Kalam serial verb constructions

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… a peculiarity of the Ewe language is that we often find a row of verbs one after the other … In English these consecutive verbs are partly rendered by composite sentences. But very often several Ewe verbs may be expressed by a single verb in English. The explanation of this is that the Ewe people describe every detail of an action or happening from beginning to end, and each detail has to be expressed by a special verb: they dissect every happening and present it in its several parts, whereas in English we seize on the leading event and express it by a verb, while subordinate events are either not considered or are rendered by means of a preposition, adverb, conjunction, or a prefix on the verb.

D. Westermann
A study of the Ewe language
(quoted in Sebba 1987:6–7).

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Acknowledgments

This book is adapted, with only minor changes, from my MA thesis *Kalam serial verb constructions*, submitted to the University of Auckland, New Zealand, in 1991. Thanks to Andrew Pawley for encouraging me to publish it. I would like to thank Andew Pawley and Frank Lichtenberk, my thesis supervisors, for their guidance and support during the writing of the thesis. Thanks also to Ross Clark, John Bowden, Matthew Fitzsimons, Robin Hooper and Wolfgang Sperlich, who provided me with relevant material and advice. Margaret Paterson helped type the references. I am grateful to Simon Bickler and Nigel Champion for the ever-present technical support. Thanks also to graduate students and staff of the anthropology Department of the University of Auckland.

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Terms and abbreviations used in Kalam glosses

REC:PAST	recent past
PAST	remote past
PAST:HAB	past habitual
PRES:PROG	present progressive
PERF	perfect
FUT	future
HORT	hortative
OPT	optative
PAST:CTF	past contrary-to-fact
SS:PRIOR	same subject, prior action
SS:SIM	same subject, simultaneous action
SS:PROSP	same subject, prospective/future action
DS:PRIOR	different subject, prior action
DS:SIM	different subject, simultaneous action
NEG	negative prefix
NOM/ADJ	nominaliser/adjectiviser suffix
Subj	subject
Obj	object
sg	singular
dl	dual
pl	plural

Foreword

ANDREW PAWLEY

There are a number of reasons why I am delighted that Jonathan Lane's study of serial verb constructions in Kalam is finally published, even though it has been circulating for some 16 years in its original form as a Master's thesis, and has been widely cited.

Not least is the fact that it is still the most thorough analysis of SVCs done for Kalam and, indeed, for any language of New Guinea. This is no small matter because Kalam must be close to world champion status in the length and complexity of its SVCs. In particular, its 'narrative' SVCs are a streamlined mechanism for reporting, in a single clause, a sequence of up to nine or ten events that make up a routine episode. In the last couple of decades serial verb constructions have come to the fore in linguistics, as scholars have come to grips with the wide range of complex predicate structures to be found in the world's languages and with the challenges these pose for theories of clause structure and event structure.

But there are other, more personal, reasons. There is a long story behind this little book. In 1977 two friends of mine, Ian Saem Majnep, a Kalam man, and Ralph Bulmer, a social anthropologist, began planning their second book on Kalam ethnobiology, which was to deal with the wild animals of the remote Schrader Ranges in Papua New Guinea, where Majnep had learnt his bushcraft as a boy in the 1950s and early 1960s. They decided that Saem would write the core chapters in Kalam and Bulmer would translate them and add commentary with scientific IDs, indices, etc. When Bulmer died of cancer in 1988 I inherited his role in the project. This involved, among other things, spending hundreds of hours editing the 800 pages of bilingual text for publication as a series of 12 working papers. It was my good fortune that Jonathan Lane, then a promising student completing his BA degree at Auckland, was around to help tidy up the messy set of computer files that contained various sections of text. The Kalam texts describing animal behaviour and Kalam hunting practices proved to be a wonderfully rich source of SVCs and I was able to persuade Jonathan to use these as the database for an MA thesis on this topic. That was an unexpected bonus from the Majnep/Bulmer project.

The examiners found Lane's 1991 thesis to be an outstanding piece of work and recommended its publication as a monograph. It was academia's loss that Jonathan chose to pursue a career elsewhere and that it has taken 16 years for the monograph to appear but I am pleased and relieved to know that his perceptive and fine-grained analysis of Kalam SVCs will at last be readily accessible to linguists.

1 *Background*

1.1 Apeban![1]

Kalam, a Papuan (non-Austronesian) language of the New Guinea Highlands, allows constructions in which one or more uninflected verb stems precede an inflected verb stem. Such constructions correspond to the cross-linguistically attested phenomenon of serial verb constructions (SVCs). Many of the features associated with serialisation in other languages are present in Kalam SVCs. For example, there is a tendency for serialised stems to combine into complex lexical units; this tendency is particularly prominent in Kalam given its closed verb class, which consists of around 100 verb stems. Some stems also take on grammatical functions, another common tendency in serialising languages.

However, Kalam serialisation differs in some respects from that described in the literature for other languages.[2] One such difference, a principal theme of this thesis, relates to the potential in Kalam for SVCs of considerable length — up to nine or ten stems long. In contrast, most descriptions of serialisation concentrate on SVCs containing only two or three stems. Within Kalam SVCs, certain combinations of verb stems form larger units. These units comprise part of the mechanisms which provide internal structure to SVCs, to a large extent in accordance with principles of discourse organisation in Kalam.

This chapter provides background for the analysis of Kalam SVCs. After introducing the location of the people and their language, I discuss the nature of my Kalam data, and how it has influenced the direction of my analysis. Following this, relevant aspects of the structure of Kalam, including the basic properties of Kalam SVCs, are presented, to pave the way for a more in-depth analysis of Kalam serialisation.

Before embarking on this analysis, it seemed helpful to investigate notions of serialisation which have been used in studies of other languages around the world. This investigation is the subject of Chapter 2, which starts with a comparison of Kalam SVCs with those of other languages. There we will see that many of the entities which have been identified as SVCs show a number of common features, enough to make the notion of serialisation workable (although not unproblematic). In Chapter 2, I investigate syntactic and semantic characteristics of serialisation across languages, and the interaction of SVCs with issues such as grammaticisation, lexicalisation and the status of the clause. It is noted

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1 Pronounced [aßémban], Kalam for 'Hi!' (lit. 'you are coming').

2 This book is based on my MA thesis, completed in 1991. While much has been written about SVCs in the intervening years, I have chosen not to comment on the more recent literature. However, the bibliography lists recent works on Kalam.

that a growing tendency in the literature is to view SVCs as sharing, to varying degrees, characteristics both of interclausal syntax and of single lexical items.

In Chapter 3 we start the analysis proper. Some aspects of Kalam discourse structure are directly relevant to issues of serialisation. In particular, SVCs often include explicit mention of motion to and from the scenes of certain events. Verbs of motion, distinctive in their syntactic behaviour, impose a layer of syntactic structure within SVCs which is tied to discourse structure.

Chapter 4 looks at the distribution of arguments and modifiers within the complex of verb stems which makes up a Kalam SVC. Typically stems are contiguous in SVCs; only a handful of stems consistently allow non-verb material into the complex. Corresponding to their role in the structure of SVCs, as introduced in Chapter 3, motion stems act as hinges for the introduction of arguments into SVCs. Chapter 4 also discusses negation, and for the evidence it provides on the clausal status of SVCs.

Chapter 5 addresses the use of verb stems to encode aspectual and case-marking grammatical functions. I discuss possible indicators of grammaticisation in Kalam SVCs, and the demarcation between grammaticisation and lexicalisation.

Chapter 6 incorporates the analyses of the previous chapters into an account of the factors influencing stem ordering in SVCs. The role of motion verbs in structuring SVCs, introduced in Chapter 3, is compared to a tighter level of organisation. I suggest a continuum of syntactic and semantic bonding for Kalam serialisation. At one end of this continuum stand SVCs resembling interclausal syntax, and reflecting patterns of discourse; at the other, co-lexicalised or grammaticised units. This suggests a possible path for diachronic change in Kalam SVCs.

Chapter 7 summarises the results of the investigation, placing them in the context of the clausal status of SVCs and the evidence that Kalam SVCs bring to the relation between discourse and grammar.

To conclude this introduction, I present an example of the phenomenon in question.[3] The following Kalam SVC, a standard way of indicating that certain types of discourse have ended, illustrates a widespread type of serialisation, in which one stem acts as a grammatical marker. In this case, *d-* 'get' marks completive aspect.

1.1 Tep, mñi **ag-d**-p-in.
good now say-get-PERF-1sg
Well, now I have finished speaking. (Intro #84)

1.2 Kalam

Kalam is spoken by some 15,000 people occupying several valleys on the Ramu and the Jimi falls of the Bismarck-Schrader Ranges, on the northern border of the Western Highlands Province of Papua New Guinea. The greatest population density is in the Upper Kaironk Valley.

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[3] This example also illustrates the conventions used in linguistic examples cited in this work. The source text, divided into morphemes where this is relevant, is followed by both a morpheme-by-morpheme gloss and a free translation. There is also a reference to the source of the example. With Kalam examples, the reference is normally to one of the two principle databases used in this work (see §1.3). Verb stems in the source text are bolded. *Italics* are sometimes used in source text and translation to highlight points of interest. Morpheme breaks in the source text are indicated by hyphens ' - '. Infixes are delineated by angle brackets '< >'.

The Kalam live in dispersed homesteads of five to thirty people at altitudes of between 1500 and 2000 metres. They belong to local kin groups of up to 300 people, each occupying a well-defined territory. Cultivation of root crops, of which the staple is sweet potato, and the raising of pigs form the basis of the economy. But many Kalam still make extensive use of the mountain forests, both as a source of important plants, and in the hunting of birds and animals (Bulmer and Menzies 1972:474ff.; Majnep and Bulmer 1977:34). Direct contact with Europeans (*cp tmel*, literally 'evil people, evil spirits') in the Upper Kaironk dates back only as far as the 1950s, during which decade Australian control was imposed on the area (Majnep and Bulmer 1977:9). Despite this relatively short period of contact, there is concern that traditional ways of life may soon be forgotten due to growing outside influence (Majnep and Bulmer 1990:(I)32).

Kalam is one of the approximately 750 Papuan languages spoken over much of New Guinea and nearby island groups of Island Melanesia and East Nusatanggara. It should be noted that 'Papuan' is essentially a negative term, denoting those languages of the New Guinea area which do not belong to the Austronesian family. The alternative term 'non-Austronesian', while less favoured by linguists working on these languages, is thus less misleading (Foley 1986:2ff.). Within the Papuan area, there are at least sixty recognised language families, each with a degree of internal diversity roughly comparable to Germanic or Romance. A number of higher-order groups have also been identified (e.g. Wurm, ed. 1975; Wurm 1982), although in the absence of systematic application of the comparative method to these, some writers prefer to remain agnostic (Foley 1986; see also Haiman 1979). Foley, in his overview of the Papuan linguistic situation (Foley 1986) also points out that the diversity of Papuan languages, combined with their close geographical proximity, creates problems for the comparative method. However, recent applications of the comparative method have revealed evidence supporting a modified version of the large Trans New Guinea phylum which was posited in Wurm (1972, 1982).

The Kalam language family comprises Kalam and its western neighbour Kobon, which is spoken by some 4000 people. Gants (Gaj), spoken to the east of Kalam territory, has also been claimed as a member of the family. However, Pawley (pers. comm.) has more recently identified Gants as belonging to the Wanang branch of the South Adelbert Range family. Both the Kalam and South Adelbert Range families belong to the the Trans New Guinea phylum.

There are two major dialects of Kalam, known as **Ti mnm** and **Etp mnm**.[4] The two dialects 'differ substantially in lexicon and morphophonemics, though not in grammatical and semantic categories, syntax or discourse structure' (Pawley 1993:89). Kalam examples in this work come from both dialects.

Compared to the majority of Papuan languages, Kalam is relatively well-described (e.g. see Haiman 1979:895). Andrew Pawley's PhD thesis (1966) is a grammar of Etp mnm dialect. Pawley (1975) is an unpublished summary of aspects of Kalam syntax. Pawley 1987 (*Encoding events in Kalam and English*), Pawley 1993 (*A language which defies description by ordinary means*) and Pawley 1991 (*Saying things in Kalam: reflections on the nature of language*) look at Kalam SVCs, adjunct + verb constructions and discourse

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4 *Ti* and *etp* are the words for 'what' in these two dialects, while *mnm* means 'speech' or 'language'. The terms 'Gobnem' and 'Kaironk', the names of villages on the southern and northern sides respectively of the dialect boundary, have also been used by Europeans to refer to the dialects (Gobnem = Ti mnm, Kaironk = Etp mnm).

principles in terms of speech formulas. I have made use of two other unpublished articles on Kalam syntax, Young 1975 (*Resultative compounds and the verbs of disconnection*) and Sugimoto 1975 (*Notes on a Kalam relative clause construction and some related problems*). Givón 1990 (*Verb serialisation in Tok Pisin and Kalam: a comparative study of temporal packaging*) compares the pause distribution of Kalam SVCs to SVCs in Tok Pisin (New Guinea Pidgin English) and Tairora (another Papuan language).[5]

There is also an extensive dictionary of Kalam by Pawley and the late Ralph Bulmer, which is as yet unpublished (Pawley and Bulmer 2003). In addition to containing information on lexemes and standard expressions, and Kalam taxonomies of plants and animals, individual entries hold information on grammatical morphemes not presented elsewhere.

Davies 1981a is a detailed grammar of Kobon, written as part of the Lingua Descriptive Series. The similarities between Kalam and Kobon syntax, especially with respect to serialisation, have made Davies 1981a a useful reference point. Additional information on Kobon syntax appears in Davies 1981b and Dawson and Dawson 1974. Davies 1981b also contains some Kobon text.

1.3 Methodology and sources

The description presented in this thesis is based primarily on an analysis of written Kalam texts, although I have made limited use of cassette recordings of Kalam speech. I did not have direct access to native speakers during the period of analysis.

I have made use of two main databases. The first consists of examples from the Kalam dictionary (Pawley and Bulmer (2003), henceforth referred to as 'Dictionary' in references). All instances of SVCs, combined with some non-SVC examples (taken from the verb entries) were entered onto WordCruncher, a database program which enabled lists of verb stems to be compiled. The other database comes from the draft of a book on Kalam knowledge of wild animals and hunting methods written by Ian Saem Majnep, a native speaker of Kalam, in conjunction with the late Ralph Bulmer. A bilingual version of this book, entitled *Aps basd skop kmn ak pak ñbelgpal*, or *Kalam hunting traditions* (henceforth KHT), has been published as a series of working papers by the Department of Anthropology, University of Auckland.[6] The KHT database consists of several chapters (5339 clauses) taken from these working papers.[7] These chapters were also analysed using WordCruncher.

The reliance on written materials has had an effect on the direction of analysis. In particular, many of the subtle distinctions which have formed part of the argumentation of existing analyses of serialisation are unavailable to the present study. For example, generative grammar analyses, mostly of West African languages and Atlantic creoles, have relied heavily on different types of 'movement' phenomena — for example, *wh*-questions

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5 Since this work was written a number of other publications on Kalam have appeared, including Pawley (1992, 1994), Pawley and Lane (1998), Pawley et al. (2000).

6 An English-only version of this book, *Animals the ancestors hunted* (a loose translation of *Aps basd skop kmn ak pak ñbelgpal*) (Majnep and Bulmer 2007), constitutes the second part of a trilogy on Kalam natural history, following on from *Birds of my Kalam country* (Majnep and Bulmer 1977). A third book, *Kalam plant lore*, is in preparation.

7 Introduction and Chapter I (from KHT I), Chapters II–III (from KHT II), *Madaw sosm* (Madaw myth) (from KHT IV), and Chapters XI–XII (KHT VI).

and focus transformations — in the identification and classification of SVCs (Baker 1989). I have no evidence that parallel phenomena exist in Kalam, or indeed in any Papuan language. Another approach, Role and Reference Grammar (Foley and Van Valin 1984; Foley and Olson 1985), uses the scope of certain types of adverbial to distinguish between levels of serialisation, and between serialisation and other ways of combining predicates. Unfortunately, the translations of much of my data are too free for such distinctions to be made.

The two databases differed in their nature. For one thing, they were in different dialects. The early drafts of the Kalam dictionary were largely geared towards Etp mnm (see §1.2), and all but one of the examples from that database were in that dialect. The chapters used in the KHT database were in Ti mnm. Existing analyses of Kalam deal almost exclusively with Etp mnm dialect. The dictionary contains short citations (plus the odd excerpt from longer texts), each with a reasonably literal translation. Most of the words used in examples are to be found elsewhere in the dictionary. In contrast, the KHTs derive from long narratives, tape recorded and transcribed by Saem and translated into English by Bulmer with Saem's help. The narratives concern technical fields, the description of animals and hunting techniques, and furthermore are written in a dialect of Kalam which is much less well described in terms of morphology and lexicon than Etp mnm. Bulmer's translation is remarkable in keeping as much as possible of the flavour of the original, while still rendering the Kalam text into idiomatic English. However, the vast differences in syntax and discourse structure between the two languages require the translation to be quite free. These factors have sometimes made analysis difficult.

Each database also differed with respect to which types of serialisation were emphasised. The dictionary contained a wide variety in the combinations of verbs possible, since most verb entries contained at least one or two examples of serialisation. What was more notable about the KHT database was the recurrence of certain patterns of serialisation, largely because of the restriction of its subject matter to a limited domain. Numerical data cited in this thesis comes from the KHT database, unless otherwise stated. The differences between the two databases were of course matters of degree rather than type.

In addition to these two databases, Kalam material is occasionally cited from other sources. These include the remaining chapters of the KHTs, including KHT VII–XII (Majnep and Bulmer n.d.); Majnep and Bulmer (1983) (*Mñeb cn Kalam, Papua New Guinea, tap kaw nb ak tlwk okok tagl tkñbwn: Some food plants gathered in our Kalam forests, Papua New Guinea*); Pawley's (1966) grammar of Kalam, and various of the published and unpublished papers mentioned in §1.2; Young (1975); and Givón (1990). Note that examples cited from the KHTs, and Majnep and Bulmer (1983), are in Ti mnm dialect, while all other Kalam examples are in Etp mnm dialect. References to examples from the KHTs give the chapter and paragraph number; those from the dictionary give the name of the entry.

1.4 Kalam phonology

The majority of Kalam examples in this work have been transcribed according to the phonemicisation devised by Biggs (1963), and modified by Pawley (1966) and Pawley and Bulmer (2003). The following description is taken from Pawley (1993:90ff.), but

incorporates Pawley's subsequent modifications to the orthography, whereby syllabic instances of /y/ and /w/ are writtten as <i> and <u> respectively.

Segmental phonemes

The five vowel phonemes are /a/, /e/, /i/, /o/, and /u/, which are realised as [a], [e], [i], [o] and [u]. Consonant allophones (excluding the epenthetic release vowel) are shown below.

Oral obstruents

	Word-initial	Medial	Final
p	[ɸ]	[β]	[b]~[p]
t	[t]	[ř]	[ř]
c	[č]	[č]	[č]
s	[s]	[s]	[s]
k	[k]	[ɣ]	[k]

Prenasalised obstruents

	Word-initial	Medial	Final
b	[mb]	[mb]	[mb]~[mp]
d	[nd]	[nd]	[nt]
j	[ňǰ]	[ňǰ]	[ňǰ]
g	[ŋg]	[ŋg]	[ŋk]

Sonorants

	Word-initial	Medial	Final
m	[m]	[m]	[m]
n	[n]	[n]	[n]
ñ	[ñ]	[ñ]	[ñ]
ŋ	[ŋ]	[ŋ]	[ŋ]
l	[ɬ]	[ɬ]	[ɬ]
w	[w]	[u]/C_C	[u]/C_
y	[y]	[i]/C_C	[i]/C_

Consonants standing alone or before another consonant in a word are released with a predictable epenthetic ('release') vowel. In words consisting of a single consonant other then a palatal the release vowel is a stressed schwa [ə́]. In most contexts the release vowel is a short high central [ɨ]. In the context C_CVC it may be a very short, unstressed near copy of V or a short, unstressed central or high central vowel ([ə] or [ɨ]). Before and after /y/ the epenthetic vowel is usually [i]. Before and after /w/ it is usually [u].

Word stress falls on the final (phonemic or phonetic) vowel of phonological words.

An alternative orthography, devised by Lyle Scholz of the Summer Institute of Linguistics (SIL), is used in Givón (1990). Examples cited in this orthography are given with their equivalent transcription in the Biggs/Pawley system in this book.[8]

1.5 Kalam morphology and syntax

This section provides some background information on the grammar of Kalam, with the aim of allowing a preliminary identification of Kalam SVCs to be made. Parts of the discussion are adapted from Pawley (1993:90–103).

1.5.1 Verb stems

Kalam is an unusual language in that its verb class is small and closed, containing only some 130 members.[9] Of these, the language relies heavily on a small subclass, termed **generic verbs**, which possess extremely broad meanings. Pawley (1993:87) states that fifteen generic verb stems account for 89% of all verb tokens in text, and 35 verb stems account for 98.6% of verb stem tokens. For an introduction to the most frequent verb stems, see §1.5.2.

Verb stems in Kalam are clearly distinguishable morphologically from other word classes. Only verb stems may be inflected for tense/mood/aspect (TMA), subject person/number and switch reference. They can appear either inflected or bare (uninflected). I leave discussion of bare stems for §1.6.1, which introduces Kalam serialisation.

Kalam verb morphology distinguishes between **independent** and **dependent** verbs. Independent verbs are inflected for tense, mood and aspect (TMA) and person/number of subject. These are all suffixed to the verb. In addition, there is a negative prefix *ma-* (see §4.4.1–4.4.2). Person/number marking codes 1st, 2nd or 3rd person and singular, dual or plural number; 2nd and 3rd person dual are conflated. The following TMA markings are distinguished:

Tense/aspect: recent past (glossed REC:PAST), remote past (PAST), past habitual (PAST:HAB), present progressive (PRES:PROG), perfect (PERF), future (FUT).

Illocutionary force: hortative (HORT).

Tense/irrealis mood: optative (OPT) and past contrary-to-fact (PAST:CTF).

The forms of these suffixes, which differ in some cases between dialects, are given in Appendix A. Individual entries in the Kalam dictionary contain descriptions of their functions. Note that there is only one TMA suffix per independent verb. The form and position of person/number markers varies with different TMA markers.

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8 For the record, the major points in which the SIL differs from that of Biggs and Pawley seem to be as follows:
the epenthetic vowel is transcribed <i> in the SIL system;
the high front vowel, written /i/ by Biggs and Pawley, is written <iy> in the SIL system;
prenasalised obstruents are transcribed as nasal + obstruent clusters except word-initially;
SIL <ny> = Biggs/Pawley <ñ>;
SIL <ch> = Biggs/Pawley <c>.

9 Kobon is similar in this respect.

Dependent verb morphology is used in connection with the clause-chaining system of Kalam. It is discussed in §1.5.5.

Verbs can be converted into nouns or adjectives by suffixing *-ep*, or its morphologically conditioned variant *-eb*, (both glossed here NOM/ADJ) to the bare stem.

1.2 **ag**-ep
say-NOM/ADJ
Having to do with speaking (adj)/word (n). (Dictionary AG- entry)

1.3 b **nŋ**-ep
man perceive-NOM/ADJ
A knowledgeable/clever man. (Dictionary NŊ- entry)

1.5.2 Some helpful Kalam verbs you should know

This section introduces a few of the most frequently encountered verb stems of Kalam. Some familiarisation with these stems, which comprise the main characters in the story of the Kalam serial verb construction, will aid the reader in following the analysis in Chapters 3 to 7. A full list of the verb stems of Kalam appears in Appendix B. Tables 4.1–4.6 in §4.3.2 show the frequency of occurrence of the sixteen most common verb stems in SVCs, in the sample used for this book.

Most of these verbs are notable for their extremely wide range of senses, and for the fact that they combine with many adjuncts and complements to form conventional verbal phrases, equivalent in many cases to single verbs in English. Any definition which attempts to cover all of the senses of one of these generic verbs will necessarily be rather abstract.

***g*- 'activity by some being or force: do, make, etc.'**

The most frequent verb stem overall, and the second most frequent in the SVCs in my sample (212/876 ≈ 25%).[10] A verb with an extremely wide range of senses, and capable of standing for any other verb stem, on a par with English 'do'. *g*- very often combines with other parts of speech to create new verbal expressions, as in example 1.5.

1.4 Etp **g**-sp-an?
what do-PRES:PROG-2sg
What are you doing? (Dictionary G- entry)

1.5 Ñapan klmeŋmeŋ **g**-p-an!
child one:after:another do-PERF-2sg
You have your children one after another! (Dictionary KLMEŊMEŊ entry)

***am*- 'motion away: go'** (with suppletive form *amn*- in certain environments)

***ap*- 'motion toward: come'** (suppletive form *o*-, *ow*-)

The two most important motion verb stems. *am*- is the most frequently-occurring verb stem in SVCs (it appears at least once in 218/876, or nearly 25%, of all clauses containing

10 In this section, 'x/876 ≈ y%' means that a given verb stem occurs *x* times in SVCs in the two databases used (see §1.3), out of a total of 876 SVCs.

SVCs); *ap-* is the third most common (194/876, or 22%). These two stems play a crucial role in discourse and in structuring SVCs (see Chapter 3). As with other, more specific, motion verbs, they contrast with the verb stem *md-* 'stay':

1.6 Mñmon Lae nb **am md**-i **o**-p-in.
land Lae place go stay-SS:PRIOR come-PERF-1sg
I've just been to Lae/I've just come from Lae (having gone and stayed at Lae, I have come (back here)). (Pawley 1987:347)

***tan-* 'ascend'**

***yap-* 'descend'** (suppletive form *yow-*)

Less frequently-used motion stems (ranked respectively 16th and 12th in frequency of occurrence in SVCs). They show some of the same patterns as *am-* and *ap-*, but most often follow *ap-* in SVCs to add a vertical direction component.

***tag-* 'go on an excursion, walk about, return'**

13th most frequent overall; 14th in SVCs. Differs from other motion stems in lacking a specific orientation to or away from the speaker's point of reference.

***md-* 'exist, stay, live, remain, continue, etc.'**

Also used as continuative marker in SVCs, usually SVC-finally (§5.2.3). See also *am-* and *ap-* above; tenth in SVCs (74/876 ≈ 9%).

1.7 Ñ-nad **md**-p-ø?
son-your exist-PERF-3sg
Do you have a son? (Dictionary MD- entry)

***d-* 'restrict, constrain, bring under control: get, obtain, hold, handle, gain or take possession, catch, arrest, etc.'**

Often precedes *am-* and *ap-* in SVCs; SVC-finally, normally indicates completive aspect (§5.2.1). Ranked fourth in terms of frequency in SVCs (148/876 ≈ 18%).

1.8 Tap si **d**-ya-k.
thing illegally get-3pl-PAST
They stole things (lit. obtained things illegally). (Dictionary D- entry)

***l-* (Ti mnm), *ay-* (Etp mnm) 'become or make stable: put, become, grow into, etc.'**

Also used as a completive marker in SVCs (§5.2.2). Ranked ninth in SVCs (80/876 ≈ 10%).

1.9 B yakt tek **ay**-p-ø.
man bird like become-PERF-3sg
The man turned into a bird. (Dictionary AY- entry)

1.10 … mlep **l**-elgp-al…
dry transform-PAST:HAB-3pl
… they used to smoke-dry (the wallabies) … (I #27)

***ñ-* 'bring an object into contact with another: give, transfer, connect, apply etc.'**

One of only two ditransitive verbs in Kalam, although it occurs only rarely with three overt arguments. Also classed as a dative marker in SVCs. Nearly always SVC-final. Thirteenth in SVCs (54/876 ≈ 6%).

1.11 An np **ñ**-a-k?
who you(Obj) give-3sg-PAST
Who gave (it to) you? (Dictionary Ñ- entry)

***ag-* 'make a sound: say, utter'**

Applies to the production of nearly any sound. In the KHTs, most serialisation involves *ag nŋ-* 'say perceive = ask' or *ag ñ-* 'say give = tell'. Ranked fifteenth in SVCs (47/876 ≈ 5%).

1.12 'Yesek **ag**-u-p' **ag**-ngab-al.
deceitfully say-3sg-PERF say-FUT-3pl
'He is lying', they will say. (Intro #13)

1.13 Balus **ag**-p-ø.
aeroplane say-PERF-3sg
The plane roared/sounded. (Dictionary AG- entry)

1.14 Bin **ag** **nŋ**-ab-in, kuk **g**-ab-ø,
woman say perceive-REC:PAST-1sg calling:out do-REC:PAST-3sg
I 'asked' (i.e. tried to abduct) the woman, she cried out,

ptk **o**-p-in.
be:afraid come-PERF-1sg
and I was frightened and came here. (Dictionary N- entry)

***nŋ-* 'perceive: see, hear, smell, sense, think, know, learn, etc.'**

Sixth in SVCs (97/876 ~12%).

1.15 Gos koŋay **nŋ**-b-in.
thought many perceive-PERF-1sg
I am worried. (Dictionary N- entry)

1.16 Yad kuj **nŋ**-i, cp **ñag**-ng **g**-a-yn.
I magic perceive-SS:PRIOR person shoot-SS:PROSP do-FUT-1sg
Having learnt magic, I will kill people. (Dictionary NŊ- entry)

***pak-* (Ti mnm), *pk-* (Etp mnm) 'strike, hit'**

***ñag-* 'shoot'**

***su-* 'bite'**

In the KHTs these verbs usually refer to different ways of performing violent acts on animals (or sometimes humans), and typically imply that the target was killed. *su-* refers to the killing method used by dogs.

1.17 Kayn nb ak kmn ak koŋay yb **sw**-olgp-ø aŋ …
dog such this game:mammal this many really bite-PAST:HAB-3sg well
Well, this dog killed (by biting) a good many game mammals … (I #171)

It should be noted that 'game mammal' is a term coined by Bulmer to translate the Kalam word *kmn*, for which there is no English equivalent. *kmn*, which corresponds to the Tok Pisin term *kapul*, includes all large marsupials and rodents, and water-rats, but excludes frogs and small rodents (*as*), rats and mice found near homesteads (*kopyak*), birds and bats (*yakt*) and dogs and pigs (Dictionary KMN entry).

***tk-* (1) 'cause or cross a hiatus, pass from one state or side to another: cross (a divide), sever, separate, be separated, interrupt, cut off, transform, suddenly become (night, day, clear), etc.'**

(2) 'make a mark or line, draw, tattoo, write'

(3) 'have a child (subject female or male), be born'

This is the fifth most frequently occurring verb in SVCs.

1.18 … tap msagay ak **tk**-l …
food plant:sp this sever-SS:PRIOR
… having broken off *msagay* foliage … (Intro #39)

1.19 Nonm nop ñapan **tk**-i, **ask** **yok**-t-k.
its:mother its:father child give:birth-SS:PRIOR avoid remove-2/3dl-PAST
Having had a child, the father and mother abandoned it. (Dictionary ASK-entry)

***ñb-/ñ-* 'consume: eat, drink, chew, suck, smoke (cigarettes, etc.), nip'**

Seventh most frequently serialised verb in the KHTs (in part because when Kalam discuss hunting, they often drop cooking and eating into the conversation).

1.20 Koyb b cp **ñŋ**-ep.
witch man corpse eat-NOM/ADJ
Witches are corpse-eaters. (Dictionary KOYB entry)

1.5.3 Non-verb morphology

In contrast to verbs, most non-verb classes have simple morphology. A small set of kinship nouns have bi-morphemic possessive forms, but only the system of locative nominals is of comparable morphological complexity to the class of verbs. These locative

words are formed from one or more locative prefixes (e.g. *b-* (Etp mnm dialect), *al-~o-* (Ti mnm) 'general locative', *sŋ-* 'quite near') combined with bases indicating orientation (in Etp mnm dialect, these include *-yoŋ* 'uphill', *-yaŋ* 'downhill', *-neŋ* 'upriver' *-im* 'down-river', *-doŋ* 'across-valley'), to give, for example, *sŋbyaŋ* 'just there, down below'.[11] Note that there is no set of adpositions in Kalam.[12]

1.5.4 Clausal syntax

The clause is centred around an inflected verb stem,[13] with optional nominals (rarely more than two) for subject, object, locative and other relations (Pawley 1993:94ff.). Kalam is an accusative language. The most usual word order is SOV, although some variation is possible; pragmatic considerations can aid in distinguishing subject and object relations. For example, 1.21 is likely to be interpreted as 'the man cut the woman', despite word order.[14]

1.21 Bin b **tb**-p-ø.
woman man cut-PERF-3sg
The woman cut the man/the man cut the woman. (Pawley 1975:1)

Subjects are differentiated from objects on the following grounds:

1. Subjects, but not objects, are cross-referenced on the verb.
2. The switch-reference system tracks subject identity or non-identity between clauses (see §1.5.5).
3. There are different forms of the personal pronouns for subject and object, which may occur independently or postposed to full noun phrases.

Note that the ability of subjects to control agreement follows an animacy hierarchy; human subjects always control agreement, important animals (such as dogs, pigs and certain game mammals) usually do so, unimportant animals less often, and so on.

1.22 Kaj omŋal ak maj **ñb**-sp-it wog nab.
pig two this sweet:potato eat-PRES:PROG-2/3dl garden middle
Two pigs are eating sweet potato in the middle of the garden. (Pawley 1975:2)

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11 I have not placed morpheme breaks within such locative nominals in Kalam examples, since their internal structure is irrelevant here.

12 There is a small class of nouns denoting spatial relations which follow the noun or nominal construction they modify, e.g. *mgan* 'inside', *ms* 'outside', *moluk* 'underneath'. Although it is possible to class *nb* (in one of its senses) as a general purpose postposition (cf. Pawley 1991:438; Davies 1981a:126 for Kobon *nöbö*), I have glossed it here as a noun meaning 'place'.

13 Non-verbal sentence types are also possible, as exemplified by:

a.Bani kotp ayn bokdoŋ, Kck kotp wsŋ-neŋ.
my:brother:in:law house below quite:a:bit:across:valley Kck house higher-up:river
My brother-in-law's house is the one lower down (on the ridge), Kck's is the nearer one up-valley. (Dictionary AYN entry)

b. Toy pas **ow**-ep nñ.
tomorrow letter come-NOM time
Tomorrow is mail (letter-coming) day. (Dictionary AP- entry)

14 'In Kalam experience, it is only men who carry axes, and chopping people is something that men occasionally do when they are enraged or in vendettas, but is rarely done by women' (Pawley 1975:2).

1.23 Kabkol omŋal ñn-yp **ay**-p-ø.
fly two arm-my settle-PERF-3sg
Two flies have (lit. has) settled on my arm. (Pawley 1975:2)

Noun phrases (NPs) consist of nouns optionally followed by adjectives, quantifiers and determiners, in that order; *ak* 'this, that, these, those' and *ogok* 'these, those'/PLURAL are the most commonly used determiners in Ti mnm dialect. Possessor nouns precede possessed nouns. Nouns or NPs can be conjoined either by juxtaposition or with the use of conjunctions such as *yp* 'with, and' or *akaŋ* 'or'.

Locatives are a subclass of NP, identifiable on the basis of distributional equivalence with, and often co-occurrence with, the locative words described in 1.5.3.

1.24 Blm kd akyaŋ
Blm side downwards
Down on the far side of Blm. (Pawley 1966:118)

Locatives, unlike subjects and objects, may either precede the verb, as in 1.25, or follow it, as in 1.26.

1.25 Mñi Sbay **am**-jp-in.
now Sbay go-PRES:PROG-1sg
Now I am going to Simbay. (Pawley 1966:147)

1.26 Koyb nup **nŋ**-b-ø bneŋ.
witch him see-PERF-3sg upvalley
He saw a witch upvalley there. (Pawley 1966:147)

Phrases marked with locative words are also used to mark temporal relations, and in counting.[15]

While SOV is the usual word order, constructions encoding involuntary body processes and internal states normally use OSV, with experiencer marked as object.

1.27 Yp ytuk **g**-p-ø.
I(Obj) boredom do-PERF-3sg
I'm bored (lit. boredom acts on me). (Dictionary YTUK entry)

1.28 Yp sŋl **ay**-p-ø.
I(Obj) boil form-PERF-3sg
I have a boil (lit. a boil forms on me). (Pawley 1993:95)

The nominals coding cause in such constructions (*ytuk* 'boredom', *sŋl* 'boil') can be considered as the subject of the clause, since such nominals are tracked by the switch reference system.

Given its reliance on such a small number of verb stems (130 or so), it is logical to ask how Kalam codes different types of actions and processes, those which more familiar languages code in single words. Two main resources exist for extending the types of events which can be coded. One is serialisation. The other involves what have been termed 'verb adjuncts' in studies of Papuan languages (Foley 1986:117). Preceding nominal or adverbial complements combine with generic verbs (Pawley 1993:96); the complements serve to restrict the verb stem's meaning (Foley 1986:117). Examples of these

15 For details on the counting systems of Kalam, see §4.3.4.

combinations, using the generic verb *nŋ-* 'perceive', are given below (SUBJ refers to 'subject nominal', OBJ to 'object nominal').

1.29 OBJ wdn **nŋ-** wsn **nŋ-**
eye perceive sleeping perceive
'see something' 'dream'

gos **nŋ-** OBJ gos tep **nŋ-**
thought perceive thought good perceive
'think, know' 'approve, like, admire something'

OBJ gos tmey **nŋ-**
thought bad perceive
'dislike, hate something' Pawley (1993:96ff.)

1.30 Yad gos **nŋ**-sp-in.
I thought **perceive**-PRES:PROG-1sg
I am thinking. (Dictionary NŊ- entry)

It should be noted that the 'nominal or adverbial complements' in the examples above are by no means syntactically homogeneous. For example, *wsn* is virtually restricted to immediately preverbal position, and may co-occur with only a handful of verbs: *ap-* 'come', *kn-* 'sleep' and *nŋ-*. Many of the items which have been identified as adjuncts are similarly restricted.[16] On the other hand, *wdn* and *gos* are both recognisable as nouns, can occur freely with following adjectives and determiners, and may be arguments to other verbs. Syntactically, *wdn* and *gos* differ from typical arguments in this context by allowing other nominals to appear as objects, something which goes against the normal pattern of Kalam clause structure. However, not all of the items which have been identified as adjuncts in Kalam necessarily co-occur with object nominals (cf. also *gos nŋ-* in 1.30 above). Thus it may be difficult to distinguish between adjuncts to verbs and arguments of those verbs, a problem which hasn't always been addressed consistently in the literature on Kalam.

Clauses can be embedded as arguments to verbs in a number of different ways, two of which will be illustrated here. *ag-* 'say' and *nŋ* 'perceive, think, know, see, etc.' subcategorise for sentential (i.e. potentially multi-clausal) complements.

1.31 … ognap pen '**Ñag**-ng **g**-engab-an?' **ag**-ngab-al.
sometimes but shoot-SS:PROSP do-FUT-2sg say-FUT-3pl
… but sometimes (the witches) will say, 'Are you going to shoot (our animals)?'. (V #93)

Note that direct quotes are extremely common in Kalam narrative, often taking place when the actor is unlikely to be literally talking. For example, lower animals are often the subject of *ag-*, as in the second line of 1.32.

16 Some combination of adjuncts + generic verbs share the distribution of single verb stems, for example in SVCs. For this reason, and others to be seen later, I make a distinction between '(verb) stems' (definable on purely morphological grounds) and 'verbs', which may be larger units, based around the verb stem.

1.32 … mey yokop tap yokop tap acb acb ogok **ñŋ**-u-b
this:one just food nothing food little little these eat-3sg-PERF
… it (the wallaby) just eats small plants.

‘**Ñb**-eb-in’, **ag**-u-p …
eat-PRES:PROG-1sg say-3sg-PERF
‘I am eating’, it says … (I #9-10)

In addition, quotes can be embedded inside other quotes:

1.33 B kayn-sek ak **a**-p-al, ‘mñi,
man dog-with this say-PERF-3pl now
men out with (their) dogs say, ‘Now,

‘sgaw ak **ap-tan** **ap-yap** **g**-eb-ø tam ak’
wallaby this come-ascend come-descend do-PRES:PROG-3sg junction this
‘A wallaby travels back and forth by this track’,

ag-ob-n’ **a**-p-al.
say-PRES:PROG-1pl say-PERF-3pl
we are saying’, they say (= they find a track they think a wallaby will take …).
(I #14)

Arguments can also take the form of relative-clause-like structures.

1.34 Yad [b tap si **d**-p-ø] **nŋ**-n-k.
I man stuff illegally get-PERF-3sg perceive-1sg-PAST
I saw [the man who stole the stuff]. (Pawley 1975:7)

Such embedded clause arguments are often marked with the postposed determiners *ak* ‘this, these’ and *ogok* ‘these’. These two determiners are also associated with nouns in simple NPs.

1.35 [B kuj **ng**-u-p ak] ma-**ñŋ**-ngab-ø …
man magic know-3sg-PERF this NEG-eat-FUT-3sg
[A man who knows magic] will not eat (the *wgi* bandicoot) … (X #55)

1.5.5 Switch reference

In common with most of the Trans New Guinea family, Kalam has a **clause-chaining** system which contrasts dependent (also known as medial) verbs with independent (‘final’) verbs (see §1.5.1) (Foley 1986:175ff.). Dependent verbs in Kalam mark subject identity and non-identity with the next inflected verb; clause-chaining systems for which this is true are called **switch-reference** systems. Kalam dependent verbs also encode tense relative to the next inflected verb. A clause containing an independent verb is capable of standing alone as an independent sentence. In contrast, clauses containing dependent verbs ultimately rely on independent clauses for specification of TMA and person/number.

The morphemes used in the Kalam switch-reference system are as follows:

Same subject

Prior:	*-l* (Ti mnm), *-i* (Etp mnm) (**SS:PRIOR**)
Simultaneous:	*-elg~olg* (Ti mnm), *-ig* (Etp mnm) (**SS:SIM**)
Prospective:	*-ng* (**SS:PROSP**)

Different subject

Prior:	*-e-* (*-o-* in certain environments) (**DS:PRIOR**)
Simultaneous:	*-nŋ* (**DS:SIM**)

Verb stems suffixed with SS morphemes normally take no further verbal suffixes. However, it is possible for SS:PRIOR morphemes to combine with OPT inflections and person/number marking. DS morphemes co-occur with the person/number marking of the subject of the clause on which they are marked. In addition, they often co-occur with absolute tense markers.

The functions of these morphemes are illustrated below. Note that *X-SS:PRIOR* or *X-DS:PRIOR* can be conveniently translated into English as 'having X-ed'; *X-SS:SIM* or *X-DS:SIM* as 'while X-ing'. For verbs suffixed with the SS:PROSP marker, the event represented by the verb occurs subsequent to that coded by the next clause. A purpose relationship between the two clauses (as implied by the phrase 'in order to' used in the translation of 1.38) is often, but not necessarily, involved (Pawley 1975:9).

Same subject:

1.36 **SS:PRIOR**

Np **nŋ**-i, **a**-b-ay.
2sg:OBJ perceive-SS:PRIOR go-PERF-3pl
Having seen you they have gone/they went after seeing you. (Pawley 1975:9)

1.37 **SS:SIM**

Ñn **d**-ig, **pk**-sp-ay.
hand hold-SS:SIM strike-PRES:PROG-3pl
While holding (it) they are striking (it). (Pawley 1975:9)

1.38 **SS:PROSP**

Np **nŋ**-ng, **o**-sw-ay.
2sg:OBJ perceive come-PRES:PROG-3pl
They are coming in order to see you. (Pawley 1975:9)

Different subject:

1.39 **DS:PRIOR**

(i) Kun **g**-e-y, si **a**-s<a>p.[17]
thus do-DS:PRIOR-2sg weeping say-PRES:PROG-3sg
You having done thus, he is weeping/he is weeping because of what you did.
(Pawley 1966:158)

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17 Note that <*a*> **3sg** is infixed.

(ii) An **ag**-e-k, **g**-a-k?
who say-DS:PRIOR-PAST do-3sg-PAST
Who$_i$ having said, he$_j$ did (it)/who told him to do it? (Pawley 1993:94)

1.40 **DS:SIM**

Yad **kn**-n-k-nŋ, nuk wog **g**-ab-ø.
1sg sleep-1sg-PAST-DS:SIM 2sg garden do-REC:PAST-3sg
While I was asleep, he has been working. (Pawley 1966:159)

Long chains of dependent clauses followed by an independent clause occur frequently in Kalam discourse. The characterisation given above of the switch-reference system is accurate for most such chains. However, there are instances where other factors are involved. One issue common to many switch-reference systems is that of 'sloppy identity', where some overlap in reference between the subjects of subsequent clauses may be sufficient for the choice of SS morphology. Pawley (1975:11–14) gives the following examples:

1.41 Yad tap **ñb**-i, **am**-j-t.
I food eat-SS:PRIOR go-OPT-1dl
When I've eaten, we should go.

versus:

1.42 *Yad tap **ñb**-e-n, **am**-j-t.
I food eat-DS:PRIOR-1sg go-OPT-1dl (Pawley 1975:11)

In the examples above, same subject marking is preferred over different subject because the 1sg subject referent of *ñb-* 'eat' is included in the 2sg subject referent of *am-*. A different phenomenon is shown by the following pair of paraphrases:

1.43 Aññak **d**-i, tmuk ksen **ag**-p-ø.
lightning take-SS:PRIOR thunder after sound-PERF-3sg
Lightning flashes, then thunder claps (lit. lightning having taken, later thunder sounds). (Pawley 1975:13)

1.44 Aññak **d**-e-k, tmuk ksen **ag**-p-ø.
lightning take-DS:PRIOR-(3sg)PAST thunder after sound-PERF-3sg
Lightning flashes, then thunder claps. (Pawley 1975:13)

According to Pawley (1975:13), the choice of SS marking in 1.43 stresses the close association of the two events.

