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Cross-linguistic patterns in the lexicalisation of BRING and TAKE

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Abstract

This study investigates the linguistic expression of BRING and TAKE events and more generally of the semantic domain of directed caused accompanied motion ('directed CAM') across a sample of eight languages of the Pacific and the Americas. Unlike English, the majority of languages in our sample do not lexicalise directed CAM events by simple verbs, but rather encode the defining meaning components – caused motion, accompaniment, and directedness – in morphosyntactically complex constructions. The study shows a high degree of crosslinguistic diversity, even among closely related languages. Meaning components are contributed to directed CAM expressions by a mix of lexical semantics, morphosyntax, and pragmatic means. The study proposes a text-based, semantic typology of directed CAM events by drawing on corpus data from endangered languages.

Key words

Caused motion, accompanied motion, event representation, semantic typology, text-based typology

1 Introduction

In this article we report on a study of the semantic field of caused accompanied motion (CAM) in a direction, across a sample of eight languages of the Pacific and the Americas. This domain includes verbs like English *bring* and *take*, which occur at high frequency in adult speech and are acquired early by children (Gropen et al. 1989). The work presented here investigates the semantic typology of directed caused accompanied motion expressions by exploring the form-meaning mapping and the interplay of lexical semantics, morphosyntax and pragmatics in the expression of these events. The data for this study was sourced from text corpora of endangered, underdescribed languages and in this way the article showcases the importance of documentary linguistics and its impact on linguistic typology.

The English verbs *bring* and *take* have been described as the transitive or causative counterparts of motion verbs like *come* and *go* (Dixon 1992; Levin 1993: 135) and as expressing “continuous causation of accompanied motion in a deictically-specific direction” (Gropen et al. 1989: 243). They differ from other caused motion verbs like *carry* or *drag* in that they include deictic directionality of motion and in that they are manner-neutral (Levin 1993: 135). Most languages in our sample do not have verbs that share all of these semantic features of English *bring* and *take*. The closest translation equivalents commonly do not lexicalise deictically specific directionality and causation of motion together in the verbal core; and in some languages, the closest equivalents to BRING and TAKE expressions are not

1 manner-neutral.¹ For these reasons, we frame the semantic domain we are investigating more broadly
 2 as directed caused accompanied motion events (‘directed CAM’) and we will reserve the English meta-
 3 labels BRING and TAKE for lexemes which include all of the semantic features associated with the
 4 corresponding English verbs. For example, the verbal lexeme in (1) from Bora expresses the same
 5 semantic features as English *bring*, but this is not the case in (2) from Saliba-Logea, which shows a
 6 manner-specific verb ‘carry’ as the lexical core.²

Bora

(1) *aa-né-jíí* *kiá-tú-ana* *mááhou* *ó* *tsíva-híjcyá-á*
 CONJ-INAN-NEG where-ABL-TAM casabe 1SG **bring**-REP-FUT
 ‘But from where am I supposed to **bring** casabe bread?’ (nEjke_kuriota 053)

Saliba-Logea

(2) *ku-bahe-i-ya-ma* *kali-gu-ena*
 2SG.SUBJ-**carry**-TR-3SG.OBJ-hither towards-1SG.POSS-POST
 ‘**Bring** it to me.’ (TBLaki_01AG_0120)

7 An important aspect in defining directed CAM events is that they involve two moving entities, one
 8 of which is conceptualised as more agentive than the other. We will refer to the two entities by the
 9 semantic roles of agent and theme (see e.g. Jackendoff 1983). What we consider as the theme of the
 10 caused motion event is essentially equivalent to Talmy’s (1985) notion of figure.³ The agent is construed
 11 as performing the caused motion event, while the theme is construed as being controlled by and moving
 12 along with the agent.

13 CAM events can be categorised as a type of caused motion events. However, they differ from
 14 events encoded by what might be considered prototypical transitive causative clauses, where an agent
 15 causally impinges on a theme or patient and brings about a subsequent change of location or state (see
 16 e.g. Croft 1991; Van Valin 2005). CAM events deviate from this prototype in two significant ways: firstly,
 17 they describe *continuous* causation of the motion event throughout its duration and the causing event is
 18 *simultaneous* to the change of location rather than preceding it.⁴ Secondly, and going hand-in-hand with
 19 the continuity of causation, the agent *accompanies* the theme throughout the motion event and
 20 changes location along the same path as the theme. Both of these aspects distinguish CAM events from
 21 non-accompanied caused motion events like KICK, SEND or THROW.

22 In CAM events, the two participants are thus involved in the event in very similar ways. We can
 23 assume an underlying cognitive schema that involves two moving entities, one of which is construed as
 24 a self-moving agent, and the other as a passive theme which is being controlled by and moving along
 25 with the agent. However, it can be argued that, since both entities are moving, both in fact share the
 26 semantic role of theme (or in Talmy’s terms, they are both figures in the motion event). Furthermore, in
 27 some cases, a degree of agentivity can be attributed to the theme participant as well (for example in

¹ Throughout the article we use capitalisation to indicate semantic concepts but italics to represent verbal lexemes in a given language.

² Example references indicate the text ID and unit numbers in the respective language corpora in the DoBeS archive or flag that the examples were elicited. See <https://hdl.handle.net/1839/00-0000-0000-0001-305B-C>.

³ We are choosing the semantic role-base term ‘theme’ over Talmy’s term ‘figure’, as we contrast the theme participant with the semantic role of agent of the caused motion event throughout the discussion. Note that the agent also classifies as a theme/figure as we address further below.

⁴ Gropen et al. (1989) describe directed CAM events like BRING and TAKE as events of *continuously* caused accompanied motion in a direction. However, it may be that the crucial distinction is the simultaneity and temporal alignment between the causing event and the motion event rather the continuous nature. Non-continuous causation could, e.g., refer to an event where the agent kicks a ball ahead for a short distance of the path, catches up and then kicks it again for another short distance. None of the languages investigated show distinct lexicalization patterns relating to continuous vs. non-continuous causation of motion.

1 GUIDE or ESCORT events, where both entities are self-moving.) Because of these characteristics, which
 2 are specific to CAM events, the divide is blurred between the agent and the theme participant, or if
 3 framed in terms of macro-roles, between the actor and the undergoer (Van Valin 2005: 61).

4 In this study, we investigate whether and how these semantic peculiarities affect the linguistic
 5 expression of CAM events across our language sample. As we will show, the semantic features which
 6 distinguish CAM events from other types of caused motion events are responsible for some of the
 7 noteworthy patterns observable in the data. Among these patterns is what we describe as ‘lexical
 8 overlap’ with other semantic domains. Lexical overlap is found when the same lexeme or construction
 9 can feature in the expression of different semantic domains. We find lexical overlap between directed
 10 CAM events and a range of other event types, including non-accompanied caused motion (PUT), non-
 11 caused accompanied motion (ACCOMPANY), but also events of change of ownership and control (GIVE).
 12 An English example of lexical overlap between CAM and non-accompanied caused motion events is the
 13 verb *move* which can express a CAM event (e.g. *move the car*) but also events where the agent remains
 14 stationary and manipulates the theme without following the same motion path (*move the chess piece*).

15 Previous work on verbal semantics suggests that the lexicon of a specific domain may contain
 16 nuclear and non-nuclear verbs (e.g. Dixon 1982). A nuclear verb in this sense is a semantically more
 17 general member of a semantic domain so that “each non-nuclear verb is a hyponym of the nuclear word
 18 – that is, its meaning is included within the generic range of meaning of its nuclear relative” (Dixon 1982:
 19 121). If such a distinction is present, a speaker can in principle always use the nuclear, more
 20 general verb in place of a non-nuclear one. It has been shown that in certain semantic fields, languages
 21 may lack an obvious distinction between nuclear and non-nuclear verbs (Dixon 1982: e.g. on GIVE in
 22 Dyrbal; Mosel 2014 on general vs. specific CARRY and CUT verbs in Teop). This is also the case for the
 23 semantic field of directed CAM events in parts of our sample, as some languages draw on verbs with
 24 manner-specific or theme-specific semantics and have no semantically general superordinate verb.

25 While not all languages have nuclear BRING and TAKE verbs, we still observe that in a given
 26 language we can typically identify a small set of verbs or constructions (usually between two and three)
 27 which can be considered the more canonical and in this sense unmarked expressions of directed CAM
 28 events on the basis of their frequency, distribution, and use vis-à-vis other verbs in this domain.
 29 Throughout the article we will refer to them as ‘basic’ directed CAM expressions (see Ameka & Levinson
 30 2007 for discussion of basic locative constructions). The notion of basicness is not unproblematic. Our
 31 main point in employing it here is to clarify that we are not aiming to draw attention to more exotic
 32 looking and possibly rarer lexicalisation patterns by investigating the fringes of this semantic domain.
 33 Rather, our focus is on the canonical, high-frequency expressions of directed CAM events across the
 34 sample languages.

35 There is a long tradition in linguistics and cognitive anthropology of investigating cross-linguistic
 36 differences in the expression of particular semantic fields. Seminal work exists for the domains of colour
 37 and kinship terms (Berlin & Kay 1969; D’Andrade 1995: 19–30; Lucy 1997; Regier & Kay 2009; Saunders
 38 & van Brakel 1997) and the categorisation of nominal referents (e.g. Hellwig 2007; Lucy & Gaskins 2001).
 39 The last decades have seen extensive work on the domains of motion (Croft et al. 2010; Slobin 2004;
 40 Talmy 1985; Talmy 1991; Talmy 2000; Talmy 2008) and space (e.g. Ameka & Levinson 2007; Bowerman,
 41 Gullberg & Narasimhan 2004; Bowerman & Pederson 1992; Levinson 2003; Levinson et al. 2018;
 42 Levinson & Wilkins 2006). Most of these works investigate nominal referents, their properties, or their
 43 position in space. More recently, this line of investigation has been extended to the linguistic expression
 44 and categorisation of events. Studies include work on the concepts GIVE (see e.g. Comrie 2003; Comrie
 45 2012; Kittilä 2006; Margetts 2007; Margetts 2008; Newman 1996; Newman 1998), PROMISE (Siewierska
 46 & van Lier 2011), CUT, BREAK and CARRY (Majid et al. 2007; Mosel 2014; Mosel 2019), events with three
 47 participants (Enfield 2007; Lüpke 2007; Margetts 2002; Margetts 2007; Margetts & Austin 2007;

1 Narasimhan, Eisenbeiss & Brown 2007; Siewierska & van Lier 2011; van Lier 2012), reciprocal events
 2 (Evans et al. 2011), and PUT and TAKE events (Kopecka & Narasimhan 2012). These earlier works on the
 3 cross-linguistic expression of specific concepts have uncovered interesting problems for linguistic
 4 typology and theory, in particular relating to principles of form-to-meaning mapping. What all of these
 5 investigations share is the exploration of how languages ‘carve up the world’ and how the linguistic
 6 expression of a particular semantic domain differs across languages and cultures. They explore the range
 7 and the nature of variation, but also the constraints on diversity.

8 A line of enquiry within the study of syntax-semantics mapping concerns how meaning
 9 components are distributed across parts of the linguistic expression of an event, that is, across the
 10 lexical core, other morphosyntactic components of the predicate, the clause, and beyond. Related to
 11 this are also language-specific differences in the detail in which semantic components and sub-events
 12 are typically expressed. Concepts which are encoded by single verbal predicates in some languages may
 13 in other languages be typically or obligatorily expressed by series of verbs which encode individual sub-
 14 events. This phenomenon and issues arising from it have been extensively discussed in the literature on
 15 verb serialisation (e.g. Ameka & Essegbey 2013; Defina 2016; Pawley 1987; Pawley & Lane 1998;
 16 Schaefer 1997). However, this tendency is not restricted to serializing languages. It can also be observed
 17 as a discourse pattern in languages which habitually express sub-events by verb sequences which are
 18 not structurally serialised or grammatically obligatory combinations. The tendency of explicitly
 19 expressing sub-events has been investigated for both serializing and non-serializing languages in the
 20 literature on event representation and segmentation of causal chains (e.g. Bohnemeyer et al. 2007;
 21 Bohnemeyer et al. 2010; Bohnemeyer & Pederson 2010; van Staden & Reesink 2008; on distributional
 22 spatial semantics see also Sinha & Kuteva 1995 and; Ameka 1995). The investigation of event
 23 segmentation is concerned with the distribution of information across the different parts of an
 24 utterance and to what extent and in what respects languages do vary in the lexical labels they provide
 25 for event categories.

26 Similar to GIVE events, which have been described extensively in the literature, we find that
 27 predicates expressing directed CAM events like BRING and TAKE show a high degree of crosslinguistic
 28 variation. In most languages of our sample, only one or two of the core meaning components are
 29 lexicalised in a single verb base, while other components are expressed elsewhere in the construction or
 30 evoked by context. This means, expressions for directed CAM events are morphosyntactically complex in
 31 the majority of our sample languages. We therefore need to investigate the distribution and
 32 construction of meaning through lexicalisation, morphosyntax, and pragmatics to explore patterns
 33 across languages.

34 In terms of lexicalisation, in our sample languages the roots from which directed CAM expressions
 35 are constructed include concepts like BRING/TAKE, GET, CARRY, HANDLE, HOLD, MOVE (tr.), BE WITH,
 36 ACCOMPANY, and COME/GO. Constructions thus vary in terms of which meaning components are
 37 expressed in the lexical roots. In terms of morphosyntax, among the devices which add meaning
 38 components we find valence-increasing and directional morphemes, multi-verb constructions, and overt
 39 expressions of goal participants. Finally, we also find that in some cases certain meaning components
 40 are regularly evoked through pragmatic implicature.

41 To date, CAM events have received little explicit attention in literature and the events we focus on
 42 here crosscut several of Levin’s (1993) categories, which tend to group together both accompanied and
 43 non-accompanied caused motion events, and simultaneous and subsequent causation of motion. Most
 44 previous studies on caused motion events come from the fields of first and second language acquisition
 45 and deal mainly with experimental data from European languages (Cadierno, Ibarretxe Antunano &
 46 Hijazo-Gascon 2016; Hendriks, Hickmann & Demagny 2008; Ji, Hendriks & Hickmann 2011; Ji &
 47 Hohenstein 2014; Montero-Melis 2017; Montero-Melis & Bylund 2017). Seminal work by Kopecka &

1 Narasimhan (2012) investigates caused motion events in a more typologically varied language sample,
 2 focusing on placement and removal verbs (such as PUT and TAKE).⁵ Narasimhan et al. (2012: 3)
 3 investigate which semantic distinctions tend to play a recurring role in PUT and TAKE verbs cross-
 4 linguistically and ask to what extent “speakers of different languages agree on whether, how, and how
 5 finely to distinguish among placement and removal events of different kinds”. Answering these
 6 questions requires detailed lexical semantic analysis of the verbs under investigation and of the
 7 constructions in which they occur.

