)

Events with more independently moving themes are typically expressed by the transitive verb *vanggu* 'lead' (§ 5.1).

4.1.2 *Directional multi-verb constructions*

Multi-verb constructions with separately inflected caused motion (CM) and directional verbs are the second most frequent type of directed CAM expression in the corpus with 24 tokens (27.3%). Of these, 21 of the tokens (or 87.5%) contain a GET verb in the caused motion verb slot and three tokens (12.5%) contain a verb that is not one of the classificatory verbs in the caused motion slot.[16] These constructions can be divided into two types that differ in the order of the two verbs: CM-directional multi-verbs and directional-CM multi-verbs. Of the 24 tokens of directed CAM multi-verbs, approximately two thirds (15 tokens or 62.5%) are CM-directional constructions and just under one third (9 tokens or 37.5%) are directional-CM constructions.

The first type of multi-verb construction mirrors the GET-directional compounds with a caused motion verb of acquisition – a GET verb in all save one token – followed by a directional verb. In the CM-directional multi-verbs, however, each verb is separately inflected as in (11) above and (28) and (29) below. While accompaniment appears to be only implied in these constructions, they only ever express accompanied caused motion events, unlike the GET-directional compound verbs that are used to express both non-accompanied and accompanied caused motion events.

(28) *i=**wo*** *wondeya na* *i=**vutha*** *e* *ghemba=ma*
3SG=**GET.SG.RIGD** possum and 3SG=**arrive** PP village=DET
'he gets a possum and arrives at the village' (couples_story_101214 017–8)

(29) *wo=li=ya* *nambe kero* *wo=**raka***[17] *e* *uma*
1EXCL=**GET.SG.FLEX**=YA basket already 1EXCL=**GO.PL** PP garden
'we got an empty basket and went to the garden'
(stone_cooking_251015 017–8)

16. The non-GET verb tokens are included here due to their similarity to the GET constructions and their relatively low frequency in the corpus.

17. The verbs *wa* 'go' and *raka* 'go (PL)' only occur in separately inflected multi-verb CAM expressions and do not occur in compound verbs.

The caused motion verb in these constructions is not necessarily restricted to a GET verb. It can, instead, be another verb of acquisition as shown by the use of *kosi* 'catch (fish)' in (30). Nevertheless, it is uncommon and this is the only token of a CM-directional multi-verb without a GET verb that expresses a directed CAM event in the corpus.

(30) *a=**kosi**=ya bwarogi=ma a=**njogha**=ma e ghemba*
1SG=**catch(fish)**=YA fish=DET 1SG=**go.back**=hither PP village
I catch fish, I come back to the village' (fishing_20150710 011–2)

In the second type of CAM multi-verb construction, the directional verb precedes the verb which expresses a placement event. Again, the majority of tokens (seven out of nine) involve a GET verb which occurs in a compound verb meaning 'put' with the stem *ra*.[18] Like the CM-directional multi-verbs, the directional-CM constructions are only attested expressing accompanied caused motion events and never non-accompanied caused motion events. Examples of this construction are given in (31) and (32). As illustrated in (31), it is common for the directional verb to be preceded by a predicate describing the acquisition of the theme with a GET verb.

(31) *…ko iya ndi̱ghe=ko ma=ma mandumbunga va*
but DEM fire=DIST bird=DET k.o.bird REM.PST
*ve=yengge=ø Rogha na i=**vutha***
3SG.INT=GET.SG.FIRE=3SG place.name and 3SG=**arrive**
*i=**yengge-ra**=ø e ndamwa*
3SG=**GET.SG.FIRE-put**=3SG PP leaf
'…but that fire, the Mandumbunga got it (fire) from Rossel Island and arrived (at Vanati̱na), she put it (the fire) on the leaf'
(mandumbunga_061215 078–80, 215.500 224.570)

(32) *i=**mena** i=**thi̱n-ra**=ø we=ø*
3SG=**come** 3SG=**GET.SG.CNTR-put**=3SG PP=3SG
'he comes (to the cave), he puts it (a pot of food) there'
(child_and_giant_201015 052–3)

The 'put' compound verb in these constructions can also be replaced by other verbs of placement. There are two tokens in the corpus that use the verb *thithi* 'insert' instead, as illustrated by example in (33). Like the example with *kosi* 'catch (fish)' above in (30), these tokens are not nearly as common as directional-CM constructions with a GET-put compound.

