

Nexus and Juncture Types of Complex Predicates in Oceanic Languages: Functions and Semantics^{*}

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In previous research on Oceanic languages, “core serialization” has received ample attention while “nuclear serialization” has often been analyzed as resulting from co-lexicalization, compounding, or grammaticalized coverbs. This analysis will show that the nuclear template constitutes a genuine type of complex predicate. It will assess their syntactic type (co-ranking vs. modifying), their distinctive features, functions and semantics, as well as the classes of predicates involved, their argument structure and ordering principles. It will also outline the type of evolution and the structural compression to which they are submitted, as well as the factors favoring or restricting the use of complex predicates.

Key words: complex predicates, serial verbs, grammaticalization, lexicalization

In previous research on serial verbs in Oceanic languages (Bradshaw 1983, Foley & Olson 1985, Durie 1997, Crowley 2002), what has been termed “core serialization” has received ample attention, while “nuclear serialization” with its contiguous nuclei has often been analysed as resulting from co-lexicalization, compounding or grammaticalized coverbs.

This paper will show that the nuclear template constitutes a genuine type of complex predicate, compatible with right- or left-branching (VO or OV) word orders and not reducible to lexical compounds. The core and nuclear templates being polyfunctional, the analysis will point out the various factors that come into play to interpret their semantics (§1.3.1, §4.2, §5).

The analysis will develop as follows:

Sections 1 through 3 will assess the various types of complex predicates (co-ranking or modifying), their distinctive features, functions and semantics, the classes of predicates involved, their argument structure and ordering principles. Section 4 will

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discuss some of their functions, with a focus on modification. Section 5 will outline the type of evolution and the structural compression to which they are submitted.

1. Towards a definition of complex predicates in Oceanic languages

Complex predicates are usually identified by various criteria which help restrict this domain.

1.1 Criteria of complex predicates

- 1) They comprise a sequence of predicates constituting one single predication.
- 2) They form one single prosodic entity, without any pause between them.
- 3) They share the same tense, aspect, and mood (marked on one or all verbs of the sequence) or, if not the same marker, a set of closely dependent mood markers, as in Paamese (Crowley 2000:57-59); they share the same illocutionary force and polarity (all predicates fall under the scope of a negation marker).
- 4) They are lexically autonomous predicates with predictable semantics (in contrast to co-lexicalized compounds).
- 5) They do not evidence any loss of morphosyntactic properties, nor any loss of stress pattern or phonological form.

1.2 Types of dependencies between complex predicates

Dependency between complex predicates can be defined as: (i) *operator dependency* (under the scope of the same TAM, polarity and illocutionary operator(s)); (ii) relations of *dominance* in asymmetrical head-modifier hierarchical structures; or (iii) relations of *governance* between constituents.

This study will focus on relations of *dependency* and *dominance* between nuclei or cores, and will exclude relations of *governance* (such as complementation) which involve clausal juncture.

1.2.1 Nuclear and core juncture

The layered structure of the clause and the notions of nucleus and core juncture are used in the sense defined by Foley & Van Valin (1984:77), Van Valin & LaPolla (1997).

The nucleus or predicate is defined as having propositional content; these terms are used in order to avoid the category of “verb”, which is problematic in Polynesian languages. The core comprises the nucleus and its arguments; adjuncts belong to the

periphery of the core.

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

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

Each layer is also delimited by a set of *operators* which have scope over it. Aspect is a nuclear-layer operator, modality and negation are core-layer operators, and tense, illocutionary force, and clausal negation are clause-layer operators (Foley & Van Valin 1984:208ff., Van Valin & LaPolla 1997:40-52). Complex predicates must share the operators at all levels, nuclear, core, and clause layer; in RRG, such *operator dependency* makes them cosubordinate.

Cross-linguistically, the core type, with its same- or switch-subject subtypes, seems to be the most widespread. In Oceanic languages, the nuclear and core types are both common as will appear.

1.2.2 Nexus: co-ranking vs. hierarchized predicates

Nuclear and core junctures further subdivide into the co-ranking and hierarchized¹ constructions.

– *Co-ranking* predicates belong to an open class; none of them determines the semantic or syntactic property of another predicate of the sequence. They generally refer to sequential actions done by the same agent as well as action-goal.

Nêlêmwa (New Caledonia)

- (1) [_{CLAUSE} [_{CORE} I u [_{NUCL} â] [_{NUCL} **kuut** mwadu]]]
 3SG PFT leave stand down there
 ‘He leaves, stands down there.’ (Bril 2004:169)

¹ I shall use these terms rather than “coordinate” or “subordinate” constructions.

In Oceanic languages, hierarchized predicates mostly express modification or circumstances, while the less frequent co-ranking subtype expresses sequential, purposive (see §4.2), and sometimes resultative actions (see §4.3).

Among the semantics of modification, manner of action (ex. (5)) is predominant in Oceanic languages; the other frequent meanings include location, direction (ex. (6)),

posture (ex. (8)), property, value (ex. (9)), and overlapping actions (ex. (7)); some include aspect and Aktionsart (inceptive, terminative) (ex. (4)) or modality, depictive (§4.4.1), comitative (ex. (34)-(35)), or simulative functions (§4.4.2).

1.3 Distinctive features of co-ranking vs hierarchized predicates

What are the distinctive features of co-ranking vs. hierarchized predicates?

In VO languages with nuclear juncture and head-modifier order, both sequential and modifying complex verbs have a unique template [(S)V₁V₂(O)], in which the V₂ can either be the next sequential action (ex. (1)) or the modifier of V₁ (ex. (5)-(6)). Besides, since many Oceanic languages lack any distinctive finite vs. non-finite verb morphology or can altogether dispense with redundant finite verb forms, a lot of functional and semantic fuzziness is involved in the interpretation of a sequence of activity verbs. On the other hand, when the V₂ is a stative verb, various morphosyntactic criteria, apart from context and verbal semantics, signal their modifying function.

1.3.1 Semantic ambiguity with activity verbs

The syntactic status of a sequence of activity verbs is often indeterminate and its interpretation rests on contextual inferences: thus, example (7) in Pileni may read as purposive ‘paddle in search’ or coincident ‘paddle searching’.

Pileni (Solomon Islands, Polynesian outlier)

- (7) Na no ua hehega na ko matu tuohine na.
 3SG TA paddle search DEM TOP 1PL.EXCL.POSS sister DEM
 ‘He has paddled here in search of our sister.’ (Næss 2004:233)

In Nêlêmwa, the V₂ *kuut* is interpreted contextually as modifying and coincident in (8), but no formal criterion distinguishes it from *kuut* in the sequential construction in (1).

Nêlêmwa (New Caledonia)

- (8) Hli u not kuut mwadu.
 3DU PFT watch stand down there
 ‘They watch standing down there.’ (Bril 2002:192)

Consequently, the syntactic and semantic interpretation of the complex rests on other factors, such as the semantics of the nuclei, the syntactic slot devolved to modification, as well as contextual inferences. Thus, in a sequence comprising a V₁ of activity

and a V_2 of posture, the posture verb is interpreted as modifying and expressing manner of action; but if a posture verb like *kuut* ‘stand’ follows a V_1 of motion (ex. (1)), it tends to be interpreted as sequential and as the endpoint of the motion.

In Nêlêmwa, a verb of movement such as *bwage* ‘go back, return’ may have a reversative reading in the V_2 slot following an activity verb, as in *fhe bwage* ‘give back’ (*fhe* ‘take, carry’), and a slightly more abstract reading following a perception verb, as in *no bwagi* ‘look back, look behind’. Similarly, *â* ‘go, leave’ has a dispersive reading in the V_2 slot, as in *wâlem â* ‘walk from place to place’, in contrast with manner of action in *â wâlem* ‘go walking’, or as in *mu â* (*mu* ‘stay’, *â* ‘leave’) ‘live from place to place’, in contrast with the purposive meaning in *â mu* ‘go settle’.

Such data tend to show that the specific function and semantics of the V_2 is interpreted by computing on a number of factors such as its syntactic slot and the respective semantics of the activity verbs.

1.3.2 Distinctive syntactic features of modifying stative verbs

Stative V_{2S} , on the other hand, evidence clearer morphosyntactic traces of their dependency and of their modifying function; this appears through various devices such as (i) transitive concord, (ii) causative or adverbial derivation, and (iii) reduplication.

(i) Transitive concord

In the nuclear juncture [sVVo], the transitive concord of a stative modifying verb with a transitive head V_1 is marked by a transitivity suffix (as in Nêlêmwa (9) and Pileni (10)) or by an applicative suffix (Saliba (11)).

In (9), the stative V_3 shows transitive concord (*yoo-lî*) and allows the whole verb complex to share a common patient. Such transitive marking of the stative verb *sho* ‘be good’ only appears in complex predicates, never otherwise. The negation marker has scope on the whole complex:

Nêlêmwa (New Caledonia)

- (9) Kio i tâlâ mwemweli yoo-lî vhaa Nêlêmwa.
 [CLAUSE [CORE **Kio** i [NUCL tâlâ mwemweli] [MOD.NUCL yoo-lî] vhaa Nêlêmwa]].
 NEG 3SG hear.TR know.TR be good-TR talk Nêlêmwa
 ‘He doesn’t understand the Nêlêmwa language very well.’ (Bril 2004:172)

Pileni (Solomon Islands, Polynesian outlier)

- (10) Kolu-no maoli la khoulua kip-ina themu-ina.
 2DU-TA true DEM 2DU keep-TR quiet-TR
 ‘If you are telling the truth, keep it quiet.’ (Næss 2004:236)

Saliba (Milne Bay, Papua New-Guinea)

- (11) Ye he-kata-namwa-namwa-**i**-gai.
 3SG CAUS-learn-RED-good-**APP**-1EXCL.O
 ‘She teaches us properly.’ (Margetts 2004:71)

(ii) “Causative” or adverbial derivation of a stative V_2

In some languages, stative verbs with modifying function in V_2 position must undergo a derivation marked by a prefix formally similar to the causative prefix (compare (12)-(13) in Tigak and (14)-(15) in Hoava). This derivation does not create a lexical class of adverbs, but marks the modifying/adverbial function of the stative V_2 , which is integrated into the complex and possibly marked for transitive concord with a transitive V_1 head as in Tigak (13). The complex thus shares a common set of arguments.

