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## Coordination, information hierarchy and subordination in some Austronesian languages

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### 1 Introduction

This paper analyses some processes leading from coordination and informational hierarchy to subordination in various Austronesian languages, mostly belonging to the Oceanic subgroup, and in one Papuan language of the Solomon Islands (Bilua). Some of these languages (like Manam) tend to avoid complex types of subordination and preferentially mark clause complexification through coordination. Sequentially coordinate clauses (marked by ‘and then’ connectors or coordinators) are preferred to adverbial time clauses; contrastive coordinators ‘but’ are preferred to concessive subordinate clauses. The basic temporal or logical asymmetry of sequential connectors/coordinators is thus the preferred strategy for temporal, cause-effect relation (and then/so), condition (if  $x \rightarrow$  then  $y$ ) (as in ‘you move and I slap you’), and purposive relation (as in ‘go and see her’). Other languages (Western Oceanic languages, or Eastern Oceanic languages such as Nêlêmwa (New Caledonia)) display more complex subordinating strategies, marked by subordinators, adpositions, non-finite verb forms (nominalised or reduplicated), and sometimes clause-chaining as in Takia.

Another type of subordinating strategy, based on informational hierarchy with topic or focus morphemes is often used to encode adverbial clauses, some types of relative and complement clauses; this strategy will be the main focus of this paper.

The picture complexifies slightly in some of these languages, as some morphemes may cumulate all three functions, as coordinator, informational hierarchy marker and subordinator (in Manam, Takia, Tawala, Bilua, Nêlêmwa for instance), with context-dependent functions and semantics.

This paper will document these facts before going into the detailed analysis and discussion of the processes leading from informational hierarchy to syntactic hierarchy and subordination. The origin and direction of change of these morphemes will be addressed, especially with respect to the morphemes displaying a three-tiered functional load as connectors, topic or focus markers and subordinators. What semantic, discourse and syntactic processes link these functions, what kind of reanalysis is involved? Results show (i) that demonstratives or definite markers are

often reanalysed as informational hierarchy markers and subordinators (as in Sobei or Kaulong), and (ii) that clause-linkers with three-tiered functions mostly originate from sequential ‘and then’, additive coordinators (‘and/plus’), or from contrastive coordinators ‘but’.

Section two will document the clause-linking functions of topic or focus markers. Section three will detail the reanalysis involving coordinators and informational hierarchy markers as subordinators. Section four will outline some hypotheses on the logical relations and evolution underlying such reanalysis.

## 2 The clause-linking functions of topic or focus markers

Table 1 gives an overview of the clause-linking functions of topic markers in a sample of mostly Western Oceanic languages. Their functions go beyond condition and adverbial time clauses and extend to relative clauses, less frequently to complement clauses of verbs of perception, cognition, volition, command. They also appear in categorical clauses such as ‘this man is a liar’, which are often expressed as theme-rheme constructions (this man TPC liar).

*Table 1: Functions of topic markers in clause-linking of Oceanic<sup>1</sup> languages*

	categorical clause	relative clauses	time clauses	condition clauses	complement clauses
'ALA'ALA <i>'eva</i>	+	+	+		
GAPAPAIWA <i>na</i>	+	+	+		+
SOBEI <i>mau</i>	+	+	+		
KAULONG <i>men</i>	+	+	+	+	
TAKIA <i>man</i>			+	+	
NÊLÊMWA <i>xe</i> (§3.3)	+	+	+	+	+
	(if argument is topicalised)	(rel. clauses providing new info.)	(if topicalised)	(if topicalised)	

A few sample cases of such clause-linking functions are illustrated below.

### 2.1 Time clauses

Time clauses are often expressed as topic clauses without any temporal conjunctive marker, the meaning is thus contextual as in (1a). Subordination and clause-hierarchy is thus achieved by topic-comment hierarchy. This is common in Papuan languages (Reesink 1994) and in Oceanic languages (Ross 2002: 360).

In 'Ala'Ala (1a), the topic clause delimits a time frame equivalent to a ‘when’ clause, which is different from a complement clause. Complement clauses are juxtaposed

and marked by a reduplicated verb and some modal dependency markers, thus ruling out the interpretation of (1a) as a complement clause. There are other types of subordinating strategies, marked by adpositions, such as the general, locative postposition *-(a)i* in (1b) which expresses coincident actions:

(1) 'ALA'ALA (SOV, W. Oceanic, Papuan Tip Cluster)

a. *Melo a-'ou-ia 'eva e-mia-divo.*

boy 1SG-tell-3sg TPC 3SG-sit-DIR

'When I told the boy, he sat down.' (lit. I told the boy (TPC), he sat down)

(Ross 2002: 360)

b. [*Mia-na-i*] *ko'o e-ani-a.*

stay-POSS.3SG-POSTP banana 3SG-eat-3SG

'(as he was) Sitting, he ate a banana.' (lit. at his sitting, he ate a banana)

(Ross 2002: 360)

Conditional clauses are marked by a specific conjunction or are juxtaposed.

In Kaulong (2-3), *men* (originally a demonstrative) functions as a clause delimiter and frames adverbial clauses of time or condition. *Men* indicates a switch of topic and of identifiable referent, the boundary of a fronted constituent or a fronted adverbial phrase.

(2) KAULONG (SVO, W. Oceanic, New Britain)

[*Po me lut mata yu men*] *ku lek-val akomen.*

3PL come dance eye pig TPC IRR fight-REC NEG.ABIL

'(When) they come (and) dance, they cannot fight with each other.'

(Ross 2002: 409)

## 2.2 Conditional clauses

In (3), *men* frames the condition clause marked as a counterfactual condition by *taku*.

(3) KAULONG (SVO, W. Oceanic, New Britain)

[*Taku it li men*] *kuli po ku li.*

CFCT 1PL.INCL go TPC FUT 3PL IRR go

'Had we gone (TPC), they would have gone.' (Ross 2002: 409)

## 2.3 Realis complementation (verbs of perception, cognition or command)

In some languages, the functions of the topic marker extend to complement clauses headed by verbs of perception, cognition or command, as in Gapapaiwa (4); again syntactic hierarchy is marked as informational hierarchy. In Sobei (5), the relation between the frame and comment clauses is semantically adversative and contrastive.

## (4) GAPAPAIWA (SOV, Oceanic, Papuan Tip cluster)

*[I-na                maduwa    i-vo-vo-koi-koi                                        na]*

POSS.AL-3SG mother 3NON.PRES-RED-DER<sup>2</sup>-RED-weed TPC

*[i-kita-i-Ø].*

3NON.PRES-see-TR-3SG<sup>3</sup>

‘He saw his mother weeding.’ or: ‘He saw his mother who was weeding.’

(lit. his mother was weeding (TPC) he saw her/it)

(McGuckin, in Lynch et al. 2002: 306)

## (5) SOBEI (SVO, Oceanic, Irian Jaya)

*Map    e-ski-i=mau<sup>4</sup>                                        ri-orpar.*

then 3SG-command-3PL=TPC 3PL-BE.unwilling

‘Then they were unwilling to do what she had ordered them to.’

(lit. then she commanded them (TPC), they were unwilling)

(Sterner & Ross, in Lynch et al. 2002: 185)

A frequent origin of topic morphemes are demonstratives (like *man* in Takia, *men* in Kaulong). The focus will now be on languages in which the topic or focus markers originate from coordinators or sequential connectors and on the process leading to such a reanalysis.

### 3 From coordinators to topic hierarchy and subordination

The most common connectors or coordinators with topic or focus functions are sequential ‘and then’, additive ‘and also/too’, contrastive-exclusive ‘but’ (as in ‘everyone but her’), inclusive ‘even’ and disjunctive-exclusive ‘or’.<sup>5</sup> The development of adverbial connectors into conjunctive markers is well-known (Mithun 1988, König 1991).<sup>6</sup> The use of connectors or coordinators as informational hierarchy markers and subordinators is quite frequent in Austronesian languages. It is attested in Formosan languages, or in Malagasy where the connector *dia* ‘and then’ is a sequential coordinator (6a), a topic marker (6b) and a correlative morpheme linking clauses with some implicative (if → then) or sequential relation (6c) (Fugier in press).

