

Complex Predicates in Oceanic Languages



Empirical Approaches to Language Typology

29

Editors

Georg Bossong
Bernard Comrie
Yaron Matras

Mouton de Gruyter
Berlin · New York

Complex Predicates in Oceanic Languages

Studies in the Dynamics of Binding and Boundness

edited by

Isabelle Bril

Françoise Ozanne-Rivierre

Mouton de Gruyter

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Mouton de Gruyter (formerly Mouton, The Hague)
is a Division of Walter de Gruyter GmbH & Co. KG, Berlin.

⌚ Printed on acid-free paper which falls within the guidelines of the
ANSI to ensure permanence and durability.

ISBN 3 11 018188 6

Bibliographic information published by Die Deutsche Bibliothek

Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data is available in the Internet at <<http://dnb.ddb.de>>.

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Printed in Germany.

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List of Contributors

Gunter Senft

Max-Planck-Institut für
Psycholinguistik, PB 310,
NL-6500 AH Nijmegen,
Netherlands
Gunter.Senft@mpi.nl

Anna Margetts

Monash University
Victoria 3800, Australia
anna.margetts@arts.monash.edu.au

Jessika Reinig

University of Kiel
reinig@linguistik.uni-kiel.de

Alexandre François

LACITO-CNRS,
Centre André-Georges Haudricourt
7, rue Guy Môquet,
94800 Villejuif, France
francois@vjf.cnrs.fr

John Lynch

Pacific Languages Unit,
University of the South Pacific,
Port Vila, Vanuatu
lynch_j@VANUATU.USP.AC.FJ

Isabelle Bril

LACITO-CNRS,
Centre André-Georges Haudricourt
7, rue Guy Môquet
94800 Villejuif, France
ibril@vjf.cnrs.fr

Claire Moyse-Faurie

LACITO-CNRS,
Centre André-Georges Haudricourt
7, rue Guy Môquet
94800 Villejuif, France
moyse@vjf.cnrs.fr

Åshild Næss

Dept. of Linguistics
University of Oslo
P.O. Box 1102 Blindern
0317 Oslo, Norway
ashild.nass@ilf.uio.no

Mirose Paia

INALCO, Paris
mirose.paia@wanadoo.fr

Jacques Vernaudo

Université de Nouvelle-Calédonie
Nouméa.
vernaudo@univ-nc.nc

Ulrike Mosel

University of Kiel.
Olshausenstraße 40
D-24098 Kiel, Germany
umosel@email.uni-kiel.de

Malcolm Ross

Research School of Pacific and
Asian Studies and Centre for
Research on Language Change,
The Australian National University
Canberra ACT 0200, Australia
Malcolm.Ross@anu.edu.au

Françoise Ozanne-Rivierre

LACITO-CNRS,
Centre André-Georges Haudricourt
7, rue Guy Môquet
94800 Villejuif, France
francoise.rivierre@vjf.cnrs.fr

Jean-Claude Rivierre

LACITO-CNRS,
Centre André-Georges Haudricourt
7, rue Guy Môquet
94800 Villejuif, France
rivierre@vjf.cnrs.fr

Introduction

This book originated in a workshop on “Serial and Compound Verbs in Oceanic languages”, organized in Paris by Françoise Ozanne-Rivierre and Isabelle Bril, on the occasion of the Third European Meeting on Oceanic Linguistics, in March 2001.

The perspective adopted is both typological and diachronic and in order to help produce comparable data, a questionnaire (see Appendix), inspired by the questionnaire from the Max Plank Institute for Psycholinguistics in Nijmegen, was designed to help assess the validity of the notions of serial and complex verbs.

The volume is a contribution to the topic of complex predicates in Oceanic languages. The data come from a broad range of languages constituting various subgroups of Oceanic languages belonging to the Austronesian family (see fig. 1). Three general papers cite an array of Austronesian and non-Austronesian languages from Oceania (Bril, Senft and Ross); the other papers are detailed case-studies of various Oceanic languages:

- WESTERN OCEANIC: Papuan Tip subgroup: *Saliba* (Saliba Island, Milne Bay province of Papua New Guinea); North-West Solomonian subgroup: *Teop* (North Bougainville).
- REMOTE OCEANIC: North-Central Vanuatu subgroup: *Mwotlap*; South Vanuatu subgroup: *Anejoñ*; New Caledonian: *Nêlêmwa*, *Nyelâyu*, *Nemi*, *Cèmuhi*, *Paici* (North), *Ajië*, *Xârâcùù* (South).
- CENTRAL PACIFIC: Polynesian languages: Samoic subgroup: *Samoan*, *East Uvean* (Wallis), *Pileni* (an Outlier Polynesian language of the Solomon Islands); Eastern Polynesian subgroup: *Tahitian*.

The papers are ordered according to genetic subgrouping and to the roughly west to east spread of Austronesian languages.

Organization of the volume

The volume contains two main parts.

Part 1: contains an introduction to the volume (Bril), which synthesizes the main data and findings of this volume from a theoretical and typological perspective. It is followed by Senft’s broad overview of the research history and data on the topic of serial verbs in various Austro-

nesian and non-Austronesian Papuan languages, which he concludes by arguing for a cognitive, rather than a purely syntactic approach to the phenomenon. Then come several detailed case-studies of complex predicates in various Oceanic languages (see contents below), which contribute to ongoing discussions on the topic of serialization and point out evolutionary factors.

Part 2: contains diachronically oriented papers which concentrate on various evolutionary processes in Oceanic languages: the evolution of Proto Oceanic serial directional verbs into deverbal pre- and postverbal clitics or locative prepositional verbs in Oceanic languages (Ross); the grammaticalization of the verb ‘take’ in various New Caledonian languages (Ozanne-Rivierre); the decay of serial constructions and their evolution into compound verbs in some New Caledonian languages (Ozanne-Rivierre and Rivierre).

Objectives

“Serial verbs” or “complex predicates” are broad terms which cover a great variety of structural types, even among closely related languages, so the first objective was to come up with fine-grained definitions and criteria (mostly based on Foley and Olson 1985, Crowley 1987, Durie 1997) in order to identify and restrict the phenomenon and help distinguish various types of contiguous nuclei in predicative function.

In dealing with the Polynesian languages (Pileni, East Uvean, Samoan, Tahitian), but also some Western Oceanic languages (Teop, Kilivila), the inadequacy of the “serial verb” label soon became apparent, as the noun/verb distinction is highly elusive in these languages. This prompted the choice of the term “complex predicate/nucleus” to bypass this categorial hurdle. The main objectives were as follows:

1. discriminate between (i) contiguous symmetrical, co-ranking nuclei/VPS and (ii) asymmetrical, hierarchized (head-modifier) contiguous nuclei/VPS;
2. distinguish putative serial, mono-clausal, one-event sequences from compressed elliptic multi-clausal sequences;
3. assess cases of specialization or grammaticalization of specific predicates;
4. distinguish contiguous nuclei from compounds and co-lexicalized entities ;
5. analyse the evolutionary pathways and stages of such constructions.