1.6 Serialisation in Kalam

Now we are ready to start on our investigation of serialisation. First I give the basic definition of the phenomenon for Kalam (§1.6.1). Following this I describe two issues necessary for an understanding of Kalam serialisation, but which don't seem to fit in anywhere else. One is the iteration or repetition of verb stems (§1.6.2); the other is a recurrent subtype of serialisation called '*g*-support' (§1.6.3).

1.6.1 Definition

The contrast between bare (uninflected) and inflected verb stems, mentioned in §1.5.1, provides part of the motivation for identifying Kalam as a serialising language. **Serial verb constructions** (**SVCs**) in Kalam can be defined as follows (Pawley 1993:95).[18]

1.45 A serial verb construction in Kalam consists of a sequence of bare verb stems followed by an inflected verb stem, with or without intervening nominals and modifiers.

For example, in the SVC

1.46 B ak **am** mon **puk** **d** **ap** **a**y-a-k.
man that go wood break:up get come put-3sg-PAST
The man fetched some firewood. (Pawley 1993:95)

the verb stems *am* 'go', *puk*[19] 'break up', *d* 'get' and *ap* 'come' are uninflected, while the final stem *ay-* 'put' has person and TMA suffixes. The object argument *mon* 'wood' follows the first stem *am-* 'go'. Typically all verb stems share a single subject, coded (explicitly, as above, or implicitly through the switch reference system) on the inflected verb, and marked by at most one overt nominal. Some of the complications associated with object sharing will be discussed in Chapter 4. However, normally all transitive verbs share an object (as in above). Note that entire SVCs may be converted to nominals or adjectives with the *-ep* suffix (see §1.5.1).

1.47 B **pak-nŋ**-ep ak nep **nŋ**-l …
man hit-perceive this precisely perceive-SS:PRIOR
Experienced hunters (lit. hit-knowing men) having seen (the *ymduŋ* 'copper ringtail') … (II #15)

We will see in Chapters 3 and 4 that the ability of non-verb material — arguments and modifiers — to intervene between the stems of SVCs is closely associated with a small number of stems. One complication such intervention adds to the definition above is that arguments can sometimes include embedded clauses, as in the following example (square brackets mark off the embedded clause):

1.48 Nad **am** [b koyb pk-p-ø] nup **ñag**-i …
you(2sgSubj) go man witch hit-PERF-3sg him(Obj) shoot-SS:PRIOR
You go and shoot [the witch who killed (my father)], (and then …)
(Dictionary CP(1) entry)

In principle this poses a methodological problem. Bare stems (such as *am-* in 1.48 above) may not belong with the immediately following inflected stem, if the latter is part of an embedded clause. In practice, though, there are few problems in assigning stems to the correct inflected verb; a strictly limited class of verb stem licenses following embedded clauses, and subject reference and word order considerations resolve potential confusion.

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18 Davies (1981a:203) gives a similar definition of SVC for the closely related language Kobon. Givón (1990) uses a wider semantic definition of Kalam SVCs, which subsumes the morphosyntactic one used in this book.

19 *puk* is a phonologically reduced form of *pk wk-* 'hit break'.

This complication aside, the identification of serialisation in Kalam according to the above definition is quite straightforward. It should be stressed that the definition given above is purely language-internal. A cross-linguistic definition which would specify only those entities which have been identified as SVCs, while excluding those which are **not** considered examples of serialisation, does not exist (see Chapter 2). However, prototypical Kalam SVCs share enough features with what have been identified as SVCs in other languages to make the term 'serialisation' applicable. Exactly how Kalam SVCs resemble and differ from those of other serialising languages is the subject of the next chapter.

1.6.2 Iteration

Iteration in Kalam SVCs can be defined as the repetition of a verb stem (or, in certain cases, a small number of verb stems), with repeated tokens of a verb immediately adjacent. The basic purpose of iteration is to express the repetition or prolongation of the action coded by the verb (cf. Davies 1981a:172 for Kobon).

1.49 ... b ak b Bogis ak b nused yes ney ak,
man this man Bogis this man his:grandfather distant he this
… an ancestor of Bogis

am am am am am am ng-a-k …
go go go go go go see-3sg-PAST
went a long, long way (from his home) and saw … (I #114)

Iteration in Kalam SVCs ties in with ways of indicating prolongation in Kalam discourse generally.[20] Whole clauses can be repeated, as in 1.50, or just the final verb (1.51).[21]

1.50 … **yn** dad **am**-l, **yn** dad **am**-l mey,
be:burnt carrying go-SS:PRIOR be:burnt carrying go-SS:PRIOR this:one
… (the dried vegetation) burnt on and on,

dad **am am am**, **yn** dad **am**-l,
carrying go go go burn carrying go-SS:PRIOR
it burnt right on down the valley

mñab Matol Magok ogim **am-jak**-osp-ø.
land Matol Magok far:downvalley go-arise-REC:PAST-3sg
to Matol and Magok (lit … and arrived at Matol and Magok:
am jak- 'arrive'). (I #89)

1.51 … kayn ak wtsek nep **yuk** **ap-tan** **ap-yap**
dog this together precisely chase come-ascend come-descend

g-e-l **g**-e-l **g**-e-l …
do-DS:PRIOR-3pl do-DS:PRIOR-3pl do-DS:PRIOR-3pl
… the dogs keep on chasing up and down right after it … (I #11)

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20 Repetition of non-verbal elements also marks intensity in expressions such as *bteyt bteyt* 'a very long time ago' (*bteyt* 'formerly, in the past') and *tap kub tap kub g-* 'grow really big' (*tap kub g-* 'thing big do = grow big, grow up').

21 Note that the repetition of *gel* in 1.51 is a trivial exception to the definition of DS marking as indicating that the subject of the next clause differs from the subject of the DS-marked one.

The types of verb which are most commonly iterated include motion verb stems (and compound forms based on these), *g-* 'do', and certain grammatical stems (which will be discussed in Chapter 5).[22]

Motion verbs pattern differently from other stems with respect to iteration. Firstly, note that *ap-* 'come' can be serialised to *tan-* 'ascend' or *yap-* 'descend' to create more specific motion verbs: *ap tan-* 'come upwards', *ap yap-* 'come downwards'.[23] Iteration provides syntactic evidence that these combinations act as single units. *ap yap-*, for example, is iterated as *ap yap ap yap-* rather than **ap yap yap-* or **ap ap yap-*. Also, both motion stems and these larger units combine with *d-* 'get', creating compounds which allow both motion and the presence of syntactic objects to be coded. *d am-*, *d ap-* and *d ap tan-* are similarly iterated as units: *d am dam-* rather than **d am am-* or **d d am-*. These compounds are discussed further in §3.3.1.

The instances of iterated verb stems discussed in the remainder of this work (aside from *md-* 'stay' in §4.3.5) have roughly the same combinatorial possibilities in SVCs as the corresponding uniterated verbs. However, *g-* 'do' is the only verb stem which consistently allows iteration SVC-finally.

Note that some instances of iteration may be separable from more clearcut instances of serialisation on the basis of pause distribution. It seems, for example, that instances of uninflected *md-* 'stay', whether iterated or not, differ considerably from typical verbs in SVCs, both in terms of allowing pauses to follow them and with respect to subject reference (see §4.3.5). However, the fact that the analysis in this book has been based primarily on written texts means that I have little evidence on the question of whether or not particular sequences of bare stems should be counted as serialisation.

1.6.3 *g*-support

This section describes a prominent subtype of SVC in Kalam which has as two of its constituents the verb stem *g-* 'do' and the modifier *tep* 'good, well'. The structure of '*g*-support' is as follows:

(modifier) stem *tep* (modifier of *tep*) *g-*

The following is an example of this type of SVC:

1.52 Bin nonm nuk, datag tep yb **g**-p-ø.
woman its:mother her take:care:of good really do-PERF-3sg
That mother, she really takes good care of her child (*datag tep g-*'look after well', where *datag* is from *dad* 'carrying' + *tag-* 'walk about').
(Dictionary DA- entry)

I have termed this construction type '*g*-support' because the role of *g-* is not to add semantic information but rather to (a) allow *tep* to modify other verb stems, (b) to carry the TMA inflections of the SVC and (c) to carry the negative prefix.

Aside from its use as an interjection or independent element in discourse (e.g. *tep, mñi agdpin* 'good, now I:have:finished:talking'), *tep* can also modify noun phrases.

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22 Especially §5.2.3 and §5.2.4. See also §4.4.4.

23 Compare also *ap tan ap yap g-* 'come upwards and downwards, go back and forth'.

1.53 kuy tep **ap**-e-k …
smell good come-DS:PRIOR-(3sg)PAST
a good smell having come … (III #131)

Without a preceding verb stem, *tep g-* is an impersonal verb meaning 'be pleasant, please', which takes the experiencer as its object.

1.54 … gub yp tap mañmod tap ogok **ag**-a-k-nŋ,
cicada with thing lizard:sp thing these speak-3sg-PAST-DS:SIM
… when the cicadas and *mañmod* lizards make their noises,

cnop tep **g**-u-p …
us(Obj) good do-3sg-PERF
we are pleased … (lit. it does good to us) (Intro #68)

In the construction *gos tep nŋ-* 'thought good perceive = be pleased', *tep* seems to be functioning as an adjective (cf. *gos tmel nŋ-* 'thought bad perceive = 1. hate 2. be worried'). In all other cases, if *tep* modifies a verb, *g-* must also be present.

Since *g-* always appears clause-finally in this construction, it is the stem to which verbal suffixes are attached. Significantly, the negative prefix *ma-* also attaches to *g-*, as in 1.55, which goes against the normal pattern for SVCs (see §4.4.2). Despite the syntactic position of *ma-*, negation applies to the (content) verb preceding *tep*.

1.55 Kotwal nb ak yad **nŋ** tep ma-**g**-p-in …
scrub:wallaby so this I perceive good NEG-do-PERF-1sg
I don't know the *kotwal* well … (i.e. I am not familiar with the *kotwal*)
(I #149)

Normally only a single verb stem (or a iterated stem) precedes *g-*, except that motion stems may precede the construction as a whole (see §3.3). The most common example of *g*-support in the KHTs (12/19 ≈ 60%) involves *nŋ-* 'perceive, think, see'. Some other stems which can appear in this construction are also illustrated below. Note that *tep* can be followed by another modifier (as in 1.52 above), and that the verb stem being modified by *tep* may be preceded by adjuncts, as in 1.59.

1.56 Gos **nŋ** tep **g**-i, kmap **ag**-ng **g**-ab-ø.
thought perceive well do-SS:PRIOR song sing-SS:PROSP do-REC:PAST-3sg
When he has thought about it carefully, he will sing the song.
(Dictionary NŊ- entry)

1.57 Nd penpen **ñag**-igp-un, mñi **md** tep **g**-p-un.
formerly reciprocally shoot-PAST:HAB-1pl now live good do-PERF-1pl
We used to fight each other, (but) now we live in peace (*md tep g-* 'live in peace'). (Dictionary MD- entry)

1.58 Wlmn ak **tk** tep **g**-l …
husk:fibre this separate good do-SS:PRIOR
having cleaned off the husk-fibre … (*tk tep g-* 'separate well, clean off')
(III #167)

1.59 ‘Kuj **g** tep **g**-sp-in’, **ag**-a-k.
magic do good do-PRES:PROG-1sg say-3sg-PAST
‘I am making good magic’, he said (cf. *kuj g-* ‘make magic’).
(Dictionary KUJ entry)

Hence *g*-support constructions seem to be distinct from standard SVCs. *g-* is a grammatically obligatory item which attracts verb inflections, but doesn’t add any lexical meaning to the construction.[24]

Tep, mñi agdpin.[25]

[24] Given that the presence of *g-* is required to allow *tep* to modify a verb, it is reasonable to ask whether other modifiers also need to be ‘supported’ in this way. *ypd* ‘truthful’ (see discussion in Chapter 5, fn.6) and *kus* ‘around’ constitute parallel examples. Certain other modifiers can either precede all of the stems of an SVC or appear before *g-* at the end of SVCs (see §4.3.6).

[25] ‘Well, now I have finished talking (on this topic)’ (see example 1.1). For a translation of the comment at the end of Chapters 5 and 7, see example 5.24.

2 *Serial verb constructions*

2.1 Introduction

The aim of this chapter is to investigate the relations between Kalam serialisation, as defined in Chapter 1, and the diverse array of entities which have been identified in other languages as serial verb constructions (SVCs), so that the issues involved in Kalam serialisation can be seen in the light of more general principles.[1] Any attempt to provide a cross-linguistic characterisation of serialisation, however, immediately comes up against certain problems. Linguists have applied the term 'serial verb construction' to entities in a wide variety of languages, using a diverse set of analytic frameworks. Different analyses draw the boundaries between SVCs and other types of construction at different places. Hence it is by no means certain that all writers who use the term 'serialisation' are talking about the same phenomenon (Sebba 1987:1).

Despite these problems, enough of the entities that have been identified as SVCs in the literature show enough features in common to make the term 'serialisation' useful. Further, there are a number of common threads apparent in recent work on serialisation, one of the most significant being the interaction between serialisation and the definition of the clause, including the notion of serialisation as part of a continuum between multiple clauses and the prototypical single clause. In this chapter, I attempt to make sense of the somewhat sprawling literature on SVCs by focusing on the status of the clause. After listing some of the references on serialisation, I will sketch the formal characteristics of the Kalam SVC. These characteristics are then compared to those of the SVCs of other languages. I will then discuss some of the semantic characteristics of SVCs, and associated issues such as lexicalisation and grammaticisation.

2.2 Serialisation: some references

The range of languages that have been labelled 'serialising' extends from the Benue-Kwa languages of West Africa to Atlantic creoles, to various South-east Asian languages (including Mandarin Chinese), Papuan languages, varieties of Melanesian Pidgin, and a number of Austronesian languages, specifically those belonging to the Oceanic subgroup.

[1] Note that the literature review in this chapter is essentially unchanged from my 1991 thesis.

Descriptions of serialisation in these languages have followed a wide range of theoretical approaches. Many studies have been made using various generative grammar models. Important early transformational grammar works (based on West African languages) include Stewart (1963), Williamson (1965), Stahlke (1970), Bamgboṣe (1974) and Awobuluyi (1973) (cited in Bamgboṣe 1974). These works all assumed transformational derivation for at least some kinds of SVC. Beginning with Schachter (1974) and Lord (1974), a phrase structure analysis was adopted. The phrase structure analysis was developed, and extended to Atlantic creoles, in Jansen, Koopman and Muysken (1987) (using the Extended Standard Theory), work in the Government and Binding framework including Nylander (1985) and Baker (1989), and the Generalised Phrase Structure Grammar approach of Sebba (1987). A detailed summary of various generative grammar analyses is found in Sebba (1987). Baker (1989) contains further references.

Role and Reference grammar (Foley and Van Valin 1984; Foley and Olson 1985) treats SVCs within the context of clause structure and linkage. Discussions of serialisation which have referred to this framework include Foley (1986), Durie (n.d.) and, to a lesser extent, Durie (1988) and Crowley (1987).

Givón (1990) takes another approach to the question of SVCs, using the results of a psycholinguistic experiment to compare the distribution of pauses in SVCs with those of other constructions.

Bruce (1986), and Pawley (1987, 1991, 1993), discuss serialisation in the context of lexicalisation and speech formulas. References to some of the literature discussing the role of SVCs in grammaticisation are given in §2.5.4.

2.3 The Kalam SVC revisited

In §1.6.1, I presented the following definition of serialisation in Kalam:

2.1 A serial verb construction in Kalam consists of a sequence of bare verb stems followed by an inflected verb stem, with or without intervening nominals and modifiers.

Kalam verb morphology allows a clear distinction to be made between (a) verbs and non-verbs and between (b) uninflected and inflected verbs, so that the constructions defined above are clearly differentiable from other constructions involving more than one verb. This is not always the case in serialising languages.

Before describing the features of the prototypical Kalam SVC, I first need to clarify the notion of 'prototypical' in this context. Not all Kalam SVCs behave alike in syntactic terms — for example, with respect to the distribution of arguments between verb stems. Complications are also induced by the length of some Kalam SVCs. In discourse, SVCs containing four or more stems are quite common, and constructions with nine or ten stems are possible, as 2.2 illustrates.

2.2

Ñn	ognap	wtsek	**d-ap-tan**	**d-ap-yap**	**g**	**g**
time	some	together	get-come-ascend	get-come-descend	do	do

Sometimes (the dog) chases up and down, on and on (after animals),

met **nŋ**-l …
not see-SS:PRIOR
(but) doesn't see (them) … (i.e. doesn't succeed in catching any) (XIX #28)

Problems in comparing complex SVCs such as 2.2 with those of other languages stem from the fact that most analyses of serialisation concentrate on SVCs containing only two or three stems. Longer SVCs may be quite complex. For example, 2.2 can be analysed in terms of at least the following factors: the existence of smaller multi-verb units within SVCs, and of units within other units (*ap-tan* and *ap-yap*, *d-ap-tan* and *d-ap-yap* and *d-ap-tan d-ap-yap g-*; §1.6.2, §3.3.1), iteration (of *g-*; §1.6.2), and a subtype of SVC of the rough form ***VERB STEMS*** *met* ***nŋ-***, which indicates that some action(s) (coded by the stems preceding *met*) had an unsuccessful outcome (§4.4.4). Since the analysis of long SVCs such as 2.2 can involve several interacting factors, some of which are specific to Kalam, they are unsuitable as a basis for comparison with those of other languages. The notion of a 'prototypical' Kalam SVC must therefore be in terms of much smaller constructions, where fewer factors obscure the relations between pairs of verb stems.

For the purposes of this chapter, then, the focus will be on SVCs containing only two or three stems.[2] The following are just two examples of such SVCs in Kalam.

ask yok- 'avoid remove' = 'abandon'

2.3 Nonm nop ñapan **tk**-i, **ask** **yok**-t-k.
its:mother its:father child give:birth-SS:PRIOR avoid remove-2/3dl-PAST
Having had a child, its mother and father abandoned it. (Dictionary ASK- entry)

pk cg- 'strike adhere' = 'stick to'

2.4 Kmn mon bak **pk** **cg**-i.
game:mammal tree trunk strike adhere-SS:PRIOR
The game mammal is sticking to the tree trunk. (Dictionary CG- entry)

Some of the features that prototypical Kalam SVCs have in common are listed below. (Note that the first two of these apply to all Kalam SVCs; the others do not apply to certain complex SVCs).

(a) There is only one set of inflections for tense/mood/aspect (TMA), person/number of subject, and/or switch reference for the whole construction. Similarly, there is only one instance of the class-changing suffix *-ep* (mutually exclusive with the above suffixes) per construction.

(b) There is only one instance of the negative prefix *ma-* per construction.

(c) Adverbs such as *kasek* 'quickly' and *kapkap* 'slowly, carefully' have scope over all verbs.

(d) The construction only has one subject, coded on the inflected verb, and possibly also by one overt NP.

(e) Transitive verb stems share an object.

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[2] The type and position of certain stems which occur in SVCs also determine whether the latter should be classed as 'prototypical'. For example, *am-* 'go' and *ap-* 'come', and *md-* 'stay' all have somewhat non-prototypical behaviour in non-final position (i.e. when they are not the last verb stem of the construction). The behaviour of these verbs will be investigated in Chapters 3 and 4.

(f) None of the devices used for conjoining clauses (over and above the switch reference system) or postposed to inflected verb stems, such as *tek* 'like, positive question', *akaŋ* 'or, negative question', or the conjunction *yp* 'with', follow bare verb stems.

(g) Certain types of SVC, including smaller SVCs without intervening material, are spoken under a single intonation contour (Pawley 1993:95).

(h) The length of pauses between stems in an SVC is comparable to that between non- verbal words within a clause, and is significantly lower than the pause length between clauses (i.e. following inflected verbs) (Givón 1990).

All of the features of Kalam SVCs identified above demonstrate ways in which SVCs resemble the prototypical clause.

2.4 Formal characteristics of serialisation

This section attempts to take the features identified above for Kalam as a point of departure for comparing the properties of serialisation cross-linguistically. To do so, I recast the features of Kalam serialisation (or those I see as most relevant to cross-linguistic comparison) in the following terms. My reformulation largely follows the wording of Bradshaw (1982:28) and Crowley (1987:38; 1990:60ff.). These features characterise at least an important subset of the entities which have been identified as SVCs.

SVCs are constructions in which there is more than one verb and:

(i) There is no contrast in verb inflections (e.g. for categories such as tense, mood, aspect, person/number of subject or actor (and sometimes other grammatical or semantic roles), directionals, transitivity and negation.

(ii) No overt morphemes characteristic of clause boundaries are present.

(iii) There is no intonational evidence of clause boundary.

(iv) There are restrictions on core arguments (actor and undergoer) according to two main patterns.

Further, for an identified subclass of SVC,

(v) Negation and adverbs whose scope is the (prototypical) clause have scope over all verbs in the construction.

2.4.1 SVCs and the clause

Much of the recent literature on serialisation has taken pains to contrast SVCs with other types of constructions containing more than one verb, often characterising SVCs as single-clause rather than multiple-clause constructions.[3] An important question here is how 'the clause' is defined. The definite article implies that there is a single notion of 'clause' which is common to all linguists. Foley and Olson (1985:17) claim that the usual

[3] This is partly for historical reasons. Some of the earliest formal treatments of SVCs, particularly in the West African and Atlantic Creole languages, were in the Transformational Grammar framework. The earliest of these attempted to derive at least some types of SVC from multi-clause constructions. Later Generative Grammar treatments rejected this analysis in favour of base generated constructions.

(implicit) working hypothesis of grammarians is that the clause is based around a single verb. Givón (1990) seems to imply that finiteness of verbal inflection is the major criterion of clausehood. In a large number of cases, these two criteria do not conflict. For example, both of the following examples centre around a single verb and a single set of verb inflections.

2.5 English:
His house collapsed.

2.6 Kalam:
Kotp-nuk **pag**-p-ø.
house-his break:up-PERF-3sg
His house collapsed. (Pawley 1987:353)

These are fairly clear cases. It is well known, however, that there is a continuum of binding between, on the one hand, sequences of such prototypical clauses and, on the other hand, verbs within single clauses. Givón (1980) and Foley and Van Valin (1984) identify the correlation between levels of syntactic bonding and semantic bonding, both within and between clauses. Givón (1990:49) demonstrates that the degree of finiteness of verbs in Papuan languages correlates with pause distribution, so that there is a continuum between sequences of prototypical clauses and tightly-packaged groups of verbs in SVCs. Later on in this work I hope to show that while Kalam SVCs contrast with sequences of prototypical clauses in many ways, there is also a substantial overlap between the syntactic behaviour of some SVCs and that of some types of clause chains. Pawley (1993:117ff.) argues that Kalam SVCs cannot be convincingly analysed as either strictly mono-clausal or strictly multi-clausal constructions. Rather, SVCs can be seen as occupying a middle ground between the prototypical single clause and multiple clauses.

Role and Reference Grammar (Foley and Van Valin 1984; Foley and Olson 1985) presents a model of clause structure within which serialisation is situated. Its proponents claim that the clause consists of nested layers of constituents; the nucleus, which (in single-predicate clauses) consists of the verb alone, the core layer, consisting of the verb plus direct (core) arguments, and the periphery, composed of the inner layers plus peripheral arguments such as locative and temporal phrases.[4] They view serialisation as one of the possible ways of joining layers of the clause to each other. Verbs can be joined together to make a complex predicate with a single set of arguments (nuclear serialisation), or groups of verb + inner arguments can be joined (subject to the constraint that the verbs share at least one inner argument) (core serialisation). In both cases, verbs must share peripheral arguments (but see §4.3.3).

The scope of operators such as tense, mood and aspect, negation, and various adverbs, is also important to the Role and Reference Grammar conception of the clause. SVCs cannot contrast in inflections for tense and mood, since these types of inflection have scope over the entire clause, including peripheral arguments (Foley and Van Valin 1984:208ff.). Aspect and directional affixes, in contrast, have scope over the verb alone (Foley and Van Valin 1984:209; Bybee 1985). Hence individual verbs in SVCs can

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[4] Foley and Van Valin (1984:78) claim that the clause layers are somewhat independent of traditional constituent structures; for example, while the core level includes the verb and actor and undergoer participants, these would not usually be classed under a single node in phrase-structure analyses.

sometimes take distinct aspect or directional marking; core SVCs have more freedom than nuclear SVCs in this regard. The notion of operators with scope over different layers of the clause will be helpful in the discussion of SVCs which follows. Of equal importance is the recognition by Role and Reference Grammar that SVCs can differ in their level of syntactic bonding, and the interrelated observation that the notion of 'clause' must allow for structures of lesser or greater complexity.

Hence, while the following discussion of features (i) to (v) is partially phrased in terms of a contrast between SVCs and multi-clause constructions, some degree of overlap is possible. The term 'SVC' encompasses a wide range of constructions which range from tightly-knit groups of verbs to constructions with somewhat looser connections between their constituents. While the features above are common (to some degree) to all of them, it is not reasonable to expect that all SVCs will select exactly the same features. Thus subtypes of SVC are possible, such as nuclear and core serialisation mentioned above. Note also that while I refer to SVCs in subsequent discussion as occupying a single clause (taking as departure point the Kalam case in which SVCs, in common with prototypical clauses, allow only one set of verb inflections), this is purely for terminological convenience, and is not meant to imply that the clausal status of SVCs is unequivocal. See Chapters 4 and 7 for further discussion of this point.

2.4.2 No contrast in inflectional categories

Kalam SVCs, according to the definition above, allow only one inflected verb per construction. TMA and person/number of subject, and/or switch reference morphemes, are implicitly shared by the complex of verbs. There is also only one instance of the negative prefix *ma-* per construction. The pattern of allowing only one set of inflections per SVC is a common implementation of the constraint on the freedom of inflections.

The other major pattern is for each verb stem to carry the same inflections. Akan (a Kwa language of West Africa) is one language for which this is true. The following Akan examples contrast serial (2.7 and 2.8) and conjoined (2.9) structures.[5]

Akan (West Africa)

2.7 **Mekɔɔe** **mebaae**.
I:went(PAST) I:came(PAST)
I went and came back.

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5 Additional abbreviations used in this chapter:

Alamblak:	CAUS - causative; ELEV - elevational; F - feminine; INS - instrument; IRR - irrealis status; M - masculine; R.PST - remote past; SA - same actor
Anyi:	HABIT - habitual
Barai:	SEQ:SA - sequential, same actor; UNREAL - irrealis status
Fore:	A - actor; DECL - declarative
Igbo:	FACT - factitive
Paamese:	CONST - construct suffix; DIS - distant deixis; IMM - immediate mood; incl - inclusive; POSS - possessive nominal; SP - spatial
Paamese, Tok Pisin:	TRANS - transitive
Tok Pisin:	PRED - predicate marker
Yoruba:	CPLT - complementiser; SHT - Subject High Tone

2.8 ***Mekɔɔe maba**.
I:went(PAST) I:have:come(PERF)

2.9 **Mekɔe** na **maba**.
I:went(PAST) and I:have:come(PERF)
I went and I have come back. (Schachter 1974:258ff.)

In Akan SVCs, all verbs in the construction must agree for subject person/number and TMA. Serial constructions such as 2.8, in which the first verb is marked for PAST and the second for PERFECT, are ungrammatical. To express this combination of TMA, a conjoined structure such as 2.9 must be used.

Akan provides a particularly striking illustration of the sharing of bound morphology, as shown by the following often-quoted set of sentences.

Akan

2.10 **Mede** aburow **migu** nsum.
I-take corn I-flow water
I pour corn into the water.

2.11 ***Migu** nsum.
I-flow water-in

2.12 Aburow **gu** nsum.
corn flows water-in
Corn is flowing into the water. (Schachter 1974:258ff.)

In the causative SVC 2.10, both verbs, *de* 'take' and *gu* 'flow' are inflected for first person singular, despite the fact that the 'semantic subject' of *gu* is *aburow* 'corn', as shown by 2.11 and 2.12 (Schachter 1974:259). In this example the syntactic unity of SVCs overrides the semantic relations between verbs and arguments.

The constraints on verb morphology are unfortunately not always as clearcut as the examples above may suggest. To illustrate this, let's look at Paamese (a Central Vanuatu language belonging to the Oceanic subgroup of Austronesian), for which Crowley (1987) distinguishes two types of serialisation, nuclear and core (cf. §2.4.1).

Paamese (Austronesian, Oceanic subgroup)

Nuclear serialisation:

2.13 Samsen **mungal** **vās** velāsen laian.
Samson 3sg-REALIS-rip:open split jaw-CONST lion
Samson ripped apart the lion's jaw.

2.14 Inau **nelah** **pilun** p**ū**k onak.
1sg 1sg-REALIS-carry stick:together-TRANS book POSS-1sg
I carried my books in one hand. (Crowley 1987:62ff.)

Paamese nuclear SVCs bear only one set of inflections for the entire verbal complex. Subject person/number and mood marking appears on the first verb of nuclear SVCs, with the second verb in 2.14 bearing a transitive suffix.

In contrast to this, both verbs in core SVCs bear inflections for person/number and mood, as illustrated by examples 2.15, 2.16 and 2.17.

Paamese

Core serialisation:

2.15 Kail **amuas** vuas **emat**.
3pl 3pl-REALIS-hit pig 3sg-REALIS-die
They killed the pig by hitting it.

2.16 Kail **aromuastei** vuas **vōmat**.
3pl 3pl-REALIS-NEG-hit-NEG pig 3sg-IMM-die
They didn't kill the pig by hitting it.

2.17 Visuvong **nisānik** **kīha** en sukul.
tomorrow 1-DIS-send-2sg 2sg-DIS-go SP school
Tomorrow, I will send you to school. (Crowley 1987:43/45/49)

In addition, it is possible for the first and second verbs of a core SVC to bear distinct inflections for mood. In this case, the mood inflection on the second verb is predictable from the mood and polarity marked on the first (Crowley 1987:44ff.). For example, affirmative verbs in realis mood are followed by verbs with the same realis marking (2.15), while negated realis verbs are followed by verbs marked for immediate mood (although not for negation) (2.16). Compare also the core SVC (2.17), which has first person singular subject marking on the first verb and second person singular subject marking on the second. While this subject marking (common in the switch-subject SVCs of Austronesian languages) is logical given the causative nature of the construction, it contrasts with the nuclear causative construction (2.14), which has only one subject inflection for the entire SVC, and even more strikingly with the Akan example (2.10). It seems, then, that the restrictions on inflections may be more loosely implemented in some SVCs than in others, even within the same language.

With respect to the Paamese examples above, it is interesting to note that the difference in inflectional restrictions correlates with other syntactic differences between nuclear and core serialisation. For example, according to the definition of core serialisation the overt object of the first verb appears between the verbs (as in 2.15 and 2.16), while in nuclear serialisation it tends to follow the complex as a whole (as in 2.13 and 2.14). More generally, Crowley (1987:59ff.) notes that Paamese nuclear serialisation resembles the verb compounding process, while core serialisation is superficially similar to coordination.

The heterogeneity of Paamese SVCs provides a first illustration of the observation that serialisation can be regarded as part of a continuum between more tightly-linked (more word-like) constructions and loosely-linked multi-clause constructions (and perhaps as part of other continua as well). Since different linguists have used different criteria to determine the cut-off point between what they identify as SVCs and other constructions, the match between SVCs cross-linguistically is fairly loose.

Recall also that certain SVCs allow some independence of operators (which are often realised as affixes on verb stems), depending on their scope (see §2.4.1). Thus tense is always shared by all verbs in SVCs, while aspect doesn't have to be. Note that such operators are not restricted to bound morphemes, as illustrated by the following example from Krio (an English-based creole of West Africa), in which the past tense marker *bin* obligatorily has scope over all verbs in the SVC:

Krio (West African creole)

2.18 John bìn **láy gì** Mary.
John PAST lie give Mary
John lied to Mary. (Nylander 1985:21)

2.4.3 Clause boundaries

Certain morphemes which are typically used to link clauses are useful as a simple test of clausehood for SVCs, since if such a morpheme occurs between verbs, these latter cannot belong to the same clause. For the sake of exposition, I discuss clause-linking morphemes under the headings of coordinating and subordinating conjunctions and clause-chaining morphology (including switch reference). It should be noted, however, that some works have stressed that clause-chaining systems share features of both coordination and subordination, and that the traditional subordinate-coordinate dichotomy is not universally applicable (e.g. Foley and Van Valin 1984:238ff.; Haiman and Thompson 1988).

Coordinators

The contrast between SVCs and constructions with overt coordinating morphemes can be illustrated by the following Yoruba sentences.

Yoruba (West Africa)

2.19 Mo **mú** ìwé **wá** ilé.
I took book came home
I took a book home.

2.20 Mo **mú** ìwé, mo si **wá** ilé.
I took book I and came home
I took a book and came home.

2.21 … ṣùgbọ́n mo **gbàgbé** lá.ti mú u **wá** pẹ̀lú.
but I forgot to take it come also
… but I forgot to bring it along. (Bamgboṣe 1974:19)

Note that while the coordinated construction 2.20 above can be followed by 2.21, this is not possible for the SVC in 2.19. This constraint has been interpreted as evidence that the events represented by the verbs in 2.19 are seen as more closely linked than those of 2.20 (e.g. Foley and Olson 1985:19).

Subordinators

Yoruba clearly illustrates the distinction between SVCs and verbs with embedded complements.

Yoruba

2.22 Bọ́lá **mú** kí Fẹ́mi ´ **wá** síbí.
Bola take CPLT Femi SHT come here
Bola made Femi come here.

2.23 Bọ́lá **mú** Fẹ́mi **wá** síbí.
Bola take Femi come here
Bola brought Femi here. (Lord 1974:202)

Sentence 2.22 differs from the SVC 2.23 in that it contains a complementiser *kí*. Lord (1974:202) notes certain other syntactic and semantic differences which correlate with the presence of *kí*. For instance, if the second NP of 2.22 were to be replaced by a pronoun, the subject form would be used. In some dialects of Yoruba the subject (*Fẹ́mi*) of the embedded clause triggers a Subject High Tone (SHT). The two structures also act differently with respect to negation; either the matrix clause or the subordinate clause of 2.22 can be negated, but 2.23 can only be negated in the following way:

Yoruba

2.24 Bọ́lá kò **mú** Fẹ́mi **wá** síbí.
Bola NEG take Femi come here
Bola didn't bring Femi [sic]. (Lord 1974:203)

There is also a semantic difference between the two sentences 2.22 and 2.23. In 2.22 Bola could have made Femi come here by a number of means, both direct and indirect (for example, by writing Femi a letter), whereas the SVC 2.23 can only mean that Bola brought Femi with him (Lord 1974:202). Again, this seems indicative of a close semantic link between the events coded by the two verbs in the SVC.

Clause-chaining

The Papuan language Barai provides an illustration of one kind of contrast between clause chaining and serialisation.

Barai (Papuan)

2.25 Mufuo fu **fi** fase **isoe**-ke.
late:afternoon he sit letter write-UNREAL
In the late afternoon, he will sit and write a letter.

2.26 Fu **fi**-na mufuo fase **isoe**-ke.
he sit-SEQ:SA late:afternoon letter write-UNREAL
He will sit and in the late afternoon will write a letter. (Foley 1986:179)

In 2.25, the temporal *mufoe* 'late afternoon' must modify both verbs in the SVC, while in 2.26 it modifies only the second chained clause.[6] Thus chained clauses allow more freedom than SVCs in the distribution of peripheral nominals such as temporals and locatives. We look in depth at the relationship between serialisation and switch-reference in Kalam in Chapter 3, where we will see that they both contrast and overlap as coding mechanisms.

6 SEQ:SA is functionally similar to the SS:PRIOR morpheme in Kalam (see §1.5.5).

2.4.4 Intonation

Alamblak (a Papuan language of the East Sepik Province of PNG: Bruce 1986) illustrates the lack of intonation markers of clause boundaries in SVCs. Serial root constructions in Alamblak form a single phonological word, as in 2.27, and contrast with 'juxtaposed predicates' as in the first line of 2.28.

Alamblak (Papuan)

2.27 **Muh-hambrë**-më-r-m.
climb-search:for-R.PAST-3sgM-3pl
He climbed (it) searching/and searched for them.

2.28 **Yak**-hay-**ni**, **yak**-hay-**ni**,
get-CAUS-go get-CAUS-go
Getting and taking, getting and taking,

yohr **fur-kih**-më-r.
string:bag MOTION-full-R.PAST-3sgM
the string bag filled up. (Bruce 1986:22ff.)

Groups of juxtaposed predicates such as those separated by commas in 2.28 are not single phonological words; they carry non-final intonation and may be separated by pause (Bruce 1986:23).

Note, however, that while SVCs are associated with simpler intonation contours than multi-clause constructions, there is room for intonational differences between subtypes of SVC. Thus in the Papuan language Barai, which, like Paamese, contrasts nuclear and core serialisation, nuclear SVCs are spoken under a single intonation contour, while core SVCs show two (partially overlapping) contours (Foley and Olson 1985:39).

Givón (1990) discusses the pause distribution of SVCs in three languages from Papua New Guinea (Tok Pisin and the unrelated Papuan languages Kalam and Tairora). His findings are that in all three languages (which differ considerably in structure and in the productivity of serialisation) the probability of a pause occurring between verbs within an SVC is significantly lower than that which holds between clauses linked in various ways.[7] Instead, the probability of a pause between serialised verb stems is comparable to that between other words within clauses (Givón 1990:45). Further, Givón illustrates that there is a continuum of pause probability from SVCs through SS-marked clauses to clauses marked with more finite morphology.

2.4.5 Restrictions on arguments

This section discusses coreference between the arguments of SVCs. There are two main patterns of coreference; one, that verbs share the same subject; the second, that the object of one verb becomes the subject of the next. Note that serialised verbs can also carry morphological markers indicating shared arguments, as discussed in §2.4.2, which may have to agree (as in Akan).

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7 In Kalam and Tairora, SVCs are compared with clause chains (although Givón includes some instances of chained clauses among his SVCs); in Tok Pisin, serialisation is compared with either juxtaposed clauses or clauses conjoined by overt conjunctions.

2.29 is an example of an SVC in which both verbs share a single subject (*Kofi*). As 2.30 shows, it is not possible for such a construction to have two overt subject NPs.

Akan (West Africa)

2.29 Kofi **yɛɛ** adwuma **maa** Amma.
Kofi did work gave Amma
Kofi worked for Amma.

2.30 *Kofi **yɛɛ** adwuma Kwaku **maa** Amma.
Kofi did work Kwaku gave Amma (Schachter 1974:254/257)

SVCs may also have identity between the object of the first verb and the subject of the second:[8] these constructions are often referred to as 'causative' or 'resultative (serial) constructions' (Lord 1974:197; Crowley 1987:39; Thompson 1973), due to the semantic relation between the verbs.

Yoruba (West Africa)

2.31 Fẹ́mi ´ **tì** Akin **ṣubú**.
Femi SHT push Akin fall
Femi pushed Akin down. (Lord 1974:199)

In 2.31 *Fẹ́mi* is a potential subject of *subú* 'fall', but it is much more plausible that Femi pushing Akin would result in Akin, rather than Femi, falling. The preferred interpretation of the SVC is thus that Akin fell (Lord 1974:199). This interpretation accords with the tight semantic bonding present between serialised verbs. In some cases, selectional restrictions can rule out same-subject readings.

It is also possible for SVCs to be ambiguous between shared-subject and switch-subject (causative) types:

Yoruba

2.32 Kofi **daadaa** Amma **kɔɔe**.
Kofi tricked Amma went
Kofi tricked Amma and Kofi went.

OR:

Kofi tricked Amma and Kofi caused Amma to go.
(= Kofi tricked Amma into going) (Lord 1974:200)

2.4.6 Scope of negation

It is typical in SVCs for negation to be marked only once, and to have scope over the whole construction. For example, in Kobon (Kalam's closest relative) an SVC may not have more than one negative (unless one of the negatives is contained in a modifier or noun phrase). Scope of the negative *-ag* (suffixed to the final verb of an SVC) is over the clause as a whole.

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8 Note that here we are dealing with two-verb SVCs for the sake of simplicity.

Kobon (Papuan)

2.33 Yad g̈ɨg̈ɨr iŋ wañib **yag** **dam** **im**-ag-pin.
I corn seed string:bag put:in take plant-NEG-PERF1s
I did not put the corn seed in the string bag and take it and plant it.
(Davies 1981a:79)

Anyi (spoken on the Ivory Coast) requires negation to be marked on each verb:

Anyi (West Africa)

2.34 Cùá ń-**jɪ̰** ákɔ́ ń-ꜜ**ní**.
dog NEG-catch-HABIT chicken NEG-eat-HABIT
The dog never eats a chicken.

*Cùá ń-**jɪ̰** ákɔ́ ꜜ**dí**.
dog NEG-catch-HABIT chicken eat-HABIT

*Cùá **cɪ̰** ákɔ́ ń-ꜜ**ní**.
dog catch-HABIT chicken NEG-eat-HABIT (Foley and Olson 1985:28)

Again, the scope of the negative is over the whole construction. The difference in coding between Kobon and Anyi is another example of the major division mentioned above (§2.4.2) in the way languages enforce restrictions on bound morphology.

The rules for negating SVCs in Kobon and Anyi are fairly simple. But in other languages, the behaviour of SVCs under negation can be more complex. In some languages, the syntactic and semantic scope of negatives in SVCs can differ (Foley and Olson 1985:28). For instance, Alamblak, like Kobon, allows only one instance of the negative morpheme per SVC:

Alamblak (Papuan)

2.35 Ritm fiñji **tandhi**-**ak**-**ni**-r-më-t-m.
insects NEG roast-get-go-IRR-R.PST-3sgF-3pl
She did not roast (and) get the insects (and) go. (Bruce 1986:25)

However, Alamblak differs from both Kobon and Anyi in the semantic scope of negation. According to Bruce (1986:25), the scope of *fiñji* may cover any verb root, or any contiguous combination of roots. So in 2.35, the negation may apply to *tandhi* 'roast', *ak* 'get' or *ni* 'go', or both *tandhi* and *ak*, or both *ak* and *ni*, or all three verb roots.

Compare also the following examples from Barai (Papuan: Foley and Olson 1985:40), a language which, like Paamese (§2.4.2), has been identified as possessing two different levels of serialisation, nuclear and core.

Barai (Papuan)

Nuclear serialisation:

2.36 Fu fase naebe **fi** **isoe**.
he letter NEG sit write
He did not sit and write a letter.

2.37 *Fu fase **fi** naebe **isoe**.
he letter sit NEG write (Foley and Olson 1985:40)

In nuclear serialisation, the negative element can only occur before the first verb, as with the Yoruba and Alamblak examples given above.

Barai

Core serialisation:

2.38 Fu naebe **fi** fase **isoe**.
he neg sit letter write
He did not sit down, but did write a letter.

2.39 Fu **fi** fase naebe **isoe**.
he sit letter neg write
He sat down, but did not write a letter. (Foley and Olson 1985:40)

In core serialisation, on the other hand, either verb can be negated separately. This is a comparable situation to that found in Paamese serialisation (§2.4.2), and, as in Paamese, seems to correlate with the different degrees of syntactic bonding within SVCs.

2.5 Semantic characteristics of SVCs

Despite the differing syntactic implementations of serialisation, the semantic relations which hold between verbs in SVCs, and between verbs and arguments, show a degree of consistency across languages. This section explores those relationships, and discusses some of the issues which have cropped up repeatedly in discussions of the semantic nature of SVCs. Section 2.5.1 addresses the question of whether, as has often been stated in the literature on serialisation, SVCs code single events. Section 2.5.2 exemplifies some of the types of semantic relations which commonly hold between verb stems in serialising languages. Section 2.5.3 discusses the interaction between SVCs and the issue of lexicalisation. Section 2.5.4 deals with the grammaticisation of serialised verbs.

2.5.1 SVCs and 'eventhood'

Some analyses have associated contrasts between SVCs and multi-clause constructions with the claim that the verbs in an SVC all refer to 'subparts or aspects of a single overall event' (Lord 1974:196ff.; cf. also Bradshaw 1982:28; Sebba 1987:212). Such a distinction would underlie contrasts such as the following (repeated from §2.4.3), between SVCs and conjoined sentences in Yoruba.

Yoruba (West Africa)

2.40 Mo **mú** ìwé **wá** ilé.
I took book came home
I bought a book home.

2.41 Mo **mú** ìwé, mo si **wá** ilé.
I took book I and came home
I took a book and came home.

2.42 … ṣùgbọ́n mo **gbàgbé** lá.ti **mú** u **wá** pẹ̀lú.
but I forgot to take it come also
… but I forgot to bring it along. (Bamgbo™se 1974:19)

While the coordinated construction 2.41 above can be followed by 2.42, this is not possible for the SVC in 2.40, implying that the events represented by the verbs in 2.40 are seen as more closely linked than those of 2.41. It has also been noted that many instances of SVCs may be translated by single words in other languages, and that individual verbs in SVCs often code functions carried out by grammatical morphemes in other languages (e.g. Givón 1990).

While the assertion that the verb stems in an SVC code subparts of a single event is difficult to prove or disprove, and somewhat prone to circularity (Givón 1990:22), there is an obvious motivation for making it. General iconicity principles would predict that the tighter **formal** links between the verbs of an SVC — in terms of reduced freedom of morphology, absence of coordinating or subordinating marking between verbs, intonation contours and pause distribution characteristic of single clauses, and restrictions on arguments — would correlate (to some degree) with a tighter **semantic** bond between stems. Thus it should come as no surprise that certain groups of verbs in SVCs can be interpreted as coding **either** temporally related strings of actions **or** (for example) cause-and-result sequences, or other types of close semantic relations. The latter interpretation would presumably result from an innate human tendency to look for connections between spatially or temporally close entities wherever possible (cf. Givón's observation that 'the temporal-physical distance between chunks of linguistically-coded information correlates directly to the conceptual distance between them' (Givón 1990:24)).