Tigak (New Ireland)

- (12) Ga koŋ **a**-tuk-i.
 3SG.PAST hold CAUS-stand-3SG
 ‘(S)he held it up.’ (Beaumont 1979:82-83, in Crowley 2002:134)
- (13) Ga vis **a**-takteak-i.
 [CLAUSE [CORE Ga [NUCL vis] [MOD.NUCL **a**-takteak]-i]].
 3SG.PAST hit CAUS-hard-3SG
 ‘(S)he hit him/her hard.’ (Beaumont 1979:76-77, in Crowley 2002:135)

Hoava (Western Solomons)

- (14) Kosiri **va**-bilani-a sa koburu sa teqe.
 urinate CAUS-smell of urine.**TR**-3SG ART.SG child ART.SG mat
 ‘The child urinated on the mat and made it smell of urine.’ (Davis 2003:162)
- (15) Koni ome **va**-leani-a goe.
 FUT see CAUS-good.**TR**-3SG 2SG
 ‘You will see it well.’ (Davis 2003:162)

Adverbs, on the other hand, are incorporated in the complex and transitivized if the head is a transitive verb, like *paki* in (16):

- (16) **Va**-mate paki-a.
 CAUS-be dead first-**TR**.3SG
 ‘Stop it first.’ (Davis 2003:168)

In Nalik, the causative prefix also has a valency-increasing function as in *famaat* ‘kill’ (< *maat* ‘be dead’, Volker 1998:65) as well as an adverbial function (ex. (17)-(19)):

Nalik (New Ireland)

- (17) Ga na dodor **fa**-mumut.
 1SG FUT RED.speak CAUS-small
 ‘I will speak a little.’ (Volker 1998:76)
- (18) Ga rexas **pa**²-mumu-**ing** naan.
 1SG know CAUS-small-Tr 3SG
 ‘I know him a little.’ (Volker 1998:82)

Volker insists that the “causative” derivation of stative verbs does not create a class of adverbs and only marks the modifying function of a stative verb in a complex verb construction (1998:76-77). Only the stative verb *doxo* ‘good’ may appear directly after the verb, with a slightly different meaning from the “causative” derivation. Compare:

- (19) A nalik ka piaat **fa**-doxo.
 ART boy 3 say CAUS-good
 ‘The boy is speaking up.’ (Volker 1998:76)
- (19’) A nalik ka piaat doxo ‘The boy speaks well.’

In Teop, the modifying function of a stative verb is marked by a prefix which originally derives from one of the two causative prefixes reconstructed in Oceanic languages.

Teop (Bougainville)

- (20) [_{CLAUSE} [_{CORE} Ean toro [_{NUCL} vaa-mate] [_{MOD,NUCL} **va**-mataa] e toa]].
 2SG must CAUS-die ADV-be good ART chicken
 ‘You must kill the chicken properly.’ (Reinig 2004:100)
- (21) [_{CLAUSE} [_{CORE} O tae kahi na [_{NUCL} avuhu] [_{MOD,NUCL} **va**-hata] kurusu nana]].
 ART excrement dog REAL smell ADV-be bad very IMPF:3SG
 ‘The dog’s excrement smells very bad.’ (Reinig 2004:100)

But when the verb complex is conventionalized, the nuclei are juxtaposed without derivation, possibly due to the fact that *hata* functions as an adverb in that case:

- (22) O mimi te kahi na avuhu hata maa-na.
 ART urine PREP dog REAL smell be bad DIR-IMPF:3SG
 ‘The dog’s urine smells awful.’ (Reinig 2004:101)

(iii) Reduplication of the modifying verb

² *fa*’ and *pa*- are allomorphs.

Reduplication usually expresses manner of action as in Saliba, Kwaio, Paamese, and Fijian. It is not a lexical but a derivational device marking the modifying function of the V₂ and its syntactically dependent status.

Saliba

- (23) Ku-hedede-**nogo-nogowai**!
 2SG-tell-RED-slow
 ‘Speak slowly!’ (Margetts 1999:135)

Kwaio (Malaita, Solomon Islands)

- (24) ŋai e toʔoru **alo-alo**.
 3SG 3SG stay RED.be quiet
 ‘(S)he sat quietly.’ (Keesing 1985:136)

Fijian

lako-v-a qasiqasi ‘fetch it crawling’ (*lako-v-a* ‘fetch it’, *qasi* ‘crawl’; Schütz 1985:232)
kani tokotoko ‘eat squatting’, *lave dokidoki* ‘carry lying’ (Pawley & Sayaba, forthcoming)

2. Productivity and distribution of types of complex predicates

Before proceeding, here is an overview of the systems found in the various languages of the sample. Table 2 presents the syntactic templates (core and nuclear) and the basic word order in each language, and Table 3 sums up their functions and semantics.

Table 2: Types of junctures with Same Subject (SS) and Different Subject (DS)

	W. Oceanic								Polyn. outlier	E. Oceanic				Polynesian
	Loniu (Manu Is.)	Saliba (Milne Bay)	Tawala	Tigak (N. Ireland)	Nalik	Nakanai (N. Britain)	Teop (Bougainville)	Hoava (N. W. Solomon)	Pileni (Solomon Is.)	Paamese (Vanuatu)	Mwotlap	Nêlêmwa (N. Caled.)	Kwaio (Solomon Is.)	Samoan Tahitian
Word order	SVO	SOV	SOV	SVO	SVO	SVO	SVO	VSO	SVO	SVO	SVO	VOS	SVO	VOS
Nuclear juncture (with same or different subject)	SS (rare)	SS	SS	SS	SS	SS	SS or DS	SS	SS	SS	SS or DS	SS or DS	SS or DS	SS
Core juncture	SS or DS	residual SS	*	*	*	*	*	*	SS or DS	SS or DS	(rare)	*	*	*

As shown in Table 3, the distribution of types is highly variable among Oceanic languages.

- In Western Oceanic languages, both core and nuclear complex predicates are common, though core juncture tends to be more widespread (Crowley 2002); yet many Western Oceanic languages only display the nuclear type (Nalik, Tigak (New Ireland), Nakanai (New Britain), Tawala (Milne Bay, Papua New Guinea)), or have dominant nuclear juncture (Hoava (Western Solomon)), and some show residual core serialization (Saliba (Milne Bay)).
- In Eastern Oceanic languages, the core type is much less frequent except in the Northern and Central Vanuatu³ subgroups, where both core and nuclear junctures are variably attested. But in the Southern Vanuatu subgroup, complex predicates are infrequent (as in Anejom) or non-existent.

In Kwaio (Solomon Islands), New Caledonia and Fiji, only the nuclear juncture is attested. In northern New Caledonian languages such as Nêlêmwa, the nuclear type is productive, whereas it is much more infrequent in southern languages where complex verbs have evolved into compounds or affixes (Ozanne-Rivierre & Rivierre 2004).

This has often led to the analysis of complex predicates in the nuclear juncture as grammaticalized or lexicalized forms; but the following data will suggest that this is over-generalized. Nor does there seem to be any regular correlation between the loss or absence of core juncture and OV or VO order, since it is manifested by both.

- Polynesian languages are generally non-serializing and complex nuclei are not very productive except in Samoan and Pileni (a Polynesian outlier). Where attested, they mostly express modification (Samoan, East Uvean), and only modification in Tahitian where coincident actions such as ‘he drives (while) telephoning’ require deranked prepositional phrases (LIT. he drives with the telephoning) and where sequential actions require clausal coordination (Paia & Vernaudo 2004). But in Samoan, predicates in the nuclear juncture may express either sequential or coincident actions indicating manner of action, and the meaning and function of the complex will be disambiguated by the semantics of the predicate and by contextual inferences.

³ In Mwotlap, the hierarchized nuclear juncture is dominant and the core juncture is rare, whereas in neighboring Araki, core juncture is pervasive (François 2000:189-200); in Lewo (Early 1993:65-67), Paamese (Crowley 1987:68, 78-79), and Namakir (Sperlich 1993:108-109), core juncture is dominant and nuclear juncture involves either non-autonomous V₂s (as in Paamese) or tends toward verb incorporation (as in Lewo) with highly morphologized V₂ which constitute a class of verbal suffixes.

In (25), two activity predicates ('cry and talk') refer to coincident actions. In (26), the first two predicates express coincident activities ('cry and sob'), while the posture predicate in the V_3 slot is modifying and expresses manner of action ('she cried and sobbed leaning'). But nothing except position and semantics indicates the different functions.