18. The stem *ra* cannot function independently and only occurs in compound verbs following a transitive verb which is most frequently a GET verb (Sheppard, 2020, pp. 280–283).

(33) *i=nji-nggɨla* *iya=na* *ma* *i=**mena***
3SG=by.hand-break DEM=ADDR.PROX already 3SG=**come**
*i=**vo-thithi**=ø* *e* *baba=ko*
3SG=**by.spearing-insert**=3SG PP wall=DIST
'he broke it (a flower) with his hands, he came and poked it in the wall'
(mandumbunga_02_181016 091–2)

4.2 Classificatory verbs with associated motion prefixes

The classificatory GET verbs also combine with the concurrent and subsequent associated motion (AM) prefixes in directed CAM expressions. These constructions are the third most common directed CAM expression in the corpus (13 tokens or 15%) following compound and multi-verb constructions with GET.

The GET verbs combine with the concurrent AM prefix *yo-* 'while going' to encode CAM events in a direction, as in Example (14) above. Such predicates are generally translated as 'carry' or 'take (something somewhere)'. They describe an event in which the agent is already physically holding the theme, rather than a series of events involving first getting then taking the theme somewhere. Because the AM prefixes specify motion of the agent, accompaniment is entailed. The concurrent prefix specifies motion in a direction. This is evidenced by the fact that locative adjuncts that occur with these constructions can only be interpreted as a goal, as in (14) above and (34) below.[19]

(34) *amba=ma* *i=**yo-tako**=nggi* *e* *mbwa=ko* *tɨne*
then=DEM 3PL=**while.going-GET.PL.GNRL**=3PL PP water=DIST inside
'then he takes them (a group of youths) to the water'
(funeral_feasting_081015_02 068)

When there is no overt expression of a goal in clauses with *yo-*GET, the specific goal is usually retrievable from the wider context. In (35), the speaker describes trade practices between islands; the implied goal of the CAM expression in the second clause is the same as the goal in the previous clause.

19. Generally, CAM events with animate themes encoded by expressions with GET verbs involve some kind of physical force on the theme by the agent. The example in (34) is the only token in the corpus in which physical force is absent. In this instance, an old man is taking a group of youths to participate in a cleansing ritual and while he is likely not physically leading them, he does have considerable influence due to his relative age and position as leader of the ritual.

(35) *methɨ=wa Saisai=ko methɨ=**yo-bigi**=ya*
3PL.IMM.PST=go place.name=DIST 3PL=**while.going**-GET.PL.CNTR=YA
ghanɨngga yambiya tobotobo mbombo
food sago greenstone.axe pig
'they went to the Calvados Chain Islands, they took food, sago, greenstone axes (and) pigs' (kula_exchange_101214 021–5)

The subsequent AM prefix *la-* 'and go' is also used to express directed CAM events when it occurs with a GET verb. In these constructions, caused motion and accompaniment are only implied rather than entailed. The prefix expresses motion of the agent away from the previous location and, by extension, it can be used to express a directed CAM event from a direction. In (36), the speaker describes people getting supplies before leaving to trade for ceremonial goods with other islands. The use of the subsequent AM prefix specifies that after the agents get their possessions, they will be going away with them.