8 The present study shares much with earlier works exploring semantic domains across languages
 9 and in particular with the research in Kopecka & Narasimhan (2012). Many of these previous studies
 10 based their investigation on customised visual stimuli designed to control for and contrast between
 11 relevant semantic variables (for Kopecka & Narasimhan’s work on PUT and TAKE events see Bowerman,
 12 Gullberg & Narasimhan 2004). The present study differs from this approach by primarily drawing on
 13 natural text data for the lexical semantic analysis of the verbs under investigation and of the
 14 constructions and discourse contexts in which they occur. Our work is therefore grounded in the field of
 15 text-based semantic typology.

16 Our initial observations about semantics, structural complexity and lexical overlap raise a number
 17 of questions which we pursue in the present study. As mentioned, directed CAM expressions can show
 18 overlap with the domain of non-accompanied caused motion but also with non-caused accompanied
 19 motion events. This raises the question whether languages differ in terms of their primary
 20 categorisation of CAM events as caused motion or as accompanied motion events or both. We
 21 investigate the basic expressions of directed CAM events in terms of their lexical core and whether this
 22 typically includes one single member or sets of lexical items (e.g. as in the deictic pair *bring* and *take* we
 23 observe English). Furthermore, we explore the taxonomy of verbs representing this domain in terms of
 24 nuclear and non-nuclear verbs.

25 The remainder of the article is structured as follows. In section 2, we present information about
 26 the methodology on which the study is based, the data, and the sample languages. In section 3, we
 27 discuss and illustrate the meaning components of directed CAM events based on the definition
 28 introduced above. In section 4, we then present our core findings in terms of the lexicalisation patterns
 29 of these events attested in the language corpora. Section 5 provides our conclusions, a summary of the
 30 major findings, and an outlook on future research.

31 2 Data and methodology

32 The study investigates data from eight languages: three from the Americas and five from the Pacific
 33 area. All of the languages are endangered and the text corpora we draw on were compiled and archived
 34 as part of language documentation projects funded through the Documentation of Endangered
 35 Languages Program (DoBeS) of the Volkswagen Foundation.⁶ The languages are listed in Table 1, with
 36 language identification codes provided by Glottolog (Hammarström et al. 2021).

⁵ That is, while Kopecka & Narasimhan deal with the concept TAKE in the sense of ‘remove’ (in opposition with PUT), we explore TAKE events in the sense of ‘taking something somewhere’ (in opposition with BRING). In the removal sense of TAKE, the agent is by default the endpoint of the caused motion event. By contrast, the sense of TAKE in our focus of CAM towards a goal, the agent does not retain the theme but continues to transfer it.

⁶ See <http://dobes.mpi.nl/>.

1 Table 1. Language sample used in this study

Language	Glottocode	Genealogy	Geographic location
Beaver	beav1236	N. Athabaskan, Athabaskan-Eyak-Tlingit	Canada
Bora	bora1263	Boran	Colombia and Peru
Movima	movi1243	Isolate	Bolivia
Savosavo	savo1255	Central Solomons	Solomon Islands
Saliba-Logea	sali1295	Oceanic, Austronesian	Papua New Guinea
Sudest	sude1239	Oceanic, Austronesian	Papua New Guinea
Vera'a	vera1241	Oceanic, Austronesian	Vanuatu
Totoli	toto1304	Western Malayo-Polynesian, Austronesian	Indonesia

2 With this very limited and idiosyncratic sample we do not pretend to give a typologically balanced
3 account of possible encoding patterns of directed CAM events. However, the observations established
4 on the basis of this sample may provide a useful basis for investigating this topic in other languages. A
5 typological overview of directed CAM events in 13 languages and more in-depth descriptions of most of
6 the languages discussed here is presented in Margetts, Riesberg & Hellwig (forthcoming).

7 The present sample includes a number of languages which are areally, linguistically, and/or
8 culturally closely related. This holds specifically for the languages of the Pacific area. Saliba-Logea,
9 Sudest, Vera'a and Totoli are all of the Austronesian family and the first three belong to the Oceanic
10 branch of Austronesian. Savosavo is a Papuan language with prolonged, close contact with Oceanic
11 languages. In terms of contact and bilingualism with colonial languages and languages of education,
12 Totoli speakers tend to be bilingual in Bahasa Indonesia, while Savosavo and the Oceanic languages have
13 primarily been in contact with English and/or Melanesian pidgin. By comparison, none of the American
14 languages of our sample are genealogically related or share a common history of contact. Beaver
15 speakers are bilingual in English, and Bora and Movima share that Spanish is the language of wider
16 communication. In terms of their basic typological features, the majority of our sample languages are
17 predominantly agglutinating and show nominative-accusative alignment. However, overall they show a
18 range of diverse characteristics, which are outlined below.

19 Beaver (Athabaskan-Eyak-Tlingit, Canada), is a polysynthetic language with nominative-accusative
20 alignment and SOV constituent order. It is strongly head marking, with subject and object indexes on
21 verbs, possessor on the head noun, and oblique object marked on postposition (Randoja 1990;
22 Schwiertz 2009; Jung et al. 2011).

23 Bora (Boran, Colombia and Peru), is an agglutinating, nominative-accusative language with OSV
24 constituent order and tonal prosody. It is mixed head and dependent marking, with subject indexing on
25 verbs but object and oblique marking on NPs (Thiesen & Weber 2012; Seifart 2009; forthcoming).

26 Movima (Isolate, Bolivia), is a weakly agglutinating language with direct-inverse alignment and
27 predicate initial constituent order (direct: VAO, inverse: VOA). It is weakly head marking, with
28 direct/inverse morphology on the verb and possessors marked on the head noun, but no person
29 indexing or case (Haude 2006; forthcoming; Haude & Beuse 2012).

30 Saliba-Logea (Austronesian, Papua New Guinea) is an agglutinating language with nominative-
31 accusative alignment and rigid SOV constituent order. It has mixed head and dependent marking, with
32 head marking for person indexes on verbs, postpositions and for adnominal possession, but dependent
33 marking for number indexing on nominal modifiers (see Margetts 1999; 2011; forthcoming; Margetts et
34 al. 2013).

1 Savosavo (Central Solomons, Solomon Islands) is an agglutinating language with nominative-
2 accusative alignment and predominant SOV order. It again shows mixed head and dependent marking
3 with head marking for object indexing on verbs and on postpositions, dependent marking for case
4 marking on possessors and syntactic subjects as well as number/gender indexing on some NP modifiers
5 (Wegener 2012; forthcoming; Wegener et al. 2016).

6 Sudest (Austronesian, Papuan New Guinea) is agglutinating and has nominative-accusative
7 alignment. The basic constituent order is SVO. The language is predominantly head marking, with
8 argument indexes on verbs and adpositions and with adnominal possession (see Anderson & Anderson
9 1991; Anderson 1992; Anderson & Ross 2002; Sheppard 2020; 2021; forthcoming).

10 Totoli (Austronesian, Indonesia) is mostly agglutinating, shows symmetrical voice (i.e. two
11 transitive constructions, no single basic alignment type), and SVO/VOS constituent order. The language
12 is weakly head marking, with aspect/mood and derivational morphology, including voice, applicatives,
13 etc., appearing on heads, but no person indexing or case (Himmelman & Riesberg 2013; forthcoming;
14 Leto et al. 2010; Riesberg, Malcher & Himmelman 2021).

15 Vera'a (Austronesian, Vanuatu) is mostly isolating with nominative-accusative alignment and SVO
16 constituent order. It shows mixed head and dependent marking, with head marking in the NP with
17 adnominal possessive constructions but dependent marking on the clause level with prepositional
18 flagging of oblique arguments (Schnell 2011; 2012; 2015; forthcoming; Schnell et al. 2006).

19 The language corpora we draw on for this study are of variable size, ranging from about 66,000 to
20 220,000 morphemes (between 4,000 to 46,900 intonation units) and are composed of a mix of text
21 types. They predominantly include monological texts, such as narratives and procedural descriptions
22 (e.g. of traditional food preparation), but also comprise some conversational data. Many of the language
23 corpora also include some stimuli-based narratives that have been widely used in crosslinguistic
24 research, including Pear Stories (Chafe 1980), Frog Stories (Meyer 1969), and the Family Problems
25 Picture Task (Carroll et al. 2009), but also staged dialogues and elicitations with stimuli like the Space
26 Games (Levinson & Wilkins 2006), the PUT-TAKE task (Bowerman et al. 2004), and the CUT-BREAK task
27 (Bohnenmeyer et al. 2001).

28 As part of the original documentation projects, texts were transcribed, translated, and
29 interlinearised in collaboration between speakers and researchers specialising in the languages. For the
30 present study, the text corpora were searched for directed CAM events through filters on the text, gloss
31 and free translation tiers in ELAN (Wittenburg et al. 2006) or Toolbox (Buseman & Buseman 2019) using
32 target language search terms and search terms in English or other meta-languages used in the corpora,
33 such as Spanish or Indonesian. All search hits were individually analysed by the respective researchers
34 and manually tagged on a dedicated tier as representing (or not representing) goal- or source-oriented
35 directed CAM events.

36 Inherent in this methodology, and in fact in any approach which starts from a set of semantic
37 categories and investigates how these are expressed in different languages, is an 'etic grid' problem (see
38 e.g. Bohnemeyer 2015; Levinson 1996; Saunders & van Brakel 1997: 26). The set of semantic categories
39 that we are investigating restricts and biases any observations about semantic categories we may be
40 able to make across the sample languages. We addressed this issue by feeding back findings from search
41 results in the individual languages into the list of search terms applied across all languages of our sample
42 and thus continuously broadening the inventory of search items. For example, since in some languages
43 the closest translation equivalent to English *bring* are verbs which literally mean 'carry', the concept
44 CARRY was included in the list of search terms for the entire sample.

1 On the basis of the directed CAM events tagged in the annotated texts, we were then able to
 2 analyse the occurrence and distribution of the relevant lexical items, derivational morphemes, and
 3 syntactic constructions. This allowed us to investigate what lexical distinctions and constructions exist in
 4 a language as well as to carry out a context-based analysis of individual verbs. We found that prior to
 5 the targeted analysis presented here, the lexical field of caused accompanied motion was poorly
 6 understood for several of the investigated languages. Many of the verbs which feature among the
 7 expressions of directed CAM events were variously and sometimes interchangeably glossed as ‘bring’,
 8 ‘take’, ‘get’, ‘fetch’, ‘carry’, ‘transport’, ‘hold’, etc., often with an unclear understanding about semantic
 9 differences between them. The analysis of text examples helped us discover some fine-grained
 10 distinctions in the semantics and use of these verbs. In the process of this discourse-based analysis we
 11 were able to identify diagnostics that allow us to distinguish between aspects of lexical semantics and
 12 pragmatic inference for many of the verbs. Some of these diagnostics are language-specific, others
 13 describe patterns shared across several languages. Diagnostics include restrictions in the choice of the
 14 theme participant, the default semantic roles of obliques (source vs. goal), attested combination with
 15 certain morphemes, and lexical overlap (i.e. the ability of the verb to express other semantic domains).
 16 The methodology used in this study thus combines the exploration of natural discourse data with the
 17 authors’ expert knowledge of the languages under investigation through long-term fieldwork. In this
 18 way our lexical semantic analysis is grounded in the fields of text-based semantic typology and language
 19 documentation.

20 3 Meaning components of directed CAM events

21 As mentioned, directed CAM events involve two moving entities, one of which is conceptualised as more
 22 agentive than the other. CAM events differ from events encoded by prototypical causative transitive
 23 clauses, as characterised e.g. by Croft (1991) and Van Valin (2005), in that the agent accompanies the
 24 theme along the same motion path and in that the events involve continuous causation throughout
 25 their duration. The causing event is therefore simultaneous to the change of location rather than
 26 preceding it. Based on these characteristics we can identify a number of meaning components of
 27 directed CAM events which we consider as defining for this semantic domain. For the purpose of this
 28 study we describe these characteristics in term of three defining features: CAUSED MOTION,
 29 ACCOMPANIMENT and DIRECTEDNESS.⁷ Only if these components are present is an example considered
 30 to describe a directed CAM event.

31 As we have seen, the English verbs *bring* and *take* show these features as part of their lexical
 32 semantics, but in addition they are characterised by lexicalising deictically specific directionality and by
 33 the fact that they are manner-neutral (Gropen et al. 1989; Levin 1993). Deictic directionality and
 34 information about manner are not among our defining characteristics and in many languages the closest
 35 translation equivalents for English *bring* and *take* do not match them in these specific features. The
 36 linguistic expressions of directed CAM events can thus be described in terms of defining features, on the
 37 one hand (caused motion, accompaniment and directedness), and possible additional meaning
 38 components, on the other hand. In the remainder of this section, we discuss and illustrate the additional
 39 semantic features attested in our sample. Of course, speakers can choose to include information on all
 40 kinds of aspects of the events they are talking about. What we discuss here under ‘additional features’
 41 only includes meaning components which are lexicalised in the verbal core of basic directed CAM
 42 expressions in at least one language and which are, in this sense, obligatorily expressed in the respective
 43 construction. In our data, three such features are attested. Deictic orientation of CAM events is

⁷ Note that Hellwig, Margetts, Riesberg & Schippling (forthcoming) break the defining features into four components, separating caused motion into causation and motion.

1 discussed in section 3.1. Manner of (caused) motion is examined in section 3.2, and in 3.3 we describe
 2 the third additional component attested in our data, namely features of the theme object evoked by the
 3 lexical semantics of the verbs.

4 3.1 Deictic and non-deictic directedness

5 Our notion of directedness is essentially equivalent to Talmy's (1985) notion of path and covers all three
 6 types of path (bounded paths, directions, and routes) distinguished by Jackendoff (1983: 165).⁸
 7 Directedness can be deictic (e.g. movement towards the deictic centre, as in COME) or non-deictic (e.g.
 8 movement with reference to non-deictic ground objects, as in ENTER or ARRIVE). So deictically-specific
 9 movement entails directedness but not vice versa. While directedness is one of our three defining
 10 meaning components of directed CAM events, deictic orientation is not, and therefore may or may not
 11 be part of the expressions we investigate in this study. Because deixis and directedness are so closely
 12 intertwined, we address them together here, even though the primary focus of this section is on
 13 additional rather than defining features of these events.

