Informational and referential hierarchy

Clause-linking strategies
in Austronesian-Oceanic languages*

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This paper analyses clause-linking strategies in mostly Austronesian languages, with particular focus on the functions of informational and referential hierarchy strategies in the architecture of complex clauses. Informational (topic, focus) hierarchy and its markers, structure clauses as subordinate via the contrast between presupposition vs. assertion. Referential hierarchy and its markers (endophoric demonstratives and definite markers), are another subordinating strategy based on the contrast between already referential/backgrounded clause vs. asserted main clause. Paths of evolution leading from coordinators or from endophoric demonstratives to informational hierarchy markers and to subordinating conjunctions or constructions are more specifically discussed. It is argued that informational hierarchy and referential hierarchy strategies are inherent to the syntactic architecture of the complex clause.

1. Introduction

Austronesian languages display various clause-linking and subordinating strategies and devices involving less finite or non-finite verb forms (reduplicated or nominalised forms), tail-head cueing constructions, adpositional markers, distinct case-marking strategies for main and subordinate clauses, modal dependency (irrealis, aorist), aspectual dependency (see François, this vol.).

Here, the focus will be on the distinct functions of informational and referential hierarchy strategies and their markers in the architecture of complex clauses. Although these strategies belong to the domain of discourse for the former, and to reference tracking for the latter, they are projected onto the syntactic level and are an intrinsic

part of the architecture of clause-linking. Informational hierarchy and its markers (topic and focus morphemes), structure clauses as subordinate via the pragmatic contrast between presupposed vs. asserted proposition; while referential hierarchy and its markers (endophoric demonstratives and definite markers), structure clauses as subordinate via the contrast between already referential vs. asserted information.

Section 2 provides some definitions on informational and referential hierarchy systems, their markers and their clause-linking functions. Section 3 illustrates some of their frequent functions in various Oceanic languages. Section 4 discusses a type of evolution leading from coordinators to topic markers and subordinating devices based on informational hierarchy. Section 5 analyses the complementary clause-linking functions of coordinators, pragmatic (topic, focus) markers, and deictic markers in Takia and Roviana. Section 6 deals with case-marking and focus strategies. Section 7 centres on the subordinating function of referential hierarchy (with demonstrative and deictic markers). Section 8 discusses the syntactic and pragmatic functions of clause-ordering. Section 9 concludes.

2.   The syntax of information and referential hierarchy in clause-linking: Some definitions

Lambrecht (1994) defines information structure as "a component of grammar", "[…] more specifically as a component of sentence grammar […] in which propositions as conceptual representations of states of affairs are paired with lexicogrammatic structures […]." Information structure is thus "a determining factor in the formal structuring of sentences" (Lambrecht 1994: 3, 5–6). The structure of the clause is thus conceived […] "as a domain in which the different components of grammar – syntax, morphology, prosody, semantics, information structure– compete and interact with each other […]. (ibid. 1994: 12).

Van Valin (2005) expresses similar views and discusses the linking algorithms between the various components and structural levels (syntactic, semantic, pragmatic).

2.1   Informational hierarchy: Focus, topic and their markers

In Lambrecht's view, the important categories of information structure are: (i) the contrast between presupposition and assertion; (ii) topic and focus; (iii) identifiability and activation (Lambrecht 1994: 5–6).

When projected onto sentence level, information structure creates hierarchy via the central contrast between the presupposed and the asserted clauses, expressed by a variety of syntactic, morphological and prosodic markers developed below.

Topics are frames, they are definite and presupposed entities already present in discourse and about which something is predicated (Lambrecht 1994). They have various degrees of salience, as contrastive or detached topics. By contrast, the focus is a restrictor, an operator with scope over the rest of the sentence (Krifka 2007).

Focusing usually involves the partitioning of the utterance between the focus and the presupposition.[1] 'The focus is the pragmatically non-recoverable element in an utterance (i.e. the assertion) (Lambrecht 1994: 207). Foci fall under various subtypes, informative-completive foci which are generally *in situ*, such as answers to questions (*who wrote? – My FATHER wrote*); the focus may also identify (contrastively or exhaustively) a restrictive variable (it's x̲ who did it).

Focus is marked by various devices, prosodic, syntactic (position, word order or specific constructions such as clefts), and morphological (with dedicated focus markers or focal operators, such as restrictive *only*, inclusive *even*, exclusive *but*, *except*, etc.).

In complex clauses, the focus clause is the asserted variable which restricts the validity of the presupposed proposition. Focus clauses are syntactically more integrated and embedded than topic clauses, as shown by the inverted word order of the main clause following the restrictive focus time clause (i) *only when I heard him yell did I realise that something was wrong*, or by the use of 'that' complementisers in clefts (ii) *it's when I heard him yell that I realised something was wrong.*

By contrast, topic-comment structure is a looser type of informational hierarchy. In the architecture of complex clauses, clauses containing the presupposition may be detached to constitute the topic or frame, while the other clause is the assertion. Thus, in *because they wanted to know more, they started investigating the whole matter* (Lambrecht 1994: 196), the topic clause is an adjunct of the main clause, in a relation of ad-clausal subordination (van Valin 2005). Detached adjunct clauses generally indicate time, condition, cause, explanation.

2.2   Referential hierarchy: Demonstratives, deictic and definite markers

Referential hierarchy rests on distinct notions relating to anaphora and reference tracking. In Oceanic languages, this is another frequent clause-linking strategy, marked by endophoric demonstratives, deictic and definite markers which refer to the propositional content of a preceding clause or sentence as informationally backgrounded; their evolution into subordinators (complementisers) is a common and well-known process.

> "When a presupposed proposition becomes a discourse referent and serves as an argument in another proposition, it may be linguistically designated with the same expression type as an entity (with a personal or a demonstrative pronoun."   (Lambrecht 1994: 78)

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1.   "Presupposed" is defined as "not part of the same assertion" as the main clause (Givón, 1980: 372).

Referential hierarchy and its markers structure clauses around the contrast between a clause with referential/backgrounded propositional content and an asserted clause. Referentially backgrounded clauses marked by endophoric demonstratives and definite markers are prone to embeddedness and syntactic subordination, as arguments or modifiers of another clause (see for instance Sections 5.4, 7.4).

Another function of demonstratives and definite markers is found in clause-chains, as in Takia (Section 5.5.2) where they encode sequential and consecutive dependency relations, or in correlative strategies.

2.3   Source of focus and topic markers

Clausal topics and clausal foci are relational constructions with functional differences: topics are frames for some other assertion about them; foci are restrictor variables. Despite such functional differences, some topic and focus markers have several common sources in Oceanic languages, the most frequent being coordinators or demonstratives (see Bril in press, Mithun 1988). Their functions and semantics are then context and structure dependent, varying with their syntactic domain and scope. They are distinguished by the grammatical construction or "constructional schema" (van Valin 2005: 131 sq.) onto which these markers are projected, and which contain morphosyntactic, logical-semantic, pragmatic and prosodic information which help discriminate their function.

Demonstratives may develop into three distinct directions, (i) as topic or focus information hierarchy markers (see Section 7.3), (ii) as correlative markers and (iii) as full-fledged subordinators.

Among coordinators, sequential coordinators ('and then') are a frequent source of topic markers. Focal operators often originate (i) from additive ('and also') and sequential ('and then') coordinators like *xe* in Nêlêmwa (Section 4.3), *=ak* in Takia (Section 5.1.3), *=be* in Manam (Section 7.2), or from additive-inclusive focus sensitive operators meaning 'too, also, even'; (ii) from coordinators with constrastive-exclusive semantics 'but' (like *nga* in Tombunuo (Section 4.1), *ma* in Tawala (Section 6.2)), and (iii) in a lesser degree from disjunctive 'or' coordinators.

When used as information hierarchy markers with distinct prosody, conjunctive morphemes link (i) the salient (phrasal or clausal) topic and the comment, or (ii) the focus and the presupposition (possibly with sequential, consecutive, inclusive or constrastive semantics). The prosody associated with information hierarchy signals the hierarchy between presupposition vs. assertion, a feature only compatible with subordination; coordinate clauses do not contain any presupposition.

Prosody further distinguishes topic from focus constructions: topic-comment often correlates with rising-falling prosody, while focal entities carry modified stress and salient prosody.

Topic, focus markers and demonstratives do not exhaust the types of informational hierarchy markers; position, clause ordering, T.A.M. markers are also widely distributed, but they will not be the core of this study.

2.4   Topic and focus strategies as clause hierarchy markers

In contrast with coordinate clauses which can neither be detached nor focused, subordinate clauses may undergo pragmatic structuring. In some Oceanic languages, the positional and morphosyntactic markers of informational hierarchy are the only actual markers of subordinate clauses. Kiss (2001: 1447) proposes that "languages can be classified typologically on the basis of how closely they reflect the discourse semantic structure of their sentences in syntax". In some cases, informational hierarchy strategies and subordination (with complement or adjunct function) may thus be coextensive.

Besides, as pointed out by Lambrecht (1994: 69), some conjunctive markers have pragmatic properties revealed by their compatibility with focus or presupposition. Thus, in contrast with 'because', 'since' is incompatible with focus; this is illustrated by the impossible use of 'since' in a cleft construction, *it's because he had insulted me that I struck him* (* *it's since…*), or as an answer to a question, *why did you hit him? – Because he insulted me* (**since he insulted me*). Some types of subordinators and subordinate clauses thus entertain close links with pragmatic properties.

In the structuring of complex clauses, focus strategies create hierarchy by subordinating the truth condition of the presupposed clause to an asserted and salient restrictor clause (informatively or exhaustively restrictive), which may specify the circumstances or conditions under which the presupposition holds true; they are syntactically more integrated.

Detached sentential topics involving the fronting of some adverbial clauses (condition, cause or time frames) are more loosely connected, as in *after she arrived at the party, Kim saw Pat*. In van Valin's model of the layered structure of the clause, detached clauses constitute adsentential subordination and are adjoined to another clause in frame-comment constructions (van Valin 2005: 192–196). Detached sentential topics are outside the scope of main clause illocutionary force and of illocution and negation operators (Foley this vol.; Foley & van Valin 1985); while peripheral clausal subordination, in which 'the subordinate junct is a modifier occurring in the periphery of a layer of the clause', may fall within the scope of main clause illocution, as shown by *Did Kim berate Pat because she kissed Chris?* (van Valin 2005: 192–197). Clausal subordination subdivides into ad-core and ad-clausal subtypes: in *Kim saw Pat after she arrived at the party*, the *after* clause constitutes ad-core subordination, it modifies the core 'saw Pat'; while in *Kim berated Pat because she kissed Chris*, the *because* clause constitutes ad-clausal subordination, it modifies the main clause.