(36) *amba=ma thɨ=**la-mban**=a le-nji*
then=already 3PL=**and.go**-GET.PL.RIGD=YA POSS.CLF2-3PL.POSS
bwadɨbwadɨ le-nji bunama=nggi
coconut POSS.CLF2-3PL.POSS ceremonial.coconut.oil=3PL
le-nji nambo-nambo=nggi
POSS.CLF2-3PL.POSS RED-basket=3PL
'they get their coconuts, ceremonial coconut oil and baskets and go (to trade)' (funeral_feasting_081015_02 093–6)

The example in (37) describes an event in which a person picks up a book that was lying on the ground and walks away. In this instance, the prefix *vi-* 'with fingers' also specifies the manner of causation.

(37) *buku=ma i=ghena-ghena lolo=ma i=mena na*
book=DET 3SG=RED-sleep person=DET 3SG=come and
*i=**la-vi-thɨn**=ø*
3SG=**and.go-w.fingers**-GET.SG.CNTR=3SG
'a book is lying (on the floor), a person just comes and picks it up with their fingers and goes' (put_stimuli_231015 055)

4.3 Classificatory verbs with directional enclitic

In the final type of directed CAM expression with a GET verb, the classificatory verb combines with the directional enclitic *=ma* 'hither (towards deictic centre)' to express a CAM event directed towards the speaker.[20] Typically, the speaker is not overtly marked by a PP in GET=*ma* constructions. As with the GET-directional compounds (§ 4.1.1), accompaniment is implied not entailed; if the distance scale of the caused motion event is large enough that the agent moves along with the theme, it is an accompanied caused motion event. There are three tokens of this construction in the corpus that express a CAM event in a direction, shown in (38) and (39).[21]

(38) *i=nga* *"Ebeutu* *u=**wo**=**ma***
3SG=say pers.name 2SG=**GET.SG.RIGD**=**hither**
lou-n=na […] *u=**wo**=**ma***
sibling.opp.sex-2SG.POSS=ADDR.PROX 2SG=**GET.RIGDSG**=**hither**
gha-n *u=na"*
POSS.CLF1-2SG.POSS friend=ADDR.PROX
'she said "Ebeutu, you bring your brother to me […] bring your friend to me"'
(crab_girl_081115 057–69)

If there were no directional enclitic in (39), the verb complex would still express a directed CAM event due to the presence of the subsequent AM prefix *la-* 'and go'. It would, however, express a CAM event *from* a direction (i.e., 'get X and go'). The inclusion of the directional enclitic in (39) means that the verb complex expresses a CAM event *in* a direction followed by a motion event away from the goal location of the directed CAM event (i.e., 'bring X hither (to me) and go').

(39) *wo=u=la-nde-**thin**=**ma**=engge* *lo*
HORT=2SG=and.go-stand.and-**GET.SG.CNTR**=**hither**=just POSS.CLF2.1SG
plastik
plastic.bag
'just stand and bring my plastic bag to me on your way past' (c_031116 064)

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20. As noted in § 3.3.3, the second directional enclitic, *=wo* 'thither' is only attested following directional verbs in directed CAM expressions and does not directly combine with the GET verbs (but it can be added to GET-directional compounds, see (26) above).

21. The low number of GET=*ma* tokens is likely an artefact of the corpus which contains mainly monologic texts with limited direct speech.

4.4 Manner of causation and classificatory verbs

Directed CAM expressions with GET verbs do not entail information about the manner in which the theme is transported. However, the GET verbs are selected based on properties of the object referent. Because there are culture-specific ways that certain types of referents are expected to be carried, CAM expressions with GET verbs do appear to imply the manner of carrying in some cases. Like many Oceanic languages, Sudest has several manner-specific 'carry' verbs (§ 5.2) but it does not have 'carry' verbs that specify carrying in the hands, both arms, or carrying on the head – carrying methods often lexicalized in such verb sets (Ross, 2016, p. 433). Instead, when explicitly asked about caused accompanied motion events that involve carrying in the hands, arms, or on the head, speakers produce predicates with the concurrent AM prefix (§ 4.2) or CM-directional multi-verbs with a GET verb (§ 4.1.2) like the ones presented below in (40) to (42).[22]