Samoan

- (25) [CLAUSE [CORE 'O lea na [NUCL **tagi**] [NUCL **tautala**] ai loa le tuna iā Sina]].
 PRES DEM TAM cry talk ANAPH then ART eel DEM Sina
 'And so, the eel cried and spoke to Sina ...' (Mosel & So'o 1997:135, in Mosel 2004:275)
- (26) ...a 'o **tagi masūsū fa'alagolago** mai Saraiatea i lo'u fatafata.
 but TAM cry sob lean hither Saraiatea at my chest
 '... Saraiatea leaned crying and sobbing against my chest.' (Mosel 2004:272)

Table 3: Functions and semantics of co-ranking and hierarchized core or nuclear complex predicates (* non-existent; (+) infrequent or sporadically attested)

		Nuclear Juncture		Core Juncture	
		Hierarchized	Co-ranking	Hierarchized	Co-ranking
Western Oceanic	Loniu (Manu Islands, Admiralties)	modification (direction, location)	sequential	modification (direction, location, manner, simulative, instrument, terminative) action-result	purpose
	Saliba (Milne Bay Province)	modification (manner, direction, terminative)	(+) action-result	(+) manner/path of motion, inchoative, modal	sequential, purpose
	Tawala (Milne Bay Province)	modification (manner, direction, degree, time limit, terminative, comparison) action-result	*	*	*
	Tigak (New Ireland)	modification	sequential, purpose	*	*
	Nalik (New Ireland)	modification (quality, manner, direction, comparison)	sequential	*	*
	Nakanai (New Britain)	modification (direction, location, time limit)	sequential	*	*
	Teop (Bougainville)	modification (quality, manner, coincidence, inceptive, terminative) action-result	sequential, purpose	*	*
	Hoava (W. Solomons)	modification (manner, direction, degree, time limit, terminative, modality) action-result action- purpose	sequential	*	*
Polynesian outlier	Pileni (Solomon Is.)	manner	(+) sequential, purpose	(+) Aktionsart (inceptive, terminative)	sequential action-result

Eastern Oceanic	Kwaio (Solomon Is.)	modification (manner, direction, posture, terminative, simulative, modal) action-result	sequential	*	*
	Paamese (Vanuatu)	modification (manner, direction) action-result (non-autonomous V ₂)	*	modification (manner, direction, location, posture, simulative) aspect, action-result	purpose
	Mwotlap (Vanuatu)	modification (quality, manner, coincidence, purpose, comparative) action-result	*	(rare) purpose	*
	Anejom (Vanuatu)	modification	*	*	*
	Nêlêmwa (New-Caledonia)	modification (quality, manner, coincidence, direction, terminative)	sequential, purpose action-result	*	*
Polynesian	Samoa	modification (quality, manner, coincidence, simulative) action-result	(+) sequential, purpose	*	*
	Tahitian	modification	*	*	*

3. Functions and semantics of complex predicates and distribution over types

Complex predicates are thus polyfunctional and polysemous constructions whose interpretation rests on various factors: classes of verbs or predicates, syntactic slots and contextual inferences.

These functions may be mapped onto one to four different types of constructions (Table 3): on the whole, the *hierarchized* type expresses modification or circumstances, while the less frequent *co-ranking* type expresses sequential, consecutive, or purposive actions. Since some of these functions and meanings belong to contiguous semantic domains, ambiguity is circumscribed within tolerable limits. Cause-result is variably assigned to one or the other of these subtypes, though more often to the *co-ranking* type. As for the mapping of these functions and semantics onto the core and the nuclear junctures, some tentative and statistical generalizations may be made:

- 1) In the languages with core and nuclear complex predicates, the core juncture tends to express sequential and purposive actions, while the nuclear juncture mostly achieves adverbial modification (manner, circumstances). But these are not fully predictable tendencies. For instance, Saliba and Loni (two Western Oceanic languages) evidence almost reverse patterns: sequential and purposive actions are expressed by the core juncture in Saliba (Milne Bay), while in Loni (Admiralties), sequential actions are marked by the nuclear juncture and the core juncture has modifying or case-marking functions (Hamel 1994:106-133).

In Paamese (an Eastern Oceanic language of Vanuatu), complex predicates do not express sequential actions, but only various types of modification (see Table 3). The core and nuclear junctures partially overlap in the expression of manner of action, direction and cause-result (Crowley 2002:55-92, 208-214), but they differ in their degree of autonomy and integration. Some V_2 are less autonomous in the nuclear than in the core juncture (*ibid.* 2002:96-98) and have undergone some specialization while remaining genuine verbal constituents, as proved by various criteria, among which the fact that only the nuclear juncture may be nominalized as a complex entity (*ibid.* 2002:83-85). Thus, *seluusi mearu* ‘speak soft’ may be nominalized as *seluusi mearu-ne* ‘whispering’ (lit. “speech soft”), thus evidencing some conventionalization. The core juncture also expresses purpose, temporal or spatial limit, comitative, similitive, comparative, and aspectual meanings (progressive, habitual, terminative).

These few cases point out different paths of evolution among languages belonging to the same or different subgroups.

- 2) In the languages with the sole nuclear juncture, sequential events or purpose are generally marked by the co-ranking type (Teop, Nêlêmwa, Pileni, East Uvean, Samoan), while modification is marked by the hierarchized type.
- 3) Finally, at the other end of the cline, Mwotlap or Anejom (Vanuatu) and Tahitian only use the hierarchized nuclear juncture for modification. In Mwotlap for instance, the nuclear juncture is highly polysemous, expressing cause-result, purpose, coincidence, manner of action, direction, location, endpoint or time-limit, comparison, quantification.

3.1 Types of nuclei, ordering principles and structural slots

Foley & Olson (1985:41-43) have sketched a cline of frequency for types of verb occurring in complex predicates, with active intransitive verbs (of motion, direction, stance, posture, manner) ranking high, transitive verbs ranking low and stative verbs in the middle (manner, quality). Most Oceanic languages verify this hierarchy, though with some variations.

(+frequent)	(–frequent)
ACTIVE INTRANSITIVE VERBS	TRANSITIVE VERBS

> STATIVE VERBS >

The following diagram shows their distribution over the core and nuclear junctures in Paamese. The core juncture mostly hosts intransitive verbs of motion or posture,

while the nuclear juncture hosts a few other active intransitive verbs and transitive verbs. Stative verbs are shared over both types (Crowley 1987:50, 69, 2002:170-171).



In Nêlêmwa, the most common verbs are active or motion verbs and stative verbs; the latter only appear in the hierarchized subtype, while active intransitive or transitive verbs appear in both, though more frequently in the co-ranking subtype.

Table 4: Distribution of verb types over the nuclear juncture in Nêlêmwa.

FREQUENCY	frequent ←————→ infrequent		
VERB TYPES	motion & active verbs	→ stative verbs →	Aktionsart, modal verbs
SEMANTICS	sequential or simultaneous actions	modification, manner, qualification	inchoative, terminative
	manner		(un)able, know, try
	purpose, endpoint		
	result (infrequent)		

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

Is the linear order of complex predicates a logical-cognitive or a purely syntactic process consistent with the basic word order parameter of a given language?

One would expect verb ordering to be sequential and logically iconic for complexes referring to sequential, purposive actions or cause-result, but subject to the syntactic order of modification and sensitive to the VO or OV parameters in hierarchized constructions. This prediction is verified in the Oceanic languages considered here. Aktionsart (inceptive or terminative) verbs also tend to be iconically ordered, while modal verbs (‘try, able, hope, expect’) tend to be in the slot left of the main verb in VO languages, but in the rightmost slot in an OV language such as Saliba (29).

The modifying predicate tends to be to the right of the main verb in VO languages (SVO Mwotlap, VOS Nêlêmwa) and even in SOV Saliba which, like other Austronesian

languages in contact with OV Papuan languages, has mixed ordering features.⁴ In Saliba, the ordered slots are as follows: [head-result-direction-adverbial or aspectual]; terminative Aktionsart (action-finish) is also iconic (Margetts 2004).

In SOV Papuan languages, such as Kalam (Pawley 1987, in press) or Haruai (Comrie 1995), the modifier is to the left of its head as shown by the position of the quantifier ‘little’ in Haruai (28), while sequential, action-goal or cause-result complex predicates tend to be logically and sequentially ordered.

Kalam (Madang Province, Papua New Guinea)

- (27) Cn np mdak ayn-bogs dad n-ngp-un.
 1PL 2SG later iron-box carrying join-FUT-1PL
 ‘We will join you later bringing the metal trunk.’ (Pawley, in press)

Haruai

- (28) Nöb’-ak^w hömlö rmal rag w| nm-ōŋ-a.
 man-that banana cut carry little eat-PAST.3SG-DECL
 ‘That man cut some bananas, brought them (and) ate a little.’ (Comrie 1995:34)

3.3 Argument structure and argument ordering

Argument ordering in complex predicates results from a compromise between (i) the constraints of a matrix verb’s logical structure (i.e. the number and type of arguments it subcategorizes for), (ii) the constraints on the argument structure of the complex predicate (which may be different from that of its parts), and (iii) the Thematic Hierarchy.⁵ Argument structure may thus be compositional, shared, or fused.

3.3.1 Argument-sharing vs. argument fusion

Argument-sharing is a good discriminating test to identify the type of complex predicate at hand, though subject to much language-specific variation, since neither subject nor object-sharing are universally obligatory. Yet, in most cases, subject-sharing distinguishes co-ranking from hierarchized constructions.

⁴ Such as SOV order with nominal arguments and sVo with pronouns. There are other mixed ordering features: GEN-N; DEM-N; but N-ADJ; N-NUMERAL; V-ADV. Complement clauses and other subordinate clause (of volition, purpose) also follow the main clause.

⁵ Agent > instrument > patient > goal > locative > comitative > beneficiary, etc.

A) Core juncture

- In the *co-ranking core juncture*, argument structure is generally compositional (i.e. is the sum of its parts), each verb has its own set of arguments (with same subjects) and the cores are ordered sequentially or logically.

Saliba

- (29) [CLAUSE [CORE Ku-sae] [CORE tamowai ku-wase-sagu-i-di!]]
 2SG-go up people 2SG-search-help-APP-3PL.O
 ‘Go up and help search the people.’ (Margetts 1999:140)

Argument marking may be cumulative with verbs like ‘help’ and a V₂ referring to a joint activity (30) whose participants are cross-referenced on V₂’s subject index:

- (30) [CLAUSE [CORE Kabo ya sagu-i-go] [CORE keke ta gabu-ø]].
 TAM 1SG help-APP-2SG.O cake 1INCL bake-3SG.O
 ‘I’ll help you bake a cake.’ (Margetts 2004:82)

- In the *hierarchized core juncture* expressing manner or direction of action, ordering generally abides by the head-modifier parameter. The V₂ may have a personal switch-subject index (31) or a third person ‘ambient’⁶ subject index referring to the specified event (32).