2nd proofs

In Kiranti languages, Bickel (1993: 24–25) mentions cases of adsentential subordination marked by the same markers as nominal topics. In Belhare, these detached finite topic clauses may also be focused by restrictive or additive focus particles.

Just as detached sentential topics are outside the scope of main clause illocution and negation operators, detached lexical topics are not syntactic arguments of a clause,[2] they may even be extra-clausal, as in '*other languages, you don't just have straight tones like that*'[3] (Lambrecht 1994: 193).

2.5   Scope and domain

Topic and focus operate in different domains. Lambrecht (1994: 215) defines the focus domain as 'constituents whose denotata are capable of producing assertions when added to presuppositions'. These constituents may be full propositions and clauses. Van Valin further refines the definition of the respective domains of topic and focus as follows:

> "The domain of topic may be a constituent within the clause or a detached sentence adjoined to another one; the domain of focus is defined with a subdistinction between the 'potential focus domain: the syntactic domain in which focus elements may occur' and the 'actual focus domain: the part of the sentence that is actually under focus."   (van Valin 2005: 75).

Domain and scope are two essential notions to account for the varying functions of morphemes. According to their scope and syntactic domain, demonstratives and deictics, for instance, may function as NP determiners, as topic or focus markers, and as subordinators or clause-linking functors. Similarly, with variations in syntactic domain, scope and prosodic specificities, some types of coordinators come to function as topic or focus markers and may further evolve as subordinators (see Sections 4; 5.3; 8.2).

3.   Information and referential hierarchy markers in clause-linking: Some case-studies

Presupposition, which is one of the key notions of information hierarchy falls under two types: (i) the type found in existential, categorical propositions such as *this boy is small* (often structured as topic-comment clauses in Oceanic languages), and

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2.   The syntactic arguments are marked by anaphoric pronouns (Lambrecht 1994: 188).

3.   Such detached lexical topics may not even be constituents (argument or adjunct) of the clause with which they are pragmatically associated, they are "syntactically autonomous, extra-clausal elements." (Lambrecht 1994: 193).

(ii) factual presupposition as in *he is sorry that she didn't come* (in which the subordinate clause contains the presupposition: she didn't come). By contrast with categorical propositions, thetic propositions such as *it's raining* are sentence focus structures containing no presupposition, and in which focus and assertion coincide (Lambrecht 1994: 138, 213).

These logical types are often encoded by topic, focus and deictic markers which occur as delimiters between presupposition and assertion. Topic markers commonly occur in categorical judgements; they also have common clause-linking functions in relative, time and conditional clauses, less frequently in cause-result clauses, explicative clauses, in purpose and complement clauses (of perception, cognition, volition, command verbs). As pointed out by Haiman (1978) and Dik (1997), condition clauses frequently correlate with presupposition and topic frames. Yet, although topics are often presupposed, they cannot be equated with presupposition.[4]

Various case-studies will now illustrate how informational and referential hierarchy operate as markers of syntactic hierarchy in clause-linking.

3.1   Sobei (SVO, Oceanic, Irian Jaya)

There are few instances of true subordination in Sobei, clause-linking is mostly marked by coordinators or sequential linkers.[5] The topic marker *mau* (re-)introduces an otherwise inaccessible entity; it appears in categorical judgement clauses (1) structured as frame-comment, in relative and time clauses structured in the same way; but conditional clauses are juxtaposed or coordinated by *map* 'and then' (Sterner & Ross 2002: 185).

3.1.1   *Categorical judgement clauses*

(1)   Sobei (Sterner & Ross, in Lynch et al. 2002)
      *Yafu=**mau**=to   bano   yafu.*
      fire=TPC=DEF   enchanted   fire
      'That fire was an enchanted fire.'   (Sterner & Ross 2002: 181)

3.1.2   *Relative clauses*

There are two types of relative clauses: one marked by the topic marker *mau* (2a), which refers to unanchored determination, asserted for the first time, while the other type, marked by enclitic demonstratives (DX1 =*tei* 'this' or DX2 =*sake* 'that')

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4.   "What is presupposed in a topic-comment relation is not the topic itself, nor its referent, but the fact that the topic referent can be expected to play a role in a given proposition due to its status as centre of interest". (Lambrecht 1994: 151).

5.   Such as *-p* 'and', *sep* 'and then', *dep* 'and', *dop* 'once finished', *dosep* 'so that', *dedwop* 'and' (+NP), 'and then', *fetap* 'and then', *map* 'then, so, consequently', *dasa* 'and so'.

or by definite markers (*=te*, *=to*), is used for already referential determination and information (2b). In the first type, the head of the relative clause is delimited by *mau*; in the latter type, the right boundary of the relative clause is marked by the deictic (DX1 *=tei* 'this') or by an enclitic definite marker (*=to* 'that' or *=te* 'this') (Sterner & Ross 2002: 169–171).

(2)   Sobei

 a.   *E-yit   mefne=**mau**   [ri-fos-e   Lea].*
       3SG.R-take   woman=TPC   3PL.R-name-3SG   Lea
       'He married the woman they call Lea.' (lit. he took the woman,
       they call her Lea)   (Sterner & Ross 2002: 175)

 b.   *U-be   nyo   [w-ar-ema=**to**]   r-en   sifa?*
       2SG-POSS   stuff   2SG-bring-DIR=DEF   3SG.R-be   where?
       'Where is your stuff you brought here?'   (Sterner & Ross 2002: 175)

 c.   [*Use   [dai   dafu-n=ma   ri-fi]=**tei**]   yam=te*
       matter   two   cross.sibling-3SG=FAM   3PL-make=DX1   2PL=DEF

       a-fei   tap.
       2SG-make   NEG

       'Don't you do this thing (sexual intercourse) that these two cousins did.'
       (2002: 175) [the demonstrative *ma* refers to a fact known to both speaker
       and listener]

Relative clauses marked by *mau* are not embedded; while those marked by determiners and definite markers are more tightly integrated and embedded. Similar facts will be shown for Nêlêmwa (Section 4.3.2) and Takia (Section 5.4.1).

3.1.3   *Time clauses*

Time clauses may be headed by a topicalised and relativised circumstancial noun *samo* 'time' (3). The relative time clause is marked at its rightmost boundary by an enclitic demonstrative pronoun DX2 *sake* 'that' and a definite marker *=to* 'that' (or *=te* 'this') marking the presupposition.

(3)   Sobei

 a.   *Map* [*samo=**mau** [tidut   er-enon   dimo   waridon*] **sake=to**],
       so   time=TPC   together   3PL.R-stay   house   inside   DX2=DEF
       'So at the time that they were all together in the house,

       *Yusup=**mau**=**to**   d-enon,   e-rom   moni   sare.*
       Joseph=TPC=DEF   3SG-stay   3SG-see   sleep   play

       Joseph was dreaming.'   (Sterner & Ross 2002: 175)

Without any time noun, clauses are structured as topic (time frame)-comment clauses (3b):

 b.   [[*Ri-dus   pamo=**mau**=**to***]   [*tat   damos=**mau***]]   [*pamo=to   tapse*].
       3PL-cut   sago=TPC=DEF   beat   knead=TPC   sago=DEF   NEG
       '(When) they had cut down the sago palm, pounded, kneaded (it),
       there was no sago.'   (Sterner & Ross 2002: 185)
        (lit. having cut down, pounded, kneaded the sago palm, there was no sago
                                         (it had magically disappeared).

The complex sentence in (4) illustrates the interaction of several markers: (i) sequential coordination with the enclitic coordinator *=p*; (ii) a relative clause headed by a locative noun marked as topic by *mau* (*pede=mau*) and as presuppositional by the deictic and definite markers *sake=to*; and (iii) a time frame marked as a topic clause by *mau* (*e-tasan-ewo=mau*):

(4)   Sobei
       *E-wo=**p**   e-wo=**p**   e-be[6]=**ma**   e-wo=**p**   [pede=**mau***
       3SG-go=and   3SG-go=and   3SG-CTRST=FAM   3SG-go=and   place=TPC

       [*tema-n=**to**   e-fos-fe]   **sake=to**]   e-wo=**p***
       father-3SG=DEF   3SG-call-?   DEM=DEF   3SG-go=and

       [*e-tasan-ewo=**mau***]   *mamuse.*
       3SG-view-DIR= TPC   empty

       'He went and went, he was the one (who) went and to the place his father had
       named, he went and (when) he looked/looking around, they weren't there.'
                                              (Sterner & Ross 2002: 184)

While the English translation of *e-tasan-ewo=mau mamuse* requires a conjunctive time clause or a participial form '(when) he looked/looking around, it was empty', Sobei actually uses a frame-comment construction.

3.1.4   *Complement clauses with* mau

Complement clauses may be marked as frame-comment clauses with contrastive meaning.

(5)   Sobei
       *Map   e-ski-i=**mau**   ri-orpar.*
       then   3SG-command-3PL=TPC   3PL-be.unwilling
       'Then what she commanded them (TPC), they were unwilling to do/
       They were unwilling to do what she had commanded them to.'
                                              (Sterner & Ross 2002: 185)

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6.   *Mau* (re-)introduces an entity in discourse (N and Proper N, but it does not appear on pronouns), *be* marks contrastive topic (and is often attached to a pronoun).

3.2   Kaulong (svo, Oceanic, New Britain)

Kaulong has various coordinators[7] and few subordinators[8] (Throop & Ross 2002: 409). The focus here will be on the functions of a definite postmodifier *tin* [NP *tin*] which marks already referential information, as well as on the functions of the topic marker and clause delimiter *men*. *Men* indicates contrast, a change of topic, sometimes a switch in identifiable referent (it is absent from most indefinite NPs), a fronted adverbial phrase (yesterday *men*) (ibid. 2002: 393–95). As a clause delimiter, it marks (conditional and counterfactual) frame clauses and appears in categorical clauses and relative clauses.

3.2.1   *Categorical judgement clauses structured as topic – comment*

(6)   Kaulong (New Britain, Throop & Ross in Lynch et al. 2002)
Hiang **ti-men**   *a Susupa.*
3sg.m   dem-tpc   p Susupa
'This (man) is Susupa.' (Throop & Ross 2002: 393)

[*tin* men is fused as *ti-men*].