(40) *nggama=ko i=**yo-li**=ya ndiya=ko ndamwe*
child=DIST 3SG=**while.going-GET.SG.FLEX**=YA mustard=DIST leaf
bubu we
grandparent/child REP
'the child carries the mustard leaf to her grandmother in her hands'
(e_161116_01)

(41) *a=**yo-wo** nggama=ke e nggolo*
1SG=**while.going-GET.SG.RIGD** child=SPKR.PROX PREP house
'I carry the child to the house in my arms' (e_081116_01)

(42) *wanakau=ma thi=**bigi**=ya le-nji*
young.women=DET 3PL=**GET.PL.CNTR**=YA POSS.CLF2-3PL.POSS
*nambo-nambo na thi=**wa** e sikulu*
RED-basket and 3PL=**go** PP school
'the girls carry their basket to school on their heads (lit. the girls get their baskets and go to school)' (e_071116)

In the elicited examples shown above, the combination of a type of object referent and GET verb appears to produce a strong enough implicature about the manner of carrying that speakers do not have to further specify manner, through e.g. the addition of a manner-of-causation prefix or PP. Importantly, the manner of causation is only implied and not entailed in these expressions, as evidenced by examples with the container-and-contents GET verb *bigi* in (14) and (35) which describe situations involving carrying in the arms and transporting by boat while in (42) it is used to specify head-carrying.

22. The free translations in (40) to (42) reflect the original elicitation questions which all specified manner-of-causation.

5. Minor directed CAM expressions

The remaining constructions only play a minor role in the expression of directed CAM events in the corpus and account for under a quarter of all directed CAM tokens in the corpus (20 tokens or 22.7%). The majority of the verbs that occur in these minor strategies entail manner of caused motion. They include *vanggu* 'lead' (§ 5.1) and 'push', 'pull', and 'carry' verbs (§ 5.2). The final type of expression combines directional verbs with valency-changing morphology (§ 5.3).

5.1 *Vanggu* 'lead'

Expressions with *vanggu* 'lead' are the most common type of directed CAM expressions (12 tokens or 13%) that do not involve a GET verb. As noted in § 4.1, the verb only takes self-moving themes.[23] *Vanggu* and the GET verbs occur in similar types of constructions to express directed CAM events, including compound and multi-verb constructions with directional verbs and with the directional enclitic *=ma* 'hither'. In contrast with the GET verbs, *vanggu* 'lead' can encode a CAM event in a direction even without combining with any additional directional morphemes. This is exemplified by (43) in which the goal of the event is overtly marked by a PP.[24]

(43) *gha-nda* *ra-vanggu-vanggu* *thi=mena* *thi=**vanggu**=inda*
POSS.CLF1-1INCL.POSS AG-RED-lead 3PL=come 3PL=**lead**=1INCL
e *garowo=ko*
PP shore=DIST
'our ancestors come (and) lead us to the shore' (engginas_story_231016 019)

In (44) the goal is not overtly marked but is retrievable from information provided in the following clause as the place the agent takes the child to sit down. As discussed in § 4.1, an event like leading a child by the hand would typically be described by an expression involving a GET verb with a directional element and this token with the manner-of-causation prefix *mwana-* 'by hand' and *vanggu* is therefore unusual.

(44) *i=**mwana-vanggu*** *nggama* *thi=yaku* *we=ø*
3SG=**by.hand-lead** child 3PL=stay/sit PP=3SG
'he leads the child by the hand, they sit there' (fp_stimuli_201015_01 155–6)

23. In the current data sample, the verb only occurs in expressions with human themes and it is unclear whether other non-human animates could also occur with *vanggu*.