Loniu (Manu Islands, Admiralties)

- (31) [CLAUSE [CORE Uto kɔʔɔluweni wɔw] [MOD.CORE ala tan]].
 1PAUC.EXCL POT.NS.lower 2SG 2SG.go down
 ‘We’ll lower you down.’ (Hamel 1994:124)
- (32) [CLAUSE [CORE Suʔu tɔ lɔs] [MOD.CORE ilɛ ya ɛy]].
 3DU NS.STAT fall 3SG.go through IN.OBL
 ‘They were falling through it.’ (Hamel 1994:121)

Comitative constructions with an applicative suffix and involving an animate argument also show the cumulative⁷ personal indexing (marked on the motion-direction V₂ in (33)):

⁶ A label originally coined by Chafe (1970:101-102) and referring to “a term that makes a general predication about the world”. Crowley borrowed it to refer to a type of modifying serialization in which the second core has a 3rd person singular subject index which refers to the event expressed by the first core.

⁷ So do prepositional comitative constructions in Saliba: *maiya-gu ka-wose* [with.3SG-1SG.POSS 1EXCL-paddle] ‘I with her, we paddled.’ (Margetts 1999:159).

- (33) Tubu-gu ya-wose-i-ø **ka-lao** Saliba.
 ancestor-1SG.P 1SG-paddle-APP-3SG.O **1EXCL**-go Saliba
 ‘I paddled (with) my grandmother to Saliba.’ (Margetts 1999:159)

In Paamese, comitative serial constructions also show the cumulative personal indexing pattern (34), whereas semi-grammaticalized constructions with an accompanitive V_2 such as *tali* and a third person ‘ambient’ subject index on V_2 (ex. (35)-(36)) have a concomitant case-marking function. The verb *tali* is not fully autonomous and always occurs in serial constructions.

Paamese

- (34) [_{CORE} makurik] [_{CORE} lovaha].
 ma-kuri-ko lo-va-haa
 1SG.IMM.FUT-take-2SG **1DU.INCL**-IMM.FUT-go
 ‘I will take you away with me.’ (Crowley 2002:41)
- (35) [_{CLAUSE} Inau [_{CORE} nimun si:n] [_{CORE} hetal tonik]].
 inau ni-muni siine he-tali tonike
 1SG 1SG.DIST.FUT-drink gin **3SG**.DIST.FUT-accompany tonic
 ‘I will drink gin with tonic.’ (Crowley 2002:41)
- (36) [_{CORE} konatitiei] [_{CORE} netalinau].
 ko-na-titu-tei ne-tali-nau
 2SG-PROH1-fight-PROH2 **3SG**.POT-accompany-1SG
 ‘Don’t fight with me.’ (Crowley 2002:76)

B) Nuclear juncture

In the nuclear juncture, argument structure ranges from shared arguments in co-ranking constructions to a set of fused arguments in hierarchized constructions.

– Shared arguments in co-ranking nuclear juncture

Subject-sharing is obligatory and distinguishes co-ranking from hierarchized constructions.

Teop

- (37) Me-nam paa rosin tagihu.
 [_{CLAUSE} Me-[_{CORE} nam paa [_{NUCL} rosin] [_{NUCL} tagihu]]].
 and- 1EXCL PAST flee go to bush
 ‘And we fled into the bush.’ (Reinig 2004:98)

Object-sharing only applies to transitive verbs with the same patient ($SV_{tr}V_{tr}O$). If

a sequence comprises verbs with different valency, the intransitive verb (often a motion verb) obligatorily precedes the transitive verb ($SV_{intr}.V_{tr}.O$), as in (38), irrespective of the language's basic order, VO (as in Nêlêmwa, Pileni) or OV as in Saliba ($SV_{intr}.OSV_{tr}.$), see (29).

Nêlêmwa

- (38) [_{CLAUSE} [_{CORE} Ma u [_{NUCL} oda] [_{NUCL} uya]] [_{CORE} tu axaleny Boovalan]].
 1DU.EXCL PFT go up arrive find this man Boovalan
 'We went up, arrived, found this Boovalan.' (Bril 2004:173)

Sequences of the type $*\langle V_{tr} V_{intr} \rangle$ are ungrammatical in Nêlêmwa and Tawala, unless the intransitive V_2 is transitivized; in Hoava, an applicative affix licenses the patient for the complex as in (40). In Teop or Mwotlap, a $\langle V_{tr} V_{intr} \rangle$ sequence triggers argument restructuring (see §3.3.2).

– Fused argument structure in *hierarchized* nuclear juncture

In hierarchized nuclear juncture, two or more verbs differing in their respective argument structure make up a complex nucleus whose argument structure differs from that of each constituent verb used independently. Thus, the verb complex has a set of arguments based on the argument structure of the main verb, and the modifying verb (stative or intransitive) fuses into it and is marked for transitive concord if V_1 is transitive, using one of various devices, a transitive suffix as in Nêlêmwa (39) or Pileni (10), an applicative suffix as in Saliba (11) or an “adverbial” derivation as in Tigak (13) and Hoava (15) (see §1.3.2).

In Nêlêmwa (39), such argument fusion only occurs with stative verbs such as *hââhuuk* ‘be new, recent’, the stative V_2 is transitivized and fused into the argument structure of the main verb.

- (39) [_{CLAUSE} [_{CORE} Hla [_{NUCL} diya] [_{MOD.NUCL} hââhuux-e] mwa eli]].
 3PL do be recent-TR house that.ANAPH
 ‘They built this house recently.’ (Bril 2004:177)

In Hoava (40), the applicative⁸ suffix on the second direction verb *la* ‘go away’, licenses the concomitant patient (the basket) for the whole complex predicate. Stative verbs on the other hand, undergo a derivation marked by *va-* (15) and repeated below:

⁸ In Hoava, the transitivizing devices vary with verb classes and types of objects.

Hoava (Western Solomons)

- (40) [_{CLAUSE} [_{CORE} [_{NUCL} Naqala] [_{NUCL} gore] [_{NUCL} la-ni-a] sa beha] [_{CORE} ADJ pa hore]].
 carry go down go away-APP-3SG ART.SG basket PREP canoe
 ‘Carry the basket down to the canoe.’ (Davis 2003:165)
- (15) Koni ome **va**-leani-a goe.
 FUT see CAUS-good.TR-3SG 2SG
 ‘You will see it well.’ (Davis 2003:162)

In Teop, the hierarchized nuclei are simply juxtaposed when they are active verbs (41), but undergo a derivation marked by *va*- when they are stative verbs as in (20) repeated below:

- (41) [_{CLAUSE} [_{CORE} [_{NUCL} Hoa] [_{MOD,NUCL} gunaha] o sinivi] [_{CORE} ADJUNCT vo tahii]].
 push go down ART canoe GOAL sea
 ‘Push the canoe down to the sea.’ (Reinig 2004:98)
- (20) [_{CLAUSE} [_{CORE} Ean toro [_{NUCL} vaa-mate] [_{MOD,NUCL} **va**-mataa] e toa]].
 2SG must CAUS-die ADV-be good ART chicken
 ‘You must kill the chicken properly.’ (Reinig 2004:100)

3.3.2 Argument-restructuring

The following construction differs from argument fusion above in that it involves argument-restructuring, as exemplified by (42) in Mwotlap, where two intransitive verbs make up one complex transitive predicate expressing cause-result, with a single argument structure [_sV_{intr}V_{intr} o] in which the subject of V₁ is the subject of the complex, while the underlying subject of V₂ appears as the object of the complex. This type of argument restructuring [SVVO] is required to fit Mwotlap’s obligatory SVO template, since a core [SV SV] construction such as ‘the wind blows the card fly away’ is agrammatical.⁹

- (42) [_{CLAUSE} [_{CORE} Ne-leṁ [_{NUCL} mi-yip] [_{MOD,NUCL} hal-yak] na-kat]].
 ART-wind PFT-blow fly-away ART-cards
 ‘The wind blew the cards away.’ (François 2004:119)

In these [_sV_{intr}V_{intr} o] constructions, the V₂ specifies the manner, motion, direction of V₁, the posture in which the action is done or the endpoint, result or purpose of V₁.

- (43) [_{CLAUSE} [_{CORE} Kē [_{NUCL} ma-vap [_{MOD,NUCL} lolmeyen] nēk]]].
 3SG PFT-say aware 2SG
 ‘She said (it) to let you know.’ (LIT. she said aware you) (François 2004:124)

⁹ So would be ‘the wind blows the card’, ‘blow’ being intransitive in Mwotlap.

Argument restructuring as in (42) might be a transitional stage in the compression from a former core such as < the wind blows the cards fly away > to a nuclear juncture, with the incipient grammaticalization of V_1 as a lexical causative verb or the grammaticalization of V_2 as a directional modifier, depending on which structural slot tends to grammaticalize first.

To a limited extent, English shows similar centripetal constructions which attract the nuclei to some adjacent positions [SVOV > SVVO], as in *he pulled the flap open* vs. *he pulled open the flap*, where V_1 behaves as a lexical causative verb and *open* indicates the result, or as in *he let the blanket fall* vs. *he let fall the blanket* where *let* functions as a causative verb licensed by the AUX-V pattern.

Left-branching (OV) Saliba shows a similar evolution with some types of verbs and functions where the core juncture (44) vies with the nuclear juncture (45). This structural change in juncture triggers the reordering of the predicates as well as some other syntactic changes: the obligatory inclusory subject pronoun on the second core in (44) disappears in (45), and the inverted position of the predicates might indicate that *sagu* ‘help’ takes the other nucleus *bosa-halusi* ‘basket-weave’ as a dependent nucleus in a more tightly integrated cosubordinate structure sensitive to the head-final parameter of Saliba.

- (44) [_{CLAUSE} [_{CORE} Lalaita ku **sagu**-i-ø] [_{CORE} kwa bosa-halusi!]]
 Lalaita **2SG** help-APP-3SG.O **2PL** basket-weave
 ‘Help Lalaita basket-weave!’ (Margetts 2004:82)
- (45) Lalaita ku bosa-halusi-sagu-i-ø!
 [_{CLAUSE} [_{CORE} Lalaita ku [_{NUCL} bosa-halusi]-[_{NUCL} **sagu**]-i-ø!]]
 Lalaita 2SG basket-weave- help-APP-3SG.O
 ‘Help Lalaita basket-weave!’ (Margetts 2004:83)

4. Some functions of complex predicates

As many previous studies (Durie 1988, Hamel 1993, Crowley 2002, Ross 2004) have focused on the case-marking and argument-expanding function of complex predicates in Oceanic languages, these functions will be touched on only briefly and the bulk of the analysis will bear on purposive, resultative constructions and on some of their modifying functions (adverbial, depictive, and quantifying). When these functions are not distinguished morphosyntactically, except sometimes by the type of juncture (nuclear or core), the reading crucially depends on the semantics of the predicates, or on the illocutionary force of the sentence, as we shall see.