## (6) MALAGASY

a. *Nitsangatsangana aho                dia hitako                ny bokibo very.*

PAST.AT.RED.walk 1SG.NOM DIA found.1SG DET book.1SG lost

‘I was walking in the woods, and then I found my lost book.’

(Pearson, to appear)

- b. *I Bakoly dia tsy nanapaka bozaka omaly.*  
 DET B. DIA NEG PAST.AT.cut grass yesterday  
 ‘As for Bakoly, she didn’t cut the grass yesterday.’ (Pearson, to appear)
- c. *Raha nandeha izahay dia nahita vorona.*  
 when PAST.AT.walk 1EXCL.NOM DIA PAST.AT.see bird  
 ‘While we were walking, we saw some birds.’ (Pearson, to appear)

Focus constructions, on the other hand, comprise a focus phrase (6d) or a focus clause (6e-f) that occurs at the left edge of the sentence, and an embedded phrase or clause headed by the morpheme *no* (labelled ‘focus particle’ by Pearson) which acts as a subordinator (Pearson, to appear; Law 2005, 2007). In (6e-f), the *no*-headed clause refers to the presupposed event whose circumstances are predicated and specified by the first clause, the focal clause, which specifies or restricts the truth value of the other event (Krifka 2007). As can be seen in (6e-f), there is no temporal conjunctive marker in the focal clause, the semantics is inferred contextually.

- (6) d. *[Oviana [no tapaka ny pensilihazo]]?*  
 when? NO broken DET pencil  
 ‘When did the pencil break?’ (Pearson, to appear)
- e. *[Nanoratra ilay taratasy Rabe [no tapaka ny pensilihazo]].*  
 PAST.AT.RED.write that letter R. NO broken DET pencil  
 ‘It was while Rabe was writing the letter that the pencil broke.’ or:  
 ‘Rabe was writing the letter when the pencil broke.’ (Pearson, to appear)
- f. *[Tsy natory aho [no lasa Rakoto]].*  
 NEG PAST.AT.sleep 1SG.NOM NO left R.  
 ‘It wasn’t while I was sleeping that Rakoto left.’ or:  
 ‘I wasn’t sleeping when Rakoto left.’ (Pearson, to appear)

Example (6g) shows the co-occurrence of the topic marker *dia* and the focus morpheme *no*:

- (6) g. *Ity radara ity dia ny Rosiana no nanao azy.*  
 this radar this DIA DET Russian NO did.ACT 3SG  
 ‘As for this radar, it was the Russians who built it.’ (Law 2007: 767)

### 3.1 Bilua (Papuan, Solomon Islands)

Bilua, a Papuan language, has six different coordinators; four of them are of special interest as they have either focusing functions (like the sequential connector (*i*)*nio* ‘and then’), or topic marking function (like the sequential conjunctions *ti* and *ta* ‘and then, and consequently’, and the contrastive-adversative *melai* ‘but’).<sup>7</sup>

### 3.1.1 Sequential coordinator and focus marker (*i*)*nio* ‘and then’

The connector (*i*)*nio* ‘and then’ conjoins sentences or clauses sequentially (7a); it is also a restrictive or contrastive focus marker at constituent (7b) or clause level (7c).

(7) BILUA

- a. ...*nio nioqa saqe ta qo-kiada puli-a-ma nioqa-ko meqora.*  
 SEQ 3DU couple TPC 3DU-all NEG-LIG-3SG.FEM 3DU-3SG.FEM child  
 ‘...and the couple were by themselves, they had no child.’ (Obata 2003: 269)
- b. [...*lai nio*] *a-ba tare-k-ou?*  
 whereFOC 1sg-PRES wait-3SG.FEM.O-FUT  
 ‘Where shall I go and wait for her?’ (Obata 2003: 265)
- c. [*Puliako meqora sa-nga el-o inio*] *vo*  
 before child COMMIT-2SG become-NMZ FOC.NON.F 3SG.M  
*lasive-a-la ta o-ta vou-va, reko-a-ma ikio<sup>8</sup> sai.*  
 male-LIG-3SG.M TPC 3SG.M-SIT die-PRES female-LIG-3SG.F FOC.FEM there  
 ‘It was before they had a child that he, the husband died, the wife was [left] there.’ (lit. before they came to be with a child then...) (Obata 2003:269)

As an informative, restrictive focus marker, (*i*)*nio* focuses constituents, clauses and sentences. At clause level, in (7c), it marks information hierarchy by restricting the truth value of the main clause to the circumstances set by the time clause: ‘It was before they had a child’.

### 3.1.2 Coordinators and topic markers *ti* and *ta* ‘and then, and consequently’

The sequential connector (*i*)*nio* behaves as a restrictor, while the sequential coordinators *ti* and *ta* ‘and then, and consequently’ are topic, frame markers.

#### A. Coordinators

The main difference between *ti* and *ta* is modal: *ti* is used for realis events (8a), while *ta* expresses unexpected events (8b). When *ti* heads repeated items (VPs, NPs or PPs), it marks intensity or persistence (as in ‘he blew and blew’) (Obata 2003: 244).

(8) BILUA

- a. *Ko-ta surai-va ti ko-ta poda-k-a.*  
 3SG.MASC-SIT heal-PRES and.then 3SG.MASC.SIT come.out-3SG.FEM-PRES  
 ‘It healed and then it came off.’ (Obata 2003: 239)
- b. *Sainio o-lilit-a ta kala ziolo ...*  
 therefore 3SG.MASC-look.back-PRES and.then INDEF.SG.MASC devil

‘Therefore, he looked back and then [he found that] there was a devil...’  
(Obata 2003: 239)

### B. Topic marking functions of *ta* and *ti*

As a topic marker, *ta* (9) marks contrast or unexpectedness and appears at constituent, clause or sentence levels (Obata 2003: 239). *Ta* also marks existential and categorical predication expressed as a topic-comment structure (Obata 2003: 199-204).

(9) BILUA

*Erisanga ta enge ta nge ukaba irurupput-a.*  
today TPC 1PL.EXCL TPC 1PL.EXCL careless work-PRES  
‘Today, as for us, we work carelessly.’ (Obata 2003: 254)

The distribution of *ti* is more restricted, it only occurs at constituent level, and its reference is habitual or generic (Obata 2003: 256-257).

### C. *Ta* with perception and cognition verbs

*Ta* also marks complement clauses of perception or cognition verbs (‘see, think, know, understand, be suspicious’, etc.).

(10) BILUA

*A-qeru-kerut-a ta enge Vella La Vella udu kale-a-ma*  
1SG.RED-think-PRES CONJ 1PL.EXCL V.L.V. island in-LIG-3SG.FEM  
*maba poso-ngela ta tapata nge-da el-ou.*  
person PL-1PL.EXCL TPC hard 1PL.EXCL-SIT become-FUT  
‘I thought [that for] us the people of Vella La Vella island (TPC), [life] will become hard.’ (Obata 2003: 239-240)

### D. *Ta* and *ti* in predictive and realis condition clauses

In realis condition clauses, *ta* and *ti* mark some implicative relation between the frame clause (i.e. the protasis marked by an epistemic marker *esa* ‘maybe’) and the propositional content of the apodosis. Irrealis condition is marked by a different conjunctive marker *tea* ‘if’ (Obata 2003: 227).

(11) BILUA

a. *Esa nioro ko-ta ev-a sai ti anga-ko*  
maybe rain 3SG.FEM-SIT become-PRES there and.then 1SG-3SG.FE  
*car ta site.site.*  
car TPC RED.wet  
‘It may be raining there, and then my car is wet.’  
(lit. maybe it rains there and then my car will be wet) (Obata 2003: 242)



*Ta* also sets off the time frame from the main clause.

