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Bringing and taking: a cross-linguistic perspective on caused accompanied motion events*

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Abstract

This chapter proposes a typology of expressions of directed caused accompanied motion (directed CAM): it introduces and defines this semantic domain, presents the corpus-based methodology used by the authors of this volume, and gives an overview of the results. It shows that directed CAM expressions tend to be morphosyntactically complex and it identifies four distinct patterns based on the lexical core of the expression: first, with a directed CAM verb; second, with an intransitive motion verb; third, with a transitive verb of accompaniment or of caused (accompanied) motion; or fourth, with a combination of the second and the third options. The chapter discusses each pattern and addresses issues of universality and variability in the domain of directed CAM.

Keywords: language documentation, three-participant events, caused motion, accompanied motion, lexical semantics

1 Introduction

This volume investigates the linguistic expression of bringing and taking events, or more specifically, directed caused accompanied motion events. The verbal concepts BRING and TAKE are representatives of a broader semantic domain: events of caused accompanied motion (or ‘CAM’ for short). When such events are described as having a directionality, i.e., as taking place in or from a direction, towards a goal or from a source, they can be characterized as events of directed caused accompanied motion (‘directed CAM’). In English, concepts from this domain are primarily lexicalized in the monomorphemic verbs *bring* and *take* – verbs that tend to be frequent in adult use and that are acquired early among children. Other languages show other types of expressions, and we find considerable variation both in the type of semantic information that is encoded and in the way that semantic components are conflated within single morphemes or distributed across several morphemes. This variation makes directed CAM a particularly fruitful domain for investigating the mapping between semantics, on the one hand, and lexicon and morphosyntax, on the other, contributing to our

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understanding of the extent and the limits of linguistic and cognitive diversity. In the present work, we explore diversity in the domain of directed CAM: How do speakers of different languages conceptualize and describe such events? Are there common patterns and constraints in how we talk about them?

The research presented here investigates directed CAM expressions across 13 different languages. It arises from two projects funded by the Documentation of Endangered Languages Program (DobeS) of the Volkswagen Foundation which brought together researchers with expertise in fieldwork-based language documentation and description.¹ The research is corpus-based, and the data corpora explored here were predominantly compiled during documentation projects and are largely accessible in the DobeS archive.²

The contributors to this volume adopt a shared methodology and a common frame of analysis. They explore the lexical semantics of verbs through corpus data, primarily by investigating context and usage patterns. Each chapter investigates directed CAM events on the basis of how they are represented in spoken language, making reference to their make-up and distribution in texts, and drawing on research questions and definitions developed during joint projects on directed CAM events and on three-participant events more generally. In this way, each contribution creates a typological profile of a given language for the domain of directed CAM events, showing how each language draws on its lexical, morphological and syntactic resources for this purpose. The shared methodology and frame of analysis ensure the comparability of results, creating a high coherence across the individual chapters of this volume.

This introductory chapter serves to guide the reader through the discussions presented in this book and signposts important topics that arise from a cross-linguistic perspective on the expression of directed CAM events. In Section 1.1, we situate our research within the field of semantic typology. We then introduce our sample in Section 1.2. The remainder of this chapter considers the semantic make-up of directed caused accompanied motion events and how this domain can be defined in Section 2. This serves as background to the discussion presented in Section 3, where we describe basic patterns attested in the languages included in this volume. Finally, Section 4 provides an outline of the volume.

1.1 Studies in the cross-linguistic encoding of events

This volume is set in a tradition of research within linguistics and cognitive anthropology that investigates the linguistic expression of semantic fields in

¹ The projects “Crosslinguistic patterns in the encoding of three-participant events” (2013-2017) and “Crosslinguistic patterns in the encoding of three-participant events - investigating BRING and TAKE” (2017-2021).

² <http://dobes.mpi.nl/>. See the individual chapters for details on their archived data.

the languages of the world.³ This line of investigation has explored the cross-linguistic mapping between semantics and lexicon (and morphosyntax), and discovered variation in the expression of a given semantic domain across languages as well as constraints on diversity.

The encoding of directed CAM events has, to the best of our knowledge, not been investigated from a typological perspective. There are discussions of language-specific lexicalizations (in particular, of English *bring* and *take*), though, and we will make reference to relevant findings throughout this introduction. Furthermore, there are typological investigations of related semantic domains: motion and caused motion events, as well as three-participant events. Directed CAM events constitute a type of three-participant event, and our volume engages with prior work investigating such events (Margetts, 2007; Margetts & Austin, 2007; Narasimhan et al., 2007; Siewierska & van Lier, 2011), including those focusing on specific concepts such as GIVE (Comrie, 2003, 2005; Kittilä, 2006; Margetts, 2008; Newman, 1996, 1997, 1998) or PROMISE (Siewierska & van Lier, 2011). More specifically, directed CAM events are a type of caused motion event. In particular, they share similarities with PUT and TAKE, i.e., with placement and removal events, differing mainly in that the caused motion is *accompanied* (i.e., the agent moves along the same trajectory as the theme object). Caused motion events have received considerable attention in the literature (see Coleman & De Clerck, 2009; Hendriks et al., 2008; Hickmann et al., 2018; Hovav Rappaport & Levin, 2008; Ji et al., 2011; Levin, 1993; Van der Leek, 2000, to name but a few). This includes a recent cross-linguistic study specifically on PUT and TAKE events (Kopecka & Narasimhan, 2012). Finally, there exists extensive work on the typology of motion events, much of it grounded in Talmy's (1985, 1991, 2000) seminal work of lexicalization patterns.

This volume builds on the above mentioned semantic-typological investigations of motion, caused motion and three-participant events, and extends the systematic cross-linguistic exploration of semantic organization to the related domain of directed CAM, thereby contributing to our overall understanding of linguistic diversity in the expression and categorization of events.

1.2 The sample

As in many other studies in semantic typology, our sample can be characterized as “an opportunistic sample, which has arisen from the chance that the authors have had to work closely together, and thus produce closely

³ Consider, for example, the seminal work on the domains of color and kinship terms (e.g., Berlin & Kay, 1969; Lucy, 1997; Nerlove & Romney, 1967), on the categorization of physical objects in terms of shape vs. material (Lucy & Gaskins, 2001), or on space (Ameka & Levinson, 2007; Bowerman et al., 2004; Bowerman & Pederson, 1992; Levinson, 2003; Levinson et al., 2018; Levinson & Wilkins, 2006a).

matched descriptions of the languages in which they are expert” (Levinson & Wilkins, 2006b, p. 6). It includes three areally or genealogically defined groups: four languages of South America and one of North America, four Austronesian languages, and four Papuan languages. With this sample, the volume combines on the one hand a number of languages which are areally, linguistically, and/or culturally closely related, but on the other hand also languages which are genealogically unrelated and do not share a common history of contact. Hence, while the sample is restricted, it enables comparison and discovery of cross-linguistic diversity and commonality, the tentative exploration of genealogical and areal patterns, and the formulation of hypotheses to be tested against a larger sample. Table 1 presents an overview of the languages and authors of the contributions.

Table 1. Languages and Affiliations

Language	Glottocode	Affiliation & Location	Contributors
Americas:			
Bora	bora1263	Boran, Colombia and Peru	Seifart
Chipaya	chip1262	Uru-Chipaya, Bolivia	Hannß
Dëne Sųłné	chip1261	Eyak-Athabaskan, Canada	Jung
Movima	movi1243	Language Isolate, Bolivia	Haude
Yurakaré	yura1255	Language Isolate, Bolivia	Gipper
Austronesia:			
Saliba-Logea	sali1295	Austronesian, PNG	Margetts
Sudest	sude1239	Austronesian, PNG	Sheppard
Totoli	toto1304	Austronesian, Indonesia	Himmelmann & Riesberg
Vera’a	vera1241	Austronesian, Vanuatu	Schnell
Papua:			
Komnzo	komn1238	Yam, PNG	Döhler
Qaqet	qaqe1238	Baining, PNG	Hellwig
Savosavo	savo1255	Central Solomons, Solomon Islands	Wegener
Yali	apah1238	Trans-New Guinea, Indonesia	Riesberg

All languages are endangered minority languages spoken by comparatively small communities of speakers. These languages are primarily used for face-to-face, verbal communication and have an oral rather than written tradition of transmitting knowledge. The speakers of these languages largely still live or have first-hand knowledge of a subsistence lifestyle.

The text corpora available for these languages provide data that is in many aspects comparable, both in their frameworks of annotation and analysis, and

in terms of the content included. They are corpora of spoken language recordings which have been compiled, transcribed, and annotated during language documentation projects, and which contain comparable text types. Most corpora mainly comprise monological texts, including procedural accounts and narratives, but also varying amounts of conversational data. Beyond this, many of the corpora include stimuli-based narratives that have been widely used in cross-linguistic research such as Pear Story retellings (Chafe, 1980), Frog Stories (Mayer, 1969), and Family Stories (San Roque et al., 2012), and also staged dialogues, elicited with stimuli like the Space Games (Levinson & Wilkins, 2006a).

The chapter authors have detailed language expertise and were involved in fieldwork and/or in the processing of the text corpora during the original documentation projects. The chapters thus combine extensive knowledge about the grammar and lexicon of the languages with a discourse-based analysis of the expression of directed CAM events.

2 The domain of directed caused accompanied motion

In this section we first delimit the domain of directed caused accompanied motion by introducing its defining semantic components as well as a number of additional – non-defining – components (Section 2.1). We then address methodological issues that arise in the cross-linguistic investigation of semantic domains (Section 2.2).

2.1 *Semantic components*

We define directed CAM events as events in which an agent moves in a particular direction (i.e., in a direction or towards a goal, or from a direction or source) and causes a theme to move (i.e., caused motion) along the same path as the agent (i.e., accompanied motion). Thus, we can isolate four meaning components that define this domain: motion, causation, accompaniment, and directedness (which can be deictically specific or not).⁴ Consider the following examples from Yurakaré:

- (1) *ana chipiri=jsha ka-ø-amala-w=ti*
DEM Chipiri=SCE 3SG.OBJ-CA-come-3PL.SUBJ=NMLZ
'They brought it from Chipiri.' (cf. Gipper, example 1)

⁴ The discussions in Margetts et al. (accepted) and in some of the chapters in this volume distinguish only three meaning components, subsuming 'motion' and 'causation' together under 'caused motion'. This approach is justified in the case of some languages, but from a broader cross-linguistic perspective, it becomes clear that motion and causation are more felicitously considered as separate semantic components (see Section 3).

- (2) *ka-ø-chittu-ø=naja* *a-tiba*
 3SG.OBJ-CA-cross.SG-3SG.SUBJ=already 3SG.POSS-pet
 ‘He took his pet across.’ (cf. Gipper, example 15)

In the Yurakaré example in (1), a directed CAM event is expressed by an intransitive motion verb – encoding the motion component – occurring in a ‘caused accompaniment’ applicative construction that expresses causation and accompaniment. Directedness is included in the semantics of the motion verb and is additionally expressed by the source phrase *chipiri=jsha* ‘from Chipiri’. In this particular example, the directionality happens to be deictically specific (encoded in the lexical semantics of the motion verb), and an overt source happens to be overtly expressed. But as illustrated in example (2), the directionality can alternatively be non-deictic (encoded in a path-denoting, non-deictic, motion verb), and a source (or a goal) need not be present.

The identification of four separate defining components allows us to explore how each of them is expressed. Each contribution in this volume investigates how these components typically manifest in a given language, showing how they are conflated in one form or distributed over several forms. In English, for example, they are conflated in the verbs *bring* and *take*. In Yurakaré, by contrast, they are distributed over a motion verb and an applicative construction. Section 3 summarizes the patterns attested in our sample, showing that directed CAM expressions are often morphosyntactically complex, i.e., the four individual semantic components are typically not encoded together in a single morpheme.

In many languages, directed CAM expressions include additional semantic components. This can best be illustrated with reference to two prominent representatives of the domain of directed CAM, the verbal concepts BRING and TAKE, as lexicalized in the English verbs *bring* and *take*.⁵ *Bring* and *take* have been described as expressing “continuous causation of accompanied motion in a deictically-specific direction” (Gropen et al., 1989, p. 243). They have also been noted to be manner-neutral, and Levin (1993, p. 135) distinguishes them on these grounds as a separate class from other verbs of caused accompanied motion.⁶ English *bring* and *take* thus lexicalize the four defining meaning components, as well as additionally the component of

⁵ Throughout this volume, we use caps for concepts (e.g., BRING and TAKE), and italics for the words that lexicalize them in a language (e.g., *bring* and *take*). Concepts are to be taken as mnemonics, usually exhibiting the semantic components of their English lexicalizations (as discussed in Levin, 1993). Where applicable, we highlight features of relevance and/or discuss deviations from Levin’s definitions. Where no corresponding English lexicalization exists, as for the concept of ‘directed CAM’, we introduce and define this concept.