4.1 Case-role marking and argument expansion

The case-marking and argument-expanding functions of complex predicates have been extensively studied, particularly in African languages that only allow two arguments per verb (Sebba 1987). Oceanic languages tend to avoid three argument verbs and resort to complex predicates for argument-expanding functions. Mwotlap (François 2004) and Nêlêmwa (Bril 2004) do use complex predicates especially for case-roles which are lower down in the hierarchy, and which are not otherwise marked by adpositions or by other morphological markers. Yet, if scarce case-marking morphology may be compensated for by complex predicates, such constructions go beyond some gap-filling function.

Thus, Jabêm (Western Oceanic, Papua New Guinea) displays very rich verbal morphology and complex predicates (Bisang 1995:138, Dempwolff 2005). Aikhenvald (1999) makes a similar remark about various Amazonian languages. Haitian has three argument verbs as well as argument-expanding complex verbs (Déchaine 1989:239). In Sranan and Saramaccan (Atlantic Creoles, Sebba 1987:213-215), in some Amazonian languages, in Alamblak (Papuan, Bruce 1988), in Thai (Foley & Olson 1985), prepositions are shown to coexist with complex predicates, 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 derived causatives express a more direct causation (such as ‘he made her enter’). Thai 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, whereas the prepositional instrument is out of focus (Foley & Olson 1985:54).

The verbs which have argument expanding or case-role marking functions are known to grammaticalize into adpositions or coverbs (Bisang 1996:521-524, Ross 2004), but there is an intermediate stage during which these verbs still head verbal arguments rather than prepositional adjuncts and this is amply exemplified in Oceanic languages (see Durie 1988, 1997, Crowley 2002, Bril & Ozanne-Rivierre 2004).

4.2 Action-purpose~goal

Sequential actions of the type ‘he came and told me’ and action-goal such as ‘he came to tell me’ are expressed by either core juncture (Saliba, Loniū) or nuclear juncture (Teop, Nêlêmwa, Hoava, Pileni, East Uvean). In most purposive constructions, the V_1 is a motion verb, while in other cases, subordinate constructions are often used.

– *Core juncture*

In OV Saliba, the co-ranking core juncture expresses sequential or purposive meanings.

- (46) [_{CLAUSE} [_{CORE} Se sae] [_{CORE} kwateya se kuma-ø]].
 3PL go up yam 3PL plant-3SG.O
 ‘They went up to plant yams.’ (Margetts 2004:75)

In Loniū (47), a motion verb *ilɛ* ‘go’ (< *la* ‘go’) functions as a purposive operator linking the two activity verbs (*iputi* ‘take’ and *čani* ‘cut’).

- (47) [_{CLAUSE} [_{CORE1} Iy iputi iy] [_{CORE2} [_{NUCL} ilɛ] [_{NUCL} čani putɔn]].
 3SG 3SG.take 3SG 3SG.go cut umbilical cord
 ‘She took him in order to cut the umbilical cord.’ (Hamel 1993:117)

– *Nuclear juncture*

In Teop and Nêlêmwa, sequential actions and action-goal are marked by nuclear juncture.

- Teop
 (48) [_{CLAUSE} [_{CORE} [_{NUCL} No] [_{NUCL} gono] o rapisi]].
 go get ART knife
 ‘Go and get the knife.’ (Reinig 2004:102)

- Nêlêmwa
 (49) [_{CLAUSE} [_{CORE} I [_{NUCL} tho] [_{NUCL} yaagi] pwaxi-n]].
 3SG cry look for child-POSS.3SG
 ‘She cries to find her child/cries looking for her child.’ (Bril, field notes)

Complex predicates involving two activity verbs as in (49) may express immediate sequence~consequence, coincidence and sometimes purpose when context allows (although the preferred purposive construction would be a subordinate clause in Nêlêmwa), whereas conjoined clauses refer to different events with some time gap between them. A similar construction in Nêlêmwa, *hla thege oga hî pwiak* is further commented on in §5.4. Again, the specific meaning is filtered by the semantics of the associated verbs: two activity verbs such as *tho yaagi* ‘cry look for’ may be interpreted as coincident or purposive; while a verb of movement and an activity verb such as *thege oga* ‘run leave’ are interpreted as coincident or consecutive.

In Mwotlap, Samoan, and Tahitian, the nuclear juncture only marks action-goal, and sequential actions require complex clauses.

Mwotlap

- (50) [CLAUSe [CoRE [NuCL Gengen] [NuCL maymay] na-taybē!]].
 AO.eat.RED strong ART-body.2SG
 ‘Eat well to strengthen your body!’ (LIT. eat strong your body) (François 2004:119)

In Hoava, the causative prefix appears on intransitive and stative V₂ in constructions expressing purpose (51) or result (62).

Hoava (Western Solomons)

- (51) [CLAUSe [CoRE Rao [NuCL hitu] [NuCL va-taloa]-gi tu]].
 1SG chase out CAUS-leave-TR.3PL REST
 ‘I chased them out to make them leave.’ (Davis 2003:161)

That (51) is purposive and not directional is shown by (51’) where motion or direction V₂s are juxtaposed. The goal of motion is construed as an argument as shown by the transitive form of the last verb (compare with (40)):

- (51’) Aso toloro la-ia sa sa sagarau.
 walk go straight go.TR-3SG 3SG ART.SG reef
 ‘Walk straight to the reef.’ (Davis 2003:163)

In the purposive construction of Samoan, the causative prefix on V₂ increases its valency and licenses a shared patient for the complex *tapena fa’a-lelei*. Compare (52) with a two-clause construction such as *tapena le fale, fa’a-lelei le fale* ‘tidy up the house, make the house good’ and with a juxtaposed adverb such as *tausi lelei* ‘care well’, *susulu lelei* ‘shine nicely’ (Mosel 2004:277-278):

Samoan

- (52) [CLAUSe [CoRE1 Suga alu] [CoRE2 [NuCL e tapena] [NuCL fa’a-lelei] le fale]].
 girl go TAM tidy up CAUS-good ART house
 ‘Girl, go and tidy up the house so that it looks good.’ (Mosel 2004:277)

Since the same syntactic template expresses sequence or purpose, what selects the right interpretation? Essentially verbal semantics and the illocutionary force of the clause. A motion verb followed by an activity verb (ex. (46), (48)) selects the purposive reading, whereas two activity verbs allow either the purposive or coincident readings (49). Injunctive mood (ex. (50)-(52)) also favors the purposive over the sequential

reading, or the purposive over the resultative reading (70).

4.3 Cause-result constructions

Languages display various strategies for resultative constructions. In Loni and Pileni, they are expressed by core juncture, but by nuclear juncture in Saliba, Teop, Mwotlap, and Samoan. As before, the cause-result reading crucially depends on semantic association, such as a V_1 of activity and a V_2 expressing accomplishment or a change of state. Languages also vary as to whether they categorize these constructions as co-ranking or hierarchized.

A) Core juncture

In the core juncture, the argument structure of cause-result complex predicates is compositional; each predicate has its argument structure in switch-subject constructions [$S_X VO_Y (S_Y) V$], with the possible evolution of V_2 as a non-autonomous, resultative predicate, requiring the support of another verb as in Numbami (Bradshaw 1993:138). In Paamese, cause-result may be expressed by core (53) or nuclear juncture (54) according to the degree of conventionalization of the V_2 . Thus, *mate* in (53) is an autonomous verb, while *vinii* ‘kill’ (54) is not fully autonomous and only appears in nuclear complex predicates (Crowley 2002:96). Note that the discontinuous negation marker (*-ro-...-tei*) is affixed on V_1 in the core juncture (though it has scope on both cores), but it brackets the complex nuclei in the nuclear juncture (54). The scope of negation over the whole complex signals a hierarchized construction.

Paamese (Vanuatu)

- (53) Irosaltei vuas he:mat.
 [CLAUSE [CORE i-ro-sali-tei vuasi] [CORE hee-mate]]
 3PL.DIST.FUT-NEG1-spear-NEG2 pig 3SG.DIST.FUT-die
 ‘They will not spear the pig to death.’ (Crowley 2002:83)
- (54) Irosal vini:tei vuas.
 [CLAUSE [CORE i-ro-[NUCL sali] [NUCL vinii]-tei vuasi]]
 3PL.DIST.FUT-NEG1-spear kill-NEG2 pig
 ‘They will not spear the pig to death.’ (Crowley 2002:83)

B) Nuclear juncture

In the nuclear juncture, cause-result constructions require various structural adjustments. Basically, the underlying subject of the V_2 becomes the patient of the

complex. Often, the V_1 behaves as a causative verb, while V_2 indicates the result.

Reduplication of the V_2 in Mwotlap (ex. (55)-(56)) also points out the hierarchized relation between a head and its verbal modifier.

- (55) [CLAUSE [CORE Na-lo [NUCL ni-hey] [NUCL simsim] n-aes]].
 ART-sun AO-shine melt.RED ART-ice
 ‘The sun melts the ice (by shining).’ (François 2004:119)
- (56) [CLAUSE [CORE Ni-yiy [NUCL mi-yiy] [NUCL sisigoy] na-mtig]].
 ART-earthquake PFT-quake fall.RED ART-coconut
 ‘The earthquake made the coconut trees fall down.’ (François pers. comm.)

In Teop, cause-result constructions behave as a subtype of modification, with the V_2 marked by the prefix *va-*, just like manner modification (but unlike sequential, purpose or directional V_2 s).