- (11) b. [*So keru [ke ilusi-v-e keru] [ni ke-lulue-v-e keru] ta*  
 that TEMP 3PL worship-3SG-RMP TEMP and 3PL-follow-3SG-RMP TEMP TPC  
*[ke-roveo-vi k-el-o ko ko-kati-m-e-ma quli]...*  
 3PL-can-RMP 3SG.O-see-NMZ 3SG 3SG-give-3PL-PRES-REL thing  
 ‘That time, when they worshipped him and when they followed him (TPC),  
 they could see the thing it gave them.’ (Obata 2003: 234)

According to Obata (2003: 241-243), *ti* and *ta* ‘and then, and so’ were originally topic markers which developed into coordinators. Many Oceanic languages show the reverse pattern, as will be shown below.

### 3.1.3 Adversative coordinator and topic marker *melai* ‘but’

The adversative/contrastive coordinator *melai* ‘but’ conjoins NPs, PPs or clauses (12a) and expresses some counter-expectation (Obata 2003: 236-238).

- (12) BILUA  
 a. ... *matu raisi-raisi ko-ta ev-a, melai nioqa-vo*  
 very RED-evening 3SG.F-SIT become-PRES CONTR 3DU-3SG.M  
*mama ta pui o-baro-a.*  
 father TPC NEG 3SG.M-arrive-PRES  
 ‘... (even though) it became late evening, yet their father didn’t arrive.’  
 (lit. it became late evening, but their father didn’t arrive) (Obata 2003: 237)

It also has topic or focus marking functions restricted to constituent level. In (12b), the two occurrences of *melai* mark parallel contrast, i.e. contrastive referents in otherwise similar or parallel events, which accounts for its translation by ‘too’, though it is not an additive, but a contrastive focus marker (Obata 2003: 258).

- (12) b. [*Kaka-ka-ma melai lula ko-ta lupao-la*  
 older-LIG-3SG.F CONTR already 3SG.F-SIT refuse-PRES  
*[sole visi-a-ma melai soinio ko-ta lupao-vou].*  
 that’s.why younger-LIG-3SG.F CONTR consequently 3SG.F-SIT refuse-FUT  
 ‘The elder daughter has already refused, so the younger daughter too will  
 refuse.’ (Obata 2003: 299)

## 3.2 Coordinators, focal and clause hierarchy markers: *ma* and *po* in Tawala

In Tawala (Oceanic), the coordinator *ma* ‘and, but’ expresses contrast and a change of subject, while *po* ‘and’ marks close relationship, coupling or consecutive relation. Both are also correlative connectors linking adverbial clauses of time (13a-b) or location (13c) to a main clause. Similarly, the French coordinator *et* ‘and’ has also a

correlative function in *qu'il paye et on verra* (lit. that he pay and one will see) 'let him pay and we'll see'.

(13) TAWALA (SOV, Oceanic, Milne Bay, PNG)

a. *Houga-na wam hi-gale-ya ma hi-kaoha labatana.*  
time-DEF boat 3PL-see-3SG and 3PL-happy strongly  
'When they saw the boat, they were extremely happy.'  
(lit. time they saw the boat and...) (Ezard 1997: 223)

b. *Houga-na to-gele-geleta po a-ga-gale-ya.*  
time-DEF 1PL.EXCL-RED-arrive and 1SG-RED-see-3SG  
'When we arrived, I saw it.' (Ezard 1997: 248)

c. *Meka ta-nae po ta-wiheliheliyam.*  
where 1PL.INCL-go and 1PL.INCL-make.friend  
'Wherever we go, we have friendship.' (Ezard 1997: 240)

The conjunction *ma* 'and, but' is also used as a contrastive and restrictive topic (14a) or focus marker (14b) at constituent level, like *melai* 'but' in Bilua (12).

(14) TAWALA

a. *Ma i am uyahi-na ma tau a-wihinimaya.*  
but our.EXCL meal at-3SG TPC 1SG 1SG-embarrass  
'But during our meal (TPC), I felt embarrassed.' (Ezard 1997: 250)

b. *Geka ma polo a-matut'-e-ya.*  
this/hereFOC pig 1SG-fear-TRV-3SG  
'It was here I was frightened by the pig.' (Ezard 1997: 250)

The conjunction *po* 'and' expressing close relationship and coupling, also has complementising functions:

(15) TAWALA

a. *Hi-wiwogatala po apo hi-na-bagibagi.*  
3PL-plan CONJ FUT 3PL-POT-work  
'They planned to work.' (Ezard 1997: 248)

The scope of negation on both clauses in (15b) shows that the clauses are not coordinate.

(15) b. *Ega [emoemota-u po a-wiyagohina].*  
NEG ability-1SG CONJ 1SG-rest  
'I'm not able to rest.' (Ezard 1997: 226)

c. *Nugote Yaubada i-baha po u-nei uyahi-u.*  
 perhaps God 3SG-say CONJ 2SG-come at-1SG

‘Perhaps God commanded you to come to me.’ (Ezard 1997: 222)

The subordinating function of *po* probably derives from its correlative function and implicative meaning. The evolution from a <VP-and> construction to subordination, as in English ‘try and do it’, or in ‘you need to start and think about this’, is not uncommon (see Hopper 2001, Heine & Kuteva, 2002: 43-44). The relation between coordinators, correlative markers, information hierarchy markers and subordinators is frequent enough cross-linguistically not to be a pure chance effect. There is also some cross-linguistic tendency for sequential ‘(and) then’ markers and clauses to evidence morpho-syntactic asymmetry and some mixed features with subordinate clauses (in clause-chaining, sequential converbial constructions, etc.), which other types of coordinate clauses do not evidence.

### 3.3 Coordination, topicalisation and subordination: *xe* in Nêlêmwa

In Nêlêmwa (Northern New Caledonia), *xe* clearly originates from a former sequential connector and coordinator *ke* ‘and (then)’,<sup>9</sup> as shown in (16), but it is now mostly used as a topic marker, and as a subordinator (in relative and complement clauses).

(16) NÊLÊMWA (VOA, Oceanic, New Caledonia)

*Hli u mago, waak. Xe hli u aa-tu khela*  
 3du PFT sleep morning CONJ 3du PFT ITER-go.down check  
*jela-li.*  
 fishing.holes-their.du

‘They sleep, it’s dawn. Then, they go down again to check their fishing-holes.’  
 (Bril fieldwork 1994)

#### 3.3.1 *Xe* as a topic marker: constituent, clause and sentence levels

As a topic marker, *xe* appears at constituent, clause or even sentence level. In (17a) the first three occurrences of *xe* mark constituent topicalisation, and the last one sets off the topic or frame clause (an argumentative protasis: *na oda-me* ‘(if) I have come here’) from the explicative apodosis (*xe puxet paara* ‘(it’s) because of her fame’). It also functions as a correlative marker between a time or condition frame clause and a main clause (if/when → then).

(17) NÊLÊMWA

a. *Hî xe fââlô xe fââlô-dame mwa na bwa dau na*  
 this TPC travel TPC travel-up.here ASS LOC on island LOC

*Uvea xe || na oda-me xe puxet paara.*  
 Ouvea TPC 1SG go.up-here TPC reason story  
 ‘As for this (TPC), this travel (TPC), this travel up here from the island of  
 Ouvea (TPC+pause), (if) I have come here (TPC), (it’s) because of her fame.’  
 (Bril fieldwork 1995)

The pause after *xe* is optional: topic reactivation does not require any pause, while a pause after *xe* marks some contrast or new predication. In sentence-initial position (17b), the sequential and correlative connecting function of *xe* is still apparent.

(17) b. *Xe i khabwe a kâama-n khabwe: “xe shuva?”*  
 CONJ 3SG say AGT father-POSS.3SG say CONJ be.how?  
 ‘So/and his father says: “So what’s it like?”’ (Bril fieldwork 1995)

Sequential and correlative conjunctions often give rise to topic marking functions; in French, for instance, *et* ‘and’ in initial position is topical or focal:

*Allons-y! — Et Paul?* translating as ‘Let’s go!’ — ‘What about Paul?’