14 Directed CAM expressions that explicitly mention the source of a motion path are considerably
 15 less frequent in our data than those referring to a goal. There is a known preference and predominance
 16 for the expressions of goals of motion events over sources (see e.g. Ikegami 1987; Bourdin 1997; Creissel
 17 2006; Kopecka, Ishibashi & Vuillermet 2021; Stefanowitsch & Rohde 2004; Stefanowitsch 2018) which
 18 can also be observed for caused motion events (Narasimhan et al. 2012; Ospina-Bozzi & Cita-Triana
 19 2021). These asymmetries are thought to reflect a fundamental cognitive bias towards the overt
 20 mention of endpoints of motion and caused motion over the source, which has been reported in several
 21 studies (Arnold 2008; Lakusta & Landau 2005; Lakusta et al. 2007; Regier & Zheng 2007). In the present
 22 study we focus on CAM events which are directed towards a goal. However, we address source-oriented
 23 verbs where they are relevant, in particular as in some languages, goal-directed CAM expressions are
 24 derived from source-oriented verbs (cf. 4.2).

25 There are two major patterns observable in the expression of directedness in our data. In some
 26 languages, directedness is lexicalised in the verbal core as an obligatory (or at least default) part of basic
 27 directed CAM expression, typically in form of deictic directedness in verb pairs like 'bring' and 'take' or
 28 'come' and 'go (away)'. In other languages, directedness is expressed by separate morphemes added to
 29 the verbal core.

30 The first pattern is attested in the South American languages, Bora and Movima, and the Papuan
 31 language Savosavo (cf. sections 4.1 and 4.6). In one of these languages, Bora, directed motion is
 32 lexicalised together with caused motion and accompaniment in directed CAM verbs expressing the
 33 concepts BRING and TAKE, as in (3) and (4).⁹

⁸ Jackendoff's 'bounded paths' cover goal paths ('to') and source paths ('from'). His notion of 'directions' includes expressions like 'away from', 'towards', 'up(wards)', 'down(wards)', which are not described as bounded in an endpoint such as a goal or source. The third type, 'routes', denotes paths which make reference to a landmark that is passed. Expressions include 'along', 'through', 'via', and 'across'. In the remainder of the article we do not distinguish between bounded paths, directions, and routes and when we refer to goals or sources of CAM events we include paths both 'to' and 'towards' a goal, and 'from' and 'away from' a source.

⁹ Etymologically, both Bora verbs probably contain an associated motion suffix (-*va* 'come and do', -*te* 'go and do' respectively). However, nothing can be said about the etymology of the initial elements *tsi-* and *tsa-* and synchronically the verbs must be considered monomorphemic, see Seifart (forthcoming).

Bora

- (3) *íillev-u tsiva o ávóó-ve*
 here-ALL bring.IMP 1SG cover-SG.INTR
 ‘**Bring** (it) here so I can put it on / so I can cover myself.’ (inf_josrobetc3 ref 57)
- (4) *aa-mé=vá=a tsajtyé díibye-ke tsúúca ááméjú-hajtsí-vú=juco*
 CONJ-PL=QUOT=REM take he-ACC already downstream-CLF.clearing-ALL=AFIR
 ‘And they **took** him already to the clearing downriver.’ (niivuwa 069)

1 In Movima and Savosavo, directed motion is lexicalised alone (i.e. without causation or
 2 accompaniment), in verbs expressing concepts like COME and GO from which directed CAM verbs are
 3 derived by valence increasing morphemes. This is illustrated in (5) and (6).

Movima

- (5) *di:ra chot jiwa-le-na=is kos wulna=is*
 at.least HAB come-APPL-DR=3PL.AB ART.N.AB crop=3PL.AB
 ‘At least they always **bring** crops (here to the village).’ (ERM_140806_1 0840)
- (6) *it joy-cheł che kaj<a:>le=Ø che joy-a:-le=Ø no-kos asna=Ø*
 1INTR ART.PL.AB and meet<DR>=1SG and go-DR-CO=1SG OBL-ART.N.AB home=1SG
 ‘I’ll go (to the station) and pick you up and **take** you to my home.’ (EAO Visita 105)

4 The second pattern is attested in the Austronesian languages and the North American language
 5 Beaver, which all lexicalise caused motion and/or accompaniment in the main verb and express
 6 directedness by added morphemes (sections 4.2, 4.3, 4.4, and 4.4). The languages showing this pattern
 7 differ in the degrees of fusion of the directional morphemes and, for deictic morphemes, also in the
 8 number and type of deictic distinctions made in the paradigm. (The Austronesian languages of our
 9 sample all show cognate deictic morphemes which are historically derived from the Proto-Austronesian
 10 verbs ‘come’ and/or ‘go’, cf. Ross 2004.)

11 In terms of boundedness, directional morphemes can be fully inflected verbs, as in (7), or
 12 compounded verb stems, as in (8):

Saliba-Logea

- (7) *heka-di se-hai-di se-lau koti ena*
 some-3PL.POSS 3PL.SUBJ-get-3PL.OBJ 3PL.SUBJ-go court POST.SG
 ‘Some **take** them (their spouses) to court.’ (Giyahi_01AA_0757)
- (8) *ye-katu-ni-di ye-bahe-sae-di*
 3SG.SUBJ-catch-TR-3PL.OBJ 3SG.SUBJ-carry-go.up-3PL.OBJ
 ‘He caught them and **took** them up.’ (Boneyawa_04AJ_0018)

13 In other constructions, the directional morphemes are no longer fully verbal but have the status of
 14 directional affixes, clitics, or particles, as in (9) and (10):

Sudest¹⁰

- (9) *u=wo=ma lou-n=na*
 2SG.SUBJ=GET.SG.RIGD=hither sibling.opp.sex-2SG.POSS=ADDR.PROX
 ‘You **bring** (me) your brother.’ (crab_girl_081115 057)

Vera’a

- (10) *di ne mul ‘ō’ kēl ma*
 3SG PROSP:3SG return be.with back hither
 ‘[He pulled one here, one there, until he had pulled up to ten,] and then he **brought** (the
 vines) back here.’ (ISV.105-106)

¹⁰ The capitalised gloss GET in Sudest stands for a set of different classificatory verbs, as discussed in 3.3.

1 In terms of the number and type of deictic distinctions, our sample languages show paradigms
 2 with one or two members and in some cases the absence of a directional is assigned a meaning through
 3 contrast as well. Vera'a has one directional particle *ma* 'hither', shown in (10) above, which specifies a
 4 trajectory of motion towards the deictic centre. Unlike many other Austronesian languages, Vera'a does
 5 not have a counterpart of *ma* 'hither' meaning 'thither, away from speaker'. Motion away from the
 6 deictic centre is not overtly coded and is a matter of contextual interpretation, as in (11), where the
 7 absence of the deictic particle is interpreted as indicating motion away from the deictic centre.

Vera'a

- (11) *m si~sikē=m siksik lēge Qo'=m mul 'ō'*
 PRF RED~search=PRF RED:search in.vain PN=PRF return be.with
 '[Spider was looking for that piece of chipping, searched] and searched, but searched in
 vain since Qo' had **taken** (it) (away).' (JJQ.057-058)

8 Totoli and Sudest each have a set of two deictic clitics which make a binary distinction between
 9 motion towards or not towards the deictic centre, as in (12) and (13).

Totoli

- (12) *alai tasmu itu Desi*
 ala=**ai** tas=**mu** itu Desi
 fetch:UV1=hither bag=2SG.GEN DIST PN
 'Bring your bag over here, Desi!' (teachers_2 303)

- (13) *pane tinga ala=ta=ko*
 only word fetch:UV1=1PL.INCL=thither
 'It's only words that we take **there**.' (marriage_proposal 55)

10 Saliba-Logea also has two directional morphemes. The suffixes *-ma* and *-wa* respectively express
 11 directionality towards the speaker (or deictic centre) and the addressee, as in (14a) and (b) respectively.
 12 As in Vera'a, in Saliba-Logea the absence of a directional morpheme can imply directionality away from
 13 the speech act participants, as in (14c). In this way, Saliba-Logea speakers draw on the absence of a
 14 directional marker to evoke a three-way distinction between directedness towards the speaker, the
 15 addressee, or a third person (cf. Margetts 2008)(cf. Margetts 2008)(cf. Margetts 2008)(cf. Margetts
 16 2008)(cf. Margetts 2008)(cf. Margetts 2008).

Saliba-Logea

- (14) a. *leta wa ye-hetamali-ya-ma*
 letter ANA 3SG.SUBJ-send-3SG.OBJ-hither
 'She sent the letter to me/us.'
- b. *leta wa ye-hetamali-ya-wa*
 letter ANA 3SG.SUBJ-send-3SG.OBJ-to.ADDR
 'She sent the letter to you.'
- c. *leta wa ye-hetamali*
 letter ANA 3SG.SUBJ-send
 'She sent the letter (to him/her).'

17 It is a well-documented phenomenon that not only morphemes but also the absence of
 18 morphemes can be assigned meaning through contrast, as is the case in Vera'a and Saliba-Logea. When
 19 a verb meaning CARRY, which does not lexicalise directedness, occurs without a directional marker (e.g.
 20 as in (11) above), it is therefore a question in such languages, when exactly the verb simply means
 21 CARRY (an undirected CAM event) and when it means TAKE somewhere (a CAM event directed towards
 22 neither the speaker nor the addressee). In such cases, the interpretation is context dependent and often
 23 ambiguous. Similarly, in paradigms where there is contrast between overt morphemes (rather than their
 24 absence), deictic meaning of a morpheme may arise pragmatically through opposition rather than by

1 being entailed in the lexical semantics of the verb. Wilkins and Hill (1995) observe that in pairs of
 2 seemingly deictically-specific morphemes, such as motion verbs expressing the concepts COME and GO,
 3 the deictic meaning of motion away from the deictic centre for the GO verb may be a pragmatic
 4 implicature and not semantically entailed. The same applies to pairs of directed CAM verbs, expressing
 5 concepts like BRING and TAKE, where the TAKE verb may imply directionality away from the deictic
 6 centre through opposition with BRING but does not necessarily entail deictic information in its lexical
 7 semantics (see Margetts 2008 on GIVE and SEND; Mosel 2014 on CARRY). While we are aware of this, it
 8 is not possible to reliably distinguish between semantically entailed versus pragmatically implied deictic
 9 meaning in the events under investigation on the basis of our text data alone. Targeted elicitations
 10 which explicitly control for this distinction, as described in Wilkins and Hill (1995), are required to
 11 investigate this further.

12 3.2 Manner

13 Directed CAM expressions can also include information about the manner in which the event is
 14 performed. Here, a distinction can be made between manner of caused motion and manner of motion
 15 (cf. Hendriks, Hickmann & Demagny 2008). By manner of *caused motion* we mean the manner of the
 16 action by which the agent causes the theme to move. Examples include concepts like CARRY, DRIVE,
 17 DRAG, GUIDE, and PADDLE.¹¹ By contrast, manner of *motion* refers to the manner in which the agent
 18 moves, as in concepts including FLY, RUN, SWIM, or SKIP. In our corpora, manner of motion of the agent
 19 is only rarely expressed in CAM events and is never obligatorily encoded in basic directed CAM
 20 expressions. However, manner of caused motion is an obligatory feature of basic directed CAM
 21 expression in some languages.

22 3.2.1 Manner of caused motion

23 In the South American languages Bora and Movima, manner of caused motion hardly ever co-occurs
 24 with directedness in the expression of CAM events. The Bora example in (15) with the verb *piichu* ‘carry
 25 on back’ with an allative-marked goal NP shows that such combinations are grammatically possible, but
 26 they are very rare in the corpus.

Bora

(15) *á-tsihdyú=u* *botsí-i* *idyé* *tsiiñe* *idyé* *o* *ímjyú-jkímyeí-ñe*
 CONJ-CLF.place=REM finally-yet also again also 1SG joy-VBZ.behave-INAN

íille-vú=juco *o* *piichú-cu-iñu-ne*
 here-ALL=AFIR 1SG carry.on.back-MULT.TR-DIR.leave-INAN

‘And then, at last, again, I happily **carried** it here.’ (aakityeMM1:34)

27 By contrast, in some of the Austronesian languages, manner-specific caused motion verbs are
 28 among the basic directed CAM predicates. In Saliba-Logea, basic expressions are derived from the
 29 CARRY verb *bahe* ‘carry in hands’, shown in (16), which contrasts with verbs expressing other types of
 30 CAM concepts, such as CARRY ON BACK, CARRY ON HEAD, GUIDE, or TRANSPORT.

Saliba-Logea

(16) *kebolo* *ku-bahe-i-ya-ma*
 spear 2SG.SUBJ-carry-TR-3SG.OBJ-hither
 ‘Bring me the spear.’ (Boneyawa_21DL_0023)

¹¹ The category of manner of caused motion verbs cross-cuts several of Levin’s (1993) verb classes including ‘carry’, ‘drive’, ‘send’ and ‘accompany’ verbs, but not all members of Levin’s classes align with our category in their semantic components.

1 Similarly, in Totoli a verb meaning both HOLD and CARRY is one of the possible base forms for directed
2 CAM events, as shown in (17).

Totoli

(17) *goot-i=ta=ko* *dokter=ko* *kau*
hold/carry-UV2=1PL.INCL.GEN=thither doctor= thither 2SG
'We (incl.) will **take** (lit. carry) you to the doctor.' (improvisation_1.082)

3 Just as discussed for deictic contrasts, meaning acquired through contrast can also play a role in
4 the expression of manner. In Sudest the basic expressions of directed CAM events are constructed from
5 manner-neutral GET-type verbs (cf. section 4.1). There is also a set of verbs denoting different types of
6 CARRY events, but there are lexical gaps for the concepts of carrying in one's hands and on one's head
7 (which have dedicated verbs in other Oceanic languages). The manner-neutral GET verbs are generally
8 used for such events and, in this way, the GET verbs may become associated with a specific manner of
9 carrying even though this is not part of their entailed meaning.