24. This contrasts with clauses with a simplex GET verb and locative PP which is always read as a source.

Example (45) shows two directed CAM expressions with *vanggu*. In the first, directionality is specified by the enclitic *=ma* 'hither', while the second expression comprises a directional compound verb with *vanggu* that also takes the directional enclitic.

(45) *i=nga "wo=vohu=**vanggu=ma**=ø wo=ra=thuwe=ø" thi=wa na*
3SG=say IMP=2PL.INT=**lead=hither**=3SG IMP=1INCL=see=3SG 3PL=go and
*vethi=**vanggu-voro=ma**=ø*
3PL.INT=**lead-go.up=hither**=3SG
'she said "lead him to me, we (will) look at him" they went and lead him up (to her/the village)' (mandumbunga_02_181016 278–80)

Example (46) shows another example of a directional compound with *vanggu*, this time expressing a CAM event from a direction with directional verb *ranggi* 'go out'.

(46) *polis thi=**vanggu-ranggi**=ya umoru=ma ina-ø e*
police 3PL=**lead-go.out**=YA young.man=DET location-3SG.POSS PP
sel tine
cell inside
'the police lead the man out from inside the cell' (e_261117)

The example in (47) shows the final type of directed CAM expression with *vanggu* which is a multi-verb construction identical to the directional-CM constructions described in § 4.1.2. The key difference between that construction and the one in (47) is that the compound verb expressing a 'put' event includes *vanggu* instead of one of the GET verbs. *Vanggu* is used in this instance because the speaker is describing a scenario in which a man is ascending a building with his wife who is self-moving and 'puts' her at the top of the building before leaving her there.

(47) *i= **voro** i=**vanggu-ra**=ø we=ø*
3SG=**go.up** 3SG=**lead-put**=3SG PP=3SG
'he goes up (and) puts her there' (mandumbunga_02_181016 523)

5.2 Manner-specific verbs of caused motion 'push', 'pull', and 'carry'

While there are a number of verbs attested in Sudest that mean 'push', 'pull', and 'carry', these manner-specific verbs are not commonly used in directed CAM expressions. Those that do occur in directed CAM expressions account for just 7.9% (7 tokens) of all tokens in the corpus. Furthermore, these verbs are only attested in CAM expressions that are compound and multi-verb constructions with directional verbs. Directed CAM events of pushing and pulling can also be expressed by directional motion verbs in combination with the manner-of-causation prefixes, these constructions are discussed in § 5.3.

The verbs *vewo* 'push' and *momodɨ* 'pull' occur in just one directed CAM expression each in the corpus.[25] Like many of the expressions already discussed, whether clauses with the two verbs express a non-accompanied or accompanied caused motion event depends on the scale of the event described. The majority of tokens with these verbs express non-accompanied caused motion events. Example (48) shows the only token of *vewo* 'push' in a directed CAM expression in which it combines with *ranggi* 'go out' in a compound verb. The verb *vewo* 'push' takes an obligatory manner-of-causation prefix which in this case is *mwana-* 'by hand'.

(48) *lolo=ma me=ranggi e truk=ma tɨne i=nja na*
person=DET 3SG.IMM.PST=go.out PP truck=DET inside 3SG=go.down and
*i=**mwana-vewo-ranggi**=ya kontaina e to*
3SG=**by.hand-push-go.out**=YA container PP outside
'the person goes out from the truck, bends down and pushes a container out (from the truck) with their hands' (put_stimuli_231015 120–2)

The verb *momodɨ* 'pull' occurs in two identical directed CAM tokens in the corpus, one of which is given in (49). Instead of a directional compound like the token with *vewo* 'push' above, *momodɨ* 'pull' occurs in a directional multi-verb construction with *wa* 'go'.