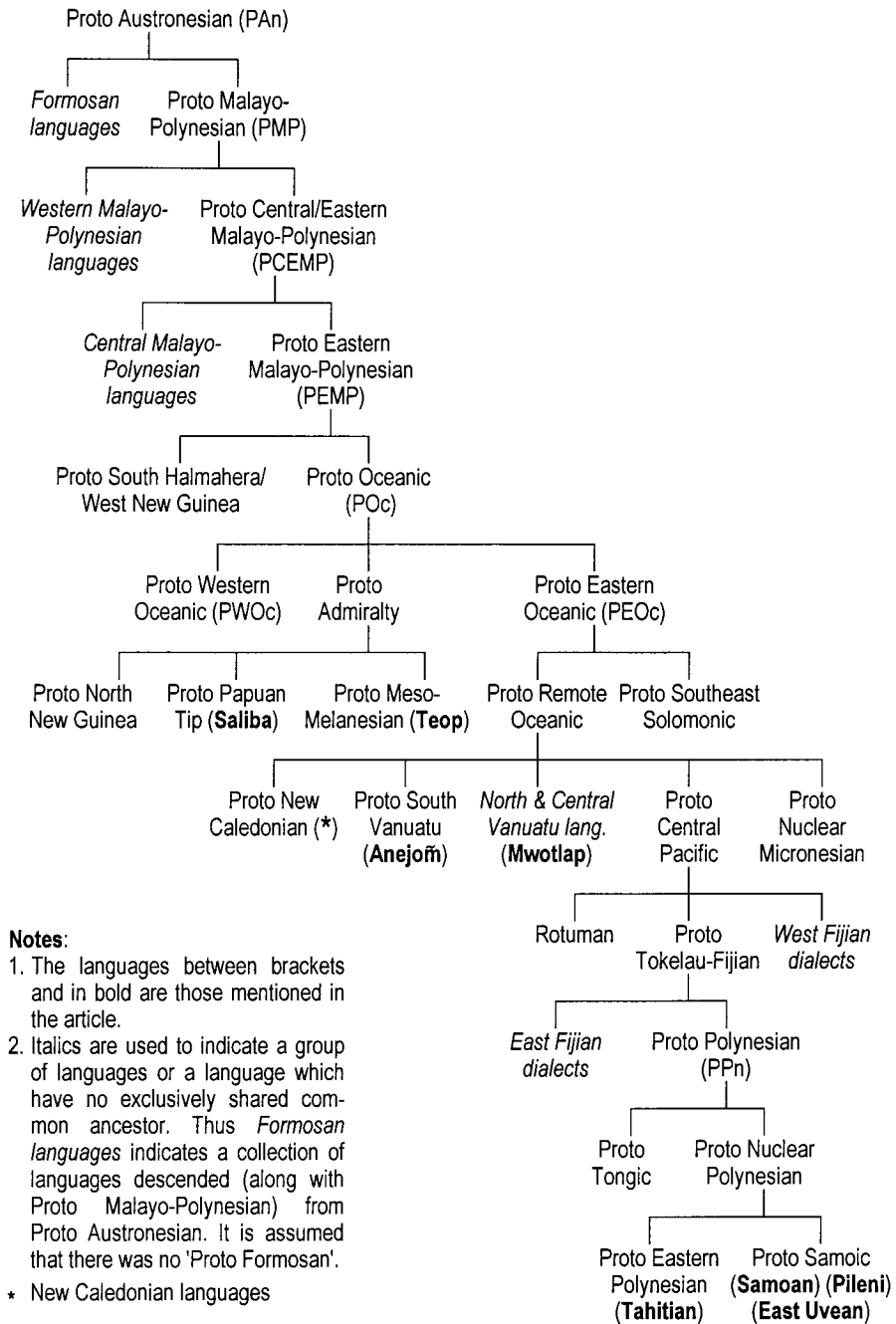


Figure 1: Diagram of Austronesian languages (adapted from Ross et al. 1998)

Complex nuclei in Oceanic languages: Contribution to an areal typology¹

Isabelle Bril

Serial verbs and complex predicates have a long history of research that has produced an extensive literature (for an overview, see Senft this vol. and Sebba 1987). They have been described in various languages from different families and areas: Benue-Congo, Kwa languages of West-Africa (Lord 1993, Givón 1975), Atlantic creoles (Sebba 1987, Byrne 1991), Central America (Hale 1991), Northwest Amazonia (Aikhenvald 1999), various East and South-East Asian languages (Matisoff 1969, Bisang 1995, 1996), Australian languages (Evans 1985, Green 1995), Papuan languages (Bruce 1988, Foley 1985, 1997, Pawley 1993), some Melanesian Pidgins, and a number of Austronesian languages, more specifically those belonging to the Oceanic subgroup (Crowley 1987, Durie 1988, 1997, Early 1993, Bradshaw 1993, Crowley 2003).

Although Oceanic languages are generally not classified as heavily verb serializing, they present in fact a variety of situations ranging from productive (Paamese, Vanuatu, Crowley 1987: 35) to almost non-existent². This diversity is reflected in the languages surveyed in this volume.

1. An investigation into contiguous nuclei in Oceanic languages

In contrast with previous research on serial verbs in Oceanic languages, which was mostly devoted to “core” serial constructions (i.e. non-contiguous nuclei *sv(o)sv(o)*), this volume contributes a more detailed investigation of the “nuclear” type (i.e. contiguous nuclei *svv(o)*), which is the predominant and sometimes sole type exhibited by the languages considered.

Malcolm Ross has pointed out that, since about half of the languages analysed in the volume belong to the Papuan Tip and Polynesian subgroups of Oceanic languages, they may not be representative of Oceanic languages in general. In the Western Oceanic subgroup in particular, core layer serialization seems to be more common than nuclear layer serialization.

In previous research, the “nuclear” type was often analysed as co-lexicalization, compounding or grammaticalization (Baker 1989: 521); but as Durie (1997) points out, such an exclusion probably rests on too restricted areal data. This volume provides new insights into this issue, new data for further typological research, as well as some structural and diachronic hypotheses which might account for the dominant “nuclear” pattern.

It has sometimes been claimed that “nuclear” serialization is correlated with verb-final order (SOV) and “core” serialization with verb-medial order; SVO languages are thus expected to display SVOV patterns³ (Baker 1989, Foley and Olson 1985: 45-47), while SVVO patterns in these languages are analysed as resulting from word order change or innovation (Crowley 1987: 78-79). However, most languages in this volume appear to combine basic verb-initial or verb-final pattern with a dominant nuclear type (see Table 3), thus contradicting these generalizations. They show the nuclear type to be compatible with all basic orders (VSO, VOS, SVO, SOV), with no evidence that this results from any word order change. Alternative explanations are offered in support of a more general evolutionary tendency towards structural compression, entailing the fusion of two or more nuclei and their argument structures. This, in turn, may lead to a further degree of fusion as lexicalized verb compounds, as grammaticalized entities or as affixal morphemes.

2. Definitions and criteria

Verb serialization is defined by Bisang (1996: 533) as “the juxtaposition of two or more verbs, each of which would also be able to form a sentence of its own”.

As “serial verbs” or “complex predicates” are broad cover terms representing a great variety of structural types, even among closely related languages, finer-grained definitions and criteria help restrict the phenomenon of verb serialization (Foley and Olson 1985, Crowley 1987, Durie 1997) both within the Oceanic Austronesian area and cross-linguistically. These criteria, summarized and discussed in Senft (this vol.) are as follows:

- 1) Verbs and Verb Phrases (or predicates or nuclei) constitute one single predication referring to aspects of a single event;⁴
- 2) These complex nuclei make up one clause, with no clause boundary or dependency marker;

- 3) They constitute one single prosodic entity, without pause;
- 4) They share at least one syntactic argument or have a single array of arguments (for the specific case of “ambient serialization”, see 2.1.1);
- 5) They share the same tense, aspect, mood (marked on V₁ or V₂ only or on all verbs), the same illocutionary force, the same affirmative or negative polarity, and the scope of negation bears on all nuclei;
- 6) No loss of stress pattern or phonological form (no syllabic reduction); no loss of morpho-syntactic or semantic properties of the nuclei;
- 7) Lexical autonomy is a prerequisite for serialization, excluding non-autonomous coverbs and nonfinite forms, as well as co-lexicalized compounds.

Complex predicates thus constitute one single grammatical unit. These criteria will be discussed in 2.3 below.

2.1. Nuclear-layer and core-layer serial constructions

In the Role and Reference Grammar approach adopted by many scholars working on Oceanic and Papuan languages, serial constructions are often described as being either of the core or of the nuclear type. These terms refer to the layered structure of the clause as defined by Foley and Van Valin (1984), Foley and Olson (1985), Van Valin and LaPolla (1997: 25).

2.1.1. Definitions

The “nucleus” or predicate has propositional function; these terms are used in avoidance of the notion of verb, which is not a universal category, as demonstrated by several authors (Foley & Olson 1985: 33; Durie 1997) and as supported by data and analyses from Oceanic and more particularly from Polynesian languages in this volume. The “core” (or VP in languages with verbs) comprises the nucleus and its arguments. The periphery consists of the secondary participants (beneficiary, etc.) and adjuncts.

[_{CLAUSE} [_{CORE} He [_{NUCL} **talked**] to her] in the library]

Thus, nuclear serialization consists of several contiguous nuclei which share arguments, while core serialization consists of several cores. The core-layer subdivides into (a) same-subject and (b) switch-subject constructions (see Table 1).

Table 1. Nuclear and core-layer serialization

Nuclear-layer serialization	Core-layer serialization
sVV(o) [I run catch (him)]	a) same-subject: sV sV(o) [I run I catch (him)] b) switch-subject: sVo (s)V (o = s) [I strike <u>him</u> (<u>he</u>) dies]
one single set of arguments	verbs share at least one inner argument

Crowley (1987: 40, 49) coined the term “ambient” serialization for a third type of core serialization in which the second core/ VP functions as a modifier of the first, with no argument-sharing, as in (1). ‘Ambient’ “refers to a term that makes a general predication about the world” (Chafe 1970: 101-102). Such constructions are found in Paamese (Vanuatu, Crowley 1987) and Tariana (Northwest Amazonia, Aikhenvald 1999: 481-82). In Paamese, argument-sharing is irrelevant and only bracketing morphemes and the scope of negation identify them as serial constructions.