⁶ Gropen et al. (1989) also specify that in the case of *bring* and *take* the causation of motion is “continuous”. We do not explore this feature any further in our discussion because none of the languages investigated show different lexicalization patterns relating to continuous vs. non-continuous causation of accompanied motion.

deixis. We have purposefully not made reference to the presence of deixis, or the absence of manner, as defining components of directed CAM events, though, because the closest equivalents to BRING and TAKE expressions in many languages represented in this volume do *not* lexicalize deictically specific directionality and/or they lexicalize manner-specific causation of motion. This means that the common denominator of our cross-linguistic investigation of bringing and taking events is more general in scope, and we therefore refer to the entire domain as ‘directed CAM’. Where applicable, the contributions to this volume investigate the expression of any additional meaning components and their role in directed CAM expressions in a given language, in particular, deixis, manner-specific causation of motion, manner-specific motion, and distinctions in the categorization of the theme entities.

2.2 Methodology

Any research into a particular semantic domain which investigates how a range of concepts are expressed in different languages faces the so-called ‘etic grid’ problem (Levinson, 1996; Lucy, 1997; Saunders & van Brakel, 1997; Bohemeyer, 2015, p. 26). This problem refers to the fact that the set of semantic concepts which is being investigated restricts and biases any observations that can be made across the sample languages about these concepts and the semantic domain they represent. That is, investigating a predefined set of semantic concepts means that relevant concepts beyond this set may remain unexplored. And, conversely, assuming the existence of a given concept across all languages (and that it is merely expressed in different ways) may lead to the inclusion of concepts in the set, even if there is no evidence to suggest that they exist in a language.

We have approached this issue in a multi-stage process. Based on the four defining semantic components of directed CAM events (motion, causation, accompaniment, directedness), we established a list of potential translation equivalents, taking into account a number of verb classes set out in Levin (1993). This included ‘bring and take’ verbs (pp. 134–135), but also ‘carry’ and ‘drive’ verbs (pp. 135–137), as well as ‘run’ verbs in the ‘induced action alternation’ (e.g., *Tom jumped the horse over the fence*) (pp. 265–267). Relevant lexemes and constructions in the languages of our sample were initially identified by searching for translation equivalents of the corresponding English verbs (and/or comparable verbs in other languages of wider communication). Since the expressions identified in this process do not necessarily share the same semantics as their translation equivalents, we conducted further analyses in order to determine the semantic components entailed or implicated by a given expression. In line with the corpus-based methodology of this volume, we paid special attention to the context of usage and the combinatorics of expressions, supplemented where available by elicited information on acceptability judgements and negative evidence. This analysis identified additional candidate expressions, which were, again,

subjected to corpus searches and semantic analyses. In this process, we thus identified further concepts that share some or all of the defining components (plus possibly some non-defining components), and assessed their role in the expression of directed CAM events. The results from the individual languages fed back into our cross-linguistic investigation, broadening the searches in our corpora, ensuring that expressions and concepts were not overlooked, and thus mitigating the effects of the ‘etic grid’ problem.

On this basis, we were able to identify the full range of directed CAM expressions available in each language and to establish both basic and minor patterns. In particular, this approach showed that languages often draw on verbs from other semantic domains in order to express directed CAM events. By themselves, these verbs do not entail all of the four defining meaning components, but they combine with other elements that entail the missing components. In other cases, the missing components are not entailed and it is pragmatics in combination with features of the context that evoke an interpretation as a directed CAM event.

All the contributions to this volume strive to distinguish between semantic entailments and context-dependent implicatures. Making this distinction is, of course, a notoriously difficult task, particularly with an approach which focuses on the analysis of discourse data rather than of data from experiments and elicitations that were designed to control for variables. By comparing the distributional patterns of the expressions, many contributions were able to draw on discourse-analytical diagnostics which help identify defeasible information and differences in the semantic entailments of the relevant expressions. For example, if a CAM construction with a ‘go’ verb was always found to be in opposition with the same construction with a ‘come’ verb, then the former was assumed to denote a CAM event that takes place in a direction away from the deictic centre, even if the ‘go’ verb itself might be deictically neutral. This kind of discourse-based diagnostic has been applied especially in the case of the basic patterns of a language. For minor patterns, there was often not enough data available to clearly distinguish between entailments and implicatures. But the contributions to this volume are careful to address this issue, adducing the available evidence. Where the evidence points against a component being entailed, the contributions discuss the circumstances that give rise to directed CAM interpretations.

3 Patterns in the conflation and distribution of semantic components

Like previous work on the form-to-meaning mapping in particular semantic domains, the contributions to this volume investigate both how meaning components are conflated in lexical items and how they are distributed across phrase- and clause-level constructions (e.g., Talmy, 1991; Ameka, 1995; Sinha & Kuteva, 1995; Evans et al., 2011). Since the research presented here is dealing with spoken language data, contributions are also able to comment

on frequencies of patterns and on distributions across other types of structural units of spoken language, i.e., intonation or pause units.

In two languages of our sample, concepts expressing directed CAM are lexicalized by simplex verbs, as in English *bring* and *take* (but only one of these two languages lexicalizes the same feature combination as English, i.e., including a deictic component). More commonly, the relevant expressions are morphologically or syntactically compositional and the volume showcases considerable diversity in their linguistic encoding. Our observations about the distribution of meaning components across different parts of the clause and even across clauses are in line with Bohnemeyer et al. (2007, p. 496) who state that “information about an event is usually not mapped onto a single lexical item, but is distributed across phrases, clauses, and larger chunks of discourse”. More generally, the literature on event representation and the segmentation of causal chains reports language-specific differences in the detail in which sub-events are habitually expressed (e.g., Bohnemeyer et al., 2007, 2011; Bohnemeyer & Pederson, 2010; van Staden & Reesink, 2008). A tendency to distribute information is commonly reported for Papuan languages among others and has been extensively discussed in studies on verb serialization (e.g., De Vries, 2005; Heeschen, 1998; Pawley, 1987; Pawley & Lane, 1998). Beyond the existence of such grammaticalized constructions, we also observe the tendency of distributing meaning components across several utterances (sometimes even produced by different speakers, engaged in co-producing the description of an event) as more general discourse patterns and reflecting speakers’ preferences in how to describe such events. These trends can sometimes be observed even if simpler, more condensed expressions of such events in a single verb or clause are possible. A tendency to distribute information is thus present in both grammar and discourse – and of course it is language use in discourse which gives rise to grammatical structures (e.g., Bybee & Hopper, 2001). See the chapters on Qaquet, Yali, and Yurakaré for further discussion.

It is a strength of the text-based methodology employed in the studies presented here that such trends can be identified, as this methodology allows us to detect, and possibly explain, variation through examining usage contexts. Searching the corpora for grammaticalized or lexicalized directed CAM expressions allows us to draw conclusions from their distribution and frequencies about the contextual factors that favour the use of one expression over another. And searching for instances of directed CAM events, regardless of their formal expression, allows us to assess the contribution of more grammaticalized or lexicalized forms of expressions vis-à-vis other types of verbalizations.

In the remainder of this section, we first summarize the patterns attested in our sample (Section 3.1) and then discuss the distribution of additional, non-defining, semantic components across the patterns (Section 3.2), before turning to issues of universality and variability (Section 3.3).

3.1 *Basic patterns in the languages of our sample*

As discussed in Section 2, directed CAM events are identified by four meaning components: motion, causation, accompaniment, and directedness. This section will show, however, that the identified expressions of directed CAM events do not necessarily entail all of these components – sometimes, components are evoked through context. Therefore, the question emerges as to where to draw the boundary of such a typology and how to best systematize the attested variability.

One possible approach is to compile an inventory of all expressions that surface in reference to directed CAM events in the languages of our sample and setting up verb classes, similar to Levin's (1993) seminal work on English verb classes. In fact, this monograph was a constant point of reference during our own typological research. Under this approach, we would find that most languages will have expressions that entail all of the defining components in addition to other components (e.g., many languages will have LEAD/GUIDE-type verbs). Or languages will have non-directed CAM verbs (especially, CARRY verbs) where the component of directedness can easily be added through an oblique source/goal phrase.

A second possible approach, and the one that we adopt in this volume, is not to focus on what is possible, but on what speakers of a language most commonly do. This approach leads to the typology proposed in this section, excluding infrequent expressions such as LEAD/GUIDE verbs or CARRY verbs plus oblique source/goal phrases. We refer the reader to Section 3.3 for a detailed discussion of the implications of choosing this approach and the ensuing limits to the typology.

In summarising the patterns attested in our sample, we thus focus on the 'basic' or 'major' patterns, as defined by frequency of occurrence. For each language, we can identify a small set of verbs and constructions which are the most frequent expressions in this domain, covering well above 50% of all directed CAM expressions in the corpora.⁷ Apart from these 'main players', typically, a range of other verbal expressions occurs but each of them with a very low frequency, covering the fringes of this semantic domain. Each contribution to this volume focuses on the description of the most typical expressions and investigates less common expressions where relevant.

⁷ For many languages, this percentage is very high (e.g., around 90% for Qaqet or Yurakaré), and many languages employ one pattern only as their major pattern. If languages have two major patterns, these two patterns build on the same lexemes (e.g., Saliba-Logea uses a CARRY verb in both pattern 3 and pattern 4, see Table 2 for a summary of the patterns) or are structurally ambiguous (e.g., Savosavo uses an expression that can be interpreted as instantiating either pattern 2 or pattern 4, depending on the context). The only counterexample is Vera'a, which has two distinct lexical cores (an ACCOMPANY verb and a MOVE verb), which are both frequent, possibly equally basic, and which lexicalize complementary meaning components (accompaniment vs. motion plus causation respectively).

Table 2 summarizes the attested patterns. For each pattern, we list the languages that use it as one of their basic options. Wherever we have evidence of additional languages which use a pattern as a minor option, we list them in parentheses. Patterns that are only attested as a minor option in the sample are not represented in the table (but see Section 3.3 for a discussion).

We distinguish four coarse-grained patterns, three of which consist of one verb only (P1–P3), and one which makes use of two verbs (P4). Languages differ as to whether they package all components that define a directed CAM event into the lexical core of the verb (P1), or whether they distribute them over several elements (P2, P3, P4). In the latter case, languages either use a) a motion verb in combination with valency-changing devices (P2), b) a transitive caused accompanied motion verb (‘CAM’ verb), a caused motion verb (‘CM verb’), or an accompaniment verb in combination with a directional morpheme (P3), or c) a transitive C(A)M or accompaniment verb in combination with a (typically intransitive) motion verb (P4).

Table 2. Coarse-grained patterns in our sample

Pattern	Description	Languages
P1	directed CAM verb	Bora, Chipaya
P2	motion verb + valency-changing element	Movima, Savosavo, Qaqet, Yurakaré, (Komnzo, Saliba-Logea)
P3	C(A)M or accompaniment verb + directional element	Dëne Sų́hné, Komnzo, Sudest, Saliba-Logea, Totoli, Vera’a, (Bora, Savosavo)
P4	C(A)M or accompaniment verb + motion verb	Saliba-Logea, Savosavo, Sudest, Vera’a, Yali

In the following, we describe the patterns in more detail, and, where applicable, define sub-patterns.

In *pattern 1*, the basic verb lexicalizes all four of the defining components: motion, causation, accompaniment, directedness. Two languages of our sample, Bora and Chipaya, follow this pattern. The Bora verbs show the same combination of features as the English verbs *bring* and *take*, where directed CAM is lexicalized together with a deictic distinction (distinguishing between movement towards and away from the deictic centre). This is illustrated in (3) for the verb *tsiva* ‘bring’. Chipaya differs from Bora and English in that its verbs probably do not lexicalize deixis; here, a deictic goal orientation can optionally be added through a cislocative suffix. The lexical core, however, entails all four defining components, including directionality, and is thus considered a lexicalized directed CAM verb. See (4) for an example, illustrating the verb *sixk* ‘take’ in combination with the deictic suffix *-zki* ‘cislocative’.