3.2.2   *Relative clauses*
Most relative clauses are marked by *men*; the definite head is marked by *tin*.

(7)   Kaulong
Po   tin   [*masang a-pi*   *e Au e   kum ta-p   i*   **men**]
3pl   dem   male   attrib-place   p Au and   work ben-2sg   there   tpc

kahut ponval misan in   to   yu.
card   two   only   be   com   pig

'Only two of these men from Au and who are working for you have pigs.'
(Throop & Ross 2002: 396)

3.2.3   *Conditional, counterfactual and time-frame clauses*
Time clauses have no other explicit marking than being marked as fronted and backgrounded frames by *men*.

(8)   Kaulong
[*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.'
(Throop & Ross 2002: 409)

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7.   *Ma* 'and', *u* 'and', *kuma* 'and then', *kama* 'and so' (consequence), *takuma* 'but', *si* 'and, but, and then, and so', *sini* 'instead, while', *va* 'or' (alternation).

8.   Reported speech is marked by the locative preposition *po*, and cause clauses are headed by the preposition *epo* 'about, with, for' (Throop & Ross 2002: 409).

'Before' clauses are expressed by using the perfective and the negation markers, they are correlated to the main clause by the coordinator *ma*:

(9)   Kaulong
[*Li   lais   hiang li pi   om kur*] *ma hiang pir*
3sg.fr   coil.around   3sg.m   go   place   neg   pft   and   3sg.m   stand

e   mir   mir   to   li   mi   ehul
and   stagger   stagger   com   3sg.fr   inside   plant.growth

uva   sangga].
shoulder   Tahitian.chestnut.tree

'Before it (python) had completely coiled itself around him, he stood and staggered with it inside the plant growth of the Tahitian chestnut tree.'
(lit. it had not yet coiled itself … and he stood…)   (Throop & Ross 2002: 391)

Condition clauses display an irrealis marker *(ta)ku* and are marked either as topic frames as in the preceding examples, or as restrictor foci as in (10); *Kha* marks the bracketed clause as a focused restrictor protasis for the following apodosis:

(10)   Kaulong
Vut   tin   vala   men [**ku** *hun* **kha**] *vut   hun ma hiang tin*
3sg.f   dem   woman   tpc   irr   die   foc   3sg.f   die   and   3sg.m   dem

masang men[9] *ku in   li   hiang hun pet   kira   titit-en.*
man   tpc   irr   live   go   3sg.m   die   follow   back   spouse-3sg

'She, the woman, should she die (foc), (then) she dies and he, the man, he will continue living (and) he dies following his wife.'   (Throop & Ross 2002: 393)

4.   From coordinators to topic markers and other clause-linking functions

In Austronesian languages, some coordinators often develop into topic or focus markers (see Bril in press); this occurs via topic maintainance (with 'and' coordinators), via topic switch (with contrastive 'but' coordinators) or via correlative functions.

4.1   Borneo languages (Austronesian)

Various Borneo languages display such functional evolution; one such case is Timugon Murut, where *am* 'and' is also a contrastive topic marker and a clausal frame marker (11b).

(11)   Timugon Murut (Borneo, Sabah)
a.   *Aku* **am** *t⟨imin⟩utup   aku ak   ra   tunturing ti.*
1sg   and   ⟨act.past⟩-shut.self   1sg   just   obl   ricebin   this
'As for me, I just shut myself up in this ricebin.'
(Brewis & Levinsohn 1991: 38)

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9.   Note also constrastive function of the topic marker *men* on the NPs 'men' and 'women'.

b. *Ba ginio **am** andu-on mu ak i-ali' ti.*
    well that and marry-PAT you.GEN just PIVT-younger.sibling this
    'Well, that being the case, you'll have to marry this younger sibling.'
    (Brewis & Levinsohn 1991: 37)

In Tombunuo, the sequential connector *om* 'and' marks topic continuity whereas the adversative-constrastive connector *nga* 'but' signals topic shift, a fact noted in other Austronesian languages (Bril in press).

(12) Tombunuo (Borneo, Sabah)
      *Roraa ri **nga** pilion nio.*
      maiden that ADVS chose he
      'As for that maiden, he chose her.'   (King 1991: 58)

In Coastal Kadazan, sequential and additive *om* 'and' and adversative *nga'* 'but' also function as informational hierarchy markers: *nga'* signals topic shift and contrast (13b), while *om* signals topic continuity (13c). They are also used as correlative morphemes between subordinate and main clause, marking continuity or contrast between events. Compare the coordinating *nga'* in (13a) and its correlative function in (13b) between a time frame subordinate clause marked by *nopo* and the other clause.

(13) Coastal Kadazan (Borneo, Sabah)
      a. *Intang-ai no dau i Lonsibog **nga'** poingodop.*
          look.at-REF.RED PFT 3SG DEF Lonsibog ADVS sleep
          'He looked at Lonsibog, but he was sleeping.'   (Miller 1991: 123)

      b. *Pihapak **nopo** ino do duvo, **nga'** kivaa do tanak.*
          split TPC DEM INDEF two ADVS exist INDEF child
          'When the rock split into two, there were children.'   (Miller 1991: 128)

      c. *Koiduai **nopo**[10] dii disido ii, **om** pamanau no vagu'.*
          release TPC ANAPH 3SG.M ANAPH and walk PFT again
          'After he released it, he continued on his way.'   (Miller 1991: 118)

Nopo nga' also appears between topic and comment in categorical predications:

(14) Coastal Kadazan
      *Ngaan ku **nopo nga'** zi Landin.*
      name 1SG.N.PIVT TPC ADVS DEF Landin
      'My name is Landin.'   (Miller 1991: 128)

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10. *Nopo* combines the completive and anaphoric *no* and the incompletive and forward-looking *po*, it marks the first part of the construction as the topic and points forward to the comment which follows (Miller 1991: 126–127).

4.2   New Caledonian languages (Remote Oceanic)

Various New Caledonian languages display a similar use of coordinators as topic markers. Topic constructions often use discontinuous morphemes, a presentative marker and a correlative coordinator indicating continuity as in Cèmuhî.

(15) Cèmuhî (North New Caledonia)
      Mēpwō̃ ā-nĭ kā ō tĕ ā cúɔ́ éli hḛ̀-nyù̀.
      as.for. this and FUT ASS NEU.ART small reservation of-us
      'As for that, we kept it for us.'   (Rivierre 1980: 211)

Similar constructions occur in other northern languages: in Nyelâyu, *wam… ka~kam* 'as for … and/but, then' (Ozanne-Rivierre 1998: 57, 62); in Nemi, *pmwavo… ko~(x) o* 'as for …and' (Ozanne-Rivierre 1979: 39); in Jawe, *phwâvo… o*; in Fwâi, *fwâvo… o* 'there is …and'. In Ajië (South New Caledonia), *wɛ* is both a coordinator and topic marker.[11] As a conjunctive marker, it may appear in sentence initial position meaning 'so, and then', it may also have an explicative meaning 'as, then' (La Fontinelle 1976: 225, 329–330).

(16) Ajië (South New Caledonia)
      *Pani-ɲa **wɛ,** na vi-rru.*
      mother-POSS.1SG TPC 3SG sow
      'As for my mother, she is sowing.'   (La Fontinelle 1976: 193)

4.3   Nêlêmwa (VS, VOA, New Caledonia, Bril 2002)

Like many Oceanic language, Nêlêmwa has a variety of coordinators and logical connectors (Bril 2002, 2004). Coordination, complementation and subordination are all attested conjunctive types (Bril 2002).

4.3.1   *Sequential and topic marker* xe
The sequential coordinator *xe* (formerly *ke*) has developed several functions, as topic marker and as conjunctive marker in some relative and (factive) complement clauses.

4.3.1.1   *Sequential conjunctive marker* xe
As a sequential marker, *xe* mostly appears sentence initially as in (17) where the first *xe* takes the preceding discourse as backgrounded and topical, and further elaborates on

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11. Loyalty Islands languages use similar constructions: in Drehu *ame … tre* 'as for…then' or *ame … ke* 'as for … so' (*tre* 'then' or *ke* 'so, as') (Moyse-Faurie 1983: 197, 201); in Iaai, *haba… me* 'as for …and' (Ozanne-Rivierre 1976: 133).

2nd proofs

it. The topic function of *xe* appears in the second occurrence of *xe* in (17), and marks the clause *yo axe-ve* '(what) you saw' as the topic frame:

(17)   Nêlêmwa
*Na   i   shumwiny mwa Pwâ-Hivic: "**xe** yo   axe-ve **xe** yo   axe*
and 3SG do.thus   SEQ Pwâ-Hivic CONJ 2SG see-DIR TPC 2SG see

o   da?, fo   idaama-m?
INSTR what? there.is eye-POSS.2SG

'And Pwâ-Hivic then says: "so, (what) you saw (TPC), what did you see it with?
Do you have eyes?"'   (Bril fieldnotes 1995)

4.3.1.2   *Topic marker* xe

Example (18) illustrates its use as a contrastive topic marker at constituent level:

(18)   Nêlêmwa
*Na   hla   **xe**   hla khu na,   na   co   **xe** yo   khuxi*
and 3PL.FR TPC 3PL eat excrement but 2SG.FR TPC 2SG eat.TR

caa-m   mido.
food-POSS.2SG taro

'And as for them, they will eat excrements, but you, you will eat your taro-food.'

In the architecture of main and dependent clauses, the neutral order is Main–Subordinate; in the reverse order, the subordinate clause is topicalised and marked by *xe*. This holds for time and condition clauses. The only subordinate clause which cannot be topicalised are purpose clauses which are in a logically iconic order and are marked by the all purpose conjunctive marker *me*.[12] Causal clauses also prefer the logical (cause–consequence) order (19a), rather than the syntactic order (Main–Subordinate). In (19b), the consequence is topicalised with *xe*.

(19)   Nêlêmwa
   a. *Puxe-t khîlû i   ye   **me** kio i   haxa hma shaya.*
       cause illness PREP 3SG CONJ NEG 3SG almost a.lot work
       'Because of his illness, he almost does not work any more.'
   b. *Kio i   haxa hma shaya **(xe)** puxe-t khîlû i   ye.*
       NEG 3SG almost a.lot work (TPC) cause illness PREP 3SG
       'He almost does not work any more because of his illness.'