Paamese, Crowley (1987: 71)

- (1) *Ki-pusi-e he-kaiho.*
 2SG.DIS-kick-3SG 3SG.DIS-be hard
 ‘Kick it hard.’ (lit. you kick, it is hard) (DIS = distant mood)

In Oceanic languages, both the nuclear and core types are common. But cross-linguistically, the core type, with its same-subject or switch-subject subtypes, seems to be the most widespread: the same-subject subtype generally expresses direction or sequential actions, while the switch-subject subtype Table 1 has causative, resultative or comitative functions and meanings.

2.1.2. Overview of the various types in the languages of the volume

In this volume, core-layer serialization is only attested in SOV Saliba and SVO Pileni (see Table 3). In Saliba, the core type is restricted to a few verbs with modal or aspectual semantics (‘help’, ‘try’, ‘start’) and marginally refers to sequential or purposive actions with co-ranking verbs; the nuclear type has modifying functions (specifying direction, manner of action, result, terminative aspect, see Table 7).

In Pileni, the core type often proves difficult to distinguish from multi-clausal asyndetic constructions (coordination or purposive subordination),

because of frequent pronoun gapping, ellipsis of TAM morphemes or dependency markers and lack of prosodic distinction.

2.2. Symmetrical vs asymmetrical constructions

Both the nuclear and core-layer types subdivide into two main structural “symmetrical” and “asymmetrical” subtypes, which mark different syntactic functions and relations (or “nexus”, Foley & Van Valin 1984).

The structural terms “symmetrical” (co-ranking) and “asymmetrical” (implying head-modifier hierarchy) will be used to avoid the syntactic terms “coordinate” and “subordinate”.

Here, “symmetrical” does not refer to positions, since slots and linear order are generally constrained (see Saliba, Nêlêmwa), but to syntactically co-ranking predicates (i.e. on the same syntactic level) sharing the same subject; while “asymmetrical” predicates are hierarchized and headed and do not obligatorily share the same subject.

2.2.1. Definitions

– *Symmetrical* serial constructions consist of several co-ranking nuclei which belong to an open class, none of them determining either the semantic or the syntactic property of another verb of the sequence, and all under equal scope of a negation marker (Aikhenvald 1999: 472). They are time-iconic, refer to sequential actions which constitute one event or the various phases of a single event; they may also refer to concomitant actions (see Table 7). The “same-subject” core-layer type displays recursive copies of the same TAM and person markers on all verbs, a proof of their co-ranking structure. In other theoretical approaches, they are sometimes called “coordinate” or “pseudo-coordinate” (Baker, 1989: 524).

– *Asymmetrical* constructions (also labelled “subordinate” or “pseudo-subordinate” constructions in other theoretical frameworks) comprise hierarchized nuclei (i.e. a head and a modifier). The head belongs to an open class, while the modifier may come from a smaller, closed class with a variety of meanings and functions (such as verbs expressing direction, motion, posture, property, cause-effect, aspect, modality, etc.). As Larson (1991: 199-200) points out, modification may just consist of a semantic (aspectual or modal) delimitation of the main action. The V_1 or V_2 in

asymmetrical constructions tends to specialize and grammaticalize into an ‘auxiliary-like’ aspect or mood marker, or into complementizers.

2.2.2. Overview of symmetrical and asymmetrical types in this volume

Their distribution is highly variable across languages (see Table 2). For example, Nêlêmwa makes equal use of both types, while Mwotlap and Tahitian make sole use of the asymmetrical type. On the whole, in the languages of this volume, the asymmetrical type appears to be dominant with modifying functions, while the symmetrical type is restricted to a few constructions expressing sequential actions or goal of motion (‘go and ~ to + action’), as in Teop, Pileni and East Uvean; see Moyse-Faurie [ex. 10] *olo si’aki* ‘go (and) leave...’.

Table 2. Asymmetrical and symmetrical nuclei or VPs.

Type of construction	Saliba	Teop	Mwotlap	Anejoñ	Nêlêmwa	Pileni	East Uvean	Samoan	Tahitian
asymmetrical	+ nuclear	+	+	*	+	+	+	+	+
symmetrical	+ core	+	*	rare	+	(+)	rare	rare	*
+ (attested); (+) (sporadically attested); * (non-existent)									

Among the languages which have either dominant or sole asymmetrical nuclear type, sequential actions are expressed by syndetic or asyndetic coordinated clauses (Mwotlap, Anejoñ, East Uvean, Tahitian, Samoan). In the asymmetrical nuclear type, the modifying nucleus is generally in the rightmost slot of the complex, irrespective of word order, SVO, VSO or VOS (Nêlêmwa) and even SOV (Saliba).

Among the semantics of modification, manner of action is common to all; the various other frequent meanings include direction, property, coincidence, result, terminative (see Table 7). As for the relation between adverbs and modifying nuclei, the situation is also variable: in Pileni, which lacks an adverb category, modification by contiguous nuclei fills a categorial gap; but this is not the case in the other languages in which modifying contiguous nuclei generally co-exist with adverbs, though for the expression of different semantic notions (as in Nêlêmwa, Mwotlap) or with adverbs derived by *va-* (Teop), *fa-* (Samoan), *faka-* or by reduplication in East Uvean.

Table 3. Types of complex predicates, of word order and of argument structure.

	Saliba	Teop	Mwot-lap	Anejoñ	Nêlémwa and North N.C. lang.	South N.C. lang.	Pileni	East Uvean	Samoan	Tahitian
V(O)S or PRED.- ARG.				nuclear	nuclear			nuclear	contiguous nuclei	contiguous nuclei
SV(O) or ARG.- PRED.		nuclear	nuclear			nuclear	<u>nuclear</u> and core			
S(O)V or ARG.- PRED.	<u>nuclear*</u> and core									
Argument structure	accus.	accus.	accus.	accus.	erg./accus.**	accus.	accus. (erg. morph.)	erg.	erg.	accus.

* The dominant pattern is underlined.
 ** Ergative morphology essentially appears in the languages of the far north of the Mainland (among which Nêlémwa). Other languages are accusative.

2.3. Discussion of criteria

Indispensable as they are, some of the criteria listed under Section 2 above are not sufficient to distinguish serial verbs, as we shall now see.

2.3.1. *Prosody*

The discriminating role of prosody is highly variable. In Anejoñ and in the New Caledonian languages studied by Ozanne-Rivierre and Rivierre (this vol.), stress clearly differentiates sequential verbs from compounds, which constitute one single phonological unit, and in the tonal languages of New Caledonia (Cèmuhî, Paicî), the compounds take the tone of the prefix. In Nêlêmwa, prosody helps distinguish serial construction from asyndetic coordination. But in other languages (Teop, Pileni), prosody fails to be discriminating since a single prosodic contour serves for serial constructions and asyndetic multiclausal coordination or subordination.

2.3.2. *Shared TAM and polarity markers*

The scope⁵ of negation and the sharing of TAM morphemes are often elusive criteria, except in languages with bracketing negative or TAM morphemes (as in Mwotlap or Numbami):

Mwotlap (François) [ex. 49]

- (2) *Kêy* <*et-* *et* *VÊGLAL* *te*> *no*.
 3PL NEG₁- see know NEG₂ 1SG
 ‘They did not recognize me.’

Numbami (Bradshaw 1993: 147; Oceanic, Morobe Province, Papua New Guinea)

- (3) *Ma(nu)* *nu-kole* *nu-nggo* *ga de* *woya kote*.
 DEHORT 2SG.IRR-turn 2SG.IRR-say talk to 1SG not
 ‘Don’t turn around and talk to me.’

2.3.3. Finiteness vs nonfiniteness

Asymmetrical nuclei are cross-linguistically associated with nonfinite verb morphology; but as many Oceanic languages lack this distinctive feature or can dispense with redundant finite verb morphology, it is often difficult to distinguish the symmetrical and asymmetrical subtypes of contiguous predicates such as *he runs (and) smiles* and *he runs smiling* and many cases remain undecidable. Yet, in some languages, a few distinctive features help identify asymmetrical constructions.