- (3) *ílle-vu tsiva o ávóó-ve*
 here-ALL **bring.IMP** 1SG cover-SG.INTR
 ‘Bring (it) here so I can cover myself’ (cf. Seifart, example 9)
- (4) *antşukki tʰiʃwiʒ sixkʒka*
antşuk=ki tʰiʃwi=ʒ sixk-ʒki-a
 2PL=TOP meat=SAL **take-CISLOC-IMP**
 ‘You will take meat here!’ (cf. Hannß, example 12)

In *pattern 2*, directed CAM expressions are formed on the basis of intransitive motion verbs, which combine with valency-changing devices to introduce a theme participant, as shown in Table 3.⁸

Table 3. Sub-patterns of P2

Pattern 2	Motion verb	Valency-changing element	
P2a	motion (± directedness)	applicative: accompaniment, causation	Movima, Qaqet, Yurakaré, (Saliba-Logea)
P2b		causative: causation	Savosavo, (Komnzo)

We distinguish two sub-patterns of P2. In one sub-pattern (*P2a*), the motion verb occurs with some form of applicative-type element. This pattern is attested in four languages (in three as a major strategy, in one as a minor strategy), with language-specific differences in their form and distribution: Yurakaré and Qaqet have constructions that are dedicated to the expression of CAM events, while Movima and Saliba-Logea make use of a more general applicative morpheme whose use is not restricted to the expression of CAM events. Aside from these language-specific differences, the patterns are remarkably similar. In all languages, the applicative enables the theme participant to occur as an argument of the verb, and, in all cases, the agent is seen as causing the movement of the theme and moving along the same trajectory. The verb (or verb root) is taken from a larger set of intransitive motion verbs, contributing information on deictic directedness (e.g., a verb like COME), non-deictic directedness (e.g., a verb like CROSS), or manner of motion (e.g., a verb like RUN). In principle, there seems little restriction on the choice of verb, but in actual practice, it turns out that only a handful of verbs accounts for the vast majority of occurrences in natural data, essentially verbs like GO and COME that lexicalize or strongly implicate deictic directedness.⁹ Note that in those cases where a manner-of-motion verb is

⁸ The depiction of morphemes in the tables throughout this section is not intended to represent the linear order of morphemes but merely their presence in the constructions.

⁹ It is particularly difficult to establish whether or not GO/TAKE verbs entail directedness away from the deictic center or pragmatically implicate it. For GO verbs, Wilkins and Hill (1995)

chosen (e.g., RUN), the component of directedness is not entailed in the expressions. Example (5) from Movima illustrates pattern P2a.

- (5) *jiwa-le:-na=Ø--'ne jayna n-os asna=y'ti*
come-CO-DR=1SG--3F DSC OBL-ART.N.PST home=1PL
 'Then I brought her to our house.' (cf. Haude, example 1)

The second sub-pattern (*P2b*) is found in two languages, Savosavo (as a major strategy) and Komnzo (as a minor strategy). In this pattern, an intransitive motion verb is causativized. As in P2a, a range of directional or manner-specific verbs can in principle occur in this construction but the deictic verbs COME and GO are again most common. Consider example (6) from Savosavo.

- (6) “*No manana=e no-va kao biti=la*
 2SG[GEN] adequate=EMPH 2SG-GEN inland volcano=LOC
gn-au bo-ghu?”
 1.OBJ-CAUS go-NMLZ
 “‘Can you take me inland to the volcano?’” (cf. Wegener, example 28)

Both languages of P2b happen to form their causatives by syntactic means: an asymmetrical serial verb construction in Savosavo (with a grammaticalized form of the verb ‘take’, cf. also the discussion of P4b below), and a transitive template in Komnzo. This does not exclude the possibility of languages employing morphological causatives for this purpose, though (e.g., Lezgian uses causative morphology to derive *bring* from *arrive*; Haspelmath, 1993, pp. 163–164).

Patterns P2a and P2b show a difference in terms of the entailed meaning components. In P2a, the combination of applicative construction and lexical verb entails (or at least strongly implicates; see Section 3.3(iv)) both accompaniment and causation. By contrast, P2b only entails causation: the construction and its lexical verbs are commonly used in reference to both *non-accompanied* caused motion and *accompanied* caused motion, where the accompaniment interpretation is contributed through context and/or additional elements of the clause.

Interestingly, the languages of our sample that have both types of formatives make a clear distinction here (Movima, Saliba-Logea, Yurakaré): applicative

were able to show that, in many languages, their deictic interpretation (as movement away from a deictic centre) is a pragmatic implicature that arises from their contrast with a deictically specific COME verb (entailing movement towards the deictic centre). Where relevant, the contributions to this volume address this issue, but there is not always enough evidence available to come to a definite conclusion. For the purposes of this summary, we have decided to treat GO/TAKE as deictic verbs. The reason is that, even if they do not entail deixis, they strongly implicate it due to their opposition to deictic COME/BRING verbs, i.e., their default interpretation is deictic.

formatives derive CAM expressions, while causative formatives are used to express *non-accompanied* caused motion (e.g., as in SEND), allowing for directed CAM interpretations in restricted contexts only (if at all). Causative formatives, by contrast, are only employed for directed CAM events in languages that do not have separate applicatives.

Previous works do observe that *bring* and *take* lexemes semantically relate to the more basic motion verbs *come* and *go*. Commonly, *bring* and *take* are characterized as the semantically causative counterparts of the intransitive motion verbs (Dixon, 1991, p. 98; Hockett, 1990, p. 239; Levin, 1993, p. 135), with some authors additionally highlighting the accompaniment component (Binnick, 1971, pp. 260ff.; Ikegami, 1970, pp. 113f.). By contrast, on the basis of our limited sample, we would hypothesize that applicative formatives play a more prominent role than causatives in the formation of directed CAM expressions worldwide. A follow-up study would need to test this hypothesis across a larger and more balanced sample.

In *pattern 3*, a transitive verb forms the lexical core of the directed CAM expression, and directedness is expressed through additional directional morphology. Depending on the type of transitive verb, we distinguish the three sub-patterns summarized in Table 4. Directional morphemes grammaticalize not infrequently from intransitive motion verbs, and their verbal origin is sometimes still visible across all sub-patterns, accounting for language-specific variability. For example, Savosavo exhibits transitivity harmony, i.e., in certain asymmetrical serial verb constructions, verbs obligatorily share the same transitivity. This includes the directionals (which derive from intransitive verbs): they occur in their plain form when following intransitive verbs, but in their causativized form when following transitive verbs (such as GET in P3b). The directional morphemes usually convey deictic distinctions in the languages of our sample (see also Section 3.2(i)), but non-deictic geocentric morphemes are also attested (the latter are especially common in Vera'a).

Table 4. Sub-patterns of P3

Pattern 3	C(A)M or accompaniment verb	Directional element	
P3a	ACCOMPANY: accompaniment	directedness	Vera'a
P3b	GET/MOVE: motion, causation		Dëne Sų́nė, Sudest, Totoli, Vera'a, (Bora, Komnzo, Saliba-Logea, Savosavo)
P3c	CARRY: motion, causation, accompaniment		Komnzo, Saliba-Logea, (Sudest, Totoli, Vera'a)

Sub-pattern *P3a*, which uses an accompaniment verb, is found as a common pattern in Vera'a. The verb neither entails causation, nor motion, i.e., in its basic use it is also compatible with a stative reading ('be with'). To derive a directed CAM reading, a directional morpheme is added. The pattern is illustrated in (7).

- (7) *nik me 'o' ma =n 'erē mōmōlege*
 2SG FUT (be.)with hither =ART PL things
lē =n lōlō nimē
 LOC =ART inside house
 'You will bring everything into the house. [So when your wife is hungry, everything will be put ready.]' (cf. Schnell, example 54)

In sub-pattern *P3b*, the languages make use of a caused motion verb expressing the concepts of GET (in Bora, Komnzo, Saliba-Logea, Savosavo, Sudest, and Totoli) or MOVE (in Dëne Sų́nė, Komnzo, and Vera'a). Accompaniment is not entailed in this sub-pattern but arises as a contextual interpretation. The verbs either combine with directional morphemes (in Dëne Sų́nė, Komnzo, Saliba-Logea, Savosavo, Sudest, Totoli, and Vera'a) or with associated motion morphemes expressing concepts such as 'while/after GOING' (in Bora and Sudest). In all languages, the GET/MOVE verb is manner-neutral (i.e., it does not give information on manner of caused motion), but Dëne Sų́nė and Sudest differ from the other languages in that they exhibit a set of distinct GET/MOVE verbs whose use depends on the semantics and number of the theme object. Example (8) shows sub-pattern P3b with a GET verb in Sudest in combination with an associated motion morpheme; (9) illustrates this pattern in Totoli, which uses a GET verb with a directional clitic. (For an example with a MOVE verb see (17) below from Vera'a.)

- (8) *thi=yo-bigi=Ø* *e* *market* *vethi=sel*
 3PL=**while.going-GET.PL.CNTR**=3PL PP market 3PL.INT=sell
 ‘they take them (baskets of produce) to market to sell’ (cf. Sheppard, example 14)
- (9) *tau Bugis nagalai* *ana ulai selatan*
tau Bugis nog-ala=ai *ana uli=ai selatan*
 people PN AV.RLS=**take**=VEN MED from=VEN south
 ‘the Bugis people brought it here from the south’ (cf. Himmelmann & Riesberg, example 10a)

Note that MOVE and GET differ semantically. We use MOVE for verbs that express a general causation of motion reading (including concepts such as PUT, TAKE/GET and GIVE, among others), as attested in three languages of our sample. And we use GET as a cover term for concepts such as REMOVE (i.e., verbs of removing from a location, following Levin, 1993, pp. 122–123), TAKE (i.e., verbs of possessional deprivation, Levin, 1993, pp. 128–129), or FETCH, GET and OBTAIN (i.e., verbs of change of possession, Levin, 1993, pp. 141–143). The languages of our sample differ in terms of the exact semantics of their GET verbs (and the different contributions use different glosses), but they all share a common core: in their underived form, they express events where the agent takes a theme entity and, as a result, has it – i.e., there is no further motion path involved toward a goal other than the agent. These events are caused motion events, but they are not directed CAM events in our sense, in that they are not directed beyond the sphere of the agent. That is, they express *taking something*, not *taking something somewhere*. As discussed in Margetts et al. (accepted), verbs expressing such concepts tend to be inherently source-oriented, and interpretations of movement towards a goal are typically not sanctioned when the verbs are in their underived form. Only when they occur in their derived form in P3b (or P4b, see below) can they express movement towards a goal (see especially the discussion on Totoli by Himmelmann and Riesberg, chapter 8, and Margetts, chapter 6).

Finally, in the third sub-pattern (P3c), manner-of-caused motion verbs contribute the features of motion, causation, and accompaniment. The languages of our sample all employ a verb of carrying in this sub-pattern, thus singling out causation by handling from other manners of causation (see Section 3.2(ii)). Directedness is again added by directional markers. This is the major pattern in Komnzo, exemplified in (10), where ‘carry’ appears with the andative directional. It is furthermore attested in all the Austronesian languages of our sample: as a major pattern in Saliba-Logea, and as a minor pattern in Sudest, Totoli, and Vera’a.

- (10) *nge faw=ma* ... *nafa ane*
 child payment=CHAR (.) 3NSG.ERG DEM
e\zä/nzrakoth
 PL>2|3PL:PST:IPFV:AND/carry
 ‘As a payment for the child ... they carried them (i.e. the yam tubers) off.’ (cf. Döhler, example 16)

Pattern 4 makes use of two verbs, one transitive C(A)M or accompaniment verb and one typically intransitive motion verb. Depending on the language, these verbs combine within different types of serial verb constructions or clause chains. The motion verbs are most typically directional and can be deictically specific or neutral. This pattern also allows for manner-of-motion verbs (not entailing directedness), but these are again much rarer in the discourse data, as already discussed for P2. Parallel to the sub-patterns of P3, we again distinguish three sub-patterns, depending on the type of transitive verb, as shown in Table 5 (see Section 3.3(ii) for a brief discussion on the possible diachronic link between P3 and P4).