- (57) [CLAUSE [CORE [NUCL Tasu] [NUCL **va**-mate] e kahi], ha!]
 stone ADV-be dead ART dog INTERJ
 ‘Stone the dog to death!’ (Reinig 2004:101)

In Saliba, cause-result complex predicates show argument-sharing with transitive activity verbs (58) or argument-fusion with intransitive or stative V_2 (ex. (59)-(60)). Because of the same-subject constraint, the underlying subject of V_2 appears in the patient slot of the complex and a causative prefix increases the valency of an intransitive or stative V_2 (ex. (58)-(59)).

- (58) Ye koi-kesi-di.
 3SG hit-break-3PL
 ‘(S)he broke them by hitting.’ (Margetts 1999:99)
- (59) Ye sikwa-**he**-beku-dobi-**ei**-ø.
 3SG poke-CAUS-fall-go down-APP-3SG.O
 ‘He poked it down. / He made it fall down by poking it.’ (Margetts 2004:70)
- (60) Ye tabe-**he**-dudulai-uyo-**i**-ya-ma.
 3SG pull-CAUS-straight-back/again-APP-3SG.O-hither
 ‘He pulled it straight again.’ (Margetts 2004:71)

Various Oceanic languages display similar constructions with a causative prefix.

Tigak

- (61) Ga koŋ a-tuk-i.
 3SG.PAST hold CAUS-stand-3SG
 ‘(S)he held it up.’ (Beaumont 1979:82-83, in Crowley 2002:134)

Hoava

- (62) [_{CLAUSE} Ego, [_{CORE} nani sa]] [_{CLAUSE}, [_{CORE} [_{NUCL} nani] [_{NUCL} **va-paho**]-e]].
 well eat.TR.3PL IN.OBL.3SG eat CAUS-empty-TR.3PL
 ‘Well, he ate them, ate and emptied them/ate them empty.’ (Davis 2003:161)

In Tawala, a causative-effective prefix increases the valency of a stative V_2 and expresses the result (or effectiveness) of the action expressed by the transitive V_1 :

- (63) Bada-na ipa i-na-houna **i-dumalu** me-ya ...
 man-DEF IRR 3SG-POT-put **EFF-be straight** REFL-CPY¹⁰
 ‘(So that) the man might make himself right.’ (Ezard 1997:129)

This prefix does not appear on a stative V_2 modifying an intransitive V_1 (64):

- (64) U-na-baha dumalu, tam palouma?
 2SG-POT-speak be straight 2SG witch
 ‘Tell us frankly, are you a witch?’ (Ezard 1997:125)

But it appears on a stative V_2 modifying a transitive V_1 such as ‘put, say’, again illustrating its valency increasing function on the modifying V_2 as in (64’) which literally means <place make correct sthg>:

- (64’) -houna **i-umalu-ya**
 put **EFF-be straight-3SG**
 ‘place (something) correctly’ (Ezard 1997:130)

See also the function of the “effective” prefix in depictive constructions (ex. (75)-(76)).

In Nêlêmwa, complex verbs with a causative prefix on V_2 (65) express a direct result, while complex clauses mark looser consecutive relations (as in some African languages, Lord 1975:28). Complex verbs are thus an intermediate stage among the highly integrated morphological expression of causation, semi-grammaticalized causative verbs, and multi-clausal constructions.

- (65) Hla khi **pa-maxa-e**.
 3PL hit FACT-be dead-3SG
 ‘They struck him dead.’ (Bril 2002:168)

In Fijian, the prefix *vaka-* also has causative and adverbial functions. It is causative

¹⁰ CPY marks the object enclitic of a condition verb with the same referent as the subject prefix.

in (66) and expresses the result and not the manner of V_1 ; it has adverbial function in (67)-(68):

- (66) E a: vosa-**k**-a **vaka**-mađala-**tak**-a.
 3SG PAST talk-**TR**-3SG CAUS-clear-**TR**-3SG
 ‘(S)he explained it.’ (LIT. talked about it made it clear) (Schütz 1985:248)
- (67) E ka-y-a **vaka**-ma:lua yani.
 3SG say-**TR**-3SG MANNER-slow DIR
 ‘(S)he said slowly.’ (Schütz 1985:408)
- (68) Bau ‘ada **va’a**-totolo noo.
 MOD run MANNER-quick ASP
 ‘Try and run quicker (to win).’ (Dixon 1988:80)

In Samoan (69), the construction is ambiguous, *lamu fa’a-malū* may be purposive ‘chew to soften’ or resultative ‘he chewed it soft’. As in (52), the TAM value of the clause is one disambiguating factor; the injunctive mood in (70) selects the purposive reading.

Samoan

- (69) ...[_{CLAUSE} [_{CORE} e fa’a-aogā] [_{CORE} e [_{NUCL} lamu] [_{NUCL} **fa’a**-malū] ai mea ‘ai]].
 TAM CAUS-used TAM chew CAUS-soft ANAPH thing eat
 ‘[molars are broad and big teeth which] are used to chew the food soft.’ (Mosel 2004:276)
- (70) Tipi **fa’a**-pa’ū le lā’au.
 cut CAUS-fall ART tree
 ‘Cut the tree down.’ (Mosel 2004:277)

4.4 Depictive and other adverbial complex verbs

Adverbial and depictive constructions are both modifying: the former modifies a predicate, while the latter modifies an argument of the main predicate. Are these two types formally distinguished?

4.4.1 Depictive constructions

Apart from East Uvean (Wallis), which sometimes distinguishes the depictive function, most of the languages under study (Teop, Samoan, Mwotlap, Tawala, etc.) do not.

In East Uvean, the depictive function of V_2 is signalled only on some thirty verbs and only in the plural, where it is then marked by partial reduplication indicating number agreement with the plural subject of V_1 as on *māsisiva* (71); compare with the adverbial function of *māsisiva* (71’). In all other cases, the depictive and adverbial

functions are not distinguished.

- (71) 'E natou nonofo **māsisiva**.
 NSPEC 3PL PL.RED.stay PL.RED.be poor
 'They live poor.' (LIT. live being poor) (Moyse-Faurie 2004:209)
 (71') 'E natou nonofo **māsiva** 'they live poorly'.

Most other languages do not make any distinction. In Teop, the adverbial (72) and depictive (73) constructions are both marked by the prefix *va-* and categorized as subtypes of modification:

- (72) [_{CLAUSE} [_{CORE} E amoba na [_{NUCL} **hio**] [_{NUCL} **va-tamaka**] nana]].
 ART widow REAL sit **ADV**-be sad IMPF.3SG
 'The widow is sitting sadly.' (Mosel and Spriggs 1999, in Reinig 2004:100)
 (73) A kaveo kuri-n-e bubuu na **hoa va-bebeahu** kurusu.
 ART nail hand-POSS-ART granny REAL grow **ADV**-be long very
 'The fingernails of granny grew very long.' (Reinig 2004:100)

But the prefix *va-* in Teop does distinguish hierarchized predicates *hio va-tamaka* 'be sitting sadly', from co-ranking predicates *hio tamaka* 'be sitting and crying'.

In Mwotlap, depictive and adverbial constructions are not formally distinguished either.

- (74) [_{CLAUSE} [_{CORE} Imam [_{NUCL} ma-hag] [_{MOD.NUCL} qaqa] ēwē] [_{PERIPH} l-ēm]].
 Dad PFT-sit stupid just in-house
 'Dad is staying idly at home.' (François 2004:110)

In Tawala (Ezard 1997:125-128), the nuclear juncture has either sequential or modifying functions (see Table 3). Depictive complex predicates headed by evaluative (75) and declarative (76) verbs such as 'regard/consider' or 'proclaim' behave like other types of modifying predicates. Compare the depictive type in which the stative *V*₂ qualifies the patient of *V*₁ (ex. (75)-(76)) with the adverbial type in (64') repeated below, in which it modifies the verb.

- (75) Ta-gale-na i-dumalu-ya.
 1PL.INCL-see-LIG **EFF**-be straight-3SG
 'We regard him as a good bloke.' (Ezard 1997:130)
 (76) -bahena i-dumalu-ya
 proclaim **EFF**-be straight-3SG
 'proclaim sthg correct' (Ezard 1997:130)

- (64') -houna i-dumalu-ya
 put EFF-be straight-3SG
 'place (something) correctly' (Ezard 1997:130)

In all three cases, the V₁ controls the transitive concord on the modifying V₂, which is marked by the causative-effective prefix (LIT. consider (or) proclaim make out something as correct). See the intransitive constructions in (64) above, where the effective prefix does not appear on the intransitive complex *baha dumalu* 'speak straight'.

The causative-effective prefix also appears after a declarative classificatory prefix such as *kawa-* 'proclaim' (ex. (77)-(77')) to increase valency:

- (77) Hi-kawa-moina.
 3PL-CLP-be true
 'They declared (it) true.' (Ezard 1997:269)
 (77') Hi-kawa-i-moin'-e-ya.
 3PL-CLP-EFF-be true-TR-3SG
 'They established it as true.' (Ezard 1997:269)

In Samoan, depictive and adverbial constructions are also formally similar. The secondary predicate modifies the argument of the main predicate in depictive (78) or the main predicate itself (78'). Other depictive examples are *lele tauaso* (LIT. fly be blind) 'fly blind'; *tupu maualuga* (LIT. grow be high) 'grow high' and other adverbial cases are *susulu lelei* 'shine nicely' (Mosel 2004:278-282).

- (78) 'Ole'ā 'ai ola 'oe.
 TAM eat live 2SG
 'You are going to be eaten alive.' (Moyle 1981:52, in Mosel 2004:281)
 (78') moe 'umi 'sleep long' (sleep be long) (Mosel 2004:278).

4.4.2 Similitive modification

In Paamese, similitive constructions behave like other adverbial constructions, using the core 'ambient'¹¹ juncture, either with a copula V₂ (79) or with a non-fully autonomous verb *suvali* 'resemble' (ex. (80), (81)).

¹¹ See footnote 6.