- Some are morphophonological: the modifying verb has a slightly different form from an autonomous verb (Mwotlap, Nêlêmwa);
- some trigger a change of word order (Saliba, Teop, Pileni);
- others imply concord: transitive concord of V_2 with a transitive head⁶ (Saliba, Nêlêmwa, Pileni) or number concord with a plural first argument, marked by partial reduplication in East Uvean (for only about thirty intransitive verbs).

When no morphological clues are available, only semantics or the existence of closed classes helps assign the syntactic type and function of the complex predicate.

2.3.4. Frequency and productivity

Many Oceanic languages have various co-existing types of serial constructions, with different productivity, functions and properties (Durie 1997: 292).

Table 4. Productivity of serial constructions.

Productivity	Saliba	Teop	Mwotlap	Anejoñ	Nêlêmwa and North N.C. lang.	South N.C. lang.	Pileni	East Uvean	Samoan, Tahitian
of nuclear or contiguous type	+	+	+	rare	+	infrequent	+	infrequent	+
of core type	infrequent	*	rare	*	*	*	infrequent	*	*
of clause-chaining	*	*	*	Echo-Subject Constr.	*	*	*	*	*

Limited productivity is an evolutionary clue, signalling innovations or receding constructions. Three languages in this volume (Saliba, Teop, Pileni) evidence non-productive core-layer constructions, restricted to a few verbs.

In the North and Central Vanuatu subgroups, the various types are variably represented: in Mwotlap, the asymmetrical nuclear type is dominant and the core-layer type is infrequent and mostly expresses action-purpose, as in ‘give me some water [so that] I drink’ (François, this vol., fn. 7); in Araki⁷, the core-layer type is pervasive (François, 2002: 189-200); in Lewo (SVO, Early 1993: 65-67), Paamese (SVO, Crowley 1987: 68, 78-9) and Namakir (Sperlich 1993: 108-9), the core type is dominant and the nuclear type involves either non-autonomous V₂s, as in Paamese, or evolves towards verb incorporation with highly morphologized V₂ which constitute a class of verbal suffixes, as in Lewo.

In the Southern Vanuatu subgroup, serial constructions are infrequent. In Anejoñ (Lynch, this vol.), this correlates with two factors: (i) the development of a dominant “echo-subject” clause-chaining construction for sequential actions (Lynch, Section 3), marked by a former coordinator grammaticalized as a proclitic “echo-subject” morpheme, in place of symmetrical serial verbs and (ii) in place of the asymmetrical/modifying subtype, the development of verb compounds from former serial verbs, in which the second item has preserved many of its modifying functions (Lynch, Section 6).

In the languages of New Caledonia, serial verbs also vary from productive (as in Nêlêmwa) to infrequent, as in some southern languages which have developed verb compounding and incorporation (Ozanne-Rivierre & Rivierre, this vol.).

Among Polynesian languages, except in Samoan and Pileni, “juxtaposed” complex nuclei are not very productive; in East Uvean, they mostly express modification and only modification in Tahitian and Samoan.

3. Types of nuclei, ordering principles and structural slots

Though most of these features (types of nuclei, slots, ordering) are language-specific, yet there are widely distributed tendencies.

3.1. Types of nuclei

Foley and Olson (1985: 41-43) have proposed a cross-linguistic hierarchy of verb types occurring in serial or complex verb constructions, with active intransitive verbs (of motion, direction, stance, posture) at the top and transitive verbs at the lowest point on the cline of frequency⁸.

(+ frequent)		(– frequent)
ACTIVE INTRANSITIVE VERBS	>	STATIVE VERBS >
		TRANSITIVE VERBS
	(denoting properties)	

In Paamese (Oceanic, Crowley 1987: 50, 69), intransitive (motion or posture) verbs and stative verbs are common in core serialization, whereas other intransitive and transitive verbs are common in nuclear serialization. Most languages in this volume verify this hierarchy, though their distribution is highly variable.

The hierarchy also correlates with the core or nuclear types and their symmetrical or asymmetrical subtypes. For example, in Nêlêmwa, which only has nuclear serialization, stative verbs only appear in the asymmetrical subtype, while active intransitive or transitive verbs appear in both subtypes, though more frequently in the symmetrical one.

3.2. Ordering principles: iconic ordering vs parametric settings and syntactic constraints

Is the ordering of nuclei in complex constructions constrained by a language's parametric settings and basic constituent order (head-first or head-last parameter, head-adjunct order) or rather is it conceptually and temporally iconic, based on the logical ordering of cause-effect, action-result, action-goal semantics or inchoative and terminative Aktionsart?

3.2.1. *Ordering of complex predicates in sequential and modifying constructions*

One would expect ordering to be iconic for symmetrical complexes referring to sequential actions, but subject to the general order of modification in asymmetrical constructions. How does this interact with the basic constituent order, particularly in SOV Saliba?

Ordering in the VO and OV types

In VO languages with head-modifier order, both sequential and modifying serial verbs merge into a unique frame TAM [(S)V₁V₂(O)], in which V₂ can either be the next sequential action or the modifier of V₁. The interpretation is either contextual or based on the types of nuclei and restricted slots which are specific to the modifying serialization.

Saliba (Margetts, this vol.) has mixed ordering features⁹, probably due to contact with OV Papuan languages. Thus in nuclear constructions, instead of the expected [_{modifier} V _{main} V] order of OV languages, the modifying V₂ is to the right of the main verb [V_{main} V_{modifier}], as are adverbs. In OV Saliba, the ordered slots are as follows: [head–result–direction–adverbial or aspectual]. Terminative Aktionsart is iconic (action–finish). In purposive core serialization, action and goal of action are iconically ordered: the intransitive motion verb is in V₁ position and the goal in V₂ position; if transitive, V₂ is preceded by its patient [sV_{intr.} OsV_{tr.}(o)] as in [ex. 26] ‘lit. < they go yam they plant them > ‘they go (and) plant yams’. This suggests that these verbs or VPs are co-ranking, not subordinate. Complement clauses also follow the main clause, in contradiction with Greenberg’s Universal 13 and 15¹⁰ by which in OV languages, the subordinate verb form is expected to precede the main verb [VP_{sub.} VP_{main}] and the subordinate clause (of volition, purpose) to precede the main clause. Yet, it has often been remarked that many SOV Papuan languages (Kalam, Pawley 1987; Haruai, Comrie 1995) evidence this general tendency for sequential actions and cause–result or action–goal complex verb constructions to be time–iconic. Consider Haruai (Comrie 1995: 34) in which the sentence ‘that man cut some bananas, brought them (and) ate a little’ – literally expressed as < man–that banana cut carry little eat–past:3sg > – shows both the time–iconic ordering of actions and the [modifier–head] order of the quantifier.

Thus, serial verb constructions often contradict the parametric settings of a language (see Carstens 2000) and favour time–iconic sequencing of serial verbs, whereas complement clauses are highly sensitive to the VO or OV parameters and could constitute a good distinctive criterion between both types. Durie (1997: 330–339) contends that the invariant sequencing of such serialized constructions proves the limits of the syntactic treatment of serialization and advocates a more cognitive or semantic approach. In support of this, Durie cites some language–specific semantic sequencing constraints: in Lahu, abstract verbs must precede concrete verbs (Matisoff 1969, in Durie 1997: 338); in Nêlêmwa (this vol.), the concrete verb always appears in V₁ position and the abstract meaning of a verb often correlates

with its modifying function in the V_2 slot; thus, in the V_2 slot, the verb *ā* ‘go, leave’ may have the dispersive reading ‘from place to place’ and *bwage* ‘go back, return’ the reversive reading ‘back’. Other languages specifically prefer verbs over directionals to express the abstract directions of verbs of perception or cognition.

3.2.2. Ordering of inchoative, terminative and modal verbs

If no other morphosyntactic clue is available, the iconic ordering of inchoative and terminative Aktionsart verbs is a possible indicator of serialization, in contrast with their grammaticalization as aspectual operators or with complementizing constructions (as in English *start/stop doing something*). In most of the languages of the volume, their position is iconic, even though they display various degrees of specialization, incipient deverbalization, morphological erosion and grammaticalization.

As for modality verbs (‘try, able, hope, expect’), they tend to appear to the left of the main verb, while modifying verbs (of manner, result, direction) tend to appear to its right. Bi-directionality is thus common in asymmetrical constructions (see Bisang 1996: 580 for examples in Asian languages).