10 When manner is lexicalised in basic directed CAM expressions this has an impact on the types of
11 theme entities that can occur with these verbs. Selection restrictions for manner-specific verbs
12 expressing concepts like GUIDE do require self-moving theme participants. Conversely, selection
13 restrictions for manner-specific verbs expressing concepts like CARRY do not allow for self-moving
14 objects that are not literally handled. Animate themes are therefore only allowed with CARRY verbs if
15 they are not self-moving (e.g. small children or sick people). These facts can provide diagnostics of
16 identifying whether verbs have manner specific semantics and we draw on them in our discussion of
17 lexicalisation patterns in section 4.

18 3.2.2 Manner of motion

19 Manner of motion of the agent can be lexicalised in the base verb in languages which derive CAM
20 expressions from intransitive motion verbs or which employ verb serialisation. In Movima, where BRING
21 and TAKE verbs are derived by an applicative from the motion verbs COME and GO, the same suffix can
22 also attach to manner of motion verbs, such as RUN, as in (18). However, this is rare in the corpus and
23 there are in fact no instances which combine such manner-specific caused motion verbs with a
24 directedness component to express *directed* CAM events. So, paralleling the trend observed above for
25 manner of caused motion, Movima CAM expressions tend to encode either directedness or manner of
26 motion, but not both.

Movima

(18) *buka'* *jayi-le-na=a* *as* *alwambet-mari:ko*
DUR.MOV run-APPL-DR=3N ART.N paper-bag
'It is **running with** the paper bag.' (Context: a chicken caught its foot in a paper bag
and is running around.) (JA, TX 170)

27 In sum, while manner of caused motion is entailed in the basic CAM verbs in some languages,
28 manner of motion of the agent is rarely expressed across our sample and it is always optional. Some
29 languages, such as Movima and Bora, show clear trends of not expressing directedness together with
30 manner information in the same clause.

31 3.3 Features of the theme object

32 The third additional feature attested in our data to be lexicalised in basic directed CAM events relates to
33 properties of the theme object. All verbs have some kind of selection restrictions governing the choice
34 of their arguments. But two of our sample languages, Beaver and Sudest, show striking patterns in their
35 basic directed CAM expressions in terms of the selection restrictions for the object arguments: they
36 have sets of verbs which categorise and classify their theme object according to certain features. These

1 are classificatory verbs in the sense of Aikhenvald (2000), Kilarski (2013) and Contini & Kilarski (2013)
 2 and each verb is restricted to certain types of theme objects and in some cases also to either singular or
 3 plural referents. The general category of the theme entity can typically be evoked by the verb alone,
 4 even if the object is not overtly expressed.

5 In Beaver, expressions of directed CAM events are typically based on verbs denoting concepts like
 6 HANDLE and similar classificatory verbs have been described throughout the Dene language family.
 7 Beaver has a set of six HANDLE verbs where each is restricted to a certain type of referent.¹² There are
 8 five verbs which specify different types of singular themes. In the plural this distinction is neutralised
 9 and covered by a single verb stem, as shown in Table 2:

10 Table 2. Beaver HANDLE verb stems (imperfective/perfective aspect)

Singular obj.	Plural obj.	Object category
-áh/-q	-le	general, round, compact object
-ká/kq		liquid in container
-tyę/-tq		stick-like, rigid object
-htyę/-htyę		animate object
-htsuus/- htsúús		flat, flexible object
-le/-laa		rope-like object

11 Examples (19) to (21) illustrate three of these distinctive handle verbs.

Beaver

(19) *ii sq wadze sq ii chuu to-nàà-saa-kq juu*
 this.one EVID down EVID this.one water water-back-PFV-handle.LQC here
 ‘She went down and **brought** some water back up.’ (ws-nabaane_story001:015)

(20) *go-tsegu náá-ni-htyę*
 his-wife back-TERM.PFV-handle.ANIM
 ‘(He is not happy, but) he **brought** his wife back.’ (anecdote_marriage_001:012)

(21) *ni-naxa-gha-dyi-le=hu dúhdye nii-nax-į-le*
 TERM-1PL.OBJ-3PL.SUBJ-QUL-handle.PL=and there TERM-1PL.OBJ-3PL.SUBJ-PFV-handle.PL
 ‘(Sometimes, somebody, who has a car,) they pick us up and **bring** us home.’ (St_Charles:048)

12
 13 In Sudest, basic expressions of directed CAM events are based on ten verbs with a meaning similar to
 14 GET. Again, each verb is restricted to a certain category of referent. Classificatory verbs of this type are
 15 otherwise not reported for Austronesian languages (for further discussion see Sheppard forthcoming;
 16 2020). The Sudest GET verbs are presented in Table 3:

¹² There is a second set of classificatory handling verbs that are used to describe actions performed in an uncontrolled or violent manner (cf. Rice 1989 on Slave).

1 Table 3. Sudest GET verbs (Anderson 1992; Sheppard 2020)

Singular obj.	Plural obj.	Object category
<i>li</i>	<i>langa</i>	flexible objects, e.g. cloth, leaves, flowers, leafy foods, paper, string, body paint, worms, empty flexible containers
<i>wo</i>	<i>mban</i>	people, animals and fish, most fruit and vegetables, knives, sticks, axes without handles, empty non-flexible containers
<i>thin</i>	<i>bigi</i>	container with contents, contents in containers, object with multiple parts, e.g. books, necklaces, tables
	<i>tako</i>	any plural objects
<i>thagha</i>		tools with handles, e.g. axe, adze, hammer
<i>yambi</i>		boats and transport craft
<i>yengge</i>		fire

2 Examples (22) and (23) illustrate two of these distinctions:

Sudest

(22) *thi=wo-njogha=∅* *we=∅*
 3PL.SUBJ=GET.SG.RIGD-go.back=3SG.OBJ to/from=3SG
 ‘They **return** it (ceremonial lime stick) to him.’ (Lit. They get it back to him.)
 (bwaindiya_151115 109)

(23) *ne thi=thin-voro thari=ko we=∅*
 FUT 3PL.SUBJ=GET.SG.CNTR-go.up dance=DIST to/from=3SG
 ‘They will **bring** the dance up to (Nju).’ (feast_of_the_fish_271015 037)¹³

3 As discussed further in 4.3, manner of caused motion lexicalised in the verb can also have an
 4 impact on the choices of theme objects, since manner-specific concepts like CARRY tend to be restricted
 5 to entities which are handled, while concepts like LEAD require self-moving themes. Furthermore, verbs
 6 denoting concepts like DRAG or SHOVE are more likely to occur with themes which are heavy and not
 7 easily lifted. It can be difficult to distinguish between object features entailed by the lexical semantics of
 8 the verb (as we suggest is the case in the Beaver and Sudest classificatory verbs) and preferences which
 9 arise though information on the manner of causation.

10 In this section, we reviewed the defining features of directed CAM events and then exemplified
 11 the additional semantic features which are attested to be lexicalised in basic directed CAM expressions
 12 in the sample languages. In the next section, we present the core findings of the study by investigating
 13 the major lexicalisation patterns of basic directed CAM expressions across our sample.

14 4 Patterns in the lexicalisation of directed CAM events

15 As discussed, expressions of directed CAM events by definition include the meaning components of
 16 caused motion, accompaniment, and directedness, and in addition, they may include information about
 17 deictic orientation, manner, or features of the theme, and possibly other specifications. In our language
 18 sample there is a high degree of variation in terms of which of these components are lexicalised in the
 19 verb(s), which are contributed morphosyntactically, and which are not entailed but evoked
 20 pragmatically. In the following, we present an overview of the lexicalisation patterns in directed CAM
 21 expressions. We identify which meaning components are encoded by the verbal core and which by
 22 other parts of the construction. We discuss lexical overlap with other semantic domains and, where
 23 possible, we list discourse-analytic diagnostics which help identify the lexical semantic versus pragmatic

¹³ The verb *thin* ‘get’ probably occurs here because the theme is construed as an object with multiple parts.

1 meaning components of the expressions under discussion. In some cases, these diagnostics are language
2 specific, in others they hold across languages.

3 4.1 Directed CAM

4 Some languages lexicalise all three defining meaning components. Our sample includes verbs which
5 combine these with a deictic orientation (4.1.1), but also verbs which include manner of caused motion
6 (4.1.2). There are no directed CAM verbs in our data which are neutral in terms of both deixis and
7 manner of causation. Neither are there verbs which lexicalise both deixis and manner within the same
8 lexeme.

9 4.1.1 CAM in a deictically specific direction

10 Verbs expressing concepts like BRING and TAKE lexicalise all three defining components along with a
11 deictic orientation.¹⁴ As discussed by Gropen et al. (1989) and Levin (1993), such verbs denote directed
12 CAM events without indicating the manner of caused motion or manner of motion of the agent. Bora is
13 the only language in our sample that shows this lexicalisation pattern, which is shown in (24) and (25).

Bora

(24) *óh-diu óóveta u tsíva*
1SG-ANIM-ALL food 2SG bring
'You will **bring** me my food.' (nEjke_kuriota ref 173)

(25) ... *cáani díibye-ke cóómí-vu tsájtyé-tí-ne-ri*
father he-ACC village-ADL take-NEG-INAN-INST
'... because the father would not **take** him (along) to the village.' (Thiesen & Thiesen
1998: 245)

14 A crosslinguistic diagnostic for this lexicalisation pattern is that these verbs do not need to
15 combine with directional morphemes or goal expressions in order to encode directed CAM events. In
16 addition, there are essentially no restrictions on the theme entity and such verbs are attested with a
17 range of themes referents, including both handled and self-moving objects.

18 4.1.2 Manner of caused accompanied motion in a direction

19 In at least one case in our language sample, caused motion, accompaniment, and (non-deictic)
20 directedness are lexicalised in a single verb along with a specific manner of caused motion. The Saliba-
21 Logea verb *lae* can be translated as 'lead (somewhere)'.

Saliba-Logea

(26) *kabo ya-lae-go e-gu magai*
TAM 1SG.SUBJ-lead-3SG.OBJ POSS1-1SG.POSS place
'I will **lead** you to my place.' (SineluguDamaya_01DG_0037)

22 A language-specific diagnostic showing that directedness is lexicalised in this verb is the fact that
23 *lae* 'lead' does not combine with directional morphemes to express goal-directed CAM events, while
24 other caused motion verbs in the language, such as *bahe* 'carry', *woya* 'guide', or *hetamali* 'send'
25 generally do. The manner-specific semantics of the verb is evidenced by the fact that it only allows self-
26 moving themes and not those which are handled or carried.

¹⁴ As mentioned, it is unclear whether both verbs in these pairs are inherently deictic or whether one receives a deictic meaning through contrast. See Wilkins and Hill (1995) and section 3.1 above.

1 4.2 Caused motion from a direction

2 In some cases, goal-directed CAM expressions are derived from verbs which lexicalise caused motion
 3 from a source, rather than toward a goal. Verbs of this type are commonly glossed as GET, TAKE, FETCH,
 4 or REMOVE. Some of these concepts are listed by Levin under ‘obtain’ and ‘get’ verbs (1993: 141–143).
 5 In Narasimhan et al.’s words, they describe “events in which an agent causes an object to move away
 6 from a location” (2012: 5). We will refer to verbs describing such events as GET-type verbs. By default,
 7 the agent of these verbs is understood as the goal and endpoint of the motion event and therefore, in
 8 their basic form, these verbs do not express CAM events towards a goal. In our sample languages, the
 9 semantic component of goal directedness must typically be added to such verbs by free or bound
 10 directional morphemes. GET verbs constitute the lexical core of basic directed CAM expressions in
 11 Sudest and, Totoli, as shown in (27), and they are also among the more common patterns in Saliba-
 12 Logea.

Totoli

(27) *tau dako=na mo-ingga=po mag-ala=ko dedek=na dei pos PIN*
 person big=3SG.GEN ST-NEG=INCPL AV-fetch=thither small=3SG.GEN LOC station PIN
 ‘The parents are still reluctant to **take** their babies to the PIN station.’ (radio_brcst_2.189)

13 GET verbs can express accompanied or non-accompanied caused motion depending on the scale
 14 of the event. If the event describes caused motion at a geographic scale (e.g. from Melbourne to
 15 Sydney), accompaniment is implied because the agent has to move along the same path as the theme. If
 16 the caused motion event is restricted to a table-top scale (e.g. when passing the salt), no accompanied
 17 motion of the agent is implied. In terms of additional semantic components, none of the languages of
 18 our sample features GET-type verbs which lexicalise deixis or manner information. However, as
 19 described in 3.3 above, Sudest features classificatory GET verbs which lexicalise information about the
 20 theme object.

Sudest

(28) *u=mban=ma=va*
 2SG.SUBJ=GET.PL.RIGID=hither=again
 ‘You **bring** them again.’ (ft_stimuli_201015_02 189)

21 Goal-directed CAM expressions based on GET-type verbs explicitly encode the sub-event of the
 22 agent acquiring the theme and, in this way, they indicate the onset of the agent’s control over the
 23 theme, which precede the actual CAM event. Expressions of directed CAM events based on GET-type
 24 verbs entail caused motion of the agent obtaining the theme but not caused motion towards a goal
 25 beyond the agent. In our data they commonly entail directness towards a goal when the GET verb
 26 combines with directional morphemes, e.g. clitics in (27) and (28) above, or by directional verbs, as in
 27 (29) and (30). The notion of accompaniment and of caused motion towards goal can either be entailed
 28 or left to implicature. In (29) the GET-verb is followed by the CAM verb *lae* ‘lead’ and accompaniment
 29 and caused motion are entailed. In (30) the GET verb is followed by an intransitive motion verb while the
 30 notion of caused motion and the fact that the theme accompanies the agent are only implied.