4.3.2   *Relative clauses with* xe

As in Sobei and Takia (see Section 5.4.1), there are two types of relative constructions based on informational and referential status. In Nêlêmwa, relative clauses with

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xe bring unanchored, new information; while relative clauses with a demonstrative marker (20b) refer to known and referential determination (Bril 2001, 2002). This function of *xe* originates from two formerly conjoined clauses[13] and two assertions.

(20)   Nêlêmwa
   a. *Na   fhe   pwaxi-n   **xe**   i   khîlû.*
       1SG bring child-POSS.3SG CONJ 3SG be.ill
       'I bring his child who is ill.'   (Bril 2001: 262)
   b. *Na   fhe   pwaxi-n   **bai**   (i)   khîlû.*
       1SG bring child-POSS.3SG ANAPH 3SG be.ill
       'I bring his child who is ill.'   (Bril 2001: 262)

In contrast with relative clauses with *xe* (20a) which contain two assertions, relative clauses with a demonstrative (20b) are prosodically and syntactically more integrated, as proved by the optional deletion of the coreferent subject index in (20b), but not in (20a). Furthermore, relative clauses with *xe* are restricted to factive clauses which presuppose the existence of the entity (21a); if the referential status is uncertain, hypothetical (21b) or under the scope of a negation (21d), the irrealis marker *o* then appears. Compare with relative clauses referring to already referential determination and marked by a demonstrative in (21c):

(21)   Nêlêmwa
   a. *Fhe-dume   hele **xe**   caak.*
       bring-down.here knife CONJ be.sharp
       'Bring me a sharp knife (lit. a knife which is sharp';
       I know there is one)   (Bril 2001: 268)
   b. *Fhe-dume   hele **o**   caak.*
       bring-down.here knife IRR be.sharp
       'Bring me a sharp knife.' (lit. a knife which would be sharp';
       if there is one)   (Bril 2001: 268)
   c. *Fhe-dume   hele **bai**   caak.*
       bring-down.here knife ANAPH be.sharp
       'Bring me the sharp knife'   (Bril fieldnotes)
   d. ***Kio** wa   tuuli foliik **o**   cêê diyawo   na   na-t.*
       NEG 2PL find thing IRR very important LOC inside-it
       'You did not find anything important in it.'
       (lit. you did not find something IRR important in it) (Bril fieldnotes)

4.3.3 Xe *as a factive complementiser (perception or cognition verbs)*
Whether in relative or complement clauses, *xe* and *o* appear contrastively as marking realis vs. irrealis events. As a complementiser, *xe* marks the factive complements of perception or cognition verbs; whereas *o* appears with verbs indicating uncertain events (*haûk o* 'not know if', *fweneng o* 'beware of', *havava o* 'hesitate to') (Bril 2000: 448–460). While the topic function may be associated with a slight pause (after *xe*), there is no pause between the head verb and the clausal complement. This function of *xe* also originates from two formerly coordinate clauses.

(22) Nêlêmwa (Bril fieldnotes 1994)

a. *Na   i   u   tâlâ da   mwaida ni kûû   jahoot xe*
     and   3sg PFT hear up   up.there in source river   CONJ

    i   tho-du-me.
    3sg   call-down-here

    'And he hears up there at the source of the river that he is calling down here.'

b. *Na kaxaak xe   na   â   Pum.*
    1sg be.sure CONJ 1sg go Pum
    'I'm sure to go to Pum.'   (Bril 2001: 264)

c. *I   khacac o   i   â.*
    3sg hesitate IRR 3sg go
    'He's unsure whether to leave.'   (Bril 2001: 268)

4.3.4 *Discussion*
As a sequential coordinator, *xe* 'and' (formerly *ke*) links clauses which are on the same syntactic level and express some logical and sequential relation between them. As a topic marker, *xe* delimits a frame and a comment clause. Its function as a conjunctive marker in some factive relative clauses and complement[14] clauses also derives from originally coordinated clauses and assertions referring to independent events: the adnominal relative clause was originally a coordinate clause (from 'I met the woman and she is learning Nêlêmwa' to 'I met the woman who is learning Nêlêmwa'). Similarly, the complement clauses (of perception or cognition verbs) originally expressed the perceived or cognitively apprehended event as a loosely correlated clause with additive or sequential semantics; this further syntacticised as a verbal complement. Haiman shows that in Hua (Papuan) some types of complement clauses have different constructions:

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14. Croft (2001: 351–353) points out that complement clauses often originate from coordinate or purposive subordinate clauses.

"In Hua, a *quote* is treated as the object of a verb of saying (and, as an object, precedes this verb), while a *perception* is not treated as the object of a verb of perception (and, thus, follows this verb)."   (1988: 64)

Sequential linkers ('and then, and so') order events in logical and time sequence and often express causal, consecutive or purposive relations. As they contain some implication, they are semantically asymmetrical, which accounts for their frequent cross-linguistic use as correlative markers in time, conditional and consecutive clauses.[15] Correlative and implication markers are on the border line between clause coordination and subordination, as in *another word and I leave* or *you calm down or I scream*!

5. Coordination, topic, focus markers and deictic strategies in clause-linking: The case of Takia

The focus will now be on Takia's[16] clause-linking strategies, which epitomise some types often found in Western Oceanic languages. Three markers will be analysed: (i) the coordinator and focus marker =*(a)k*, (ii) the topic marker *man*, (iii) and the demonstrative markers DX2 *an*, DX1 *en*. Their clause-linking functions are based on informational or referential hierarchy (see Bril in press). Takia's clause linking types include (paratactic) coordination, co-subordination, clause-chaining, and subordination for relative, complement and purpose clauses (marked by conjunctions or nominalisation).

5.1 Subordination

5.1.1 *Adverbial clauses*
Takia is described as having no conjunctively marked adverbial clause (Ross 2002: 241): adverbial clauses are marked by logical and semantic inferences,[17] or by foreground-background strategies (see Verstraete this vol. for inferential encoding).

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15. In Old French, apart from their coordinating function, both *si* 'if' (in modern French) and *et* 'and' could link a main clause to (i) a time adverbial clause, (ii) a conditional clause, (iii) a relative clause with a correlative morpheme and an anaphoric pronoun.

16. Takia belongs to the same North New Guinea cluster as Kairiru and Manam, though to different linkages: Kairiru and Manam are closely related (Schouten linkage); Takia belongs to the Vitiaz linkage.

17. Some clauses may be reversible without much syntactic change, and interpretation varies with sequential order.

5.1.2   *Other subordinate clauses*

Subordination appears mostly (i) for purpose clauses referring to events incomplete at the time of speech (23a), and (ii) for complement clauses of verbs of desire or request (23b); both are marked by the intentive predicate enclitic mood marker *(w)o* '(in order) to' (Ross 2002: 246).

(23)   Takia (SOV, Western Oceanic, PNG, Madang Province)
    a.   *Oŋ*   [*anaŋ* *w-ani*   ***wo***] *ø-palu*   *ya.*
        2SG   food   2SG-eat INT 2SG-come R
        'You came in order to eat.'   (Ross 2002: 246)
    b.   *Iŋ*   *ŋai*   [*ŋ-au*   ***o***] *i-bol*   *a.*
        3SG 1SG 1SG-go INT 3SG-speak R
        'He told me to go.'   (Ross 2002: 247)

The other main strategy is nominalisation with a possessive classifier (*ane-* or *sa-*); this appears in negative existential clauses (24), in some negative complement clauses and some relative clauses (see below).

(24)   Takia
    [*Maŋ*   *dugo*   *ma-bol*   ***sa-n***]   *tia*   *ya.*
    1PL.EXC what 1PL.EXC-speak POSS-3SG not.exist R
    'There is nothing we can say.'   (Ross 2002: 240)

5.2   Subordination and clause-chaining

Subordination and clause-chaining are marked by clausal enclitics expressing sequential, chronological (before, after) or simultaneous events (while), as well as causal, explicative and conditional relations. These enclitics are former conjunctions, now mostly used as mood indicators (=*go* realis dependent, =*pe* irrealis dependent) or aspect markers (=*do* continuative, =*gu*[18] completive). Cause-reason clauses are marked by =*ta* (Ross 2002: 244; 1993: 65–66). Loose clause-chaining and complementation are marked by *de* (25) (Ross 2002: 243–45).

(25)   Takia
    Pas   *ŋi-gire*   ***de*** *Mait* *i-li-ag*   *a.*
    letter 1SG-write DEP Mait 3SG-see-1SG R
    'Mait saw me writing a letter.'   (Ross 2002: 243)
    (lit. I wrote a letter and M. saw me)

While the co-subordinators =*go* and =*de* link events with some 'natural' connection, coordination with =*(a)k* connects events with speaker-imposed logical relation (Ross 1993: 58–59).

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18.   After a vowel, they appear as =*g*, =*p*, =*d*.

5.3   The coordinator and focus marker =*(a)k*

Coordination is essentially asyndetic in Takia, except between clauses where it may be marked by =*(a)k*[19] which is cliticised to a clausal mood or aspect marking particle.

5.3.1   *Clause coordination with* =(a)k
=*(a)k* has no semantics of its own, the semantic relation is contextually inferable. It mostly refers to simultaneous, parallel, alternative events; it is also used for reported speech and for logical (causal) connections between events established by the speaker (vs. events with some 'natural' connection) (Ross 1993: 58–59).

(26)   Takia
    Matu *ulat* *ŋuga=da=**k***   *a*   *kris*   *tamol* *pein*   *ŋaŋal=da.*
    senior work 1SG.do=IPF=AK DX2 Christian man woman 1SG.get=IPF
    'I do the work of an elder and I lead the Christians.'   (Ross 1993: 59)

Consecutive relations are marked by the conjunction *akot* 'and so, and consequently' (the contraction of *ak* and the locative marker *ote* 'yonder') (Ross 2002: 243). The functions of =*(a)k* in clause-linking cross-cut the coordination-subordination dichotomy; it appears in constructions that are equivalent to both, including relative clauses (Ross 2002: 235).

5.3.2   *Selective, informative and contrastive focus with* =(a)k
The second important function of =*(a)k* is as a focus marker. It appears in polar questions involving some presupposition and is enclitic to the informative[20] focal expression (Ross 2002: 228).