Many examples of SVCs do indeed seem, on intuitive grounds at least, to code single events. And many are indeed translatable by single words in other languages (although any assumption that there is a direct connection between these two facts is somewhat suspect). But these don't seem to be necessary conditions for SVCs; it's hard to imagine offhand how SVCs such as those below could be classed as single events, or as single lexemes, at least in the way these terms are usually understood.

Kalam

2.43 … koŋay nep **timb-rik** **tip-pang** **yok**-sap …[9]
koŋay nep tb-tk tpag yok-s<a>p
much very chop-sever cut:up throw-PRES:PROG-3sg
… he's chopping and cutting and throwing much more … (Givón 1990:35)

2.44 … mj bep **tk** **d-ap** nb okyaŋ **yok**-l …
leaf plant:sp break get-come place below displace-SS:PRIOR
… having broken off *bep* (and) brought (and) tipped (it) in below … (I #72)

Yoruba (West Africa)

2.45 Ajé **wá** aṣọ **rí** **jí** **gbé** wọ̀.
Aje seek dress see steal take wear
Aje looked for some clothes, found them, stole them, and put them on.
(Baker 1989:550)

The problem is that it is by no means always clear what differentiates 'single' from 'multiple' events. Givón (1990) points out the circularity involved in assuming complete

9 This line is in Givon's orthography, while the following is in Pawley's.

isomorphism between grammatical packaging (e.g. of the clause, if we assume that the clause is an inflexibly defined entity) and the way events are processed. His argument is that the temporal packaging of linguistic information is a more reliable indicator of the cognitive processing of events. Since the pause probabilities between verbs in SVCs are consistently lower than those between clauses (see §2.4.4), he concludes that event segments are chunked according to the clause, rather than on the basis of individual verbs.

Givón claims that the criterion of pause distribution correlates with the way in which events are processed. The same criterion also discloses a continuum of intermediate stages between single and multiple clauses which in turn correlates (for Kalam, at least) with the degree of morphosyntactic marking on verbs (Givón 1990:49).[10] The tightness of linkages between and within clauses has been shown to correspond, though not always directly, with the strength of semantic relations between verbs (Foley and Van Valin 1984:270). Givón's results show that SVCs tend to occupy one end of the pause distribution continuum, as is to be expected given the lack of morphosyntactic independence between serialised verbs; but it should not be concluded from this that they occupy **only** an extreme end of the event-coding continuum. Many serialising languages have distinct types of coding mechanisms for SVCs, in which more morphological freedom between verbs correlates with a looser bond between the verbs. Others, such as Kalam, code SVCs uniformly in morphological terms, but not in terms of syntax (as we will see). It is likely that pause distribution would differ between these subtypes of SVC, as has been reported for intonation (Foley and Olson 1985; see also §2.4.4). And as we will see for Kalam, there is a substantial overlap between the syntax of certain SVCs and that of switch-reference marked sequences.

2.5.2 Semantic relationships between serialised verbs

This section illustrates some of the most frequently encountered semantic relations which hold between verb stems in SVCs. The first three sets of examples concern fairly general types of relations: temporal, cause-effect and head-modifier.

Temporal relations

A basic distinction can be made between sequential and simultaneous relations.

Sequential actions

Kalam

2.46 … kmn **pak** **d-ap** **ad** **ñb**-l …
game:mammal hit get-come cook eat-SS:PRIOR
… having hit (i.e. killed) and brought (got and come with) and cooked and eaten the game mammals … (Intro #22)

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10 From these two facts concerning pause distribution, it should follow that there is a continuum of 'eventhood', between prototypical single events and prototypical sequences of loosely related events (although it is difficult to determine exactly what such a continuum would entail).

bep mey nb ognap **tk** **ñb**-l …
plant:sp this:one place some pick eat-SS:PRIOR
(the wallaby) having picked (and) eaten *bep* in these places … (I #56)

Yoruba (West Africa)

2.47 Wọ́n **bú** omi **mu**.
they pour water drink (transitive)
They poured water and drank it. (Baker 1989:516)

Simultaneous actions

Kalam

2.48 … ney okok tap **ñb** **tag**-ng …
it around food eat move:about-SS:PROSP
… in order for it to move about eating… (I #127)

Yoruba (West Africa)

2.49 Adé **jó** **rìn**.
Ade dance walk
Ade danced and walked along.

Compare:

2.50 Adé **rìn** **jó**.
Ade walk dance
Ade danced and walked along. (Baker 1989:534)

Some SVCs can be ambiguous between sequential and simultaneous actions:

Alamblak (Papuan)

2.51 M-yt ritm **muh-hambray**-an-m.
tree insects climb-search:for-1sg-3pl
The tree I climbed and looked for insects/The tree I climbed,
looking for insects. (Bruce 1986:26)

Cause-effect

It is common for a cause-effect (often termed 'resultative' or 'causative'; see §2.4.5) relationship to hold between pairs or groups of verbs.

Kalam

2.52 B mon **tb** **lak**-sp-ay.
man wood cut split-PRES:PROG-3pl
The men are splitting logs. (Dictionary LAK- entry)

Yoruba (West Africa)

2.53 Fẹ́mi **tì** Akin **ṣubú**.
Femi push Akin fall
Femi pushed Akin down. (Lord 1974:199)

Saramaccan (Atlantic creole)

2.54 Kofi **naki** Abendi **kii**.
Kofi hit Abendi kill
Kofi struck Abendi dead. (Sebba 1987:200)

Paamese (Austronesian (Oceanic subgroup))

2.55 Kail **uas** vuas **hēmat**.
3pl 3pl-DIS-hit pig 3sg-DIS-die
They will kill the pig by hitting it. (Crowley 1987:46)

Alamblak (Papuan)

2.56 **Tat-noh**-më-an-r.
hit-die-R:PST-1sg-3sgM
I killed him (by hitting him). (Bruce 1986:22)

Note that a switch-subject relation (in which the object of the first verb is the subject of the second) is possible, but not necessary, between the verbs. The Yoruba 2.53, Paamese 2.55 and Alamblak 2.56 examples show such a relation (overtly marked in the case of Paamese). This is not true of the Saramaccan example 2.54. There is no clear way of telling in the Kalam example 2.52, since *lak* can either be transitive ('split') or stative ('be split') (see §4.2 for discussion).

Head-modifier

Bruce (1986:22) states that verbs in Alamblak SVCs can be interpreted as having either a head-modifier relationship (as in the first gloss below) or a sequential one (as in the second):

Alamblak (Papuan)

2.57 **Dbëhna-no**-më-r.
sick-die-R:PST-3sgM
He was deathly sick/He was sick and died. (Bruce 1986:22)

Individual verbs in SVCs have been identified as coding a set of more specific semantic relationships, which intersect to some degree with the sequential/simultaneous and cause-effect distinctions mentioned above. Some of the semantic relationships which are most common in SVCs are given below. Since many of the recurrent functions associated with serialised verbs correspond to those carried out by grammatical morphemes in other languages, notably by case-marking and TMA morphemes, it is convenient to group the relationships below in terms of function. This is not intended to imply, however, that the verbs in the SVCs below are grammatical functors; in the absence of evidence to the contrary, a useful working assumption is that they are in fact verbs, just as they seem to be. I will return to this point in §2.5.4, on grammaticisation in SVCs.

Case

Benefactive/dative

Kalam

2.58 Paskoy yp **ag** **ñ**-a-k.
girl me(Obj) say give-3sg-PAST
The girl told/confided (it) to me. (Dictionary AG- entry)

Yoruba (West Africa)

2.59 Mo **sọ** **fún** ọ.
I say give you
I said to you. (Sebba 1987:176)

Instrumental

Papiamentu (Atlantic creole)

2.60 Ela **tuma** e kuchu **korta** e karni.
he:PAST take the knife cut the meat
He cut the meat with the knife. (Sebba 1987:171)

Thai

2.61 Kháw **ʔaw** mîit **pay tàt** yâa.
he **take** knife **go** **cut** grass
He cuts grass with a knife. (Foley and Olson 1985:54)

Comitative

Saramaccan (Atlantic creole)

2.62 Kofi **teki** en sisa **go** **bay** krosi.
Kofi take his sister go buy clothes
Kofi bought clothes with the help of his sister. (Jansen et al. 1978:130)

Transitivity increasing functions

Causative

Yimas (Papuan)

2.63 Na-ka-**tal-kwalca**-t.
3sgObj-1sgSubj-hold-arise-PERF
I woke him up. (Foley 1986:154)

Transitive

Often verbs translatable as ‘get’ or ‘take’ function to allow another verb to take extra arguments. For instance, in Kasem (a Gur language of Ghana and Upper Volta), for *de* ‘drop’ to be used as a transitive verb it must be serialised with *kwe* ‘take’ (Foley and Olson 1985:51).

Kasem (West Africa)

2.64 Bà **kwɛ́** sámwɛ̄ sém bā dē dá.
they take grasses the they drop there
They dropped the grasses there. (Foley and Olson 1985:51)

Some West African languages allow ditransitive verbs in simple clauses to take only indefinite undergoers; if the undergoer is definite, these verbs must be serialised with verbs meaning 'take' (Foley and Olson 1985:54ff.).

Directionals

Kalam

2.65 **Ptk** **o**-p-ay.
be:afraid come-PERF-3pl
They have fled here. (Dictionary PTK- entry)

Igbo (West African)

2.66 Ó **bú-lá**-rá íté.
he carry-go:home-FACT pot
He carried the pot home. (Foley and Olson 1985:43)

Aspect

Completive

Kalam

2.67 Mnm **ag** **d**-p-ay.
word say get-PERF-3pl
They have finished talking. (Dictionary D- entry)

Fore (Papuan)

2.68 **Na-kai**-ʔta-i-e.
eat-throw:aside-PAST-3sgA-DECL
He had finished eating. (Foley 1986:145)

Continuative

Kalam

2.69 Mnm **ag** **md**-p-ay.
word say stay-PERF-3sg
They are still talking. (Dictionary MD- entry)

Tok Pisin (New Guinea Pidgin)

2.70 … em **brukim** i-**stap** …
he break(TRANS) PRED-stay
… he keeps breaking (it) … (Givón 1990:27)

Inceptive

Kalam

2.71 **kn am-**
sleep go-
fall asleep (Dictionary KN- entry)

Yoruba (West African)

2.72 Ó **ńsùn lọ**.
he sleeping go
He is falling asleep. (Bamgboṣe 1974:18)

Paamese (Austronesian (Oceanic subgroup))

2.73 Kosa **rōmai rolongolong**.
now 1pl/incl:REALIS:come 1pl/incl:REALIS:knowledgeable
Now, we have become knowledgeable. (Crowley 1987:58)

Complementiser

Kalam

2.74 Malŋ **ag** gos **nŋ**-b-in.
Mareng say thought think-PERF-1sg
I think he is a Mareng. (Dictionary AG- entry)

Krio (West African creole)

2.75 À **yèrí sé** [John dọ́n **kám**]$_S$.
I hear say John PERF come
I hear that [John has come]$_S$. (Nylander 1985:18)

Comparative

Yoruba (West Africa)

2.76 Ayọ̀ **ní** ọgbọ̀n **jù** mí lọ.
Ayo has cleverness surpass me go
Ayo is cleverer than I am. (Stahlke 1970:64)

Paamese (Austronesian (Oceanic subgroup))

2.77 Aut Honiara **mutin lin** aut Vila.
place Honiara 3sg:REALIS:hot 3sg:REALIS:pass place Vila
Honiara is hotter than Vila. (Crowley 1990:74)[11]

---

11 While doubt has been expressed over the status of such comparatives in some languages (Sebba 1987), they seem a logical development from the use of motion verbs in directional serialisation. Common verbs associated with such constructions include 'pass' and 'reach'.

2.5.3 Lexicalisation

It was noted in §2.5.1 that the verbs in SVCs tend to have closer semantic links than verbs in typical multiclause constructions. Thus SVCs have been seen as coding single events, in many cases the kinds of events which are coded by single words in other languages. Given these facts, it is plausible that SVCs will undergo reanalysis into lexemes. However, the point at which it can be said that a sequence of serialised verbs is interpreted as a lexical item depends on the criteria used to define lexicalisation (cf. Pawley 1986).

One path from SVCs into lexical items stems from the fact that serialising languages may have a range of SVCs which, although accorded a similar morphosyntactic treatment, differ in terms of semantic complexity. Bruce (1986) makes such a claim for the Papuan language Alamblak, stating that there is a continuum between serial root constructions (SRCs: essentially SVCs which form a single phonological word), syntactic compounds and idiomatic compounds. The syntax of all these constructions is basically similar (although individual verbs in SRCs may take their own directional affixes, unlike the other types of construction), and contrasts in a number of ways with multi-clause constructions. However, these three types of construction differ in productivity and semantic analysability. For example, the SRC in 2.78 has a plausible paraphrase in 2.79:

Alamblak (Papuan)

2.78 Met-t hohora-m **fak-yirona**-më-t-m.
woman-3sgF thorn-3pl get-feel:pain-R.PST-3sgF-3pl
The woman got/held the thorns (and) felt pain. (Bruce 1986:28)

2.79 Met-t hohora-m **fak**-më-t-m.
woman-3sgF thorn-3pl get-R.PST-3sgF-3pl
A woman got/held the thorns.

Yirona-më-t.
feel:pain-R.PST-3sgF
She felt pains. (Bruce 1986:29)

There are case relations holding between each verb stem within 2.78 and nouns in the clause, the same case relations as are manifested in the two-clause paraphrase 2.79.

The syntactic compound 2.80 contrasts with 2.78 in being less semantically transparent:

2.80 Këfra-e fëhr-r **t-finah**-an-r.
spear-INS pig-3sgM throw-arrive-1sg-3sgM
I speared a pig. (Bruce 1986:28)

2.81 is a somewhat approximate paraphrase of 2.80, differing from the latter not only in the situation it can refer to but also in the case relations between nouns and verbs:

2.81 Këfra-t **tu**-an-t. Fëh-r rim-**finah**-t-r.
spear-3sgF throw-1sg-3sgF pig-3sgM ELEV-arrive-3sgF-3sgM
I threw a spear. It arrived over at the pig. (Bruce 1986:29)

Finally, the idiomatic compound 2.82 has no parallel two-clause paraphrase, and the noun *met-t* has case relations with the compound as a whole, rather than with individual verbs.

2.82 Met-t **fak-yirona**-më-t.
woman-3sgF get-feel:pain-R.PST-3sgF
A woman had birth pangs. (Bruce 1986:28)

SRCs are intermediate between lexical items and combinations of clauses in that, while syntactically productive and semantically analysable, there are collocational restrictions on the kinds of things they can code. Bruce (1986:26) claims that Alamblak SRCs are only used to express 'culturally determined commonly associated events'. For example, if an Alamblak speaker wishes to say 'the woman took an axe, put a string-bag on her head and went', she or he could say:

2.83 Hodayrt **yak**-hatë,
axe get-SA
Having gotten the axe,

yoht **fët**-hatë **yi**-më-t.
string:bag string:from:head-SA go-R.PST-3sgF
having strung the string bag from her head, she went. (Bruce 1986:26)

An SRC such as the following would be ungrammatical:

2.84 *Hodaryt yoht **yak-fët-ni**-më-t-t.
axe string:bag get-string:from:head-go-R.PST-3sgF-3sgF

Bruce concludes that the constraints on verb combinations are essentially those of lexicalisation, and hence SRCs appear to represent the first stage in a lexicalisation process, with compound verbs as a further point along this continuum. Cross-linguistic evidence supports this conclusion; idiomatic series of verbs are common in serialising languages, and such SVCs often stand alongside more semantically transparent verb series. Combinations of serialised verbs (whether 'idiomatic' or not) may also fuse phonologically into a single lexeme (see §5.2.5, §6.5 for evidence from Kalam). Bruce's conclusion that syntactically productive serial verb constructions have some of the characteristics of lexical items also fits in with work by Pawley on the defining features of lexicalised expressions (1986) and speech formulas (1985, 1987, 1993) (see Chapter 3).

2.5.4 Grammaticisation

I turn now to specialised functions of verbs in SVCs and the question of when a verb can be considered 'grammaticised'. Grammaticisation is a term which covers a wide range of processes; here I am specifically interested in the development of grammatical functors from fully lexical items (in this case, from verbs participating in SVCs). As the examples given in §2.5.2 suggest, there is a degree of cross-linguistic consistency in both the types of categories that are coded by serialised verbs, and in the verbs that are used to encode those categories. So for example the arguments of verbs corresponding to 'get' or 'take' often function as patients, instruments or comitatives in SVCs; various kinds of posture verbs correlate with continuative aspect. Other correlations between verbs and semantic functions are discussed in Sebba (1987) and Foley and Olson (1985).

This cross-language consistency of course derives as much from the nature of the verbs themselves as from serialisation. Not all languages with productive serialisation will associate a given verb with a given function in SVCs. For example, as was mentioned

above, serialising languages commonly use a verb meaning 'get' to mark instrumental nouns in SVCs. While Kalam does indeed make use of *d-* 'get' in this function, it does not do so in SVCs. Rather, when *d-* is used to mark instrument it almost invariably takes the suffix marking prior action by the same subject as the following verb. Compare 2.85, from Kalam, with 2.86 (repeated from 2.60 above).

Kalam

2.85 Kut **d**-i, nup **pk**-p-in.
stick hold-SS:PRIOR him(Obj) hit-PERF-1sg
I hit him with a stick (lit. having taken a stick, I hit him). (Pawley 1993:101)

Papiamentu (Atlantic creole)

2.86 Ela **tuma** e kuchu **korta** e karni.
he:PAST take the knife cut the meat
He cut the meat with the knife. (Sebba 1987:171)

It should also be noted that the association of a verb with a particular function in an SVC does not mean that the verb in question has become grammaticised (although grammaticisation of serialised verbs is of course a common occurrence, as we will see shortly). The existence of SVCs comprised solely of two such 'functional' verbs is common in serialising languages; compare the following examples from Twi.

Twi (West Africa)

2.87 **Ọde** sika no **mãã** me.
he:take money the give:PAST me
He gave me the money. (Sebba 1987:164)

2.88 **Ọde** kanea bi **sii** poŋ no so.
he:take lamp a stand:PAST table the top
He took a lamp and stood it on that table/He stood a lamp on that table.
(Sebba 1987:163)

2.89 **Ogyaw** ne sika **mãã** me.
he:leave his money give:PAST me
He left me his money. (Sebba 1987:174)

If such an association were to imply grammaticisation, then (on the assumption that grammaticisation would involve a degree of loss of verbal status) 2.87 would be lacking in a fully lexical verb. There is no evidence to support such an analysis in the above examples. Another example of the distinction between verbs carrying out a grammatical function and being grammaticised, from Kalam, is given in §5.2.4.

While grammaticisation of one or more constituent verbs is not a necessary condition of serialisation, the two are frequently associated. There is an extensive literature on the diachronic development of serialised verbs into grammatical markers of other categories, with concomitant loss of semantic and grammatical properties of verbhood. Comparative and historic evidence for such development has been documented in both Benue-Kwa (West Africa) (Lord 1973; Givón 1975; Heine and Reh 1984) and Oceanic languages (Pawley 1973; Bradshaw 1982; Lichtenberk 1985; Crowley 1987; Durie 1988). Other serialising languages show at least synchronic evidence that such processes have been in

action, in the existence of items intermediate in syntactic and semantic behaviour between verbs and other word classes (e.g. Jansen et al. 1978 for Atlantic creoles; Li and Thompson 1974 for Mandarin Chinese; Crowley 1990 for Bislama (Vanuatu Pidgin English); Bruce 1984, 1986 for Alamblak (Papuan); Foley 1986 for other Papuan languages). The development of serialised verbs into adpositions or case markers, and into aspect markers, is particularly widespread. Other developments from serialised verbs that have been noted include result markers and verb classifying prefixes in New Guinea Oceanic languages (Bradshaw 1982:34), conjunctions (Lord 1973:73) and noun classifiers (in the Papuan language Imonda: Seiler 1986).

As with all grammaticisation, this process takes place gradually, and it may be difficult to identify whether specific lexical items are verbs, grammatical functors (such as prepositions) or somewhere in between. There are a number of criteria that have been used to determine these questions of categorial status.

One obvious, although not conclusive, test for 'verbhood' is whether (or the extent to which) the item can stand as an independent verb. For a language to be meaningfully classed as verb serialising, it seems obvious that it should have some constructions whose constituent verb stems can all function as independent verbs with the same meanings that they have in SVCs. But once we have identified such clear cases, we may be left with structurally parallel constructions in which some items have the distribution of serialised verbs but do not occur as lexical verbs in the language. Alternately, there may be a corresponding lexical verb with a radically different meaning to its serialised counterpart. Both of these situations are exemplified in Paamese (Crowley 1987:58ff.).

Givón (1975) considers three factors implicated in the grammaticisation of serialised verbs: morphology, semantics and syntax. As verbs become grammaticised, they may lose aspects of their verb morphology. This usually takes place gradually, so that there may be items which are morphologically intermediate between verb and some other category.

Givón describes the shift from verb to preposition as also involving the depletion of semantic material. This often involves the relaxation of selectional restrictions, so that verbs which originally allowed only animate objects may develop into prepositions allowing inanimate NPs (e.g. instrument complements: Lord 1973:201). Syntactically, the grammaticised items start behaving less like verbs (e.g. with respect to processes like nominalisation and focus) and more like some other category. For example, Jansen et al (1978), discussing Sranan, compare the syntactic behaviour of a number of serialised verbs with that of prepositions. They demonstrate that serialised *go* 'go/motion away', *kon* 'come/motion towards' and *tek* 'take/instrumental' behave like unserialised verbs in wh-questions, relative clauses, topicalised clauses and focus constructions. This behaviour contrasts strongly with that of Sranan prepositions such as *nanga* 'with'. However, the verb *gi* 'give/dative/benefactive' turns out to pattern like prepositions syntactically. So it seems that *gi*, despite occurring as an independent verb in Sranan, has become much more 'prepositional' than the other three verbs.

The implication of serialisation in diachronic change can make the task of identifying SVCs problematic (Givón 1975:86). In clear cases all the items in a particular construction can be readily identified as verbs. However, as verbs become more grammaticised it becomes less rewarding to try and differentiate their behaviour from that of other grammatical categories such as prepositions, adverbs or TMA markers.

2.6 Conclusion

This chapter has compared 'serial verb constructions' in a number of language families and areas. We have seen that the term 'SVC' has been used of a heterogeneous class whose boundaries are somewhat ill-defined. What SVCs do share in all these languages is a number of formal features which serve to link them with the prototypical single-predicate clause. All SVCs are characterised by a lack of overt markers of coordination and subordination (by definition), and by restrictions on bound morphology and operators and on arguments. The nature and degree of those restrictions is a function of the tightness of syntactic bonding between stems, as is also the case with intonation and pause characteristics.

The variation which is possible in these formal characteristics place SVCs on a continuum between multi-clause and single-clause constructions. The tightness of formal links within SVCs also correlates with semantic closeness, and it is likely that these two factors reinforce each other, as evidenced by the recurrent drift of serialised verbs from full lexical items to grammatical functors and parts of lexical units.

Tep, mñi agdpin.

3 *SVCs and discourse structure*

3.1 Introduction

This chapter is concerned with the ways in which the internal structure of Kalam SVCs reflects some recurrent patterns present in Kalam discourse. Section 3.2 discusses relevant aspects of Kalam discourse structure, and the syntactic mechanisms (including serialisation) used to encode these patterns. Section 3.3 focuses on the verbs of motion, which play an important role in the structure of SVCs. Section 3.4 summarises the interaction of the verbs of motion with discourse structure.

3.2 Aspects of Kalam discourse structure

This section aims to introduce the things that Kalam speakers need to mention to make adequate descriptions of particular events, and the way this interacts with what is coded in SVCs and how. To start off with, we look at the central role of marking spatial orientation in Kalam (§3.2.1). In §3.2.2 this is integrated into a more general description of event structures in Kalam. Section 3.2.3 discusses the role of serialisation in the coding of event structures.

3.2.1 Spatial orientation in Kalam

The flavour of Kalam discourse, and the ways in which it differs from that of more familiar languages, is illustrated by the following quote from Pawley (1993:109), who describes his early experiences in the Upper Kaironk. Pawley noticed that bystanders, repeating his Kalam utterances to people nearby, systematically expanded on them:

3.1 For instance, if someone asked, 'Where's Kiyas?' […] and I answered, 'He's in his garden', a bystander might say, 'He said "Kiyas has gone to Matpay to work in the garden. He'll be back later", he said'.

Kalam and English differ in the aspects of events that need to be mentioned. In particular, as the quote above shows, Kalam favours explicit mention of movement **to** the place where a particular action is carried out or situation occurs (Matpay, in the example above), and **from** that location after the action has been carried out (back here, in the example above). In contrast, English normally leaves out this information where it would be predictable.

Mention of motion to and from locations is a pervasive part of Kalam discourse. It forms an integral part of the description of everyday events and traditional activities such as hunting animals, gathering plants, chopping firewood, collecting water and carrying out revenge killings. Verbs of motion, of which the most common are *am-* 'go' and *ap-* 'come', orient motion between locations in terms of the participants in speech events. The following mini-discourse illustrates this with the location of the speech event as deictic centre.

3.2 Speaker A sees Speaker B after an absence of an hour or so:

Speaker A:

Nad etp **g**-ab-an **o**-p-an?
you what do-REC:PAST-2sg come-PERF-2sg
What have you been doing? (lit. What have you just done and you have come?)

Speaker B:

Am wog-day okok kpl **g**-ab-in **o**-p-in.
go garden-section here:and:there weeding do-REC:PAST-1sg come-PERF-1sg
I have just gone and weeded in the garden

o-p-in.
come-PERF-1sg
(and) have come (i.e. I've been weeding in the garden). (Pawley 1993:111)

Here, the Kalam differs from the English 'pragmatic translation' (Pawley 1993:110) in explicitly mentioning both the movement away of a participant from a pivotal location (in this case, from the present location of the conversation) to another scene, and that participant's return to the first location. *am-* indicates that B had to go somewhere else to garden, while *ap-* (in its suppletive form /o-/) tells us that he returned to the place of the speech event. English does **not** normally require this information to be made explicit, especially in cases like the one above, in which the return of B is predictable from the fact the speech event is taking place at all. Kalam strongly favours mention of such movement.[1]

The reference point to which movement is oriented is not necessarily the location of the present speech event, but rather is related to the viewpoint of the speaker. In 3.3, the deictic centre is *yad* 'I', and the third person singular participant goes to another location (the *smi* or dance festival) and then returns to where *yad* is. In this sentence, too, the movement between scenes is associated with transfer of an object (*bis* 'beads') — hence *d am* 'get go ≈ take' (to the *smi*) and *d ap* 'get come ≈ bring' (back to the location of *yad*).

3.3 Yad nuk bis **ñ**-ab-in, nuk **d** **am** smi **adi**-n-muŋ,
I him beads give-REC:PAST-1sg he get go singsing wear-OPT-3sg
I gave him beads, he took them to wear at the *smi* festival,

kolkol **g**-i, **d** **ap** **ñ**-b-ø.
tangling do-SS:PRIOR get come give-PERF-3sg
he tangled them and brought them back and gave them to me
(i.e. he gave them back tangled). (Dictionary KOLKOL entry)

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1 Note that A's question explicitly asks for this information to be provided.

Example 3.3 also illustrates that English can encode orientation towards a deictic centre just as readily as Kalam, although the coding methods used differ between the languages. Where Kalam uses a separate verb stem, English may use a particle ('(give) back', '(take) away') or include orientation in a single verb ('bring' vs 'take'). The important difference between the two languages is that Kalam requires mention of movement to and from pivotal locations, even when this would be predictable.[2] As we will see in §3.2.3, efficient coding methods exist in Kalam to allow such movement to be mentioned economically where it seems necessary.

3.2.2 General patterns of Kalam event reports

This section discusses the way in which verb stems are combined in event descriptions, and in particular the sub-components of a complex event which need to be mentioned in such a description. I use 'event' in a fairly loose sense here, to refer simply to 'something that happened' (or some state that existed) at a given time, or over a given period (Pawley 1993:109). These events may or may not be internally complex. More specifically, what is being discussed here is the way such events are described by Kalam speakers, rather than 'objective' events themselves—the relationship between objective and reported events need not be direct, as has been pointed out by Grace (1987:25ff.), among others.

Pawley (1993) illustrates the way Kalam describes 'deliberate action' events with extracts from the introduction to the KHTs, in which Saem Majnep, the author, is talking about hunting game mammals. Note firstly that there is no single verb in Kalam corresponding to English 'hunt'. Instead, the description is based around the method of killing—for game mammals, *pak-* 'hit, strike'. In addition, other verbs are routinely used in descriptions of hunting events, mentioning activities closely associated with the killing of animals.

3.4 … basd yes ogok **md**-l
ancestor distant these stay-SS:PRIOR
… the ancestors, having stayed (there),

kti **am** kmn **pak** dad **ap**-l nb okok,
they go game:mammal hit carrying come-SS:PRIOR place around
they used to go and kill game mammals and come back with them to these places,

ad **ñb**-elgp-al.
cook eat-PAST:HAB-3pl
and cook them and eat them. (Intro #17)

In 3.4 above, the ancestors first **go** from where they were staying (in the ritual cordyline enclosures), **hit** (i.e. kill) game mammals, **carrying** (the animals) **come** (back to the ritual enclosures), and then **cook** and **eat** (the animals, in the ritual enclosures). Very similar orderings of the same verb stems occur often in this narrative, even though the specific aspects of the hunting process which are being emphasised, and the coding methods involved, can differ. Consider, for example, the following extract, where 'the narrator is

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[2] Pawley (1993:111) suggests that this discourse preference has parallels in some of the conventions of syntax, such as the obligatory marking of singular versus plural, and of definiteness versus indefiniteness, on English nouns, which often lead to redundant coding.

mainly concerned with the fact that the ancestors used to transport game to the ritual enclosures for cooking and consumption' (Pawley 1993:113ff.).

3.5 … sblam mgan **kn**-l,
cordyline enclosure sleep-SS:PRIOR
… having slept in the cordyline enclosures,

kmn **pak** **d-ap** **ad** **ñb**-l, **ap**-elgp-al.
game:mammal hit get-come cook eat-SS:PRIOR come-PAST:HAB-3pl
they used to kill game and bring it and cook it and eat it there, (and) they used to come (back home). (Intro #22)

Note the difference in coding methods, coupled with the consistency in ordering of verbs, between 3.4 and 3.5. In 3.4, *am-* 'go', *pak-* 'hit' *dad ap-* 'come carrying, come with' form one SVC, while *ad-* 'cook' and *ñb-* 'eat' form another. In 3.5, *pak-*, *d ap-* 'get come ≈ bring' (which performs much the same function as *dad ap-* above), *ad-* and *ñb-* constitute a single SVC. But the same kinds of verbs are used in each case.

So, in reporting an event involving deliberate action, certain things over and above what seems to be the central action itself need to be stated. According to Pawley (1993:111):

3.6 A well-formed report of a deliberate action event should, generally, indicate the following information:

1. Whether or not the actor had to move from his/her previous location (scene 1) to the scene of his/her action(s) (call it scene 2).
2. What he/she did at scene 2. If his/her action was aimed at obtaining something, whether or not he/she obtained it.
3. Whether or not he/she moved from scene 2 to another location (scene 3) and whether or not he/she carried the object obtained in 2.
4. What he/she did with the object obtained at scene 2 (or if transported, at scene 3).

This organising principle of Kalam discourse is manifested by a number of speech formulas (the standard expressions, above word level, that languages use for talking about familiar subject matters: see Pawley 1986). For example, Pawley (1993:112ff.) summarises the 'general hunting formula' exemplified in 3.4 and 3.5 above as involving a number of elements, some obligatory, some optional, which constitute part of any description of a succesful hunting event.

1	2	3	4
MOVE/STAY	KILL GAME	((CARRY) MOVE)	(COOK (EAT)-INFL)

Figure 1: 'Hunting game mammals' formula (Pawley 1993:112)

In 3.4, for example, *am-* is the element corresponding to the initial MOVE constituent (which in turn corresponds to conceptual element 1 above, whether or not the actor had to move to a new location). *pak-* 'hit' is the method used to kill game (the default for humans killing game mammals). Movement to the next location (in this case, to the ritual cordyline enclosures), bringing the *kmn*, is coded by *dad ap-* 'carrying come'. Finally, the action at

the enclosures, cooking and eating, is fully encoded in this instance, using the SVC *ad ñb-* 'cook and eat'.

There is a sense in which event descriptions such as 3.4 or 3.5 centre around the verb *pak-* 'hit'. In certain utterances, the sequence as a whole may be represented by *pak-*.[3] We could say that the action which takes place in stage two of 3.6 is the **pivotal** action of such an event description, with the other stages of the description encoding either **orientation** (*am-*, *ap-*) or **peripheral** events. Speakers may choose to omit some of the non-pivotal stages.[4] But the constituents of the formula are closely associated, as can be seen when the formula is 'telescoped', as in the following relative clause.[5]

3.7 B **pak ñb n**-p-al ogok.
man hit eat know-PERF-3pl those/pl
experienced hunters (lit. those men that know how to hit and eat) (VI #25)

3.2.3 Serialisation and event reports

The Kalam formulas discussed by Pawley describe the semantic classes of verbs used in reports of familiar events, and indicate the linear order of those verbs, but offer only schematic detail on the way these are actually coded. What syntactic means are used to implement these formulas? More specifically, how do Kalam 'deliberate action formulas' fit in with serialisation? The examples of the 'general hunting formula' above indicate that there is considerable freedom in the coding of formulas. Evidence from another, more specific, formula, shows that the interaction between serialisation and other methods of coding relationships between verbs is a complex one.

1	2	3	4
MOVE/STAY	DIG ((CARRY) MOVE) KILL RODENT	((CARRY) MOVE)	(COOK (EAT)-INFL)

Figure 2: 'Hunting burrowing rodents' formula

Descriptions of hunting small rodents resemble the general hunting formula above except that, since these animals live in burrows underground or in foliage, mention of digging down into the burrow (*yg-* 'dig') precedes the method of killing (again *pak-* 'hit'). The foliage may be quite thick, and digging through it may take time. This adds extra

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3 It is not clear, however, what discourse circumstances would allow such an abbreviated form to constitute a well-formed description.

4 Alternately, it is possible to focus on the orientational stages without mentioning any non-movement actions:

B-nak Ptipesa Biks nuk kapkap **amn**-a-k Womk,
man-your Professor Biggs he secretly go-3sg-PAST Womk
Our friend Professor Biggs went secretly to Womk,
am-i Tbamkab **am**-i **ow**-a-k.
go-SS:PRIOR Tbamkab go-SS:PRIOR come-3sg-PAST
having gone to Tbamkab Bluff he returned (having been forbidden to travel in these restricted areas by the Government Officer). (Kas 1981:385)

5 *nŋ-* 'know, perceive' in SVC-final position often indicates that the actor is an expert in, or habitual practioner of, the activity coded by the previous verbs.

internal complexity to the action stage of the formula, nesting an event-sequence involving movement between scenes inside it (cf. Pawley 1987:346). So the formula would be something along the lines of Figure 2 above.

Large parts of the formula can be coded as an SVC, as in 3.8 and 3.9.

3.8 As nb ak, **yg pak d-ap ñb**-l …
rodent such this dig hit get-come eat-SS:PRIOR
Having dug and hit and brought and eaten this rodent
(i.e. a rodent of this kind) … (XIII #75)

3.9 Bin pataj ogok **am yg pak** dad **ap**-elgp-al …
woman young these go dig hit carrying come-PAST:HAB-3pl
Young women used to go and dig and hit and bring back (these animals) …
(XIII #29)

On the other hand, most of the components can be coded in separate clauses (typically marked by SS:PRIOR morphology), as in 3.10.

3.10 **Nō**-l, **yg**-l, **pak**-l, dad **o**-p-al …
see-SS:PRIOR dig-SS:PRIOR hit-SS:PRIOR carrying come-PERF-3pl
they see (it) and dig, and hit (it), and carry it back … (XIII #144)

When Kalam talk about hunting rodents, most verbs can be either serialised or put into a series of separate clauses. Most logically possible combinations of serialisation and clause chaining can be used. In a sample of 70 digging and hitting events,[6] the two core verbs of the formula, *yg-* 'dig' and *pak-* 'hit', occurred serialised together in 39/70 reports (≈ 55%), and in different clauses 33/70 (≈ 45%) of the time.

In some cases, SVCs haven't been chosen for all or part of the formula for reasons to do with discourse and syntactic structure. For example, 3.11 and 3.12 both have arguments or modifiers in the *pak-* clause, material which would not be able to intervene between the stems *yg-* and *pak-* in an SVC.

3.11 … bin-b pen **yg**-l, koŋay yb **pak**-ngab-al …
woman-man but dig-SS:PRIOR many really hit-FUT-3pl
… (if) people dig, they will kill a large number … (XIII #43)

3.12 … **yg**-l, kasek **pak**-l, dad **o**-p-al.
dig-SS:PRIOR easily hit-SS:PRIOR carrying come-PERF-3pl
… having dug, they easily hit (the animals), and (then) carrying (them)
come back (i.e. they dig in and catch them easily, and return home).
(XIII #105)

Example 3.11 allows *koŋay yb* 'very many' to modify *pak-*. While it is possible to say *koŋay yb yg pakpal*, it is unlikely that *koŋay yb* would ever follow *yg-* in an SVC.[7] Example 3.12 illustrates a similar phenomenon with the modifier *kasek* 'easily, quickly'. Note that if *kasek* were to precede both *yg-* and *pak-* in an SVC, it would necessarily have scope over both verbs. These are syntactic reasons for not coding the sequence *yg-* and *pak-* in an SVC. The syntactic reasons obviously correlate with (and probably are

6 Taken from KHT VII (Majnep and Bulmer n.d.), Chapter XIII, which concerns three animals hunted in this way.

7 The only verb stems that *koŋay yb* follows in SVCs are *am-* and *ap-* (in the KHT database). See §4.3.

consequences of) semantic/pragmatic reasons for using multi-clausal coding methods in these cases. The presence of modifiers or overt arguments in the *pak-* clauses is likely due to the speaker's desire to foreground those clauses. This can only be done in a multi-clause construction, since SVCs have tighter restrictions on the distribution of non-verbal elements.

So syntactic, semantic and discourse reasons are all implicated in the choice between serialised and non-serialised coding. A final set of examples will illustrate the interaction of these features with the issue of which event reports get coded in SVCs. Compare the SVC 3.8, repeated below as 3.13, with 3.14.

3.13 As nb ak, **yg pak d-ap ñb**-l …
rodent such this dig hit get-come eat-SS:PRIOR
Having dug and hit and and brought and eaten this rodent
(i.e. a rodent of this kind) … (XIII #75)

3.14 '… tap acb acb nb ogok **yg**-l, **pak** dad **ap**-l,
thing little little so these dig-SS:PRIOR hit carrying come-SS:PRIOR
'… we dig out these little things and hit and carry them back,

ñ-o-n, **ñb**-l, kub **g**-ø-laŋ' **ag**-l …
give-DS:PRIOR-1pl eat-SS:PRIOR big do-HORT-3pl say-SS:PRIOR
and give them (to our children), and having eaten (them), they should grow big', having said … (They used to dig out these little animals and give them to their children, so that they could grow big and strong) (XIII #138)

The normal interpretation of SVCs is that all stems share the same subject, and the same polarity. For example, in the SVC in 3.13, all verb stems share the same actor (3pl, marked in a later clause), and all stems are asserted. However, 3.14 describes a situation in which mothers dig up and kill animals and then give them to their children to eat. There is a difference in actor between *ñ-* 'give' (and the verbs of the two preceding clauses: 1pl) and that of *ñb-* 'eat' (3sg: the child). This is marked overtly by DS:PRIOR morphology. Hence the situation described in 3.14 couldn't be coded in an SVC.

It also happens that people kill an animal but discover they don't want to eat it for some reason: because of ritual restrictions, or because the animal nauseates them.

3.15 Kmn nb ak **pak**-l,
game:mammal so this hit-SS:PRIOR
Having killed (one of these) game mammals,

kti aŋ, bin pataj b pataj ogok ma-**ñ**-b-al …
they well woman unmarried man unmarried these NEG-eat-PERF-3pl
well, unmarried women and men don't eat it … (XII #35)

In 3.15, young unmarried women and men, who can easily get something better to eat, don't touch the *kuypep* water-rat, on account of its rank smell. They kill the *kuypep* but don't eat it;[8] this couldn't be coded in an SVC since the scope of *ma-* negation is over all stems in an SVC (see §4.4.2). An SVC such as *kmn ak ma-pak ñbal* 'game:mammal this NEG-hit they:ate' could **only** mean 'they didn't kill and eat this game mammal'.

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8 They often give it to old people or children instead.

These syntactic restrictions interact with the functions of SVCs. If well-formed descriptions of events require a good deal of predictable or hardly relevant detail, there is an obvious advantage in saying it as economically as possible. In the context of event reports in Kalam, Pawley (1993:112) says:

> From the foregoing account the reader may think the event-reports in Kalam are usually long and cumbersome. But such is not the case. Discourse rules interact with clause and interclausal syntax to give streamlined formulas which allow various types of events to be reported in a standard and efficient way.

And later:

> Such relatively complex formulas are often realized in discourse by a standard sequence of no more than 8 or 9 syllables, spoken in a one to two second burst. (Pawley 1993:113)

Serialisation provides a stripped-down method of coding, but one which allows less flexibility than interclausal syntax. Hence serialisation is most useful when events conform to the expected pattern (where 'expected' refers to those aspects of events considered most salient in Kalam discourse). It provides an efficient way of coding routine sequences of events. When such sequences deviate from the norm, or some subevent seems particularly worthy of mention for whatever reason, serialisation may not be suitable as a coding method.

3.3 Distribution of the verbs of motion

The preceding account of patterns of discourse structure in Kalam has prepared the way for a more detailed treatment of the distribution of verbs of motion in SVCs. Section 3.3.1 provides some basic terminology useful for the discussion of verbs of motion introduced in §3.3.2 and expanded in the following five sections.

3.3.1 Definitions of verbs of motion

For the purposes of this discussion I will define a **motion stem** as any single stem which can follow the adjunct *dad* 'carrying' (see §3.3.5). Stems which can appear in this environment include *am-* 'go', *ap-*'come', *tag-* 'walk about', *padk-* 'go past', *yok-* 'displace, put somewhere else', *n-* 'join others, go in the company of others', which all accord reasonably with the semantic idea of a verb stem with some motion component. While *tan-* 'ascend' and *yap-* 'descend' don't appear on their own after *dad* (although they occur in compounds with *ap-*), they are distributionally equivalent to *am-* and *ap-* in other ways, and should be included with the former on notional grounds at least.[9]

am- 'go' and *ap-* 'come' are the verb stems which appear most often in this position. Of all clauses containing *dad* in the KHT database, 153/177 (≈ 85%) were followed by single tokens of either *am-* or *ap-* (86 instances of *ap-*, 67 of *am-*). Complex or iterated forms based on *am-* or *ap-* accounted for another 13/177 (≈ 8%).

The combinations of stems which can appear following *dad* include *ap tan-* 'come ascend', *ap yap-* 'come descend' and *ap tan ap yap g-* 'come ascend come descend do'. As mentioned in §1.6.2, these combinations also act as units in respect of iteration.

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9 See §4.3.3 on some similarities between *tan-* and *yap-* and the basic motion stems.

A single motion stem, or a combination of motion stems, which can occur after *dad* can be referred to as a **motion verb**.[10] I symbolise these potentially complex verbs as *MOTION*. *am-* and *ap-*, and compound motion verbs based on *ap-*, can also follow *d-* 'get', with the whole complex again acting as a unit for purposes of iteration (see §1.6.2). Both ***d* + *MOTION*** and ***dad* + *MOTION*** combinations, which share functional similarities, will be referred to as **augmented motion verbs**.[11] The term **verb(s) of motion** refers to all the above classes.

3.3.2 Overview of verbs of motion

In this section I briefly summarise the distribution of verbs of motion, principally *am-* 'go' and *ap-* 'come' and forms based on these verb stems, in Kalam SVCs. *am-* and *ap-* have a considerable amount of positional freedom in SVCs, and fewer restrictions than other verb stems on the stems they can co-occur with in such constructions.[12] The placement of verbs of motion has an important role in the structure of Kalam SVCs. At least three positions for the placement of motion verbs can be distinguished: **initial** (in the case where verbs of motion are the first stem(s) in an SVC), **middle** (after a non-motion verb[13]) and **final** (the position immediately preceding verb affixes). Each position is associated with a specific subset of the verbs of motion.

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10 Note that this introduces a distinction between **verb** and **verb stem** in Kalam. A verb may consist either of a verb stem (possibly combined with adjuncts) or a sequence of verb stems which can act as a constituent within SVCs in some contexts.

11 Of course, *d* + *MOTION* combinations could just as easily be considered transitive verbs with a deictic component. What is important is that in certain contexts where motion between scenes needs to be mentioned, it is these tightly-bound combinations rather than plain motion verbs which are required.