In Bilua (12b), it has been shown that the repeated occurrence of the coordinator *melai* marks some parallel and contrastive focus. Again, in French, an iterated *et* (as in b. below) in exhaustive listing is focal too: the first *et* in *et toi et moi* has focal, inclusive and contrastive/exhaustive functions (rejecting any other alternative), and the two NPs are then stressed; while in the neutral coordination (in a.), the NPs *toi et moi* are unstressed.

a. *Nous partirons toi et moi.* vs. b. *Nous partirons [et toi et moi].*

This indicates that the informational hierarchy functions of these connectors are not just areal features, but might manifest more general functions of connectors and coordinators.

When used as a topic marker, there may be a pause after *xe*, whereas in its other clause-linking functions (in relative and complement clauses), no pause is involved.

### 3.3.2 Realis complementation with *xe* (perception or cognition verbs)

*Xe* in (18) functions as a complementiser for perception or cognition verbs with realis propositional content (as above in Gapapaiwa (4) or in Bilua (9)).

(18) NÊLÊMWA

*Na i tâlâ xe hla hoe.*  
 and 3SG hear CONJ 3PL call

‘And he hears that they are calling.’ (no pause) (Bril fieldwork 1994)

### 3.3.3 Relative clauses with *xe*

Relative clauses marked by *xe* (19a) define the NP by providing new information about it (Bril 2001, 2002); the construction certainly originates from formerly coordinate clauses adding some information about the NP. By contrast, relative clauses with a post-head deictic or anaphoric determiner (19b) refer to some already referential NP, and to backgrounded determination. They also tend to be syntactically more integrated.

(19) NÊLÊMWA

a. *Na tu thaamwa aa-xiik xe i yeenare vhaa nêlêmwa.*  
 1SG find woman CLASS-one CONJ 3SG learn.TR speak Nêlêmwa  
 (formerly: I met a woman, and she learns the Nêlêmwa language).

‘I met a woman who learns the Nêlêmwa language.’ (Bril 2002: 340)

b. *Na tu thaamwa bai i yeenare vhaa nêlêmwa.*  
 1SG find woman ANAPH 3sg learn.TR speak Nêlêmwa

‘I met the woman who learns the Nêlêmwa language.’ (Bril fieldwork 1995)

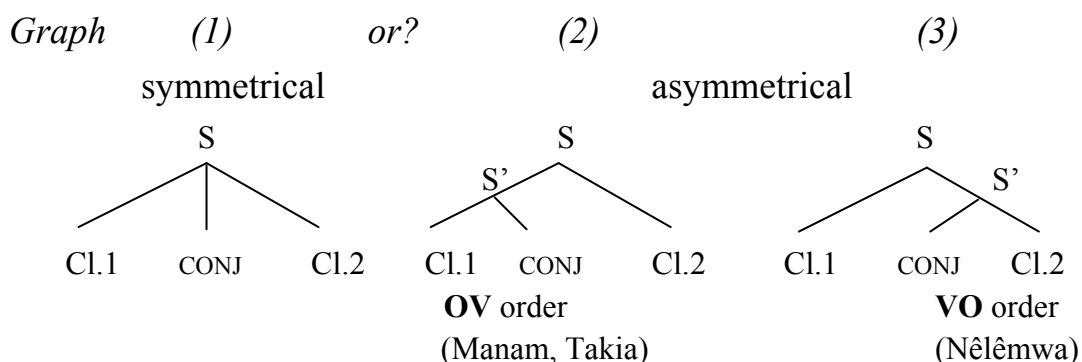
## 4 How are coordination, topic or focus markers and subordination related?

How do coordinators (mostly sequential, additive or contrastive) come to be reanalysed as informational hierarchy markers and subordinators? In many Oceanic languages, these coordinators or connectors are also adverbial or adnominal focal operators with additive ‘and also/too’, inclusive meaning ‘even’ or with contrastive meaning ‘but/yet’; contrastive connectors often have focus marking properties too (as in Tawala and Bilua). These focal markers are operators with scope: the constituent under their scope tends to have prosodic prominence and stress, as in ‘he too came’ or ‘he even talked to me’. Their scope may be narrow (on a constituent), or it may be wider, on a clause or a sentence, which then becomes focal. This will be illustrated by Manam and Takia below.

Some informational hierarchy is thus created between clauses, (i) either between a frame clause and a main clause in the case of topicalisation, or (ii) between a salient, asserted restrictor clause and another clause with presuppositional content in focus constructions. Apart from the distinctive morpho-syntactic and prosodic features of frame clauses and restrictor clauses, their other differences lie in the type of informational hierarchy involved: the topicalised frame clause is the anchor for the propositional content of the other clause, which contains the main information and assertion; by contrast, the focused restrictor clause contains the highly salient information and assertion, which restricts the truth value of the other clause and its propositional

content (Krifka 2007). When discourse and informational hierarchy (topic or focus) constructions and markers are thus summoned to structure clause hierarchy, they may operate on various syntactic types, marking off the hierarchy between a main clause and an adverbial clause (which specifies its circumstances), or between a verbal head and its complement clause (§2.3). Scope extension of these markers to clause level may further trigger their subsequent reanalysis and syntacticisation as subordinators.

Semantically and formally, sequential coordinators and sequential coordination are asymmetrical, often evidencing mixed features between coordination and subordination, which accounts for their reanalysis as complementisers with some verb types, or as relativisers (as shown in sections 1, 2 above). This asymmetry is supported by some syntactic approaches of coordination (Johannessen 1998) according to which it may not be universally defined as a symmetrical structure (as in Graph (1) below); some types of coordination are better defined and represented as asymmetrical structures in which the coordinator asymmetrically heads one of the conjuncts (as in Graphs (2) and (3) below), a model suggested by (and possibly accounting for) the many cross-linguistic cases of asymmetrical conjuncts.



Given some specific prosodic features (pause, focal prominence, change of intonative pattern), some change in scope, an asymmetrical conjunctive configuration (as in graphs (2) and (3)) may be reanalysed in terms of informational hierarchy (as in graphs (4) and (5)).



Incidentally, in graph (5), the two branches representing two possible positions of the focus marker,<sup>10</sup> do not exhaust possibilities, graph (7) in (§4.3) shows yet another

position of the focus marker in Manam,<sup>11</sup> and another possible ordering of the focus/restrictor clause and the other clause.

According to its initial category and semantic type, the conjunctive morpheme may then come to function as a frame delimiter, indicating topic-comment hierarchy (a function often, but not uniquely, devolved to sequential connectors), or it may function as a clause restrictor (a function essentially played by connectors with additive, inclusive or contrastive semantics) indicating the hierarchy between a focus/restrictor clause and another propositional content. The basic conjunctive and pragmatic asymmetry of these markers and structures may then be subject to some further reanalysis as subordinators and subordination (as *ma* or *po* in Tawala, and *xe* in Nêlêmwa). Such structural and syntactic changes are triggered by some combined modifications in the distribution, scope and syntactic domains of their markers, and by the neutralisation of the prosodic features linked to their pragmatic function when used or reanalysed as subordinators (as for *xe* in Nêlêmwa, §3.3).

This type of evolution is displayed by the coordinators *ma* and *po* in Tawala, *xe* (formerly *ke* in Nêlêmwa), or *-be* in Manam. These conjunctions are reflexes of various Proto-Oceanic conjunctions reconstructed as *\*mV*, *\*bV*, *\*kV* (Lynch et al. 2002), thus giving additional support to the claim that, in Oceanic languages, the path of evolution was from a coordinator or connecting adverb to a topic or focus marker and to a subordinator, rather than the reverse.

#### 4.1 From coordination to focal and clausal hierarchy:

##### Manam *-be* and Takia *-(a)k*

Let us turn to the case of *-be* in Manam and *-(a)k* in Takia, which have a similar array of functions as coordinators, focal markers and subordinators. Manam and Takia belong to the same North New Guinea cluster<sup>12</sup> of Oceanic languages spoken in the neighbourhood of Papuan languages. Yet, Takia displays more Papuan features, it has more complex subordinating strategies, using various cosubordination<sup>13</sup> markers and various other subordinating morphemes,<sup>14</sup> which do not occur in Manam, a more canonical Oceanic language. Manam's general conjunctive marker *-be* 'and' is also much more polyfunctional than *-(a)k* in Takia, which has fewer subordinating functions. Tables 2a/b summarise these functions: the focal function originates from their function as additive and sequential connector/coordinator '(and) also, (and) then'.