(27)   Takia
    a.   *Oŋ*   *pein*   *u-le=**k**?*
        2SG.FR woman 2SG-see=AK
        'Have you met a girl?'
    b.   *Awo=**k**,* *ŋai* *ŋi-le*   *ya=**k***
        yes-AK   1SG 1SG-see R=AK
        'Yes, I HAVE.'   (Ross 2002: 236)

Example (27c) is the answer to 'what could you cook?'

    c.   *Malkouk=**ak*** *sa-d*   *anaiŋ* *ŋi-nei*   *a=n.*
        white=AK   POSS-3SG food 1SG-cook IRR=DEF
        'I could cook WHITE men's food.'   (Ross 2002: 228)

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19.   =*ak* is cliticised to a final consonant or after a pause between clauses, otherwise =*k*.

20.   Informative/completive focus (in answer to a question for instance) contrasts with restrictive/exhaustive focus.

The other functions of =*(a)k* appear in relative and complement clauses, where it contrasts with the enclitic definite marker =*n* (see Section 5.4).

5.4 Subordinating strategies: =*(a)k* vs. the definite clausal enclitic =*n* vs. nominalised subordinate clauses

In clausal subordination (relative, complement and some adverbial clauses), =*(a)k* marks asserted and unanchored information. It also indicates a looser syntactic bond than the definite enclitic =*n* (which also marks NPs as definite) and which indicates referential, presupposed information and stronger syntactic integration.

5.4.1 *Relative clauses*
A. =*(a)k* vs. =*n* construction
In relative clauses, the =*(a)k* vs. =*n* strategies are similar to those already encountered in Sobei or Nêlêmwa. =*(a)k* asserts some unanchored, focal determination while the more frequent =*n* strategy expresses referential and presupposed determination. They also correlate with definiteness: a definite NP appears with =*n* relative constructions (28a), while an indefinite NP appears with =*(a)k* constructions (28b).

(28) Takia
   a. *Ab*   ***a***   [*oŋ w-abi   ya=**n***] *ŋai Mait da   lo*
       house DX2 2SG 2SG-build R=DEF 1SG Mait COM 3LOC.in
       mu-mado   da.
       1EXC-stay IPF
       'The house that you built, Mait and I are living in it.' (Ross 2002: 230)
   b. *…iŋ aŋar*   [*parapar na   ya=**k***] *kaek ma-ŋa=p* …
       3SG canarium platform LOC R=AK one   1PL.EXC-take=IRR.DEP
       '… so we take one canarium nut which is on the bed and …'
                                                              (Ross 2002: 231)

B. Nominalised possessive construction
Another possible backgrounding and subordinating strategy is the use of nominalised possessive construction in relative clauses.

(29) Takia
   *di-ani   **sa-n***   *an.*
   3PL-eat POSS-3SG DX2
   'Those (things) for them to eat.' (lit. that (which is) their eating)
                                                              (Ross 2002: 231)

5.4.2 *Complement clauses (perception, cognition, utterance, ability verbs)*
A. =*(a)k* vs. =*n*
Again the difference between =*(a)k* vs. =*n* lies in the focal, asserted features marked by =*(a)k* vs. the presupposed and referential information status marked by =*n*. In (30a),

the two clauses are asserted and the reported speech clause is more loosely concatenated; whereas in (30b), the complement clause is embedded, its propositional content is marked as presupposed and referential by the definite enclitic =*n*. Subordination in (30b) further appears in the modal opposition between realis and irrealis; the irrealis *wa-* in (30b) has generic meaning and refers to a norm.

(30) Takia
   a. *Ago-go   uya-n   a-**k***   *du-bol.*
       PRO-R:D good-3SG R=AK 3PL-speak
       'Then/so, they say it is good.' (lit. thus, it is good they say) (Ross 2002: 242)
   b. *Bin* [*i-siti   wa-**n***] *i-loŋ   a.*
       Bin 3SG-read IRR-DEF 3SG-hear **R**
       'Bin has learnt/knows how to read.'   (Ross 2002: 246)

B. Nominalised complement clauses
Some complement clauses can also be nominalised with a possessive construction (31), similarly to the relative clause in (29).

(31) Takia
   *ŋai man [nek du-fun-ag   ŋa-mat **ane-n***]   *ŋa-moi.*
   1SG TPC just 3PL-hit-1SG 1SG-die POSS-3SG 1SG-not.want
   'As for me, I just did not want to kill them.'   (Ross 2002: 248)

5.4.3 *Reason clauses with* =(a)k *vs.* =n
Reason clauses show the same twin constructions varying with asserted, unanchored, focal information with =*(a)k* vs. presupposed and referential information with =*n*. Though more data would be needed to confirm this, I interpret the clauses as equally asserted and coordinate in (32a), while in (32b), the reason clause is presupposed, backgrounded and marked as subordinate by =*n*.

(32) Takia
   a. *Oŋ   u-rer   a=**k***   *niŋe-n   ta   w-au   na   ya.*
       2SG 2SG-fear R=AK matter-3SG NEG 2SG-go DUR R
       'You were afraid and for that reason you didn't go.'   (Ross 2002: 247)
       (my translation; Ross translates both sentences (a–b) as 'because you
       were afraid you didn't go', but suggests that the clause may be in
       apposition to *niŋe-*)
   b. *Oŋ   u-rer   a=**n***   *niŋe-n   ta   w-au   na   ya.*
       2SG 2SG-fear R=DEF matter-3SG NEG 2SG-go DUR R
       'Being afraid, you didn't go.' Or 'You didn't go for the reason that/because
       you were afraid.'   (Ross 2002: 247) (my translation)

5.5 Clause linking and sequencing functions of DX2 *an*, DX1 *e*, *en*

Deictic markers have various clause-linking functions. The medial demonstrative DX2 *an*, and the proximal demonstrative DX1 *e, en* have pronominal and adnominal uses.

2nd proofs

In their adnominal use [NP *an ~ e, en*],[21] they mark definiteness: *mau an* 'that taro'; *am en* 'this story' (Ross 2002: 240).

(33)   Takia
       An   goun   tia   ya.
       DX2   dog   not.exist R
       'That is not a dog.'   (2002: 240)

As a clause-linking marker and endophoric reference-tracking device, the medial deictic DX2 *an* has a heavy functional load (Ross 2002: 224).

5.5.1   *Recapitulative function of dx2 an in sentence-initial position*
In sentence-initial position, DX2 *an* 'thus, so' is recapitulative and cohesive, it refers back to a preceding clause or sentence (Ross 2002: 245).

(34)   Takia
       An   misin   a   [du-palu   ya=n]   iŋ   urat   nek   ago   fu-n
       DX2   mission   DX2   3PL-come   R=DEF   3.FR   work   CTRST   thus   base-3SG

       du-ga   ya.
       3PL-do   R

       'Thus, the missionaries who came, they started their work in this way.'
                                                                       (Ross 2002: 230)

5.5.2   *Clause sequencing with dx2 an … an… dx1 en*
DX2 *an* and DX1 *en* are primarily paratactic links between discourse entities. Clauses are sequenced with DX2 *an*, while consecutive relations are marked with proximal DX1 *e(n)* 'here, this' expressing the immediate consequence of the preceding action (Ross 2002: 245).

(35)   Takia
       [*Bog   i-du*]   *an*   [*i-fun-ai   de   i-bol*]   *an*   [*suŋuro-n   wog*
       eagle   3SG-descend   DX2   3SG-kill-3PL   DEP   3SG-say   DX2   beak-3SG   canoe

       lo   i-sofute]   *en*   *i-mat.*
       in   3SG-ram   DX1   3SG-die

       lit. the eagle descended, (DX2) he thought he would kill them, (DX2) his beak rammed into the canoe, DX1 he died
       'The eagle descended thinking he would kill them, [but] his beak rammed into the canoe and consequently he died.'   (Ross 2002: 245)

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21.   The demonstrative *en* signals the final boundary of the definite NP (and may only be followed by a quantifier; *e* is used when one or more modifiers follow the definite NP (as in relative clauses) (Ross 2002: 224).

5.6   Clause-linking functions of =(a)k an and =(a)k en

When combined with =*(a)k*, the deictics DX2 *an* and DX1 *en* have other clause-linking functions.

5.6.1   *Complement clauses with* =(a)k an
Complement clauses with =*(a)k* (36a) stand in contrast with those marked by the definite marker =*n* (see ex. (30), Section 5.4.2). The third possible construction combines =*(a)k an* (DX2) as in (36b).

(36)   Takia
       a.   *ŋai   ŋa-loŋ   a=k   iŋ   i-palu   wa.*
            1SG.FR   1SG-hear   R=AK   3.FR   3SG-come   IRR
            'I have heard he will come.'   (Waters & Ross 2002: 242)

       b.   *Iŋ   i-palu   wa=k   an   ŋai   ŋa-loŋ   a.*
            3SG.FR   3SG-come   IRR=AK   DX2   1SG.FR   1SG-hear   R
            'I have heard that he will come.' (lit. he will come and [that] I have heard)
                                                                (Waters & Ross 2002: 242)

The first difference lies in clause order: in (36a), the clause containing the perception verb precedes the clause referring to the event, while it follows it in (36b), thus placing the perceived event clause in the expected position of a clausal argument in a SOV language. But the other main difference lies in the anaphoric function of DX2 *an* in (36b), which, as a propositional anaphora, refers back to the first clause and suggests a looser clause relation.

Again SOV Hua offers some interesting perspective; Haiman (1988: 64) notes that "[…] a *perception* is not treated as the object of a verb of perception (and, thus, follows this verb). There are thus two constructions of perception verbs in Hua; the first treats the perception as the verb's object, the complement clause is then headed by a relativised noun *na* 'thing' and precedes the perception verb (37a).

(37)   Hua (Papuan, Haiman 1988, SOV)
       a.   [*Eva'   kutta'na   ripa'   na-mo*]   *kgoe.*
            money   theft   take(2SG.REL)   thing-(NMZ)   I.saw.you
            'I saw you stealing the money.'   (Haiman 1988: 61)

But this is rare and

> "[…] limited (it seems) to clauses which represent propositions whose validity is presupposed. […] and are acceptable only if the fact is already common knowledge, and what I am reporting as news is only the fact that I observed it."
>   (Haiman 1988: 61)

The other construction makes use of the inconsequential marker *'mana*, when the propositional content refers to non-presupposed event "where my observation

validates the truth of what I describe". The perceived event then follows the perception verb.