12 The following information illustrates how common *am-* and *ap-* are in SVCs, and how little restriction they place on the verbs which may follow them. Firstly, nearly 25% of all the SVCs in the KHT database contain at least one instance of *am-*; 22% contain at least one instance of *ap-*. 45.7% (401/876) of all SVCs contained one or the other of these verbs (11 SVCs had both *am-* and *ap-*). Of these, the majority were non-final; 187 instances of *am-* (21.4% of SVCs) and 164 tokens of *ap-* (18.7%) (tokens of verb stems repeated immediately adjacent to each other were counted as a single instance of that verb stem). Together some 39.8% of SVCs contained instances (again, not counting repeated tokens) of one or the other verb stem non-finally (two contained tokens of both). More importantly for our purposes here is the range of verb stems which can follow these two stems. In the KHTs, a total of 35 verb stems were able to follow *am-* in SVCs; some 25 could follow *ap-*. All in all, *am-* and *ap-* could be followed by any of 42 verb stems (out of a total of 77 stems altogether in the KHTs, of which only 62 appeared in SVCs). By way of contrast, *d-* 'get' and *tk-* 'separate, give birth, etc.', which occurred non-finally with roughly comparable frequency (117 for *d-*, 111 for *tk-*) could be followed by only 12 and 14 different stems respectively in the KHT database. Further, there was a rough correlation between the frequency with which a verb stem appeared in SVCs and its ability to follow *am-* or *ap-*. All stems which appeared in nine or more SVCs (31, exactly half of the stems which could be serialised) could follow one of *am-* or *ap-* in an SVC. (Other stems which occurred less frequently could also be serialised after *am-* or *ap-*). Overall, it seems as if *am-* and *ap-* don't have selectional restrictions, or at least have fairly loose restrictions, on the kinds of verbs which can follow them in SVCs.

13 I refer to this position as 'middle' rather than '(SVC-)medial', since the latter term could easily be confused with medial (i.e. dependent; see §1.5.1) verbs in Kalam.

Initial	Middle	Final
MOTION/d + MOTION	*d + MOTION*	*dad MOTION/d ap-*
		MOTION (after *ptk-*, etc.)

Figure 3: Positions of verbs of motion within SVCs

Figure 3 illustrates the verbs which code each of these positions. Figure 4 sketches out the interaction between the verbs of motion occupying these positions and both non-motion verbs and NPs.

Initial	(Arg(s)) non-motion verb(s)	**Middle**	(Arg) non motion verb(s)	**Final** (INFL)

Figure 4: Interaction of verbs of motion with other verbs and arguments

These positions, and the choice of verb stems or combinations used to code them, can be better understood in terms of the picture presented in 3.6 (from §3.2.2) of Kalam's discourse requirements. The connection between the positions of individual verbs of motion and these discourse requirements will be expanded on in the sections which follow.

3.3.3 SVC-initial *am-* and *ap-*

am- and *ap-* often occur as the first verb of an SVC to mark movement of an actor to the location of a pivotal action.

3.16 … mab yesek ogok pen **am** **kn**-u-b.
tree different these but go sleep-3sg-PERF
… so it **goes** and **sleeps** in different trees. (III #41)

The bare motion stem may be followed by a large amount of non-verb material: in 3.17, a locative element (*Sapkoy-Sagaym kab okdaŋ*) and the object of the next verb stem (*kañm ak*, object of *ñb-* 'eat') follow *ap*.

3.17 … kmn ak **ap** Sapkoy-Sagaym kab okdaŋ,
game:mammal this come Sapkoy-Sagaym rock across
… a game mammal having come to the rocks over at Sapkoy-Sagaym

kañm ak **ñb**-l …
banana this eat-SS:PRIOR
(and) eaten bananas … (Madaw Sosm #24)

The ability of motion stems to be followed by lengthy non-verb elements sets them off from other classes of stem. In terms of the role of motion verbs in discourse structure, this syntactic freedom allows movement to new scenes to be mentioned, then the new scenes themselves and new objects at the new scenes. The distribution of non-verb material within SVCs is discussed in detail in the next chapter. For the moment it is important to note that verbs of motion (including those serialised with *d-* 'get', which I discuss in the next section) can occur before virtually any other verb stem or SVC. This means that they can appear before verb stems which otherwise aren't serialised (see fn.12). Motion verbs

also appear in *g*-support constructions (see §1.6.3), which otherwise don't allow other verb stems to precede them. In other words, motion verbs have considerably greater positional freedom than, and considerably different syntactic behaviour from, other verb stems in SVCs.

3.3.4 Functions of *d am-* and *d ap-*

Section 5.2.5 discusses the tendency for *d-* 'get' to be closely associated with verb stems. This close association is particularly evident with *am-* and *ap-*, and with *ap tan-* and *ap yap-* (which, as was mentioned above, act as single units both for iteration purposes and when preceded by *d-*). *d am-* (≈ 'take') and *d ap-* (≈ 'bring'), which are highly recurrent in Kalam, allow in principle for objects to be mentioned in association with the basic verbs of motion.

3.18 ... *kmn* *ak* **d-ap**-l,
game:mammal this get-come-SS:PRIOR
… having brought *the game mammals*,

wad-sek ak **sog**-a-k …
string:bag-with this pour:out-3sg-PAST
he tipped out bag-fulls (of them) … (II #78)

3.19 … ksen cn *wgi* *ogok* **d-am** kab **agl ad** **ñb**-lg…
later we bandicoot these get-go stone heat cook eat-SS:SIM
… later (when) we take *the wgi bandicoots* and heat oven-stones and cook and eat (them) … (III #160)

Movement from the scene of an action to another scene normally involves mention of the result of the action. Given that *d am-* and *d ap-* are transitive, it is only logical that these verbs can be used when mentioning movement between scenes, as in the examples below.

3.20 Kmn mosak ognap **pak**-l,
game:mammal bamboo:kapul some hit-SS:PRIOR
Having killed some *mosak*

d-am mlep ak **l**-l …
get-go dry this become-SS:PRIOR
and taken them and dried them (*mlep l-* 'dry (vb.)') … (III #85)

3.21 … mj bep **tk** **d-ap** nb okyaŋ **yok**-l…
leaf plant:sp break get-come place below displace-SS:PRIOR
… (they) break off *bep* leaves and bring them and tip them in below … (I #72)

However, examples such as 3.22 indicate that *d* + *MOTION* doesn't necessarily correlate with the presence of syntactic objects.

3.22 … **yg** **d-ap** **d-ap** **d-ap** nb awl **ap**-l,
dig get-come get-come get-come place here come-SS:PRIOR
… they dig further and further and further in,

mey **nŋ**-l, **pak**-p-al ak.
this:one see-SS:PRIOR hit-PERF-3pl this
(until) they see (the occupants), and kill (them). (XIII #11)

It is possible that some type of object is implicit in 3.22 — twigs, dirt, rubbish from burrowing, perhaps. This is supported by 3.23 below, in which *l-* 'put' also implies that an object is present.

3.23 … mab-yb alyaŋ **su-tk** **d-am** okyaŋ **l**-l,
tree-epiphyte below bite-sever get-go far:below put-SS:PRIOR
having burrowed down into a clump of epiphytes,

'katp **g** tep **g**-eb-in' **ag**-a-k …
house do good do-PRES:PROG-1sg say-3sg-PAST
'I am building a proper house', it said. (III #40)

But despite the fact that *yg-* 'dig' is a transitive verb, overt objects don't appear in constructions such as 3.22, in which *yg-* is followed by *d* + *MOTION* verbs. Two other issues need to be considered in this regard. Firstly, Kalam generally likes to keep the number of NPs per clause to a minimum (Pawley 1993:95). Secondly, as we discuss in §3.3.6, if action stems are followed by motion verbs in SVCs, augmented motion verbs are used in all but a few restricted cases. Hence it may be that *d* + *MOTION*, originally used to allow mention of syntactic objects, has become obligatory following a certain class of stem (roughly, transitive verbs), regardless of whether or not objects are present.

3.3.5 *dad* + *MOTION* constructions

It was noted in §3.3.1 that the class of verbs which follow the modifier *dad* 'carrying' always have some motion component.[14] *am-* and *ap-*, and forms based on *ap-*, are the most common verbs in this position. In cases where the literal meaning of *dad* is most obvious, it allows the intransitive verbs of motion to take non-locative objects, expressing patient or comitative roles. This is comparable to the function of *d-* in the *d* + *MOTION* constructions mentioned above. The following sentences illustrate the overlap between these two constructions.

3.24 … tap alŋaw kab ak **tk** **d-ap**-l …
thing pandanus nut this separate get-come-SS:PRIOR
… having broken off and brought the pandanus nuts … (Intro #20)

3.25 … alŋaw kab **tk** dad **ap**-l …
pandanus nut separate carrying come-SS:PRIOR
… having broken off the pandanus nuts and come carrying them … (Intro #23)

However, *dad* + *MOTION* almost always occurs SVC-finally,[15] while *d* + *MOTION* has a wider distribution.

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[14] The KHTs also have one instance each of *dad* before *jm ñ-* 'connecting give = connect' and *g-* 'do'. These constitute a very small percentage of the total number of constructions involving *dad* (2/167 ≈ 1.3%). Other than these two cases, *dad* has no existence independent from motion verbs in the KHTs.

[15] The construction is followed by another stem in only 7/98 of the SVCs involving *dad* in the KHTs.

The most concrete meaning of the *dad* + *MOTION* construction can be determined when *dad* is not preceded by a bare verb stem.

3.26 Ñg **am mal**-i, bakt dad **a**-s<a>w.
water go fill:with:water-SS:PRIOR bucket carrying come-PRES:PROG-3sg
Having gone and filled (it) with water, he is bringing the bucket. (Dictionary MAL- entry)

The meaning of 'carry' can be extended into allowing a comitative role to be expressed (note the presence in 3.27 of *sek* 'with, possessing' marking the comitative noun):

3.27 B kayn-sek ak dad **am**-l …
man dog-with this carrying come-SS:PRIOR
A man having gone (there) with his dog … (II #65)

When a verb stem precedes *dad*, the resulting SVC can be interpreted as a sequence of discrete events, as in 3.28, in which case a two-clause paraphrase is possible (3.29).

3.28 … kmn ak **pak** dad **ap**-l …
game:mammal this hit carrying come-SS:PRIOR
… having killed game mammals and brought them home … (Intro #24)

3.29 Tap mey kmn nb ogok **pak**-l dad
thing this:one game:mammal so these hit-SS:PRIOR carrying

ap-l …
come-SS:PRIOR
… having killed the game mammals, having come back with them …
(Intro #72)

In some cases, however, the idea of motion has been metaphorically extended to mark that the action of the preceding verb stem takes place over a wide geographical area, as in 3.30 and 3.31.

3.30 Kut lum kub **pk** dad okdoŋ **amn**-t-k-nŋ.
stick ground loudly hit carrying across:valley go-2/3dl-PAST-DS:SIM
They went across the valley beating the ground loudly with the sticks they carried. (Dictionary KWB(5) entry)

3.31 Kotwal ak mey **md** dad **ap-tan**-l,
scrub:wallaby this this:one live carrying come-ascend-SS:PRIOR
The *kotwal* lives all the way up,

l-u-p mey mñab Kotumdek-ayn won nb alyaŋ.
settle-3sg-PERF this:one land Kotumdek piece place below
it lives up as far as Lower Kotumdek. (I #168)

dad + *MOTION* can also indicate that the action of the preceding stems takes place over a wide interval of time, as in 3.32, which illustrates a common usage, 'give birth on down through the generations'.[16]

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[16] In fact, Kalam uses *ap*- 'come' in this construction — possibly generations are seen as moving towards the reference point of the speaker.

3.32 ‘… tap *monkey* ak **tk** dad **ap**-e-k
thing monkey this give:birth carrying come-DS:PRIOR-1pl
‘… a monkey having given birth (to our ancestors),

mey cn **md**-ob-n’ **ag**-ngab-al.
this:one we live-PRES:PROG-1pl say-FUT-3pl
now we are living’, they will say (i.e. they will say that they are descended from monkeys). (I #44)

3.3.6 SVC-final *am-* and *ap-*

In contrast to their prominence SVC-initially, the basic motion stems *am-* and *ap-* are quite restricted in their use at the end of SVCs. For one thing, they occur less frequently SVC-finally than elsewhere. In the KHT database, of the 218 instances of serialised *am-*, only 49 (< 25%) were SVC-final. *ap-* occurred SVC-finally in 63/194 (≈ 30%) serialised clauses.

More significantly, both verbs occur in a narrow range of environments SVC-finally. SVC-final *am-* and *ap-* mostly appear after *dad* or *d-*. These two elements allow the introduction of objects into SVCs, something the intransitive basic verbs of motion can’t do on their own. Both verb stems occur most frequently following *dad* ‘carrying’ (30/49 for *am-*, 52/63 for *ap-*) (see §3.3.5). *ap-* (but not *am-*, in this position) also appears after *d-* ‘get’ (in 3/63 instances) (see §5.2.5).

Serialisation with *dad* (and *d-*) is understandable in terms of the discourse structure of Kalam described in §3.2, which applies to reports of a wide range of activities in Kalam narrative. In addition to describing an action, speakers should also mention movement to and from the scene of the action. In describing the return from the action (e.g. killing an animal), it also seems desirable to mention what happened to the result of that action, or at least to mention that there was such a result. In syntactic terms, this means the verb of motion (describing the return) must be augmented in some way to allow an object to be present in the clause (even if there is no overt NP actually in the clause, it should be at least be able to occur). Hence SVCs involving sequences of actions (loosely speaking) do not end with just *am-* or *ap-*, but rather with *dad am-*, *dad ap-*, or *d ap-*, enabling the result of the action to be mentioned (if necessary).

Another possibility is for SVC-final tokens of *am-* or *ap-* to be preceded by other tokens of *am-* or *ap-*. The tokens can be separated by locative NPs, in which case the motion verbs usually match up: *am-* is followed by *am-*, as in 3.33, and *ap-* is followed by *ap-*.

3.33 … **am** nb alyaŋ **am**-osp-ø, gongaln **g**-e-k …
go place below go-REC:PAST-3sg track do-DS:PRIOR-(3sg)PAST
… it had just gone down below, and left tracks … (Madaw Sosm #33)

It is also possible for *am-* to be the only verb stem preceding *dad ap-*, as in 3.34.

3.34 … ñapay omŋal nb ak **am** dad **ap**-l …
child two such this go carrying come-SS:PRIOR
… having gone and brought back the two children … (I #120)

Multiple instances of *am-* and *ap-* account for a small proportion of SVC-final tokens of these two verb stems (10/49 for *am-*, 6/63 for *ap-*).

What of the remaining instances of SVC-final *am-* and *ap-*, those which immediately follow a verb stem other than *d-*? The other verb stems preceding SVC- final *am-* and *ap-* fall into two main divisions. The first class consists of more specific motion stems, notably *saŋd-* 'go out of sight', *tan-* 'ascend' and *jak-* 'arise'. Note that, in contrast to the complex motion verbs based on *ap-* discussed in §3.3.1, such as *aptan-* 'come ascend', the basic motion stems (usually *am-*) **follow** the more specific stems, possibly to add deictic specification to the latter.[17]

The second class, which I concentrate on here, are verb stems which are not inherently directional, such as *ptk-* 'be afraid', *ktg-* 'let go of, abandon, leave (something), finish doing (something)', and *tgaw-* 'draw a bow, prepare to shoot, ambush'.[18] Examples 3.35 and 3.36 illustrate the unserialised use of *ptk-* and *ktg-*.

3.35 Kun **g**-e-y, **ptk**-p-in.
thus do-DS:PRIOR-2sg be:afraid-PERF-1sg
When you do that, it makes me frightened/I am frightened.
(Dictionary PTK- entry)

3.36 **Ktg**-ø-an!
release-HORT-2sg
Let (it) go! / Cease! (Dictionary KTG- entry)

The basic verbs of motion provide a directional component to their meaning: hence *ptk am-* 'go in fear', *ptk ap-* 'come in fear', *ktg am-* 'leave (a thing or place) and go elsewhere', *ktg ap-* 'leave and come back (here)', *tgaw am-* 'draw back the bowstring and go, ambush thither'.

3.37 '**Ñag**-ø-in' **ag**-e-n, ***ptk*** ***am****-e-k* ...
shoot-HORT-1sg say-DS:PRIOR-1sg be:afraid go-DS:PRIOR-(3sg)PAST
I tried to shoot (him) (lit. 'Let me shoot', I said), *and he fled in fear* ...
(Dictionary YWK- entry)

3.38 Bin **ag** **n**ŋ-ab-in,
woman say perceive-REC:PAST-1sg
I 'asked' (i.e. tried to abduct) the woman,

kuk **g**-ab-ø, ***ptk*** ***o****-p-in.*
cry do-REC:PAST-3sg be:afraid come-PERF-1sg
she cried out, *and I fled here*. (Dictionary Nŋ- entry)

3.39 Yp **ktg** **amn**-ø-oŋ!
me(Obj) leave go-HORT-2sg
Leave me! / Let go of me! (Dictionary KTG- entry)

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17 In addition, *tan am-* 'ascend go = climb up (something)' specifically refers to an animate actor climbing in some location, whereas *tan-* 'ascend' can mean either 'climb' in this sense or, for example, 'grow (as a plant)', or 'shoot up (as of sparks)'. Note also that while *tan am-* has the same distributional freedom in SVCs as *am-* and *ap-*, *saŋd am-* and *jak am-* only occur SVC-finally in my database.

18 Possibly *kbi-* 'let remain, leave a place, cease', a near synonym of *ktg-*, also behaves like these verb stems. However, the fact that it ends in /i/ makes it difficult to distinguish between serialised (non-final) *kbi-* and the same stem marked for SS:PRIOR (at least in Etp mnm dialect, which is where all my evidence for this stem comes from).

3.40 … ‘mdak takn ak **tgaw** **ow**-j-n taw ak’ …
later moon this prepare:to:shoot come-OPT-1pl ridge this
… (they say,) ‘Later when the moon is out we should come and ambush (*ymduŋ*, tree-dwelling marsupials) on that ridge’ … (I #30)

Pawley (pers. comm.) points out that the distinction between verb stems which are followed by *d* + *MOTION*- or *dad* + *MOTION*- SVC-finally, and those which are directly followed by a motion verb alone, correlates well with transitive versus intransitive stems. Such a correlation makes sense in terms of the discourse requirements of Kalam. In leaving the scene of an action which is aimed at obtaining something (i.e. coded by a transitive verb), the speaker needs to mention that the actor brought the object to some new location. After some action which **didn’t** result in obtaining something (typically an action coded by an intransitive verb), all that needs to be mentioned is the movement of the actor. Note further that the transitive/intransitive and augmented motion/plain motion verb correlation is not perfect; *ktg*- ‘abandon’ is transitive, but is followed by *am*- or *ap*- alone, since the object of *ktg*- does not move with the actor after the act of abandoning has taken place. The choice of unaugmented versus augmented motion verbs seems to be made according to semantic (and ultimately discourse), rather than strictly syntactic, principles.

3.3.7 Distribution of *tag*-

tag- ‘walk about, travel, go to/return from a distant place’ differs from *am*- and *ap*- in not possessing a specific orientation to the speaker. Example 3.41 exemplifies the unserialised use of *tag*-.

3.41 … kjeŋ yesek okok **tag**-u-p …
path unfamiliar around walk:about-3sg-PERF
… it travels on unfamiliar paths … (I #6)

When *tag*- appears on its own in a clause, it can act much like *am*- and *ap*- in terms of introducing movement between discourse scenes, as illustrated by 3.42.

3.42 Kotwal ak yokop **tag**-l, **ña**-p-al
scrub:wallaby this just walk:about-SS:PRIOR shoot-PERF-3pl
The *kotwal*, they (the hunters) having just walked around, they shoot (it) (i.e. they hunt *kotwal* by stalking and shooting them). (I #156)

However, *tag*- acts differently from *am*- and *ap*- in SVCs. Firstly, it is serialised less frequently than either of these verbs. In the KHTs, 50 of the 161 clauses it appeared in were SVCs (i.e. approximately 31%; as opposed to 218/499 ≈ 43% for *am*-, 194/363 ≈ 53% for *ap*-). More importantly, serialised *tag*- is more restricted in position than either *am*- or *ap*-. It tends to be SVC-final (33/50 occurences = 66%). The occurrence of *tag*- non-finally in SVCs is restricted to a limited number of environments. It can occur before *nŋ*- ‘perceive, see’ (often in the sense of ‘know how to’) (see §6.4) and *met nŋ*- (see §4.4.4). It also appears directly before *l*- ‘put’, in which case *tag*- is iterated.[19] Unlike *am*- or *ap*-, non-final *tag*- isn’t followed by locative elements or objects.

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[19] In constructions like *pak ñb tag tag l*- ‘hit eat walk:about walk:about put’, *l*- may be a dummy element, allowing *tag*- to be iterated (*g*- is the only verb stem in my database which can be iterated in SVC-final position).

Even in SVC-final position, *tag-* can be interpreted differently from *am-* and *ap-*. The following examples show the use of *tag-* SVC-finally.

3.43 B kmn **pak ñb ta**-p-al nb ogok …
man game:mammal hit eat walk:about-PERF-3pl place these
The men walk about hunting (hitting and eating) game mammals …
(Intro #19)

3.44 Kmn nb ak ney nep ak,
game:mammal such this it alone this
so this game mammal (unlike the others),

ñb tag*-engab-ø* *ñg* *bakbak* *okok ...*
eat walk:about-FUT-3sg water bank around
(it) will walk about on the banks of streams feeding ... (XII #38)

3.45 B-nak nuk kubap **d**-i, yakt **tow**-ng,
man-your he pearl:shell hold-SS:PRIOR bird buy-SS:PROSP
That man having held the *kubap* pearl shell, in order to buy birds,

yom yom g ta*-s<a>p.*
show show do walk:about-PRES:PROG-3sg
he is walking around displaying (it) (i.e. that man holding the *kubap* pearl-shell is walking about displaying it so that he can buy birds (plumes) [with it]). (Dictionary YOM entry)

In 3.43 and 3.44, and similar cases, it is possible to interpret *tag-* either as marking movement away from the scene(s) of actions (in 3.44, hitting and eating and then going elsewhere), or as indicating that the actions concerned are habitually associated with moving from place to place (as reflected in the translations). 3.45 strongly favours the latter interpretation. The examples above suggest that SVC-final *tag-* has the potential to be further reanalysed as a habitual or durative marker.[20]

3.4 Verbs of motion and discourse structure

We are now in a position to describe the interaction between the discourse requirements presented in §3.2 with the verbs of motion which have been the subject of §3.3. Recall that §3.3.2 introduced a set of positions for motion verbs in SVCs, repeated here as Figure 5.

Initial	Middle	Final
MOTION/d + MOTION	*d + MOTION*	*dad MOTION/d ap-*
		MOTION (after *ptk-*, etc.)

Figure 5: Positions of verbs of motion within SVCs

[20] This seems to have happened with a related verb in Kobon, which has a bound durative morpheme with two grammatically determined allomorphs, /-ai~-ei/ and /-aj/ (Davies 1981a:174). The latter may be related to the Kobon verb *aj-* 'walk'. Note that Ti mnm dialect in Kalam is also said to have the verb stem *aj-* as an equivalent to (Ti and Etp mnm) *tag-* (Dictionary AJ- entry).

The first two positions are associated not only with specific verbs of motion, but also with the possibility of being followed by NPs. This will be discussed in more detail in the next chapter, particularly in §4.3.3. For the time being, note that a good deal of freedom is allowed in SVC-initial position for both simple motion and *d* + *MOTION* verbs to be followed by arguments. In middle position (i.e. after non-motion verbs, but non-finally) this freedom is somewhat restricted — verbs of motion are less frequently followed by NPs in this position, and the non-verb material which follows them is generally shorter and less complex. As the SVC moves towards its last verb, less new nominal information can be coded. Even in non-initial position, however, verbs of motion still have more potential to be followed by arguments than non-motion verbs. The arrangement of non-motion verbs and arguments relative to these positions was summarised in Figure 4, repeated here as Figure 6.

Initial	(Arg(s)) non-motion verb(s)	**Middle**	(Arg) non motion verb(s)	**Final** (INFL)

Figure 6: Interaction of verbs of motion with other verbs and arguments

Example 3.46 summarises Pawley's schema of the things the Kalam language focuses on when reporting certain events (cf. 3.6).

3.46 According to Kalam, if you are an actor in a certain kind of event you:

1. Go somewhere.
2. Do something there.
3. Take the result of that action, if any, and go somewhere else (if you need to), so that you can
4. do something with it.

As we saw earlier (in §3.2.3), any stage of that sequence can be coded in an SVC, or a sequence of stages can, or the whole thing can. Here, we are focusing on the 'movement to or between scenes' stages (1 and 3). Movement **to** the scene of an action (stage 1) normally doesn't require you to mention bringing anything; hence typically *am-* rather than *d am-* would be used. In the case of *tgaw-* 'draw back the bowstring, (get in readiness to) ambush', you bring not an object (from a previous scene) but (notionally at least) an instrument (to aid you in getting patients at the present scene); this may explain why *tgaw-* is also followed by *am-* or *ap-*. Movement **from** that scene, however, does normally involve taking something with you (the result of the action at the scene). Hence stage 3 is coded by motion verbs following *dad* or *d-*. There are few occasions on which one leaves a scene empty-handed, according to Kalam discourse logic: one is when you are scared by something, and take off, and another is when you leave something at some location. Hence *ptk-* 'be scared' and *ktg-* 'abandon' are followed by single motion stems. Plain motion stems are also used to denote movement from locations after some expected result hasn't been gained. In 3.47, where the dogs return with their booty, *dad opal* 'they carry it back':

3.47 … kayn ognap **su**-wl, maglsek **ñ**-b-al,
dog sometimes bite-SS:PRIOR all eat-PERF-3pl
… sometimes when dogs have killed (an animal), they eat (nearly) all (of it)

skol-bad ogok nep dad **o**-p-al.
small-part these precisely carrying come-PERF-3pl
just bringing a very little home. (XIX #29)

Compare this with 3.48, where the dog returns home empty-pawed (*owp* 'it comes').

3.48 … ñn ognap wtsek **d-ap-tan** **d-ap-yap** **g** **g**
time some chasing get-come-ascend get-come-descend do do
… sometimes it (the dog) chases (animals) up and down, on and on,

met **nŋ**-l,
not perceive-SS:PRIOR
but doesn't succeed (in catching any),

adkd katp o-w-p.
turning house come-3sg-PERF
(and) returns home. (XIX #28)

In addition to knowing which verbs code which types of movement, we also need to know how different types of movement fit in with the positions of verbs of motion outlined above. It is important to remember that an SVC can code virtually any portion of the kinds of event descriptions we are dealing with here. So where exactly particular discourse movements come in an SVC is largely a matter of which bit of the discourse the construction is coding. SVC-initial verbs of motion can encode initial movement to an event. This usually involves plain motion verbs. *d + MOTION* at the beginning of SVCs indicates that the result of the action(s) of the previous clause is being moved to a new location. Normally this correlates with stage 3. However, since we are dealing with ongoing discourse, event descriptions may overlap, so that results from previous events may still be relevant to the one at hand: hence *d + MOTION* can be ambiguous between movement to and movement between scenes. Following non-motion verb stems in SVCs, *d + MOTION* or *dad + MOTION* normally occur. Since an action (the one coded by the non-movement verb(s): motion verbs code actions as well, of course, but their actions have a different status in discourse) has taken place, motion verbs always code movement between scenes in this position. Only in the special cases where objects are no longer relevant (such as after *ptk-*) will plain verbs of motion be used here.

To sum up, then, verbs of motion behave differently from other stems in Kalam, with respect to their distribution in SVCs, and in terms of allowing arguments to follow them. Motion verbs act syntactically as 'hinges' for introducing such information: this syntactic role correlates with their discourse role of encoding movement between locations.

Mñi tep agdpin.

4 *Arguments and modifiers in SVCs*

4.1 Introduction

This chapter deals with the treatment of arguments and modifiers within Kalam SVCs. We begin with a brief outline of aspects of the argument structures in Kalam SVCs generally (§4.2). This is followed by an investigation into the distribution of non-verb material, particularly NPs, within the string of verb stems in an SVC (§4.3). This investigation contains two main parts; first, an overview based on the behaviour of sixteen commonly serialised verb stems (§4.3.2), then more detailed discussions of a smaller number of individual verb stems (§4.3.3–4.3.6). The principal emphasis is on the intervention of NPs between stems, although certain verbal modifiers are briefly mentioned. Section §4.4 considers the syntactic position and semantic scope of two types of negation in Kalam.

Recall that Kalam is an SOV language; all NPs precede the verb in simple clauses, except for locatives, which may either precede or follow the verb. Foley and Olson (1985:45ff.) have suggested that verb-final languages tend to allow a type of serialisation in which serialised verbs all share the same set of inner arguments (nuclear serialisation; see §2.4.1), while verb-medial languages disfavour SVCs with such a close connection between stems. The correlation between verb-final languages and nuclear serialisation would arise partly because serialised verbs are more likely to be contiguous in a verb-final language, with inner arguments preceding the entire series of verbs. Many Kalam SVCs are of the nuclear type, in which one set of arguments is shared by all verbs, with the entire series spoken under a single intonation contour (Pawley 1993:95), and with the low probability of pause distribution noted by Givón (1990).

However, it is possible for Kalam SVCs to have more complex structures. One of the factors involved in their internal structure is the possibility of non-verb material of different kinds intervening between stems. The internal complexity of Kalam SVCs involves more than the distinction posited by Foley and Olson between nuclear and core serialisation, the latter type allowing for individual verb stems some freedom in the choice in inner arguments, subject to the constraint that at least one inner argument must be shared. The structure of Kalam SVCs allows also for **peripheral** arguments such as locatives to intervene between verb stems, so that at least in theory individual stems could have peripheral arguments not shared by the rest of the complex. In this way, such SVCs would resemble multiclause structures rather than single clauses. Whether any sharp cut-off point exists between such complex SVCs and the simpler SVCs which resemble more those of other languages is another question.

This chapter looks in detail at **what** kinds of non-verb material can intervene between stems, **where** particular types of non-verb material can intervene, and the implications that such intervention has on the structure and complexity of Kalam SVCs. Stems differ in the frequency with which they allow various kinds of non-verb material to either precede or follow them in SVCs. Motion stems, for example, have greater potential than other stems for NPs, particularly locative NPs, to follow them. The treatment of arguments by motion verbs is a syntactic correlate of the discourse functions discussed in the previous chapter. While locative arguments are readily identifiable in Kalam, there is no clear-cut distinction between non-locative arguments and modifiers. Hence any analysis of Kalam treatment of arguments touches on a complex, and potentially unresolvable, question: the syntactic status of what have been called verb adjuncts, in Kalam and in other Papuan languages.

4.2 Outline of argument structures in SVCs

Cross-linguistic accounts of serialisation propose two main divisions in the argument-sharing patterns of SVCs. It is simplest to discuss this in terms of pairs of adjacent verbs. Both verbs may share a single subject, as in 4.1, from Thai.

4.1 Sùk ʔ**aw** máy **maa**.
Sook take wood come
Sook brought the wood. (Foley and Olson 1985:25)

The other principal possibility, frequently used in SVCs, is that the object of one verb is the subject of the other, as in the following example, from Alamblak.

4.2 Wifërt **fir-gënNgi**-me-t-a.
wind blow-cold-remote:past-3sgS-1sgO
The wind blew on me and I got cold. (Bruce 1979:251)

The type of serialisation exemplified in example 4.2 is commonly known as 'switch-subject' or 'causative' serialisation. The latter term derives from the usual semantic relation between switch-subject verbs.

Foley and Olson (1985:24ff.) analyse these two possibilities in terms of the following constraint on SVCs; that all verbs in the series must share some core arguments. This is seen as evidence for tight bonding between stems in SVCs.

Here I sketch out the argument-sharing possibilities in Kalam. This analysis is by no means definitive, but will aid in the ensuing discussion of a more specific issue of argument sharing in Kalam SVCs, that of the way arguments may intervene within stems.

It is usual in Kalam SVCs for all verb stems to share the same subject. For an exception, see §4.3.5. Example 4.3 illustrates the same subject constraint.

4.3 'Kmn nb ak ned **pak** dad **ap**-ob-n'
game:mammal such this first hit carrying come-PRES:PROG-1pl
'We are killing and bringing this first game mammal',

a-p-al …
say-PERF-3pl
they say … (i.e. they kill their first animal and bring it). (III #96)

4.4 Kmn ak **pak ad ñb**-l …
game:mammal this hit cook eat-SS:PRIOR
Having killed and cooked and eaten this game mammal … (III #143)

In 4.3 *pak-* 'hit' and *ap-* 'come' share the 1pl subject marked on *ap-*. The same constraint applies to 4.4, in which *pak-*, *ad-* and *ñb-* share the subject implicitly coded on *ñb-* through SS marking (coreferential with the 3pl marking of a later clause). Example 4.4 also illustrates another common pattern of argument sharing, that of transitive verbs sharing a common object. *kmn* 'game mammal' is the object of all verbs in the series. The same applies in 4.3 as well, provided it is recognised that *kmn nb ak ned* is the object of not only *pak-*, but also *dad ap-* (as opposed to *ap-* alone). In other words, arguments may belong to larger units than just single stems: this applies particularly to motion verbs when they are combined with *dad* or the verb *d-* 'get'.

The same-subject constraint is much more widespread in Kalam than in some other serialising languages. Many serialising languages use pairs of active-stative verbs in a switch-subject relationship to code cause-result situations. While Kalam does allow SVCs to code this kind of situation, as will be discussed in §6.3, it is by no means certain that a switch-subject relationship exists in such constructions. Uncertainty arises largely from the fact that the Kalam stems which participate in these constructions have both active and stative readings. The only morphological evidence for distinguishing between these two readings is subject person/number endings on verbs. But by definition there is only one such piece of verb morphology per SVC in Kalam. So an SVC such as *pug sug-* 'blow extinguish = blow out (e.g. a flame)' is ambiguous between same-subject and different-subject readings:

4.5 Malaŋ **pug sug**-ø-an!
flame blow extinguish/be:extinguished-HORT-2sg
Blow on the flame and extinguish it / Blow on the flame (so that) it is extinguished! (i.e. Blow out the flame! [in either reading])
(Dictionary SUG- entry)

Evidence that a switch-subject relation **may** be present in at least some cause-result sequences is provided by Pawley (1975:21), who says that an SVC such as 4.6, in which *ñag-* 'shoot' denotes a cause and *tk-* 'separate' its immediate result,

4.6 Agl **ñag tk yok**-ø-an!
arrow shoot separate dislocate-HORT-2sg
Shoot the arrow so that it is dislodged (lit. so that it separates and moves away) / shoot the arrow off (the branch and foliage in which it has fallen).
(Pawley 1975:21)

may be paraphrased by a sequence of two clauses, with the difference in subject between the two clauses explicitly marked:

4.7 Nad **ñag**-e-y, agl **tk yok**-ø-aŋ.
you shoot-DS:PRIOR-2sg arrow separate dislocate-HORT-3sg
You having shot (at the arrow), let the arrow dislodge. (Pawley 1975:21)

In example 4.6, *agl* 'arrow' is the syntactic object of *nag-* 'shoot' (in both 4.6 and 4.7 *agl* is the goal rather than the theme — it refers to the arrow which is being shot **at** rather than the arrow which is being shot). Example 4.7 explicitly marks *agl* as the syntactic subject of

tk- and *yok-*. However, evidence against interpreting cause-result SVCs as generally involving a switch in subject is the fact that the few Kalam verb stems which are unequivocally intransitive, such as *kum-* 'die, be incapacitated' or *yn-* 'be heated', don't ever participate in such cause-result SVCs as result verbs.

It was mentioned earlier in this section that where transitive verbs occur in an SVC they share the same object. Compare the behaviour of intransitive motion stems in SVC-initial position.

4.8 Ñg **am** **may** **d** **aw**-ø-an …
water go fill:up get come-HORT-2sg
Go and fill (the vessel) with water and bring (it: water) …
(Dictionary MATK entry)

In 4.8 *may-* and the augmented motion verb *d ap-* share the object *ñg* 'water', but this doesn't hold for *am-*. Note that all verb stems implicitly share the subject (and illocutionary force) marked on the final stem. Plain motion stems can co-occur with locatives, a subtype of NP (see §1.5.4), but not with other non-subject NPs (all of which are classed together here as objects). The inability of motion stems to take non-locative objects may help explain some aspects of their syntactic behaviour, to be discussed in the next section.

The example of *am-* also raises another question; exactly what kind of objects do the transitive verbs in SVCs share? Locatives are a readily identifiable syntactic class in Kalam, but with other NPs different types of semantic (case) relations need to be considered. Note that nouns are not overtly marked for case.[1] In the examples above, it is a single patient (in a fairly general sense, possibly including themes in the sense of items undergoing movement) that is being shared. But groups of fairly tightly-knit verbs may allow more than one patient. The following example illustrates this.

4.9 Kmn sblam yb ak mey,
game:mammal cordyline true this this:one
The true *kmn sblam* ('game-mammal cordyline') plant,

kmn ak **pak** dad **ap**-l,
game:mammal this hit carrying come-SS:PRIOR
they used to kill and bring game mammals,

tk ***ad*** ***ñ***-*b*-*al* ak …
break cook eat-PERF-3pl this
and break (i.e. pick) (the leaves of the cordyline) and (use them to) cook and eat (the animals) … (the true *kmn sblam* that, when they killed and brought the animals, *they broke off and cooked (them with it) and ate (them)*) (Intro #11)

In the italicised SVC on the third line of 4.9, *tk-* refers to cutting or breaking off the leaves of the cordyline plant. *ad-* refers to cooking the *kmn* (subject of the previous clause) in an earth oven, implicitly at least with the cordyline leaves as instrument. *ñb-* refers to eating the animals (and presumably not the cordyline). In this sense, at least, serialisation can be seen as allowing increased transitivity (in the sense of Hopper and Thompson 1980) in

[1] Sometimes overt morphemes associated with NPs are used to indicate particular semantic relations; for example *sek* 'possessing, with' (comitative) or *nen* 'for the purpose' (purpose), but these are not obligatory, and many NPs are left unmarked.

Kalam clauses. For another example of this use of serialisation, see §5.2.4. Note that increased transitivity doesn't necessarily equate with an increase in the number of overt NPs in serialised clauses. Kalam tends to keep the number of NPs per clause to a minimum; there are a number of syntactic mechanisms that interact with this tendency — switch reference, rules of determining coreference, subject marking on inflected verbs.

Motion verbs, as was mentioned in the previous chapter, may appear in a number of different positions in SVCs. The correlation between the various positions of motion verbs and their ability to license following non-verb material is discussed in §4.3.3. Here, it is worth noting that verb stems preceding motion stems and those following motion stems may not be required to share objects. This is illustrated by 4.10, in which *su-* 'bite, burrow' has as notional object dirt and twigs, while *yk-* 'open' has the tunnel itself as object.

4.10 … **su** **d-am** **d-am** **d-am**, kjeŋ day alŋud **yk**-l …
bite get-go get-go get-go path section above open-SS:PRIOR
… it burrows on and on and opens up a tunnel (*kjeŋ day*) above (its nest) …
(XIII #5)

Between more tightly-linked verb stems, it may be more difficult to determine exactly the case relations involved. As an example, take *ag nŋ-* 'say perceive = ask'. Unlike the SVCs above, *ag nŋ-* is not related to the use of the same verbs in multi-clause constructions. *ag-l (gos ak) nŋ-* 'say-SS:PRIOR (thought this) perceive' normally has quite a different function, in which *ag-* acts to introduce complements of thinking.

4.11 '… ti ti **g**-elgp-al', **ag**-l
what what do-PAST:HAB-3pl say-SS:PRIOR
'… and what (customary activities) did (the ancestors) use to do?' having said,

gos ak ng-ngab-al.
thought this perceive-FUT-3pl
they will think (i.e. they will wonder about the customary activities the ancestors used to do). (Intro #1)

Given that a multi-clause paraphrase would be at least unnatural for *ag nŋ-*, it is difficult to assign case relations accurately to it.[2]

One more issue needs to be addressed in discussing subject reference in SVCs. This is the possibility of 'sloppy subject identity', discussed in §1.5.5 in relation to the switch reference system of Kalam. There it was said that a certain imprecision was possible in the application of the notion 'same subject'. Some types of clauses could be joined by verbs marked with either SS or DS morphology. Further, some sequences of clauses could be marked SS even when the referents of the subjects were, strictly speaking, not 'the same'. In SVCs, the verb stem *ag-* 'say' seems particularly susceptible to this type of 'sloppy reference'.

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[2] It is, however, possible (if rare) for serialised *ag-* to carry out this complementising function:

Malŋ **ag** gos **nŋ**-b-in.
Mareng say thought perceive-PERF-1sg
I think he is a Mareng (name of a neighbouring people). (Dictionary AG- entry)

4.12 … mnek pen day ogok **ag-ñ**-a-k,
next:day but section these say-give-3sg-PAST
… the next day he told them (further) parts (of the magic)

ag ñ ñ kn-la-k.
say give give sleep-3pl-PAST
he told them and told them and then they (all) slept. (Madaw Sosm #58)

In the second clause of 4.12 the sequence of stems *ag ñ ñ-* (cf. *ag ñ-* 'tell, instruct') has as subject referent a giant pig who is instructing two men, Saleŋ and Kawt, in magic. This subject referent is shared with the previous clause, which is explicitly marked for 3sg subject. However, the final verb of the second clause, *kn-* 'sleep', is marked for 3pl. The subject referent of *kn-* includes the two men as well as the pig. This is parallel to certain functions of the switch reference system, in which a later clause can be marked for same subject with a preceding clause if the subject of the later clause **includes** the subject of the earlier. However, sloppy reference of this kind is much more common between chained clauses than between verb stems in SVCs; *ag-* is the only verb stem for which I have evidence of sloppy reference within SVCs.

Of non-core arguments, the most relevant to the discussion that follows are locatives. There is a small class of multimorphemic locative/directional words (see §1.5.3), which are often combined with other nouns, including proper nouns and those marking relative location, to create phrases coding the setting of a situation or the source or goal of some movement. These phrases may precede or follow the complex of verbs in an SVC; they may also appear between stems, as described in the sections to follow. Note that temporals and certain types of numerals can show formal similarities with locatives (§4.3.4). Other types of elements associated with verb stems, aside from arguments, include adjuncts (see §1.5.3, §4.3.1, §4.3.6), negative elements (see §4.4) and adverbs such as *kasek* 'quickly', *kapkap* 'slowly', *penpen* 'reciprocally' and *keykey* 'by oneself' (some of which are discussed in §4.3.2 and §4.3.6).

4.3 Intervention of arguments and modifiers between stems

4.3.1 Introduction

Section 4.3 gives a summary of the ways in which non-verb material can intervene between verb stems in an SVC. The distribution of arguments and modifiers within SVCs is useful as a measure of the degree of bonding between stems. If all stems are immediately adjacent, given their shared subjects and objects, it is possible to regard the group as a single constituent, equivalent on distributional grounds (and in terms of intonation and pause distribution) to a single verb. Greater internal complexity of SVCs, as indicated by the intervention of various types of arguments and modifiers within the verb complex, means that the syntax of SVCs begins to resemble that of chained clauses. A correlation exists between the amount of intervening material and the complexity of intonation contours, and with the probability of pause.

Adapting a term used by Pawley (1993:95), I will refer to the group of verb stems which make up an SVC as a **serial verb string (SVS)**. The material which may occur between the constituent stems of an SVS falls into two main categories: arguments of verb stems (normally of following verb stems), and modifiers. Object arguments can be further

usefully subdivided into locative objects (henceforth 'locatives'), and non-locative objects (henceforth 'objects'). Kalam also allows a very small number of stems in SVCs to be followed by the subjects of following verbs.

Among modifiers, it is useful to distinguish between adverbs such as *kasek* 'quickly', *key* 'separately', *keykey* 'by oneself', and verb adjuncts. Pawley (1993:96) describes what he has elsewhere termed 'verb adjuncts' in Kalam as nominal or adverbial complements which precede a generic stem. These complements serve to restrict the meaning of generic stems (Foley 1986:119, discussing Kalam). In principle, then, adjuncts differ from arguments in Kalam in that the former combine with verb stems to make more complex (or at least different) semantic units, each roughly equivalent to a verb. An example is the adjunct *bpuk* 'sucking' (which refers to the sucking of liquid or objects that dissolve).

4.13 Ñapanŋaŋ ti bpuk **ñb**-s<a>p.
baby breast sucking consume-PRES:PROG-3sg
The baby is sucking the breast. (Dictionary ÑŊ- entry)

bpuk differs from objects in that it can only appear immediately preceding the verb stem *ñb-/ñŋ-*'consume'; note also that it is extremely rare for a simple clause to contain more than two arguments. In contrast, object NPs, which typically follow the subject if one is present, may be placed clause-initially (i.e. separated from the verb by another NP) in some cases (at least sometimes for reasons of contrast).

4.14 Cgoy, yad ma-**ñ**-b-in; ñg saki **ñ**-b-in.
tobacco I(Subj) NEG-consume-PERF-1sg water irrational consume-PERF-1sg
I don't smoke tobacco, (but) I drink liquor (*ñg saki* 'crazy water, stupid water').
(Dictionary ÑŊ- entry)

Unlike *bpuk* 'sucking', noun phrases such as *cgoy* 'tobacco' or *ñg saki* 'liquor' may occur with other verb stems, and in certain environments, such a phrase may occur in isolation as an acceptable utterance (Pawley 1966:92).

Adjuncts differ from the adverbs mentioned earlier partly on the grounds that they are associated with a single stem, whereas adverbs can modify a number of stems in an SVC.