(49) … *amba ma mwata Linggiya i=**momodɨ**=va mwata Enauwa*
then already snake place.name 3SG=**pull**=REP snake place.name
*na thɨ=**wa** Linggiya*
and 3PL=**go** place.name
'…then Linggiya snake pulled Enuana snake again and they went to Linggiya' (snake_story_101214 021–3)

As mentioned above, Sudest, like many Oceanic languages, has several 'carry' verbs that specify the manner of carrying.[26] Elicitation of the 'carry' verbs shows similar patterning as with the GET verbs for encoding direction, which can be marked by a directional verb, either in a compound or multi-verb construction, or by a concurrent AM prefix. In the corpus, 'carry' verbs only occur in directed CAM expressions with directional verbs. Example (50) shows the only instance of a 'carry' verb in a compound verb expressing a directed CAM event. Directionality is further specified by the enclitic *=ma* 'hither' and the goal is overtly marked by the demonstrative

25. There are three additional verbs in the corpus and elicitation data that mean 'pull' (*bwata* 'pull (ashore)', *li* 'pull', *gita* 'pull (from)'). They do not occur in directed CAM expressions in the corpus and are, therefore, not considered further.

26. There are four 'carry verbs in Sudest: *gogo* 'carry (across/on shoulder(s)', *kewe* 'carry (on shoulder with stick)', *kithaghe* 'carry (on forehead/shoulder with string)', *kembɨmbɨ* 'carry (underarm)'.

=na 'there (near addressee)' which is cliticized to the verb complex rather than a separate locative adjunct base.

(50) *le umoru ma i=voro-voro=ma=na ma*
POSS.CLF2 young.man already 3SG=RED-go.up=hither=ADDR.PROX already
*ma i=**kewe-kewe-voro=ma=na** yambiya*
really 3SG=**RED-carry(on.stick)-go.up=hither=ADDR.PROX** sago
'her husband was already coming up there (to the village), he was already carrying the sago up there' (marriage_111015 029–30)

The only other directed CAM expressions with 'carry' verbs in the corpus are multi-verb constructions with a 'carry' verb followed by a separately inflected motion verb, as in (51) and (52). In (52), the second verb is a compound verb *gae-mena* 'swim-come' or 'come by swimming' which specifies the manner of motion as well as the directionality of the event.

(51) *thi=**kewe** mbombo=ko i=**njogha** e ghemba*
3PL=**carry(on.stick)** pig=DIST 3SG=**go.back** PP village
'they carried the pig on a stick (and) went back to the village' (hunting_261214 036)

(52) *ma i=**gogo**=ya le mbugha=ma*
already 3SG=**carry(on.shoulder)**=YA POSS.CLF2 dog=DET
*thi=**gae-mena** e umbwa regha*
3PL=**swim-come** PP tree/stick one
'he carried the dog on his shoulders, they come by swimming to a tree' (frogstory_161214 102–3)

The 'carry' verbs can also combine with an AM prefix to express a directed CAM event. The sentence in (53) shows an elicited example of *kewe* 'carry (across/on shoulder)' with concurrent AM prefix *yo-* 'while going' to express a CAM event in a direction.

(53) *gharighari thi=**yo-kewe**=ø e ghemba*
people 3PL=**while.going-carry(on.stick)**=3SG PP village
'the people carry it (a pig) to the village' (e_261116_01)

5.3 Directional verbs with valency-changing morphology

In the final type of directed CAM expression attested in the Sudest data, a directional verb is transitivized by a causative prefix. There are two subtypes of this construction; the first takes the general causative prefix and the second takes a manner-of-causation prefix. This strategy is a major strategy for other languages

described in this volume including the Papuan languages Qaqet (Hellwig, this volume) and Savosavo (Wegener, this volume), but only plays a very minor role in directed CAM expressions in Sudest.

In the first substrategy, a transitive verb is derived through the addition of the causative prefix.[27] The resulting construction expresses a manner-neutral directed CAM event with the verb stem encoding directed motion and the valence-changing morphology adding the element of causation. It is unclear whether the construction entails accompaniment or if it is only implied. There are just two identical tokens of this construction in the corpus. The construction is shown in (54) in which the speaker describes the same stimulus video as in (25b) where another speaker uses a GET-directional compound. This shows that the two construction types appear to be interchangeable in expressing directed CAM at least in some contexts.