3.2.3. Ordering of arguments and argument structure

Argument ordering in serial constructions results from a compromise between (i) the constraints of a matrix verb’s argument structure (i.e. the number and type of arguments it may subcategorize for), (ii) the constraints of a complex verb’s argument structure and (iii) more generally the Thematic Hierarchy¹¹. Durie (1997: 330-40) contra Baker (1989: 541, 544) contends that the ordering of verbs is basically iconic and cannot be reduced to the Thematic Hierarchy; on the contrary, the Thematic Hierarchy “is an artifact of verb sequencing constraints”. Argument ordering in the languages of this volume involves composition, sharing and fusion; none of them allow for multiple objects or contiguous objects such as mentioned by Senft (this vol.) and Crowley (1987: 39, 50).

3.2.3.1. Argument-sharing vs argument fusion in contiguous nuclear constructions

Argument-sharing is a powerful discriminating test for serial constructions (Foley and Olson 1985) though subject to much language-specific variation since neither subject nor object-sharing is universally obligatory.

3.2.3.2. From compositionality to sharing and fusion

a) In *core-layer* serialization, argument structure is compositional, each verb has its own arguments and the complex VPs are ordered according to language-internal parametric settings including constituent order and conceptually iconic order.

b) In contiguous *nuclear* constructions, argument structure ranges from shared arguments in symmetrical constructions to fused arguments in asymmetrical constructions. Foley and Olson (1985: 44) and more recently Durie (1997: 344-48) argue for argument fusion¹² with “an integrated set of semantic roles” when two or more verbs differing in the argument structure of their lexical entries constitute a complex nucleus. The “fused theta-hierarchy is not the simple addition of the theta-roles for the two verbs”, it is a different conceptual structure altogether (Durie 1997: 348).

Table 5. Complex predicates with Same Subject (SS) and Different Subject (DS) constructions.

	Saliba	Teop	Mwot-lap	Anejoñi	Nêlêmwa & Northern N.C. languages	Southern N.C. languages	Pileni	East Uvean	Samoan Tahitian
nuclear or contiguous type	SS	SS or DS	SS or DS	infrequent	SS or DS	(+)	SS	SS	SS
core type	SS	*	*	*	*	*	SS or DS	*	*

– In *symmetrical* constructions, subject-sharing is obligatory in all the languages of this volume; it is the primary criterion which distinguishes them from asymmetrical modifying constructions. Object-sharing only applies to transitive verbs which have the same patient (SV_{tr}.V_{tr}.O). If the sequence contains verbs with different valency, the intransitive verb (often a verb of motion) obligatorily precedes the transitive verb (SV_{intr}.V_{tr}.O), whether in VO languages (Nêlêmwa, Pileni) or in OV Saliba (SV_{intr}. OSV_{tr}.).

– In *asymmetrical* constructions, there are two main cases. In Nêlêmwa, Pileni or Saliba, the complex verb has a single set of arguments which is based on the argument structure of the head (V_1), and the argument structure of the modifying verb (V_2), be it intransitive or stative, fuses with it. Thus a transitive V_1 will trigger transitive concord on V_2 , which is marked by a transitive suffix [SV_{tr} . V_{trans}^{ed} O] (as in Nêlêmwa, ex. (4) below or in Pileni) or an applicative affix as in Saliba [(SO) sV_{tr} . $V(V)_{appl.o}$]. The inflectional concord in asymmetrical constructions is evidence that they constitute one complex predicative unit.

Nêlêmwa (Bril) [ex. 25b]

- (4) *Hla diya hââhuux-e mwa eli*
 3PL do be recent-TR house that.ANAPH
 ‘They built this house recently.’

The second case is illustrated by Mwotlap, with only asymmetrical nuclear “macro-verbs” and strict SVO order: “in case of conflict for the object position [...] the macro-verb adopts the primary orientation of V_1 and the secondary orientation of V_2 ” (François, 3.4. this vol.). Thus, in (5) two intransitive predicates make up one single complex transitive causative predicate with cause-effect or cause-result meaning within the SVO template and with a single argument structure.

Mwotlap (François) [ex. 24]

- (5) *Ne-leñ <mi-yip hal-yak> na-kat.*
 ART-wind PFT-blow fly-away ART-cards
 ‘The wind blew the cards away.’

This is not a case of argument-sharing but of argument-restructuring and fusion, since in a non-serial construction, both verbs would be intransitive with different subjects.

A non-compositional argument structure (i.e. different from that of its constituent parts) for a complex verb often signals some functional specialization, grammaticalization or lexicalization. This is not quite the case in Mwotlap, but this might well be a transitional stage in a general process of compression from looser core serialization with different subjects (such as <the wind blows the cards fly away >) towards compact nuclear transitive macro-verbs, in the process of specializing and grammaticalizing: V_1 as a light causative verb or V_2 as an adverb, according to the structural slot which attracts grammaticalization for a specific function.

3.2.4. *Cross-linguistic comparisons*

Inflectional concord (in person, number) with the subject of the main verb or in transitivity with V_1 signals one complex syntactic unit. In Tariana (Aikhenvald 1997: 476-78), causative serial constructions trigger subject-affix agreement with the subject of the causation verb; this affix is cross-referenced on all verbs [you take you cause-cross you cause-stand].

Tariana (Aikhenvald 1997: 476-78)

- (6) *Phia-nikha phita pi-thaketa pi-eme*
 you-REC.P.INFR 2SG+take 2SG-cross+CAUS 2SG-stand+CAUS
ha-ne-na hyapa-na-nuku
 DEM-DISTAL-CL:VERT hill-CL:VERT-TOP.NON.A/S
ha-ne-riku-ma-se
 DEM-DISTAL-CL:LOC-CL:PAIR-LOC
 ‘Was it you who brought that mountain across (lit.you take you cross you put.upright) (the river) to the other side?’
 (REC.P = recent past, INFR = inferred, s = intransitive subject)

In Òbòlò (Niger-Congo, Faraclas 1984), subject-affix concord occurs in spite of switch-subject reading, but only in certain moods (positive imperative, hortative and subjunctive utterances) (7a.), and does not appear in the indicative (7b.), nor in the negative mood (Uche Aaron, in Durie 1997: 301). Durie, analyses such concord as a sign that they behave as co-heads and not as multi-headed VPs.

Òbòlò (Uche Aaron, cited in Durie 1997: 299, 301)

- (7) a. *É-gwên èmì é-nû*
 PL-call 1SG PL-come
 ‘Let them call me to come.’
 b. *Èmì ñ-sà ògè ífieëk á-năm*
 I 1SG-use knife 3SG-cut meat
 ‘I cut the meat with a knife.’

4. *Functions and semantics of serial constructions*

As Table 7 shows and as cross-linguistic studies confirm, contiguous serial or complex predicates are polyfunctional and polysemous constructions whose interpretation is filtered by various factors: the type of predicate or

verb class, functional slots, types of collocations, as well as contextual inferences.

Among their common functions and semantics are sequential or coincident actions, modification (or value), specification of circumstances or manner of action, causative, resultative, purposive, aspectual and less frequently, case-role marking (benefactive, comitative). But the mapping between construction, functions and meanings is highly variable and not easily generalizable cross-linguistically.

4.1. Distribution of types and functions

The aforementioned functions may be mapped onto one to four different construction types (*core* or *nuclear* and their *symmetrical* or *asymmetrical* subtypes); yet few of the languages of the volume actually make use of them all. Some have three types (Saliba, Pileni), some two (Teop, Nêlêmwa), some only one (Mwotlap, Samoan, Tahitian).

To the *asymmetrical* subtype is generally assigned modification (property, value) or specification of circumstances (manner, result, location, etc.), while the less frequent *symmetrical* subtype expresses sequential or purposive actions (Teop, Nêlêmwa, Pileni).

Table 6. Serial constructions in Saliba and Pileni.

	nuclear		core	
	asymmetrical 1	symmetrical	asymmetrical	symmetrical
Saliba	(mostly) modification		(infrequent) Aktionsart, modal, causative	sequential, purpose
Pileni	modification	sequential, purpose	(infrequent) Aktionsart, action-result	

Table 7. Typology of functions and meanings.