Saliba-Logea

(29) *nauwa hiange ye-lau-ma ye-hai ye-lae*
 current also 3SG.SUBJ-go-hither 3SG.SUBJ-get 3SG.SUBJ-lead
 ‘The current came and **took** him along.’ (BudoiNualele_02CY_0272)

Sudest

(30) *i=wo wondeya na i=vutha e ghemba=ma*
 3SG.SUBJ=GET.SG.RIGD possum and 3SG.SUBJ=arrive to/from village=DET
 ‘He **gets** a possum and arrives at the village.’ (couples_story_101214 017-8)

1 A diagnostic for identifying GET-type verbs is that they express caused motion towards the agent
 2 rather than further directedness towards a goal. That is, after a getting event, the agent by default has
 3 control over the theme. In addition, GET verbs are source-oriented and in our sample this is manifested
 4 in several languages by the fact that, in their underived form, these verbs can occur with source obliques
 5 but not with goals. In some languages, such as Bora, GET verbs are not attested in goal-directed CAM
 6 events at all (but they do occur in source-oriented CAM events such as ‘get something from
 7 somewhere’). In the other languages, GET verbs can occur in goal-directed CAM predicates, but only if
 8 the goal directedness is overtly marked by constructions with directionals. This can be observed in
 9 languages with general locative expressions that are in principle ambiguous between a goal and a source
 10 reading (among others). With verbs expressing concepts such as CARRY, GUIDE, or TRANSPORT,
 11 ambiguous locative phrases generally allow both a goal and a source reading, but they tend to prefer the
 12 goal interpretation. By contrast, with GET verbs the general locatives tend to only allow a source reading
 13 and a goal interpretation is generally not sanctioned. This pattern can be observed in Saliba-Logea,
 14 Savosavo, Sudest, and Totoli. In (31), the underived Totoli verb *ala* ‘fetch’ allows only a source reading of
 15 the general locative preposition *dei*. In order to sanction a goal reading of the locative, the verb has to
 16 combine with a directional morpheme such as the clitic =*ko*, as in (27) above.

Totoli

(31) *kami nag-ala bogas dei bale gaukan*
 IPL AV-fetch rice LOC house king
 ‘We **took** (i.e. stole) rice from the house of the king.’ (Elicited)

17 The same pattern is attested in Sudest. The general locative PP in (32) expresses the source of the
 18 caused motion event. In order to encode a goal-directed event, the GET verb needs to combine with a
 19 directional expression, as in (22) and (23) in 3.3 above.

Sudest

(32) *ghaningga=ma methi=wo=∅ e uma=ma tine*
 food=DET 3PL.SUBJ.IMM.PST=GET=3SG.OBJ to/from garden=DET inside
 ‘The food, they **get** it from the garden.’ (ft_stimuli_201015_04 086)

20 In (33) from Saliba-Logea, the verb *hai* ‘get’ again combines with a general locative PP which is
 21 consistently interpreted as the source of the caused motion event. In order for *hai* ‘get’ to express a
 22 CAM event towards a goal, it needs to be followed by a directional suffix or a directional verb, as in (34).

Saliba-Logea

(33) *ye-hai Spanish unai*
 3SG.SUBJ-get Spanish POST.SG
 ‘He **got** it from the Spanish.’ (Torres_01AC_0029)

(34) *gulewa wa se-hai se-dobi*
 clay.pot ANA 3PL.SUBJ-get 3PL.SUBJ-go.down
yo-di balanda wa unai se-suwa
 POSS-3PL.POSS veranda ANA POST.SG 3PL.SUBJ-serve
 ‘They **took** their clay pot down to the veranda and served.’ (Tautolowaiya_01AG_0090)

23 In Saliba-Logea there is lexical overlap between directed CAM events, as in (34), and the domain
 24 of change of possession, as the verb *hai* ‘get’ can also encode GIVE events (typically in the sense of GET
 25 and GIVE, cf. Margetts 2008). Examples like (35) can describe an event where the speaker goes to fetch
 26 the object, but also situations where they are already holding the theme and are passing it to the
 27 addressee.

Saliba-Logea

- (35) *ka-m* *keyaka* *ye-hai-ya-wa*
 POSS2-2SG.POSS coconut.bowl 3SG.SUBJ-get-3SG.OBJ-to.ADDR
 ‘I’ll **bring/give** you a coconut bowl.’ (Margetts 2008)

1 4.3 Caused accompanied motion

2 In another lexicalisation pattern, verbs combine caused motion and accompaniment together but do not
 3 entail directedness towards a goal. In our language sample there are no manner-neutral CAM verbs and
 4 all instances also express a specific manner of caused motion.

5 Manner-specific CAM verbs express concepts which may be described by meta-language labels
 6 like CARRY, GUIDE, DELIVER, SHEPHERD, SMUGGLE, and TRANSPORT, among others.¹⁵ Directedness
 7 towards a goal is not lexicalised in these verbs but can be expressed through combination with free or
 8 bound directional morphemes and goal expressions. This is the main pattern for expressing directed
 9 CAM events in Saliba-Logea (as shown in (2), (8) and (16) above) and it is attested as a minor pattern in
 10 Totoli and Sudest.

11 As mentioned, when manner is lexicalised in the verb, this has an impact on the types of theme
 12 entities that are sanctioned. Selection restrictions for manner-specific verbs expressing concepts like
 13 CARRY do not allow for self-moving objects. This means that languages which have manner-specific
 14 concepts like CARRY as their basic directed CAM expressions cannot cover with a single verb the same
 15 range of events as manner-neutral concepts, such as BRING/TAKE or GET do. Events where the theme is
 16 not in fact carried but is either self-moving or transported by boat, car, cart, horse, etc. are typically
 17 expressed by other manner-specific concepts, such as GUIDE, ROW, or TRANSPORT.

18 The fact that the type of theme entity influences the choice between different manner-specific
 19 CAM verbs can be observed in the following examples from Saliba-Logea. They show sequences of false
 20 starts and repairs involving the CAM verbs *bahe* ‘carry’ and *woya* ‘guide’ and in both cases the ability of
 21 the human theme to move independently is in question. In example (36) the speaker initially chooses
 22 the verb *woya* ‘guide’ but then self-corrects to *bahe* ‘carry’. The child, which is the theme entity, is
 23 already dead at this point of the story and therefore not self-moving. The false start is likely associated
 24 with the change of perspective throughout the story between the direct speech of the father, who does
 25 not know that the child is dead, and the narrator, who does.

Saliba-Logea

- (36) *wawaya* *wa* *ye-woya-i* *se-dobi* *ye-/*
 child ANA 3SG.SUBJ-guide-TR 3PL.SUBJ-go.down false.start

mwalo-mwaloi-na *na* *ye-bahe-i*
 RED-dead-3SG.POSS and.then 3SG.SUBJ-carry-TR

ye-dobi-yei *ede* *waga* *ena* *ye-usa-i*
 3SG.SUBJ-go.down-TR PRSUP boat/canoe POST.SG 3SG.SUBJ-put.in-TR
 ‘He **led** the child down he/, it was dead, he **carried** the dead child down and put it in the
 canoe.’ (Boneyawa_22DS_0034)

26 Example (37) shows the reverse type of repair sequence, from *bahe* ‘carry’ to *woya* ‘guide’. Here the
 27 theme is a young woman who is the child of an octopus and half-human half-animal in character but she
 28 occurs in her human form in this scene and is self-moving.

¹⁵ This lexicalisation pattern cross-cuts several of Levin’s (1993: 136) English verb classes including her ‘carry’ and ‘drive’ verbs, but only some of her ‘send’ verbs (those which express *accompanied* caused motion), and only some of her ‘accompany’ verbs (those which expressed *caused* accompanied motion).

Saliba-Logea

(37) *ye-/* *ye-bahe-i* *ye-/* *ye-woya-i* *ye-lae-i* *magai*
 false.start 3SG.SUBJ-carry-TR false.start 3SG.SUBJ-guide-TR 3SG.SUBJ-lead-TR place
 ‘He/ he **carried** her he/ he **guided** her and led her home.’ (Guyuwa_01AT_0054)

1 Of course manner-specific concepts such as GUIDE, LEAD, ROW, or TRANSPORT also exist in
 2 languages that have manner-neutral verbs like BRING/TAKE or GET as their basic directed CAM
 3 expressions, as in Bora and Movima or English. However, their taxonomical relationship to the basic
 4 directed CAM expression is quite different from languages which have CARRY as the basic CAM verb.
 5 BRING/TAKE or GET verbs can typically function as nuclear verbs and as cover terms for directed CAM
 6 events with different manners of caused motion, including events where the theme is carried, guided, or
 7 transported. They can act as manner-neutral superordinate terms for such events and speakers can
 8 choose verbs expressing concepts like CARRY, GUIDE, or TRANSPORT in order to provide more detail. By
 9 contrast, in languages like Saliba-Logea with a CARRY verb as the basic directed CAM expression, there
 10 may not be a manner-neutral superordinate verb. GUIDE or TRANSPORT are manner-specific concepts
 11 which constitute alternatives to CARRY, rather than sub-types of CARRY events. So, in this sense, GUIDE
 12 and TRANSPORT verbs are as basic in the expressions of this semantic domain as CARRY verbs are, they
 13 are just less frequent because directed CAM events with handled inanimate objects tend to be more
 14 common.

15 Diagnostics for identifying verbs which lexicalise manner of caused accompaniment lie in their
 16 manner specificity, which means they are restricted to occur with certain types of theme entities (e.g.
 17 handled vs. self-moving themes), and/or they are restricted to express events which involve certain
 18 means of transport, in the case of concepts like TRANSPORT, PADDLE, or GIVE A LIFT. A further criterion
 19 is that these verbs typically must combine with directional or goal expressions to encode directed CAM
 20 events, as they do not inherently entail directedness.

21 Also attested in our data are verbs which lexicalise manner and caused *static* accompaniment,
 22 expressing concepts such as HOLD, GRAB, or BEAR (cf. Levin’s class of ‘hold’ verbs). In some cases, such
 23 verbs can encode caused motion towards the agent, as in PICK UP and LOAD (onto one’s own back). The
 24 notions of motion and directedness towards a goal (other than the agent) need to be expressed in
 25 constructions with directional morphemes or goal expressions. This is attested as a minor pattern in
 26 Sudest which has several distinct verbs used to describe bearing and carrying events, as in (38).¹⁶

Sudest

(38) *gogo* ‘bear on shoulder’
kithaghe ‘bear with string (on forehead or shoulder)’ (e.g. like a bilum bag)
kewe ‘bear on a stick’
kembibi ‘bear clutched under the arm’

27 Sets of manner-specific CARRY-type verbs are a common feature in Oceanic languages. However,
 28 the discourse patterns in Sudest suggest that, in this language, the four verbs do not literally denote
 29 CARRY events (lexicalising manner of caused accompanied *motion*) but rather describe concepts similar
 30 to BEAR or HOLD, lexicalising manner of static accompaniment. The language-specific diagnostics for this
 31 include that the four Sudest verbs are not attested with a directly following goal PP. All examples with
 32 goal PPs show the BEAR verbs first combining with a directional expression – such as an associated
 33 motion prefix, directional suffix, or directional verb, as in (39) and (40). They differ in this respect from
 34 Sudest caused motion verbs, like GUIDE, PUSH, PULL or SEND. The distributional pattern therefore

¹⁶ Events where an entity is carried in hands or on the head are expressed by a GET verb in Sudest (cf. 4.2).

1 suggests that the Sudest BEAR verbs lexicalise manner of static accompaniment rather than caused
 2 accompanied motion.¹⁷

Sudest

(39) *gharighari thi=yo-kewe mbombo=ma e ghemba*
 people 3PL.SUBJ=while.going-bear.on.stick pig=DET to/from village
 ‘The people **carry** the pig to the village (on a stick).’ (e_2611216_01)

(40) *a=kithaghe lo nambo a=wa e sikulu*
 1SG.SUBJ=bear.on.shoulder/neck POSS.CLF2.1SG basket 1SG.SUBJ=go to/from school
 ‘I **carry** my bag (on my back) to school.’ (e_071116_03)

3 Two further Austronesian languages, Totoli and Vera’a, show verbs meaning HOLD or GRASP as
 4 lexical bases for some of their directed CAM expressions, however in both cases the verbs also have a
 5 dynamic reading like CARRY and it is not clear whether this is evoked pragmatically (and the verbs, like
 6 in Sudest, do not entail motion) or whether the verbs are polysemous with both a static HOLD and a
 7 dynamic CARRY reading. The CARRY sense of the Totoli verb *goot* ‘hold (onto); carry (in hand)’ is
 8 illustrated in (41).

Totoli

(41) *mo-goot=mo=ko bibit ia*
 AV-hold=CPL=thither seedling PROX
 ‘(We) already **took** the seedlings there.’ (conversation_2.0834)

9 Examples (42) and (43) illustrate the HOLD-sense.

Totoli

(42) *isia mo-goot-i lima=ku*
 3SUBJ AV-hold-APPL2 hand=1SG.GEN
 ‘She **holds** (onto) my hand.’ (Elicited)

(43) *mo-goot-i kku tonggulabit ia*
 AV-hold-APPL2 foot k.o.rope PROX
 ‘The tonggulabit rope **holds** the feet.’ (coconut.159)

10 In Totoli the choice between the more static HOLD and the more dynamic CARRY sense appears to
 11 depend essentially on the nature of the theme participant and the pragmatic context. In isolation,
 12 sentences with themes like ‘hand’, ‘wall’ or ‘area’ will be translated with HOLD, while ‘seeds’, ‘avocados’
 13 or ‘fish’ will elicit a CARRY translation. In addition, instances with the CARRY reading usually also involve
 14 a directional clitic (such as =ko in (41)).

15 Similar examples from Vera’a show the verb *gis* ‘hold/take in hand(s)’ with the directional particle
 16 *ma* ‘hither’, as in (44).

Vera’a

(44) *nik ē riv ēn dom ne vō-ruō*
 2SG PROSP:2SG plant ART yam NUM.ART NUM-two

no=m gis ma den lē=n lōlō vunuō
 1SG=PRF hold hither ABL LOC=ART inside village
 ‘You plant the two yams (that) I have **brought** here from the village.’ (JSV.129)

¹⁷ Note again that this diagnostic is language specific and that it is the difference in distribution to caused motion verbs like GUIDE or SEND which suggests that the four BEAR verbs do not entail motion. In other languages of our sample the requirement of combining with a directional expression holds for non-directed caused motion verbs as a group and is indicative of verbs not having a directedness component (while they do entail motion).

1 Diagnostics for identifying verbs lexicalising manner of caused static accompaniment expressing
 2 concepts like BEAR and HOLD lie again in their manner specificity, which means they are restricted to
 3 theme entities which are handled. Further diagnostics include that these verbs can express static events
 4 and do not entail motion, and because of this, they differ in some language-specific way from manner of
 5 caused motion verbs like GUIDE or SEND.