While the distinction between adjuncts and other entities such as arguments and adverbs is useful, assignment of particular words to one of these categories may be somewhat arbitrary in particular cases. This arbitrariness gives rise to a methodological problem for investigations of the argument structures of Kalam SVCs, since the nominal and adverbial complements which have been identified as 'verb adjuncts' in Kalam and in other Papuan languages (e.g. Foley 1986:117–128) do not behave uniformly in syntactic terms. It may be that there is a syntactic characterisation possible for certain adjuncts; for other entities which have been termed 'adjuncts', the term may be based more on translation equivalence with European languages.

As an example of the diverse properties of what have been termed 'adjuncts', note first that some nominals or adverbials only ever appear as complements of this kind, restricted to a position immediately preceding verb stems. Further, the set of stems which these complements can precede is normally quite small, often consisting of only one generic stem. *g-* 'do' is probably the stem to which the largest number of such entities attach. Note that verbs borrowed from Tok Pisin or English find their way into Kalam not as verb stems

but as adjuncts, normally preposed to *g-*. This applies, for instance, to *raitim g-* 'write' (TP *raitim* 'write (transitive)' and *change g-* 'change'.[3]

4.15 Mñab bteyt yb buk ak *raitim* **g**-ng …
land former truly book this writing do-SS:PROSP
In order to write of the earliest (state of this) country … (I #1)

Note also that many nominals/adverbials which are restricted in this way are suffixed by *-ŋd* (or *-d*): e.g. *poŋd* 'leading', *paŋd* 'thud', *kayŋd* 'contiguously, in close contact', *nŋd* 'truly' (cf. *nŋ-* 'perceive, know').

Other nominals/adverbials act similarly as complements, and combinations of such complements and generic verbs may be translatable by single-word verbs in other languages. However, they may have more syntactic freedom than the adjuncts described above, to varying degrees. They may be able to appear elsewhere in the clause than immediately before verb stems. If nominals, they may be able to appear with demonstratives/articles such as *ak* and *ogok*. For example, the collocation *kab agl-* 'stone heat = heat stones for an earth oven' is highly recurrent. Normally the nominal *kab* 'stone' immediately precedes *agl-*. But other phrases can intervene between them, as in 4.16, where the stones are being highlighted.[4]

4.16 Kmn kab nb ak sek **d-ap** **agl**-l,
game:mammal stone such this with get-come heat-SS:PRIOR

ad-l …
cook-SS:PRIOR
Having brought game mammals and heated such stones to cook them with …
(IX #87)

In this respect, as well as the fact that it may freely appear as an argument of other verbs, *kab* resembles an object argument more than an adjunct.

In some cases, patterns of serialisation can help distinguish between objects and adjuncts. For instance, *d-* 'get' tends to immediately precede other stems in SVCs, so that no arguments intervene between *d-* and the following stem. One major exception is the case of *l-* 'put', which will be discussed in §4.3.4. The only other exceptions in my corpus are with collocations such as *jm ñ-*, 'connecting contact' where *jm* 'connecting' only ever appears before *ñ-* 'give, contact'. *d-* combines with this collocation to give *d jm ñ-*, rather than *jm d ñ-*. Here it seems plausible that *jm ñ-* acts as a unit for purposes of co-occurring with *d-*: in other words, *jm ñ-* shares the distribution of single stems rather than of stems plus objects. However, this kind of evidence is not always available.

Any attempt to distinguish consistently between objects and verb adjuncts in Kalam would need to consider a number of interacting factors. These include the ability of the entity to appear elsewhere than immediately before stems in Kalam clauses; the possibility of it being 'deleted under co-reference'; whether or not an entity can be possessed by a

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[3] Saem pronounces the word transcribed as 'change' somewhere between English 'change' and Tok Pisin 'senis', i.e. [čen̈is] or [čenič].

[4] This example is part of a discussion of the ritual prohibitions surrounding the *madaw* cuscus. Experts on magic were not permitted to eat *madaw* (among other animals), lest their stomachs should swell up and kill them. The ritual danger of the *madaw* is further emphasised in the example above, which concerns the fact that men who knew powerful war-magic could not eat any food cooked in ovens on stones which had been previously used to cook *madaw*.

possessive pronoun or the possessive marker *ket* (possible for non-locative NPs but not for adjuncts); and whether or not extra object arguments can appear in the same clause. Length is also a factor. While adjuncts are only one or two words in length, arguments can be much longer and more complex, and may include embedded clauses. Such an analysis is well beyond the scope of this book; hence I have been forced to make arbitrary decisions in some cases in classing entities as either objects or adjuncts.

Of the items which **have** been identified as adjuncts in Kalam, two are common enough to be mentioned separately. These are *dad* 'carrying' (introduced in §3.3.5) and *tep* 'good, well' (introduced in §1.6.3). Other types of modifiers I have distinguished here include adverbs (typically *keykey* 'separately') and the negative *met* (see §4.4.4).

This part of the investigation of non-verb material within SVSs falls into two main parts. We begin with an overview of the distribution of material either preceding or following a number of frequently-serialised verb stems. Following this, four verb stems which particularly favour following (or preceding) arguments, *am-* 'go', *ap-* 'come', *l-* 'put' and *md-* 'stay', are discussed. The behaviour of *g-* 'do' with respect to modifiers is also briefly mentioned.

4.3.2 Overview of non-verb material within SVCs

The distribution of non-verb material within the SVS will be illustrated in this section by sketching the behaviour of the sixteen verb stems which occur most frequently in the Kalam SVCs in the KHT corpus. These are (in descending order of frequency in SVCs) *am-* 'go', *g-* 'do', *ap-* 'come', *d-* 'get, hold', *tk-* 'sever, change, give birth, etc.', *nŋ-* 'perceive, see, know', *ñŋ-* 'consume', *pak-* 'hit', *l-* 'put', *md-* 'live, stay', *jak-* 'arise', *yap-* 'descend', *ñ-* 'give', *tag-* 'walk about, travel' and *tan-* 'ascend'.

Tables 1 and 2 show the distribution of these verbs in terms of being followed by arguments or modifiers; hence they look at non-final stems, treating iterated stems as a single token.[5] Table 1 shows the frequency with which the verb stems are followed by non-verb material. The second column shows the total number of tokens of each verb in the KHT corpus. The third column shows the number of sentences in the corpus in which the verb stems are followed by non-verb material. The final column gives an approximate measure of how often each stem is followed by non-verb material. *md-* 'stay' and *am-* 'go' are both frequently followed by potentially lengthy material, although of different types, as we will see later. Note that *pak-* 'hit' and *nŋ-* 'perceive' (*jak-* 'arise' and *ñ-* 'give', with only a small number of non-final tokens, are statistical aberrations here) often have material following, but that the material is always only one word long (normally *dad* 'carrying' or *tep* 'good, well'). Table 2 shows the average length of material following verb stems. The third column in that table shows the total number of words following each verb stem in the corpus. The last column divides this figure by the number of sentences in which that verb stem is followed by non-verb material to give the average number of words which follow a given stem. Aside from *ñŋ-/ñb-* 'eat' and *d-* 'get', which will be discussed later (in §4.3.4, which concerns arguments preceding *l-* 'put'), it is the motion stems which are followed by the longest material.

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5 By definition (§1.5.3), iterated stems are immediately adjacent to each other.

Table 1: Stems and **following** material: frequency with which stems are followed by material

Stem	Total tokens	No. sentences with following words	Sentences/ total tokens
md-	17	15	88.24
am-	187	109	58.29
pak-	53	27	50.94
jak-	7	3	42.86
nŋ-	28	11	39.29
ñ-	3	1	33.33
ap-	164	48	29.27
g-	45	11	24.44
tk-	111	17	15.32
tan-	33	5	15.15
d-	117	14	11.97
tag-	17	2	11.76
yap-	34	4	11.76
ñŋ/ñb-	34	1	2.94
ag-	45	1	2.22
l-	8	0	0.00
TOTAL	903	269	
AVERAGE			27.36

Table 2: Stems and **following** material: average length of material

Stem	Total tokens	Total no. of following words	No. sentences with following words	Words/ sentence
ñŋ/ñb-	34	6	1	6.00
am-	187	336	109	3.08
tan-	33	13	5	2.60
ap-	164	107	48	2.23
d-	117	30	14	2.14
yap-	34	8	4	2.00
md-	17	26	15	1.73
g-	45	16	11	1.45
tk-	111	23	17	1.35
ag-	45	1	1	1.00
jak-	7	3	3	1.00
ñ-	3	1	1	1.00
nŋ-	28	11	11	1.00
pak-	53	27	27	1.00
tag-	17	2	2	1.00
l-	8	0	0	0.00
TOTAL	903	610	269	
AVERAGE				1.79

These figures provide an overview of the way arguments and modifiers can be incorporated in SVSs. Table 3 details the kinds of argument and modifier that particular verb stems can be followed by.[6] Certain patterns are present in Table 3. Firstly, note that motion stems correlate highly with following locatives. Both *md-* 'stay' and motion stems allow following objects. These two types of argument constitute the most frequent non-verbal material allowed into SVSs. Further, this is related to the finding, reported in Table 1, that motion verbs tend to be followed by longer stretches of material than non-motion stems, since (as mentioned) objects tend to be longer than modifiers. Secondly, any stem which allows material to follow it with any frequency may be followed by adjuncts (usually *dad* or *tep*). Finally, *am-*, *ap-* and *md-* can be followed by subject noun phrases.

Table 3: Stems and **following** material:
types of arguments and modifiers which follow stems

Stem	LOC	OBJ	SUBJ	QUA	NUM	*dad*	*tep*	V.ADJ	ADV	*met*	TOTAL
am-	56	51	1	3		2		5			118
ap-	27	23	1					1	1		53
pak-						25		2			27
tk-					3	12	1		1		17
md-		6	4			3				2	15
d-	3	1				4		6			14
nŋ-		1				4	5	1			11
g-	1	1				4	3	1		1	11
tan-	3	1								1	5
yap-	1	2							1		4
jak-							3				3
tag-										2	2
ñŋ-/ñb-					1						1
ñ-								1			1
ag-		1									1
TOTAL	91	87	6	3	4	54	12	17	3	6	283
PERCENT	32	31	2.1	1.1	1.4	19	4.2	6	1.1	2.1	100
AVERAGE	15	9.7	2	3	2	6.8	3	2.4	1	1.5	18

So far we have looked at the way in which arguments and modifiers follow particular stems in SVCs. The other direction needs to be considered as well: what verb stems are preceded by non-verb material? Tables 4 and 5 show the way in which the same sixteen verb stems are preceded by arguments and modifiers. As Table 3 indicates, motion stems, particularly *am-* 'go' and *ap-* 'come', are closely associated with following locative and

[6] Abbreviations used in the table: LOC - locative; OBJ - (non-locative) object; SUBJ - subject; QUA - quantifier (*koŋay yb* 'very many', discussed in §4.3.3); NUM - numeral (discussed in §4.3.4); V.ADJ - verb adjunct; ADV - adverb. *met* is a negative morpheme, discussed in §4.4.

object arguments. Motion stems are ubiquitous in SVCs.[7] So to simplify the account of the kind of verb stems which allow **preceding** non-verb material, and of the kind of material which can precede stems within SVSs, I leave out instances of verb stems following the motion stems *am-* 'go', *ap-* 'come', *tan-* 'ascend' and *yap-* 'descend'. This simplification applies to Tables 4–6. Note that iterated stems are again counted as a single token.

Table 4: Stems and **preceding** non-verb material: frequency with which stems are preceded by material

Stem	Total token	No. sentences with preceding words	Sentences/ total tokens
ag-	4	2	50.0
g-	97	40	41.2
am-	83	32	38.6
nŋ-	34	12	35.3
pak-	3	1	33.3
ap-	201	53	26.4
l-	54	10	18.5
yap	10	1	10.0
ñ-	46	3	6.5
md-	44	2	4.5
jak-	34	1	2.9
d-	48	0	0.0
ñŋ-/ñb-	60	0	0.0
tag-	35	0	0.0
tan-	0	0	0.0
tk-	19	0	0.0
TOTAL	772	157	
AVERAGE			16.71

Table 4 illustrates the frequency with which applicable verb stems — non-initial verb stems which aren't preceded by a motion stem — are preceded by arguments and modifiers. *g-* 'do', *nŋ-* 'perceive', the motion stems *am-* 'go' and *ap-* 'come', and *l-* 'put', are all frequently preceded by such material.

Table 5 shows verbs in order of the length of preceding material. It shows that *g-* 'do', *nŋ-* 'perceive' and the motion stems are normally preceded by single words only. In contrast, *l-* 'put' is often preceded by much longer material. Significantly, the stems *pak-* 'hit', *yap-* 'descend', *md-* 'stay' and *ag-* 'say', which are rarely preceded by non-verb material, pattern together. The stretches of material they follow are comparatively lengthy, and the preceding verb stem in these cases is always *md-* 'stay'.

[7] For evidence on the high text frequency of *am-* and *ap-* and the loose co-occurrence restrictions holding between motion verbs and following verb stems, see Chapter 3, fn.12.

Table 5: Stems and **preceding** non-verb material: average length of material

Stem	Total tokens	Total no. of preceding words	No. sentences with preceding words	Words/ sentence
pak-	3	5	1	5.0
yap-	10	4	1	4.0
l-	54	39	10	3.9
md-	44	6	2	3.0
ag-	4	4	2	2.0
g-	97	44	40	1.1
ñ-	46	3	3	1.0
nŋ-	34	12	12	1.0
ap-	201	53	53	1.0
jak-	34	1	1	1.0
am-	83	32	32	1.0
tan-	0	0	0	0.0
tag-	35	0	0	0.0
ñŋ/ñb-	60	0	0	0.0
d-	48	0	0	0.0
tk-	19	0	0	0.0
TOTAL	772	203	157	
AVERAGE				1.5

Table 6 provides detail on the type of material which can precede particular stems. *am-* 'go' and *ap-* 'come' are only ever preceded by *dad* 'carrying' (see §3.3.5). *g-* 'do' is frequently preceded by adjuncts, particularly *tep* 'good, well' (see §1.6.3). *l-* 'put' and *ñ-* 'give' also follow adjuncts, although less often than *g-*. The tendency of *l-* to allow preceding locatives and numerals will be discussed later. The remaining instances of locatives, objects, and subjects preceding stems correlate with the presence of preceding *md-* 'stay'.

The observations above form the basis of an analysis of the patterns of intervening material, particularly intervening arguments, in SVSs. Firstly we look at the ability of motion stems, particularly *am-* 'go' and *ap-* 'come', to allow following NPs. We also note a tendency for *l-* 'put' to allow preceding locative and number phrases. Then the somewhat unusual behaviour of *md-* 'stay' is investigated.[8] Finally there is a discussion of the treatment of modifiers by the stem *g-* 'do'.

[8] The motion stems, *md-* 'stay' and *l-* 'put' are all involved in specifying spatial orientation in discourse (*l-* can often overlap with *md-* in the sense of 'live, be at a place'). Hence it is possible to say that the class of 'orientation verbs' is implicated in allowing non-verb material into serial verb strings. I do not exploit such a possibility in this book, since each class of verb stem is associated with different types of non-verb material, and further each allows material into the string of verbs for different reasons.

Table 6: Stems and **preceding** material:
types of arguments and modifiers which precede stems

Stem	LOC	OBJ	SUBJ	NUM	*dad*	*tep*	V.ADJ	ADV	*met*	TOTAL
ap-					53					53
g-		4				19	17			40
am-					32					32
nŋ-									12	12
l-	3			4			2	1		10
ñ-							3			3
ag-	2									2
md-	1		1							2
jak-		1								1
pak-		1								1
yap-			1							1
d-										0
ñŋ/ñb-										0
tag-										0
tan-										0
tk-										0
TOTAL	6	6	2	4	85	19	22	1	12	157
PERCENT	3.8	3.8	1.3	2.5	54	12	14.0	0.6	7.6	100
AVERAGE	2	2	1	4	43	19	7.3	1	12	9.8

4.3.3 Arguments following motion stems

Table 3 shows that *am-* 'go' and *ap-* 'come' are the stems which are most frequently followed by arguments and modifiers in the SVCs in the KHT database. Table 7 gives further detail on the distribution of material after these stems. It also includes the verbs *tan-* 'ascend' and *yap-* 'descend', which show some of the same patterns, but on a much smaller scale, and *tag-* 'walk about', which behaves quite differently from other motion stems in SVCs.

Table 7: Types of material which follow motion stems in SVCs

Stem	LOC	OBJ	LOC, OBJ	LOC, SUBJ	OBJ, V.ADJ	QUA	*dad*	V.ADJ	ADV	*met*	TOTAL
am-	47	43	8	1		3	2	5			109
ap-	23	19	3	1	1		4	1	1		53
tan	3	1								1	5
yap-	1	2							1		4
tag										2	2
TOTAL	74	65	11	2	1	3	6	6	2	3	173

As Table 7 shows, *am-* and *ap-* are typically followed by either locatives or the (non-locative) object of the following verb stem. Together, these two stems account for 91% (83/91) of the locatives which follow the sixteen stems under investigation. They account for 85% (74/87) of following objects.[9] In some cases, unlike other stems, they can be followed by both locatives and objects or adjuncts (in that order).

4.17 … kmn tmaŋ ak **am** Sapkoy-Sagaym kab alim
game:mammal cuscus this go Sapkoy-Sagaym rock down:valley
… a *tmaŋ* game mammal having gone to the rocks down below at Sapkoy-Sagay

kañm ak **ñb**-l …
banana this eat-SS:PRIOR
and eaten the bananas … (Madaw Sosm #33)

For example, in 4.17 the subject NP, *kmn tmaŋ ak* 'this *tmaŋ* game mammal', precedes *am-*; the locative *Sapkoy-Sagaym kab alim* 'the rocks down below at Sapkoy-Sagaym' and *kañm ak* 'this banana', the object of *ñb-* 'eat', follow *am-*.

Quite lengthy and complex arguments may follow *am-* and *ap-*. This is particularly the case with objects of following verb stems, which may include embedded clauses. In the following examples, embedded clauses are enclosed in square brackets.

4.18 Nad **am** [b koyb pk-p-f] nup **ñag**-i …
you(2sgSubj) go man witch hit-PERF-3sg him(Obj) shoot-SS:PRIOR
You go and shoot [the witch who killed (my father)], (and then …)
(Dictionary CP(1) entry)

4.19 Tap **am** [kuyn ak, kas ak mlep g-olg<u>p]
thing go tree:fern this foliage this dry do-PAST:HAB-3sg
They used to go and

ognap **d**-elgp-al …
some get-PAST:HAB-3pl
get some [tree-fern and (other) foliage which had been dried] …
(*mlep g-* 'dry (verb)') (I #65)

In addition to being followed by various kinds of objects, *am-* and *ap-* are occasionally followed by phrases which refer to the subject of the clause. In some cases more detail is added to the subject NP, as in 4.20.

4.20 Ymduŋ yp kmn ognap **am**
copper:ringtail with game:mammal some go
The *ymduŋ*, along with other game mammals, goes,

koŋay yb **kn**-u-b mey, abn alyaŋ …
many very sleep-3sg-PERF this:one undercroft below
very many of them sleep down in the undercroft … (i.e. the *ymduŋ*, along with many kinds of game mammals, goes and sleeps in the undercroft) (II #63)

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9 The four motion stems *am-*, *ap-*, *tan-* and *yap-* together account for 96% (87/91) of locatives and 89% (77/87) of objects in SVCs.

In other cases the subject is recapitulated, as in example 4.21, perhaps because the speaker has 'gotten lost' after the first stem of the SVC, or perhaps because the speaker wants to remind the listener of the subject after a long diversion.

4.21 Nb alim ognap **am**
place down:river some go
Down at lower altitudes some go,

tap gd ak gd kub sketek moluk alyaŋ,
thing tangle:fern this tangle:fern big extremely root below
under the roots of big beds of tangle-fern

kmn ognap **am** koŋay yb **kn**-b-al mey
game:mammal some go many very sleep-PERF-3pl this
some game mammals go, very many (of them) sleep

nb okyaŋ.
place below
underneath there. (II #67)

Afterthoughts and recapitulations of the kind exemplified in 4.20 and 4.21 occur only after *am-* and *ap-*.[10] It seems likely that the ease with which long stretches of material can intervene between SVC-initial motion stems and the following stem contributes to the possibility of 'getting lost' in this way. It is also possible for a speaker to pause when *am-* or *ap-* are followed by long NPs, either immediately after the verb stem itself or after the following NP. In contrast, there would be no pause in an SVC such as *pak dad apl* 'hit carrying having-come'. The intervention of long stretches of non-verb material, and the concomitant possibility of a pause and of the recapitulation of the subject, are evidence of a weaker bond between motion verbs and the following stem(s) than the bond which usually holds between the stems of an SVC.

The situation described above in which subject NPs **follow** motion verbs is extremely rare — subjects almost always precede all stems in an SVC. Non-subject NPs, in contrast, have more freedom in being able to either precede or follow motion verbs. Examples 4.22 and 4.23 illustrate this freedom of position for object NPs (italicised).

4.22 *Tap magi* **am d aw**-ø-an!
food vegetable go get come-HORT-2sg
Fetch *the vegetables*! (lit. go and get *the vegetables* and come (with them))
(Dictionary AM- entry)

4.23 **Am** *mon* **d aw**-ø-an!
go wood get come-HORT-2sg
Fetch *the wood*! (Dictionary AP- entry)

Examples 4.24 and 4.25 both involve locatives (italicised):

4.24 … ji mey *tp kti* **am kn**-b-al ak.
CONJ this:one place they go sleep-PERF-3pl this
… and they go and sleep in *their (sleeping-) places*. (I #126)

---

[10] Bare-stem *md-* 'stay' can also be followed by the subjects of following verbs, although (unlike *am-* and *ap-*) *md-* need not have a specific subject referent.

4.25 … **Am** *katp seŋ seŋ ak*, **kn**-elgp-al mey mñab
go house site site this sleep-PAST:HAB-3pl this:one land

nb okok
place around.
… They used to go to *(their) established house sites* and sleep (there) in places around there. (Intro #7)

Example 4.22 shows the situation in which the object of *d-*, *tap magi*, precedes *am-*. *mon* 'wood' follows *am-* in 4.23. In 4.24, the locative *tp kti* 'their place(s)' precedes *am-*; in 4.25 the locative *katp seŋ seŋ ak* 'the old established house sites' follows *ap-*. Note that *mñab nb okok* '(in) places around there', which follows the SVS in 4.25, is an outer locative, characterising the wider setting of the clause.

Examples 4.26 and 4.27 both code exactly the same situation (the building of nests by certain animals, the same animals in both sentences). Pairs such as this indicate that objects can precede or follow SVC-initial verbs of motion without necessarily affecting (referential) meaning.[11]

4.26 … **d-ap** *mj* pat **l** tep **g**-l, **kn**-b-al.
get-come leaf extending put good do-SS:PRIOR sleep-PERF-3pl
… having brought *leaves* and laid them down, they sleep (*l tep g-* 'arrange well'). (III #32)

4.27 … kmn nb ogok, *mj* **d-ap** pat **l**
game:mammal such these leaf get-come extending put

tep **g**-l,
good do-SS:PRIOR
… these types of game mammals, having brought *leaves* and laid them down,

kn-b-al.
sleep-PERF-3pl
they sleep. (III #32)

It is more difficult to determine from written texts alone whether a similar paraphrase relation exists between SVCs in which a locative precedes *am-* or *ap-* and those in which it follows them. Pairs such as 4.24 and 4.25 at least suggest this. Note that these pairs involve SVC-initial *am-*. Since simple motion stems are unable to take non-locative arguments, it is plausible that differences in the relative order of locatives and motion stems would not affect referential meaning. The locative element can be considered to apply equally to both motion stem and following non-motion stem. For example, in 4.24 the subject (some kinds of animal) both go (*am-*) to *tp kti* 'their places' and sleep (*kn-*) in *tp kti*. This applies equally to the two stems in 4.25 with respect to the *katp seŋ seŋ ak* 'the old established house sites'.

d am- and *d ap-* present more complications since they allow non-locative arguments. Examples 4.26 and 4.27 above certainly seem to be paraphrases of each other, at least on the evidence of their free translation in the KHTs.

More problematic are instances of non-final *d am-* and *d ap-* following a non-motion verb (see §3.4). These typically involve the transport of the result of some action from one scene to another. 4.28 (repeated from §3.3.4) gives an example of this.

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11 The constructions may allow differences of focus.

4.28 … mj bep **tk** **d-ap** nb okyaŋ **yok**-l …
leaf plant:sp break get-come place below displace-SS:PRIOR
… (they) break off *bep* leaves and bring them and tip them in below … (I #72)

In 4.28, *tk-* 'break off' codes the action at one location (gardens or forest); *d ap-* codes the moving of the object to another location where another action, *yok-* 'displace, tip' takes place. *nb okyaŋ* 'place below' refers to the location at which the tipped items ended up (an earth oven). This location differs from where the breaking off took place. So the locative following verbs of motion in middle position can code a different location from that of the action of the initial non-motion verb.

Since motion verbs may occupy more than one position in an SVC, given that locations can be coded either before or after motion and other orientation verbs, quite complicated combinations of locative arguments could occur in SVCs. In practice, though, it is usual for only one of the possible slots to be filled by a locative.

For instance, it is possible to imagine a situation in which an animal is killed up-valley in the forest and brought down to eat at, say, Gulkum. However, my database does not have examples such as the following hypothetical SVC, in which both locatives are coded explicitly (locatives are italicised).

4.29 (*)Kmn ak *mab* *wog* *oklaŋ* **pak** **d** **ap** *mñab* *Gulkum*
game:mammal this tree garden above hit get come land Gulkum
They used to kill animals up in the forests and bring them down to Gulkum

ad **ñb**-elgp-al.
cook eat-PAST:HAB-3pl
and cook and eat (them).

Instead, normally only one of the syntactic 'slots' used for locatives is filled, as in 4.28 above, or 4.30 below (in which the locative precedes *d am* and the object of *d-*, plus an adverb *alog* 'together', follows).

4.30 '*Katam* *ak* **d** **am** kaj kaw alog **d**-p-ut **ag**-a-k
track this get go pig trap together dig-PERF-1dl INTJ

akey, ñbem'.
cousin say-3sg-PAST
'We went along the track and dug pit-traps together, oh cousin', he said.
(Dictionary ALOG entry)

A number of explanations suggest themselves for this apparent constraint (the one locative per clause constraint). Firstly, this may simply be a gap in my data. Secondly, this phenomenon may be linked to higher-level constraints on discourse, such as those discussed in Chapter 3. A third possibility, related to the second, is that it reflects constraints on what can be coded in the clause. According to the definition of the clause offered in Foley and Olson (1985:57), all of the verbs in an SVC must share a single set of peripheral arguments. By 'peripheral' they mean arguments such as locatives and other oblique noun phrases, which 'set the utterance in a particular spatial/temporal setting' (Foley and Olson 1985:36) (see also §2.4.1). They argue that there is a looser bond holding between verbs in structures in which each verb may have its own peripheral arguments, as in clause chains, than in serialisation. Such a constraint on peripheral arguments would help explain the one-locative constraint for Kalam SVCs.

However, there are apparent exceptions to the one-locative constraint. Let us consider three examples in which one locative precedes and one locative follows bare motion stems.

4.31 Kmn nb ak ney nb **g**-u-p,
game:mammal such this it thus do-3sg-PERF
This type of animal acts like this,

k-ng **g**-u-p
sleep-SS:PROSP do-3sg-PERF
(so that) it will sleep,

mab-ib alyaŋ **sw-tk** **d-am** *okyaŋ* **l**-l …
tree-epiphyte below bite-sever get-go below put-SS:PRIOR
having burrowed *down* into *a clump of epiphytes* ... (III #40)

Example 4.31 in fact has two locative phrases in distinct positions. *mab-ib alyaŋ* 'below the (clump of) epiphytes' precedes the stems *su tk-* 'bite sever ~ burrow', while *okyaŋ* 'below' can be interpreted as referring to the final location where burrowing stops. However, it is possible that *okyaŋ* is just a more specific recapitulation of the first locative. Even if this is the case, it is still somewhat problematic for Foley and Olson's definition that there are two locatives in **syntactically** distinct positions, and hence potentially at least each is a peripheral argument of a different (non-motion) stem. However, it should be noted that SVC-initial locatives can often be analysed as belonging to the previous clause (or possibly to both clauses). So *mab-yb alyaŋ* could perhaps be an argument only of the preceding clause ('it will sleep down in the epiphytes').

4.32 … tap maj wad ogok, wad **yg**-l,
food sweet:potato string:bag these string:bag fill-SS:PRIOR
… (when) they have filled up bags with sweet potatoes

d-ap, *kapk mgan okok yp*, **d-ap** *okok* **l**-l …
get-come oven hole around with get-come around put-SS:PRIOR
(and) brought them to *oven pits*, brought them to *(other) places around (the house)* and put them (there) … (XVII #18)

Each instance of *d-ap* in the SVC in 4.32 is followed by a locative argument (of *d-ap* and of the final stem *l-*). Note that *yp* 'with, and' can be used to conjoin NPs. However, if *kapk mgan okok* and the second *okok* constitute a conjoined locative NP, such an NP would have to be discontinuous, separated by instances of *d ap-*. There is no evidence (outside of SVCs) that discontinuous NPs exist in Kalam.

4.33 … **d-ap** *mseŋ* *okol*,
get-come open:country around:here
… (they) brought (it, i.e. the *kuñp* plant) *here in the open country*,

d-am *ñg* *klam klam okok* **d-ap** **ym**-e-l
get-go water spring spring around get-come plant-DS:PRIOR-3pl
(they) took it to *springs* (*ñg klam klam*), they brought and planted (it) …
(Majnep and Bulmer 1983:40)

Example 4.33 also includes two locatives. The second (*ñg klam klam okok*) seems a more specific addition to the first (*mseŋ okol*), but the two are again separated by augmented motion verbs.

The SVCs of 4.31, 4.32 and 4.33 suggest that it is in fact possible for individual verbs in Kalam SVCs to take their own peripheral arguments. One alternative analysis, that complex locative NPs may be discontinuous, would ignore the fact that such multiple locative phrases only ever occur with SVCs, and are only ever separated by motion verbs.

tan- 'ascend' and *yap-* 'descend' occasionally take following locatives in a similar manner to *am-* and *ap-* (see Table 7). Compare, for example, the following sentences.

4.34 … mey *mab acb-acb goblad* **tan** kuyopi **tan**
this:one tree small-small tree:sp. climb tree:sp climb
… having climbed *small trees and goblad*, (having) climbed *kuyopi*

galgal juj jsp kogm mab-ib skol-bad,
ginger clump orchid knee tree-epiphyte small-group
(and where there are) *clumps of galgal wild ginger and of jsp orchids and small clumps of epiphytic moss*,

mey **tan**-l …
this:one climb-SS:PRIOR
(having) climbed (them) … (II #71)

4.35 … oglaŋ nep **yap yap**,
above precisely fall fall
… (from up there) it falls all the way down,

yap oglaŋ nep wagn okyaŋ **yap** **pak**-l …
fall above precisely base below fall hit-SS:PRIOR
(it) falls right on down to the base (of the tree) and hits (the ground) …
[*(ap) yap pak-* ~ 'fall down (onto a surface)'] (III #43)

tan- and *yap-*, however, are only rarely followed by locative arguments, partly due to their frequent occurrence as part of the motion verbs *ap tan-*, *ap yap-* and *ap tan ap yap g-*, whose distribution is more limited than that of *am-* and *ap-*. Note that *tag-* 'walk about' doesn't allow following locatives at all, and is in fact normally restricted to SVC-final position (see §3.3.7).

Another way in which the motion verbs, specifically *am-* 'go' and *ap-* 'come', differ from other stems is that they may be followed by various adverbs which otherwise precede all the stems of an SVC. These include *kasek* 'quickly' and *kapkap* 'quietly, unobtrusively, sneakily'.

4.36 … maj-wog ogok **g** **ym**-e-l,
sweet:potato-garden these do plant-DS:PRIOR-3pl
… after they had made sweet-potato gardens,

ap *kasek* **ñb**-e-k.
come quickly eat-DS:PRIOR-(3sg)PAST
(the *kupyak* rat) came and *quickly* ate (there). (XVII #14)

4.37 Ognap **am** mgan kti *kapkap* **su** **d-am** **l**-p-al …
sometimes go hollow their quietly bite get-go put-PERF-3pl
Sometimes they go and *sneakily* burrow through their secret escape tunnel …
(XIII #68)

As with the object NPs (both locative and non-locative) discussed above, these modifiers can either precede or follow *am-* or *ap-*. Compare example 4.36 above with 4.38.

4.38 Ognap kmn nb ak
sometimes game:mammal so this
Sometimes this game mammal

kasek **am** **kn**-u-b mey nb okyaŋ.
quickly go sleep-3sg-PERF this:one place below
quickly (i.e. readily) comes and sleeps down in these places. (IX #98)

Unfortunately, the free translations of the relevant texts are not precise enough to enable me to determine if the differing relative order of these adverbials and motion stems corresponds to the difference in scope implied by the translations I have given these examples. So, for example, I can't tell if the differing order of *kasek* relative to *am-* in 4.36 and 4.38 reflects any difference in which stems *kasek* applies to.[12] However, what is clear is that *am-* and *ap-* are the only stems with which such an alternation of position is possible (a different type of alternation is possible with *g-* 'do'; see §4.3.6). Again, this is evidence that *am-* and *ap-* are less closely bound to following bare stems than is typical for the stems in an SVC.

To summarise, *am-* and *ap-* differ from other stems in allowing a wider range of non-verb material to follow. This material includes locative arguments, non-locative objects, and certain adverbs. In all cases, the same material can precede these two stems. Often, a paraphrase relationship exists between constructions in which the argument precedes the motion verb stem and those in which it follows. However, complications occur where locative arguments both precede and follow motion verbs.

Two consequences of the potential for bare-stem *am-* and *ap-* to be followed by arguments need to be discussed. The first regards the syntactic complexity of Kalam SVCs. This section has shown a number of ways in which uninflected *am-* and *ap-* behave like verb stems inflected with SS:PRIOR morphemes. Bare motion stems may be followed by locatives (recall that locatives, unlike other NPs, either precede or follow the inflected verb stem of simple clauses) and/or by the object of the following verb stem. Bare motion stems may be followed by adverbs such as *kasek* 'quickly' and *kapkap* 'slowly'. When bare motion stems are followed by long NPs, it is possible for the speaker to pause, either after the motion stem or after the NP. Similarly, it is possible for a sequence of *motion verb + NP* to be spoken under a separate intonational contour from the following stem or stems.[13] Other bare motion stems can behave similarly to *am-* and *ap-*, at least in terms of allowing following locatives, but do so much less often.

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[12] Pawley (pers. comm.) suggests that the relative ordering of these adverbs and motion verbs **does** in fact reflect a difference of scope, in accordance with the translations I have given for 4.36 and 4.38.

[13] The end of an utterance in Kalam is marked by a sudden rise in pitch on the final stressed phoneme of the utterance, followed by a sharp drop in pitch and a slowdown in the rate of speech over the final few phonemes (Pawley 1966:41). The utterances thus marked often coincide with major syntactic phrases.

Motion stems differ in all these respects from non-motion stems. Except in the circumstances to be mentioned in §4.3.4 and §4.3.5, it is extremely rare for non-motion stems to be followed by arguments, either locative or non-locative. Non-motion stems are never, in my database, followed by the adverbs *kasek* or *kapkap*. And a sequence of non-motion stems, plus any **following** motion verbs (such as *pak dad apl* 'hit carrying having-come'), is spoken without pause and under a single intonational contour. Thus bare-stem *am-* and *ap-* are less closely tied to following verb stems than is normally the case in SVCs. These two stems allow SVCs to superficially resemble sequences of SS:PRIOR-marked clauses in terms of the relative ordering of verb stems and NPs. For example, in both 4.39 and 4.40, *kmn* 'game mammal', the object of *pak-* 'hit', appears between *am-* and *pak-*, even though *am-* is inflected for SS:PRIOR in 4.39, but is uninflected in 4.40.

4.39 … b ak **am**-l, *kmn* **pak**-l …
man this go-SS:PRIOR game:mammal hit-SS:PRIOR
… the men having gone, having hit *game mammals* ... (III #97)

4.40 … kti **am** *kmn* **pak** dad **ap**-l nb okok …
they go game:mammal hit carrying come-SS:PRIOR place these
… they having gone (and) hit and carried back *game mammals* ... (Intro #17)

In contrast, arguments tend to cluster around a sequence of **non**-motion stems in an SVC; non-locative objects precede the complex of verb stems, while locative arguments either precede or follow the complex. In this sense, sequences of non-motion stems resemble the single verb of a simple clause.

Given that bare motion stems can behave quite differently from other bare stems, it could be asked whether the former are really part of the same construction as following stems. Davies (1981a:204), discussing Kalam's closest relative Kobon, proposes that a bare stem which is followed by long stretches of non-verb material should be considered an alternative to the same-subject form of the verb. This analysis would apply, for instance, to the following sentence, in which *dam* 'take' (cf. Kalam *d am-* 'get go') and *yu-* 'throw' (cf. Kalam *yok-* 'displace'; Kalam /k/ corresponds to zero in Kobon) are interrupted by an embedded clause (*nibi mölep md-aj-p* 'the old woman was (staying)'):

4.41 Ñi u **dam** [nibi mölep m**ɨ**d-aj-**ɨ**p g**ɨ**daŋ] **yu**-bil.
boy that take woman old be-dur-past3sg across throw-perf3d
They took the boy over to [where the old woman was]. (Davies 1981a:204)

Davies (1981a:204) acknowledges that attempting to distinguish between different functions of bare verb stems in this way involves some arbitrariness. Certainly this analysis necessarily ignores the morphological differences between bare stems and SS-inflected stems. Another problem which would arise in Kalam (and, I suspect, in Kobon) is due to the fact, mentioned above, that motion stems can often either follow or precede certain arguments without difference in referential meaning. For example, the following sentence, in which the object of *pak-* 'hit' precedes the motion stem *am-* 'go', can be added to 4.39 and 4.40 above.

4.42 Kmn nb ak **am** **pak** dad **ap**-l …
game:mammal such this go hit carrying come-SS:PRIOR
Sometimes, having gone and hit and carried back such a game mammal …
(III #115)

The difference in word order between 4.40 and 4.42 correlates with a difference in their temporal delivery. While it is common for Kalam speakers, at least when speaking relatively slowly, to pause or slow down after a bare motion stem if that stem is followed by a long stretch of non-verb material, pauses are much less common after motion stems which **immediately** precede another stem, as in 4.42.[14] But the difference in relative order between *am-* and the object of the following verb stem in pairs of sentences such as 4.40 and 4.42 does not correlate with any difference in referential meaning.[15] To say that the bare stem *am-* in 4.40 does not belong with the following stems, while the bare stem *am-* of 4.42 **does**, would ignore this last fact. Alternatively, saying that bare motion verb stems are **never** part of the following SVC would ignore the fact that speakers tend to treat sequences of *am-* and an immediately following verb stem as a unit in terms of speech delivery.

It should also be recognised that the morphological distinction between bare and inflected motion stems correlates with some syntactic differences. For instance, even though motion verbs in SVCs differ from other stems in allowing NPs (or adjectives) to recapitulate or modify the subject, as in 4.20 and 4.21, an identical subject is maintained for all stems of the SVC. When *am-* is inflected with an SS:PRIOR morpheme, however, the subject of the following clause may be included in, rather than be identical to, that of *am-*. 4.43, in which the subject of the first instance of *am-* is the girl and the two men, Saleŋ and Kawt, while the two men alone are subject of *yom-*, is an example of such 'sloppy reference' (cf. §1.5.5):

4.43 Bin ak **ag**-a-k,
woman this say-3sg-PAST
The woman said,

'*Katp ñt ak* ***am****-l, yp tap ti* ***yom****-ngab-it*?
house your(dl) this go-SS:PRIOR me(Obj) thing what show-FUT-2/3dl
'(Us) having gone to your place, what things have you got to show me?

Katp-yad ak amn-u-n!' **ag**-a-k.
house-my this go-HORT-1pl say-3sg-PAST
'Let's go to my place!' she said. (Madaw Sosm #26)

The constraints on subject coreference are thus stricter between bare motion verbs and following verbs than between motion verbs with an SS:PRIOR inflection and the inflected verbs of following clauses.

The evidence presented above suggests that the syntactic behaviour of bare motion stems is intermediate between that of other bare stems and stems inflected with SS:PRIOR morphemes. Motion stems can be less tightly connected to following bare stems. This allows SVCs to deal with the requirements of Kalam discourse in terms of describing movement of actors and objects between scenes of a complex event, as discussed in the preceding chapter. In addition to coding movement itself, bare motion stems also allow the

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[14] In turn, the fact that pauses are possible, if rare, between motion verbs and immediately adjacent stems sets these sequences off from typical sequences of non-motion stems, where the probability and duration of a pause is very low indeed (cf. Givón 1990).

[15] On the evidence of my data it is plausible to propose that the relationship between motion verbs with preceding NPs and those with following NPs is on a par with the relation between English sentences such as *John picked up the phone* and *John picked the phone up*.

associated locations and objects to be coded within SVCs in the same order as they would be coded in a sequence of clauses. The most complex structures allowed in Kalam SVCs by motion stems, in which individual verb stems may be able to take their own locatives, are characteristic of sequences of clauses. However, motion stems also participate in the most tightly-knit sequences of verb stems.

4.3.4 Arguments preceding *l-* 'put'

As Tables 4, 5 and 6 show, *l-* 'put, form, become, etc.'[16] behaves quite differently from most other stems in the kinds of non-verb material that can precede it. As with other stems, *l-* can co-occur with adjuncts such as *mlep* 'dry' and adverbs such as *key* 'by oneself'. But Table 6 indicates that it can also be preceded by locative arguments and numbers. Preceding locative arguments typically occur when *d-* 'get' is the preceding verb stem. As with *am-* 'go' and *ap-* 'come', the locative may be quite complex. This is illustrated by the following example, in which the locative phrase consists in turn of two locatives conjoined by *akaŋ*, the second an embedded clause (in square brackets).

4.44 '**D** *kab bak sŋak akaŋ, [man mlep g-u-p sŋalped*]
get rock steep just:here or ground dry do-3sg-PERF across
'Let me get (it, i.e. *kuypep* water-rat) and *on a rock or [on ground which is dry]*

l-ø-in' ag-e-y …
put-HORT-1sg say-DS:PRIOR-2sg
(let me) place it', you having said… (i.e. (if) you (were to) get it and place it on the rocks or dry ground …) (XII #44)

Again like *am-* and *ap-*, locative arguments can precede the SVS *d l-* (as in 4.45) as well as being able to intervene between the stems *d* and *l* (e.g. 4.46).

4.45 … ned *first chapter* **d** **l**-ng, mey **ag**-ngeb-in ak.
first first chapter get put-SS:PROSP this:one say-FUT-1sg this
… in order to put (the *sgaw* and the *kotwal* wallabies together) in the first chapter, I am going to speak. (I #145)

4.46 … **d** ned *first chapter* ned **l**-ng
get first first chapter first put-SS:PROSP
… so as to put (the *sgaw* wallaby) first in the first chapter,

mey mñi sosm **ag**-ngeb-in.
this:one now story say-FUT-1sg
I am now going to tell (its) story. (I #3)

For a number of reasons, I consider that *l-*, rather than *d-*, is the stem which allows locative arguments into these SVCs. Firstly, *d-* is otherwise quite closely tied to following verb stems (see §5.2.4). Secondly, locative arguments preceding *l-* also occur following other stems, although less prominently. The following is an example with *yg-* 'dig'.

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[16] *l-* is the form of this verb in Ti mnm dialect, *ay-* in Etp mnm. Note that all the examples cited in §4.3.4 are in Ti mnm; hence, for simplicity, I refer to *l-* throughout. I have positive evidence that *ay-* behaves similarly in Etp mnm, at least with respect to licensing locatives after *d-*.

4.47 **D-ap** bak okok lum **yg** okyaŋ **l**-ob-n
get-come bank around ground dig below put-PRES:PROG-1pl

ag-ngab-al.
say-FUT-3pl
'We are bringing (it; the meat) to (somewhere around the homestead) and digging the earth and placing it *below*', they will say (i.e. they will bring it somewhere near the homestead and dig a hole and bury it). (XIX #30)

The third reason involves the behaviour of *l-* with other preceding stems in SVCs. *l-* allows verb stems to be followed by numbers, which would otherwise either precede or follow **all** the verb stems of the SVS. Example 4.48 illustrates a common usage, *tk NUMBER l-* 'give birth to NUMBER offspring'.[17]

4.48 Kmn nb ak ney ñluk ak ognap
Game:mammal such this it offspring this sometimes
This type of animal will sometimes

tk *mamd* *ak* **l**-ngab-ø, …
give:birth five this put-FUT-3sg
bear *five* offspring, … (XI #7)

Example 4.49 shows that the number phrase may be internally complex, containing nested number phrases, usually joined by *akaŋ* 'or'.

4.49 … nb **su-su** *mamd* *sŋak* *akaŋ* *kagol* *akaŋ* *sŋak*
so bite-bite five just:here or six or just:here

l-osp- ø …
put-REC:PAST-3sg
… it has just killed (by biting) its *fifth or sixth* (animal) … (XIX #87)

Again, there is a parallel with the behaviour of *am-* 'go' and *ap-* 'come' to allow following arguments. Numerals can either occur outside (i.e. before or after) all stems in the SVS (as in 4.50) or intervene between the initial stems and *l-* (as in 4.51).

4.50 … ognap **kn-kn** **l**-p-al wajtem …
sometimes sleep-sleep put-PERF-3pl ten
… sometimes ten sleep (there) … (VIII #74)

4.51 Kawsek **kn-kn** mamd, kagol sŋak **l**-p-al ak.
together sleep-sleep five six just:here put-PERF-3pl this
Five (or) six (of them) sleep together. (X #19)

These examples also illustrate that numerals can relate to the subject of the clause.