Table 2a: Functions & semantics of the enclitic coordinator/connector **-(a)k** (Takia)

<b>Additive</b> coord. 'and also' Listing ↓	Coord. & <b>inclusive</b> disjunction 'and, or'	<b>Implicative</b> '(if) → then'	<i>akot</i> <b>consecutive</b> 'and so'	<i>ak man</i> <b>contrastive</b> 'but'
Informative <b>focal</b> marker				

Table 2b: Functions & semantics of the enclitic coordinator/connector **-be** (Manam)

<b>Additive</b> coord. <b>coincident</b> action 'and also, plus' ↓	<b>Sequential</b> coord. 'and then' ↓	<b>Implicative</b> '(if) → then'	<b>Consecutive</b> 'and so'	<b>Purposive</b> 'and/to'	<b>Contrastive</b> 'but'
Informative <b>focal</b> marker					

## 4.2 The case of **-(a)k** in Takia (SOV, Oceanic, Papua New Guinea, Madang Province)

While the various cosubordinating conjunctions and clause-chaining constructions in Takia link “naturally” connected events, **-(a)k** links events whose relation is construed by the speaker; the semantic relation between the clauses mediated by **-(a)k**<sup>15</sup> is inferred and context-dependent (Ross 1993: 58-59). The conjunction **-(a)k** and its compounds (see below) are the only coordinators in Takia, and Ross notes that the functions of **-(a)k** cross-cut the coordination/subordination dichotomy.

### 4.2.1 Additive coordinator and focal operator

As a coordinator, **-(a)k** has additive, inclusive and implicative meanings; its compounds, *akot* ‘and so, and consequently’ (**-ak** + locative *ote* ‘yonder’) express consecution, and *ak man* ‘but’ (**-ak** + demonstrative and topic marker *man*) has adversative meaning (Ross 2002: 243).

#### 1. Coordinator ‘and’ and inclusive disjunction ‘or’

As a coordinator, **-(a)k** appears in listing with additive meaning ‘and also’. It also expresses inclusive disjunction (both x and/or y) as in (20) (Ross 1993: 59-60; Ross 2002: 241-247).

(20) TAKIA

- a. *Mao mi-sapal da-k fud mi-sapal da.*  
 taro 1PL.EXCL-mix IMPF-AK banana 1PL.EXCL-mix IMPF  
 ‘We mix taro and/or we mix bananas.’ (Ross 2002: 241)



Each clause except the last in the sequence is usually marked by *-(a)k*, unless some parallel focus is involved, in which case it is repeated as in (20b). Alternative clauses are expressed with *-(a)k*, and the negation *tia* in the second clause (20b) indicates exclusive disjunction ('either ... or'):

- (20) b. *Gabulo-p ij eteke i-palu wa-k boi | tia Madan*  
 tomorrow-IRR:D 3.FR here 3SG-come IRR-AK DUB NEG Madang  
*na y-au wa-k boi.*  
 LOC 3SG-go IRR-AK DUB

'Maybe he'll come here tomorrow and/or maybe he'll go to Madang.' or:  
 'He might either come here tomorrow or he might go to Madang.'  
 (Ross 2002: 241)

## 2. Focal marker

As a focal operator, *-(a)k* is enclitic to the informative focal expression. Thus, example (21) is an answer to 'what could you cook?' and (22) is the answer to 'have you met a girl?'

- (21) TAKIA  
*Malkouk-ak sa-d anaiη ηi-nei a-n.*  
 white-AK POSS-3SG food 1SG-cook IRR-DEF  
 < FOCUS >

'I could cook WHITE men's food.' (Ross 2002: 228)

- (22) TAKIA  
*Awo-k, ηai ηi-le ya-k.*  
 yes-AK 1SG 1SG-see R-AK  
 'Yes, I have met (one).' (Ross 2002: 236)

## 4.2.2 From coordination to other types of clause-linking functions

### 1. Sequential and implicative functions of *-(a)k* in time, cause or conditional clauses

In clauses such as (23a), *-(a)k* expresses some implicative relation (if → then) between two asserted clauses and signals new information. The semantics is contextual: in (23a) the difference in moods (realis–irrealis) marks clause1 as the condition or time frame for clause2.

- (23) TAKIA  
 a. [*Go, bor du-tur-a-k*] [*bor inug mu-sue-do-p*]...  
 R.D pig 3PL-stand-PFT-AK pig first 1PL.EXCL-pierce-CONT-IRR.D

‘(When/if) the pigs are available, then we kill them first and ...’  
(Ross 1993: 80)

Condition and time clauses may also be marked as topic clauses (23b) by the non-contrastive topic marker *man* (see Table (1)), originally a deictic:

(23) b. *ɲai ete ɲu-masa man skul lo ɲa-sol a.*  
1SG.FR here 1SG-get.up TPC school in 1SG-flee R  
‘(When) I left here, I ran away from school.’ (Ross 2004: 22)

In (24), *-(a)k* expresses some causal relation between two asserted clauses, both with realis moods. Clause1, to which *-(a)k* is enclitic, is a causal frame with informative value, and clause2 is the consequent.

(24) TAKIA

*Oɲ u-rer a-k | niɲe-n ta w-au na ya.*  
2SG.FR 2SG-fear R-AK reason-3SG NEG 2SG-go DUR R  
‘(As/because) you were afraid, you didn’t go.’  
(lit. [you were afraid] and (for) this reason you didn’t go) (Ross 2002: 247)

By contrast, the clausal definite enclitic *-n* in (25) (which also marks NPs as definite) marks the first clause as already referential, unasserted and thus subordinate. Clause hierarchy and subordination are thus of a different type in (24) and (25), and have different informational status, marking the first clause as informative and asserted (24) or given and backgrounded (25).

(25) TAKIA

*Oɲ u-rer a-n | niɲe-n ta w-au na ya.*  
2SG.FR 2SG-fear R-DEF reason-3SG NEG 2SG-go DUR R  
‘Being afraid, you didn’t go.’ (Ross 2002: 247)

## 2. *-(a)k* in relative clauses

Very much like *xe* in Nêlêmwa, *-(a)k* provides new, asserted information and marks relative clauses which identify, characterise or define NPs (as in 26a); whereas a relative clause marked by the definite clausal enclitic *-n* signals already referential determination. A similar opposition has been shown in Nêlêmwa (19).

(26) TAKIA

a. ... [*sip a [gamu fou-n a-k] i-palu i*].  
ship DX2 now new-3SG R-AK 3SG-come R  
‘A ship of a new kind has come.’  
(lit. that ship now it’s new and it has come) (Ross 2002: 230)

- b. ... [*an sip a [niŋe-d            ŋa-l            da-n] sip e yu*  
 DX2 ship DX2 matter-POSS.3SG 1SG-speak IMPF-DEF ship DEM war  
*sa-n ...]*  
 POSS.3SG  
 ‘...then the ships I’m talking about, these ships from the war...’  
 (Ross 2004: 24)

### 3. Complementation with *-(a)k*

The enclitic *-(a)k* also concatenates the complement clauses (27a) of specific types of verbs (of perception, cognition, discourse or ability).

(27) TAKIA

- a. *ŋai        ŋa-loŋ    a-k    |    iŋ        i-palu        wa.*  
 1SG.FR    1SG-hear    R-AK        3SG.FR    3SG-come    IRR  
 ‘I have heard he will come.’  
 (lit. I have heard and he will come) (Ross 2002: 242)

This is a common strategy in other Oceanic languages. See Tawala (15) or Nêlêmwa (18). Again, this stands in contrast with the subordinating function of the definite clausal enclitic *-n* (27b) which marks embedded complement clauses referring to already referential knowledge (the making of a pudding).

- (27) b. [*Sabi ŋai    [furoŋ    ŋu-sue        wa-n]    i-pitiŋan-ag    a].*  
 Sabi 1SG.FR pudding 1SG-pound IRR-DEF 3SG-teach-1SG R  
 ‘Sabi teaches me how to make the canarium nut pudding.’ (Ross 2002: 246)

Table 3 summarises the functions of *-(a)k*.