6 4.4 Accompaniment

7 Verbs expressing concepts such as ACCOMPANY, GO WITH or BE WITH lexicalise accompaniment
 8 without the notion of caused motion or directedness.¹⁸ None of the ACCOMPANY-type verbs in our
 9 sample encode any of the additional semantic features; they are all manner-neutral, not deictically
 10 specific, and do not encode aspects of the theme object. When ACCOMPANY verbs occur in directed
 11 CAM expressions, directedness towards a goal can be expressed through combination with directional
 12 morphemes or goal expressions. Causation of motion is not entailed in these constructions but arises as
 13 an implicature in certain contexts, e.g. when the theme is inanimate and cannot move independently.
 14 This is one of the main lexicalisation patterns for directed CAM events in Vera'a:

Vera'a

(45) *nik me 'ō' ma=n 'erē mōmōlege lē=n lōlō nimē*
 2SG FUT be.with hither=ART PL things LOC=ART inside house
 'You will **bring** everything into the house. [So when your wife is hungry, everything will
 be put ready.]' (TNK.039)

(46) *'ō'ō' lē=n 'ekē wunva 'amēn nēreg si [...]*
 RED:be.with LOC=ART place maybe PURP sell
 '[He took them], **took** (them) to a place in order to sell (them)' (PAPF.072)

15 As shown in (45) and (46), the ACCOMPANY verb can occur by itself, however more commonly it occurs
 16 in serialisation with a directional verb, like *van* 'go' or *kalu* 'exit', as in (47) and (48).

Vera'a

(47) *nik=ēm van 'ō' di lē=n hospital va-van*
 2SG=PRF go be.with 3SG LOC=ART hospital RED-go
 '[When] you have been **going with** him/her to the hospital for a while...' (PAKM.007)

(48) *'ēkē gidē dē=m kalu 'ō' ma=n mu-dē=n*
 oh.dear 1PL.INCL 1PL.IN=PRF exit be.with hither=ART POSS.GEN-1PL.IN=ART
'erē naka=m 'ul'ul qē'
 PL canoe=PRF RED:drown finish
 'Oh dear, no, we have **brought** our canoes out here (to the sea), and they have all
 drowned.' (JJQ.115)

17 This type of lexicalisation is also attested as a minor pattern in Totoli with the verb *untud* 'go with'. In
 18 (49) and (50) the theme is inanimate and not self-moving:

Totoli

(49) *mangana nog-untud-an=ko songgona itu*
 child AV.RLS-go.with-APPL1=thither hat DIST
 'The child **brings** (him) the hat.' (pearstory_1.160)

¹⁸ Levin's class of 'accompany' verbs includes several manner-specific verbs expressing concepts like ESCORT, GUIDE, and SHEPHERD but they all seem to entail caused motion as well as accompaniment and as such were discussed in 4.3 above.

- (50) *harus nog-untud mamaan*
 have.to AV.RLS-go.with betel pouch
 ‘You have to **bring** a betel pouch (when going to the parents’ house to propose for their daughter).’ (marriage_proposal.034)

1 While the clauses in (49) and (50) express directed CAM events, in (51) and (52), where the theme is
 2 animate, it is less clear whether the events include caused motion or merely accompaniment.

Totoli

- (51) *aku moki-turung moki-untud kota=ko*
 1SG AV.RQV-help AV.RQV-go.with town=thither
 ‘I ask to be **accompanied** to town.’ (Elicited)

- (52) *untud-an moane itu makko=ai di bale bbine*
 go.with-APPL1 man DIST AV:go=thither LOC house woman
 ‘The man is **escorted** when going to the house of the woman.’ (marriage_proposal.138)

3 When ACCOMPANY verbs are used to encode directed CAM events, there is lexical overlap with
 4 non-caused accompanied motion where both participants have some control over the motion event. In
 5 addition, some such verbs can denote not only active accompaniment events like ACCOMPANY or GO
 6 WITH but also static ones, encoding concepts like BE WITH. The overlap in Vera’a goes even further in
 7 that the morpheme ‘*ō*’ ‘accompany, be with’ has a dual status as both a verb and a comitative and
 8 instrumental preposition ‘with’, as in (53). Commonly the morpheme occurs in contexts where its status
 9 as a verb or a preposition is ambiguous.

Vera’a

- (53) *di ne mul kēl ma ‘ō=n gengen,*
 3SG PROSP:3SG return back hither with=ART food

duru=k dada gengen
 3DU.SUBJ=PROSP:NSG RED:do food
 ‘He came back **with** food, and the two prepared the meal.’ (JSV.E.007)

10 Diagnostics for ACCOMPANY-type verbs include that they can express non-caused accompaniment
 11 events but not non-accompanied caused motion events (such as GIVE or SEND). A further diagnostic is a
 12 lack of restriction on the theme entity.

13 4.5 Caused motion

14 Some verbs in our sample essentially lexicalise caused motion and do neither specify whether the agent
 15 shares the same motion path as the theme nor the directionality of the motion event. Such verbs can
 16 express accompanied or non-accompanied caused motion depending on the context. Similar to the GET
 17 verbs in 4.2, accompaniment arises as an implicature in those cases where the event involves motion at
 18 geographic scale (where the agent moves from A to B), rather than within table-top space (where the
 19 agent manipulates the position of objects, e.g. in a board game). Verbs of this type express the
 20 positional manipulation of the theme and may be manner specific, when they denote concepts like
 21 HANDLE, DRAG, PUSH, PULL, or ROLL, or manner-neutral, expressing concepts like transitive MOVE.
 22 Such verbs are again distributed across several of Levin’s (1993) classes (e.g. her ‘slide’ and ‘roll’ verbs).
 23 In our data, directedness of the caused motion event can be expressed in constructions with goal
 24 obliques, as in (54), or with directional morphemes, as in (55).

Bora

- (54) *aa-né=vá=a teene í-ñe í-tsoróó-ho ihdyu*
 CONJ-INAN=QUOT=REM 3-INAN this-INAN 3.POSS-chest-CLF.enclosure like.this
pevé-bájcú ijcyá-ne cáttú-jcaáyo-obe
 empty-CLF.bone be-INAN push-SG.TR-M.SG
tee-ne i-píívyé nu-jpácyó pañé-u
 3-INAN 3.POSS-creation water-CLF.liquid inside-ALL
 ‘And he **pushed** his [= his enemy’s] whole chest, which was a single bone, into the water of his creation.’ (lluuhii ref 033)

Saliba-Logea

- (55) *waga hesau lakilaki-na se-niuli-dobi-yei*
 canoe other big-3SG.POSS 3PL.SUBJ-drag-down-TR
 ‘They **dragged** down a big canoe.’ (Ulawa_01DG_0080)

1 These constructions show lexical overlap between the domains of accompanied and non-
 2 accompanied caused motion, since the same lexical items are used to cover both event types. None of
 3 the languages in our sample show separate verbs for accompanied vs. non-accompanied MOVE, DRAG,
 4 PUSH or PULL-type events. The verbs (54) in and (55) can, in principle, describe CAM events (where the
 5 agent moves along while dragging the canoe) or unaccompanied caused motion events (where the
 6 agent remains stationary, e.g. while dragging the canoe down on a rope).

7 In a similar fashion, the Beaver HANDLE verbs lexicalise manner-specific caused motion in that the
 8 theme objects are handled in some way. (As described in 3.3, the Beaver verbs also lexicalise
 9 information about the theme object by classifying objects into different types.) Examples with human
 10 themes typically describe situations where they are being manhandled and transported. In (56) the
 11 speaker describes how, as children, they were placed on a wagon and taken to the country side; in (57)
 12 the agent abducted a woman to take her as his wife.

Beaver

- (56) *ahséi yù tyé’e yu k’éémói-dzé’ naxa-gha-da-le*
 grandfather and dad and bush-to 1PL.OBJ-3PL.SUBJ-QUL.PFV-handle.PL
 ‘My grandfather and my father **took** us out into the bush.’ (without_a_mom001:006)
 (57) *tyuchuk yidóneh ya-dyé-htyi*
 ocean across 3SG.OBJ-QUL.PFV-handle.ANIM
 ‘He **brought** her across the ocean.’ (horned_man_001:002)

13 While examples (56) and (57) describe accompanied caused motion events, accompaniment is again not
 14 entailed by these verbs. In (58) the same verb stem *-htyi* ‘handle animate object’ as in (57) describes a
 15 non-accompanied caused motion event where the agent lifts up a child.

Beaver

- (58) *íi ts’ídoa mats’í’ dah-ya-ts’a-dyi-htyi, ya-k’éé-sa-ladz*
 this baby 3-ALL up-3SG.OBJ-3.PL.SUBJ-QUL.PFV-handle.ANIM 3SG.OBJ-on-PFV-pee
 ‘They **lifted** the baby up to him, and it peed on him.’ (moose001:043)

16 In Beaver, there is lexical overlap not only with non-accompanied caused motion events but also
 17 with the domain of change of possession. The same verb stems that encode directed CAM events in (56)
 18 and (57) can describe PUT and GIVE events. In these contexts the HANDLE verb stem occurs with
 19 different aspectual affixes and specialised postpositions expressing the goal or recipient, as in (59) and
 20 (60).

Beaver

(59) *na-tʂ'jilé' tyé-ni-ø*
 2SG.POSS-axe into.water-1SG.SUBJ.PFV-handle.SRO
 'I **put** your axe in the water.' (classificatory_give001.pdf)

(60) *tth'a' k'áá-m-a-ni-'á*
 plate REP-3PL.OBJ-BEN-2SG.SUBJ.IPVF-handle.SRO
 'Give them the plate!' (household_items004)

1 Similar patterns can also be observed in Vera'a, with the manner-neutral caused motion verb *le*
 2 'move', as in (61) and (62):

Vera'a

(61) [...] =*ēm le ma=n qi'i malmála ē*
 =PRF move hither=ART head girl DEM3
 '[He paid them for that they went and] **brought** the head of that girl.' (ASMS.153)

(62) *alē dir'ōl ... le ba'a di sar lē=n lōlō nimē*
 INTERJ 3TL move into 3SG inward LOC=ART inside house
 'Alright, they (trial) **took** [forced] her into the house (and guarded her).' (ASWM.083)

3 While (61) and (62) describe directed CAM events, in (63) *le* 'move' encodes an event of minimal spatial
 4 manipulation which involves caused motion of the theme. The example does not describe a CAM event
 5 since the agent does not accompany the theme along the same motion path.

Vera'a

(63) *le kal sar [...] le kel rak row*
 move upwards inwards (it) move back off seawards (it)
 'Move (it) 'bushwards', [oh wait, that's too far] **move** (it) back 'seawards' [adjusting
 beams of a rafter during house construction]. (HB05_JJ.019)

6 The verb *le* 'move' can also encode PUT and GIVE events, as in (64) and (65). This means that in Vera'a
 7 there is again lexical overlap between directed CAM events and the domains of non-accompanied
 8 caused motion and change of possession.

Vera'a

(64) *di ne le=n ge anē ne van 'ō'*
 3SG PROSP:3SG move=ART thingy DEM.ADDR PROSP:3SG go be.with
qēl le lē=n naka
 descend move LOC=ART canoe
 'He took that thingy, took (it) down to the sea, **put** (it) in the canoe ...' (ISV.163)

(65) *di=m le mē diē*
 3SG=PRF move DAT 3SG
 '[He took the hat] and he **gave** (it) to him.' (BSPF.102)

9 Diagnostics for verbs which entail caused motion but none of the other defining features of
 10 directed CAM events include that they can describe both accompanied and non-accompanied caused
 11 motion. Furthermore, verbs of this type cannot express non-caused accompanied motion events such as
 12 ACCOMPANY or BE WITH. If they are manner neutral, these caused motion verbs show no semantic
 13 restrictions on the theme entity.

14 4.6 Motion

15 Some languages regularly derive directed CAM expressions from intransitive motion verbs by means of
 16 transitivity morphemes, such as causatives or applicatives. In these cases, the verbs at the core of the

1 CAM expression lexicalise motion but neither causation of motion nor accompaniment. The base verbs
2 typically describe directed motion (4.6.1) or, less commonly, manner of motion (4.6.2).

3 4.6.1 Directed motion

4 As discussed in 3.1, directional motion verbs can be neutral or specific in terms of deictic orientation.
5 Examples of deictically neutral concepts include verbs describing upwards or downwards motion,
6 motion inland or seaward, but also concepts like ENTER, EXIT, RETURN and ARRIVE. Deictically specific
7 concepts include COME and GO, which express motion directed towards or not towards the deictic
8 centre.¹⁹

9 In our data, two patterns are attested within this lexicalisation type. In the first pattern, CAM
10 expressions are derived from directional verbs by means of a causative morpheme. In the second
11 pattern, they are derived by an applicative. The two patterns differ in terms of which meaning
12 components are entailed and which are implied by the derived verb.

13 The first pattern exemplifies suggestions in the literature that BRING and TAKE verbs are the
14 causative counterparts of COME and GO (cf. Dixon 1992; Levin 1993: 135). This is attested as the basic
15 pattern of directed CAM expressions in only one language of our sample.²⁰ In Savosavo basic directed
16 CAM events are expressed by complex verb constructions where an intransitive directional verb is
17 preceded by a causative morpheme, as in (66) and (67).

Savosavo

(66) *no manana=e no-va kao biti=la*
2SG.GEN adequate=EMPH 2SG-GEN.M bushwards volcano=LOC.M

gn-au bo-ghu?
1SG.OBJ-CAUS go-NMLZ
'Can you **take** me inland to the volcano?' (mp_biti_040)

(67) *l-ovu-a ke=gne poqala ropo=la mane*
3SG.M-put-IMP.SG CONJ=1SG.NOM tomorrow morning=LOC.M CONSEC

ghoi kulisogha no-va ela samu zala-li
again go.to.beach 2SG-GEN.M some food look.for-3SG.M.OBJ

l-au ba
3SG.M.OBJ-CAUS/take come
'Leave it (i.e. don't worry about it), tomorrow morning again I shall go seawards (and)
find and **bring** some food for you (or: find it, take it and come).' (ws_cs_ghulia_055)

18 The causative marker can also derive transitive verbs from unaccusatives (e.g. 'to clean' from 'be
19 clean', Wegener forthcoming), and therefore classifies as a prototypical causative (see e.g. Haspelmath
20 2016). It historically developed from a TAKE verb in a serial verb construction and the homophonous
21 ungrammaticalised TAKE verb still coexists. In (67) above, the morpheme is ambiguous between a verbal
22 and a causative reading. In the first occurrence in (68) *l-au* has the verbal reading 'take'.²¹

¹⁹ However, see again the discussion by Wilkins & Hill on whether TAKE is inherently deictic (cf. section 3.1).

²⁰ In Movima causativisation of COME and GO derives caused *non-accompanied* motion verbs, such as in SEND.