Table 5. Sub-patterns of P4

Pattern 4	C(A)M or accompaniment verb	motion verb	
P4a	ACCOMPANY: accompaniment	motion (± directedness)	Vera’a
P4b	GET/MOVE: motion, causation		Savosavo, Sudest, Yali, (Saliba-Logea)
P4c	CARRY: motion, causation, accompaniment		Saliba-Logea, (Savosavo, Sudest, Yali)

In a first sub-pattern (*P4a*), an accompaniment verb combines with a motion verb. We find this pattern in one language, Vera’a, where the ACCOMPANY verb combines with an intransitive motion verb in a serial construction. This sub-pattern is exemplified in (11).

- (11) *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...’ (cf. Schnell, example 5)

In sub-pattern *P4b*, a caused motion verb (GET/MOVE) combines with a motion verb. This sub-pattern is the most common type of directed CAM expression in Savosavo, Sudest, and Yali, and it also occurs as a minor but well attested pattern in Saliba-Logea. Example (12) illustrates this possibility

by means of a clause chaining construction in Yali, contrasting a COME verb and a GO verb in the motion verb slot.

- (12) a. *at wam walug waha*
at wam wa-tug waha
 3SG pig take-SEQ come:3SG.IM.PST
 ‘he brought the pig here’ (cf. Riesberg, example 11a)
- b. *at wam walug laha*
at wam wa-tug laha
 3SG pig take-SEQ go:3SG.IM.PST
 ‘he took the pig there’ (cf. Riesberg, example 11b)

In the third sub-pattern, *P4c*, the transitive CARRY verb entails motion, causation, and accompaniment, as well as manner of caused motion. We find this as the major pattern in one language, Saliba-Logea, shown in (13). The sub-pattern is also attested as a minor pattern in Savosavo, Sudest, and in Yali.

- (13) *ye-bahe-i ye-sae*
 3SG.SUBJ-carry-TR 3SG.SUBJ-go.up
 ‘He carried it up.’ (cf. Margetts, example 32)

The patterns schematized in Tables 2 to 5 are attested as major tendencies in at least one of our sample languages. As mentioned, the basic pattern of one language may be attested as a minor pattern in another language – i.e., the existence of a pattern in a given language does not predict the role it plays in expressing the domain of directed CAM events. Given this variability, it does not come as a surprise that we cannot identify any expression as being ‘basic’ in the encoding of directed CAM events cross-linguistically.

As we have shown, the patterns are most commonly compositional, with the four defining components distributed over several morphemes. This does not necessarily mean that each component is represented by a separate morpheme, and in fact we have no examples of this scenario. Commonly, two or three of the defining components are conflated in a single morpheme. But morphemes do exist which only express one of the defining components (although they may then be conflated with other, non-defining, features). This means, each of the four defining components is attested to be decoupled from the others in at least one of the sample languages. Starting with the verbal lexemes, we find the following five combinations: (i) conflation of all four components (P1) (conflated with the non-defining component of deixis in one language); (ii) motion conflated with either directedness (deictic or non-deictic) or with the non-defining component of manner of motion (in P2 and P4); (iii) accompaniment only (in P3a and P4a); (iv) motion and causation (in

P3b and P4b); and (v) motion, causation, and accompaniment (conflated with manner of caused motion) (in P3c and P4c).

In those cases where the defining components are not conflated in a single lexeme (i.e., all patterns except P1), there is a division of labour in the expressions of directed CAM events across different parts of the verb or clause. Here, we can formulate the following generalizations: languages tend to build their directed CAM expressions either around a (typically directional) motion verb, and express causation and accompaniment by different means (P2), or they build it around a verb of accompaniment, caused motion or caused accompanied motion, and express directedness by different means (P3), or they combine these two possibilities (P4).

These tendencies manifest in expressions where either two verbal lexemes combine, each contributing different components to the overall expression (in P4), or where one verbal lexeme combines with other, non-verbal formatives that encode some or all of the missing components (P2 and P3). In this case, when the lexical core is a verb of motion, our sample includes applicative-type formatives (in P2a), and causative-type formatives (in P2b). By contrast, when the lexical core is a verb of accompaniment, caused motion, or caused accompanied motion (in P3), formatives include directional morphology and associated motion morphology (commonly conflated with deixis).

This compositionality may be unexpected from an English perspective, but it is less surprising when taking the semantic complexity and the four defining meaning components of directed CAM events into account. As discussed above, English *bring* and *take* are often considered the transitive semantic counterparts of intransitive directed motion verbs (additionally including a causation and/or accompaniment component), and languages of P2 present morphosyntactic evidence for this type of semantic analysis. But this is only one possible analysis. Our sample offers morphosyntactic evidence for a second way of conceptualising directed CAM events: as the directed semantic counterparts of undirected caused (accompanied) motion or accompaniment verbs (additionally including a directional and/or motion component), as shown by languages of P3.

To summarize, we observe that no single pattern emerges as the basic expression of directed CAM in the languages of the world. But despite considerable cross-linguistic diversity there is a high degree of coherence in that the many constructions attested in individual languages can be summarized by only four major patterns. In fact, we would hypothesize that most, if not all, of the major patterns in the languages of the world may fit into one of the four types discussed as P1 to P4 above, and we will justify and elaborate on this hypothesis in Section 3.3 below.

3.2 *The expression of additional semantic components*

We now turn to the additional, non-defining, components that are attested in directed CAM expressions in our sample: deixis, manner of caused motion,

manner of motion, and features of the theme. Table 6 summarizes their occurrence across the patterns. Note that the table only represents their distribution in the languages of our sample, and we discuss below whether we expect this distribution to hold for a larger sample.

Table 6. The distribution of additional, non-defining, components in our sample

Pattern	Deixis	Manner of caused motion	Manner of motion	Theme features
P1 (directed CAM verb)	frequent	no	no	no
P2a (motion verb + applicative)	frequent	no	rare	no
P2b (motion verb + causative)	frequent	no	rare	no
P3a (accompaniment verb + directional)	frequent	no	no	no
P3b (caused motion verb + directional)	frequent	no	no	no/yes [†]
P3c (CAM verb + directional)	frequent	yes	no	yes ^{**}
P4a (accompaniment + motion verb)	(no) [*]	no	rare	no
P4b (caused motion + motion verb)	frequent	no	rare	no/yes [†]
P4c (CAM + motion verb)	frequent	yes	rare	yes ^{**}

* We assume the absence of deixis in this pattern to be an accidental gap in our database

** Theme features not encoded independently, but as a consequence of manner of caused motion

† Only attested in Dëne Sųłné and Sudest

Anticipating the discussion below, we can identify a tendency that holds across many languages of our sample: commonly, languages do not use a single verb or construction in reference to directed CAM events, but a pair or set of verbs or constructions which complement each other in terms of additional semantic features. In many languages across all patterns, it is a pair of deictic verbs or constructions, similar to English *bring* and *take*. In some

languages, it is sets of verbs which complement each other in their manner of caused motion, or in the classification of their theme objects.

In the following we discuss the distribution of the semantic components of (i) deixis, (ii) manner of caused motion and manner of motion, and (iii) theme features.

(i) Deixis

The deictic categories include especially movement towards and away from the deictic centre, either entailed or strongly implicated in BRING/TAKE verbs (P1), GO/COME verbs (P2 and P4), or deictic directional morphemes (P3). The languages in our sample differ with respect to the inventory of deictic directional morphemes but also in their use. In some languages, a given deictic morpheme contrasts with another deictic morpheme (e.g., BRING/TAKE and GO/COME verbs, or HITHER/THITHER directionals), while in other languages, it contrasts with the absence of a deictic morpheme (e.g., when a HITHER directional contrasts with the absence of a directional, whereby the latter option can confer a contextual THITHER reading on the expression).

Almost all the languages of our sample have expressions of directed CAM events that either obligatorily or frequently convey deictic information. The only counterexample in this respect is Vera'a, which has one basic pattern (P4a) where deixis is not expressed. This is the result of a specific lexicalization pattern: Vera'a lacks a genuinely deictic verb, and the only way to add deixis to P4a in Vera'a is to use a non-deictic verb in combination with a deictic particle in the motion verb slot of the serial verb construction (see (24) below for an example; cf. Schnell, chapter 9).

That is, although directed CAM expressions need not be deictic, they nevertheless frequently are. Note that this finding is not merely a consequence of our research design, as we explicitly investigated deictic and non-deictic directedness (see also Section 2.2 for a description of the methodology). In that sense the expressions in our sample languages exhibit a strong overall resemblance to English *bring* and *take*, in that directed CAM events tend to be deictically specific – but with two major caveats: deictic information is not necessarily obligatory, and the expressions are not necessarily monomorphemic.

But while deictic information is frequently expressed across our entire sample, it is conceivable that a larger sample will reveal languages where deictic verbs or deictic formatives play only a minor role (comparable to the difference between deictic BRING/TAKE verbs in Bora vs. non-deictic TAKE verbs in Chipaya).

(ii) Manner of caused motion and manner of motion

We distinguish between manner of caused motion and manner of motion (following Hendriks et al., 2008). Manner of caused motion typically distinguishes causation by handling (e.g., CARRY) in contrast with other manner-of-caused motion verbs including especially LEAD/GUIDE verbs

(causation by walking ahead and/or verbally or physically enforcing), DRAG/PUSH/PULL verbs (causation by exerting different kinds of forces), and TRANSPORT verbs (causation by means of a vessel or other container). Manner of caused motion is attested in the major patterns of two languages of our sample (Komnzo and Saliba-Logea, using a CARRY verb in P3c and/or P4c). Other languages allow for manner-specific caused motion verbs in expressions of directed CAM events only as minor patterns with usually very few attested examples. In terms of manner of motion, most of the languages that use intransitive motion verbs in their formation of directed CAM expressions (patterns 2 and 4) typically use deictically specific verbs, but they can optionally use manner-of-motion verbs, expressing concepts such as RUN, WALK, SWIM, or FLY.

Compared to the expression of deictic information (which is frequent in all patterns and languages), individual patterns and languages thus vary considerably in their tendencies to express manner-specific information. Overall, manner expressions in CAM events are less common in our sample: only two sub-patterns entail manner of caused motion (P3c, P4c); and only two patterns allow for the (rare) possibility to express manner of motion (P2, P4). Again, this finding is not attributable to our research design but rather indicates an apparently robust tendency of encoding either the manner of a CAM event (i.e., choosing a manner-specific non-directed CAM expression) or the directedness of a CAM event (i.e., choosing a manner-neutral directed CAM expression), but not both (i.e., manner-specific directed CAM expressions are overall rare).

As a tendency, this can be observed even in those languages which have P3c or P4c as their basic patterns, which are based on CARRY verbs (and thus inherently specify manner of caused motion combined with directedness). Languages across our sample commonly show sets of verbs describing different types of carrying events (e.g., carrying in hands, or carrying over shoulder).¹⁰ However, we find that if CARRY verbs do play a role in directed CAM expressions, it is generally not the entire set of CARRY verbs that occurs in these constructions. Rather, one verb, usually the most general one, e.g., the verb conveying ‘carry in hand’, accounts for the vast majority of occurrences. All other verbs expressing specific types of carrying typically do not combine with expressions of directedness. They are much more likely to be used in contexts where the speakers focus on the specific manner of a CAM event and not on its directedness (see, e.g., Himmelmann & Riesberg on Totoli, chapter 8; Margetts on Saliba-Logea, chapter 6).

While we observe this tendency of competition between manner and direction in the present study, it is conceivable that there are languages where manner and directional information are more balanced in the expression of CAM

¹⁰ This is probably best reflected in the four Austronesian languages, Saliba-Logea, Sudest, Totoli, and Vera’a (cf. also Hill, 2016; Mosel, 2014), but is also found elsewhere.

events. We discuss potential and actual variability beyond our sample in Section 3.3(iv).

(iii) Theme features

For some languages, the verb points to features of the theme participant. Mostly, this is simply a consequence of manner of caused motion. In this scenario, whenever manner of caused motion is *not* encoded, no restrictions are imposed on the theme entity. Note especially that expressions which are neutral in terms of the manner of caused motion can also be used with self-moving human/animate theme entities, provided that the agent can be construed as causing their movement. As discussed in individual contributions, there may be an effect of the animacy hierarchy on the form of the expression (e.g., Yali has a system of differential object marking, which is sensitive to animacy) or on the frequency of the expression (e.g., Yurakaré shows differences in the distribution of P2a and comitative expressions that interact with animacy), but the relevant expressions all can, and frequently do, occur with human/animate themes. By contrast, when manner of caused motion *is* encoded, restrictions or preferences regarding the theme entity commonly follow. In particular, CARRY verbs in P3c and P4c are restricted to inanimate or physically incapable themes, LEAD/GUIDE and HERD verbs require animate or self-moving themes, while DRAG/PUSH/PULL verbs most typically occur with heavy, unwieldy types of themes.