Paamese

- (79) Kail aselūs vē unaun.
 kaile a-seluusi vee unaune
3PL 3PL.REAL-speak 3SG.REAL-COP crazy person
 ‘They are speaking crazy.’ (Crowley 1987:54)
- (80) Kūmoni hesuvalinau.
 ki-umoni-e he-suvali-nau
2SG.DIST-do-3SG 3SG.DIST-resemble-1SG
 ‘Do it like me.’ (Crowley 1987:50)
- (81) Kaik koselūs suval ēhon kail.
 kaiko ko-seluusi suvali eehono kaile
2SG 2SG.REAL-speak 3SG.REAL-resemble child PL
 ‘You speak like a child.’ (Crowley 1987:54)

In Samoan (82), similitive constructions also behave as a subtype of modifying construction:

- (82) ...e māfaufau fa’a-tamaitiiti le tagata matua.
 TAM think SIM-child ART person adult
 ‘... the adult person thinks like a child.’ (Mosel 2004:280)

4.4.3 Quantifying modification

Quantifying predicates generally apply adverbially or depictively; but quantifiers behave differently from numeral predicates.

In Paamese, numeral predicates appear in the core ‘ambient’ juncture with adverbial (83) or depictive function (84) if the scope is only on the patient of V₁.

- (83) Nu:moni heha:rel.
 [CLAUSe [CORE ni-umoni-e] [MOD.CORE he-haa-relu]].
 1SG.DIST.FUT-do-3SG **3SG.DIST.FUT-MULT-three**
 ‘I’ll do it three times.’ (Crowley 2002:81)
- (84) Kai hesa:ni helu.
 kaie he-saani-e he-lue
 3SG 3SG.DIST.FUT-give-3SG **3SG.DIST.FUT-two**
 ‘He will give two of them.’ (LIT. he’ll give it it’s two) (Crowley 2002:80)

Quantifiers appear in the nuclear juncture (ex. (85) through (87)) and show transitive concord with a transitive V₁; their adverbial or depictive function is somewhat fuzzy, and their scope is as much on the main nucleus as on one of its arguments, selected in accordance with the basic orientation of the first nucleus (towards the agent or the patient).

- (85) *Namun maun oai.*
 [CLAUSE [CORE [NUCL *na-muni*] [MOD.NUCL *mau-ni*] *oai*]].
 1SG.REAL-drink be whole.**TR** water
 ‘I drank the water by myself.’ (LIT. drink whole the water) (Crowley 2002:117)
- (86) *Ina nelah pilun pūk onak.*
 [CLAUSE *inau* [CORE [NUCL *na-lahi*] [MOD.NUCL *pilu-ni*] *puuke ona-ku*]].
 1SG 1SG.REAL-carry stick together-**TR** book POSS-1SG
 ‘I carried my books together (i.e. in one hand).’ (Crowley 1987:63)
- (87) *Nian kesen auhus.*
ni-ani kese-ni auhu-se.
 1SG.DIST.FUT-eat only.**TR** yam-only
 ‘I will only eat the yam.’ (Crowley 2002:119)

In Hoava, quantifiers and numerals alike appear in the nuclear juncture with a causative derivation, like stative verbs acting as modifiers, see (ex. (15)).

- (88) [CLAUSE [CORE [NUCL *La*] [NUCL *valusa*] [MOD.NUCL *va-soku*] *ga-da makasi*]].
 go fish CAUS-many ED.POSS-1PL.INCL bonito
 ‘Go and fish to make our bonito plentiful.’ (Davis 2003:162)
- (89) [CLAUSE [CORE [NUCL *Boka*] [NUCL *vagi*] [MOD.NUCL *va-soku*] [MOD.NUCL *va-karua*, *hike*]].
 able take CAUS-many CAUS-two three
 ‘(We) are able to take many, two, three.’ (Davis 2003:162)

But the stative verb *sua* ‘be first’ just shows transitive concord when used adverbially, like the adverb *paki* ‘first’ in (16):

- (90) [CLAUSE [CORE [NUCL *La*] [NUCL *ome*] [MOD.NUCL *suá*¹²] *sa gugusu*] [PERIPH *pa Tonima na*]].
 go see be first.**TR**.3SG ART.SG village PREP T. DEM
 ‘Go and see first the village at Tonima.’ (Davis 2003:169)

The adverb *eke* ‘alone’¹³ also shows transitive concord with *V*₁.

- (91) *Tavete eke-a qa sa pu nana isa.*
 make alone.**TR**-3SG REST 3SG REL POSS.3SG IN.OBL.3SG
 ‘(He) made alone that which was his.’ (Davis 2003:169)

In Samoan, the multiplicative form of numerals is marked by the causative prefix *fa’a-* (92), while quantifiers are simply postposed to the item under its scope, with

¹² Transitivity is marked by stress on the final vowel.

¹³ *eke* is derived from the numeral *keke* ‘one’ (< *ka-eke*); it is also used in numbers over ten *manege eke* ‘eleven’, *lima-navulu eke* ‘fifty-one’ (Davis 2003:67).

adverbial function when it is a predicate (ex. (93), (94)) or with depictive function when it is a noun (95):

- (92) 'Ua tagi **fa'a-lua** le tama'ita'i.
TAM cry CAUS-two ART lady
'The lady's crying a second time.' (LIT. cry make two) (Mosel 2004:283)
- (93) 'o lo'u fia¹⁴ pule **to'a-tasi** o mea a le 'āiga potopoto.
PRES my want control HUM-one POSS thing POSS ART family extended
'My wish to control alone the affairs of the extended family.' (Mosel 2004:288)
- (94) 'Ua folo **'ātoa** Fitilo'ilo'i.
TAM swallow whole Fitilo'ilo'i
'She swallowed Fitilo'ilo'i whole.' (Moyle 1981:116, in Mosel 2004:283)
- (95) ... lenei tagata **'ātoa** 'ua na foloina.
this person whole TAM 3SG swallow
'[going around with her stomach about to burst from] this entire person she had
swallowed.' (*ibid.*)

In Nêlêmwa, depictive constructions are infrequent, since nominal modification is mostly marked by relative clauses or other types of complex clauses. Yet a few such constructions appear with the restrictive predicate *hada* 'be alone, only', the distributive predicate *pexagiik* 'do separately, on one's own', the collective modifier *wuung* 'together' (lenified form of the verb *fuung* 'gather'). As with other types of modifying predicates, the V₂ shows transitive agreement with V₁ and only the basic orientation of the main verb towards the agent (96), or the patient (97), or semantics inferences, distinguish the depictive function from the adverbial function of the quantifier.

- (96) Hla **diya wuuge** fagau mwa eli.
3PL do together.TR body house this.ANAPH
'They built the wall of the house together.' (Bril 2002:193)
- (97) Hla **hnaxi wuuge** shâlaga malaaleny.
3PL tie together.TR crab these.DEICT
'They tied these crabs together.' (Bril 2004:180)

In (98), the transitivized quantifier *hade* may either be depictive with scope on the agent (he alone) or adverbial with scope on the verb (only eat).

¹⁴ *fia* 'want' is a modal particle.

- (98) I pwâ khuxi **hade** miit.
 3SG a little eat.TR only.TR meat
 ‘He ate the meat alone.’ or ‘He only ate the meat.’ (Bril 2002:65)

On the other hand, when *hada* is postposed to the patient (99) and beyond the control of the main verb, it does not show transitive concord and has scope either on the patient (the meat only), or has adverbial scope on the verb and its patient (only eat the meat):

- (99) I pwâ khuxi miit **hada**.
 3SG a little eat.TR meat only
 ‘He ate the meat only.’ or ‘He only ate the meat.’ (Bril 2002:66)

4.5 Complex predicates with time-limit function

In such constructions, the V_2 specifies the time-limit of the event expressed by V_1 . These highly compressed constructions may sometimes be rephrased as two-clause constructions.

- Mwotlap
 (100) Kōyō mō-bōw liwo kē.
 3DU PFT-bring up big 3SG
 ‘They brought him up (till he was) big.’ (François 2004:122)

- Tawala
 (101) Hi-eno malitom.
 3PL-sleep be daybreak
 ‘They sleep till daytime.’ (Ezard 1997:125)

In Nakanai, the autonomous verb *kara* ‘go as far as, reach’ specializes as a time or space boundary marker in complex predicates, with the meaning ‘until, as far as’.

- (102) Amiteu pou kara (te) la maulavi.
 1PL.EXCL sit go as far as PREP ART afternoon
 ‘We stayed until the afternoon.’ (Johnston 1980:190)

In Nêlêmwa, *uya* ‘arrive, reach’ has a similar function:

- (103) Co! me oome uya-ve ni yeewa-t hleny.
 well! and come here reach-DIR in time this.DEICT
 ‘Well! and (time) has passed until now.’ (Bril 2002:439)

In Numbami and Loniū, these constructions appear in the hierarchized core ‘ambient’ juncture:

Numbami

- (104) [_{CLAUSE} [_{CORE} Ja-mu] [_{CORE} ja-mêng malac] [_{CORE} ê-ndêng ocsalô]].
 1SG.IRR-return 1SG.IRR-come village 3SG.IRR-reach forenoon
 ‘I will come back to the village before noon.’ (Bradshaw 1993:156)

Loniū

- (105) [_{CLAUSE} [_{CORE} ɲanɛ suʔu ito tuwani] [_{CORE} ilɛ mɛʔisan]].
 mother 3DU 3SG.STAT cook 3SG.go done
 ‘Their mother would cook until it was done.’ (Hamel 1994:130)
 (106) Iy i-tɛʔɛɲani i-wɛnɛy aŋ malimɛh.
 3SG 3SG-wait 3SG-be sufficient day five
 ‘(S)he waited until the fifth day.’ (Hamel 1994:169)

In Pileni, time-limit and degree are also marked by core-layer juncture:

- (107) [_{CLAUSE} [_{CORE} Lha-ko khaikhai] [_{CORE} ko lāvoi]].
 3DU-TAM RED.eat TAM be good
 ‘They ate until they were full.’ (LIT. they ate, it was good) (Næss 2004:240)

5. Discussion

As shown in Table 3, the functions most commonly compressed as complex predicates are modification, sequential, action-goal events, and to a lesser degree cause-result. They are sometimes marked by one single, highly polyfunctional syntactic template (with core or nuclear juncture), and their reading is contextual and inferential, often based on the semantic type of verb: (i) stative, posture, motion, or direction V_2s tend to have modifying functions; (ii) activity V_2s tend to be modifying when they refer to coincident actions, but co-ranking when they refer to sequential or purposive actions; (iii) motion V_2s may appear with both functions since they are also activity verbs. It has also been pointed out (i) that the purposive meaning is often expressed by a sequence involving a V_1 of motion and a V_2 of activity (otherwise a two-clause construction is used) and (ii) that the resultative meaning involves a V_1 of activity and a V_2 expressing an accomplishment or a change of state.