²¹ The construction in Savosavo thus derives from serial constructions similar to those found in some Austronesian languages (e.g. (7) and (8) in 3.1), where one verb expresses accompanied and/or caused motion and a separate verb encoded directedness. The pattern in Savosavo differs from the Austronesian languages in that it is the CAM verb TAKE which grammaticalises into a dependent morpheme, while in the Austronesian languages it is the directional verbs COME and GO which have lost their independent status.

Savosavo

- (68) *tulola=lo l-au ota lo sebina lo*
 then=3SG.M.NOM 3SG.M.OBJ-take there DET.SG.M wild.yam 3SG.M[GEN]
pabu-tu ota toala=lo te l-au bo-i
 germinate-REL there really.LOC=3SG.M.NOM EMPH 3SG.M.OBJ-CAUS go-FIN
 ‘Then he **took** him, he **took** him exactly to where the wild yam grew.’
 (ak_cs_toneto_043)

1 The Savosavo causative marker also seems to express accompaniment but it is not clear whether
 2 this is entailed in the construction. Non-accompanied caused motion events like SEND or events
 3 involving moving objects on a table-top space (e.g. in a board game) generally require the causativised
 4 verb to be serialised with a preceding PUT verb, as in (69).

Savosavo

- (69) *kati=gne n-ovu n-au bo ta-i*
 CERT=1SG.NOM 2SG.OBJ-put 2SG.OBJ-CAUS go FUT-FIN
 ‘I will **send** you out [to get two cows for the wedding].’ (eg_madoke_058)

5 A similar causative construction is attested as a minor pattern in Sudest, where the directional
 6 verb appears with a causativising prefix. In (70) the verb *voro* ‘go up’ takes the causative prefix *va-* to
 7 derive the predicate ‘take up’. In (71) the verb *ru* ‘go in’ is preceded by a manner-of-causation prefix
 8 *mwana-* ‘do with hand’. Both types of examples are however rare. The Sudest prefixes entail causation
 9 but only imply accompaniment in this example, as the causative prefix is also attested with non-
 10 accompanied caused motion events (such as taking something out of a pocket).

Sudest

- (70) *thi=va-voro=nga thari=ko e thaga=ko righe*
 3PL.SUBJ=CAUS-go.up=TR dance=DIST to/from feast=DIST base
 ‘And they **take** up that dance to the feasting place.’ (feast_of_the_fish_271015_053)
- (71) *a=mwana-ru=wo daghata=ma e nggolo raberabe*
 1SG.SUBJ=by.hand-go.in=thither log=DET to/from house under
 ‘I **pull** the log under the house.’ (e_021115_01)

11 Among the diagnostics for this lexicalisation pattern is that the notion of causation is expressed by
 12 a separate morpheme.

13 In the second major pattern involving motion verbs, directed CAM expressions are derived from
 14 directional verbs by an applicative which adds an accompanied theme to the verb’s argument structure.
 15 The derived verbs therefore encode directedness (in the verb stem) and accompaniment (with the
 16 applicative). This is the basic pattern for directed CAM expressions in Movima, where the applicative
 17 suffix *-te* adds a concomittant theme argument to the intransitive motion verbs, typically COME or GO,
 18 as in (72) and (73) (see Haude 2006: 402–405). The applicative expresses accompaniment and
 19 apparently also causation of motion, as the concomittant theme moves with and because of the agent.

Movima²²

- (72) *jiva-te-na=Ø--us ney n-as lo:los*
 come-APPL-DR=1SG--3M.AB here OBL-ART.N village
 ‘I **brought** him here to the village.’ (EAO_240807_vibora 147)
- (73) *joy-a-te=sne--kus n-as sot-lo:los*
 go-DR-APPL=3F.AB--3N.AB OBL-ART.N other-village
 ‘She **took** him to another village.’ (ERM_150806 607)

²² Two hyphens in Movima indicate “external cliticization” (Haude 2006: 101–103).

1 This pattern is also attested with non-deictic verbs like *di:rat-te* ‘travel to village with’, *joyaj-te* ‘arrive
 2 with’, and *salmo-te* ‘return with’, as in (74) and (75). However, such constructions, which combine non-
 3 deictic directedness and accompaniment, are rare in Movima.

Movima

(74) *di:rat-te-na=is* *os* *sotak-aro:wa* *di'* *se:wo* *duk-'i*
 travel.to.village-APPL-DR=3PL.AB ART.N.PST one-arroba REL grease grind-RES
 ‘They **came (to the village) with** one “arroba” of ground grease.’ (Ganado 117)

(75) *ban* *i'ne* *joyaj-te-na=Ø* *jayna* *i'nes* *ma:ma=nkwel*
 but PRO.3F arrive-APPL-DR=1SG DSC ART.F mother_of=2PL
 ‘But I **arrived with** her, with your mother.’ (JZH_080807 061)

4 A diagnostic for this lexicalisation pattern is that the notion of accompaniment (and typically also
 5 caused motion) is added by a separate morpheme, and again the lack of restrictions on the theme
 6 entity.

7 4.6.2 Manner of motion

8 Parallel patterns to those just discussed are attested with verbs which do not describe directed motion
 9 but express concepts like RUN, SKIP, SWIM, or FLY, which entail the manner of motion of the agent
 10 without indicating a specific direction (cf. 3.2.2). In some languages, such verbs are attested with the
 11 same derivational patterns described for directional verbs, where the notions of caused motion and/or
 12 accompaniment are added by separate morphemes. Manner-specific CAM predicates can be derived by
 13 applicatives in Movima, Totoli, and Saliba-Logea, and by causatives in Savosavo, but they are not
 14 common in any of the sample languages. The resulting constructions do not encode *directed* CAM
 15 events since the intransitive base verbs are not inherently directional. Example (77) shows the
 16 applicativised verb ‘run with’ in Saliba-Logea (an example from Movima was given in (18) above).

Saliba-Logea

(76) *ye-kukui* *na* *ye-heloi-yei*
 3SG.SUBJ-load CONJ 3SG.SUBJ-run-APPL
 ‘It (the deer) loaded him on its antlers and **ran off with** him.’ (FrogStory_01AW_0109)

17 In principle, such manner-specific non-directional verbs can be combined with a directional or
 18 goal expression. However, as discussed in 3.2, constructions which combine both manner of motion and
 19 directedness are very rare across the language sample. Example (78) is the only instance attested in the
 20 Totoli corpus and (79) shows an elicited example from Saliba-Logea.²³

Totoli

(77) (*llenget=na*) *pog-umbang=na=ko* *taking* *sapeda*
 basket=3SG.GEN SF-run:APPL1=3SG.GEN=thither with bike
 ‘He **hurried away** (with) his basket on his bike.’ (pearstory_3 019)

Saliba-Logea

(78) *tubu-gu* *ya-wose-i* *ka-lao* *Saliba*
 granny-1SG.POSS 1SG.SUBJ-paddle-APPL 1EXCL-go PN
 ‘I **paddled** my grandmother to Saliba.’ (Elicited)

21 In sum, the same derivational strategies that were discussed for directional verbs can also derive
 22 CAM expressions from manner-of-motion verbs, however this is not a common strategy in any of the
 23 languages. Even rarer are such derived manner-specific CAM verbs in directed CAM expressions. There
 24 seems to again be a preference to encode either manner of motion or directedness but not both.

²³ See Himmelman & Riesberg (2013) on the rather intricate grammar of applicatives in Totoli.

1 5 Conclusions

2 In this study we presented data from eight languages of the Pacific and the Americas on their encoding
 3 of directed CAM events. Our main finding is one of diversity, with a wide range of strategies in the
 4 expression of these events. It is noteworthy that this tendency of diversity holds even for closely related
 5 languages (such as the Oceanic languages Saliba-Logea, Sudest, and Vera'a). We described causation of
 6 motion, accompaniment, and directedness as the defining components of directed CAM events and
 7 demonstrated that different combinations of these features can be entailed or implied in the
 8 constructions. We further observed that some directed CAM expressions lexicalise and therefore entail
 9 additional features in the verb. Additional features attested in our sample are deixis, manner of (caused)
 10 motion, and information about the theme object. We found no verbs which lexicalise further
 11 distinctions, but a broader cross-linguistic sample may reveal lexicalisation of other features.
 12 Hypothetically relevant distinctions include intentional vs. accidental causation, continuous vs. non-
 13 continuous causation of motion, or physical causation vs. causation by ordering or enabling, but none of
 14 these are attested so far.

15 The attested lexicalisations show that with the exception of Totoli none of the languages have a
 16 single nuclear verb (in the sense of Dixon 1982) which could cover more or less the entire semantic
 17 domain of directed CAM as a superordinate term. This is due to the presence of additional semantic
 18 features in the verbal core of directed CAM expressions which narrow their scope in terms of the event
 19 types they can represent. The lexicalisation of deictic features leads to verb pairs such as English *bring*
 20 and *take* (or derivations based on COME and GO verbs), which in our sample are attested in Bora,
 21 Movima, and Savosavo (3.1). The lexicalisation of manner features can be seen as creating a similar split,
 22 with sets of verbs covering the basic expression of this domain between them. This is attested in Saliba-
 23 Logea, which typically describes directed CAM events on the basis of a CARRY verb which is in contrast
 24 with other manner-specific verbs expressing concepts like DRAG, LEAD, GUIDE, etc. (3.2, 4.3). In a similar
 25 way, Beaver and Sudest show sets of object-specific classificatory verbs which cover the CAM domain
 26 between them (3.3). In all of these cases, one member of the set of verbs may be more frequent, and in
 27 that sense basic and unmarked, but they are in a paradigmatic relationship with the other verbs rather
 28 than functioning as a nuclear, superordinate term.

29 In terms of the three defining components – caused motion, accompaniment, and directedness –
 30 only one language in our sample, Bora, shows all three features lexicalised in a single verb. Bora shares
 31 the English lexicalisation pattern of two verbal lexemes, BRING and TAKE, encoding caused motion,
 32 accompaniment, and directedness in a deictically-specific and manner-neutral way.²⁴ Throughout the
 33 remaining languages, basic directed CAM expressions are morphologically and/or syntactically complex.
 34 In these languages, directed CAM expressions are built up from verbal concepts including CARRY, GET,
 35 HANDLE, HOLD, transitive MOVE, ACCOMPANY, BE WITH, and COME/GO by valence-increasing
 36 morphology, verb or clause combinations, and/or overt encoding of the goal.

37 In addition to this morphosyntactic complexity, some languages regularly draw on pragmatics in
 38 their encoding of these events and the patterns vary widely in terms of which meaning components are
 39 encoded by lexical semantics, morphosyntax, or pragmatics. Table 4 provides an overview.²⁵

²⁴ However, as mentioned in 3.1, even in Bora these verb stems are etymologically compositional.

²⁵ For the valence-increasing morphemes in Movima and Savosavo it could not be demonstrated whether both caused motion and accompaniment are entailed or one of them may be merely implied. However, there are no examples that demonstrate that these features are defeasible meaning components in either language.

1 Table 4. Defining features in basic directed CAM expressions

Language	Genealogy and location	Basic verbs	Directedness encoded by	Causation encoded by	Accompaniment encoded by
Beaver	Athabaskan-Eyak-Tlingit Canada	object-specific HANDLE verbs	directional and/or goal PP	main verb	main verb
Bora	Boran Colombia, Peru	<i>tsiva</i> 'bring' <i>tsajtye</i> 'take'	main verb	main verb	main verb
Movima	Isolate Bolivia	<i>jiwa</i> 'come' <i>joy</i> 'go'	main verb	applicative	applicative
Savosavo	Central Solomons Solomon Islands	<i>ba</i> 'come' <i>bo</i> 'go'	main verb	causative	(causative?)
Saliba-Logea	Austronesian PNG	<i>bahe</i> 'carry' <i>niuli</i> 'drag', ...	directionals and/or goal PP	main verb	main verb
Sudest	Austronesian PNG	object-specific GET verbs	directionals and/or goal PP	main verb	context
Totoli	Austronesian Indonesia	<i>ala-</i> 'fetch'	directionals and/or goal PP	main verb	context
Vera'a	Austronesian Vanuatu	<i>le</i> 'move s.th.'	directionals and/or goal PP	main verb	context
		' <i>ō</i> ' 'accompany'	directionals and/or goal PP	context	main verb

2 The findings summarised in Table 4 show that all attested patterns cross-cut the genetic
3 groupings and geographic distribution across the Pacific and the Americas. In terms of the encoding of
4 caused motion and accompaniment, we find that some languages have basic CAM expressions that
5 lexicalise both features (with or without directedness). This is attested as a basic pattern in Bora and
6 Saliba-Logea (4.1, 4.3) (and as a minor pattern in Sudest, Totoli, and Vera'a). Other expressions lexicalise
7 either accompaniment or caused motion but not both. Vera'a and Totoli show basic directed CAM
8 expressions which express accompaniment but only imply causation of motion (4.4). Beaver and Vera'a
9 show constructions, where the verbs entail causation of motion but only imply accompaniment (4.5)
10 (and this is also a minor pattern in Saliba-Logea).

11 While, as mentioned, Bora, Movima, and Savosavo lexicalise directedness in the main verb,
12 directedness is expressed by morphosyntactic means in a pattern shared across the Austronesian
13 languages and also Beaver: they all lexicalise caused motion and/or accompaniment in the main verb
14 but express goal directedness by added morphemes with various degrees of boundedness (sections 3.1,
15 4.2 to 4.5).

16 A further pattern cross-cutting the geographic groupings is shared by Savosavo and Movima,
17 which derive basic directed CAM verbs from intransitive directional motion verbs expressing the
18 concepts COME and GO (4.6). In Savosavo the motion verb is causativised, while in Movima it is
19 applicativised (and these strategies are attested as minor patterns in the Austronesian languages Sudest
20 and Saliba-Logea respectively).