In addition, there are two languages in our sample (Dëne Sų́nė, Sudest) with verbs that provide specific information on the number and the inherent properties or functions of their theme participants. Both languages make use of a set of classificatory verbs. Sudest, for example, distinguishes flexible items, rigid items, containers and their contents, tools with handles, boats and other means of transport, and fire. The existence of classificatory verbs is well-known from Athapaskan languages and is discussed in relation to directed CAM events for Dëne Sų́nė by Hellwig and Jung (chapter 14) and for Beaver (Margetts et al., accepted). By contrast, Sudest seems to be the only Austronesian language for which such verbs have been reported to date. Overall, it is not surprising that verbs of this type are attested in the domain of directed CAM. Classificatory verbs tend to be found not only with verbs of location, motion, and throwing, but commonly also with verbs of handling. They are carried over into the domain of directed CAM whenever such verbs form the core of a directed CAM expression (MOVE in the case of Dëne Sų́nė, GET in the case of Sudest). As such, the phenomenon of classificatory verbs crosscuts the lexicalization patterns in our sample: other languages (Saliba-Logea, Totoli, Vera'a, Yali) also have verbs of handling as their lexical core, but do not employ a set of classificatory verbs.

3.3 *Universality and variability*

The starting point of our discussion of universality and variability, and probably the most interesting finding of our study, is the observation that basic expressions used in reference to directed CAM events do not need to entail all the defining semantic components of such an event. The lack of entailment is attested as a possibility for each of the four defining components: motion (in P3a), causation (in P3a, P4a), accompaniment (in P2b, P3b, P4b), and/or directedness (in P2 and P4). This finding could lead to the conclusion that some languages lack dedicated expressions of directed CAM events altogether. Strictly speaking, such a conclusion is true, but to exclude the above expressions from the typology (and hence from consideration) would distort the picture: even in the absence of dedicated directed CAM expressions, speakers of all languages can, of course, talk about directed CAM events and they frequently do. As shown in Section 3.1, they do so by recruiting verbs from other semantic domains, and combining them with elements that entail some (or possibly all) of the missing components.¹¹

In this section, we explore four issues that arise in this context. First, given that some of the basic expressions lack one or more of the defining components, we discuss the attested possibilities for contributing the missing components (Section i). Second, given that our patterns abstract away from the actual forms used, we discuss variation in terms of the morphosyntactic construction types and the level of morphosyntactic integration of the elements (Section ii). Third, given that our patterns combine at most two elements, we pursue the possibility of combining three or more elements in reference to directed CAM events (Section iii). And fourth, given that our typology is based on a small, opportunistic, sample, we discuss to what extent we expect the proposed four patterns to capture the entire cross-linguistic variability (Section iv).

(i) Missing meaning components

As schematized in the tables of Section 3.1, the identified patterns do not always entail all of the four meaning components. Missing components can then either be overtly expressed through optional constituents or implicated by the context.

Optional constituents are available for the expression of directedness: speakers can choose to add a source or goal phrase in order to specify

¹¹ As pointed out to us by an anonymous reviewer, the observation that many languages use compositional expressions and/or expressions that do not entail all of the defining features raises an interesting question about the cognitive reality of this domain: does directed CAM constitute a cognitive domain for the speakers of such languages? To answer this question we would, ideally, need evidence from cognitive tests. As such testing is beyond the scope of our volume, we can do little more than raise this question in the hope that our results will feed into future studies into the cognition of directed CAM.

directedness relative to a specific start or endpoint. Note that *all* patterns allow for this possibility, irrespective of whether or not directedness is already entailed in that pattern. We illustrate this possibility for P2a with the help of examples (14) and (15) from Qaqet. In P2a, the construction itself only entails caused accompanied motion. In all languages of this pattern, speakers usually choose a directed motion verb as the obligatory lexical filler (e.g., COME, as in 14), but they can alternatively choose a manner-of-motion verb instead (e.g., WALK, as in 15). In the first case, directedness is entailed by the verb; in the second case, it is not. In both cases, speakers have the option to add a source/goal phrase. In the second case (example 15), this source/goal phrase constitutes the *only* expression of directedness – but not in the first case (example 14).

- (14) *de nya=an* [se-ki]_{THEME} [i-na-muk]_{SOURCE}
 CONJ 2SG.SUBJ=**come.NCONT.FUT** to-3SG.F AWAY-BACK-across
 [se=pe ma=up-ka]_{GOAL}
 to=PLACE ART.ID=coldness-SG.M
 ‘bring her from over there to the shade’ (cf. Hellwig, example 8b)

- (15) *nya=ang* [se-ka]_{THEME} [i-pit]_{GOAL}
 2SG.SUBJ=**walk.NCONT** to-3SG.M AWAY-up
 ‘take it up there’ (cf. Hellwig, example 8c)

All contributions to this volume explicitly discuss source and goal phrases, and investigate their contribution to the interpretation of the event. Our text-based approach reveals that these oblique constituents are, in fact, not only optional, but rather rare. In most languages, neither the source nor the goal is stated, and, if overtly encoded, directedness is instead expressed by the main verb or directional morphemes in our sample. For those instances where the source or goal is expressed, there is a strong preference towards mentioning the goal over the source of the CAM event. This pattern reflects an asymmetry originally noted by Ikegami (1987) which was also observed by Narasimhan et al. (2012) in the encoding of placement versus removal events across a number of languages. The asymmetry appears to represent a general cross-linguistic tendency which is thought to reflect a fundamental cognitive bias towards the overt mention of endpoints over the source of (caused) motion (e.g., Regier & Zheng, 2007; Lakusta et al., 2007; Arnold, 2008; Kopecka et al., 2021).

In our sample, such an asymmetry can be observed in the preferred use of goal over source adpositions, but also in the preferred goal interpretation of expressions that are compatible with either reading (e.g., general spatial adpositions, spatial nouns). We find that in clauses expressing directed CAM events such spatial expressions are more commonly interpreted as goals than as sources. Interestingly, this even holds for directed CAM expressions whose lexical core is a GET verb (i.e., a verb that is source-oriented in its underived

use; see Section 3.1). Overall, the contributions to this volume thus strongly confirm the cross-linguistic tendency of preferring goals over sources. Having said this, there are two partial exceptions to this observation. First, several languages of our sample (Qaqet, Yali, Yurakaré) can resort to purposive-type constructions as one possible strategy to express directed CAM events. In this case, the theme is not yet in possession of the agent, and the agent moves with the purpose of fetching the theme from a source and taking it to a goal. In at least one language (Qaqet), source interpretations are frequently attested in this context. Second, the preference for goals may also partly depend on the text types represented in a corpus. More specifically, the Qaqet child language corpus features a large number of source expressions. Source expressions are still less frequent than goal expressions, but the gap is not as pronounced as in the adult corpora. Very likely, the large number of source expressions follows from the use of directed CAM expressions in imperatives directed at children to go and fetch something from somewhere (and then take it somewhere) (cf. Hellwig & Jung, chapter 14).

When present, oblique source/goal phrases contribute the component of directedness. More commonly, though, a missing component is not expressed overtly, but evoked through context. We illustrate this for P3b, which makes use of a GET/MOVE verb. Such verbs entail caused motion but not accompaniment. Nevertheless, P3b can be used to denote either non-accompanied or accompanied caused motion events (i.e., the agent may remain stationary or share the motion trajectory of the theme). The Vera'a MOVE verb *le* illustrates this: example (16) was uttered in a 'giving' context (not requiring the agent to change his own position), while example (17) was uttered in a directed CAM context (that does involve accompaniment).

(16) *'erē le ma =n koli'ē* [...]

PL LE **hither** =ART firewood

'Give me some firewood [...].' (Schnell, p.c.)

(17) [...] =*ēm le ma =n qi'i malmāla ē*

=PRF LE **hither** =ART head girl DEM.REM

'[He paid them for that they went and] brought the head of that girl.'

(cf. Schnell, example 54)

Often, an interpretation will be constrained by the interaction with further elements, especially with TAM inflection. Vera'a presents an especially interesting case study, as none of its expressions entails all the defining meaning components: each expression can also be used in reference to other event types, and Schnell (chapter 9) discusses in detail how directed CAM interpretations arise.

Of course, all languages allow for the possibility to add source/goal phrases or to rely on contextual information to fill in gaps. There are nevertheless two interesting generalizations that emerge from the contributions to this volume.

First, while the languages of our sample all have non-directed CAM verbs (especially, CARRY verbs) to which directedness could straightforwardly be added through a source/goal phrase, none of the languages attests to more than a handful of such examples. When these verbs are used as the lexical core of directed CAM expressions they tend to combine with directional formatives (or evoke directedness by context) rather than drawing on overt source/goal phrases. This generalization holds true even for Saliba-Logea, which uses CARRY verbs in its basic directed CAM expressions (in P3c and P4c). The Saliba-Logea corpus contains 200 directed CAM events based on CARRY and only three consist of only a CARRY verb plus a source/goal phrase (i.e., without any other formative contributing directional information). Of course, we cannot rule out that languages exist beyond our sample where expressions of non-directed CAM verbs with a source/goal phrase may constitute basic patterns. For many languages included in this volume, however, overt source or goal phrases are not only optional, but infrequent in natural discourse: they *can* be added to any of the identified patterns, and they *can* be added to non-directed CAM verbs, but speakers mostly choose not to do so. The only partial exceptions are Komnzo and Movima, where source/goal phrases seem to play a more important role than in the other languages of our sample.

Second, languages differ as to whether they allow a directed CAM interpretation for verbs which only entail some but not all of the defining components (i.e., P2, P3a, P3b, P4a, P4b). That is, even though languages often have the lexical material available for a particular pattern, they do not necessarily make use of this pattern, and we would expect a larger sample to reveal areal and/or genealogical preferences in the distribution of patterns. For example, all languages of our sample have GET/MOVE verbs (i.e., caused motion verbs that lack the component of accompaniment) – but only some languages can use these verbs in reference to directed CAM events (i.e., languages of P3b and P4b). In some languages, these verbs can occur in directed CAM contexts, but only rarely do so and/or are subject to further restrictions (e.g., Bora, where such a verb is only attested in the context of CAM from a source, but not as CAM to a goal). In other languages, they cannot occur in reference to directed CAM events at all (e.g., Qaqet). In those cases where they constitute the lexical core of a CAM expression, we observe further language-specific differences in the relative frequencies of simple and derived expressions. In some languages, the GET/MOVE verbs frequently occur as underived verbs expressing removing or obtaining events and less commonly within the morphologically more complex expressions of P3b and P4b (e.g., in Saliba-Logea, Sudest, Totoli, and Vera'a). In these languages, the removing or obtaining uses of the GET/MOVE verbs can thus be considered basic, both in terms of the underived morphological status of the verbs and in terms of their higher text frequency. In other languages (e.g., in Yali), a different scenario is attested. Here, the GET/MOVE verb occurs much more commonly in compositional constructions expressing directed CAM events

and less frequently in its underived form. This means, the simple, underived or uncombined occurrences are not the default uses of this lexeme in terms of frequency.

(ii) Morphosyntactic variation in expressing the patterns

The patterns schematized in Section 3.1 abstract away from the morphosyntactic expressions, and we expect considerable cross-linguistic variation in the formal means that instantiate a pattern. Our small sample already testifies to various degrees of morphosyntactic complexity not only on the morphological, but also on the syntactic level (and even at the discourse level, as highlighted in the introduction to Section 3). We expect a larger sample to exhibit even more variation along this dimension, as languages differ in their typological profiles, thus drawing on different lexical, morphological and syntactic resources to express a limited set of patterns in many different ways. In this section, we summarize the formal means attested in our sample, in order to give an impression of the enormous variability.