> b. *Ka-'**mana*** *navibo* *rgi'* *'a'baivao.*
> look (3DU.INCONS)   in.there   really   they.are.not
> 'The two of them looked (and saw) that they really weren't in there.'
> (Haiman 1988: 61)

"[…] The inconsequential form is then used where the complement is not subjective, and, as a non-object clause, follows the verb of perception." (Haiman 1988: 64)

Haiman then compares all the possible constructions of the complement clauses of perception verbs as follows:

> "This may, then, be the best explanation for the use of the inconsequential construction for expression of the relationship between acts of perception and the acts perceived. The construction is used because none of the other available constructions is appropriate. They make unacceptable claims about the semantic relationship between the two events in question: either by claiming that the event perceived is already *common knowledge* (the relative clause construction), or by claiming that the event perceived is a *physical product of the act of perception* (the direct quote construction), or by claiming that the event perceived is *purely subjective* (the *-gasi'* gerund construction), or by claiming that the *act of perception precedes and/or is the cause of the event perceived* (the medial construction)." (Haiman 1988: 65) [My italics].

The chaining (medial) construction which signals a consecutive relation such as *you came up (and) I saw you* implies that the event is prior to the perception; the reverse order with the same construction, *I looked at you and consequently you came up*, is unacceptable unless the intended meaning is that the perception is the cause of the event. Subordinating strategies are thus highly sensitive to semantic factors such as modality (realis, irrealis), reference and logical relations. The data in Takia might be analysed from such a perspective.

5.6.2   *Clause-linking with* =(a)k *and dx1* e ~ en

Clauses marked by =*ak* and the endophoric DX1 *e ~ en* express consecutive and deductive relations (Ross 2002: 245). But constructions with DX1 *e* are subordinate-like, and based on referential strategy. In (38a), the rightmost boundary of the first clause is marked by final DX1 *e*, followed by a pause, [=*(a)k e*| (pause)], the first clause is thus backgrounded, presupposed and subordinate, similar to a participial clause. In (38b), the pause is before *en* [(pause) =*(a)k* | *en*] and DX1 *en* is in the initial position of the second clause, it stands as the propositional anaphora of clause 1, recapitulates its propositional content, and acts as a correlative marker expressing causal-consecutive relation.

> (38)   Takia
> a. *ŋai*[22] *pein* *ŋu-le* *la* *i=**k*** ***e,*/** *oŋ* *pein* *ta*
> 1SG.FR   woman   1SG-see   TERM   R=AK   DX1   2SG.FR   woman   INDEF
>
> *u-le* *o.*
> 2sg-see   INT
>
> (lit. I have met a girl (given this DX1), you should meet a girl (too).
> '(as) I have (already) met a girl, you should meet a girl (too).'
> (Ross 2002: 242) [| marks a pause)]
>
> b. *Id* *mala-d* *y-of* *da=**k** /* *en* *panu* *na*
> 1INCL.PL   eye-1INCL.PL   3SG-close   IPF=AK   DX1   village   LOC
>
> *t-au* *wa.*
> 1INCL.PL-go   IRR
>
> (lit. Our eyes are closing, given this we will go home)
> '(As) we are sleepy, so we will go home.'   (Ross 2002: 245)

The demonstrative's position thus signals distinct informational functions: backgrounding subordination of the first clause with DX1 *e* in (38a) with =*ak* possibly acting as a restrictor focus marker; and a looser type of clause-linking in (38b) with clausal anaphoric DX1 *en*.

5.7   =*(a)k* combined with the topic marker *man*

The topic marker *man* indicates a switch of topic between already referential topics; there is usually no intonation break after *man*. It is different from mere fronting without any other marker (Ross 2002: 238).

> (39)   Takia
> a. [*ŋai* *sa-g* *boi* *an* *(**man**)*] *iŋ* *e* *sip*
> 1SG.FR   POSS-1SG   servant   DX2   (TPC)   3.FR   DX2   ship
>
> *sa-n* *tamol.*
> POSS-3SG   man
>
> '(As for) my servant, he is a sailor.'   (Ross 2002: 237)

Sentence-initial *man* indicates that the preceding utterance is presupposed and topical ('as for that, thus').

> b. *Gu=**g*** *milae-n* *tina-n* *a.* —   ***Man*** *u-moi.*
> CONT=R.DEP   long-3SG   big-3SG   R   TPC   2SG-not.want
> 'But it's very long.'   'Don't worry about that.'
> (Ross 2002: 245)

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22.   Independent pronouns signal a change of topic. When there is no topic switch, the reference to the current topic is only marked by affixes on the verb.

In (40), the condition clause (marked by the reason marker *ta* and the irrealis dependent morpheme =*p*) is marked as a topic clause by *man*:

(40)   Takia
*You   nam   gireŋ   mi-gane   **ta**=**p**   **man** /   aŋar   saen   da.*
water   INST   oil   1PL.EXC-do   REAS=IRR.DEP   TPC   canarium   bad   IPF
(lit. because we mix the oil with fresh water (TPC), the canarium goes bad)
'(If) we mix the oil with fresh water, the canarium goes bad.'   (Ross 2002: 244).

5.7.1   *The contrastive conjunction* ak man *in coordinate clauses*
The contrastive conjunction *ak man* 'but' occurs in sentence or clause initial position, after an intonation break; it indicates a topic shift between otherwise coordinate clauses.

(41)   Takia
*ŋai   nor   ŋu-palu   ya,   **ak   man**   oŋ   tia   ya.*
1SG.FR   yesterday   1SG-come   R   AK   TPC   2SG   not.exist   R
'I came yesterday, but you did not.'   (Ross 2002: 242)

5.7.2   *Cliticised* =(a)k man *in subordinate clauses*
In contrast with the conjunctive *ak man* 'but' in (41) above, in (42), the cliticised =*(a)k man* has scope over the topic clause to its left. The Dx2 *an* in initial position of the following clause of (42) is the propositional anaphora of the preceding frame clause, a correlative marker linking the frame clause and the clause which contains the main assertion.

(42)   Takia
*Ta   i-win   na   i=**k**   **man** | **an**   dal   na   i-mul.*
NEG   3SG-win   DUR   R=AK   TPC   DX2   path   LOC   3SG-return
(lit. he does not win [the race] TPC, (given) that he turns back)
'(When/as) he does not win [the race], then he turns back.'   (Ross 2002: 244).

5.8   Discussion

Coordinate clauses with equal assertive/illocutionary force thus stand in contrast with clause-linking strategies based on asymmetric assertive force, using either (i) informational hierarchy (topic or focus) markers, contrasting presupposition vs. assertion, or (ii) referential hierarchy devices such as determiners or definite markers which may function as subordinators or as looser correlative markers.

    A further strategy involving a differential case-marking system will now be analysed in Roviana.

6.   Case-marking and focus strategies in clause-linking: The case of Roviana (Oceanic, Solomon Islands)

According to Corston (1996, 2002), the preferred clause-linking strategy in Roviana is coordination; subordination is extremely limited. Relative and complement clauses are marked by *sapu* (43b), but the latter are uncommon: the preferred strategy is to use (i) an epistemic modal such as *gina* 'maybe' rather than a matrix verb of cognition, or (ii) a conjunctive expression composed of 'and' coordinators and a quotative marker indicating epistemic doubt as in (43a).

(43)   Roviana (Corston-Oliver, in Lynch et al. 2002)
a.   *Mala   hite   si   rau   **meke   gua   meke**   lopu   ruku   sa   popoa.*
afraid   little   ABS   1SG   and   say   and   NEG   rain   DEF   place
'I am afraid that it might not rain.'   (Corston-Oliver 2002: 496)
b.   *Matatagu   se   John   **sapu**   kote   seke-i-a   (e)   Zima*
fear   ABS   John   COMP   FUT   hit-TR-3SG.O   ERG   Zima
se   Maepeza.
ABS   Maepeza
'John is afraid that Zima will hit Maepeza.'   (Corston 1996: 30)

Adverbial clauses are restricted to conditional and time clauses and are headed by *totoso* 'while, when', *beto* 'after', *pude* 'if'. Adverbial clauses have a number of specificities which set them apart from other subordinate clauses: (i) they occur in clause-initial Focus/Topic position[23] which is part of the subordinating strategy; (ii) they are optionally marked by the 'focal' marker *si*; (iii) they display neutral case marking (not the absolutive/ ergative morphology found in main clauses); (iv) they have a distinct intonational contour; (v) they never contain new information in core argument positions (although they may in other syntactic positions) (Corston-Oliver 2002: 496).

    Main clauses (as well as relative and complement clauses) thus display a split ergative system, while adverbial subordinate clauses have a neutral case system. In (44a–b), the subordinate clause is focused by *si* and the pronoun *goi* 'you' is in the neutral case[24], while it is marked by the absolutive marker *si* (*si goi*) in the main clause. The

---

23.   Roviana has the basic order [(top)VAO or (top)VS].

24.   Absolutive pronouns are marked by *si*, while ergative and neutral pronouns are marked by the same paradigm. Proper nouns are marked as absolutive by *se* and as ergative by *e*. Other quantified NPs are marked as absolutive by *si*, ergative is unmarked (Corston 1996: 12–13).

"focus" and absolute markers *si* are homophonous, and perhaps historically related, with the focus marker possibly originating from the absolutive case-marker.

(44)   Roviana
a.   [***Pude*** *la*   *goi*   *pa*   *popoa* *taqa* *rau* *pa*   *Solomone* ***si***]
      if   go   2SG.NEU PREP place   POSS 1SG PREP Solomons   FOC

      kaqu *vagi*   *meresina* *si*   *goi.*
      must   gather   medicine   ABS   2SG

      'If you go to my place in the Solomons, you must get some medicine.'
                                                                (Corston 1996: 26–27)

b.   [*Totoso* *koa* *goi*   *pa*   *korapa* *tropic* ***si***]   *kaqu* *pezaku*
      when   stay 2SG.NEU LOC   inside   tropic FOC   must wash.hands

      lamo   *si*   *goi.*
      always   ABS   2SG

      'When you stay in the tropics, you must always wash your hands.'
                                                            (Corston-Oliver 2002: 495–497)

Adverbial clauses expressing concomitant events (45) display the same neutral case marking system; they are marked as backgrounded by a reduplicated verb. Compare the neutral pronoun *ri* 'they' in the subordinate clause, with the ergative (*ri*) and the absolutive NP *se Noki* in the main clause:

(45)   Roviana
      [*En-ene*   *ri*   *karua*] *tutuvi-a*   *ri*   *kara* *se* *Noki.*
      RED-walk   3PL.NEU two   meet-TR-3SG 3PL.**erg** two   ABS snake

      '(As) they were walking along, they met Snake.'
                                                            (Corston-Oliver 2002: 497)

The neutral case marking system also appears in clauses which are not syntactically subordinate, but which are presupposed and backgrounded frames as in (46a): this points to another shared feature between information structure and subordination. Compare with the two coordinate clauses in (46b) where the arguments of both clauses are marked as absolutive as in independent clauses:

(46)   Roviana
a.   [*Pa*   *ngati* *seda*   *si*   *habotu* *gami*]   *meke* *vivinei* ***si***
      PREP root   frangipani FOC   sit   1PL.EXC.NEU and   chat   ABS

      gami   *kara* *Granpapa.*
      1PL.EXC   two   Grandpa

      '(As) we were sitting under a frangipani and/then Grandpa and
      I were having a chat.'   (Corston 1996: 32)

b.   [*Pa*   *ngati* *seda*   *si*   *habotu* ***si*** *gami*] [*meke* *vivinei*
      PREP root   frangipani FOC   sit   ABS   1PL.EXC and   chat

      si   *gami*   *kara* *Granpapa*].
      ABS   1PL.EXC   two   Grandpa

      'We sat down under a frangipani and Grandpa and I had a chat.'
                                                                (Corston 1996: 32)

At constituent level, the "focus" particle *si* encodes contrastive topics as in (47a) or focus (47b–d) (ibid. 2002: 486).