5.1 Factors favoring complex predicates

These factors are just statistical tendencies found in the Oceanic languages under study.

- Co-ranking verbs with same-subjects, especially those referring to sequential actions, are prone to compression and adjacency through gapping and ellipsis of shared arguments, for reasons of discourse economy and topic continuity. But there are exceptions: Mwotlap, Samoan, or Tahitian for instance require complex clauses.
- Relations of entailment and semantic proximity in sequential, consecutive, and action-goal complex predicates also favor formal compression (Nêlêmwa).
- Modification also favors structural compression and adjacency within the head-modifier template. The modifying function of a predicate often correlates with a reduced class of adverbs (Nêlêmwa, Mwotlap), no adverbs (Pileni) or derived adverbs (Tigak, Nalik, Teop, Hoava, Fiji, Samoan).
- Complex predicates often have case-marking and valency-expanding functions, especially for participants lower down on the semantic hierarchy (*give* > beneficiary, *take* > comitative, *follow*, *measure* > according to, etc.).

5.2 Syntactic constraints on complex predicates

The limits imposed on complex predicates vary cross-linguistically, yet there are a few robust features with some general validity:

- Different TAM markers generally trigger multiclausal constructions (Crowley 2002, Bril & Ozanne-Rivierre 2004), but there are exceptions; in Loniū, for instance, resultative constructions may show different mood-marking.

Loniū (Manu Islands)

(108) Yo u-nəh ya i-kiteʔi amat ka-mat.
 1SG 1SG.REAL-afraid FUT 3SG.REAL-hit man IRR.NS-die
 ‘I am afraid that it will kill the men.’ (Hamel 1993:117)

- Argument structure restricts compression: the same-subject constraint is rather weak as subjects may be similar or different (ex. (32), (35)), even in the nuclear type (ex. (43)), but the constraints are often stronger on objects in the nuclear juncture (less so in the core juncture), since only one object is allowed for the whole complex. When they are different, one of them is left unmentioned if already referential, otherwise a two-clause construction is required (Mwotlap, Nêlêmwa).
- Semantic distance or contradictory notions finally restrict compression, triggering the need for core or clausal junctures and conjunctive markers. Although Talmy (2000) reports that Mandarin may have serial constructions expressing “antifulfillment” (109) when the context allows; such constructions are very restricted and require a clear context, the expected and default relation being one of logical consequence

between the two events.¹⁵

Mandarin

(109) Wǒ bǎ chèn-yī xǐ zāng le.

1SG OBJ shirt wash dirty PFT

‘I washed the shirt (in the river), but it came out dirtier.’ (Talmy 2000, Vol. 2, 276)

5.3 Tightness of linkage: from complex clauses to complex predicates

Languages display various degrees of compression on the cline towards more syndesis or more desententialization (Lehmann 1988:210-213, Croft 2001:352-353).

Foley & Van Valin (1984: ch. 6) have suggested the following correlation between tightness of linkage and semantic integration, schematised under Cline 1, ordered from tight to weak linkage (in bold italics are the types found in the Oceanic languages surveyed).

Cline 1

TIGHT linkage (single event) to **WEAK** linkage (distinct events)
causative > *aspectual* > psych action > *purposive* > jussive > perception >
 propositional attitude (love, hate) > cognition > indirect discourse > *temporal*
adverbial > conditionals > *simultaneous actions* > *sequential actions*
 (+/-overlapping) > *action-action* (unspecified)

Cline 2 is the one I propose for this sample of Oceanic languages: modification has been added to the tightest point of the cline at the left-end.

Cline 2: tightness of linkage in Oceanic languages

TIGHT linkage to **WEAK** linkage
modification (manner, direction) or *adverbial* (time, location) > *causative* >
Aktionsart > *purposive* > *overlapping actions* > *sequential actions* > *cause-result*
 > *modality*

In terms of frequency, apart from adverbial modification (*manner, direction*) and circumstances (*location, time*), the most common functions and semantics of complex predicates in Oceanic languages are *sequential* and *coincident actions*, *purpose*, *cause-result*, *time-limit*, *Aktionsart* and to a lesser degree *modality*.

¹⁵ This was brought to my attention by Toshio Ohori. Thanks to Chang Jung-hsing and the audience of Academia Sinica for comments on these constructions.

5.4 Tightening linkage: from core to nuclear juncture

The pathways towards tight linkage and clause fusion go from syndetic to asyndetic coordination, then from co-ranking core juncture [sV(o) sV(o)] to co-ranking nuclear juncture [sVV(o)], through gapping, ellipsis, and argument fusion. Tightness of linkage varies with semantic or pragmatic integration.

In Pileni and Teop where subject gapping is common and with few available morphosyntactic or prosodic tests, it is often difficult to distinguish core-serialization from asyndetic coordination or subordination.

In Nêlêmwa, only same-subject sequential and purposive actions are prone to tightened linkage from clausal to nuclear juncture, from conjoined clauses *hla thege me hla oga hî pwiak* ‘they run and they leave this fishing-net’ to conjoined nuclei, *hla thege me oga hî pwiak* ‘they run and leave this fishing-net’, and on to complex predicates *hla thege oga hî pwiak* ‘they run leaving this fishing-net’ expressing immediate sequence~consequence or coincidence, whereas conjoined clauses refer to different events with some time gap between them, possibly expressing purpose. As in a variety of languages, complex predicates and two-clause constructions have different meanings (see Foley & Olson 1985:19-22).

SOV Saliba shows some undergoing compression from core to nuclear juncture by moving the nominal object (O) out of its core to make it the argument of the whole complex [O sV sV] as in (110), although this cannot be ascribed to topicalization. A further step towards adjacency would be reached by gapping the subject pronoun of V₂ in (111), yielding a nuclear juncture [O sVV]. Other cases of compression from core to nuclear juncture are shown in (44), (45).

- (110) [_{CLAUSE} [_{CORE} Ya dobi] [_{CORE} Sioni ya kita-ø]].
 1SG go down Sioni 1SG see-3SG.O
 ‘I go down and see Sioni.’ (Margetts 2004:75) [sV OsV]
- (111) [_{CLAUSE} [_{CORE} Sioni ya lao] [_{CORE} ya kita-ø]].
 Sioni 1SG go 1SG see-3SG.O
 ‘I go down and see Sioni.’ (Margetts 2004:77) [O sVsV]

Various such stages may coexist synchronically with different functions and meanings (Saliba, Pileni, Paamese, Lewo). In the process of compression from core to nuclear juncture, the V₂s often lose their autonomy and gradually become co-lexicalized compounds or grammaticalize as in Paamese. Lewo (Early 1993) has reached the point where most V₂s now tend to behave as deverbal adjuncts.

Compression also occurs at word level, resulting in compounding, and then in grammaticalized or morphologized entities (Lehmann 1988). The general tendency is for

co-ranking adjacent nuclei to develop into co-lexicalized compounds, adpositions and case-markers, affixes or conjunctive markers, while hierarchized nuclei tend to grammaticalize into adjuncts or adverbs. In Southern New Caledonian languages, former complex predicates have thus been eroded into compounds, adpositions, or affixes, while newer serial verbs have been reformed (Bril 2004, Ozanne-Rivierre & Rivierre 2004).

Another tendency is to incorporate non-verbal items into the head-modifier template at nuclear juncture, triggering possible transitive concord on items which are not initially verbs or deverbal modifiers, as with the nominal modifier *right* or *left* (112), or the intensifying noun *saaso* ‘self’ (113) in Paamese.

Paamese

- (112) Nagur matu:n a.i.
 na-guri matu:-**ni** aai
 1SG.REAL-take right-**Tr** stick
 ‘I took the stick in my right hand.’ (Crowley 2002:116)
- (113) Na-gilel sa:sokuni.
 na-gilela saaso-ku-**ni**-e
 1SG.REAL-know self-1SG-**Tr**-3SG
 ‘I realized it by myself.’ (Crowley 2002:117)

6. Conclusion

Complex predicates have been shown to be polyfunctional syntactic templates whose functions and meanings are possibly disambiguated by morphological features, by argument structure, by verb classes and verbal semantics, by illocutionary mood at clause level or by contextual inferences (§5).

Coexistent patterns of complex predicates with a similar function often show different degrees of conventionalization and slightly different meanings; they are also the synchronic manifestation of various stages of an ongoing process of compression and morphological attrition. This often applies cross-linguistically and accounts for their striking similarity of functions and meanings.

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大洋語複雜述語的聯繫關係與接合單位的種類：功能與語意

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先前有關大洋語的研究中，「大核心連動現象」一直受到廣泛的注意，而「小核心連動現象」則被分析為是共詞彙化、複合或是虛化的動介詞。本研究分析指出這種小核心句型模板的內容是一種真正的複雜述語。本文將探討這些述語的句法類型（共並或修飾），區別成分、功能及語意。本文也將討論這些述語的類別、論元結構及排序的原則。

此外，本文也將簡述這些述語所遵循的一種演化和結構壓縮的過程，及偏好或限制使用這種複雜述語的因素。

關鍵詞：複雜述語，連續動詞，虛化，詞彙化