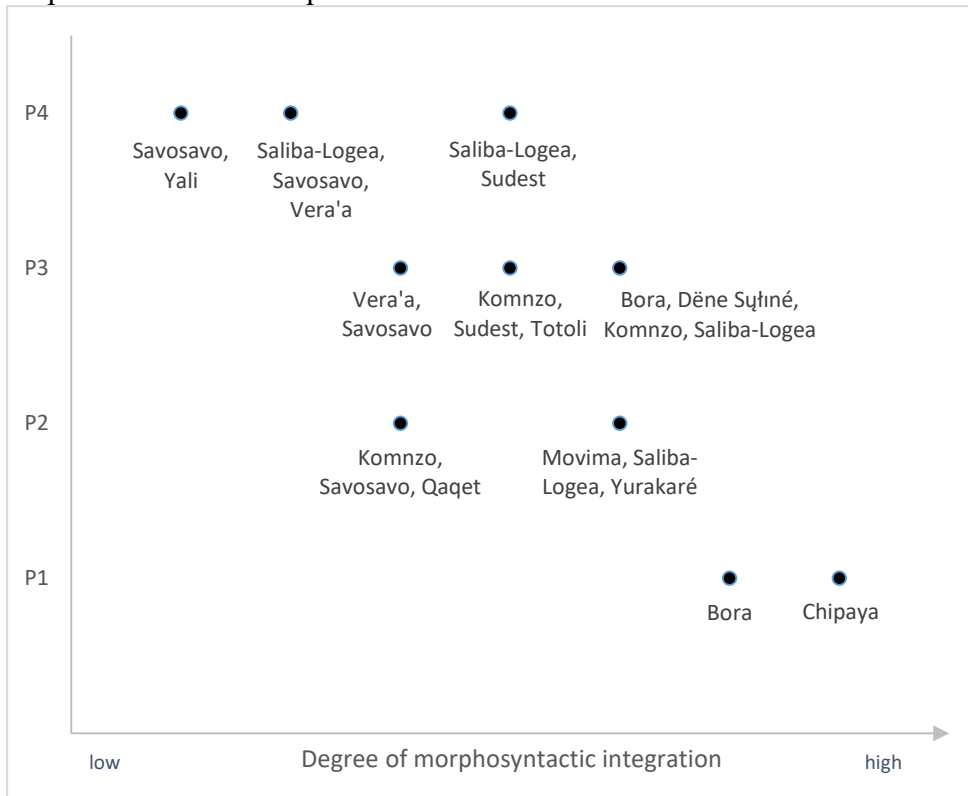
Figure 1 offers a schematization of this variation: The Y-axis shows the patterns, and the X-axis, the relative degree of morphosyntactic integration, with the languages on the left exhibiting the lowest degree of integration and those on the right showing the highest degree. Note that this figure is intended as a rough schematization only, aiming to visualize the attested variability, but not differentiating between sub-patterns, and sometimes subsuming structures from different languages under a single entry.

P1 does not show any (synchronic) compositionality, expressing directed CAM by means of a single lexeme. Note, though, that at least in one of the two languages that follow this pattern – Bora – there is evidence that, diachronically, the verbs are multi-morphemic, containing associated motion suffixes. Unfortunately, the etymological source of the other element is unknown, i.e., we cannot confidently link Bora to any of the other patterns. On the basis of our typology, however, we can hypothesize that it has originated in P3, possibly as a caused motion verb (see Seifart, chapter 2, for a discussion of possible diachronic developments). Figure 1 represents the difference between Chipaya (no evidence for a multimorphemic origin) and Bora (fusion of two diachronically distinct morphemes) by placing Bora to the left of Chipaya. All other languages use synchronically multimorphemic expressions and are hence placed further to the left.

The remaining three patterns all show constructions with various degrees of morphosyntactic integration. P2 is attested with bound applicative/causative morphemes (Movima, Saliba-Logea, Yurakaré), but also with syntactic applicative/causative constructions (Komnzo, Savosavo, Qaqet). In P3 we find directional affixes (Bora, Dëne Sųłné, Komnzo, Saliba-Logea), clitics (Komnzo, Sudest, Totoli), and particles (Vera'a, Savosavo). Finally, the constructions in P4 range from verbal compounds (Saliba-Logea, Sudest), verb serialization and less grammaticalized verb series (Saliba-Logea,

Savosavo, Vera'a), to bi-clausal constructions (Savosavo, Yali). Figure 1 offers a schematized visualization of this difference for each pattern by placing affixation further to the right, followed by clitics and compounding, followed by particles and other free forms, followed by verb serialization and then by bi-clausal constructions.

Figure 1. Degree of morphosyntactic integration of the directed CAM expressions in the sample



It is probably no coincidence that languages of our sample commonly allow for more than one possibility, and frequently there is a choice between morphological and syntactic means. For example, several languages express directionality within different construction types, making use of both P3 and P4 (e.g., Saliba-Logea shows directional suffixes, as well as compounded verbs and verb sequences containing motion verbs; Sudest has directional clitics and compound verbs; and Vera'a has directional particles and serialized directional verbs). Our volume is not concerned with diachronic developments, but it is well-known from the literature that serial verbs develop into particles, affixes, or adpositions with more grammaticalized meanings (e.g., Bradshaw, 1982; Crowley, 2002; Durie, 1988, 1997). That is, languages not infrequently exhibit diachronic links between intransitive verbs in P4 and valency-changing or directional morphemes in P2 and P3. Savosavo very nicely illustrates this case. The major strategy to express directed CAM

events in Savosavo are serial verb constructions consisting of what could be considered a GET verb (*-au*) and a deictically specific motion verb (COME or GO). However, as Wegener (chapter 11) shows, in most instances, the GET verb is ambiguous between a lexical interpretation and a grammaticized reading as a causative marker. Consider the following example:

- (18) *Te=lo lo madaki*
 CONJ=3SG.M.NOM 3SG.M[GEN] wife
k-aqi-ghu=e: “*L-au*
 3SG.F.OBJ-order-NMLZ=EMPH 3SG.M.OBJ-**take**/CAUS
ba-i-a lo ai laghaso.”
come-EP-IMP.SG DET.SG.M 1SG.GEN provision
 ‘And he ordered his wife: “Bring my provisions.”’ (cf. Wegener, example 1)

While in some cases semantic or structural factors can help to disambiguate between a lexical and a grammatical analysis of *-au*, (18) allows for both readings: ‘take the provisions and come’, i.e., P4b, and ‘cause the provisions to come’, i.e., P2b. In the typology presented in Section 3.1, we therefore list Savosavo under both these patterns.

(iii) *Combinations of more than two elements*

Our patterns in Section 3.1 are maximally composed of two combining elements. It is, however, possible that more elements combine. Such expressions are infrequent in our sample, and there tends to be evidence for a hierarchical organization (e.g., nested serial verb constructions, see, e.g., Aikhenvald, 2006; Cleary-Kemp, 2015; Unterladstetter, 2020). For both reasons, we do not include them in our patterns. They are interesting, however, as they testify to the creativity of speakers and their ability to create ever more complex expressions, sometimes nesting one attested pattern within another. Given the small sample size, it is clear that we cannot give an exhaustive list of the possibilities, but we can summarize some recurring structures across our sample.

Languages with multiverb constructions sometimes allow for three or more verbs to combine. A pertinent example is found in Savosavo, illustrated schematically in (19) where ‘take’ (in either its lexical use or in its grammaticized use as CAUS) combines with a directional motion verb (e.g., ‘exit’) and with ‘come’ (or its grammaticized use as HITHER). This surface structure is ambiguous and can be interpreted in four different ways, with different internal structures, as illustrated in (20). In (20a), there is no clear evidence for or against a hierarchical structure, and the three verbs are interpreted sequentially, i.e., one could analyse (20a) as a complex instantiation of P4b, with two separate motion verb slots. In (20b), a complex motion expression (‘exit hither’) is nested within the single motion verb slot of P4b. In (20c), a complex causative verb (‘cause to exit’) is nested in the

caused motion verb slot of P4b, i.e., one could interpret this structure as P2b ('cause to exit') nesting within P4b. Finally, in (20d), a complex motion expression ('exit hither') is nesting within the verb slot of P2b. For details of the examples and analyses, see Wegener, chapter 11, examples (36) to (39).

- (19) take/CAUS + directional motion verb (e.g., exit) + come/HITHER
- (20) a. take + exit + come ('they take it, exit, and come')
 b. take [exit + HITHER] ('they take it, and exit hither')
 c. [CAUS + exit] + come ('they cause it to exit, and come')
 d. CAUS + [exit + HITHER] ('they cause it to exit hither')

Similar multiverb structures of three or more combining verbs are attested in other languages as well. Note that such structures are not necessarily ambiguous, but we have chosen to use Savosavo as an illustration, as Wegener (chapter 11) gives a detailed discussion of the evidence for the different interpretations and hierarchical structures.

Multiverb structures usually also offer the possibility of adding a manner-specific verb to a basic directed CAM construction. This can be a manner-of-motion verb, as illustrated in the serial verb construction in (21) for Saliba-Logea. Or it can be a manner-of-caused motion coverb, as illustrated in (22) for Yali, where a manner-specific complex predicate (*paya walug*) fills the first slot of a directed CAM clause chaining construction.

- (21) *ye-bahe-i* *ye-heloi* *i-lau*
 3SG.SUBJ-carry-TR 3SG.SUBJ-**run** 3SG.SUBJ-go
 'He carries it and runs and goes.' (cf. Margetts, example 37)

- (22) [...] *oriyen* [[*paya* *walug*] *wahasa*]
 ori=en ***paya*** ***wa-tug*** *waha-ehesa*
 friends=AGT **carry.on.shoulder** **take-SEQ** come-3PL.IM.PST
 '[...] his friends carried him (home) on their shoulders' (cf. Riesberg, example 25a)

Similarly, languages can resort to structures that combine their canonical CAM expression with a subordinate, participle or nominal structure involving a manner-of-caused motion verb (described for Chipaya, Movima, Yali, Yurakaré). Example (23) illustrates this possibility for Chipaya: a directed CAM verb (P1) combines with a subordinated CARRY verb.

- (23) *wet^h* *ma:taqa* *ʃup* *quzʒku* *t^hit^hitʃa* *ʃeʃku*
wet^h *ma:taqa* *ʃup* ***quz-ʒku*** *t^hit^ha=tʃa* *ʃeʃku*
 1SG.POSS wife firewood **carry-GER** take.to=DECL yesterday
 'Yesterday, my wife took firewood [to somewhere], carrying [it] on the shoulder/s.' (cf. Hannß, example 15)

The above examples all illustrate combinations involving several verbs. A second recurring combination is the addition of a directional to one of the other patterns. For P1, see example (4) in Section 3.1 from Chipaya. For P2, see example (20d) from Savosavo above. And for P4, see example (24) from Vera'a, where a serialization of three verbs – a motion verb (*mul* '(go and) retire'), an accompaniment verb (*'ō* '(be) with'), and a directional verb (*kēl* 'back') – is combined with a directional particle that adds deictic information.

- (24) *di ne mul 'ō kēl ma*
 3SG PROSP:3SG retire (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.' (cf. Schnell, example 35)

(iv) *Variability beyond our sample*

Section 3.1 has shown that languages recruit a variety of verbs as the lexical core of their basic directed CAM expressions. It is an open question to what extent the posited four patterns capture the entire cross-linguistic variation. We consider this to be an empirical question to be tested against a larger sample, but variation within our sample and the existence of minor patterns across our sample make it possible to offer some pointers at this stage. We are convinced that a larger sample will necessitate some adjustments to the sub-patterns, but not necessarily to the major coarse-grained patterns of P1 to P4. Specifically, this means that we do not expect to find a lexical core that cannot be characterized as either a directed CAM verb (P1), a motion verb (P2), an accompaniment verb (P3a), a caused motion verb (P3b) or a caused accompanied motion verb (P3c). Furthermore, we also do not expect to find a major pattern that is composed of more than two combining elements, i.e., we do not expect the four defining meaning components to be regularly distributed over three or four different elements. Instead, there are four areas where we expect to find variability beyond the variation found in our sample:

1. the role of *deictic verbs and manner verbs*
2. the inventory of *caused motion verbs*
3. the use of *accompaniment verbs and comitative structures*
4. semantic components being either *entailed or implicated*

First, pertaining to the *deictic and manner verbs*, we expect a larger sample to reveal variation in the inventory and frequencies of these verbs used in reference to directed CAM events.