(54) *thi=**va-voro**=**nga*** *thari=ko* *e* *thaga=ko* *righe*
3PL=**CAUS-go.up**=**TR** dance=DIST PP feast=DIST base
'and they take that dance up to the feasting place (from east to west)'
(feast_of_the_fish_271015 053)

In the second substrategy, a transitive verb expressing a manner-specific directed CAM event is derived through the addition of a manner-of-causation prefix. There are no tokens of this strategy in the corpus, however, they occur frequently in elicitation responses to events of 'pushing' and 'pulling'. Examples of this construction are shown in (55) and (56) with *mwana-* and *ghe-* both 'by hand'. Notably, although both mean 'by hand' and are used interchangeably in the corpus with verbs of impact (e.g. *ten* 'break') there is a semantic difference between the two prefixes *mwana-* and *ghe-* in this construction: when they occur with a directional verb, *mwana-* specifies a pulling event and *ghe-* specifies a pushing event.

(55) *a=**mwana-ru**=**wo*** *daghata=ma* *e* *nggolo* *raberabe*
1SG=**by.hand-go.in**=thither log=DET PP house under
'I pull the log under the house' (e_021115_01)

(56) *i=**ghe-ru**=**wo*** *daghata=na* *e* *nggolo=ko* *raberabe*
3SG= **by.hand-go.in**=thither log=ADDR.PROX PP house=DIST under
'I push the log in under the house' (e_021115_01)

27. Some derived causatives in Sudest obligatorily take both the causativizer and transitivizer (Sheppard, 2020, pp. 167–170).

6. Frequencies of directed CAM expressions

The previous sections presented an investigation of the different types of directed CAM expressions used in Sudest. This section now presents an overview of the different types of expressions and their frequencies in the corpus. The frequency of each of the attested expressions are listed in Table 3. For each token it is noted whether there was an overt expression of goal, source or neither.

Table 3. Frequencies of directed CAM expressions

Verb	Construction type		Goal	Source	Neither	Total	
GET verbs	+ associated motion prefix		3	–	10	13	14.8%
	+ directional enclitic		–	–	3	3	3.4%
	+ directional verb	compound verb	11	1	16	28	31.8%
		multi-verb	15	–	6	21	23.9%
Vanggu 'lead'	independent verb		2	–	1	3	3.4%
	+ directional enclitic		–	–	3	3	3.4%
	+ directional verb	compound verb	2	1	1	4	4.5%
		multi-verb	1	–	1	2	2.3%
CARRY verbs	+ directional verb	compound verb	1	–	–	1	1.1%
		multi-verb	2	–	1	3	3.4%
Caused motion verbs	+ directional verb	multi-verb with *kosi* 'fish'	1	–	–	1	1.1%
		multi-verb with *momodɨ* 'pull'	2	–	–	2	2.3%
		multi-verb with *thithi* 'insert'	2	–	–	2	2.3%
		compound verb with *vewo* 'push'	1	–	–	1	1.1%
Directional verb	+ valence-increase		1	–	–	1	1.1%
Total			**44**	**2**	**42**	**88**	**100%**

Forty-six tokens (52.3%) overtly express a goal or source and 42 tokens (47.7%) do not mark a goal or source. As can be seen from Table 3, the expression of goals is far preferred over the expression of a source with 44 tokens including an overt goal and just two tokens with a source. The preference of expressing goals over sources aligns with the cross-linguistic asymmetry first described by Ikegami (1987) and

since noted by many others for various types of motion events (see Hellwig et al., this volume, for discussion).

Overall, the classificatory GET verbs are used as the base of the majority of directed CAM expressions. GET verbs occur in just under three quarters of all tokens in the corpus (65 tokens or 73.9%). Following the GET verbs, the only other verb that occurs in more than five percent of all directed CAM expressions is the verb *vanggu* 'lead' (12 tokens or 13.6%). Combined, the remaining verbs make up just 12.4% (11 tokens) of all directed CAM expressions in the corpus.