21 As shown in Table 4, it is not uncommon that basic directed CAM expressions entail either caused
22 motion or accompaniment but not both. In these cases, context and pragmatics play an important role
23 in the interpretation of these constructions. With verbs which entail only accompaniment, an
24 implicature of caused motion can arise, for example, if the theme entity is inanimate, incapacitated, or
25 unwilling. Where verbs entail caused motion, an implicature of accompaniment can be triggered, for

1 example, if the caused motion event is performed on a geographic scale (as opposed to a table-top
 2 space). When the motion path of the theme exceeds the agent’s arm reach, this implies that in order to
 3 make the theme reach the goal, the agent has to move along the same path. Such caused motion
 4 constructions can entail either motion towards the goal either of the agent or of the theme, leaving the
 5 accompanying motion of the other event participant to implicature. Constructions like ‘GET and GO’ or
 6 ‘HOLD and ARRIVE’ as in 4.2 and 4.3, describe the agent controlling the theme and the agent moving.
 7 The fact that the theme moves along the same path as well is left to implicature. Conversely, concepts
 8 like (transitive) MOVE, DRAG, or PULL in a direction, as in 4.5, entail that the theme moves toward a
 9 goal, but the information that the agent moves along the same path is based on implicature.

10 We can also observe patterns in relation to the additional meaning components which are
 11 lexicalised in some directed CAM expressions as shown in Table 5:

12 Table 5. Additional features in basic directed CAM expressions

Language	Genealogy and location	Basic verbs	Deixis	Manner	Object info
Beaver	Athabaskan-Eyak-Tlingit Canada	object-specific HANDLE verbs	directionals	main verb	main verb
Bora	Boran Colombia, Peru	<i>tsiva</i> ‘bring’ <i>tsajtye</i> ‘take’	main verb	n/a	n/a
Movima	Isolate Bolivia	<i>jiwa</i> ‘come’ <i>joy</i> ‘go’	main verb	n/a	n/a
Savosavo	Central Solomons Solomon Islands	<i>ba</i> ‘come’ <i>bo</i> ‘go’	main verb	n/a	n/a
Saliba-Logea	Austronesian PNG	<i>bahe</i> ‘carry’ <i>niuli</i> ‘drag’, ...	directionals	main verb	n/a
Sudest	Austronesian PNG	object-specific GET verbs	directionals	n/a	main verb
Totoli	Austronesian Indonesia	<i>ala-</i> ‘fetch’	directionals	n/a	n/a
Vera’a	Austronesian Vanuatu	<i>le</i> ‘move s.th.’ <i>’ō</i> ‘accompany’	directionals directionals	n/a context	n/a n/a

13 Table 5 presents only the patterns in what we described as *basic* directed CAM constructions.
 14 Some further combinations of semantic features are attested, but only in more marginal constructions,
 15 including manner of caused (accompanied) motion in Sudest, Totoli, and Vera’a (4.3), and manner of
 16 motion in Movima, Saliba-Logea, Savosavo, and Totoli, (4.6.2).

17 Six of the eight languages show one of the additional features lexicalised in the verbal core. Only
 18 Totoli and Vera’a have basic directed CAM expressions with verb roots which are neutral in terms of
 19 deixis, manner, and object features. Three of the languages lexicalise deixis, two lexicalise manner, and
 20 two code object features in the verbal core. There is an overall tendency that no more than one of the
 21 additional features is lexicalised in the verb and only one language, Beaver, combines manner and
 22 object features in basic CAM lexemes.

23 Again the patterns observable in the table crosscut geographical and genetic groupings. Going
 24 hand in hand with the general pattern for directedness shown in Table 4, the Austronesian languages
 25 share with Beaver that deixis tends to be an optional component. By contrast, Savosavo and the South
 26 American languages, Bora and Movima, lexicalise deictically specific directedness of concepts like BRING
 27 in the main verb.

1 As another pattern cross-cutting the geographic language groupings we find Beaver and Sudest
 2 clustering together in regards to lexicalising features of the object arguments (3.3). Both languages have
 3 directed CAM expression based on classificatory verbs which differ in the type of theme object specified
 4 by their selection restrictions.

5 Noteworthy is also the absence of certain combinations of defining and additional features in our
 6 data. Firstly, there are no verbs of caused motion from a direction (as in GET, FETCH, or REMOVE) which
 7 also lexicalise deixis or manner (4.2). Secondly, there are no non-directed, manner-neutral verbs which
 8 lexicalised caused accompanied motion. All CAM verbs also express a specific manner of caused motion
 9 (as in CARRY, GUIDE, or TRANSPORT, 4.3) and/or they entail directedness (as in BRING, TAKE, or LEAD,
 10 4.1). In our sample these combinations are not only unattested in what we established as the basic
 11 constructions in the sample languages, they are in fact absent from all directed CAM expressions in our
 12 data, including the more marginal ones. Again, a more varied cross-linguistic sample may reveal that
 13 such feature combinations exist in the languages of the world.

14 As discussed, some aspects of meaning are regularly evoked pragmatically rather than being
 15 entailed in the directed CAM constructions of our sample languages. This leads to what we have termed
 16 lexical overlap with other semantic domains (and this overlap can serve as a diagnostic for the semantic
 17 features of the base verbs, as discussed throughout section 4). For example, if a basic CAM expression
 18 does not entail accompaniment but evokes this pragmatically, the construction is not restricted to
 19 express accompanied cause motion events but can describe non-accompanied caused motion as well,
 20 depending on contextual factors.

21 Lexical overlap is not found in languages which entail all three of the defining components in their
 22 basic expressions, as in Bora, Movima, and Savosavo. But we find instances of lexical overlap in Beaver
 23 and all of the Austronesian languages. Table 6 presents a summary of both basic directed CAM
 24 constructions and some of the minor patterns.

25 Table 6. Lexical overlap between directed CAM and other semantic domains

Languages	Overlapping semantic domain	Overlap with concepts like
Saliba-Logea, Totoli, Sudest	Non-directed CAM	CARRY, GUIDE, TRANSPORT
Sudest, Totoli	Caused static accompaniment	HOLD, GRAB, PICK UP
Vera'a, Saliba, Beaver	Non-accompanied caused motion	MOVE, HANDLE, PUT, GIVE
Vera'a, Totoli	Non-caused accompanied motion or static accompaniment	ACCOMPANY, BE WITH

26 Table 6 shows that in some of the languages, goal-directed CAM events are based on the same
 27 verbal core as non-directed CAM events (such as CARRY), or as caused static accompaniment events
 28 (HOLD, 4.3). In other instances, goal-directed CAM events show lexical overlap with non-accompanied
 29 caused motion events (such as MOVE, 4.5), or with non-caused accompanied motion events (e.g.
 30 ACCOMPANY, 4.4). Most cases of lexical overlap relate to directedness or accompaniment being implied
 31 rather than entailed. While most basic directed CAM constructions entail caused motion, Vera'a and
 32 Totoli have basic constructions which entail accompaniment but leave caused motion to implicature.
 33 However, none of the languages of our sample draw on straightforward comitative constructions as
 34 their basic CAM expressions.²⁶ Constructions with associated motion morphology (cf. Koch 1984; Wilkins

²⁶ There are languages which recruit comitative constructions to refer to directed CAM events, with causation arising as a possible contextual interpretation, however they do not constitute the basis directed CAM expressions (see Hellwig et al. forthcoming; Gipper forthcoming).

1 1991; Guillaume & Koch 2021) are attested in Sudest and etymologically in Bora, but they are not the
2 preferred pattern in any of the languages.

3 Regarding the underlying cognitive schema of directed CAM events, we observed aspects which
4 diverge in significant ways from that of prototypical caused motion events. In CAM events, there are two
5 moving entities, one which is construed as the actor, as agentive and self-moving, and the second which
6 is construed as the undergoer, as passively moving along with and as being controlled by the actor.
7 However, both participants are in fact involved in the event in very similar ways: they are both moving
8 entities, simultaneously sharing the same motion path, and in some cases, the undergoer can be
9 attributed a degree of agentivity (e.g. in GUIDE events, where both entities are self-moving).
10 Furthermore, the causing event does not result in a subsequent but in a simultaneous, continuous
11 change of location. In this way, the conceptual divide between actor and undergoer, and between
12 causing event and change of location – which is clearly maintained in prototypical caused motion events
13 – is blurred.

14 These semantic characteristics which are specific to CAM events may be responsible for some of
15 the noteworthy patterns observed in the data, such as the lexical overlap between caused and non-
16 caused, accompanied and non-accompanied motion events. A further pattern which may be attributable
17 to the specifics of the underlying cognitive schema concerns the relationship between directed CAM
18 verbs and intransitive motion verbs. The literature suggest that verbs denoting the concepts BRING and
19 TAKE are semantically the causative counterparts of COME and GO (Dixon 1992; Levin 1993: 135), and
20 we indeed find derivation with a causative as the basic pattern at least in Savosavo.²⁷ Our data shows
21 however that causative constructions are clearly not the preferred pattern, even for those languages
22 which derive expressions of BRING and TAKE by transitivizing COME and GO verbs, and even though
23 productive morphological causatives are present in several of the languages.²⁸ This relative scarcity of
24 causative derivations may be due to the more described symmetrical involvement of the two
25 participants in CAM events compared to typical causative events.

26 The present study has focused largely on the lexicalisation patterns of directed CAM expressions,
27 but we also touch on larger morphosyntactic and pragmatic combinatorial patterns and the tendency
28 attested in some languages of explicitly expressing sub-events.²⁹ Our data exemplifies two main patterns
29 in this respect. The first pattern is found in the Austronesian languages, which generally encode
30 directedness by separate directional morphemes and one such pattern involves directional motion verbs
31 in combination with verbs expressing caused motion and/or accompaniment, where each verb
32 expresses a sub-event of the directed CAM event. Historically, the same pattern is attested in the
33 Papuan languages Savosavo. While in the Austronesian languages the directional verb tends to
34 grammaticalise into a directional modifier of the main verb, in Savosavo it is the caused motion verb
35 which has grammaticalised into a causative morpheme modifying the directional motion verb.

36 The second pattern of expressing sub-events relates to the explicit encoding of what can be
37 termed the acquisition sub-event, as expressed by GET-type verbs (4.2). This sub-event precedes the
38 actual directed CAM event and describes the onset of control by the agent over the theme. In our data,
39 GET-types verbs can occur alone or in combination with CAM verbs or directional verbs, which explicitly
40 encode sub-events the goal-directed CAM event. Depending on the construction, causation,

²⁷ We are also aware that causative morphemes can derive CAM expressions in Komnzo (Döhler forthcoming) and Lezgian (Haspelmath 1993: 163).

²⁸ It is also noteworthy that in Movima, causative morphology is attested to derive non-accompanied caused motion events (e.g. 'send' from 'go') but not CAM verbs.

²⁹ Hellwig et al. (forthcoming) investigate in more detail the morphosyntactic patterns of directed CAM expressions across a slightly larger language sample and the chapters in Margetts et al. (forthcoming) present more-in depth descriptions of the individual languages.

1 accompaniment, and/or directedness – in fact the overall transfer of the theme towards a goal – can be
 2 left entirely to implicature (e.g. as in *I'll pick up the kids* or *He's getting the pizza*). Directed CAM
 3 expressions based on GET-type verbs are attested across most of the Austronesian languages but seem
 4 to be virtually absent in some of the other languages. In Bora GET verbs are not attested in goal-directed
 5 CAM events at all, but are restricted to source-oriented CAM expressions (such as 'getting something
 6 from somewhere').

7 The present study explored text data from corpora which were created as lasting records of
 8 endangered languages. The analysis primarily focussed on this corpus data by investigating the encoding
 9 of directed CAM events in natural language and by interrogating texts for patterns in the distribution
 10 and use of individual verbs and groups of semantically related lexemes. As more and more languages of
 11 the world are threatened to disappear, corpus-based methodologies will grow in importance in the field
 12 of linguistic typology and across other areas of analysis that are concerned with cross-linguistic
 13 investigation. Seeking input from native speakers on linguistic analysis will become more difficult. Our
 14 study showcases the application of text-based methodologies to small-scale corpora from endangered
 15 languages in the area of lexical semantics, event representation, syntax-semantic mapping, and
 16 morphosyntactic and semantic typology. The results highlight the importance of endangered-language
 17 corpora and the archival infrastructure that ensures their longevity.

18 To conclude, the semantic domain of caused accompanied motion in a direction shows diverse
 19 typological patterns across the languages investigated, despite the small size and areal restriction of our
 20 sample. The high degree of diversity may be due in part to the underlying cognitive schema and the
 21 special semantic characteristics of directed CAM events as compared to prototypical caused motion
 22 events. A further trigger of this diversity may be the fact that expressions of directed CAM events are
 23 generally morphosyntactically complex in the sample languages rather than lexicalised by single
 24 morphemes. Different constructions are based around different building blocks and draw on different
 25 combinations of lexical semantic, morphosyntactic and pragmatic means. We expect crosslinguistic
 26 investigations on a broader, more varied base of languages to add to the diverse ways of encoding such
 27 events and further investigation of this semantic domain is called for across the languages of the world.

28

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1 Abbreviations

2 AB absential, ABL ablative, ACC accusative, ADL adlative, ADDR addressee, AFIR affirmative, ALL allative, ANA
 3 anaphoric, ANIM animate, APPL applicative, ART article, AV actor voice, BEN benefactive, CAUS causative,
 4 CERT certainty marker, CLF classifier, CO co-participant, CONJ conjunction, CONSEC consecutive, CNTR
 5 container-and-contents ‘get’ verb, CPL completive, DAT dative, DEM demonstrative, DET determiner, DSC
 6 discontinuous, DIST distal, DIR directional, DR direct, DU dual, DUR durative, EMPH emphatic, EVID evidential,
 7 EXCL exclusive, F feminine, FIN finiteness marker, FUT future, GEN genitive, GET object-specific ‘get’ verb,
 8 HAB habitual, IMM.PST immediate past, IMP imperative, INAN inanimate, INCL inclusive, INCPL incomplete,
 9 INST instrument, INTERJ interjection, INTR intransitive, LQC liquid in container, LOC locative, M masculine,
 10 MOV moving, MULT multiple action, N neuter, NEG negation, NMLZ nominaliser, NOM nominative, NSG non-
 11 singular, OBJ object, OBL oblique, PFV perfective, PST past, PRF perfect, PL plural, POSS possessive, POST
 12 postposition, PRSUP presupposition, PRO free pronoun, PN proper name, PROSP prospective aspect, PROX
 13 proximal, PURP purposive, QUL qualifier, QUOT quotative, REC recent past, RED reduplication, REL relativiser,
 14 REM remote past, REP repetitive, RES resultative, RIGD rigid-entity ‘get’ verb, RLS realis, RQV requestative, SG
 15 singular, SF stem former, SRO single round object ST stative, SUBJ subject, TAM tense/aspect/mood, TERM
 16 terminative, TR transitive, TL trial, UV undergoer voice, VBZ verbalization.

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