In P1, this is likely to be the only source of variation: as the verb entails all four defining semantic components, we expect any cross-linguistic variation to be on the level of additional, non-defining, components. With respect to deixis, our small sample exemplifies both logical possibilities: deixis is coded in the verbs of one language (Bora), but probably not in the verbs of the other (Chipaya). With respect to manner, there is one candidate that is attested as a

minor pattern: LEAD/GUIDE-type verbs (see especially Margetts, chapter 6). Levin (1993, p. 270) includes them among the ACCOMPANY verbs, relating to “one person taking a second from one place to another”. A subset of these verbs entails all defining components in addition to a manner component. These verbs have a fairly specialized meaning: they pose restrictions on the theme entity, and on “the nature of the relation between the two participants” (Levin, 1993, p. 270). Given their specialized meaning, we would not assume LEAD/GUIDE-type verbs to surface as the basic directed CAM expression in any language. However, we would expect them to be well attested in languages whose basic directed CAM expression is built on a manner-specific CARRY verb (i.e., P3c and P4c): assuming that the CARRY verbs cannot be used with self-moving themes, a LEAD/GUIDE-type verb is required to cover these scenarios. This is, indeed, what we find in Saliba-Logea: it is the only language of our sample where LEAD/GUIDE-type verbs occur with reasonable frequency (see Margetts, chapter 6).

In the other three patterns, we expect to find comparable variation in the encoding of deixis and manner information in the motion verbs (P2, P4) and the CARRY verbs (P3c, P4c). Currently, our sample allows for the generalization that a small set of high-frequency verbs account for the vast majority of occurrences: deictic GO/COME verbs (in P2 and P4) and one general CARRY verb (usually the one with a meaning of ‘carry in hand’) (in P3c and P4c). But it is entirely possible that other languages draw on a different inventory with different frequencies. As alluded to in Section 3.2(ii), it is conceivable that some languages do not show the imbalance between expressions of manner vs. directedness that we observe in the current language sample. This could be manifested, for example, in a higher frequency of manner-of-motion verbs occurring in patterns P2 and P4, or through a higher frequency of instances where both manner and directedness are expressed in P3c and P4c.¹²

Second, with respect to the inventory of *caused motion verbs*, a larger sample may reveal a broader range of caused motion verbs that can be used in reference to caused accompanied motion events. In our sample, only GET/MOVE type verbs are attested as a basic pattern in this context (P3b, P4b). In addition, there are a handful of manner-specific caused motion verbs (especially PUSH/PULL) that keep recurring across the languages of our sample (see, e.g., the contributions by Margetts, Schnell, and Sheppard, this volume). Again, given their specialized meaning, we would not expect them to constitute the basic directed CAM expression of any language, and they occur indeed very infrequently in our sample. Beyond the possibility of expressing manner information, though, there is one conspicuous gap in our database: while languages commonly recruit GET verbs for expressing directed CAM events, we have not come across clear cases of PUT verbs in this context.

¹² For example, Aung Si (p.c.) suggested to us that Burmese would probably use a large number of different CARRY verbs in the context of directed CAM.

However, three languages of our sample recruit a MOVE verb (Dëne Sųłiné, Komnzo, Vera'a): these verbs have a general caused motion semantics, being employed in a large variety of contexts (including GET contexts, but also PUT or GIVE contexts). It is possible that a larger sample will reveal a language that uses PUT as the lexical core of its directed CAM expression.

Third, a larger sample may clarify the role of verbs and structures that express non-caused accompaniment, such as *ACCOMPANY verbs and comitative structures*. In our sample, there is one language (Vera'a) that makes frequent use of an ACCOMPANY verb in reference to directed CAM events (P3a, P4a). In the other languages of our sample, by contrast, ACCOMPANY verbs are not attested in contexts of caused motion (but see the discussion by Himmelmann and Riesberg on Totoli, chapter 8). With respect to comitative structures, none of the languages of our sample uses them as the basis for a major pattern: they tend to be used for non-caused accompaniment and/or conveying 'take along' readings (i.e., taking something along on a journey, rather than taking something from a source to a goal). However, in some languages, comitative structures can be recruited to refer to directed CAM events – again, with causation arising as a possible contextual interpretation. This is again the case for Vera'a whose ACCOMPANY verb is ambiguous and also occurs as a preposition with a comitative function. And Gipper (chapter 5) presents an illustrative case study, showing how two non-causative comitative structures in Yurakaré (a dependent-marking associative construction, and a comitative applicative structure) are distributed compared to the basic directed CAM construction (P2a) (see also Wegener, chapter 11, for the use of subordination constructions in Savosavo in this context). Again, in other languages, comitative structures are not attested in this context (e.g., Bora, Chipaya, Movima, Qaqet, and Yali). Overall, structures expressing non-caused accompaniment thus only play a minor role in our sample. However, the observation that they *can* be recruited to express directed CAM events in at least some languages coupled with the observation that one language (Vera'a) uses such a verb as the lexical core of its basic expression, leads us to believe that a larger sample may reveal that comitative-type structures can play a more prominent role in the encoding of directed CAM events.

And finally, we expect that a larger sample will reveal language-specific differences with respect to the meaning components of a pattern being *entailed vs. implicated*. As discussed in Section 2.2, it is notoriously difficult to distinguish between semantic entailments and pragmatic implicatures, and we do not always have sufficient data and evidence to come to a definite conclusion. The contributions to this volume are careful to address this issue, but it is inevitable that there remains some uncertainty. This uncertainty is bound to impact on our typology. The tables of Section 3.1 list those meaning components for which the evidence suggests that they are either entailed or strongly implicated by the construction and/or its elements. We take 'strongly implicated' to mean that there are either no conclusive counter-examples attested or that the expression is in a privative opposition to another

expression that entails the corresponding meaning component (see Footnote 9 in Section 3.1). But, of course, it is entirely possible that we have wrongly analysed a given expression as either entailing or not entailing a meaning component. And it is equally possible that a larger sample will reveal more variation in that some languages showing a given pattern entail a meaning component, while others only implicate it.

For example, Vera'a uses an ACCOMPANY verb (in P3a) that does not entail motion – but we would expect there to be languages of P3a that use an ACCOMPANY verb that does entail motion. Similarly, Totoli uses a verb that is polysemous between a CARRY sense (involving motion) and a HOLD sense (not involving motion) (in P3c), and it is possible that other languages instantiating this pattern will use only a HOLD-type verb that does not entail motion (see also the discussions by Döhler, chapter 10, and Schnell, chapter 9). Further, some languages use intransitive motion verbs as their lexical core plus a valency-changing element (P2). In the case of applicative-type elements, it does not necessarily follow that causation is entailed (P2a). And conversely, in the case of causative-type elements, it does not necessarily follow that accompaniment is entailed (P2b). We would expect a larger sample to contain languages in P2a and P2b where both components are entailed, as well as languages where only one component is entailed. Furthermore, this question of entailment vs. implicature not only pertains to the lexical core of an expression, but also to the combinatorics. This is especially the case in languages that use motion verbs in either P2 or P4. Sometimes (e.g., in Savosavo P4b), this motion verb refers to the motion of the agent (thus creating the entailment, or at least the strong implicature, of accompaniment). In other cases (e.g., in Savosavo P2b), it refers to the motion of the theme (thus not necessarily resulting in an interpretation of accompaniment).

To conclude the discussion, we expect that a larger sample will reveal language-specific variation with regard to the presence and distribution of non-defining components (manner, deixis) across the basic patterns. It will also unearth additional verb types and structures: strong contenders are caused motion verbs of the PUT type (possibly necessitating the further differentiation of P3b and P4b), and non-caused accompaniment structures of the comitative type (possibly necessitating a third sub-pattern of P2). And there will be differences with regard to meaning components being entailed or implicated (within P2, P3, and P4). That is, overall, we expect the adjustments and additions to the typology to be on the level of sub-patterns, and we do not expect additions on the level of the basic patterns.

4 Outline of the volume

The following chapters describe the encoding of directed CAM events in individual languages. They discuss the interaction of lexical semantics,

morphosyntax, and discourse-pragmatic features in the linguistics of directed CAM events. Each chapter explores the lexicon-semantics and syntax-semantics mapping in this domain and describes the inventory and the role of lexical items, formatives, and morphosyntactic constructions used in the expression of these events.

The chapters are genealogically and geographically ordered. The first set discusses four languages of South America, the second set is dedicated to languages of Austronesia, the third set of chapters considers directed CAM events in four Papuan languages, and the final chapter of the volume presents data on directed CAM events from two fieldwork-based research and documentation projects on first language acquisition.

Table 7 presents an overview of the languages and preferred patterns of expressing directed CAM events.

Table 7. Languages and their preferred patterns

Language	Major Pattern	Chapter	Contributors
Americas:			
Bora	P1	Chapter 2	Seifart
Chipaya	P1	Chapter 3	Hannß
Dëne Sųłné	P3	Chapter 14	Jung
Movima	P2	Chapter 4	Haude
Yurakaré	P2	Chapter 5	Gipper
Austronesia:			
Saliba-Logea	P3 and P4	Chapter 6	Margetts
Sudest	P3 and P4	Chapter 7	Sheppard
Totoli	P3	Chapter 8	Himmelmann & Riesberg
Vera'a	P3 and P4	Chapter 9	Schnell
Papua:			
Komnzo	P3	Chapter 10	Döhler
Savosavo	P2 and P4	Chapter 11	Wegener
Qaqet	P2	Chapter 12, 14	Hellwig
Yali	P4	Chapter 13	Riesberg

Abbreviations

\.../ - verb stem; 1, 2, 3 - first, second, third person; AGT - agent; ALL - allative; AND - andative; APPL - applicative; ART - article; ART.ID - article (inherently identifiable referents); AV - actor voice; AWAY - away from deictic centre (directional); CA - caused accompaniment; BACK - back to deictic centre (directional); CAUS - causative; CHAR - characteristic case; CISLOC -

cislocative; CNTR - container with contents classifier; CO - co-participant; CONJ - conjunction; DECL - declarative; DEM - demonstrative; DET - determiner; DSC - discontinuous; DR - direct; EMPH - emphatic; EP - epenthetic vowel; ERG - ergative case; F - feminine; FUT - future; GEN - genitive; GER - gerund; IM.PST - immediate past; IMP - imperative; INT - intentional; IPFV - imperfective; LOC - locational; M - masculine; MED - medial (demonstrative); N - non-human; NCONT - non-continuous (aspect); NMLZ - nominalizer; NOM - nominative; NSG - non-singular; OBJ - object; OBL - oblique; PL - plural; POSS - possessive; PP - pre/postposition; PRF - perfect; PST - past; PROSP - prospective; RED - reduplication; RLS - realis; SAL - salience-marking enclitic; SCE - source; SEQ - sequential; SG - singular; SUBJ - subject; TOP - topic marker; TR - transitive; VEN - venitive

References

- Aikhenvald, A. Y. (2006). Serial verb constructions in typological perspective. In A. Y. Aikhenvald & R. M. W. Dixon (Eds.), *Serial verb constructions: A cross-linguistic typology* (pp. 1–68). Oxford: Oxford University Press.
- Ameka, F. K. (1995). The linguistic construction of space in Ewe. *Cognitive Linguistics*, 6(2/3), 139–182.
- Ameka, F. K., & Levinson, S. C. (2007). Introduction: The typology and semantics of locative predicates: Posturals, positionals, and other beasts. *Linguistics*, 45(5–6), 847–871.
- Arnold, J. E. (2008). Reference production: Production-internal and addressee-oriented processes. *Language and Cognitive Processes*, 23(4), 495–527.
- Berlin, B., & Kay, P. (1969). *Basic color terms: Their universality and evolution*. Berkeley, CA: University of California Press.
- Binnick, R. I. (1971). Bring and come. *Linguistic Inquiry* 2, 260–265.
- Bohnenmeyer, J. (2015). A practical epistemology for semantic elicitation in the field and elsewhere. In R. Bochnak & L. Matthewson (Eds.), *Methodologies in semantic fieldwork* (pp. 13–46). Oxford: Oxford University Press.
- Bohnenmeyer, J., Enfield, N. J., Essegbey, J., Ibarretxe-Antuñano, I., Kita, S., Lüpke, F., & Ameka, F. K. (2007). Principles of event segmentation in language: The case of motion events. *Language*, 83(3), 495–532.
- Bohnenmeyer, J., Enfield, N. J., Essegbey, J., & Kita, S. (2011). The macro-event property: The segmentation of causal chains. In J. Bohnemeyer & E. Pederson (Eds.), *Event representation in language and cognition* (pp. 43–67). Cambridge: Cambridge University Press.
- Bohnenmeyer, J., & Pederson, E. (2010). *Event representation in language and cognition*. Cambridge: Cambridge University Press.