Saliba	Teop	Mwotlap	Anejōm̃	Néleŋwa and North. N.C. languages	Pileni	East Uvean	Samoan	Tahitian
mostly modifica- tion	mostly modifica- tion	only modification	(infrequent) modification	modification	modifi- cation	infrequent mostly modification	mostly modifica- tion	modifica- tion
V ₁ [main action]	V ₁ [main action direction, inchoative]	V ₁ [main action, cause]	V ₁ [main action, direction, iterative]	V ₁ [main action, inchoative , modal]	V ₁ [main action]	V ₁ [main action, inchoative imminence]	V ₁ [main action, inchoative , modal]	V ₁ [main action]
V ₂ [direction manner , result , terminative]	V ₂ [direction, result , concomitance]	V ₂ [value, manner , result , concomi- tance , purposive valency]	V ₂ [direction, value, manner]	V ₂ [value, manner , terminative]	V ₂ [manner]	V ₂ [manner , concomi- tance sequential]	V ₂ [value, manner , result concomi- tance purposive , simulative, additive, etc.]	V ₂ [value, manner , concomi- tance purposive , simulative]
+ transitive concord (applicative)	*	*	*	+ transitive concord	+ transitive concord	+ number concord (redup.)	*	*

Functions of
ASYMMET-
RICAL
CONTIGUOUS
NUCLEI

	Saliba	Teop	Mwotlap	Anejōm	Nēlēmwa and North. N.C. languages	Pileni	East Uvean	Samoan	Tahitian
Functions of SYMMETRICAL CONTIGUOUS NUCLEI	<u>infrequent</u>	<u>infrequent</u> S.S. constraint [sequential , purposive]	*	rare S.S. [sequential]	S.S. constraint [direction concomi- tance , sequential , purposive , valency]	S.S. constraint [sequential , purposive]	<u>infrequent</u> [sequential , purposive]	*	*

Functions of CONTIGUOUS VPS (CORE TYPE)	<u>infrequent</u> S.S. constraint [V ₁ 'help', 'try', 'start'] [sequential purposive V ₂]	*	rare [purposive]	*	*	<u>infrequent</u> S.S. or D.S. [V ₁ 'take' incipient, volitional] [sequential , result, terminative V ₂]	*	*	*
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In Saliba and Pileni, the asymmetrical nuclear type has modifying function. In Saliba, the symmetrical core type, with co-ranking VPs, expresses sequential and purposive actions ('go to~and sleep'), and the infrequent asymmetrical core type expresses Aktionsart, modal or weak causative meanings. In Pileni, the symmetrical nuclear type expresses sequential and purposive actions, and the infrequent core type expresses Aktionsart (incipient, terminative) and action-result. As Table 6 shows, sequential or purposive actions are more desententialized in Pileni than in Saliba, even though the symmetrical nuclear type in Pileni is unclear and might result from gapping or ellipsis.

At the other end of the cline, Mwotlap, Samoan and Tahitian use one single, highly polyfunctional pattern of asymmetrical contiguous nuclei (see Table 7) and sequential actions are expressed by multiclausal constructions.

In Saliba, Teop (Reinig [ex. 50]) and Mwotlap the causative, resultative or comitative functions and meanings, which are often expressed cross-linguistically by the switch-subject core-layer type [S_1V S_2V] (as in < S_1 makes S_2 do something > or < S_1 hits sth. (as a result) S_2 breaks > or < do sth. take s.o. >) are expressed by the compact SV_1V_2O nuclear type, in which case the patient of V_1 takes the next position available as the patient of the macro-verb: in Saliba see Margetts [ex. 6] < SV_{pull} CAUS- $V_{straight}$ -again-APPL-O > 'he pulls it straight again'; in Mwotlap, see François [ex. 60, 61] with *tēy* 'hold' or [ex. 37] < make stay quiet him >.

4.2. Case-role marking and argument expansion

Argument expansion¹³ and case-marking are two of the common cross-linguistic functions of serial constructions. In several African languages, Akan, Yoruba and Ijo (Sebba 1987), serial constructions have been described as essentially an argument increasing strategy. Sebba (1987: 216) shows that all three languages have strict limitations on argument structure (also see Carstens 2002), and Ijo only allows two arguments per verb, just like Mwotlap (this vol.). Foley (1997) pointed out that Austronesian languages tend to avoid three argument verbs and use complex verbs for case-marking and argument-adding functions. If the gap-filling function certainly holds true for Nêlêmwa (this vol.), where a few verbs may have argument-adding and case-role marking functions which compensate for non-existent prepositions or morphological markers, yet, neither poor

morphology nor the gap-filling function of serialization can be generalized further, even less held as universal features. Various Amazonian languages exhibit both very rich verbal morphology as well as serialization (Aikhenvald 1999). Bisang (1995: 138) makes a similar remark about Jabêm (Western Oceanic, Papua New Guinea). Haitian has three argument verbs as well as argument-expanding serial verbs (Déchaine 1989: 239). In Sranan and Saramaccan (Atlantic Creoles, Sebba 1987: 213-15), in some Amazonian languages, in Alamblak (Papuan, Bruce 1988), in Thai (Foley and Olson 1985), prepositions are shown to coexist with serial constructions, though with slightly different semantic and syntactic properties. In Alamblak (Bruce 1988: 37-38), serial causatives express indirect causation (lit. 'the wind blew me cold'), whereas the derived causatives express a more direct causation (such as 'he made her enter'). Thai (Foley and Olson 1985: 54) is also reported to have both an instrumental preposition *dûay* '(along) with, too' and a serial construction with the verb *ʔaw* 'take' which highlights the instrument, in contrast with the prepositional instrument, which is out of focus.

The verbs used as argument expanders or case-role markers are known to grammaticalize into adpositional markers or coverbs (Bisang 1996: 521-24), but there is an intermediate stage during which these verbs still head verbal arguments rather than prepositional adjuncts.

5. Which theoretical approach for serial constructions?

There are ongoing debates as to whether serialization is relevant to syntax and phrase structure (dependency, chaining), to lexicon (compounds, lexical enriching), to reference-tracking (same vs switch reference), to argument and case-role marking, to semantic and iconic temporal ordering (for sequential or coincident actions) or to several – or all – of these levels at the same time (Sebba 1987). Various theoretical approaches and models have been proposed, among which Sebba (1987), Baker (1989), Zwicky (1990), Byrne (1991), Givon (1991), Seuren (1991), Larson (1991), to mention but a few; but there is as yet no agreement on the syntactic model that might represent such a structural type, and, given the variety of configurations and linguistic types involved, Durie (1997) even voices strong doubts that there might be such a model. The only notion that generally meets agreement is that serial constructions make up one single complex

predicate with shared arguments and constitute one complex event. The three main positions will briefly be presented.

5.1. The syntactic vs the lexicalist approach

Sebba (1987) and Baker (1989: 523, 545-50) analyse serialization in various SVO Creole and African languages as a syntactic process involving recursive categories based on the notion of tightly knit and multiple right-branching verb phrases. Ordering is constrained both by the syntactic and structural parameters of a given language (such as the head-adjunct parameter) and by Thematic Hierarchy. The SVOV pattern is analysed as object-sharing with a VP as the dominating node:

“serializing languages allow Vs to embed within V’ to form a double-headed construction [...] this creates the possibility and the obligation of two verbs theta-marking the same internal argument.” (Baker 1989: 550).

In the lexicalist approach, serialization is analysed as taking place in the lexicon (Lefebvre 1991: 70); that is, matrix and serial verbs are considered either as (i) homophonous, different lexical items, (ii) or as forming a single complex predicate in the lexicon with a single argument structure (resulting from the composition of each verb’s argument structure) which theta-marks for a single set of arguments.

Durie (1997: 344-450) points out that a verb has a different lexical conceptual structure when serialized or not. Serialized verbs form a grammatical unit, which may modify the semantic and morphosyntactic properties of each verb.

“The semantic contribution of arguments can only be understood in the context of the whole serial complex”. [In instrumental *take-hit* constructions], “the first object is understood as an Instrument, by virtue of the interaction of the meanings of the two verbs’ argument structure.” (Durie 1997: 345).

5.2. Discussion: a cline between syntax, lexicon and conceptual structure

Foley (1986) and Pawley (1987, 1993) showed that languages vary greatly in the way they categorize event-types and complex notions, (i) either by

one single verb, e.g. *grab*¹⁴ or (ii) by co-lexicalized formulas¹⁵ such as 'hand raise go touch hold' (Foley 1986) or (iii) by several clauses.

Durie (1997: 326-27) observes that when serial constructions are cultural constructs, conventionalized concepts or formulas or when they have lexicon-expanding functions to make up for lexical verb scarcity as in Papuan¹⁶ languages (Bruce 1988, Pawley 1987, 1993; Lane and Pawley 1992), then syntax should not have much effect on theoretical explanations or models (*see also* Senft, this vol.). Besides,

"the productivity of verb serialization is constrained in such a way that a large variety of syntactically well-formed verb combinations will be rejected by native speakers as unacceptable or ungrammatical, because they do not correspond to a recognizable event-type, either within the actual experience of speakers, or alternatively within the permitted patterns of verb serialization within a language". (Durie 1997: 322).