One reason that *l-* treats numerals similarly to locatives derives from the Kalam 'body-part' method of counting. In this method, positions on the hands (starting from the little finger of the left hand as 'one'), arms, shoulder and neck represent numbers from 1 to 23 (once the hollow in the clavicle of the neck, 'twelve', is reached, numbering continues with the same body-parts down the other side of the body to the right hand). While counting, one hand points to the relevant position on the other side of the body (Dictionary

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17 Note that both *tk-* alone and *tk l-* can mean 'give birth to, be a parent'.

ÑN entry). This method of counting is referred to as *ñn pag (nŋ)-* 'hand bend (perceive)'. Hence locatives and this type of numeral are closely related in Kalam. Note that numeral phrases can end in locative elements (e.g. *sŋak*; these further specify the position of the body-part being used as marker; cf. Davies (1981a:207) on Kobon). In addition, numerals can appear clause-finally (after inflected verbs), something characteristic of locatives but not of other clause constituents.

It is body-part numerals (and numerals borrowed from Tok Pisin or English) that tend most often to precede *l-* and follow other stems in SVCs; the numerals *nokom* 'one' and *omŋal* 'two' (also *omŋal nokom* 'three' and *omŋal omŋal* 'four') normally precede the modified stems, which normally aren't followed by *l-* in this case.[18] Compare 4.52 with 4.50 above, the latter being the clause which immediately precedes 4.52 in the text.

4.52 … ognap won omŋal nep **kn**-b-it …
sometimes piece two precisely sleep-PERF-2/3dl
… sometimes only two sleep there … (VIII #74/2)

In sum, then, *l-* 'put' is able to license preceding locatives (particularly after *d-* 'get') and numerals. *l-* differs from motion verbs in only permitting these two types of object, and in that locative elements precede (rather than follow) the stem. It also differs in the frequency with which it allows material to precede it and in the range of verbs which it licenses to precede locatives and number elements. Probably these last two facts are related. But as with the motion verbs, *l-* allows sequences of bare stems to be interrupted by quite complex phrases. The fact that such phrases can also precede or follow the same sequence of verb stems with no difference in referential meaning suggests that the semantic links between verb stems in discontinuous SVCs can be as strong as those between adjacent stems.

4.3.5 Non-final *md-* 'stay'

This section concentrates on SVC-initial *md-* 'live, stay, CONTINUATIVE'. The meaning of *md-* in SVC-initial position shows some affinity with that of the same stem elsewhere.[19] However, its syntactic behaviour SVC-initially is somewhat unusual, as the following examples illustrate.

4.53 Ney olap kosiŋd ma-**tag**-u-p,
it other carrying:on:back NEG-walk:about-3sg-PERF
The other (game mammal, i.e. the wallaby) doesn't carry (its young) around on its back,

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[18] The basic similarity between body-part numerals and those borrowed from other languages is that both types are suited to counting larger numbers of things than the numeral system based around *nokom* 'one' and *omŋal* 'two'. Above *omŋal omŋal* 'four', this latter system loses its usefulness, for obvious reasons. Note also that *nokom* and *omŋal*, if referring to the number of subjects, are reinforced by the number information suffixed on the verb stems.

[19] *md-* typically occurs SVC-finally (62/75 or 83% of serialised occurrences in the KHTs). In this position its most common function is as a continuative aspect marker (see §5.2.3). Non-finally, *md-* appears in *md tep g-* constructions (see §1.6.3 on *g-*support) and *md dad MOTION-* constructions (see §3.3.5), as well as in constructions which more closely resemble the aspectual use of SVC-final *md-*.

md md *tap kub* ***g****-l …*
stay stay thing big do-SS:PRIOR
time passes until (the young wallaby) grows big … (I #125)

4.54 Ñluk **l**-l
lying:in:wait put-SS:PRIOR
(They, i.e. the two men Saleŋ and Kawt) having lain in wait

md md *mey bin ak awl* ***yap pak****-e-k*
stay stay there woman this here descend hit-DS:PRIOR-(3sg)PAST
(they) waited/time passed (and) the woman fell down (i.e. suddenly appeared) in front of them … (Madaw Sosm #49)

In the examples above, SVC-initial *md md-* indicates that there was a passage of time before the actions of following stems. The iteration of *md-* emphasises that the duration involved was fairly long (it is also possible for just a single token of *md-* to appear SVC-initially with this function, as 4.55 below shows). The examples above also illustrate the behaviour of SVC-initial *md-* with respect to following non-verb material. In 4.53, *md-* is followed by the object or modifier of the following verb stem *g-* 'do'.[20] Example 4.54, in contrast, allows a new subject, *bin ak* 'this woman', to follow *md-*.

The examples above are relevant to an important question regarding SVC-initial *md-*, the question of subject reference. In 4.53, *md-* could plausibly be interpreted as sharing the subject of *g-* 'do' (3sg: the young wallaby). No such interpretation is possible in 4.54. The subject of *md-* in 4.54 could be that of the previous clause (i.e. the two men), or *md-* could in fact have no particular subject referent. *bin ak* 'the woman' is not a possible subject of *md-* in this example. Note the interaction between the switch reference system and the possible subject reference of *md-* in 4.54. The clause containing *ñluk l-* 'lie in wait', which has a subject coreferential with 'Saleŋ and Kawt', is marked for SS:PRIOR. The sequence *yap pak-* 'descend hit ≈ fall down onto a surface' has *bin ak* as subject (marked on the inflected verb *pak-*). Recall that the basic definition of switch reference in Kalam states that same or different subject reference holds with the next inflected verb (§1.5.5). But despite the same subject marking on *l-*, *(ñluk) l-* and *yap pak-* definitely do **not** have the same subject referent.

The SS:PRIOR marking on *l-* in 4.54 could be taken as implying that *md md-* shares the subject referent of the previous clause, the two men Saleŋ and Kawt. Despite the contrary evidence presented by the switch reference system in 4.54, it may be preferable to regard SVC-initial *md-* as always having indeterminate subject reference (i.e. as meaning simply 'time passed').[21] Classing SVCs such as 4.54 as switch-subject serialisation obscures the fact that most such serialisation involves sharing of core participants (actor/undergoer). Hence it is most typically manifested as causative serialisation (undergoer of first stem becomes actor of next: see §4.2). In 4.54, if *md md-* is considered to have the two men as

[20] Since Kalam places many different types of phrases immediately before stems (the position typically associated with both objects and modifiers in the language), it is sometimes difficult to tell exactly what function a given phrase may be fulfilling in such a position. This is particularly true of phrases preceding *g-* 'do', since the latter's broad range of meaning (at least comparable to that of English 'do') can make the assignment of relations between the stem and various phrases rather arbitrary. See §4.3.6. Table 3 and Table 6 (arbitrarily) count *tap kub* 'thing big', as well as *gup* 'seed' in 4.55, as (non-locative) objects of *g-*.

[21] Note that my database contains no instances of *md-* in its more typical unserialised meanings of 'stay' or 'exist' in SVC-initial position.

subject, then *md md-* and *yap pak-* have **no** participants in common. This assumption could be avoided as long as the subject of *md-* is left unspecified. Such is certainly the case for 4.55, within which switch reference operates in a more typical fashion.

4.55 Abn mgan okok **l**-e-k,
undercroft hollow around put-DS:PRIOR-(3sg)PAST
(The *gudlus*) puts (*kumi* pandanus nuts) in the undercroft,

md gup **g**-u-p-**nŋ**,
stay shoot do-3sg-PERF-DS:SIM
(and) after a while they sprout,

dad **am**-l, mey **ym**-u-b ak.
carrying go-SS:PRIOR this:one plant-3sg-PERF this
(and) it carries them off and plants them. (III #167)

In 4.55, the first clause is marked for different subject from the clause containing both *md-* and *gup g-*. Note also that inanimate entities such as *kumi* 'nuts' are not normally actors of *md-*. So neither the previous clause subject (3sg, the *gudlus*) nor that of *g-* (3sg, *kumi* 'nut(s)') are likely subjects of *md-*.

md- differs from most other stems in allowing subjects to follow within SVCs. *am-* and *ap-* also allow following subjects, or phrases recapitulating or further restricting the subjects of the clause, perhaps because the length of other material intervening between these stems and following stems creates the potential for ambiguity or confusion — the hearer, or the speaker, can become 'lost'. Allowing following subjects is one way in which SVC-initial *am-* and *ap-* resemble SS-marked clauses. SVC-initial *md-* also resembles interclausal syntax more than other serialised verb stems. However, the behaviour of *md-* isn't necessarily comparable to either SS or DS morphology. In fact, the switch reference system can be rendered somewhat confused by *md-*, as demonstrated by 4.54. *md-* contrasts with SVC-initial motion stems in that the latter always have the same subject referent as following stems, while *md-* is not required to do so.

Following other (non-motion) verb stems, *md-* is interpretable with a continuative aspect function (§5.2.3). When *md-* is non-final, this function is combined with the syntactic behaviour described above for SVC-initial *md-*.

4.56 … abn ak **tk** **g** **md** **md**
undercroft this break do stay stay
… we(2) dug (down) into the undercroft for some time,

swatg ak pat nb ak **pak**-t-uk.
marsupial:cat this long such this **hit**-1dl-PAST
and killed a big *swatg* (marsupial cat). (XI #15)

In 4.56 above, *md-* modifies *tk g-* 'break do',[22] indicating that the breaking occupied a considerable period of time (note that *md-* can be iterated non-finally, unlike the same stem in SVC-final position). In addition, the object of the following verb stem follows *md-*. It is also possible for the **subject** of the following verb stem to follow in this position, although perhaps only after *ag-* 'say'.

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[22] Following bare stems, *g-* 'do' seems to mark repetition of the previous action. Intensity may also be implied (Pawley pers.comm.). Compare *ag-* 'say' with *ag g-* 'say do' = 'scold, rebuke, tell off'.

4.57 **Ag**-e-k mey nb, **ag md md**, bin **ag**-a-k,
say-DS:PRIOR-(3sg)PAST this:one so say stay stay woman say-3sg-PAST
(She) having said (this), they kept on talking, the woman said,

'Katp-yad **amn**-u-n' **ag**-a-k.
house-my go-HORT-1pl say-3sg-PAST
'Let's go to my house' she said. (Madaw Sosm #27) (cf. 4.43)

As with 4.55 above, the clause immediately preceding the SVC in 4.57 is marked for DS reference. The most likely subject for the first *ag-* in the SVC *ag md md, bin ak agak* is the two men (Saleŋ and Kawt again) and the woman. The final stem is marked only for agreement with *bin*. Interestingly, as with 4.54, *md-* here has thrown off the switch-reference system. If DS marking is assumed to operate between inflected verbs, *ag-* (in the *agek* clause) is marked for different subject with the *bin ag-* clause, despite the fact that *bin* is the subject of both clauses.

Examples such as 4.54, 4.55 and 4.57 demonstrate that non-final *md-* can operate quite differently from other serialised stems. The fact that these stems lack verbal morphology, and restrictions on the length of material between *md-* and the next stem (normally shorter than that between *am-* or *ap-* and following stems), argue that *md-* (and preceding bare stems, if any) belong to the same clause as the next finite verb. However, the semantic connections between SVC-initial *md-* and following stems seems much looser than that which holds even between bare motion stems and following stems. Issues of subject reference, including the behaviour of the switch-reference system with respect to *md-*, emphasise the independence of non-final *md-* from following stems. Hence there are grounds for redefining the clause in Kalam to allow clauses ending in bare-stem *md-* (which would in turn require SVCs to be defined in a more narrow way than solely on the basis of morphology, as has been done in this work).

4.3.6 Modifiers and *g-* 'do'

While this chapter has concentrated on arguments, some brief notes on different types of modifier are in order. Comparing Table 3 and Table 6 in §4.3.2, it can be seen that the presence of modifiers is conditioned by following (rather than preceding) stems in SVCs. *dad* appears with *am-* and *ap-* (see §3.3.5). *tep* precedes *g-*, as do most of the items I have classed as adjuncts. The association of adjuncts with *g-* partly results from my classification methods. Given the breadth of the meaning of *g-*, it is difficult to determine case relations between the stem and many of the items which can precede it. Normally I have classed as adjuncts any items which are not unequivocally arguments of *g-*.[23] However, it is significant that many more such problems of identification arise with *g-* than with other stems.

Other evidence that *g-* is particularly prone to co-lexicalising with adjuncts comes from the fact that words borrowed from Tok Pisin or English often co-occur with *g-* to allow new verbal meanings. In particular, verbs are always borrowed on this pattern: *wokim g-* 'work', *bihainim g-* 'follow (customs)' (from Tok Pisin), *change g-* 'change', *believe g-* 'believe' (from English).

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[23] Syntactic tests, such as the question of whether or not possessive pronouns or markers, or other modifiers, could be postposed to the elements preceding *g-* (such modification being possible for nouns but not for adjuncts) were not available, since I had no access to native speakers.

In addition to this kind of co-lexicalisation, there is evidence that *g-* can be used to allow modification of other parts of the SVC. *g*-support, as described in §1.6.3, is one such example. Information provided by Pawley (pers.comm., from field notes) suggests that *g-* may introduce other modifiers into SVSs. Pawley's example involves the SVC *wik d ap tan d ap yap g-* 'rub get come ascend get come descend do' (= 'rub upwards and downwards'), 'to massage (by rubbing)'. Modifiers such as *kasek* 'quickly' and *kapkap* 'slowly, carefully' can be placed in SVC-initial position, or immediately before *g-* (to make *wik daptan dapyap kasek g-*). Constructions such as 4.58 and 4.59 are synonymous.

4.58 *Kasek* **wik d-ap-tan d-ap-yap g**-sp-ay.
quickly rub get-come-ascend get-come-descend do-PRES:PROG-3pl
They are *quickly* rubbing (him) up and down (i.e. they are massaging (him) with quick strokes). (Pawley pers. comm.)

4.59 **Wik d-ap-tan d-ap-yap** *kasek* **g**-sp-ay.
rub get-come-ascend get-come-descend quickly do-PRES:PROG-3pl
They are *quickly* rubbing (him) up and down. (Pawley pers. comm.)

Other than before *g-,* the only place within SVSs that such modifiers can intervene is after *am-* or *ap-* (see §4.3.3).

If these modifiers are to be placed anywhere else within this sequence of verb stems, SS morphology must be used.

4.60 **Wik**-ig *kasek* **d ap tan-i,**
rub-SS:SIMULT quickly get come ascend-SS:PRIOR
As you rub, (you should) go upwards *quickly*

kapkap **d ap yap g**-n-mn.
slowly get come descend do-OPT-2sg
and go downwards *slowly* (i.e. you should rub upwards quickly and downwards slowly). (Pawley pers. comm.)

Pawley says that modifiers are most likely to be inserted after *tan-* or *yap-*, further evidence that *d ap tan-* and *d ap yap-* act as units for certain processes.

The above points illustrate two of the many interrelated roles *g-* plays within SVCs (and generally in Kalam syntax). One is its tendency to co-lexicalise with other items to form new verbs; its behaviour with borrowings suggests that it is (or is becoming) the 'elsewhere' stem in respect of this process. *g-* can also function to introduce adverbial modifiers into SVCs.

4.4 Negation

The two negative morphemes of Kalam, ma- and met, provide evidence for both the internal structure and the clausal status of SVCs. The prefix ma- is almost always attached directly to verb stems. met, on the other hand, is a free morpheme which can occur in a wider range of syntactic environments.[24] The differences of syntactic behaviour between the two morphemes extends also to the ways in which they interact with serial verb constructions.

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[24] There is very little overlap between these two morphemes, although in a limited number of environments *met* can be used as a free or emphatic variant of *ma-*. However, there may be a diachronic connection between them; note that negatives starting with /m/ are a feature of the wider language group to which the Kalam family belongs (the Trans New Guinea family).

4.4.1 *ma-*

ma- (glossed NEG in examples) is a prefix, with two allomorphs, /ma-/ before consonants and /m-/ before vowels.[25] There is normally only one instance of this morpheme per simple clause. The prefix can occur on verbs nominalised or adjectivised with the *-ep/-eb* suffix; for example *b ma-ng-eb* 'an ignorant/unaware man' (man NEG-perceive-ADJR).[26] While *ma-* normally attaches to verb stems, it is occasionally prefixed to certain modifiers (I have examples of *ma-* before *nep* 'precisely, only, just' and *yb* 'truly, really'). In this case negation is emphasised.

4.61 … b pataj sŋok kuj **n**-p-al ak,
man bachelor just:here magic perceive-PERF-3pl that
… bachelors who knew magic

ma-yb ***ñ**-b-al* mey nb ak.
NEG-truly eat-PERF-3pl this:one so this
really couldn't eat it (the madaw). (IX #85)

It can also, very rarely, be prefixed to verb adjuncts, such as *tug* 'with the fingers' in 4.62, or nominal arguments, as in 4.63.

4.62 Pas ma-tug **cg**-ng **g**-a-yn.
envelope NEG-with:the:fingers stick-SS:PROSP do-PRES:PROG-1sg
I will not seal up the envelope. (Dictionary CG entry)

4.63 Ma-kotp **md**-p-ø.
NEG-house stay-PERF-3sg
It is not at the house/There is no house.

Compare:

Kotp ma-**md**-p-ø.
house NEG-stay-PERF-3sg
It is not at the house/There is no house.
[Both sentences are the negation of *kotp md-p-ø* house stay-PERF-3sg
'It is at the house/There is a house'.] (Dictionary MA- entry)

It should be emphasised that it is extremely rare for *ma-* to prefix to anything other than to verb stems. Out of the 162 instances of *ma-* in both the KHT and DICT databases, only five (3%) allowed *ma-* to prefix non-verb material.

The scope of *ma-* is (roughly speaking) the whole clause (cf. Young's remarks below on inclusion or exclusion of the subject in negation). Note that the quantifier *koŋay* 'many' (and phrases such as *koŋay yb* 'very many') are included in the scope of *ma-* negation, as exemplified by the contrast between the asserted (4.64) and the negated (4.65).

4.64 … mey kmn ak koŋay **md**-olg<u>p.
this:one game:mammal this many live-PAST:HAB-3sg
… there used to be many game mammals. (Intro #52)

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[25] Note that /y/ and /w/, which would have high front and high back vowel allophones respectively in this position (after a consonant), take the /ma-/ allornorph. This is part of Pawley's justification for classing these phonemes as consonants.

[26] Negated adjectives or nouns which have been derived in this way can co-occur with a main-clause negative.

4.65 … kmn ak koŋay ma-**md**-eb-ø, …
game:mammal this many NEG-live-3sg
… there are few game mammals … (II #79)

This can also apply to *magisek* 'all', but not to other quantifiers such as *nokom nokom* 'a few' or *ognap* 'some'.

Certain adverbs such as *kapkap* 'quietly, carefully, slowly' can also be included in the scope of *ma-*

4.66 … kapkap m-**am**-u-b …
slowly NEG-go-3sg-PERF
… it doesn't move off slowly … (III #51)

The scope of *ma-* doesn't include following clauses. It also doesn't include preceding clauses which are marked with final or DS inflections:

4.67 Pen tap kub tap kub **l**-a-k, *jl ak su ma-**l**-a-k.*
but thing big thing big grow-3sg-PAST neck this thick NEG-grow
It grows quite big, (although) its *neck is not thick*. (II #89)

4.68 … **su**-e-k, *bin-b ognap ma-**kn**-b-al …*
bite-DS:PRIOR-(3sg)PAST woman-man sometimes NEG-sleep-PERF-3sg
… (the *ymdwŋ)* having bitten (them), *people sometimes can't sleep …* (II #50)

In a few cases, such as 4.69, *ma-* also has scope over preceding SS-marked clauses.

4.69 … **ñag**-l, ma-**ñ**-b-al
shoot-SS:PRIOR NEG-eat-PERF-3pl
… they don't shoot and eat (it) (rather than 'they shoot it (but) don't eat it'). (VII #61)

Davies (198la:79ff.) describes a similar phenomenon in Kobon. He states that negation can apply to both clauses only if negation of the first clause wouldn't preclude the event of the second clause occurring, and if 'the situations in the two clauses are naturally closely related'. Exactly what kind of events are closely related is, of course, by no means obvious. However, note that 4.69 can be paraphrased by an SVC with the same two verb stems.[27]

4.70 … ma-**ñag** **ñ**-b-al …
NEG-shoot eat-PERF-3pl
… they don't shoot and eat (it) … (VII #63)

Constructions such as 4.69, in which the earlier clause is included in the scope of negation, are in the minority. Still, this is evidence that SS-marking is intermediate between final- and DS-clause morphology and the bare stem marking of SVCs, as suggested by Givón (1990).

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[27] I don't have enough evidence to tell whether or not the scope of negatives will extend to previous SS marked clauses just in case the verb stems involved could appear in an SVC. Still, for Kalam at least, serialisation may be a syntactic correlate of these 'closely related' situations.

4.4.2 *ma-* in SVCs

As we saw in Chapter 2, SVCs are generally considered to involve tighter syntactic bonding than multi-clause constructions. As discussed in this and the previous chapter, there are restrictions on the ways in which verb stems can be combined in Kalam SVCs, restrictions that don't apply to chained or conjoined clauses. The negative prefix *ma-* provides evidence of ways in which SVCs behave like single clauses. The evidence is both syntactic and semantic in nature.

ma- tends to attach to the initial verb stem of a serial verb construction, in cases where the following verb stems are all contiguous (i.e. uninterrupted by non-verb material).

4.71 Kmn ak pen, mñab ognap ma-**pak-ñ**-b-al okok.
game:mammal this but land some NEG-hit-eat-PERF-3pl around
They don't kill and eat game mammals in these parts of the country (or: parts of the country where they don't kill and eat game mammals). (Intro #50)

Exceptions to this statement are generally attributable to the fact that if non-verb material intervenes in an SVC, *ma-* will follow such material.

4.72 … tap kmn ognap **g**-a-k tek,
thing game:mammal some do-3sg-PAST like
… in the way that some animals did,

walak **d-am** keykey sŋalyaŋ ma-**l**-a-k.
testicles get-go separately downwards NEG-grow-3sg-PAST
it didn't grow its testicles downwards (i.e. its testicles don't hang down like those of some animals [note that the *tek* clause acts as an adverbial modifier of the clause containing *l-*]). (III #7)

In this example, the verb stems *d am* are followed by non-verbal material: *keykey* 'separately' and a locative morpheme. Since *ma-* tends overwhelmingly to be prefixed to verbs, it is logical that the placement of *ma-* in SVCs should be sensitive to the presence of non-verb material (cf. also the negation of *g*-support discussed below).

Pawley (pers.comm.) suggests that if *d-* precedes *am-* or *ap-* and another verb stem, *ma-* will follow the *d + MOTION* combination, regardless of the presence or absence of intervening material. This is borne out by 4.73.[28]

4.73 … kti kuñp ak nb nep **tk** **d-ap** **ma**-ñ-b-al …
they vegetable:sp this so precisely cut get-come NEG-eat-PERF-3pl
… they don't cut and bring and eat *kuñp* greens at all …
(Majnep and Bulmer 1983:44)

Note that when *am-* and *ap-* are not followed by non-verb material, *ma-* will be prefixed to them.

4.74 Kotp-ip enen m-**ap** **nŋ**-b-an?
house-my why NEG-come see-PERF-2sg
Why haven't you come to visit my house? (Dictionary NŊ- entry)

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[28] Pawley (pers. comm.) also suggests that *ma-* will not prefix the first verb stem if a verb series is longer than two or three stems. In the few cases in my database in which long SVCs are negated, either intervening material or *d + MOTION* could also be the conditioning factors.

In *g*-support constructions (see §1.6.3), *ma-* attaches to *g-* (i.e. the final verb stem of the SVC):

4.75 Kotwal nb ak yad **nŋ** tep ma-**g**-p-in …
scrub:wallaby so this I perceive well NEG-do-PERF-1sg
I don't know very much about the *kotwal* ... (I # 149)

4.76 … kaj ogok **md** tep ma-**g**-esp-al …
pig these live well NEG-do-PAST:HAB-3pl
… (their) pigs were not flourishing … (VII #87)

This is evidence that *g-* is a grammatically obligatory morpheme in these constructions (i.e. those in which a verb stem is modified by *tep*, and maybe other modifiers), to which affixes such as TMA and negatives attach. It is also possible that *ma-* attaches to *g-* in this construction because there is material after the first stem (i.e. the modifier *tep*).[29]

In general, it seems that, regardless of the syntactic position of *ma-,* it can always be interpreted as including all the verb stems in an SVC within its semantic scope. So all the verb stems in 4.77 below are negated, as are all those in 4.74 above. The difference in syntactic position comes from the presence of intervening non-verb material (the locative argument of *(d) ap-*), or from the presence of *d ap-*, as described above.

4.77 sataw ey tap gu alyaŋ nb **ag** **d-ap** awl
serpent INTJ thing plains below place say get-come here
ma-**l**-p-al …
NEG-put-PERF-3pl
… they didn't talk about the *sataw* of the lowland plains … (X #31)

Young (1975:1) states that *ma-* can also allow 'the negation of the entire sentence when the subject is stressed'. This interpretation is possible, but not obligatory, with any SVC (and presumably with any unserialised sentence as well, when negated by *ma-*).

4.78 Yad m-**am** **nŋ**-n-k.
I NEG-go perceive-1sg-PAST
NEG [I go look for him]
It wasn't I who went to look for him.

OR:

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29 Example a. below (taken from the Kalam dictionary) is an apparent exception to the general rule that *ma-* includes contiguous parts of SVCs in its syntactic scope. *ypok ma-ñ-* (sentence a.) seems anomalous since there are other SVCs with *ma-* and *ñ-* in which the negative morpheme precedes the entire SVC (such as sentence b.).

a. Yp **ypok** ma-**ñ**-b-an.
me equalise NEG-give-PERF-2sg
You haven't given me the equivalent (of what I gave you).
(Dictionary YPOK- entry)

b. … yp ma-**ag-ñ**-e-la-k.
me(OBJ) NEG-say-give-DS:PRIOR-3pl-PAST
… they didn't tell me (*ag ñ-* 'say give' = 'tell'). (III #126)

Since *ñ-* seems to have the same function in both the above SVCs, and there is no difference in the semantic scope of *ma-,* I can't think of any explanation for the aberrant behaviour of the first SVC.

I NEG [go look for him]
I didn't go and look for him. (Young 1975:1ff.)

To summarise, then, *ma-* normally[30] appears prefixed to the first stem of an SVC which isn't followed by non-verbal material (occasionally it prefixes a modifier preceding such an SVC). Exceptions in my database occur when *ma-* follows *d* + *MOTION* — whether because of the length of such SVCs or because of the nature of *d* + *MOTION* itself is not clear from my evidence. In my database, the semantic scope of negation is over all stems of the SVC.[31] Note the difference between *ma-* negation of SS:PRIOR marked clauses and that of SVCs. In SS:PRIOR-marked clause chains, the negative appears in the rightmost clause, and normally will apply only to it.

4.4.3 *met*

As mentioned above, *met* (which I gloss 'no' or 'not') can occur in a wider range of syntactic contexts than *ma-*. For instance, it can be used to disagree with the previous speaker or, more generally, to indicate that previous assertions in a discourse are untrue.

4.79 … pen bin-b cn pen **nŋ**-l **a**-p-un,
but woman-man us but see-SS:PRIOR say-PERF-1pl
… but we Kalam people, having seen (this), we say,

algaw key mug nep **ym**-u-b **a**-p-un.
Pandanus self rodent:sp precisely plant-3sg-PERF say-PERF-3sg
'It is just the *mug* which plants *alŋaw* pandans', we say.

Met, gudlus yp omŋal **g**-l **y**-b-it.
no rodent:sp with two do-SSTRIOR plant-PERF-2/3dl
This is not true, both it and the *gudlus* plant (them). (III #166/167)

This seems related to its use in non-verbal negative clauses:

4.80 Kmn ognap pen cb-wt ak yp,
game:mammal some so intestines-bunch this with
So the intestines of some game mammals,

tap okok yp slek **g**-u-p,
thing these with bitter do-3sg-PERF
and the contents (of the intestines), are bitter

kmn nb ak *met* ...
game:mammal such this not
but *not* (those of) this game mammal (the *mosak*) … (III #137)

It can also appear in yes/no questions:

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30 That is, in all cases except for *ypok ma-ñ-* cited in fn.29.

31 Note that in Kobon the bound negative morpheme *ag-* follows the verb, immediately before TMA suffixes. In the case of SVCs, it is suffixed to the last verb of the series. Despite this morphological difference with Kalam, in Kobon the scope of negation is similarly over all verb stems in an SVC (Davies 198la:78ff.).

4.81 Plaw **yn**-b-ø akaŋ met?
bread heat-PERF-3sg or not
Is the bread baked or not? (Dictionary YN- entry)

So *met* can occur at least at the beginning of clauses (possibly in apposition to them) and after NPs.

met can be seen as a constituent negator, as 4.80 above and 4.82 below both suggest.

4.82 Yad mñi knm mosak ak **d**-l ned met,
I now game:mammal bamboo:kapul this get-SS:PRIOR first not
I, having got the *mosak,* in order to put it not first,

nab-pi ak met, nab-pi ak **l**-ng **ag**-ngeb-in.
next-here this not next-here this put-SS:PROSP say-FUT-1sg
not next (in the middle here/right here), but next after that, I will talk about it (i.e. now, thirdly, I am going to talk about the *mosak).*
(Original title of Chapter III of the KHTs).

This contrasts with *ma-,* which negates verbs, verb phrases or sentences, and is always closely associated with verb stems. I have encountered no instances of *met* and *ma-* in the same clause.[32]

4.4.4 *met* in SVCs

In SVCs, *met* 'no, not' (unlike the negative prefix *ma-*) almost always occurs immediately before the final verb stem. Its use in SVCs is virtually restricted to a single type, termed here the effort-in-vain construction.[33] The effort-in-vain construction involves one or more (usually more) stems encoding a repeated action or prolonged state followed by *met* and then *nŋ-* 'perceive, see, think, know, etc.[34] The following SVCs illustrate this construction *(met* is italicised to make it easier to locate).

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[32] This is hardly surprising, considering the functions of *met.* When *met is* used as an appositional negator, the truth of the previous clauses is denied while the following clause is asserted. And to negate the effort-in-vain construction (discussed in the next section) would result in something like *ma-pyow pyow met nŋbin.* This contains non-verbal material, and in addition would be highly unlikely pragmatically:

I didn't search and search for something but saw it.

[33] There is only one instance of *met* being involved in a different type of construction from the one described in this section. This occurs in the title of Chapter II of the KHTs:

Mñi kmn ymduŋ **d** ned *met,* nab-pi ak **l**-ng **ag**-ngeb-in.
now game:mammal copper:ringtail get first not next-here this put-SS:PROSP say-FUT-lsg
Now in order to get and put the *ymduŋ* not first, but next, I will talk (about it) (i.e. now, secondly, I will discuss the *ymduŋ).* (title of Chapter II of the KHTs)

The example above is quite different both from the use of *met* in SVCs in effort-in-vain constructions, and from that of *ma-*. As with 4.82, this example seems to involve constituent negation (of the modifier *ned* 'first') rather than clause negation. Note also the use of *l-* 'put' to allow complex locatives into SVCs.

[34] While all the effort-in-vain constructions in my corpus involved *met,* Pawley (pers. comm.) suggests that *ma-* can substitute for *met* in this construction. If so, this would constitute an exception to the scope and position *of ma-* as defined above. However, it is an exception which would apply only to this single construction type.

4.83 ‘Ami-nup **pyow pyow pyow** *met* **nŋ**-b-in’ ag-a-k.
mother-she search search search not see-PERF-1sg say-3sg-PAST
‘I have searched and searched but have not found (our) mother’, he said.
(Dictionary PYOW- entry)

4.84 Kawt yp, Saleŋ ip **am** takn alyaŋ
Kawt with Saleŋ with go moon below
Kawt and Saleŋ went one night

tgaw md md *met* **nŋ**-e-t …
draw:a:bow stay stay not perceive-DS:PRIOR-2/3dl
and lay in wait to shoot (a *madaw* cuscus) but didn’t see it …
(Madaw Sosm #3/4)

Compare 4.83 above with 4.85, the asserted equivalent:

4.85 ‘… yad **am pyow ng**-ø-in’ ag-l …
I go search perceive-HORT-1sg say-SS:PRIOR
‘… let me go and search (in order to) find (the arrow)’, he said …
(Madaw Sosm #8)

In fact, the final verb of the effort-in-vain construction need not always be interpreted literally. Example 4.86 below suggests that what is being denied is the fruitful conclusion of the preceding action/state.

4.86 Tuwn **g** *met* **ng**-te-k ak …
bundle do not perceive-2/3dl-PAST this
They bundled (it) (but) didn’t succeed (in bundling it up) …
(i.e. they just couldn’t wrap it up). (Madaw Sosm #75)

The action verb is typically iterated (to indicate the extent of the action), while a stative verb stem may be followed by *md-* ‘exist, stay, wait’ (possibly iterated, as in 4.84 above) to indicate continuous aspect. No non-verbal material intervenes between the stems (aside from *met* itself). Any arguments must precede the sequence, as must motion stems (only *am-* ‘go’ in my database) indicating initial movement to the location of the striving.

This construction contrasts with those involving *ma-* in two important respects. Firstly, *met* is restricted to a position immediately before SVC-final *nŋ-*. In contrast, *ma-* normally prefixes the first stem of an SVC not followed by non-verb material; *ma-* only attaches to the final stem of an SVC under quite restricted conditions. Secondly, the semantic scope of *met* is only over *nŋ-*. *ma-* applies to the entire construction. Compare the effort-in-vain construction 4.87 with 4.88, which contains the same verb stems but is negated by *ma-*.

4.87 Ñn ognap **tag tag** *met* **nŋ**-l, **o**-p-al.
time some walk:about walk:about not perceive-SS:PRIOR come-PERF-3pl
Sometimes having walked about but not seen (any animals) they return (empty handed). (II #80)

4.88 … pen yad ma-**tag** **n**-p-in ak …
but I NEG-walk:about perceive-PERF-1sg this
… but I haven’t walked about and made any observations (down there) …
(II #101)

The two examples above illustrate the differences in semantic and syntactic scope of *ma-* and *met.* In addition, they shed some light on the functions of constructions involving these two morphemes. *ma-* is the standard negator both of single predicates and of entire SVCs in Kalam, and as such represents one way in which Kalam treats the latter as single units. The negation of individual stems with *ma-* could only take place if those stems were in separate clauses.

met, in contrast, allows negation of individual stems in SVCs, but only in a restricted construction type. As with the formulas discussed in Chapter 3, the effort-in-vain construction is an efficient method of coding a culturally (probably universally) recurrent situation, that of expending effort to no avail.

4.5 Conclusion

This chapter has presented additional evidence for the analysis in Chapter 3, that motion stems serve to structure SVCs along the lines of Kalam discourse. Here it has been shown that motion stems act differently from non-motion stems in terms of the type and amount of non-verbal material — arguments and modifiers — they can introduce into SVCs. *am-* 'go' and *ap-* 'come' allow locative arguments or objects, and sometimes both, to intervene between them and following stems. In this way they act as hinges within SVCs, as was stated in §3.4. However, the presence or absence of this material following motion stems doesn't (in certain positions) necessarily correspond to any difference in referential meaning.

l- 'put' allows locatives and numerals (two closely related concepts in Kalam) into SVCs. In common with *am-* and *ap-,* there is no difference in referential meaning between cases where material intrudes into the complex of verb stems and those where it clusters around the complex. Unlike *am-* and *ap-,* though*, l-* licenses **preceding** material.

md- 'exist, stay' resembles *am-* and *ap-* in permitting arguments to follow it. However, it is unique among Kalam stems in possessing indeterminate subject reference in certain positions. In SVC-initial position, particularly, bare-stem *md-* differs from all other verb stems because of its unusual interaction with the mechanisms of interclausal syntax, and in the weakness of its semantic connection to following verb stems.

Patterns of negation indicate another way in which Kalam SVCs resemble both single predicates and multi-clause constructions. *ma-,* a clause negator, closely tied to the predicate in simple clauses, normally has the entire SVC in its semantic scope. It is possible to negate individual predicates within SVCs, as the effort-in-vain construction (which uses the constituent negator *met*) shows. However, this possibility is very restricted, both syntactically and in terms of the type of situation such constructions can encode.

The evidence presented in this chapter has shown that Kalam SVCs can have quite complex internal syntactic structure. In particularly complex cases, motion verb stems allow subparts of SVCs to take individual peripheral arguments, a feature normally associated with sequences of clauses rather than with verb stems within SVCs. Even in somewhat simpler cases, SVCs may superficially resemble sequences of chained clauses since bare motion stems can license following NPs. At the same time, such SVCs can often be paraphrased by constructions in which all arguments, core and peripheral, cluster around the entire sequence of verb stems, including motion stems; this latter type of SVC thus superficially resembles a single predicate. And while the negative prefix *ma-* may

follow motion stems in some SVCs, in semantic terms it treats all SVCs similarly to single predicates. In these senses, Kalam SVCs form a continuum between single and multiple clause structures; while some SVCs resemble structures such as chained clauses more than others, which more closely resemble single predicates, all SVCs share features of both.

Tep.

5 *Grammatical functions of serial verbs*

5.1 Introduction

This chapter is based around a study of three Kalam verb stems, *d-* 'get', *md-* 'stay, live, exist', and *ñ-* 'give'. When one of these stems appears as the last verb of a serial verb construction, it marks functions which in many languages are carried out by grammatical morphemes: *d-* 'get' marks completive aspect, *md-* 'stay' signals continuative aspect, and *ñ-* 'give' is associated with benefactive/recipient objects. Hence these verb stems are relevant to grammaticisation, in the sense of the development of grammatical markers from lexical items.

The term 'grammaticisation' itself implies a process; according to a widely quoted definition,

> grammaticalization consists in the increase in the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status. (Kuryłowicz 1965:69)

Cross-linguistic studies have identified a number of phonetic, morphosyntactic and functional or semantic processes which are implicated in grammaticisation (e.g. Heine and Reh 1984:16ff.). As a linguistic unit becomes more 'grammatical' — in terms of the present study, as a lexical verb takes on some grammatical role — we expect it to lose some of the features of the lexical class to which it originally belonged. So to say that verb stems in Kalam are being grammaticised, we need to show that some kind of movement from more lexical to more grammatical function is taking place with these verbs. Further, the change in function should correlate to some degree with a concomitant loss of verbhood, in some or all contexts.[1]

In a number of serialising languages, there are morphological clues that category change is taking place. As §2.5.4 illustrates, serialised verbs can begin to lose aspects of their identity as verbs, including the ability to take certain verbal inflections: this correlates with their drift into grammatical functions. In Kalam, this evidence is denied us for two reasons. Firstly, verb stems, by definition, are capable of either taking verbal infections or appearing uninflected (as bare stems). In this way they contrast with all other word classes in Kalam. Secondly, according to the definition of SVCs in Kalam given in §1.6.1, all

[1] The co-existence of earlier functions/meanings of a linguistic unit and later developments of that unit has been termed 'functional split' (Heine and Reh 1984:57). The alternate possibility is that a new function of a word replaces its earlier meaning/function. This 'functional shift' is assumed to result from the same processes as functional split, with, in addition, the loss of the original meaning (Heine and Reh 1984:59ff.).

stems but the last in an SVC are bare stems, without suffixed verbal morphology. The distribution of suffixes on verb stems is thus predictable solely on the basis of position in an SVC, and doesn't correlate with any potential loss of verbal function.[2]

Accordingly, we must look for other pointers towards a decrease in lexical status concomitant with the increase in grammatical function. One of these, of course, is the extent to which the grammatical meaning differs from the meaning of other instances of the same verb stem, whether unserialised or elsewhere in SVCs. Restrictions on the freedom of distribution of verb stems can also point to loss of verbal status. In Kalam, the 'grammatical' use of serialised verbs is strongly correlated with SVC-final position. It may well be significant that this is the position immediately before bound grammatical morphemes for tense, mood and aspect, person/number of subject and/or switch-reference. A common development in many languages is for lexemes which have changed into function words to move into the structural position associated with constituents of a similar function (Heine and Reh 1984:28). This fact would provide some motivation for the correlation of the aspectual uses of *d-* 'get' and *md-* 'stay' with SVC-final position. Bearing this in mind, there are at least three different, but interrelated, approaches to the notion of 'freedom of distribution':

(i) the ability of verb stems to appear unserialised,

(ii) the ability of stems to appear non-finally in SVCs, and

(iii) the ability of stems to appear non-finally in SVCs with their grammatical function.

Section 5.2 describes the behaviour of each of the three verb stems mentioned above, with respect to their possible grammatical functions. The section on initial *d-* 'get' also includes discussion of several verb stems with somewhat related aspectual functions, *ay-* (Ti mnm *l-*) 'stabilise, put', *ju-* 'withdraw' and *tk-* 'separate, change, interrupt'. The individual sections introduce each verb stem, then compare their semantic characteristics and syntactic behaviour in SVC-final position with those of the same verb in other positions. The conclusion focuses on two interrelated issues. Section 5.3.1 concerns possible indicators of grammaticisation in Kalam. Section 5.3.2 discusses the question of whether it is always possible to distinguish between the 'lexical' and 'grammatical' meanings of a verb stem. In some cases, what appear to be grammatical functions for particular verb stems might be better analysed as falling out from other principles — general principles of semantic interpretation in SVCs, complementarity in the lexicon, and the potential for closely associated lexical items to form single words (co-lexicalise).

5.2 *d-* and other completive verbs, *md-* and *ñ-*

5.2.1 SVC-final *d-* 'get'

d- (which I have usually glossed 'get') refers to 'actions or processes which restrict, constrain or bring under control' (Dictionary, D- entry). This definition encompasses a number of related meanings, perhaps centred on the concrete notion of physically manipulating or acquiring some object: 'get, obtain, hold, gain, acquire, attain (a position), catch, seize, stop, etc.'). Typical arguments are subject and, frequently, non-locative object (representing agent and patient roles respectively).

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2 My reliance on written texts also precludes me from using phonological evidence to decide questions of grammatical status.

5.1 Dacŋ **d**-i, **pk**-ig, dad **am**-j<a>p.
drum get-SS:PRIOR hit-SS:SIMULT carrying go-PRES:PROG-3sg
Having got a drum, he is hitting (it) as he goes carrying (it).
(Pawley 1966:163)

In impersonal constructions (§1.5.4) it often refers to seizure by a physical or emotional reaction ('shame', 'trembling'):

5.2 Yp nabŋ **d**-p-ø.
me(Obj) shame get-PERF-3sg
I am ashamed (lit. shame seizes me). (Dictionary D- entry)

d- is a common verb, present in 300/5339 clauses (≈ 6%) of the KHTs (eighth in overall frequency). It is very often serialised (fourth most frequently serialised verb in the KHTs), occurring in 148 (≈ 16%) of the 876 SVCs in the KHTs. Around half of the clauses in which it appears are SVCs (148/300). In 44 (≈ 30%) of these it occurs SVC-finally. In this position, and if it directly follows one or more verb stems, *d-* often signifies completive aspect. Sentence 5.3 illustrates the completive use of *d-* (henceforth glossed **complete** in this function).

5.3 Tep, mñi **ag-d**-p-in.
good now say-complete-PERF-1sg
Well, now I have finished speaking. (Intro #84)

This function is readily distinguishable from some of the common meanings of *d-* such as 'get' or 'hold'. The difference can be exemplified by the fact that *d-* has an aspectual function only when it immediately follows a verb stem in an SVC, as in 5.3, or the italicised SVC in 5.4 (*d-* here denotes complete involvement of the subject in the action of going).

5.4 … bin **ag**-a-k '*Katp-yad* ***am-d-ø-un***' …
woman say-3sg-PAST house-my go-complete-HORT-1pl
… the woman said, '*We must all go to my house*' … (Madaw Sosm #27)

When *d-* follows a clause marked for same subject reference (SS), no completive aspect reading is possible.

5.5 … wtsek dad **am**-l, **d**-l, **pak**-nu-k.
chasing carrying go-SS:PRIOR get-SS:PRIOR hit-1pl-PAST
… having chased (it) and caught (it), we killed (it). (XII #18)

In this way *d-* differs from the verb stems *md-* 'stay'/CONTINUATIVE and especially *ñ-* 'give'/DATIVE, discussed in §5.2.3 and §5.2.4 respectively. Both *md-* and *ñ-* can be read with this 'grammatical function' after SS-marked clauses.

However, development from verbs meaning 'get' to completive aspect is a common one cross-linguistically (Foley 1986:145). Further, since Kalam generic verbs have such a wide range of meanings, either unmodified or in combination with other stems in SVCs or with adjuncts, there is a chain of meaning associated with *d-*, from 'get' and 'handle', through 'hold', 'control', 'constrain', to the completive aspect use of *d-* (Pawley pers. comm.).

d- may modify more than one verb stem in an SVC, as in 5.6 where *pak ñb-* 'hit eat' denotes hunting and *d-* (translated 'out') indicates the exhaustiveness of the hunting and killing of animals in the area.

5.6 … kmn ak **pak ñb** **d**-p-al,
game:mammal this hit eat complete-PERF-3pl
… they have hunted (i.e. struck and eaten) out the game mammals,

nokom nokom **md**-eb-ø …
one one stay-PRES:PROG-3sg
(so that) only a few (*nokom nokom*) remain … (Intro #53)

Completive aspect applies to series of verb stems which are not separated by NPs, as illustrated by 5.7, in which completive aspect has scope over *yg-* 'fill with/be full of (non-liquid objects)', but not over *ap-* 'come'.