Table 3: Clause-linking functions of *-(a)k* in Takia

Coordination	Complementation	Relative clauses	Informational focus	Clause-hierarchy based on implication		
‘and then, and also’	of cognition, perception verbs	adding new information	at constituent or clause level	time ‘when’	cause ‘as, since’	conditional ‘if’

The clause linking functions of *-(a)k* in Takia and *-be* in Manam are similar (see Table 4), though *-be* is actually much more polyfunctional (as shown in §4.3.3); the clause linking functions of the definite marker *-n* in Takia and the proximal demonstrative *-ŋe* in Manam (see §4.3.4) are also similar.

Table 4: Some clause-linking morphemes in Takia and Manam

TAKIA		MANAM	
-(a)k	coordinator	-be	coordinator
-(a)k	focal operator	-be	focal operator
-□a	restrictive focus marker		
-n	definite marker	-ŋe	demonstrative DX1

### 4.3 The case of *-be* in Manam (SOV, Oceanic, Papua New Guinea, Madang Province)

While Takia has a variety of subordinating or cosubordinating conjunctions marking clause-chaining, but no other coordinator than *-(a)k* (and its compounds), Manam, by contrast, displays few subordinators<sup>16</sup> and few subordinate or embedded clause types (Lichtenberk 1983: 514-516); clause-linkage in Manam makes an important use of the polyfunctional conjunction *-be* which has both coordinating and subordinating functions correlating with different structural positions, semantic and discourse correlates, summarised below. The basic principle is the following: with medial *-be*, clauses are asymmetrically coordinate; with sentence final and focal *-be*, clauses are subordinate through focal and discourse hierarchy.

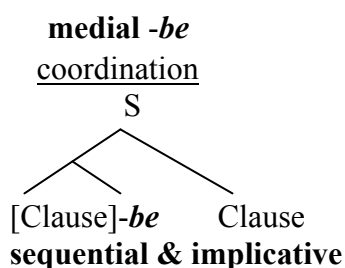
Table 5: Clause-linking functions of *-be* in Manam

medial <i>-be</i>	sentence-final <i>-be</i>
coordinating	focusing, subordinating
sequential	non-sequential
implicative	contradictory implication

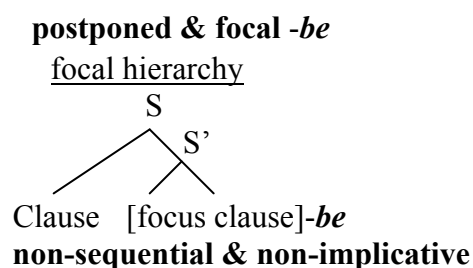
This correlates with some general principles of clause-dependency in Manam: clause-ordering is highly iconic and follows the logical order of events. Thematic entities are clause-initial and predicates are clause-final; focus position also tends to be clause-final. Dependency is also marked prosodically, with a slight rise at the end of non-final clauses and a drop at the end of the sentence (Lichtenberk 1983: 468-469, 485, 521).

Graph

(6)



(7)



The functions of *-be* are thus dependent on syntactic position: coordinating *-be* (graph 6) is in clause-medial position (enclitic to the last element of the first clausal conjunct) and focal *-be* (graph 7) is in sentence final position (enclitic to the last element at the right edge of the sentence). Sentence final, focal *-be* selects the clause to which it is enclitic as the specifier or restrictor of the truth value of the other clause. As shown in table 6, the semantics of sentence-final *-be* are more restricted: it has no additive or purposive meaning, (contrary to coordinating *-be*), and some of its semantics result from sequential and logical inversion.

Table 6: Semantics of clause-linking functions of *-be* (Manam)

<b>medial <i>-be</i></b> (sequential, implicative relation)		<b>sentence-final focal <i>-be</i></b> (sequential inversion, syntactic hierarchy)	
<b>Additive</b>	‘and also’ + simultaneous events		
<b>Sequential</b>	‘and then’	<b>Sequential inversion</b>	‘before, after’ chronology
<b>Consecutive</b>	‘and so’	<b>Causal inversion, explicative</b>	‘because, since’
<b>Purposive</b>	‘and/to’		
<b>Contrastive</b>	‘but’	<b>Counter expectation</b>	concessive-adversative ‘yet, though’

#### 4.3.1 Additive and sequential coordinator *-be*

The enclitic coordinator *-be* conjoins NPs (additively), VPs, or clauses (additively or sequentially) (Lichtenberk 1983: 70, 98, 526). It appears in medial position between the conjuncts and is enclitic to the first conjunct, as in the first part of (28). It is also a sentence connector, and as such, occurs sentence-initially, as in the second part of (28).

(28) MANAM

*i-lá*□*o-be*    *róa*-Ø    *sáriŋa*-Ø    *i-sóa*□*i*.    *Be áine*    *ŋáe*-Ø  
 3SG-go-and    spouse-3SG    space-3SG    3SG-sit    and woman    this-3SG  
*éwa*    *i-éur-i*.  
 fire    3SG-blow-3SG

‘He went and sat down close to his wife. And this woman blew in the fire.’

(Lichtenberk 1983: 526)

Two facts show that the second occurrence of *-be* in (28) is a sentence initial connector, and is not cliticised to the verb ‘sit’: (i) the intonative fall after *i-sóa*□*i* indicates

the end of the sentence, and (ii) the lack of stress shift on the verb *sóa□i* (if *-be* was cliticized, the stress would move to the penultimate syllable *soá□i*).

### 4.3.2 Inclusive and informative focal operator

*-be* is also an additive and inclusive focal operator meaning ‘too, also’, as in *ηáú-be* ‘me too’, *X záiza-be* ‘with X too’ (*záiza* ‘with’), *rúa-be* ‘both’ (*rúa* ‘two’) (Lichtenberk 1983: 271, 349, 432).

It is also an informative<sup>17</sup> focus marker, as in example (29), which is the answer to ‘who did he steal the knife from?’.

(29) MANAM

*Ási ne-η ηáú-ló-be i-ana□ú-a□-i.*

bush.knife POSS-2SG 1SG-from-FOC 3SG-steal-TR-3SG

‘He stole your bush-knife from ME.’ (Lichtenberk 1983: 482)

### 4.3.3 From coordination to subordination

Most complement clauses are juxtaposed without any conjunctive marker in Manam, but some of them, headed by verbs of commands for instance, are marked with *-be* in a < VP-and > sort of template. *-be* is then enclitic to the head verb and stands between the verb and the complement clause (30). The irrealis and prospective markers in (30) show some modal dependency to the verb ‘talk’.

(30) MANAM

*Tamá-gu i-ra-yá-be ási ne-∅ n-do□-i □ána.*

father-1SG 3SG-talk-1SG-and bush-knife POSS-3SG 1SG.IRR-take-3SG PROSP

‘My father told me to take his bush-knife.’ (Lichtenberk 1983: 514)

(lit. my father talked to me and I am/was going to take his bush-knife).

### 4.3.4 From coordination to subordination via informational hierarchy (time, condition, cause clauses)

Its other subordinating function are more akin to adverbial clauses and derive from its function as a discourse operator with focal properties, in sentence-final focus position. As an informative focal marker, *-be* and the final focal clause to which it is enclitic function as restrictors of the first clause, specifying its circumstances. In turn, such discourse, semantic and informational hierarchy, creates subordinating effects and mostly involving time, condition and cause readings. Compare coordinating *-be* which links events in sequential and chronological order, as in (31a) < [take-*be*] [eat] >, with focal, sentence-final *-be* in (31b), in which events are non-sequentially ordered, the focal event being sentence final < [eat][take-*be*] > and specifying the circumstances of the main event.