In Kalam, Pawley and Lane show that these complex verb chains fall somewhere on a cline between serial verbs, lexical compounds or conventionalized formulas. These verb chains are submitted to judgement of acceptability and idiomaticity and specify phases or components of a unique complex "event", which Pawley (1987: 333; 1993: 109) defines as a subjective conceptual construction of a bounded happening (action or process) and a formal construct on which several functions and meanings are mapped. Pawley adds that if such verb chains involve lexical compounding, it is a productive lexical process which combines verbs into series without necessarily generating new dictionary entries for them.

In less extreme language types, nuclear serialization is often intermediate between syntactic and lexical phenomenon and can thus evolve towards grammaticalization or co-lexicalized compounds, in contrast with less desententialized core juncture. Early (1993: 81-85) also states that while "syntax rather than lexicon is the best place to handle the description of core serialization" in Lewo (Vanuatu), nuclear serialization is more highly desententialized because of the absence of TAM and person marker on each verb and may gradually fade into lexicalization and compounding. But languages vary greatly in this respect. Anejoñ with its "echo-subject" chaining markers (Lynch, this vol.) and Paamese (Vanuatu, Crowley 1987) with its dominant core serialization are less advanced in this process of desententialization.

Since co-lexicalization and compounding are gradual, ongoing evolutionary processes observable in the synchronic grammar of a language, it may be difficult to draw a clear-cut line between the various stages that

lead from serial verbs to incipient co-lexicalized predicates (see Nêlêmwa and Mwotlap, this vol.), except when they have reached an advanced degree of morphophonological fusion and when there is clear prosodic or tonal evidence that they constitute one stress or tonal unit (see Rivierre & Ozanne-Rivierre this vol.). Reduced productivity, analysability, paraphrasability and reduced semantic predictability are additional criteria to identify lexicalization, compounding and grammaticalized verbs.

Durie (1997: 330) points out that the invariance of cause-effect, instrumental or goal serial verb sequencing in SVO and SOV languages makes it “implausible that serialization sequencing constraints can receive a general explanation through syntactic accounts alone”. He suggests that “models of lexical conceptual structure and event-hood [...] will also need to be deployed to deal properly with verb serialization” in order to understand “which properties of serialization are manifestations or projections of semantic structure, culture-specific constructions of event-hood and tendencies of grammaticization and lexicalization.” (*ibid.* 1997: 349). Senft (this vol.) stresses that serial constructions might be the manifestation of some cognitive process, favouring an analytic rather than a synthetic mode of categorization and expression.

6. Complex predicates in a typology of dependency

Dependency can generally be defined (i) as *operator* dependency (entities under the scope of the same TAM, polarity and illocutionary operator(s)), (ii) as relations of *dominance* within hierarchical structures or (iii) as relations of *governance* between constituents. This encompasses several types of constructions ranging from coordination to subordination.

Complex predicates may evidence dependency in all these senses as they are highly integrated constructions. TAM *operator* dependency is definitory of serial constructions; asymmetrical serialization displays additional relations of *dominance* (head-modifier relations). But relations of *governance* (such as complementation) are normally excluded from serialization since they involve clause juncture (Seuren 1991: 196-203). Yet, there are ambiguous cases which may be interpreted either as symmetrical, co-ranking serial constructions or as *governed* nuclei or cores (i.e. arguments or complements of a governing predicate).

6.1. One or several clauses?

If there is fairly general agreement that serial predicates constitute one clause, interpretations vary as to what the underlying structure and concatenation principles are: (i) asyndetic coordination, pseudo-coordination and paratactic sequences, (ii) more or less loose adjunct construction (adverbial type) (Muysken and Veenstra 1994; Veenstra 1996), (iii) asyndetic subordination, (iv) ungoverned pseudo-complementation¹⁷ (Zwicky 1990: 3; Seuren 1991: 196-97, 201), (v) governed pseudo-complementation¹⁸ as in *he stopped writing*.

Baker (1989: 514-15) also recognizes that while “some putative SVCs are instances of veiled coordinations, embedded clauses, prepositional phrases, adverbs or particles”, some others, which he calls serial constructions, can be shown to be different on a number of criteria (such as extraction patterns, clefts, anaphors); besides, “true SVC structures and covert coordination structures seem to feel different to native speakers. The SVC is perceived as a single event” (Baker 1989: 546).

Serial constructions are monoclausal while complex predicates do not have such restrictions. Some types of complex predicates are reduced dependent clauses resulting from pronominal gapping or conjunction ellipsis. They can either be co-ranking verbs as in English *go (and) get it*, *come (and) fetch it*, or (+/-contiguous) asymmetrical verbs in weak causative constructions such as *he helped (to) finish it* or *she helps me (to) do it*, where V_2 is a nonfinite secondary verb. In English, co-ranking verbs are restricted to a few verbs in imperative mood or base forms (*she'll go get it*), but are ungrammatical with conjugated forms (**I went got the paper*), consequently they are not serial verbs.

In Pileni and Teop (this vol.), gapping is the norm and with few morphological markers and syntactic tests available, the syntactic relation between units (i.e. the type of nexus) is elusive; nor are operator scope and prosody any more helpful. Thus, in Pileni, nuclear or core serial verbs are difficult to distinguish from asyndetic coordination or subordination. With such formal and prosodic indeterminacy, distinctions and labels vary from language to language or are a matter of theoretical approach, and the only general notion that holds is that serial and complex verb constructions constitute a tight linkage type which spans a wide domain of mono-clausal or interclausal relations and functions.

Foley and Van Valin (1984), Foley and Olson (1985), Van Valin and LaPolla (1997) analyse such phenomena with three levels of juncture

(nuclear, core and clause), combining with three types of nexus (coordination, subordination, cosubordination) to generate nine possible complex sentence types on a cline from tight to loose integration into a single unit (Van Valin & LaPolla 1997: 477). Because of the great variability of morphosyntactic types and constructions exhibited by complex constructions (serialization, participial and converbal forms, medial clauses, etc.) and because of the highly variable mapping of conceptual relations onto the syntactic structures which encode them and which do not always fall neatly into coordination and subordination patterns, the notion of a hierarchical cline of interclausal linkage (from autonomy to integration), correlated with a cline of tightness of linkage (from implicit to explicit, Lehmann 1988) and correlated with semantic integration, is a preferred option for many scholars (see Foley & Van Valin 1984).

6.2. Symmetrical and asymmetrical nuclei: equal rank, dominance and governance

Serial constructions generally exist along with other modes and markers of dependency, such as tight or loose syndetic coordination, complementation or subordination.

6.2.1. *Functions of symmetrical and asymmetrical nuclei*

In Nêlêmwa, symmetrical, co-ranking nuclei refer to sequential actions and may often be rephrased as multiclausal syndetic or asyndetic coordination, yet they cannot be reduced to elliptic or asyndetic coordination for there are clear prosodic, syntactic and semantic differences in terms of event-frame: asyndetic coordination involves a pause and refers to different clauses and distinct events, whereas co-ranking nuclei refer to time-iconic sequential actions or to coincident actions which constitute one clause and one complex event.

Table 8. Types of constructions for sequential actions

Saliba	Teop / Mwotlap	Anejoñ	Nêlêmwa and North. N.C. languages	Pileni	East Uvean / Tahitian / Samoan
core-layer sequence of VPs	syndetic or asyndetic coordinated clauses	clause- chaining, multi- clauses	nuclear SVCs or syndetic / asyndetic coordinated clauses	core-layer sequence of VPs or syndetic / asyndetic coordinated clauses	syndetic or asyndetic coordinated clauses

Symmetrical or asymmetrical nuclei: some ambiguous cases

Contiguous nuclei often generate some syntactic and semantic ambiguity between co-ranking, sequential actions or asymmetrical predicates with adverbial or circumstantial meaning. In Nêlêmwa, the contiguous nuclei *i walem gi* (lit. (s)he walk cry) may be interpreted either as symmetrical nuclei ‘(s)he walks and cries’ or as asymmetrical nuclei similar to copredicative participles such as ‘(s)he walks crying’. Yet, *i walem gi* constitutes one event and differs from two coordinated nuclei *i walem me gi* ‘he walks and cries’ or two coordinated clauses *i walem me i gi* ‘he walks and he cries’, which refer to two events. In Pileni (Næss), contiguous nuclei such as [ex. 9] have the same ambiguous readings: co-ranking as in ‘he paddled (and) searched’ or asymmetrical and adverbial as in ‘he paddled searching’; such ambiguity is increased by pervasive gapping and conjunction ellipsis. In East Uvean (Moyse-Faurie), contiguous nuclei such as [ex. 9] *hopo malimali* ‘jump and smile’ or ‘jump smiling’ are similarly ambiguous.