(47)   Roviana (Corston-Oliver, in Lynch et al. 2002)
a.   *Arau*   *si*   *na*   *qua*   *g⟨in⟩ani*   *si*   *pa*   *batu* *huda.*
      1SG.FR FOC   INDEF   POSS.1SG   ⟨NOM⟩food   FOC   LOC   head tree
      'As for me, my food is in the treetops.'   (Corston-Oliver 2002: 486)

b.   *Esei* *poza-mu*   *si*   *agoi?*
      who   name-2SG   FOC   2.FR
      'What is your name?'   (Corston-Oliver 2002: 494)

c.   *Na*   *sa*   *si*   *kote* *hena-i-a*   *kohite* *veluvelu?*
      DISJ   what   FOC   FUT   eat-TR-3SG   today   evening
      'What are we going to eat this evening?'   (Corston-Oliver 2002: 495)

d.   *Totoso* *sa*   *si*   *kote* *beto*   *si*   *goi?*
      time   what   FOC   FUT   finish ABS   2SG
      'When are you going to finish?'   (Corston-Oliver 2002: 495)

Thus, neutral case marking, avoidance of newly mentioned arguments in adverbial clauses, and the occurrence of adverbial clauses in sentence initial (Focus/Topic) position, delimited by the focus marker *si* (indicating the restrictor variable), are part of the subordinating strategy contrasting presupposition vs. assertion, and are clearly related to informational hierarchy strategies.

7.   Referential hierarchy: Demonstratives and deictics as markers of subordination and clause hierarchy in Tawala

The function of demonstratives in clause-linking and subordination will be further investigated, based on data from Tawala (Western Oceanic). Eastern Oceanic languages such as Mwotlap (Vanuatu, François 2000) display similar clause-linking functions for demonstratives. Nêlêmwa uses them in relative clauses containing referential determination and in cleft constructions to mark the presupposed propositional content. Endophoric demonstratives are a frequent cross-linguistic mechanism of clause integration and subordination, optionally associated with a conjunctive marker, as in

French: *il lui a menti, /ceci ~ cela ~ ce qui/ n'arrangea pas la situation* 'he lied to him, / this ~ that ~ which/ did not improve the situation'.

In Tawala, deictics, demonstratives and definite markers have topic marking functions (see Section 7.3.), as well as clausal conjunctive functions, mostly in relative, time, conditional, cause, and explicative clauses. As in Takia (where Dx2 *an* marks sequential events and Dx1 *en* consecutive events) proximal and distal deictics are used for distinct clause-linking functions.

7.1   The polyfunctional coordinators *po* and *ma*

Tawala also displays polyfunctional conjunctions. The 'and' conjunctions *po* and *ma* are used for coordination and factive[25] complementation. The contrastive coordinator *ma* 'and, but' has other functions (Bril in press): (i) as a correlative conjunction linking adverbial clauses to main clauses, as in (48a) where the reduplicated verb *tugala* marks temporal overlap and durative aspect, (ii) as a contrastive and restrictive topic marker (48b), or as a focus marker at constituent level (48b) or at clause level (48c).

(48)   Tawala (SOV, Oceanic, Milne Bay, Papuan Tip, PNG)
    a.   *I-tugu-tugala* **ma** *hi-woe.*
        3SG-RED-sit   and   3PL-paddle
        'While he was sitting, they paddled.'   (Ezard 1997: 250)

    b.   *Yaka a   koyama uyahi-n'-ei* **ma** *a   luyagohana i-weme-ya.*
        so   his   lying   at-3SG-ABL   and   his   life   3SG-take-3SG
        'So by his trickery he saved his life.'   (Ezard 1997: 250)

    c.   *Geka*   **ma** *polo a-matut'-e-ya.*
        this/here   FOC   pig   1SG-fear-TRV-3SG
        'It was *here* that I was frightened by the pig.'   (Ezard 1997: 197, 250)

While *ma* 'and, but' marks a change of subject or topic, *po* conjoins clauses with a close, consecutive semantic relation and rarely introduces a new topic (ibid. 1997: 243).

7.2   Subordination

Among adverbial clauses,[26] cause clauses are marked by two postpositions *uyahi-n'-ei* and *ugoli-n'-ei* (lit. at-it-ABL) 'because of' and occur in the cause-result order (Ezard 1997: 237). Purpose of motion clauses such as *he went to the river to bathe* are generally juxtaposed and follow the motion verb. Time clauses (Section 7.4.1), are generally preposed to the main clause and are simply juxtaposed or correlated to the following main

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25.   Irrealis complementation is marked by *ipa* (irr mkr).

26.   Prosodically, sentences begin with a higher onset and end with a lower coda than clauses.

---

clause by *ma* 'and', *po* 'and' (with consecutive meaning), or they may be backgrounded with Dx2 *naka* (Section 7.4.2). Complement clauses also display various strategies, nominalisation, adpositional complements, conjunction with *po* 'and', the irrealis marker *ipa* and the demonstrative Dx2 *naka* (Section 7.4.3). Conditional clauses are usually in sentence initial position (Section 7.4.4).

7.3   Demonstratives as constrastive topic or focus markers

Our focus will now be on the functions of the medial demonstrative Dx2 *naka*[27] 'that, there' as a pragmatic topic and focus marker, and as a conjunctive marker in relative, condition, time and complement clauses. Its functions vary with its domain and scope. When preposed to an NP, *naka* has focal function (49a), as shown by the contrast with a neutral definite NP marked by *na* (49b).

(49)   Tawala (Ezard 1997: 144)
    a.   **Naka** *bada-**na** i-woe-woe.*
        DX2   man-DEF   3SG-RED-paddle
        'THAT man was paddling.'

    b.   *bada-**na** i-woe-woe.*
        man-DEF   3SG-RED-paddle
        'The man was paddling.'

All three deictic grades (Dx1 *geka*, Dx2 *naka* and Dx3 *noka*) have constrastive topic or focus functions. Topic maintainance and prominence of NPs is marked by postposed demonstratives, such as Dx3 *noka* in (50a) and Dx1 *geka* in (50b) (ibid. 1997: 143–144).

(50)   Tawala
    a.   *Ma* [*dobu-na* **noka**]   *dobu banei duma-na.*
        and   town-DEF   DX3.TPC   town big   very-3SG
        'As for the town there, it is a big town.'   (Ezard 1997: 143)

    b.   *Ma* [*meyagai* **geka**]   [**naka** *meyagai dewadewa duma-na*].
        and   village   DX1.TPC   DX2   village   good   very-3SG
        'As for this village, THAT is a very good village.'   (Ezard 1997: 144)

Compare the topic function of postposed *geka* and the focal function of the following preposed *naka* in (50b).

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27.   The three deictic grades are: proximal Dx1 *geka* 'this, here', medial Dx2 *naka* 'that, there', and distal Dx3 *noka* 'that, over there' (out of speaker's or hearer's sight). They are reflexes of Proto-Oceanic *a/*na 'near addressee'; *o/*no 'distant from both speaker and addressee' (Ross 1988: 100).

7.4   The clause-linking functions of Dx2 *naka*

Dx2 *naka* has conjunctive functions in relative, complement and adverbial clauses.

7.4.1   *Relative clauses with Dx2* naka *'that, there'*

The verbs of all relative clauses are marked as subordinate by reduplication. Relative clauses may be juxtaposed and embedded as in (51):

(51)   Tawala
   Kwasikwasi(-na) [*pom*   *u-gima-gimal'-e-ya*]   *i-tutuma.*
   machete(-DEF)   yesterday   2SG-RED-buy-TRV-3SG   3SG-blunt
   'The bushknife that you bought yesterday is blunt.'   (Ezard 1997: 207)

Or they may be hierarchized as topic–comment clauses as in (52a – b), with postposed Dx2 *naka*[28] marking the presupposed status of the information contained in the relative clause (ibid. 1997: 208–209).

(52)   Tawala
   a.   *Numa* [*hi-wogo-wogo-hi*   **naka**] / *hi-lata*   *duma.*
       house   3PL-RED-build-3PL   DX2.TPC   3PL-grow   very
       'As for the houses which have been built [impers. 3PL], they are very big.'
       (Ezard 1997: 209)

   b.   *Meyagai*   *noka*   [*a-ga-gale-hi*   **naka**] / *meyagai*
       village   there   1SG-RED-see-3PL   DX2.TPC   village
       dewadewa   *duma-na.*
       good   very-3SG
       'As for the villages which I saw, they are very big villages.'   (Ezard 1997: 209)

The relativized NP is often repeated in the main clause and indicates a resumed topic as in (52b). Topic-comment relative clauses are a common strategy.

7.4.2   *Time clauses with* naka

Time clauses are relativised time noun clauses with *houga* 'time', they are optionally topicalised with *naka* and set the time-frame for another clause.