## (31) MANAM

a. [Ruaná-da rúa ŋe-Ø maŋ di-do□-i-a-rú-be]  
 friend-1INCL two DX1-3SG chicken 3PL-take-3sg-BF-DU-and  
 [di-□aŋ-aŋ-í-a-ru].  
 3PL-eat-RED-3SG-BF-DU  
 ‘Our two friends caught a chicken and are eating it.’  
 (Lichtenberk 1983: 489)

b. [Ruaná-da rúa ŋe-Ø maŋ di-□aŋ-aŋ-í-a-ru]  
 friend-1INCL two DX1-3SG chicken 3PL-eat-RED-3SG-BF-DU  
 [di-do□-i-a-rú-be].  
 3PL-take-3SG-BF-DU-FOC  
 ‘Our two friends are eating a chicken after catching/having caught it (first).’  
 (lit. our two friends are eating a chicken, THEY CAUGHT IT (too))  
 (Lichtenberk 1983: 490)

In (32), the presence of the negation marker in the sentence final, focal clause has some argumentative effect; it expresses counter-expectation or contradiction, which is interpretable as temporal (‘before, not yet’), or as concessive (‘yet, though’). The prominent, focal fact is that the father had not returned.

## (32) MANAM

[U-yalále-be u-éno] [tamá-gu tágo i-múle-be].  
 1SG-go-and 1SG-sleep father-POSS.1SG NEG 3SG-return-FOC  
 ‘I went to bed before my father came back.’  
 (lit. I went and slept, (yet) my father HAD NOT RETURNED)  
 (Lichtenberk 1983: 521)

On the other hand, overlapping events (‘while’ clauses) or backgrounded time-frames are marked by the clausal enclitic *-ŋe*, which is also a proximal deictic (DX1) with scope on the clause to its left.

## (33) MANAM

[úma-lo u-la□o-púra-ŋe] [roá-gu baŋ i-tano-táno-Ø].  
 garden-to 1SG.R-go-arrive-DX1 spouse-POSS.3SG taro 3SG.R-plant-RED-3PL  
 ‘(When) I arrived to the garden, my wife was planting taros.’  
 (lit. I arrived at the garden-this my wife was planting taros)  
 (Lichtenberk 1983: 536)

Similarly, in chronological order, cause-effect clauses are coordinate (lit. < I went to Bieng-*be* I didn’t help you > ‘I went to Bieng and so I didn’t help you’) (Lichtenberk

1983: 481-482), but when the cause clause is focal and marked by *-be* in sentence-final position, as in (34), it is subordinate via informational hierarchy effects. The focal clause marked by sentence-final *-be* specifies the cause and circumstances justifying the state of affairs expressed in the first clause.

(34) MANAM

[*Tágou-duma-í□o*] [*Biéŋ u-lá□o-be*].

NEG 1SG.R-help-2SG Bieng 1SG.R-go-FOC

‘I didn’t help you (because/since) I went to Bieng.’ (Lichtenberk 1983: 548)

The preceding examples (31 to 34) show that focal *-be* has no dedicated meaning, the semantics of focal constructions with sentence-final *-be* is clearly contextual and dependent on other present markers. Interestingly, there is an exhaustive/restrictive focus marker *-□a* which also structures informational and syntactic clause hierarchy, but in contrast with sentence-final *-be*, it does not require any logical or sequential order inversion, it is enclitic to the cause clause in the logical cause-effect order (35).

(35) MANAM

[*Biéŋ u-lá□o-□a*] [*tágo u-duma-í□o*].

Bieng 1SG-go-FOC NEG 1SG-help-2SG

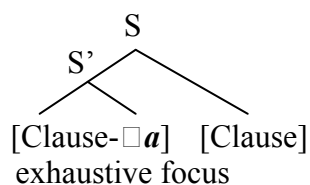
‘It’s (because) I went to Bieng (that) I didn’t help you.’ or:

‘(Since) I went to Bieng, I didn’t help you.’ (Lichtenberk 1983: 517)

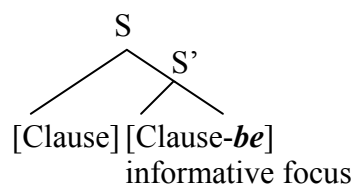
This difference in clause ordering could result from the fact that *-□a* is a dedicated exhaustive focus marker, while *-be* is only an informative focal operator with argumentative functions. In (35), the focus marker *-□a* creates informational and syntactic hierarchy between a restrictor clause with causal or explicative reading and the following main clause. Without *-□a*, the events would be sequential and the clauses would be coordinate. As with *-be*, the semantic relation between the clauses marked by *-□a* is contextual.

Graphs (8) to (10) below summarise the function of the restrictive focus marker *-□a*, the focal operator *-be*, and the clausal enclitic demonstrative *-ŋe*, as informational and syntactic hierarchy markers. Readings are contextual.

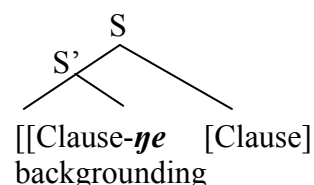
Graph (8)



(9)



(10)





### 4.3.5 Conditional clauses: from juxtaposition to hierarchy

These three strategies and types of markers also appear in conditional clauses, which have three possible constructions: (i) when juxtaposed in the order < protasis – apodosis >, the relation is implicative as in ‘you eat it, you’ll get sick’, illustrated in (36a); (ii) when marked by focal *-be* with reverse order < apodosis – protasis-*be* > (36b), the meaning becomes strongly argumentative; (iii) finally, the condition may be backgrounded with *-ɲe*, in the order < protasis-*ɲe* – apodosis >.

implication (36a):                    protasis    apodosis  
 focal hierarchy (36b):             apodosis   protasis-*be* (*modus tollens*, argumentative)  
 backgrounded condition (36c):   protasis-*ɲe*   apodosis

Examples (36a-b) are both counterfactual conditions with negative entailment (it did not rain), the semantic difference in (36b) with the reverse order and focal *-be* is a strong contradictory argumentation against a purported state of affairs ‘it rained’.

(36) MANAM

- protasis                                    apodosis  
 a. [úra    ɲa-púra]                                    [zála    ɲa-malázi].  
    rain 3SG.IR-come    path    3SG.IR-be.slippery  
    ‘If it had rained, the path would be slippery.’ (Lichtenberk 1983: 490)
- apodosis                                    protasis  
 b. [Zála ɲa-malázi]                                    [úra    ɲa-púra-be].  
    path 3SG.IR-be.slippery    rain    3SG.IR-come-FOC  
    ‘The path would be slippery if it had rained.’ (Lichtenberk 1983: 490)

Compare with (36c) in which the condition is expressed as some backgrounded presupposition.

- protasis                                    apodosis  
 (36) c. [Éwa di-máte-ɲe]                                    [mása ta-goala-tína].  
    fire 3PL.R-die-DX1 INIR    1PL.INCL.IR-be.ruined-INT  
    ‘(If) the fire dies, we will suffer greatly.’ (Lichtenberk 1983: 531)

These facts are summarised in Tables 7a-b below.

Table 7a: Clause-linking functions of medial *-be* (Manam)

				based on implication		
medial <i>-be</i>	sequential ‘and then’	conditional		<b>complementation</b> of discourse, command verbs		
	causal-consecutive ‘and so’	‘(if) → then’				

Table 7b: Clause-linking functions of focal -be (Manam)

	sequential inversion	causal inversion	counter-expectation	condition clauses
focal <i>-be</i>	anterior, posterior relation 'before, after'	explicative, causal relation 'as, since'	concessive relation 'yet, though'	contradictory argumentation

## 5 Conclusion

Three main clause-linking strategies and types of clausal complexification have been analysed in a sample of Austronesian languages, from dependency to informational hierarchy and subordination. These strategies involve (i) connectors/coordinators (with sequential, additive/inclusive or contrastive semantics), (ii) demonstratives, and (iii) informational hierarchy (focus, topic) markers often deriving from the former two types.

The focus has been on strategies using asymmetrical sequential connectors or correlative coordinators, expressing logical and implicative relations (also expressing cause-effect or purpose relations), and whose functional domain often extends and reaches into informational hierarchy and subordination (see Table 8). Demonstratives with clausal scope are another frequent clause-linking strategy, used either as framing devices and topic markers (§2) or as subordinators (like *-ŋe* in Manam) and based on referential hierarchy between an already referential, backgrounded clause and an asserted clause. The third type involves topic or focus markers. Topic strategies create some hierarchy between a frame clause and an asserted clause. Focus or focal strategies, create some hierarchy by subordinating the truth condition of the presupposed clause to an asserted and salient restrictor clause (Krifka 2007), which may be informatively or exhaustively restrictive, and which, for instance, specifies the circumstances or conditions under which the propositional content of the presupposed clause holds true. Topic strategies often correlate with rising and falling prosody delimiting protases from apodoses (Haiman 1978), while focal entities have different salient prosody and stress.