The main disambiguating criteria are mostly verb slots (V_2 is most often the modifier slot, even in SOV Saliba), verb classes, contextual inferences and semantic collocations.

On the whole, the Polynesian languages in this volume tend to restrict contiguous nuclei to modification and to resort to multi-clause constructions for sequential actions. But even with modifying function, East Uvean prefers “depredicativized” and “deserialized” constructions to contiguous nuclei (Moyse-Faurie, 1.3. [ex. 27 to 29]). In Tahitian (Paia & Vernaudeau), neither sequential nor coincident actions may be encoded by contiguous nuclei: ‘he nibbles (while) reading’ or ‘he telephones (while) driving’ require either deranked prepositional phrases (lit. he drives with the telephoning) or multiclausal syndetic or asyndetic coordination. Samoan

(Mosel) also uses similar constructions as an alternative to complex nuclei, compare examples (50) and (51): [ex. 50] (lit. 'it does not grow high'; [ex. 51] lit. 'it is not high its growing'. In contrast with East Uvean and Tahitian, Samoan (Mosel) uses contiguous nuclei for coordination or additive properties (see [ex. 17] 'the leaf is black and thin') and more infrequently, for coincident actions, together with time iconic ordering of nuclei: see [ex. 11] 'she leaned crying and sobbing' (lit. cry sob lean), [ex. 21] 'the eel cried and spoke/spoke crying...' (lit. cry talk) and [ex. 23] 'sit praying'.

6.2.2. *Another type of dominance: clause-chaining and medial verbs*

Clause-chaining or "medial verb constructions" are defined by Longacre (1983: 186) as "a sequence of one fully finite verb and a number of less finite medial verbs", which must be under the scope of the same tense, mood and illocutionary operators as the main verb (sometimes eliminating them). Medial, dependent verb forms are marked by cliticized morphemes which are distinct from those used on simple main clause verbs, which eliminate agreement markings and are sometimes specified for same or different subjects. Clause-chaining has mainly been described among right-headed (OV) Papuan languages¹⁹ (Comrie 1983: 30, Foley 1986, Roberts 1988, Farr 1993, Bradshaw 1999). It is infrequent in Oceanic languages (Lynch *et al.* 2000: 48), but a similar phenomenon, "echo-subject constructions", is described in the South Vanuatu subgroup: Anejoñ (Lynch, this vol.), Lenakel (Tanna island, Lynch 1983) and Sye (Erromango island, Crowley 1998). In Anejoñ (Lynch, Section 3, this vol.), contiguous verbs are very infrequent and the dominant pattern for sequential actions is a type of clause-chaining called "echo-subject construction" (ES) and marked by a cliticized former coordinator (*m-*). This proclitic requires the same subject (SS) constraint and replaces person-tense-mood morphemes. In Sye (Crowley 1998: 247), ES-marking is pervasive, it conflates the functions marked both by symmetrical and asymmetrical serial constructions, that is both sequential or coincident actions as well as asymmetrical modification (the ES verb may express manner of action, direction, comparison, Aktionsart 'finish').

Being operator-dependent, medial verbs constitute an intermediate type of linkage, labelled "cosubordination" (Foley & Van Valin 1984) or "dependent" or "deranked" coordination (Roberts 1988, Lehmann 1989,

Haspelmath 1995: 21-23, Croft 2001: 354-55), and though they “span the region between coordination and adverbial subordination” (Croft 2001: 322-23), they are more akin to coordinate than subordinate clauses. One source of same-subject affixes in clause-chaining happens to be grammaticalized coordinating conjunctions (Haiman 1983: 106, 1987; Mithun 1988).

6.2.3. Governance: contiguous nuclei vs complementation

Contiguous nuclei or complex predicates have a variety of functions which range from co-ranking coordinate-like to hierarchized subordinate-like functions. Croft (2001: 323-24), citing Noonan (1985: 78), mentions an ambiguous case of linkage in Lango (Nilo-Saharan), in which paratactic clauses such as < I remembered I closed the door > may also be interpreted as asyndetic complement clauses such as ‘I remembered to close/closing the door’. Pronoun gapping, ellipted TAM markers may then yield two contiguous nuclei with shared arguments.

In Samoan [ex. 12 to 14], Mosel analyses contiguous nuclei involving ‘begin’, ‘know’, ‘go’ (as in ‘go buy some sugar’) as compressed, ellipted two-clause constructions.

Aktionsart and modal verbs often specialize as semi-auxiliary operators and undergo gradual delexicalization which then triggers clause compression:

“[...] the final stage of the grammaticalization of complements can be the fusion of the complement to a highly generalized main verb, indicating causation, mood or aspect.” (Croft 2001: 351).

But there are intermediate stages in which contiguous nuclei involving Aktionsart and modal verbs such as ‘try, help, start, know’ are syntactically ambiguous between co-ranking serial verbs and cosubordinate or governing constructions with dependent nuclei (see Saliba, Teop, Nêlêmwa, Pileni and East Uvean).

In spite of the lack of finite vs nonfinite morphology, there are a number of language-specific tests that help clarify their status. Comparison with syndetic constructions with similar functions and meanings is a good test to assess the basic differences between serial verbs and asyndetic dependent clauses. In Nêlêmwa, governing verbs generally select specific types of complementation markers, except a few verbs such as ‘start, know, try’ (see Nêlêmwa, Bril, 2.10; 2.11) which are structurally ambiguous. As far as

Aktionsart verbs are concerned, the iconic position of ‘start’ in V_1 and ‘finish’ in V_2 position is an argument in favour of their analysis as co-ranking or cosubordinate constructions, in contrast with the non-iconic position of similar verbs in other languages such as English *he stops doing it* (not to mention the nonfinite V_2), which indicate complementation. The construction of ‘start’ in Nêlêmwa actually depends on the valency of V_2 : it is cosubordinate with an intransitive V_2 , but governing with a transitive V_2 (see Nêlêmwa, Bril, 2.10). As for ‘finish’, it fits into the modifier V_2 slot and behaves as an aspectual modifier of V_1 .

In Saliba, the construction of ‘help’, ‘start’ and ‘try’ (Margetts, 6.4 to 6.6.) shows some evolution either (i) towards more compression, from core to nuclear juncture with shared arguments, or (ii) towards a deranked, converbal, nominalized verb form [$O_{\text{cake}} V_{\text{bake-POSS}} sV_{\text{try}}$] (lit. cake baking-its I try) functioning as the complement of the main verb (see footnote 10). Thus, the core juncture [ex. 54] [$O_{\text{Lalaita}} sV_{\text{help-APPL-3SG.O}} sV_{\text{basket.weaveO}}$] ‘help Lalaita to weave baskets’ (lit. Lalaita you_{sg} help her you_{pl} basket weave) gives way to a single complex nuclear juncture [ex. 54’] [$O_{\text{Lalaita}} sV_{\text{basket.weave}} V_{\text{help-APPL-3SG.O}}$] (lit. Lalaita you_{sg} basket weave help her) with an inverted word order to comply with Saliba’s constrained syntactic slots in nuclear constructions, ‘help’ then appears in the modifying V_2 slot. With ‘start’ and ‘try’, there is no order inversion (possibly due to iconic reasons), thus [ex. 46] [$sV_{\text{start}} O_{\text{skirt}} sV_{\text{weave}}$] (lit. I start skirt I weave) becomes [ex. 50a.] [$O_{\text{skirt}} sV_{\text{start}} sV_{\text{weave}}$] (lit. skirt I start I weave), by raising the object to the position of object of a core juncture, which might possibly develop into contiguous nuclei at a later stage [$O_{\text{skirt}} sV_{\text{start}} V_{\text{weave}}$] (lit. skirt I start weave), as a consequence of subject pronoun gapping [(SO) sVVo].

6.3. Asymmetrical complex nuclei and converbs: a comparison

Asymmetrical complex predicates expressing the manner, coincidence or circumstances of an action (see 6.2.1 above) may be analysed as cases of cosubordination. They are encoded cross-linguistically by a wide range of syntactic constructions, morphological markers or lexical categories: nonfinite verb forms (infinitives, gerunds), co-predicative participles (*I sat watching the scene, he arrived holding the lamp*, French *traverser la rivière en nageant*), nominal modifiers (*traverser la rivière à la nage*), prepositional phrase (*swim across the river*), adverbs or adverbial forms,