Looking at general construction types rather than specific (sets of) verbs, constructions involving a transitive verb and a directional verb, i.e., compound verbs and multi-verb constructions, are the most common constructions used overall. In fact, they also account for just under three quarters of all directed CAM expressions (65 tokens or 73.9%). As a whole, the constructions involving a transitive verb and a directional verb divide nearly equally into compound verbs (34 tokens or 38.6%) and multi-verb constructions (31 tokens or 35.2%). The only other type of directed CAM expressions with a frequency of over ten percent in the corpus are those with a GET verb and associated motion prefix (13 token or 14.8%) and just seven tokens (7.9%) in the entire corpus involve neither a GET verb nor a directional verb.

7. Conclusion

Directed CAM events in Sudest are generally expressed by classificatory GET verbs that are selected based on inherent properties of the object referent. Nearly three quarters of all directed CAM expressions in the corpus are encoded in this way. Directional orientation of expressions with a GET verb is encoded by a directional verb, deictic directional enclitic, or prefixes with associated motion semantics. In expressions with a directional verb, the verb can either form a compound verb with the GET verb or is separately inflected and forms a multi-verb construction. Goal and source participants can optionally be overtly expressed by an adjunct. Accompaniment is only entailed for constructions with AM prefixes and a subset of the GET-directional verb constructions with the verbs *nja* 'go up' and *voro* 'go down'. For all other directed CAM expressions with a GET verbs, accompaniment implicature arises from the wider context of the event.

The remaining directed CAM expressions account for approximately one quarter of all tokens in the corpus. Just over half of these tokens involve *vanggu* 'lead' and the remaining half involve other manner-specific verbs like *momodɨ* 'pull', *vewo* 'push', *kewe* 'carry (on stick)', which only occur once or twice each in directed CAM expressions. While some of these verbs can express a directed CAM event on their

own, the majority of the constructions specify directionality using additional directional elements. The most common way to do this, like with the GET verbs, is by combining the verb with a directional verb either in a compound verb or multi-verb construction. It is also possible for derived transitive verbs with a directional verb root to express directed CAM events, however this strategy is not common and there is only a single token of this type in the corpus.

The majority of directed CAM expressions fall into two of the patterns identified by Hellwig et al. (this volume) for directed CAM events: pattern 3 which takes a transitive verb as its lexical core and verbal morphology to encode directness and pattern 4 which takes a transitive verb and an intransitive motion verb that encodes directedness. In this, Sudest resembles the other Austronesian languages described in this volume. The language diverges from the other languages, however, in taking classificatory GET verbs as the core verb stems around which the directed CAM expressions are constructed. Sudest is the only Oceanic or even Austronesian language attested to have verbal classifiers and, therefore, offers a unique case study of directed CAM expressions in this language family.

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Abbreviations

ADDR	addressee	IMM.PST	immediate past
AG	agentive	INCL	inclusive
AM	associated motion	INT	intentional
BOAT	boat classificatory verb	LOC	locative (base)
CAUS	causative	NEC	necessitive
CLF	classifier	NUM	numeral
CM	caused motion	PL	plural
CNTR	container-and-contents classifier	POSS	possessive
		PROX	proximal
COMPL	completive	PP	preposition/postposition (phrase)
DEM	demonstrative		
DET	determiner	REM.PST	remote past
DIST	distal	RED	reduplication
EXCL	exclusive	RIGD	rigid entity classificatory verb
FIRE	fire classificatory verb	SG	singular
FLEX	flexible entity classificatory verb	SPKR	speaker
		TOOL	tool with handle classificatory verb
GET (verb)	classificatory verb		
GNRL	general classificatory verb	TR	transitive
HORT	hortative		

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