The last point addressed is the reanalysis and syntacticisation of these markers from these various categories and domains. Demonstratives are a very frequent origin of topic or focus markers and subordinators, a fact that does not need to be developed further here. But the reanalysis of connectors/coordinators as topic or focus markers, complementisers (of cognition and command verbs) and relativisers (Nêlêmwa, Takia) is less common. So is the use of informational hierarchy to mark syntactic hierarchy and subordination. More research needs to be done on how frequent this may be cross-linguistically.

If informational hierarchy strategies are also found in languages with few subordinators (like Manam), these two facts do not necessarily correlate, as proved by Takia or Nêlêmwa, which use information hierarchy in addition to other conjunctive and subordinating types, but which seem to use it preferentially for adverbial clauses (expressing cause, consequence, condition or time-settings, less often purpose or concession).

Topic markers mostly originate from sequential ‘and then’ connectors or coordinators with correlative function and expressing implicative semantics (if → then) between two propositional contents. Focal operators, on the other hand, tend to originate from sequential, additive/inclusive or from adversative/contrastive adverbial or adnominal connectors/coordinators. Their function then diverge (i) with changes in their distribution, position and syntactic domain, (ii) with extension of their scope (from narrow constituent to wide clausal scope) and (iii) with prosodic changes. They may eventually come to be reanalysed as subordinators once their discourse properties tend to recede, and with possible neutralisation of informational hierarchy prosody. By a similar process, when demonstratives acquire clausal scope, they come to be reanalysed as clause-linkers and subordinators (Hopper & Traugott 1993). Thus informational or referential hierarchy is gradually reinterpreted as syntax.

Table 8: Connectors/coordinators, subordinators, topic and focus markers in some Oceanic languages

Connectors Coordinators	Topic or focus marking functions	Existential & categorical clauses	Relative clauses	Time clauses	Cause clauses	Conditional clauses	Equivalent of complement clauses
BILUA <i>ta</i> 'and then'	contrast, unexpectedness	+					perception, cognition verbs
<i>ti</i> 'and then'	topic					+	
<i>melai</i> 'but'	contrastive topics or inclusive focus			+	+		
<i>inio</i> 'and then'	restrictive focus						
TAWALA <i>ma</i> 'and, but'	topic and focus			+			
<i>po</i> 'and'				+			cognition, discourse, ability verbs
NĒLĒMWA <i>xe</i> (former sequential coordinator)	+	+	+	+		+	perception, cognition verbs
TAKIA <i>-(a)k</i> 'and'	focus		+	+	+	+	perception, cognition, discourse, ability verbs
MANAM <i>-be</i> 'and'	inclusive and in- formative focus			+	+	+	discourse, command verbs

## Notes

- <sup>1</sup> Sobei (Irian Jaya), 'Ala'Ala and Gapapaiwa (Papuan Tip Cluster), Kaulong (New Britain), Takia (Madang Province) are Western Oceanic languages located in the neighbourhood of Papua New Guinea (Lynch et al. 2002). Nêlêmwa is spoken in the Far North of the Mainland of New Caledonia and belongs to the Eastern Oceanic subgroup.
- <sup>2</sup> *vo-* indicates the manner of action done 'with the hands'.
- <sup>3</sup> 3SG object pronoun is unmarked.
- <sup>4</sup> *-mau* marks new topics; *-be* is the contrastive topic marker.
- <sup>5</sup> Especially when repeated: [lit. and also ... and also] meaning 'both ... and'; [lit. or ... or] meaning 'either ... or'; [lit. but ... but] meaning 'as for ... as for'.
- <sup>6</sup> Mithun (1988: 345-346) showed the frequent evolution of adverbial markers into coordinators: mostly sequential (*then*), additive (*also*), consecutive (*so*), temporal (*now*) or contrastive markers. For an analysis of the correlation between focus particles and conjunctive markers, (see König 1991).
- <sup>7</sup> The other coordinators are *ni* 'and', *ma* 'or'. They conjoin NPs, PPs, VPs, non-verbal predicates or (with the exception of *tî*) clauses.
- <sup>8</sup> *ikio* only focuses the NP 'wife', while *inio* focuses the first clause.
- <sup>9</sup> There are several other coordinators in Nêlêmwa: *me*, *ma* 'and', *na* 'and, but', *ka* 'and also', *ai* 'or'. *Me* is polyfunctional: coordinator, complementiser and purposive conjunction.
- <sup>10</sup> Either delimiting the focus clause to the left of the focus marker (as in Bilua or Takia), or heading the clause to the right of the focus clause (as in Malagasy). In (VO) Malagasy, the focus clause occurs at the left edge of the sentence and the focus marker *no*, acting as a subordinator, heads the clause referring to the presupposed event (ex. 6e).
- <sup>11</sup> In (OV) Manam, the focus clause occurs at the right edge of the sentence and the focus marker *-be* is enclitic to the focal clause (ex. 31b).
- <sup>12</sup> But they belong to different linkages of this cluster: Takia belongs to the Vitiaz linkage; Manam and Kairiru belong to the Schouten linkage and are closely related.
- <sup>13</sup> In Takia, the cosubordinators, *-go* (realis), *-pe* (irrealis), *-de* (loose linker), connect events "conceived as being connected in the real world" (Ross 1993).
- <sup>14</sup> These other subordinating markers or strategies appear in complement or relative clauses, and make use of nominalisation and possessive classifiers for instance.
- <sup>15</sup> *-ak* is cliticised to a final consonant or appears after a pause between clauses, *-k* is cliticised to a clausal enclitic.
- <sup>16</sup> Time clauses are often marked by a relativised time noun *rama* 'time that', reanalysed as a conjunctive marker. There are various sequencers meaning 'then, later'. Other conjunctions are disjunctive  $\square i$  'or', contrastive *ata* 'but'. The similative postposition *bó*  $\square$  *ana* 'be like' has various subordinating functions (causal, manner, similative-comparison, conditional, and counterfactual irrealis conditional (1983: 365, 374-375, 528-529, 532, 536-539).
- <sup>17</sup> Only non-subjects can be focused with *-be*. It also focuses time expressions referring to the past and adjuncts (time, location or referring to points of origin).

## Abbreviations

ANAPH	anaphoric	LIG	ligature
ART	article	LOC	locative
ASS	assertive	M/MASC	masculine
AT	actor trigger	NEG	negation
BF	buffer	NEG.ABIL	negation of ability
CFCT	counterfactual	NON.F	non-feminine
CLASS	classifier	NONFUT	non-future
COMIT	comitative	NON.PRES	non-present
CONJ	conjunctive	NOM	nominative
CONT	continuative	NMZ	nominaliser
COORD	coordinator	NM	noun marker
DEF	definite	O	object
DEICT	deictic	PFT	perfective
DEM	demonstrative	PL	plural
DER	derivation	POSS.AL	possessive alienable
DET	determiner	POSTP	postposition
D	dependent	PROG	progressive
DIR	directional	PROSP	prospective
DU	dual	PROX	proximal
DUB	dubious mood	PRS	present
DUR	durative	R	realis
DX1	proximal deictic	REC	reciprocal
DX2	medial deictic	RED	reduplication
EMPH	emphatic	REL	relator / relative marker
EXCL	exclusive	RMP	remote past
FEM	feminine	SG	singular
FR	free (pronoun)	SEQ	sequential
FUT	future	SIT	situation change
IMPF	imperfective	SPEC	specifier
INCL	inclusive	TA	tense-aspect
INIR	indefinite irrealis	TEMP	temporal
INT	intensifier	TPC	topic
IRR	irrealis	TR	transitive
ITER	iterative	TRV	transitiviser

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