- Bowerman, M., Gullberg, M., & Narasimhan, B. (2004). Put project: The crosslinguistic encoding of placement events. In A. Majid (Ed.), *Field Manual* (Vol. 9, pp. 10–24). Nijmegen: Max Planck Institute for Psycholinguistics.
- Bowerman, M., & Pederson, E. (1992). Topological relations picture series. In S. C. Levinson (Ed.), *Space stimuli kit 1.2: November 1992* (p. 51). Nijmegen: Max Planck Institute for Psycholinguistics.
- Bradshaw, J. (1982). *Word order change in Papua New Guinea Austronesian languages* (Doctoral dissertation, University of Hawaii). Retrieved from <https://scholarspace.manoa.hawaii.edu/>
- Bybee, J. L., & Hopper, P. J. (Eds.) (2001). *Frequency and the emergence of linguistic structure*. Amsterdam: John Benjamins.
- Chafe, W. L. (1980). *The pear stories: Cognitive, cultural, and linguistic aspects of narrative production*. Norwood, NJ: Ablex.
- Cleary-Kemp, J. (2015). *Serial verb constructions revisited: A case study from Koro* (Doctoral dissertation, University of California). Retrieved from ProQuest Dissertations and Theses. (UMI 3733339).
- Colleman, T., & De Clerck, B. (2009). ‘Caused motion’? The semantics of the English to-dative and the Dutch aan-dative. *Cognitive Linguistics*, 20(1), 5–42.
- Comrie, B. (2003). Recipient person suppletion in the verb ‘give’. In M. R. Wise, T. N. Headland, & R. M. Brend (Eds.), *Language and life: Essays in memory of Kenneth L. Pike* (pp. 265–281). Arlington, TX: SIL International and the University of Texas.
- Comrie, B. (2005). Some argument-structure properties of ‘give’ in the languages of Europe and Northern and Central Asia. In P. Sihkonen, B. Comrie, & V. Solovyev (Eds.), *Argument structure and grammatical relations: A crosslinguistic typology* (pp. 17–35). Amsterdam: John Benjamins.
- Crowley, T. (2002). *Serial verbs in Oceanic: A descriptive typology*. Oxford: Oxford University Press.
- De Vries, L. (2005). Towards a typology of tail–head linkage in Papuan languages. *Studies in Language*, 29(2), 363–384.
- Dixon, R. M. W. (1991). *A new approach to English grammar, on semantic principles*. Oxford: Clarendon Press.
- Durie, M. (1988). Verb serialization and “verbal-prepositions” in Oceanic languages. *Oceanic Linguistics*, 27(1/2), 1–23.
- Durie, M. (1997). Grammatical structures in verb serialization. In A. Alsina, J. Bresnan, & P. Sells (Eds.), *Complex predicates* (pp. 289–354). Stanford: CSLI Publications.
- Evans, N., Gaby, A., Levinson, S. C., & Majid, A. (Eds.). (2011). *Reciprocals and semantic typology*. Amsterdam: John Benjamins.
- Gropen, J., Pinker, S., Hollander, M., Goldberg, R., & Wilson, R. (1989). The learnability and acquisition of the dative alternation in English. *Language*, 65(2), 203–257.

- Haspelmath, M. (1993). *Lezgian grammar*. Berlin: Mouton de Gruyter.
- Heeschen, V. (1998). *An ethnographic grammar of the Eipo language*. Berlin: Dietrich Reimer.
- Hendriks, H., Hickmann, M., & Demagny, A.-C. (2008). How adult English learners of French express caused motion: A comparison with English and French natives. *Aile: Acquisition et Interaction En Langue Étrangère*, 27, 15–41.
- Hickmann, M., Hendriks, H., Harr, A.-K., & Bonnet, P. (2018). Caused motion across child languages: A comparison of English, German, and French. *Journal of Child Language*, 45(6), 1247–1274.
- Hill, D. (2016). Bride-price, baskets, and the semantic domain of “carrying” in a matrilineal society. *Oceanic Linguistics*, 55(2), 500–521.
- Hockett, C. F. (1990). Bring, take, come, and go. *Journal of English Linguistics*, 23(1–2), 239–244.
- Hovav Rappaport, M., & Levin, B. (2008). The English dative alternation: The case for verb sensitivity. *Journal of Linguistics*, 44(1), 129–167.
- Ikegami, Y. (1970). *The semological structure of the English verbs of motion: A stratificational approach*. Tokyo: Sanseido Publishing Company.
- Ikegami, Y. (1987). ‘Source’ and ‘Goal’: A case of linguistic dissymmetry. In R. Dirven & G. Radden (Eds.), *Concept of Case* (pp. 122–146). Tübingen: Gunter Narr.
- Ji, Y., Hendriks, H., & Hickmann, M. (2011). The expression of caused motion events in Chinese and in English: Some typological issues. *Linguistics*, 49(5), 1041–1077.
- Kittilä, S. (2006). The anomaly of the verb ‘give’ explained by its high (formal and semantic) transitivity. *Linguistics*, 44(3), 569–612.
- Kopecka, A., & Narasimhan, B. (Eds.) (2012). *Events of putting and taking: A crosslinguistic perspective*. Amsterdam: John Benjamins.
- Kopecka, A., Ishibashi, M., & Vuillermet, M. (Eds.) (2021). Source-goal asymmetries across languages. Special issue of *Studies in Language*.
- Lakusta, L., Wagner, L., O’Hearn, K., & Landau, B. (2007). Conceptual foundations of spatial language: Evidence for a goal bias in infants. *Language learning and development*, 3(3), 179–197.
- Levin, B. (1993). *English verb classes and alternations: A preliminary investigation*. Chicago: University of Chicago Press.
- Levinson, S. C. (1996). Introduction to part II. In J. J. Gumperz & S. C. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 133–144). Cambridge: Cambridge University Press.
- Levinson, S. C. (2003). *Space in language and cognition: Explorations in cognitive diversity*. Cambridge: Cambridge University Press.
- Levinson, S. C., Cutfield, S., Dunn, M., Enfield, N. J., Meira, S., & Wilkins, D. P. (Eds.). (2018). *Demonstratives in crosslinguistic perspective*. Cambridge: Cambridge University Press.
- Levinson, S. C., & Wilkins, D. P. (2006a). Patterns in the data: Towards a semantic typology of spatial description. In S. C. Levinson & D. P.

- Wilkins (Eds.), *Grammars of space: Explorations in cognitive diversity* (pp. 512–552). Cambridge: Cambridge University Press.
- Levinson, S. C., & Wilkins, D. P. (2006b). The background to the study of the language of space. In S. C. Levinson & D. P. Wilkins (Eds.), *Grammars of space: Explorations in cognitive diversity* (pp. 1–23). Cambridge: Cambridge University Press.
- Lucy, J. A. (1997). The linguistics of ‘color’. In C. L. Hardin & L. Maffi (Eds.), *Color categories in thought and language* (pp. 320–346). Cambridge: Cambridge University Press.
- Lucy, J. A., & Gaskins, S. (2001). Grammatical categories and the development of classification preferences: A comparative approach. In M. Bowerman & S. C. Levinson (Eds.), *Language acquisition and conceptual development* (pp. 257–283). Cambridge: Cambridge University Press.
- Margetts, A. (2007). Three-participant events in Oceanic languages. *Oceanic Linguistics*, 46(1), 71–127.
- Margetts, A. (2008). Learning verbs without boots and straps? The problem of ‘give’ in Saliba. In M. Bowerman & P. Brown (Eds.), *Crosslinguistic perspectives on argument structure: Implications for learnability* (pp. 111–137). Mahwah, NJ: Lawrence Erlbaum.
- Margetts, A., & Austin, P. K. (2007). Three-participant events in the languages of the world: Towards a crosslinguistic typology. *Linguistics*, 45(3), 393–451.
- Margetts A., Haude, K., Himmelmann, N. P., Jung, D., Riesberg, S., Schnell, S., Seifart, F., Sheppard, H., & Wegener, C. (accepted). Cross-linguistic patterns in the lexicalisation of BRING and TAKE. *Studies in Language*.
- Mayer, M. (1969). *Frog, where are you?* New York City, NY: Dial Press.
- Mosel, U. (2014). ‘Cut’ and ‘carry’ in Teop. Australian National University. Manuscript.
- Narasimhan, B., Eisenbeiß, S., & Brown, P. (2007). “Two’s company, more is a crowd”: The linguistic encoding of multiple-participant events. *Linguistics*, 45(3), 383–392.
- Narasimhan, B., Kopecka, A., Bowerman, M., Gullberg, M., & Majid, A. (2012). Putting and taking events: A crosslinguistic perspective. In A. Kopecka & B. Narasimhan (Eds.), *Events of putting and taking: A crosslinguistic perspective* (pp. 1–20). Amsterdam: John Benjamins.
- Nerlove, S. B., & Romney, A. K. 1967. Sibling terminology and cross-sex behavior. *American Anthropologist*, 69(2), 179–187.
- Newman, J. (1996). *Give: A cognitive linguistic study*. Berlin: Mouton de Gruyter.
- Newman, J. (Ed.). (1997). *The linguistics of giving*. Amsterdam: John Benjamins.

- Newman, J. (1998). Recipients and ‘give’ constructions. In W. van Langendonck & W. van Belle (Eds.), *The dative* (Vol. 2, pp. 1–28). Amsterdam: John Benjamins.
- Pawley, A. (1987). Encoding events in Kalam and English: Different logics for reporting experience. In R. S. Tomlin (Ed.), *Coherence and grounding in discourse* (pp. 329–360). Amsterdam: John Benjamins.
- Pawley, A., & Lane, J. (1998). From event sequence to grammar: Serial verb constructions in Kalam. In A. Siewierska & J. J. Song (Eds.), *Of case, typology and grammar* (Vol. 38, pp. 201–228). Amsterdam: John Benjamins.
- Regier, T., & Zheng, M. (2007). Attention to endpoints: A cross-linguistic constraint on spatial meaning. *Cognitive Science*, 31(4), 705–719.
- San Roque, L., Gawne, L., Hoenigman, D., Miller, J. C., Rumsey, A., Spronck, S., Carroll, A., & Evans, N. (2012). Getting the story straight: Language fieldwork using a narrative problem-solving task. *Language Documentation & Conservation*, 6, 135–174.
- Saunders, B. A., & Van Brakel, J. (1997). Are there nontrivial constraints on colour categorization? *Behavioral and Brain Sciences*, 20(2), 167–179.
- Siewierska, A., & van Lier, E. (2011). ‘Introduce’ crosslinguistically – Towards a typology of non-prototypical three-participant construction. Talk presented at the *Association for Linguistic Typology, 9th Biennial Conference, Hong Kong*.
- Sinha, C., & Kuteva, T. (1995). Distributed spatial semantics. *Nordic Journal of Linguistics*, 18(2), 167–199.
- Talmy, L. (1985). Lexicalization patterns: Semantic structure in lexical forms. In T. Shopen (Ed.), *Language typology and syntactic description* (Vol. 3, pp. 57–149). Cambridge: Cambridge University Press.
- Talmy, L. (1991). Path to realization: A typology of event conflation. *Annual Meeting of the Berkeley Linguistics Society*, 17(1), 480–519.
- Talmy, L. (2000). *Toward a cognitive semantics*. Cambridge, MA: MIT press.
- Unterladstetter, V. (2020). *Multi-verb constructions in Eastern Indonesia*. Berlin: Language Science Press.
- Van der Leek, F. (2000). Caused-motion and the ‘bottom-up’ role of grammar. In A. Foolen & F. van der Leek (Eds.), *Constructions in cognitive linguistics: Selected papers from the fifth International Cognitive Linguistics Conference, Amsterdam, 1997* (pp. 301–331). Amsterdam: John Benjamins.
- Van Staden, M., & Reesink, G. P. (2008). Serial verb constructions in a linguistic area. In G. Senft (Ed.), *Serial verb constructions in Austronesian and Papuan languages*. Canberra: Pacific Linguistics.
- Wilkins, D. P., & Hill, D. (1995). When ‘go’ means ‘come’: Questioning the basicness of basic motion verbs. *Cognitive Linguistics*, 6, 209–260.