5.7 '**Ap** wad ak mgan alyaŋ, wad
come string:bag this hollow below string:bag

yg-d-eb-in'
fill-complete-PRES:PROG-1sg
'I am coming (home) and filling up string bags (with game mammals)',

ag-a-k.
say-3sg-PAST
he said. (Intro #35)[3]

Conversely, in my database, if SVC-final *d-* immediately follows another stem, it necessarily marks completive aspect; the only exception to this statement is when *d-* follows motion stems. Thus a sequence such as *am d-* can either be interpreted as 'completely go, all go' (as in 5.4 above), or as 'go (and) get', as in 5.8 below.

5.8 … b ak **am** **d**-l, **pak**-ngab-ø.
man this go get-SS:PRIOR hit-FUT-3sg
… having gone and seized (it), he will kill (it). (II #116)

The fact that motion stems need not be modified by an immediately following token of *d-*, whereas other stems are obligatorily modified in this way, fits in with the syntactic character of motion stems discussed in the previous two chapters.

Pawley (1993:102) analyses *d-* as an 'actor-oriented completive' (the actor has finished/is completely involved in her/his action). This presumably is meant to account for combinations such as *ag d-* 'finish speaking' (as in 5.3 above), or *am d-* 'all go' (5.4). However, contrary to Pawley's claim, emphasis need not necessarily be on the actor. Examples 5.6 and 5.7 above could both be interpreted as completely involving the patient ('… hit and ate *all the game mammals* …', 'am filling up *the string bag(s)* …' A similar interpretation applies to the following SVCs (compare 5.10 with 5.15 below).

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3 *d-* in this example emphasises how full the string bags were. The sentence is part of the story of one of the original inhabitants of the Kalam area, who caught so many animals that he was able to burn some as fuel to cook the others with. Following this, he went and filled up string bags with game mammals and tipped them out on places which had originally been without such animals. Note that *yg d-* is specified for present progressive (PRES:PROG) tense/aspect. Although completive aspect may seem incompatible with such a TMA specification, such an incompatibility is only superficial. Kalam speakers often place parts of narratives into the form of direct speech, with the last verb of the quote marked for PRES:PROG. This often takes place when the protagonists (including animals and plants) are unlikely to actually be talking (§1.5.4). In such cases, it is reasonable to take the tense of the quoted sentence from that of the quote verb *ag-* 'say' (PAST in 5.7) (see Davies 1981a:4 for a similar phenomenon in Kobon).

5.9 Saleŋ, kañm mab ak **pd**-l, ***ñb*** ***d****-l* …
Saleŋ banana fire this scrape:skin-SS:PRIOR eat complete-SS:PRIOR
Saleŋ scraped the skin off the roasted bananas, and *ate his fill (of them)* …
(Madaw Sosm #10)

5.10 … Cabak yp, Kudakay yp, b ak maglsek **ñag-d**-a-k …
Cabak and Kudakay and man this all shoot-finish-3sg-PAST
… he shot all the men from Cabak and Kudakay … (Madaw Sosm #104)

Any emphasis placed on participant(s) in an SVC marked with *d-* is secondary to the fact that the event has been completed in an exhaustive fashion, and can be inferred from that and the nature of the verb stems involved.

5.2.2 Other 'completive' verbs

While *d-* 'get' is the most productive marker of completive aspect in Kalam, certain other stems in SVC-final position can indicate the completion of events. One of these is the verb stem *ay-* (in Etp mnm dialect; *l-* in Ti mnm dialect), which has a wide range of meanings centred around the idea of becoming or causing something to become in a stable condition: 'put, become, secure, form, settle or perch (of birds), turn or change into, etc.' (Dictionary AY-(3) entry).

5.11 B yakt tek **a**y-p-ø.
man bird like become-PERF-3sg
The man turned into a bird. (Dictionary AY-(3) entry)

In impersonal (uncontrolled) 'bodily process' constructions (§1.5.4) *ay-* denotes stable conditions (permanent or at least fairly long-lived), as in the two examples below.

5.12 Yp slañ **a**y-p-ø.
me(Obj) scab put-PERF-3sg
I have a scab (lit. a scab has grown on me). (Pawley pers. comm.)

5.13 Yp su **a**y-p-ø.
me(Obj) wellness put-PERF-3sg
I am well/free from ritual contamination. (Pawley pers. comm.)

This contrasts with the meaning of other generic verb stems in uncontrolled constructions; for instance *g-* 'do' involves more temporary/dynamic conditions.

5.14 Yp sb **g**-p-ø.
me(Obj) shit/bowels do-PERF-3sg
I feel upset (lit. my bowels act on me). (Pawley pers. comm.)

Pawley (1993:102) has identified SVC-final *ay-* as marking a 'patient-oriented' completive — 'i.e. the effect of the action or process on the patient is complete or permanent'. So for example *ñag ay-* 'shoot put' means 'kill by shooting', *pk ay-* 'hit put' means 'kill by striking'. Compare 5.15, which illustrates *ñag ay-*, with 5.10 above, which illustrates *ñag d-* 'shoot all (of the men)', in which *d-* indicates the thoroughness with which the action of shooting was carried out.

5.15 B nup **ñag** **ay**-p-in.
man him shoot put-PERF-1sg
I shot the man stone dead. (Dictionary AY-(3) entry)

Likewise, *pag ay-* 'break put = break through' in 5.16 below indicates the complete breakage of the shell. Note, however, in that SVC *ay-* may be fulfilling the additional role of allowing *yakt ñluk* to act as agent: unserialised *pag-* is often an impersonal verb.

5.16 Yakt ñluk ceg **pag** **ay**-p-ø.
bird child shell break put-PERF-3sg
The baby bird breaks out of its shell. (Dictionary CEG(1) entry)

The patient-oriented nature of this aspectual function of *ay-/l-* falls out naturally from some facets of the verb's unserialised meaning, such as the notion of movement into a permanent or long-lived state.

In addition to *d-* and *ay-/l-*, other verb stems can indicate the completion of an event in SVCs. *tk-* 'interrupt, separate' (and *tb tk-* 'cut separate = cut off'), *ask-* 'avoid' (and *ask-* serialised with *ay-* 'put' and *yok-* 'remove') and *ju-* 'withdraw' can be used in this function. The following are examples of these SVs used with *ag-*.

5.17 Mnm **ag** **tk** **d**-p-ay.
word say sever complete-PERF-3pl
They have stopped talking. (Dictionary AG- entry)

5.18 Tap si **ñ**-b-ay, mnm **ag** **ask** **yok**-p-ay akaŋ?
food illegally eat-PERF-3pl word say avoid remove-PERF-3pl or
The theft of food, have they stopped talking about it? (Dictionary YOK- entry)

5.19 Mey aŋ tep **ag**-**ju**-p-in ak.
this:one well good say-withdraw-PERF-1sg this
Well, so now I've completed what I have to say. (cf. 5.3 above) (XI #33)

Taking these examples into account, it is possible to identify a number of subtly different aspects in Kalam, all involving the basic concept of 'completion'. Note that each verb introduces facets of its unserialised meaning into the construction. *tk-* includes the notion of interruption. *ju-* refers to removing (things) or departing; compare 5.19 with 5.20 and 5.21 below.

5.20 Kañm yŋ **ju**-a-k.
banana shoot withdraw-3sg-PAST
He removed all the banana shoots. (Dictionary JW- entry)

5.21 Yad kotp **ju**-sp-in ok.
I house withdraw-PRES:PROG-1sg this
I'm departing from this house. (Dictionary JW- entry)

ask- focuses on avoiding or leaving (a topic); compare the serialised use of *ask-* in 5.18 above, and in 5.22, with the unserialised use of the same verb stem in 5.23.

5.22 … b ak **ñag-ñag** **ask**-a-k wajtem olaŋ.
man this shoot-shoot avoid-3sg-PAST ten above
… he shot ten (of the enemy) before he was finished. (Madaw Sosm #103)

5.23 Bin-b asŋ **padk**-p-ay kayaŋ:
woman-man contaminated pass:by-PERF-3pl downhill:from:you
People who are ritually contaminated have just passed by down there:

ask-i **aw**-ø-an.
avoid-SS:PRIOR come-HORT-2sg
having avoided (that place) you should come. (Dictionary ASK- entry)

Despite the functional overlap of the serialisation of these verbs and the aspectual use of *d-* 'get', it should be noted that the latter type is much more productive. In addition, the verb stems mentioned above are much closer to their basic meaning, or to their meaning in other SVCs, than that of *d-*. For these reasons, it is less profitable to talk of 'grammatical' uses of these verb stems than it is with *d-* (and, to a lesser extent, *ay-*).

However, it is worth noting that, among the stems discussed here, *ju-* 'withdraw' seems to act the most like *d-*. It is more productive than *tk-* and *ask-* in this function (note *(pas) tk ju-* '(letter) write withdraw = finish writing a letter'). Also, *ju-* can be used to reinforce the aspectual function of *d-*, in which case it follows *d-*, which otherwise occurs SVC-finally (cf. 5.17 above, in which 'aspectual' *tk-* precedes *d-*). Sentence 5.24 illustrates this (square brackets mark off an embedded clause) (cf. 5.3, 5.19).

5.24 Mñi [Nolb mnm **ag**-a-k at ak] **ag-d-ju**-p-in.
now Nolb word say-3sg-PAST on this say-get-withdraw-PERF-1sg
Now I have finished reporting [what Nolb had to say (about this topic)].
(XX #69)

5.2.3 The stem *md-* 'stay'

md- means 'to exist, live, dwell, remain, stay, persist, continue' (Dictionary MD- entry). I have usually glossed it 'stay'. It occurs in 426 out of 5339 clauses in the KHT database (≈ 8%), making it the sixth most commonly used verb stem. Typical arguments are subject and locatives (expressing patient and locative roles).

5.25 Mey kmn ak koŋay **md**-olg<u>p.
this:one game:mammal this many live-PAST:HAB-3sg
Many game-mammals used to exist (= game mammals were very plentiful).
(I #52)

In the sense 'live, exist' it has an antonym *kum-* 'die, be/become incapacitated, non-functioning'. In the sense 'remain, stay' it contrasts with the verbs of motion *am-* 'go' and *ap-* 'come' (see §3.3; Pawley 1987:346–348). For example, a common leave-taking expression is the following.

5.26 Nad **md**-e-y, yad **am**-jp-in.
you stay-DS:PRIOR-2sg I go-PRES:PROG-1sg
You remain, I am going. (Dictionary MD- entry)

md- appears in 74 SVCs, out of a total of 426 clauses (≈ 16%). It appears in SVC-final position 83% of the time (62/74) in the KHT database (some aspects of the behaviour of *md-* in other positions in SVCs are discussed in §4.3.5). When SVC-final *md-* is preceded by verbs of motion (with or without intervening material) (5.27), or by other verb stems followed by intervening material (5.28), it will only be interpretable with its unserialised meaning.

5.27 Numud kmn mon **tan** **am**, **am**,
cross:cousin game:mammal tree ascend go go
The cross-cousin climbed the tree for a possum, going and going

muŋ byoŋ **md**-e-k.
top:of:tree uphill stay-DS:PRIOR-(3sg)PAST
to the top, where he remained. (Dictionary MUŊ entry)

5.28 … **g** **g**, ttoŋ mgan alyaŋ **md**-eb-ø.
do do pouch hollow below stay-PRES:PROG-3sg
… it does (these things) (to) keep (its young) in its pouch. (I #122)

When SVC-final *md-* directly follows another verb stem, it can function as an aspect marker indicating persistence or continuation of the action encoded by the previous stem (Dictionary MD- entry). This accounts for 49 (≈ 66%) of the KHT instances of serialised *md-*. Sentences 5.29 and 5.30 provide examples (*md-* is henceforth glossed 'continue' in this function).

5.29 Ñayp **d** **md**-e-n, **yow**-p-ø.
knife hold continue-DS:PRIOR-1sg descend-PERF-3sg
The knife I was holding fell. (Dictionary YAP- entry)

5.30 Kmn nb ak lŋowc **g** **md**-la-k-nŋ …
game:mammal such this scuffling do continue-3pl-PAST-DS:SIM
(As) these game-mammals scuffle … (*lŋowc g-* 'scuffle') (XI #23)

In §4.3.5 it was noted that when uninflected *md-* follows other stems, it may mark continuative aspect in a similar fashion to SVC-final *md-*.

5.31 … abn ak **tk** **g** **md** **md**
undercroft this break do stay stay
… we(2) dug (down) into the undercroft for some time,

swatg ak pat nb ak **pak**-t-uk.
marsupial:cat this long such this hit-1dl-PAST
and killed a big *swatg* (marsupial cat). (XI #15) (repeated from §4.3.5)

In some cases, this aspectual function of non-final *md-* is combined with the loose semantic connection to the final inflected verb characteristic of SVC-initial *md-*.

5.32 **Ag**-e-k mey nb, **ag** **md** **md**, bin **ag**-a-k
say-DS:PRIOR-(3sg)PAST this:one so say stay stay woman say-3sg-PAST
(She) having said (this), they kept on talking, the woman said,

'Katp-yad **amn**-u-n' **ag**-a-k.
house-my go-HORT-1pl say-3sg-PAST
'Let's go to my house', she said. (Madaw Sosm #27) (repeated from §4.3.5)

Note, however, that non-final use of *md-* in SVCs, either aspectual or non-aspectual, is considerably less common than SVC-final use of the same verb; there are only three instances in the KHT database where non-final *md-* modifies another verb (3/74 ≈ 4%).

Many languages use verbs meaning 'stay' or 'live' to mark a similar continuative aspectual function (Foley 1986:144). Note that, unlike *d-* 'get' (§5.2.1), *md-* can be interpreted with its aspectual function when it immediately follows clauses marked for same subject, as in 5.33.

5.33 … **ap-tan** **ap-yap** **g**-l **md**-eb-al …
come-ascend come-descend do-SS:PRIOR continue-PRES:PROG-3pl
… they go up and down (the forest ridges) … (lit. having gone up and down they are staying) (I #45)

Sentences 5.34 and 5.35 are adjacent segments of a narrative. Example 5.34 represents serialised aspectual *md-*; this is contrasted with a similar use across a SS:PRIOR boundary in 5.35.

5.34 … pay ney, ney mey b **d** **md**-e-k ak
daughter his she this:one man get continue-DS:PRIOR-(3sg)PAST this
… his daughter having continued to hold this man,

5.35 nep cci tmel **d**-l **md**-e-k.
precisely gripping very get-SS:PRIOR continue-DS:PRIOR-(3sg)PAST
she was just gripping him very tightly. (Madaw Sosm #41)

In both 5.33 and 5.35, a literal reading of the two clauses as encoding discrete events ('went up and down and (then) stayed', 'gripped (him) very tightly and (then) remained') is a little unnatural.

However, in many combinations of SS-marked verb + *md-*, such a reading (X did Y and then remained) is plausible, and may in fact be the only possible one. Compare the examples above with 5.36.

5.36 … 'mosak smjen **ñ**-u-b' **ag**-l
bamboo:kapul entrance give-3sg-PERF say-SS:PRIOR

md-esp-al …
stay-REC:PAST-3pl
… they say, 'The *mosak* has closed its entrance', having said (this), they have just stayed … (i.e. they discover that the *mosak* has closed its entrance, and wait (so that they can catch it)) (III #45)

In other words, when *md-* directly follows a verb marked for SS, it may be interpreted either aspectually or non-aspectually. In cases where *md-* follows a bare stem in an SVC, however, an aspectual reading is much more strongly favoured. These facts provide evidence that (a) the aspectual meaning of *md-* is more closely related to the basic meaning of the verb than is the case with *d-* 'get'/COMPLETIVE, but that (b) it is possible to distinguish these two meanings of *md-*; particularly, the aspectual function is closely, but not exclusively, associated with SVC-final position.

5.2.4 The stem *ñ-* 'give'

The meaning of *ñ-* (which I have usually glossed 'give') can be summarised as '… bring an object into close-fitting and lasting contact with another object or surface' (Dictionary Ñ- entry). This encompasses a wide range of meanings, including 'to connect or fit together, apply against a surface, fit or screw into position, close a door, transfer or give [something] into [someone's] possession, arrange or position [something] in an orderly fashion'. As with English *give*, *ñ-* can act like a prototypical ditransitive verb, with the potential for three arguments. These are typically agent/source, patient/theme and recipient/goal. All three arguments are represented in 5.37.

5.37 Yad nuk bis **ñ**-ab-in …
I him bead give-REC:PAST-1sg
I gave him beads … (Dictionary KOLKOL entry)

However, as has been mentioned (§1.5.4), the number of NPs per clause in Kalam narrative is generally low. Of the 43 clauses which contained **unserialised** instances of *ñ-* in the KHT database, 10 (≈ 23%) had no arguments, 29 (≈ 68%) had one argument and only four (≈ 9%) had two arguments. In terms of semantic roles, there were 24 patients (present in 78% of the 33 clauses containing one or more arguments), nine recipients/ beneficiaries (≈ 27%), three agents (10%) and one locative (3%).[4]

ñ-, which appears in 100 (≈ 2%) of the 5,339 clauses in the KHTs, is serialised in nearly three fifths of these occurrences (57/100). It tends overwhelmingly to be SVC-final (54/57 in the KHTs, 24/25 in the Dictionary database). The notion of transfer of one entity to another, which is common to all meanings of *ñ-*, is the most salient feature of its contribution to the meaning of SVCs. The following two sentences illustrate this contribution. In 5.38, *pk-* 'hit, strike' appears unserialised, while in 5.39 it is followed by *ñ-*.

5.38 Ñg **pk**-ø-an!
water strike-HORT-2sg
Wash (yourself)! / Strike the water! (Pawley 1975:19)

5.39 Ñg **pk** **ñ**-ø-an!
water strike give-HORT-2sg
Wash (it/him/her)! / Strike water (on it/him/her)!
(cf. *ñg ñan* 'Give the water!') (Pawley 1975:19)

Here, as Pawley (1975:20) suggests, *ñ-* can be interpreted as a dative marker. Again, dative marking functions very commonly develop from verbs meaning 'give', and SVCs are often involved in such a development (see §2.5.4). It is important to note that the only (notional) recipient possible in 5.38 is the same person as the subject/actor. In 5.39, however, the recipient has to be a participant other than the actor. This distinction is maintained in other pairs of constructions which differ in the presence or absence of *ñ-*. For example, *tm-* can mean 'fit in position, put (a covering) on'. Both unserialised *tm-* and its synonym *tm g-* refer to 'fitting or putting something on oneself' (Dictionary TM- entry). With *tm ñ-*, on the other hand, the fitting is directed towards another participant. So what is important with verbs serialised with *ñ-* is not just that there is a recipient, but that the recipient and the agent differ.

Note that while *ñ-* notionally introduces the role of recipient into an SVC, that role need not be represented explicitly by an NP. As discussed above, Kalam tends to keep the number of NPs per clause to a minimum. For example, of the 57 SVCs containing *ñ-* in the KHT database, only 21 (37%) have overt recipient NPs. *ag ñ-* 'say give = tell, inform' has an overt recipient just 50% of the time (12/24) in that database.

This means it can be misleading to talk of 'valence increasers' in Kalam, since introduction of a new case role into an SVC may not correlate with the presence of an overt NP representing that role. It is more important to note that recipient arguments are at least notionally possible in SVCs containing *ñ-* (e.g. 5.39). In contrast, unserialised *pk-*

4 Of the four sentences with two arguments, two had both agent and patient, two had patient and recipient.

(see 5.38) doesn't ever allow recipient objects, at least on the evidence of the Kalam dictionary and the KHTs.

The grammatical use of *ñ-*, even more than is the case with *md-*, is difficult to separate from its basic meaning. In some cases, clause chains involving SS:PRIOR-marked verb stems followed by *ñ-* are identical in meaning to SVCs in which the same verbs precede *ñ-*, as the following examples illustrate with *ad(-) ñ-* 'cook give = make an offering of food'. In 5.40, *ad-* 'cook' and *ñ-* 'give' form an SVC, while in 5.41, which describes the same situation, employs the same verb stems in separate clauses.

5.40 **Ad-ñ**-o-n …
cook-give-DS:PRIOR-1pl
We having cooked and given (food) (i.e. made offerings)
(to the spirits of the ancestors) … (III #111)

5.41 … b ak nop **ad**-l **ñ**-ob-n …
man this him cook-SS:PRIOR give-PRES:PROG-1pl
… having cooked, we are giving (food) (i.e. making offerings) to him …
(III #96)

In other cases, it seems that if a verb is modified by *ñ-*, the two verbs can only occur together in an SVC. An example of this is provided by the SVC *ag ñ-* 'tell, inform' (lit. 'say give').[5]

5.42 … nbep **ag-ñ**-ngab-al.
you(2sgObj) say-give-FUT-3pl
… they will tell you (this). (I #42)

Of the 24 instances of this sequence of verbs (*ag-* 'say' followed by *ñ-*) in my database, all involve SVCs; I have not encountered any such sequences in which *ag-* is marked for same subject. It is tempting to suggest that *ag-* and *ñ-* have to be serialised because speech, unlike the food which is given in 5.40 and 5.41 above, is not a possible object of *ñ-* alone. However, the breadth of meaning of Kalam generic verbs means that such verbs often have less strict selectional restrictions than their English glosses. Evidence that this is the case for *ñ-* comes from the fact that stories (*kesm*) can be either 'told' (*ag ñ-*), as in 5.43, or 'passed on' (*d ñ-* 'get give'), as in 5.44.

5.43 … b bpap-yad ak Wpc yp kesm ak
man mother's:brother-my this Wpc me story this

ag-ñ-l …
say-give-SS:PRIOR
… my maternal uncle Wpc having told me this story … (I #113)

5.44 … kesm yp **d** **ñ**-e-l …
story me get give-DS:PRIOR-3pl
… after (/if) they had passed on these stories (to me) … (I #174)

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5 Note that *ag ñ-* takes as possible arguments the speaker, the hearer and the topic of speaking. If complements of speaking are involved, they are first introduced by *ag-* alone. English *they told me (that) X* would be translated, *X ag-l, yp ag-ñ-la-k*, i.e. 'X having-said, me they-told'.

A consequence of the close relation between the dative function of *ñ-* and the basic meaning of that verb stem is that, unlike *d-* 'get'/COMPLETIVE and *md-* 'stay'/ CONTINUATIVE, *ñ-* allows a dative interpretation when it follows motion stems in SVCs.

5.45 … mey kmn ak mlep **l**-l,
this:one game:mammal this dry become-SS:PRIOR
… having smoke-dried these animals,

d-am *nopey* ***ñ****-elgp-al* …
get-go him(Obj) give-PAST:HAB-3pl
they used to take (them) and give (them) to him … (III #86)

5.46 … ji binb sŋok, bin toki b toki akaŋ, ñskol, ñapay-skol
and people these woman old man old or boy-small girl-small

ogok *ktop* ***d-ap*** ***ñ****-esp-al.*
these they(Obj) get-come give-REC:PAST-3pl
… *they had just brought and given* (them) to these people, old women and men, or to little boys and girls. (XII #35)

As was mentioned earlier, *ñ-* nearly always appears SVC-finally. One motivation for such a restriction in position is the fact that when clauses following *ñ-* involve participants of the *ñ-* clause, typically it is the recipient/beneficiary NP which is shared. This is demonstrated in 5.47, where *ñapay-skol ogok ktop* 'their daughters' is the recipient of the *ñ-* clause and the subject of the *ñb-* clause.

5.47 … ñapay-skol ogok ktop ak **ñ**-e-l, **ñb**-elgp-al.
daughter-small these them(Obj) this give-DS:PRIOR-3pl eat-PAST:HAB-3pl
… having given (the *godmg* water-side rat) to their little daughters, the latter ate (it). (XII #6)

It would not be possible for a verb stem which has the beneficiary or recipient argument of *ñ-* as subject to follow *ñ-* in an SVC, since Kalam typically requires that all verb stems in an SVC share a single subject (see §3.2.3).

Another possible motivation for placing *ñ-* last in an SVC is that this position is associated with other 'grammatical' uses of SVs, the aspectual uses of *d-* 'get' and *md-* 'stay'. Note that in my database, *ñ-* is never followed by *md-* in SVCs (although aspectual *md-* may follow *ñ-* + *SS*). I have one example (not taken from the KHT database, but from a later chapter in Majnep and Bulmer (n.d.)) in which *d-* follows *ñ-*; in this case *d-* supplies completive aspect.

5.48 '… bin-b ogok maglsek **ñ-d**-l, **ñ**-b-un'
woman-man these all give-get-SS:PRIOR eat-PERF-1pl

ag-a-k.
say-3sg-PAST
'… having shared (the cooked meat) out to everybody (i.e. given (it) to all the men and women), we ate (it)', he said. (XIX #50)

Compare 5.48 with 5.44 above, in which *d-* precedes *ñ-*.

In the KHT database, there are three exceptions to the pattern of final *ñ-* (i.e. 3/57 ≈ 5% of the total number of SVCs with *ñ-*). One of these involves *g*-support (§1.6.3), with

the sequence *ypd g-* 'truthfully do' acting to modify the preceding SVC *ad ñ-* 'cook give = make an offering (e.g. to the spirits of the ancestors), share out cooked food'.[6]

5.49 … kti nb ak 'nop ned **ad** **ñ** ypd **g**-ob-n'
they so this it first bake give truthfully do-PRES:PROG-1pl

a-p-al
say-PERF-3pl
… so they say 'first we are cooking and giving truthfully' (i.e. so they cook, as an offering, the first (animal)) (III #93)

The other two examples of non-final *ñ-* involve *ag-* 'say', followed by one or more instances of *ñ-*, in turn followed by *kn-* 'sleep':

5.50 … mnek pen day ogok **ag**-ñ-ak, **ag** **ñ** **ñ**
next:day but section these say-give-3sg-PAST say give give

kn-la-k.
sleep-3pl-PAST
… and the next day he went on teaching them (till they slept).
Madaw Sosm #58)

The function of *ñ-* is identical in such SVCs to that of SVC-final *ñ-*, but, as the sentence above shows, there are some differences in the syntactic behaviour of the two items. The first is that the subject of the SVC changes after the *ag ñ-* sequence (from the 3sg subject of the previous clause (a giant domestic pig who is teaching two men various types of magic) to the 3pl subject coded on the verb, i.e. the two men, and presumably the pig as well). Also, patterns of iteration are different for sequences involving *md-* and *ñ-* than for most sequences of Kalam verbs. For other sequences, normally a single content verb will be iterated or if two verbs are particularly closely associated the whole sequence will be repeated (hence *d ap d ap* etc.). In 5.50, however, it is *ñ-* rather than of the 'content' verb *ag-* 'say', or the whole sequence *ag ñ-*, which is repeated. This is similar to the behaviour of non-final *md-* (see §4.3.5; §4.4.4).

5.2.5 Non-final *d-* 'get' in SVCs

The KHTs contain 108 instances of non-final *d-* 'get' (108/148 ≈ 67% of all serialised *d-*). In contrast with the uniform aspectual function which SVC-final *d-* typically fulfils, it is difficult to differentiate any possible grammatical functions of non-final *d-* from the unserialised meaning of the verb stem. Pawley (pers. comm.) suggests that SVC-initial *d-* can indicate that an action is deliberately performed by the actor. This use of *d-* would

6 *ypd g-* (which can also mean 'be straight'; cf. *sketek g-* 'crooked do = be crooked, do wrongly') emphasises that the offering is genuine. This example arises in the context of hunters cooking the first animal that they kill and offering it to the spirits of deceased kin and ancestors, partly to ensure succesful hunting. This contrasts with another tradition (described later) in which people who have acquired wild dogs offer valuable goods to the *kceki* (goblins), so that the latter will not take the dogs back. Contrasting with the first tradition, though, the gift of valuables is not intended to be permanent: hence, Saem says of the people's speech to the *kceki* that they *yesek agelgpal*, 'they used to lie'. So a contrast exists between offering in good faith (*ypd* 'truthfully') and making a token gift (*yesek* 'deceitfully'). For this reason I have classed *ypd g-* with *tep g-* 'do well, properly'.

account for the difference between such pairs as *nŋ-* 'perceive, think, see, etc.' and *d nŋ-* 'feel (something concrete by touching)'.

5.51 Nak **am** asŋ nup **d** **nŋ**-b-an.
you go contaminated him get perceive-PERF-2sg
You went and touched a ritually contaminated person.
(Dictionary WLK- entry)

Also, *d-* would mark verbs which can be either transitive or intransitive, such as *ay-* 'put', *kuskus g-* 'revolve, make revolve' as unambiguously transitive or causative.

5.52 Cm **d** **ay**-sp-in.
bow get put-PRES:PROG-1sg
I am taking the bows and placing (them)/putting (them) away.
(Dictionary D- entry)

Compare:

5.53 Yakt **ap** mon alk **ay**-p-ø.
bird come tree branch put-PERF-3sg
The bird came and settled on the branch. (Dictionary AY- entry)

5.54 **d** kuskus **g-** 'to hold and revolve, swing around and around'
(Dictionary D- entry)

Compare:

5.55 Kuskus **g**-ig **am**-j<a>p.
revolving do-SS:SIMULT go-PRES:PROG-3sg
It spins around as it goes (of a top). (Dictionary KWSKWS entry)

In all these examples, however, it is still possible to interpret *d-* literally ('get' the object, then perceive/put/spin (it) around). So any 'grammatical' function *d-* may have in this position is not necessarily distinct from its literal meaning.

In connection with the above it is worth noting that the use of *d-* in SVCs can facilitate the appearance of overt patient NPs in a clause. This seems a major motivation for the presence of *d* + *MOTION* verbs, rather than simple motion stems, following transitive verbs in SVCs (§3.3.4; §3.4). Also note that in the KHTs, of four instances of *d su-* 'get bite', all had overt NP objects. With unserialised *su-* 'bite', in contrast, 18/37 (≈ 50%) had objects.

However, as was noted earlier with *ñ-* 'give' and recipient NPs, the potential for a certain type of grammatical or case role to be manifested in a clause is not always realised. Givón (1990:39–43) tests the hypothesis that *d-* has become grammaticised as a case marker, following 'accusative and instrumental objects'. Grouping *d-* with the verbal modifier (adjunct) *dad* 'carrying', which also favours accusative objects, he counts the potential for these morphemes to be preceded by such objects. Givón's findings are that less than half (47.8%) of accusative objects immediately precede *d-* or *dad*. He concludes from this that *d-* and *dad* have not been grammaticised as case markers.

The low figures obtained by Givón are consistent with the generally low number of NPs per clause in Kalam. More significantly, Givón notes that objects are more likely to be followed by *d-* or *dad* in constructions where the literal meanings of these two morphemes (in particular, the component of carrying or getting with the hands) is still present.

While non-final serialised *d-* still retains the literal meaning of the unserialised stem, there is tenuous evidence to suggest that other functions are associated with it. Of these functions, we have identified at least increased volition of the actor and the possible presence of patients. Both these phenomena are identified by Hopper and Thompson (1980) as components of transitivity, and so their co-occurrence should not be surprising. Note also the obligatorily causative interpretation of *d kuskus g-* mentioned above; causatives are high in transitivity.

Whatever the grammatical status of non-final *d-*, there is evidence that it tends to be bound tightly to the stems with which it co-occurs.[7] We have already seen one example of this in the case of *d* + *MOTION* combinations (§3.3.1). *d am-* 'get go ≈ take' and *d ap-* 'get come ≈ bring' are widespread in Kalam text. Of the 108 SVCs with non-final *d-* in the KHT database, 79 ≈ 70%) involved verbs of motion. *d am-* occurred 43 times, *d ap-* 32, and *d ap tan-* and *d ap yap-* each occurred twice (these figures refer to the number of SVCs which contained at least one of these constructions: some contained two). *d-* and these verbs of motion are tightly linked in a number of ways. For example, there is never any intervening non-verb material between *d-* and the following motion stem(s).[8] Also, as was noted in §1.6.2, the two stems (or three in *d ap tan*/*d ap yap*) function as a single unit when iterated.

5.56 … **d-ap** **d-ap**, Ced ñg odaŋ ak tek, **yok**-l …
get-come get-come Ced water across:valley this like remove-SS:PRIOR
… (he) brought (all the burnt bamboo) and deposited it some distance away,
about as far as the Ced river is from us … (Madaw Sosm #101)

5.57 … **pag** **d-ap-tan** **d-ap-tan**
break get-come-ascend get-come-ascend
… we used to count right on up,

…ognap at ogok **l**-olgp-un …
sometimes seven these put-PAST:HAB-1pl
… we used to count right on up, sometimes to seven … (I #62)[9]

So evidence points towards *d-* and verbs of motion being closely bound in SVCs, closely enough that they act much like single verbs.[10] The tendency for *d-* to be tightly bonded to following verb stems doesn't just apply to *am-* and *ap-*. It is in fact true of virtually every stem with which *d-* co-occurs. With the exception of *d… ay-/l-*, discussed in §4.3.4, no arguments can intervene between *d-* and the following verb. Only members of

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7 The only verb stem to which this doesn't apply is *ay-/l-* 'put'. See §4.3.4.

8 Except that *d-* may precede *dad* + *MOTION* constructions (§3.3.5).

9 This example refers to the 'body-part' method of counting (§4.3.4), called *ñn pag (nŋ)-* 'hand bend (perceive)'. *aptan aptan* 'go up and up' in the SVC above presumably refers to the fact that counting is proceeding further and further up the (left) arm (by the time 'seven' is counted, the forearm has been reached). Note the use of *l-* 'put' to introduce numbers into the SVC.

10 Other evidence for this is provided by Majnep and Bulmer's orthographic conventions for the KHTs, in which *d am*, *d ap* etc. are invariably written as one word <dam>, <dap>. Likewise, Davies (1981a) treats *dap* 'bring' and *dam* 'take' as single words in Kobon. In relation to this, note that the Kobon cognate of Kalam *d-* is *ud-* 'take'. So the difference in Kobon between *ud ap* [unt^{h} ap] 'take come' and *dap* [dap] 'bring' argues that what was once a series of two verb stems has been reanalysed as a single phonological word in the language. At least the potential for the same process is present in Kalam.

a small subclass of modifiers (i.e. 'adjuncts'), which form constituents with the following verb stems, are allowed to intervene, as in the following SVCs.

5.58 … mnm sketk **ag**-e-y, npey **d** *katbus* **g**-p-ø.
word wrong say-DS:PRIOR-2sg you(sg:Obj) get jail do-PERF-3sg
… (if) you talk inconsistently, *you will be jailed* (*katbus g-* 'put in jail').
(Dictionary SKETK entry)

5.59 … sgaw ak yp, kotwal ak yp, **d** *jm*-**ñ**-l …
wallaby this with scrub:wallaby this with get connecting-give-SS:PRIOR
… having placed together the *sgaw* and the *kotwal* (in the same chapter) …
(*jm ñ-* 'connect together') (I #145)

There are two verb stems with which *d-* has in fact become phonologically fused. There is synchronic variation between *agl-* (*agi-* in Etp mnm dialect) and *dagl-* (*dagi-*) '1. ignite, make hot, 2. sew beads/bark cloth', and also between *aŋ-* and *daŋ-* 'fuck'. Note that both these verbs are high in transitivity,[11] which provides a plausible explanation for this variation. It is also significant that both these stems begin with /a/, as do the basic verbs of motion: thus phonological factors may help determine which verb stems *d-* is most closely associated with.[12]

5.3 Conclusion

5.3.1 Grammaticisation

This section considers SVC-final *d-* 'get', *md-* 'stay' and *ñ-* 'give' in the light of the question of determining possible indicators of grammaticisation in Kalam SVCs. In §5.1, it was stated that the meanings of these verb stems which have been identified as 'grammatical' (partly on the basis of their correspondence to similar functions carried out by grammatical morphemes in other languages) are not distinguished morphologically from other meanings of the same verb stems. The principal formal evidence Kalam provides concerning the grammaticisation of such verb stems would seem to be the positional freedom of verb stems with the putative grammatical function. The criterion of positional freedom also raises the question of whether 'grammatical' meanings can always be distinguished from 'lexical' ones.

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11 While *aŋ-* and *daŋ-* 'fuck' can both be used reciprocally (as in example a.), a construction type which is considered lower in transitivity than constructions with two distinct arguments (Hopper and Thompson 1980:278), they also allow prototypical transitive argument structures, exemplified by example b.

a. Bin bap koyb-sek, bin bap bin yb, **ab**-i …
woman certain witch-with woman certain woman true fuck-SS:PRIOR
A certain female witch and a normal woman having had sexual relations …
(Dictionary KOYB entry)

b. … 'mdak nonm key ak **daŋ**-ngab-ø' **ag**-l ...
later its:mother by:itself this fuck-FUT-3sg say-SS:PRIOR
… having said, 'Later it will fuck its own mother' … (II #110)

12 The most likely phonological explanation would be that *d-* tends to coalesce with stems beginning in a vowel. Note that no verb stems (other than certain allomorphs of *ap-*) begin with /o/, which is the only other vowel phoneme in Kalam. The phonemes /y/ and /w/, which can also be realised as vowels, would begin with semivowel allophones in word-initial position, which differentiates them from /a/ and /o/ .

Table 8: Characteristics of Kalam 'grammatical' verbs

	d-	*md-*	*ñ*
Frequency of serialised clauses	49% (148/300)	17% (74/426)	57% (57/100)
SVC-final occurrences out of total clauses	15% (44/300)	15% (62/426)	54% (54/100)
SVC-final occurrences out of all SVC clauses	30% (44/148)	84% (62/74)	95% (54/57)
SVC-final immediately after another stem	77% (34/44)	95% (59/62)	87% (47/54)
Grammatical uses SVC-finally	75% (33/44)	94% (58/62)	(100%)
Grammatical uses SVC-finally, after another stem	97% (33/34)	98% (58/59)	(100%)
Grammatical uses non-finally	no (n = 109)	sort of (n = 14)	yes (n = 3)

As we have seen in §5.2, the grammatical functions of the three verbs in question correlate highly with SVC-final position. Section 5.1 suggested that this position would allow aspectual *d-* and *md-* to be directly adjacent to morphemes carrying out similar functions (i.e. the bound TMA morphemes of final, and some different-subject, inflections). The tendency for *ñ-* to be SVC-final could result from analogy with the same pattern; an alternative suggested in §5.2.3 was that this tendency stemmed from constraints on subject reference in Kalam SVCs.

The indicators of freedom of distribution proposed in §5.1 are as follows:

(i) the ability of verb stems to appear unserialised,

(ii) the ability of stems to appear non-finally in SVCs, and

(iii) the ability of stems to appear non-finally in SVCs with their grammatical function.

Table 8 summarises the correlation of these features with the three verb stems that this chapter focuses on, *d-*, *md-* and *ñ-*. Table 9 shows how the verbs are ranked with respect to these features.

Table 9: Measures of grammatical features for *d-*, *md-* and *ñ-*

Measures of grammaticisation	more grammaticised <—> less grammaticised
Functional split (extent to which grammatical function differs from other uses of stem)	*d-* > *md-* > *ñ-*
Tendency to be serialised	*ñ-* > *d-* > *md-*
Tendency to appear SVC-finally	*ñ-* > *md-* > *d-*
Grammatical uses SVC-finally	*ñ-* > *md-* > *d-*
Grammatical uses non-finally	*d-* < *ñ-* < *md-*

On semantic grounds, aspectual *d-* seems most grammaticised; there is a considerable difference between its aspectual function and other common meanings/functions of the verb. In other words, functional split has clearly taken place. While *d-* occurs freely both unserialised and non-finally in SVCs, the aspectual meaning is restricted to final position.

md- and *ñ-* differ from *d-* in that it is often possible for the grammatical functions of the former two verbs to be present when they follow verbs inflected for same subject. The difference of meaning between final and non-final *md-* is less clearly defined than is the case with *d-*, but such differences as there are correlate with differences in syntactic behaviour between the two positions.

The aspectual functions of *d-* and *md-* have in common that they are tied in with the functions of the bound TMA morphemes in Kalam. Pawley (1993:102) compares completive *d-* with the bound perfect marker *p-*, and *md-* with the present progressive suffix *eb-* (in Ti mnm dialect), *sp-* (Etp mnm). Completive *d-* and continuative *md-* also complement each other:

5.60 Mnm **ag** **d**-p-ay.
word say complete-PERF-3pl
They have finished talking. (Dictionary D- entry)

5.61 Mnm **ag** **md**-p-ay.
word say continue-PERF-3pl
They are still talking. (Dictionary MD- entry)

However, *d-* and *md-* differ from the bound TMA morphemes in important ways. The latter set are obligatory in final verbs, and don't co-occur with suffixes marking same subject. Aspectual *d-* and *md-* are optional, and are often suffixed for switch reference. Further, aspectual *d-* and *md-* occur with the bound morphemes, but the bound morphemes are mutually exclusive with each other; there is only one TMA inflection per final verb.

In contrast with *d-* and *md-*, dative *ñ-* does not constitute part of any paradigm; no other verbal morphemes mark the presence of non-subject arguments in the clause. *ñ-* also shows the least evidence of loss of lexical meaning. It may in fact be misleading to class the serialised use of *ñ-* as 'grammatical' in cases where there is no contrast with its unserialised meaning. But of the three stems, *ñ-* is the most restricted syntactically. In SVCs, it almost invariably occurs finally. While it can occur freely unserialised, it does so with noticeably lower frequency than either *d-* or *md-*. Hence, even if *ñ-* shows few semantic signs of grammaticisation, it is, syntactically speaking, in the position where it is most prone to be reanalysed as a grammatical morpheme.

Earlier (§4.3) we investigated the presence of non-verbal material between verb stems. This interacts with grammatical uses of stems, particularly with the aspectual functions. For *d-* to carry aspectual meaning, it must immediately follow the verb stems which it modifies. A similar restriction applies to aspectual *md-*, with the caveat that, as mentioned, the distinction between continuative and other uses of *md-* is not as sharply definable. As was mentioned in Chapter 4, if arguments intervene between the stems of an SVC, they typically follow motion stems marking movement to or between scenes of an event. Hence the scope of aspectual *d-* and *md-* applies only to verb stems coding actions within the scenes of an event. The following principle, which needs no explanation, provides the motivation for these restrictions on the scope of verbs marking aspectual functions:

> aspect markers don't take arguments.

This is another way in which the aspectual verbs differ from the bound TMA markers, which are implicitly shared by all verb stems in an SVC.

ñ-, of course, can take arguments, and in fact its ability to allow recipients/ beneficiaries into argument structures lies at the core of its grammatical use. Even so, *ñ-* tends to immediately follow other verb stems (other than *am-* and *ap-)*. This may also be a sign of grammaticisation: but other factors could be involved, since non-intervention by arguments is the 'default' for Kalam SVCs.

5.3.2 Complementarity in the lexicon

While it is unequivocal that certain Kalam verb stems take on grammatical functions, these are not always sharply distinguishable from other functions of the same stem elsewhere. *ñ-* provides an illustration of this problem. Its use as 'dative marker' — allowing recipient or beneficiary arguments into SVCs, usually when the other verb stem(s) in the construction would not allow such arguments — is not distinct from its unserialised meaning 'give'. In a subset of Kalam SVCs, the series of verb stems can be viewed as coding distinct, consecutive, actions — for example, *(kmn) pak d ap ad ñb-* '(game:mammal) hit get come cook eat'. This interpretation is equally valid for SVCs such as *ad ñ-* 'cook give', in which first one cooks, then the result of that cooking is transferred to another party (children, people of the surrounding households, the ancestors, etc.). What motivation is there, then, to say that *ñ-* has been grammaticised?

Rather, it may be better to discuss this in terms of the division of labour between Kalam verb stems. One of the features of Kalam which has been most remarked upon is its reliance on a small number of stems which have an extremely wide range of meanings. Kalam uses these as 'building blocks', combining them either with modifiers or with other verbs to code concepts which other languages encode in a single word. The ways in which verbs are combined in Kalam SVCs, and their overlap with patterns of discourse, have been viewed as a sign that Kalam is more analytic than other languages in terms of its description of events (Pawley 1987; Pawley 1993). It is possible to exaggerate the 'analytic' nature of Kalam — generic verb stems can overlap in meaning, both with each other and with specific stems. But the complementarity that does exist between generic verb stems is exploited by SVCs to allow complex notions to be encoded. Tight bondings which subsequently emerge between complementary verb stems can lead to the formation of new verbs. There is unequivocal evidence that this has happened, and is continuing to happen, in Kalam. SVCs such as *pk wk-* 'hit shatter = break up by pounding, pound into

fragments' co-exist with phonologically reduced forms such as *puk-*. New verbs are also built from non-verbal modifiers and verbs coalescing phonologically, as *at tan-*/*atan-* 'top ascend = rise to the top'. Close association between *ñ-* and preceding verb stems could be evidence of potential word-formation as easily as of potential grammaticisation.

ñ- at least conforms syntactically to the picture we have of grammatical morphemes in Kalam, even if its semantic status doesn't point strongly in that direction. Non-final *d-*, on the other hand, has somewhat elusive grammatical properties but shows a very strong tendency to attach to other verb stems. Whether this simply results from the need for its literal meaning, 'get', to co-occur with other stems, or from a requirement to mark higher agency and/or transitivity, it shows signs of being involved in word-formation processes, especially with *am-* and *ap-* (and their offspring). Hence non-final *d-* seems better described in terms of lexicalisation processes (building new words, albeit in this case out of the finite resources of the verbal lexicon) than of grammaticisation.

Tep, mñi agjupin.

6 *The structure of SVCs*

6.1 Introduction

In the previous three chapters, we have looked at several interconnected issues involving serialisation in Kalam. Chapter 3 introduced Pawley's analysis of the organisation of Kalam discourse, which provides a background for understanding certain aspects of serialisation. Some factors involved in the choice between serialised and unserialised reports were discussed in that chapter. Sections 3.3 and 3.4 detailed the central role played by the verbs of motion (specifically, *am-* 'go' and *ap-* 'come' and compound forms based on these) in structuring SVCs according to Kalam discourse patterns. Some syntactic mechanisms by which motion stems carry out this structuring were discussed in Chapter 4. Chapter 5 concentrated on some grammatical functions of serialised verb stems, a different level of organisation within SVCs from the encoding of discourse patterns introduced in Chapter 3.

This chapter attempts to tie this information together to form a sketch of factors influencing the order of verb stems in SVCs. Section 6.2 looks at the role of iconicity in SVCs which report certain types of events, such as the hunting events described in Chapter 3.

The overall structure of SVCs coding these types of events (which, for convenience, I will refer to as **formulaic** SVCs) was described in that chapter in terms of actions at scenes and movement between scenes. Movement between scenes has already been investigated. In §6.3 we look at the structure of SVCs, or subparts of SVCs, coding actions **at** scenes. To illustrate this, I introduce a subtype of SVC which has been called the 'resultative compound'. This subtype is characteristic of a smaller level of organisation within SVCs, in which links between stems are tighter than those between the scenes of formulaic SVCs. I suggest that within this level, however, there is a continuum of semantic and syntactic connectedness between stems.

Section 6.4 examines SVCs where iconicity doesn't seem to hold. These form two main types: ones where SVCs (or subparts thereof) form basically unanalysable wholes, and ones where the final stem(s) take on a modifying role, shading off in some cases to grammatisation.

Thus the connection between pairs or groups of bare verb stems within Kalam SVCs forms a continuum between the looser relationships characteristic of verbs in separate clauses and much tighter relationships. There is evidence in some cases for a diachronic

link between these two types of relationships, in the direction looser to tighter. Section 6.5 presents a model for the role of Kalam SVCs in the development of lexical items and grammatical morphemes from patterns of free discourse.

6.2 Iconicity in formulas

This section looks at the role of iconicity in serialised reports of common events. In this context, I intend iconicity to mean the extent to which ordering of stems in SVCs reflects the order of the actions or states encoded by those stems. Before discussing issues of iconicity, it is necessary to point out that the relation between what languages code and the events of the real world is an indirect one. As Grace (1987) points out, humans don't experience 'reality' directly, but, in the first instance, through sensory input. Further, humans have to make sense out of the input data in order to talk about it: this involves such processes as concentrating on specific parts of the data (ignoring bits of the input which seem irrelevant), and looking for connections between the parts of 'reality' which have been singled out. Grace (1987:30ff.) gives the example of a scene containing (among other things),

> (a) a dog running hard and making abrupt sharp turns as it runs, (b) a squirrel sitting on the branch of a tree, (c) a bird flying overhead, (d) a cat somewhat in front of the dog running hard and making abrupt sharp turns which correspond approximately in timing and direction to the turns the dog is making. It would not be surprising if a human observer in such a case inferred that there was a relation between the actions of the dog and those of the cat, attributed purpose to both (the cat having the purpose of escaping the dog; the dog having the purpose of catching the cat), and reported (a) and (d) as a single unit: a dog chasing a cat. In fact, it would be more surprising if he/she did not do so.

Given that there is such an indirect relation between the real world and speakers' reports of events, it is unrealistic to expect, say, verb order (a feature of linguistic coding) to reflect exactly events of the external world. Instead, I consider iconicity to hold (or not hold, as the case may be) between verb order and the speaker's representation of the event. The principal evidence available to me for the speaker's representation of events is the way speakers have of talking about them — that is, the linguistic patterns themselves.

Here, of course, there is great potential for circularity; verb order is considered to be iconic with the speaker's representation of certain events, the principal evidence for which is clause order.[1]

But there is more evidence within Kalam for temporal ordering than just linear order. Kalam interclausal morphology offers a complicated model of the ordering of events, which can override clause order considerations. For example, the event marked by a verb in a given clause can be marked as occurring either prior to, simultaneous with or subsequent to that of the next clause, using switch-reference marking. Optative and past contrary-to-fact TMA markers can indicate realis or irrealis distinctions, marking some events as contingent on others; this also is not strictly bound to word order. Hence the interaction of clause order and verb inflections gives us a language-internal way of

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[1] Givón (1990:22ff.) expresses concern with a parallel issue in the analysis of SVCs, the question of whether they encode single or multiple events. Givón points out the potential for circularity in first using grammatical packaging (such as the notion of the clause) to define what constitutes a single event, then saying that events correlate with such packaging.

checking what order the Kalam language views events as occurring in. SVCs, by definition, do not offer any of these complex morphological ways of indicating temporal relations; but we can at least compare word order in SVCs to that of verbs coding what seem to be the same kind of event in multi-clause constructions.

In §3.2 we saw that certain types of activities can be coded either with interclausal syntax, or (either in whole or in part) by SVCs. More specifically, much the same sequences of verb stems can be coded either in a series of switch-reference-marked clauses or in an SVC. The following three examples from Kalam discourse involve reports of hunting underground animals (cf. §3.2.3, where 6.2 and 6.3 are first introduced).

6.1 Mnek **am**-l, **yg**-l,
next:day go-SS:PRIOR dig-SS:PRIOR
The next day having gone, having dug,

katp mgan nb alyaŋ koŋay yb **pak**-elgp-al.
house hollow place below many really hit-PAST:HAB-3pl
they used to kill lots (of animals) in their nests down there (underground). (XIII #87)

6.2 **N**ŋ-l, **yg**-l, **pak**-l, dad **o**-p-al …
see-SS:PRIOR dig-SS:PRIOR hit-SS:PRIOR carrying come-PERF-3pl
Having seen (it), having dug, having hit (it), they carry (it) back … (XIII #144)

Sentences 6.1 and 6.2 both rely on SS:PRIOR morphology to indicate sequential temporal relations between clauses. This type of clausal morphology typically indicates that the event in the SS:PRIOR marked clause happened previous to (and with the same subject as) that of the next clause. Hence order of occurrence is explicitly marked as being the same as order of clauses. Compare this with the SVC of 6.3.

6.3 Bin pataj ogok **am yg pak** dad **ap**-elgp-al …
woman young these go dig hit carrying come-PAST:HAB-3pl
Young women used to go and hit and bring back (these animals) … (XIII #29)

The linear order of verbs in 6.3 is the same as that of the SS:PRIOR-marked clauses in the previous examples. Since roughly the same things are being talked about in all three examples, it seems reasonable to assume that the order of events coded in 6.3 corresponds with that of the events coded in the other examples. So, if linear order matches the order of events (as seen by the Kalam language) in interclausal syntax, and SVCs use the same order of verbs to talk about the same type of events, we can conclude that linear order of verbs matches the order of events in at least some kinds of SVCs.

6.3 Resultative compounds and constraints within scenes

Up to this point, we have been concentrating on issues of the overall structure of SVCs, and relations between this structure and that of discourse. Within the larger structure described in §3.4, smaller patterns exist. Section 3.3.1 discusses one type of pattern. Various types of motion stem, as well as the stem *d-* 'get', can combine into more complex units. These units carry out an important discourse function in Kalam, that of marking

motion between scenes. Likewise, Chapter 5 describes another close type of bond between verb stems, with one verb stem modifying another.

This section looks at the patterns of verb stems marking actions within the scenes of an event description. To illustrate this, I will introduce a set of constructions known as 'resultative compounds' (Young 1975). In contrast to the somewhat looser connections between non-motion stems in hunting formulas (§3.2.2–3.2.3), these compounds are tightly bound groups of stems, which act as units syntactically and semantically. Their behaviour with respect to verbs of motion suggests that they code actions at scenes, rather than larger units of discourse. So it is possible to identify at least two distinct levels of serialisation in Kalam: one reminiscent of discourse structure, one coding more specific combinations of actions. Between these two levels, however, there is a continuum of bonding within SVCs.

Section 4.2 briefly discussed groups of verb stems coding cause-result situations. Resultative compounds, as identified in Kalam (Young 1975), constitute a subtype of such groups of verbs.[2] These compounds involve verbs from two classes: the first from verbs of contact — hitting, cutting, shooting, biting, scraping, digging (*pk-/pak-*, *tb-*, *ñag-*, *su-*, *ak-, yg-* respectively) — and subsequent verbs from a class which has been termed the 'verbs of disconnection' (Young 1975; Bulmer and Pawley 1970–74). Verbs in the latter class include *tk-* 'separate, sever, etc.', *lak-* 'split', *sak-* 'extract', *wk-* 'rupture', *yk-* 'open', *ask-* 'avoid, free' and *wsk-* 'untie'.[3] Verbs of contact and verbs of disconnection combine in a cause-effect relationship, describing forceful contact between an instrument and an affected object, and the fate of that object (Pawley pers. comm.). 'Fate' normally involves mention of the nature of the object's disintegration.[4] Examples of such combinations include:

tb	lak-	'split, cut longitudinally'
	pag-	'cut and break, as an axe blade'
	sak-	'cut off a part of something'
	tk-	'cut off, cut in half, cut apart, sever by cutting'
	wk-	'break open or shatter by cutting'
	yk-	'cut a hole in, cut open'
ñag	lak-	'split by shooting'
	tk-	'shoot and sever'
	wk-	'shoot and break'

2 The term 'resultative compound' itself comes from an analysis of a similar phenomenon in Mandarin Chinese (Thompson 1973).

3 Young's paper is centred around a more detailed analysis of the verbs of disconnection, using SVCs involving such verb stems as the evidence for the semantic decomposition of these stems (in a generative semantics framework). Individual entries from the Kalam dictionary also give detailed definitions of these stems.

4 I am actually concentrating here on a subclass of what have been identified as resultative compounds in Kalam. Other stems which can be used to code 'fate' include *ju-* 'withdraw', *yok-* 'displace, put somewhere else'. These types of fate must follow the verb coding disintegration (if the latter is mentioned).

pak	pag-	'alter the shape of something by striking, strike and bend, dent'
	sak-	'break off by striking'
	wk-	'break up by pounding, pound into fragments'
	yk-	'knock open'
su	sak-	'extract by biting or sucking (of the process of removing a foreign body from inside an ailing person)'
	tk-	'bite off, sever'
	yk-	'bite open'
yg	tk-	'dig through'

The following are examples of resultative compounds.

6.4 Mon alk **tb** **tk**-sp-in.
tree branch cut separate-PRES:PROG-1sg
I am cutting off the branches. (Dictionary TB- entry)

6.5 Numud kulep poj won **ñag** **tk**-a-k ak.
cross:cousin bird:sp head piece shoot separate-3sg-PAST this
The cross-cousin shot off the head of the *kulep* bird. (Dictionary TB- entry)

Note that some verb stems, for example *tk-* 'separate', can perform either 'cause' or 'effect' function: compare 6.4 and 6.5 above with 6.6.

6.6 Akl **tk** **lak**-ø-an!
bamboo separate split-HORT-2sg
Split the bamboo in two! (Dictionary LAK- entry)

A similar argument to that of §6.2 can be made that word order in resultative compounds is iconic. For instance, it is possible to paraphrase the resultative compound 6.7 with the sequence of clauses given in 6.8, of which the first uses DS:PRIOR marking (cf. SS:PRIOR for the examples in §6.2).

6.7 Agl **ñag** **tk** **yok**-ø-an.
arrow shoot separate dislocate-HORT-2sg
Shoot the arrow so that it is dislodged (i.e. so that it separates and moves away)/Shoot the arrow off (the branch and foliage in which it has fallen). (Pawley 1975:21)

6.8 Nad **ñag**-e-y, agl **tk** **yok**-ø-aŋ.
you shoot-DS:PRIOR-2sg arrow separate dislocate-HORT-3sg
(lit.) You having shot (at the arrow), let the arrow dislodge. (Pawley 1975:21)

'Cause' verb stems always precede 'result' stems, as iconicity would predict. The use of different subject marking on *tk-* 'sever' in 6.8 also suggests that at least some resultative compounds have a switch-subject relationship between verbs; see §4.2 for discussion.

Resultative compounds act as units in a number of ways. The stems are always contiguous—they aren't separated by other verbs or arguments.[5] Compare 6.9 with 6.10:

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[5] While multiclausal paraphrases such as 6.8 are possible, the normal pattern of coding for such events is in SVCs.

6.9 … **su** **d-am** **d-am** **d-am**, kjeŋ day alŋud **yk**-l …
bite get-go get-go get-go path section up open-SS:PRIOR
… it burrows on through and opens up a tunnel (*kjeŋ day*) above (its nest) …
(XIII #5)

6.10 … ognap **su-yk** **ñŋ**-u-b.
some bite-open eat-3sg-PERF
… it bites some (nuts) open and eats them. (III #168)

In 6.9, in which *su* 'bite' is separated by motion verbs and locative arguments from *yk-* 'open', the two stems have different objects: *su-* refers to biting/burrowing (through soil and/or undergrowth), while *yk-* refers to opening the tunnel. In the resultative compound 6.10, both verbs share the same object (pandanus nuts).

Secondly, at least some resultative compounds can occur in environments normally reserved for single stems, such as before *dad* or *d + MOTION*.

6.11 Kti **su-tk** dad **ap-tan** **ap-yap** **g**-p-al …
they bite-sever carrying come-ascend come-descend do-PERF-3pl
They slash up and down with their teeth … (II #50)

6.12 Katp ogok mey **tb-tk** **d-ap**-l …
house these this:one cut-sever get-come-SS:PRIOR
It cuts off (foliage) and brings it for its house … (III #152)

This is the only time that more than one non-motion stem can appear in these positions.

Thirdly, in some cases compounds have coalesced phonologically. This has happened with, for example, *pk pag-* (to *ppag-*) and *pk wk-* (into *puk-*).

I have used resultative compounds to illustrate the presence of more tightly bound units within SVCs. Resultative compounds are prime examples of this because they share the distribution of single stems to some extent. There are many other series of tightly bound stems. Some of them are constructions of a causative type (e.g. *pug sug-* 'blow extinguish = blow out (e.g. a flame)'. In other cases the relationship may be more difficult to define, as in *ag nŋ-* 'say perceive = ask'. These can be contrasted with the formulaic SVCs which resemble discourse most. Compare the resultative compounds above with the following two examples, in which *pak-* and *ad ñb-* can be separated by verbs of motion.

6.13 Kmn ak **pak** **ad** **ñb**-l …
game:mammal this hit cook eat-SS:PRIOR
having killed and cooked and eaten game mammals … (III #143)

6.14 … kmn **pak** **d-ap** **ad** **ñb**-l …
game:mammal hit get-come cook eat-SS:PRIOR
… having killed and brought and cooked and eaten game mammals …
(Intro #22)

But this difference in syntactic behaviour, and the concomitant difference in semantic bonding, is a matter of degree. The verb stem *pak-* 'hit' and the pair of stems *ad ñb-* 'cook eat' differ from resultative compounds such as *tb tk-* in a number of ways. One of these ways is that *pak-* and *ad ñb-* can be separated, either in different clauses, or in the same clause, by verbs of motion, as in 6.14 above. Compare this with, say, the *yg (...) pak-* ('dig hit') sequence of the 'killing rodents' formula introduced in §3.2.3. Here the verbs are

equally capable of being coded in different clauses, and *yg-* may be followed by motion verbs in an SVC; but if the two stems appear in the same clause, they are always adjacent (that is, there are no instances of *yg d-ap pakpal* 'dig get-come hit' in my database).

Compare further the pair of stems *ad ñb-*, which occur in 6.14 above. These two stems can also appear in separate clauses, but there are no instances in my database of motion verbs separating them, either when they appear in the same clause or in separate clauses. In other words, *ad-* and *ñb-* are prime examples of verbs encoding actions at one scene of an overall event. Possible evidence that the *ad ñb-* sequence is less tightly bound than, say, resultative compounds, comes from the fact that non-motion verb stems such as *tb-* 'cut' can be inserted after *ad-*:

6.15 … **ad** **tb-ñb-**lg …
cook cut-eat-SS:SIM
… as they cooked and cut up and ate (the meat) … (III #157)

The occurrence of non-motion verb stems between *ad-* and *ñb-* also sets them off from combinations such as *yg pak-* mentioned above.

Taking into account both interclausal syntax and the behaviour of verbs within SVCs, it is possible to identify a continuum of semantic and syntactic bonding between verb stems in Kalam. Within Kalam SVCs, some combinations of stems have a looser relationship with each other, comparable to that between verbs in different clauses. Others represent closely related events, and resemble word level more.

6.4 Non-iconic word order in SVCs

The previous two sections described ways in which word order in Kalam SVCs can be said to be iconic. But iconicity doesn't always apply. One obvious case is that of idioms, in the strict sense of SVCs whose meaning does not correspond to the sum of its parts. A small class of SVCs are basically unanalysable, such as *benben pag tag-* 'following break walk:about = follow', or *ask mosk g-* 'place a ritual restriction on, be ritually restricted', which literally means 'avoid heat:up do'.[6] But such SVCs are uncommon. A more important class of non-iconic SVCs are those in which stems, typically in SVC-final position, can be interpreted as coding actions which are simultaneous with, rather than subsequent to, those of preceding stems. While the linear nature of language precludes simultaneous events being coded iconically, it is significant that Kalam allows SVCs to encode such events when morphological methods for explicitly indicating simultaneity exist. Note that while there is non-iconic word order (in this sense) in SVCs, Kalam does not allow 'anti-iconic' order in such constructions. That is, verbs coding later actions cannot precede verbs coding earlier ones.

In fact, there is a continuum between iconic and simultaneous coding, with the non-iconic end affording an entry point into grammaticisation. Recall the discussion of metaphorical uses of *dad* + *MOTION* constructions in §3.3.5. *dad* followed by motion verbs can be interpreted as coding movement from a scene (after some action has taken place), carrying some object.

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[6] Actually, it is probably better to analyse *mosk* here as a non-verbal modifier homophonous with the verb stem *mosk-*, as does the Kalam dictionary. But it is possible that some diachronic connection exists between the two items.

6.16 … kmn ak **pak** dad **ap**-l …
game:mammal this hit carrying come-SS:PRIOR
… having killed game mammals and brought them home … (Intro #24)

Alternatively, this sequence can indicate that the previous action took place over a wide area (spatial or temporal):

6.17 ‘Aps-cn ak yes ak tap sgaw ak aŋ
grandmother-our this distant this thing wallaby this well

nb **g**-l,
so do-SS:PRIOR
‘Our distant ancestress was a wallaby,

tk-l-muŋ,
give:birth-SS:PRIOR-OPT
and due to her having given birth,

tk *dad* ***ap****-e-k* ***ap****-e-k*
give:birth carrying come-DS:PRIOR-(3sg)PAST come-DS:PRIOR-(3sg)PAST
she and her descendants having given birth,

cn mñi **md**-ob-n’ **ag**-ngab-al.
we now live-PRES:PROG-1pl say-FUT-3pl
now we are living’, they will say (i.e. they will say, ‘Our first ancestor was a wallaby, and we are all descended from her children’). (I #41)

SVC-final *tag*- ‘walk about, travel’ (§3.3.7) favours a reading in which the action of *tag*- is simultaneous with the action of the previous verb stem.

6.18 B kmn **pak** **ñb** **ta**-p-al nb ogok …
man game:mammal hit eat walk:about-PERF-3pl place these
The men walk about hunting (hitting and eating) game mammals … (Intro #19)

nŋ- ‘perceive, know, etc.’ is capable of being interpreted in a modifying role SVC-finally. Example 6.19 illustrates the use of *nŋ*- to indicate knowledge of or expertise in some particular field. Compare this with the sequential reading of 6.20.

6.19 Kmn ak ma-**pak** **n**-p-al.
game:mammal this NEG-hit perceive-PERF-3pl
They don’t know how to hunt (lit. they don’t know how to hit game mammals). (Intro #56)

6.20 Yakt **yuk** **nŋ**-i **o**-p-in.
bird chase see-SS:PRIOR come-PERF-1sg
After finding the bird I chased, I have come back. (Dictionary YWK- entry)

The examples above have shown that some verbs in SVC-final position can be interpreted either as coding part of a series of actions or as simultaneous with the actions of preceding verb stems. In the latter case, the SVC-final verbs can be seen as modifying preceding stems. Insofar as there is evidence for the reanalysis from one interpretation to the other, the most plausible hypothesis for the direction of change is from iconic coding to non-iconic. For example, *dad* + *MOTION* constructions marking sequential events, as in

6.16, fit in with requirements of Kalam discourse structure, which operate both within SVCs and in larger units of discourse. Both *dad* 'carrying' and the following verb(s) of motion retain their literal meanings (where 'literal' denotes the meaning of these items outside of SVCs). In contrast, this literal use is not available when such constructions are used to mark 'extent', such as 6.17. Thus the iconic interpretation is logically prior to the non-iconic, metaphorical interpretation. This does not prove diachronic development from one to the other, of course, but certainly such development, if it has taken place, could only be in the direction iconic to non-iconic.

6.5 SVCs: a shortcut from discourse to grammar and the lexicon

In the discussion of various types of SVCs in this section, I have concentrated on the possibility of iconic relations between verb stem order and order of the events encoded by the stems. Iconicity, of course, constitutes only one facet of the differing relations between verb stems in different SVCs. In formulaic SVCs, in which verb order is iconic, the verb stems, although coding habitually associated events, have some degree of syntactic independence. Action stems can be separated by motion stems marking movement between scenes, in accordance with the logic of Kalam discourse. In SVC-final *tag-* and *dad* + *MOTION* constructions, loss of sequential relations between verb stems cannot be separated from the fact that *tag-* and *dad* + *MOTION* act to modify previous stems.

The tendency for verb stems to modify others correlates highly with SVC-final position, as has been discussed in Chapter 5. Given the likely direction of diachronic change from iconic to non-iconic, and more generally from discourse-like to grammatical uses of verb stems, a model of the movement from discourse into the grammatical system can be proposed. The tendency for stems to co-lexicalise into larger units can be seen as constituting part of the same process. Certain sequences of events tend to be coded in SVCs, in large part to marry speed of articulation with the requirements of Kalam discourse. Verb order is initially iconic with the order of the events coded, recapitulating the most typical patterns of interclausal discourse. Once events get coded in SVCs, iconicity of another kind takes over. The close association of events coded by the verbs is reinforced by, among other things, the physical closeness of the stems themselves. Contiguity of stems, and the absence of morphological markers within SVCs, allows reinterpretation of the relation between stems (cf. Givón (1979) on the derivation of case markers from serialised verbs in West African languages). From coding independent events, they move to being dependent on each other in some way. One manifestation of this is for the stems to become part of a larger lexical unit (cf. Bruce (1986) for a similar process in Alamblak). This has happened with resultative compounds, and with complex verbs of motion. The end point of this process is phonological fusion into a single word. Alternately, one stem can end up modifying the other. Essentially, one stem will begin to act as a grammatical marker. In Kalam SVCs, this correlates highly with SVC-final position. Hence discourse can be seen as being sucked inexorably into SVCs, and, through SVCs, into the lexicon or into the grammatical system.

Tep.

7 *Conclusion*

7.1 Preamble

Still with us? *Mdpan!*[1] You have just reached the end of a long but unavoidably sketchy tour through the domain of the Kalam SVC. The analysis presented here is of necessity a preliminary one — many details need to be filled in, and many more issues need to be considered. For example, while I have given some detail on the ability of arguments to intervene between stems, the general argument-sharing structures of SVCs have only been sketched out. The limitations of my data have precluded me from determining whether the scope of modifiers such as *kasek* and *kapkap* depends on word order with respect to serialised verb stems (cf. §4.3.3); this information would be a major aid in distinguishing between nuclear and core serialisation as defined by Role and Reference Grammar. The analysis has also been greatly restricted by my reliance on written sources. Chapter 4 mentioned in passing some aspects of the interaction of the intervention of non-verb material following uninflected verb stems with pause distribution and intonation contours. A more thorough consideration of these factors is needed; for example, the psycholinguistic experiment reported in Givón 1990 could be extended to measure the differences of pause distribution which exist **within** SVCs.

Below, I summarise the work that has been done in this book. Then I attempt to relate the results of my analysis to two issues: the clausal status of SVCs and the role of SVCs in the path from discourse to grammar.

7.2 Summary

Chapter 1 introduced the serial verb construction in Kalam. An SVC was defined for Kalam as any sequence of uninflected verb stems followed by an inflected verb stem. The morphology and syntax of Kalam allows SVCs to be clearly differentiated from other types of multi-verb construction.

Chapter 2 compared Kalam SVCs with constructions in other languages which have been identified as 'serialising'. It was seen that there is no all-encompassing cross-linguistic definition, but that what have been labelled 'SVCs' in a wide variety of languages possess enough common features for the term to be useful. The features which are characteristic of serialisation include: reduced freedom of verb morphology on serialised verbs, no indicators (morphological or syntactic) of coordination or subordination between verbs, tendency for

[1] Well done!' (lit. 'you exist').

clause-level operators to have scope over all verbs in a construction, restrictions on the possibility of arguments for the construction, restrictions on the particular verb stems which can be combined within the construction.

The ways in which these restrictions are implemented are to some extent language-specific, and one should not expect that all items identified as SVCs in a given language will have equivalents in other serialising languages. However, many of the same patterns of serialisation occur over and over in different languages. The vast majority of argument-sharing patterns reduce to one of two possibilities: serialised verbs either share the same subjects, or the object of one becomes the subject of another. Speakers are much less likely to pause between stems than between clauses. Similar patterns of co-lexicalisation and grammaticisation are found in serialising languages from genetically and geographically disparate groups. The cluster of features associated with prototypical SVCs suggests that structurally, such constructions fall between single clauses and multiple clauses.

In Chapter 3, I introduced Pawley's observations on the structure of event reports in Kalam discourse. The Kalam formulate reports of certain kinds of everyday events in accordance with the following principles:

7.1 If you are an actor in a certain kind of event you:

1. Go somewhere.
2. Do something there.
3. Take the result of that action, if any, and go somewhere else (if you need to), so that you can
4. do something with it.

In reporting particular kinds of events, Kalam speakers use more specific formulas which conform to these broad principles of discourse structure and, at the same time, reflect the rules and choices of sentence structure. Formulas can be coded by a sequence of clauses. Alternatively, entire formulas, or contiguous parts of them, may be mapped onto SVCs. Within SVCs, a level of structure exists which allows formulas to be coded efficiently. The basic motion stems *am-* 'go' and *ap-* 'come', and these forms augmented with *d-* 'get' or *dad* 'carrying', are fundamental to the coding of movement between scenes (steps 1 and 3 of 7.1), both in interclausal syntax and within SVCs. Their role in providing internal structure to SVCs is illustrated below.

Initial	Middle	Final
MOTION/d + MOTION	*d + MOTION*	*dad MOTION/d ap-*
		MOTION (after *ptk-*, etc.)

Figure 7: Positions of verbs of motion within SVCs

Chapter 4 provided some detail on the argument-sharing patterns in SVCs. It was seen that only a small number of verb stems regularly allow intervening arguments and modifiers. Of these, *am-* and *ap-* play a unique role in allowing arguments into the verb complex of SVCs, in accordance with the patterns of discourse sketched in Chapter 3. These two verb stems allow for quite complex structures within Kalam SVCs, in some

cases letting subparts of the construction take individual peripheral arguments. This latter characteristic is more usually associated with sequences of clauses. *l-* 'put' is also capable of 'licensing' arguments within the verb complex, but in a more restricted way than the motion stems.

Non-final *md-* 'stay' also differs from the usual behaviour of stems in SVCs. *md-* is unusual in allowing indeterminate subject reference. In general it seems less tightly bound to the next inflected verb than is normally the case with uninflected stems. As with *am-*, *ap-* and *l-*, this use of *md-* shows that the morphological uniformity of verbs in Kalam SVCs — the absence of suffixes — doesn't imply that all such serialised stems are uniform in their syntactic or semantic behaviour.

Negation, also investigated in Chapter 4, illustrates clearly the intermediate clausal status of SVCs. The clause-level negative morpheme *ma-*, which tends overwhelmingly to prefix to verb stems, normally has semantic scope over the entire SVC — in other words, it treats the construction as a single predicate. It is possible to negate individual parts of SVCs using the *met* constituent negator. However, the latter type of negation is restricted to a single subtype of SVC, coding a specific class of event.

Chapter 5 describes a lower level of organisation which holds between groups of stems within SVCs — the tendency for certain stems to act as grammatical modifiers of other stems, and their concommitant restriction to SVC-final position. Unlike certain serialising languages discussed in Chapter 2, Kalam supplies no morphological clues as to whether or not a given serialised verb stem has become grammaticised. The main formal indicator of grammaticisation is freedom of position. Aside from this indicator, the principle diagnostic feature for classing a given verb stem as carrying out a grammatical function is meaning. However, meaning can be rather misleading on this score. For example, *ñ-* 'give' acts semantically rather like a dative marker in SVCs; however, this dative meaning is transparently derivable from the basic meaning of the verb and general principles of semantic interpretation in SVCs. The syntactic evidence is by no means unequivocal either. Both *ñ-* and *md-* 'stay, continuative aspect' are restricted (to varying degrees) to SVC-final position, which suggests a degree of grammaticisation. Yet the 'grammatical' functions which they carry out in SVCs can also be present when they follow clauses marked with SS morphology. This last characteristic is not true of *d-* 'get, completive', evidence that its grammatical function is restricted to SVC-final position (directly following a verb).

Chapter 5 also raises the question of the boundary between co-lexicalisation and grammaticisation. For example, while the function of *ñ-* corresponds to one carried out by clearly grammatical morphemes in other languages, its close association with other stems is perhaps evidence that it is being reanalysed as part of larger lexical units. This analysis is strongly favoured for non-final *d-*, which seems to be involved in word-formation processes with other stems, especially noticeable in the *d* + *MOTION* combinations ubiquitous in Kalam.

Chapter 6 illustrates another level of organisation within SVCs, one which corresponds to actions between scenes. Thus Figure 8 complements Figure 7 to provide further detail on the structure of Kalam SVCs.

Initial	(Arg(s)) non-motion verb(s)	**Middle**	(Arg) non motion verb(s)	**Final** (INFL) Aspect/dative verbs

Figure 8: Structure of Kalam SVCs

Chapter 6 also suggests that there is a continuum of bonding between the outer level of structure, which reflects aspects of discourse structure, and the smaller level of organisation within scenes. I propose a hypothesis for diachronic development, from patterns of discourse to either co-lexicalisation or grammaticisation, resulting from reanalysis within the stripped-down coding environment of SVCs.

7.3 Clausal status

Some recent studies in serialisation (Foley and Olson 1985; Pawley 1993; Givón 1990) have explicitly addressed the question of the clausal status of SVCs. There is evidence on a number of fronts that Kalam SVCs are intermediate between prototypical single clauses and multi-clause structures. The respects in which Kalam SVCs resemble single clauses, outlined by Pawley (1993:117ff.), are summarised below:

> one set of inflections per SVC
>
> typically single subject and object for construction
>
> typical scope of *ma-* negative is entire construction
>
> sequence often spoken under a single intonation contour
>
> distribution of pauses differs considerably from that of multiclause constructions, and resembles that of prototypical single clauses (Givón 1990)

To these can be added:

> the default value is for stems within SVCs to be contiguous
>
> nouns or adjectives can be derived from entire SVCs using the *-ep* suffix

Pawley (1993:118ff.) also mentions ways in which Kalam clauses resemble **multiple** clauses: the ability of arguments and modifiers to intervene between serialised stems, and the overlap between serialisation and clause chaining using SS:PRIOR-marked dependent verbs. Both of these issues have been discussed in some detail here. The way in which *met* can be used to negate subparts of SVCs could also be mentioned in this regard. In all of these respects, SVCs show considerably less freedom than clause chains.

'Grammatical' uses of serialised verbs similarly are part of a continuum between multi-clausal coding and tight bonding in SVCs. In SVCs, aspectual *d-* and *md-*, and dative *ñ-*, are (to varying degrees) restricted to SVC-final position, the 'slot' associated with grammatical markers. However, the grammatical meanings of the latter two verb stems are not strictly separable from their basic meanings. This is clearly shown by the fact that these stems can carry out identical grammatical functions when they appear in separate, following, clauses from the verbs they modify.

Thus a continuum seems to exist between the clearly multi-clausal behaviour of clause chains (and other combinations of finite clauses in Kalam) and clearly mono-clausal structures which involve a single verb stem. I have suggested that within Kalam SVCs,

sequences show varying degrees of bonding between the level most reminiscent of discourse and a more clearly co-lexicalised status. Indicators of bonding include the frequency with which given sequences are coded in SVCs rather than in separate clauses, and the ability of motion stems to separate the stems in question.

It should be recognised that this continuum does not take place along a single dimension. Languages offer a wide array of devices for joining clauses, and so there can be a complex network of intermediate points between multiple clauses and single predicates. Serialisation can be seen as one area within this network, defined by a cluster of features involving the absence of morphosyntactic indicators of inter-clause relations and limitations on the independent choice of arguments for individual verbs.

7.4 Interaction of discourse and grammar

A central theme of this book has been the way in which SVCs are structured by motion verbs along the lines of discourse. To a large extent, a description of the structure of Kalam SVCs **is** a description of Kalam discourse. This is one respect in which this work has differed from other descriptions of serialisation, a difference which stems from the length of Kalam SVCs, and the high degree of productivity of serialisation in the language. The internal structure of Kalam SVCs, together with characteristics common to serialisation cross-linguistically, such as restrictions on argument sharing and the tendency for stem ordering to be iconic, allow listeners to interpret long multi-verb constructions which lack morphosyntactic connections other than linear order.

The tendency for formulas to be coded in similar ways in interclausal syntax and in SVCs is connected to another issue — the relation between discourse and the grammatical system (see for example García 1979; Givón 1979), and in particular the pathway from the former to the latter in terms of the development of grammatical morphemes. For example, Du Bois (1985) presents a picture of language in which discourse needs are seen as the ultimate motivation for particular grammatical structures. Grammar is the partially autonomous system which arises from the need to resolve competition between discourse motivations for the 'limited good' of morphology.

Du Bois' observation that 'grammars code best what speakers do most', and the recognition that the competition between the different things that speakers want to do needs to be resolved, has a direct correlate in the structure of Kalam SVCs. One of the things speakers 'want to do' in Kalam is describe situations according to a given set of principles; this seems to conflict with the basic need for economy of expression. SVCs provide a mechanism for resolving this conflict. The rules determining the ordering and argument-sharing behaviour of verbs in Kalam SVCs are isomorphic with the rules of discourse, but on a smaller scale. Tighter restrictions in SVCs are the price paid for greater efficiency of processing. The coding restrictions of SVCs, and their intermediate clausal status, in turn allow for the reanalysis of stems as parts of lexical units, or as grammatical morphemes.

Tep, mñi agdjupin.

Appendix A: List of verbal morphemes

Adapted from Pawley (1966) and Pawley and Bulmer (2003).[1]

Etp mnm	Both dialects	Ti mnm
Recent past, immediately preceding (REC:PAST)		
-ab		-esp ~ -osp
Remote past (PAST)		
	-k	
Past habitual, past iterative (PAST:HAB)		
-igp		-elgp ~ -olgp 3sg: -olg<u>p ~ -elg<a>p
Present progressive (PRES:PROG)		
-jp ~ -sp ~ -sw 3sg: -j<a>p ~ -s<a>p ~ -s<a>w		-eb ~ -ob
Present perfect, present iterative (PERF)		
	-p ~ -b	
Future (FUT)		
-ngp	-ngay	-ngab
Hortative, imperative (HORT)		
	ø	
Optative, future subjunctive, future prescriptive (OPT)		
	-n (-j with 1dl, 1pl)	
Past contrary-to-fact, past subjunctive (PAST:CTF)		
	-b<a>p ~ -p<a>p	

[1] Note the use of a 3sg infix.

Appendix B: List of verb stems

This list of verb stems is adapted from the verb entries in the Kalam dictionary (Pawley and Bulmer 2003). Square brackets [ ] enclose verb stem allomorphs. Pawley (1966:63–73) describes Kalam verb morphophomenics in detail. Where verb forms differ between Ti mnm and Etp mnm dialects, I have given the Ti mnm form first, with the Etp mmn equivalent in parentheses. The abbreviation 'K.' (for 'Kaironk', one of the principal settlements from which Pawley gathered Etp mnm data), is used here to refer to Etp mnm dialect. Similarly, 'G.' (for 'Gobnem', a Ti mmn-speaking settlement used as a base by Bulmer for his ethnographic investigations) denotes Ti mnm dialect.

ad-	make an earth-oven, cook in an earth-oven
adk-	turn around
adl- [ad-] (K. adi-)	put on, hang around the neck
ag- [a-]	make a sound/talk/say, etc.
agl-/dagl- [ag-/dag-] (K. agi-/dagi-)	1. ignite/make hot, etc. 2. sew or secure beads, shell ornaments/sew bark cloth
aj-	travel about, walk back or return from a place some distance away (G. = K. (and G.) *tag-*)
ajlak-/aljak-	clear a space by pushing things into a heap on the side
ak-	shape (wood) by cutting, shave off, carve, whittle
am- [amn-/a-]	(movement away:) go, pass into state of, move, etc.
aŋ-/d aŋ-/daŋ- [a-/ab-]	copulate, fuck
aŋl- [aŋ-] (K. aŋi-)	open and empty out the contents of a net bag (also) open (of eyes)
ap- [a-/o-/aw-/ow-]	(movement towards:) come, approach, be imminent, rise, be suddenly manifested/felt
ask-	free, release, avoid, clear, abandon, be in a relationship entailing ritual avoidance, etc.
atan-	(*at tan-*) rise to the top, rise above
ay-	K. equivalent of G. *l-* (q.v.)

blok-	share out, formally distribute
bsg- [bs-]	sit
cg- [c-]	adhere, stick to
d-	(restrict, constrain, bring under control:) get, hold, acquire, attain, cease, etc.
g-	(activity by some being or force:) act, do, work, create, occur, afflict with, etc.
gom- [go-]	sling from the forehead
jak-	(attain elevated/upright position:) stand up, grow, arrive
jk-/juk- [ju-]	close (eyes)
ju-	(move from fixed position:) withdraw, depart from, retreat, open (a drawer), etc.
kak-	hoist onto, carry on the shoulder (also *kak g-*)
kam-	(G. = K. *kom-*) roll up, fence around, bury a person
katk-	1. hide, obscure, screen off 2. search for something (especially unobtrusively)
kbi- [kb-]	let remain, leave, let go of, abstain from doing, cease to do
kl- [k-] (K. ki-)	excrete, lay (eggs)
kluk-	grate, shave or scrape (esp. hard foodstuffs)
kn- [k-]	lie down, recline, sleep, repose
kod-	clear off an area in readiness for something by cutting and burning
ktg- [kt-]	leave, let go of, release, cease doing
kum- [ku-]	(be(come) non-functioning:) die, be(come) physically incapacitated, end, stop working (engine), (avoidance language:) go out, be extinguished
l- (K. ay-)	(stabilise:) place, put, become, secure, form, etc.
lak-	cut longitudinally, split
lalk-	tear, rip
lek-	thread/sew/loop together
lg-/lug- [lu-]	(cause to move smoothly along a surface:) (cause to) slide, glide over, sweep, ease into position, etc.
lk-	remove from the ground
lpg- [lp-]	(exert force on something causing it to move:) push, pull, move, persuade to come/go, etc.
mal- (K. mal-/may-)	fill up a container with water
malk-	plait, interlace, twist together

maŋi- [maŋ-]	warm oneself
mask-	give out, distribute
md-	be, exist, live, remain, stay, stop, persist, continue
meg- [me-]	call (domestic) pigs
mlok-	roll, cause to roll
mok-	1. raise, tend, look after domestic animals 2. hold in the mouth
mosk-	dry
n- [j-]	join others
nŋ- [ng-/n-]	(process of perceiving, cognition, emotion, attitude:) know, understand, be aware of, realise, see, feel, hear, listen
ñ-	(bring an object into close-fitting and lasting contact with another object/surface:) connect, fit together, apply against a surface, fit into position, close a door, transfer s.t. into s.o.'s possession, arrange/position s.t.
ñag- [ña-]	(use instrument to displace/propel an object:) shoot, fire a bow, etc., flick a marble/stone, pass/draw s.t. through a space/surface (sewing, folding arms), spring suddenly (frog)
ñetk-	trail, track
ñŋ- [ñ-/ñb-]	consume, esp. by mouth
pag- [pa-]	(undergo disturbance of normal shape or condition:) break, bend, buckle, etc., break up, pour out, be cracked/split, be depressed or hollow
pak-	(momentary contact between two things:) strike, hit, contact, touch, etc.
pat-	1. unfold, stretch out 2. place the first layer of hot stones in preparing an earth oven
pbok- (pboŋ tk-)	cook in a separate fire or oven, reheat food
pd-	1. pull out, harvest taro 2. scrape the skin off tubers prior to cooking or eating
plg- [pl-]	fasten, secure, close up, sew up
plk-	(jerk s.t. out in a sudden movement:) pluck, jerk out, paddle/swim, etc.
ppag-	alter the shape of something by striking, dent, etc.
ptaw-	place the final layer of stones and leaves in a dirt oven
ptk-	be frightened
pug- [pu-]	(make a noise by propelling air through a channel:) blow, exhale noisily, sniff, whistle, play a flute, etc.

puŋl- [puŋ-] (K. puŋi)	(force/come into a fixed position, of a smaller surface area or object on/in a larger surface:) press, force, insert, poke, thrust against/into, pierce, stab, land (plane), run aground, kneel, etc.
pyow- [pyo-]	search for, seek, look for
sab-	1. cut up cassowary (*kobti*) flesh 2. remove inedible outer skin of sugar cane
sak-	(remove, come off, of something which is part of a whole or inside a larger body:) extract, remove, break off, etc., come out, take out, etc.
saŋd-	(go beyond some fixed visible point:) depart, pass out of sight, go past
sbk-	be burnt or scorched (food/material)
sk-	enter, go inside
slok-	go down, subside (impersonal)
sog- [so-]	pour or spill, be spilled
su-	bite
sug- [su-]	extinguish, be extinguished
tag- [ta-]	1. go on an excursion, walk about, return from a place 2. avoidance language substitute for verbs of travelling
talak-, tlak-	jump over
tan- [ta-]	(rise above a surface, ascend:) climb, grow (of hair), sprout/come up, swell up
taw-/tow- [ta-/to-]	1. (move reciprocally or back to the starting point:) move s.t. back and forth, recoil, lever back and forth, barter, trade, buy, sell, etc. 2. (place foot against a surface and put one's weight on it or apply pressure with the legs:) step, plant the feet/tread on, push against with the feet, grip between the feet, etc. 3. fill or pack a rigid container with solids
tb-	(penetrate surface with an edged instrument:) cut, chop, gouge, slice, etc.
tbk-	secure/grip s.t. by pressing against it, usually from both sides
tdk-	trim tree (< *tb tk-* ?)
tegl- [teg-] (K. tegi-)	carry in a sling, sling from the shoulder
tg- [t-]	make string or cord, by rolling it on the thigh

tgaw- [tga-]	1. draw a bow, pull back the bowstring 2. avoidance language substitute for verbs of shooting and contact
tgom- [tgo-]	avoidance language substitute for verbs of heating, burning, lighting, cooking, sound-making
tk-	(event or condition with discontinuity, hiatus, transition, etc.:) sever, interrupt, pass from one side to another, suddenly change state, give birth to, make transverse marks on a surface, dig a hole, put a fine edge on, etc.
tm-	1. perch 2. fit in position, put on (of a covering)
tol-	go deep, penetrate deeply
tpag-	(= *tk pag-*) bend or break in half
wask-	insult someone of the opposite sex with references to their genitals
weg- [we-]	hide, conceal (oneself or something)
wjk-	take out (e.g. the contents of an earth oven, after cooking), remove skin
wk-	(of solid objects/surfaces, break up or apart:) crack, fissure, shatter, break open, puncture, rupture, burst, etc.
wlek-	(draw something back and forth across a surface:) rub, erase, take off (rind or skin) by rubbing, draw marks across
wlk-	come into contact with a person or thing by accident, meet an arriving party, come across or pass over a place or object
wok-	1. vomit 2. howl (dogs)
wsb-	1. undo, untie, loose 2. avoidance language substitute for *wsk-*, and in some contexts, *ask-*
wsk-	(remove something which constrains, fits around or encapsulates:) take off, undo, untie, peel off, set free, etc.
wik-	(move repeatedly against/over a surface:) rub, stroke, massage, wipe, brush, etc.
yak-	vomit (= K. *wok* (1))
yap- [ya-/yow-]	(move freely in a downward direction (impersonal):) fall, descend, sink, land, etc.

yepl- [yep-] (K. yepi-)	release, let go of, unburden oneself of something carried or held with effort
yg- [y-]	1. harvest root crops other than taro 2. turn over sods of soil by hand 3. fill, be full (of non-liquid objects)
yk-	(of a surface area or passage, be or cause to be open, free of covering, make an opening in:) open, be open, make a hole in, tear, break through, etc.
ym- [y-]	plant (crops)
ymagl- (K. ymagi-)	foster
yn [y-]	(become heated, burnt or ignited by exposure to heat (impersonal):) be cooked, set alight, etc.
yok-	1. (s.t. moves/is moved off, out or away from a stable/controlled position:) remove, get rid of, deposit, move, move away, etc. 2. leave the scene of an event
yom- [yo-]	indicate, point, point out, show
ypok-	(match two corresponding entities:) equalise, give back the equivalent of s.t. received, (gain) revenge, retaliate, bring two corresponding surfaces together, etc.
ypt-	gather (adjunct (*ypt g-*), but apparently a verb for some speakers)
ysg-	drive a pig along with sticks, stones, etc
yuk-	(pursue with intent to capture or kill:) hunt, pursue a victim, chase or round up, etc.

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