(53)   Tawala
   a.   [*Ma*   *houga-na*   *to-ne-nae*   (**naka**)] / *houga*   *i-apapoe*   *duma.*
       and   time-DEF   1PL.EXC-RED-go   DX2.TPC   time   3SG-bad   very
       'As for the time we were going along, the time/weather was very bad.'
       (Ezard 1997: 209)

---

28.   The bracketing of clauses (64a-b) is Ezard's, *naka* belongs to the relative clause. According to Ezard, they must be interpreted as nominal despite their clausal structure, because of the presence of the demonstrative topic marker *naka*. In my analysis, it is a topic-comment construction.

   b.   *Houga-na*   *hi-gele-geleta,*   *pona-pona*   *hi-nonol'-i.*
       time-DEF   3PL-RED-arrive   PL-voice   3PL-hear-3SG
       'The time when they arrived, they heard voices.'   (Ezard 1997: 210)

In (53b), the topic time clause is marked by a prosodic rise, thus *houga-na hi-gele-geleta* cannot be an independent clause, by contrast with (54) where *houga-na* is a full NP focused by *naka* (similar to (49a)):

(54)   Tawala
   Naka   *houga-na*   *hi-gele-geleta.*
   DX2   time-DEF   3PL-RED-arrive
   'They were arriving *at that time.*'   (Ezard 1997: 210)

7.4.3   *Complement clauses with Dx2* naka

Complement clauses with Dx2 *naka* is one of several complementising strategies used for realis complement clauses of perception verbs (see, hear), cognition verbs (think, know, believe, desire), utterance and quotation verbs (say, tell) (Ezard 1997: 226). Subject complement clauses occur as topic clauses, as in (55) where *naka* is an anaphoric and focal pronoun,[29] not a complementiser.

(55)   Tawala
   [*O-gu⟨u⟩guya*   *lawa*   *uyahi-hi*]   **naka**   *ega*   *i-ta-dewa-dewa.*
   2SG-RED-preach   person   at-3PL   DX2   NEG   3SG-IRR-RED-good
   'As to your preaching to the people, that is not good.'   (Ezard 1997: 221)

Object complement clauses (including those marked by *naka*) normally follow the verb,[30] and are thus distinct from core arguments[31] which precede the verb [OV] (ibid. 1997: 221). In (56) and (57a), *naka* displays the common evolution from cataphoric demonstrative to complementiser.

(56)   Tawala
   A-gale-i   [**naka**   *hi-buli-bulili*].
   1SG-see-3PL   DX2   3PL-DUR-run
   'I saw that they were running.'   (Ezard 1997: 231)

---

29.   The bracketing of example (58) is Ezard's, *naka* thus heads the second clause as a full focal NP: 'As to your preaching to the people, <u>that</u> is not good'.

30.   Complementation with *po* also follows the verb. This reflects the Proto-Oceanic SVO order rather than the new SOV order of NP arguments due to contact with Papuan languages (Ezard 1997: 221).

31.   But some nominalised object complements occur before (like core-arguments).

2nd proofs

Compare the three complementising strategies: with *naka* (57a), juxtaposed (57b), and with *po* 'and' (57c).

(57)   Tawala
    a.   *Hi-i-wogatala* [***naka*** *apo* *iyowai* *hi-na-bagibagi*].
        3PL-DUR-plan DX2 FUT how 3PL-POT-work
        'They were planning how they would work.' (Ezard 1997: 222)
    b.   *Hi-i-wogatala* [*hi-na-bagibagi*].
        3PL-DUR-plan 3PL-POT-work
        'They are planning to work.'   (Ezard 1997: 224)
    c.   *Hi-wiwogatala* [***po*** *apo* *hi-na-bagibagi*].
        3PL-plan   CONJ FUT 3PL-POT-work
        'They planned to work.'   (Ezard 1997: 248)

7.4.4   *Conditional clauses with optional* naka

Condition clauses are generally in sentence initial position and are optionally followed by DX2 *naka* (58); counterfactual conditions are marked by the hypothetical marker *inapa* or *itapa* 'if' and are optionally topicalised with DX2 *naka* or correlated by the consecutive marker *yaka* 'so'.

(58)   Tawala
    *I-**na**-dumol'-i*   *(naka)*   *a-nae.*
    3PL-**pot**-calm-3SG   DX2.TPC   1SG-go
    'If it is calm, I'll go.'   (Ezard 1997: 242)

7.5   Discussion

When used as conjunctive markers, demonstratives may express sequencing and consecutive functions (as in Takia), but they mostly function as subordinators (in relative, complement or adverbial clauses). As adverbial clause markers, they appear in time, conditional, causal and explicative clauses. Their semantics are contextual and the semantics of the clause complex are inferred and depend on other collocated morphemes (adverbs, conjugations or T.A.M. morphemes). Some of these morphemes are not always fully grammaticalised as conjunctions; some are endophoric demonstrative operators with conjunctive functions when their scope extends over a clause or sentence.

8.   The syntactic and pragmatic functions of clause-ordering

Clause ordering is another pragmatic and syntactic indicator. Sequential (in line) constructions following the logical order of implication are the closest to coordination; they may dispense with connectors when the semantic relation is straightforward (as in *the doctor arrived, (and) he examined the patient*); if not straightforward, specific

coordinators express the intended semantic relation (consecutive, adversative, counter-expectancy, etc.) as in *the doctor arrived, (but) he did not examine the patient*).

8.1   Some general facts

While the sequential and logical order of events is the neutral order for chronological and causal coordinate relations, non-chronological and anti-causal order is frequently used to express anteriority or concessive meanings. These coordinate clauses in inverted order are often coupled with time adverbs like 'already' to mark non-chronological events (ex. ⟨I arrived and/but John had already left⟩; they may also be coupled with negation markers as in Manam (ex. ⟨I arrived and/but John had not left⟩ meaning 'I arrived before John left'). Similar clause ordering strategies are used for causal relations. As shown below, Manam and Korafe for example use anti-sequential order and focusing strategies to reverse chronological or logical (causal) relations.

8.2   From sequential coordination to subordination in Manam

Compare the sequential order of coordinate clauses with the coordinator =*be* 'and' in (59a) in Manam, with the inverted order associated with the focus marker (=*be*) in (59b). Reversing the sequential order and focusing with clause final, focal =*be* creates pragmatic hierarchy which is interpreted as subordination (see Bril in press for discussion).

(59)   Manam (SOV, Oceanic, Papua New Guinea, Madang Province)
    a.   *Nóra*   *malípi* *né-gu*   *di-lába=**be**,*   *tágo* *u-púra.*
        yesterday work CL-POSS 1SG 3PL.R-be.big=and NEG 1SG.R-come
        'Yesterday I had a lot of work *and so* I didn't come.' (Lichtenberk 1983: 524)
    b.   *Tágo* *u-duma-íʔo,* *Biéŋ* *u-láʔo=**be**.*
        NEG 1SG-help-2SG Bieng 1SG-go=FOC
        'I did not help you (because) *I went to Bieng*.'   (Lichtenberk 1983: 548)

Adpositional causal subordination is used when the cause is backgrounded information; the cause clause is then in topic, sentence-initial position and is marked by the similative postposition *bóʔana* 'like'[32] which is the only subordinator in Manam (Lichtenberk 1983: 548).

    c.   *ʔa-sege-aʔ-á-u-ru*   ***bóʔana*** *máʔa* *u-soʔóaʔi.*
        2PL.R-not.like-TR-1SG-BF-DU CAUSE here 1SG.R-live
        'Since you two don't like me, I live here.'   (Lichtenberk 1983: 548)

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32. The postposition *bóʔana* 'like' has various subordinating functions (causal, manner, similative-comparison, conditional, and counterfactual irrealis conditional (Lichtenberk 1983: 372–75, 528–529, 533).

Inversion of the sequential and logical order disrupts the implication ((if) x then/so (y) and creates asymmetry between clauses. This semantic asymmetry may be strengthened by informational hierarchy (topic or focus) devices or by referential hierarchy devices (demonstratives), as in Korafe.

8.3   From adversative coordination to concessive subordination in Korafe

In Korafe (Papuan), the linkers *avata* 'that, but' and *amo* 'that', are members of a set of originally demonstrative Dx2 markers, with topic/focus and conjunctive functions. As a clause-linker, *avata* 'but' conjoins clauses with adversative relationships or heads concessive apodoses; it also marks contrastive topics or focus. Functions vary with position and scope: as a contrastive coordinator in (60a), *avata* 'but' heads the second clause; as a concessive subordinator in (60b) *avata* occurs in clause-final position of the contrastive frame clause to which it belongs prosodically. The negation marker in the second clause bars the expected implication and triggers a concessive reading.

(60)   Korafe (Papuan, Cape Nelson, PNG)
   a.   *Oja-da   kau-mo   jarusa-da   kaugo-ri,*   [***avata***
        shrimp-GEN   kind-TPC   crayfish-GEN   kind.like-be   DX2.CT.FRUS

        memyako   beká-ri].
        SMALL.RED.DIM   true-be

        'Freshwater shrimps are like crayfish, but they are very tiny.'
                                                                (Farr 1999: 252)

   b.   [*Nunda guka titifa-ghae   **avata***],   *aimi   **jo***
        3s.GEN   back spine.RED-COM   DX2.CT.FRUS   that.AGT   NEG

        ga-y-ae   e-raira.
        spear-EPEN-not.do   do-CUST.3s

        'Although it (mangrove ray) has spines on its back, it does not sting
        (people) with them).'   (Farr 1999: 252)

The logical inversion of clauses, the different bracketing and scope of *avata*, modify its functions and readings. Compare with the simple additive coordinate clause in (61):

(61)   Korafe
       Bosivara-mo   mindafu, ã   nunda tamo ingago-ri.
       porpoise-TPC   big   and   3s.GEN   body   black-be
       'The porpoise is big, and its body is black.'   (Farr 1999: 114)

Amo, also originally a deictic (*a* 'that' near addressee +-*mo* topic/focus marker) is used as a topic marker in categorical predications (62):

(62)   Korafe
       *Rika-jawo-**mo**   uufa-ri.*
       bird-name-TPC   W.Wagtail-COP.3SG.FN
       'The name of (this) bird is (the) Willy Wagtail.'   (Farr 1999: 114)

It also marks condition clauses as presupposed subordinate frames (63a); compare with coordination in (63b), expressing consecutive relation.

(63)   Korafe
   a.   *Namonde   dubo-kot-arera   **amo**,   fakina-arera.*
        1PL.EXC   neck-think-FUT.1PL-FN   DX2.T/F   strength.do-FUT.1PL-FN
        'If we reason well, we'll become strong.'   (Farr 1999: 253)

   b.   *Namonde   dubo-kot-arera   ã,   fakina-arera.*
        1PL.EXC   neck-think-FUT.1PL-FN   and   strength-do.FUT.1PL-FN
        'We will reason well and we'll become strong.'   (Farr 1999: 253)

Amo may also function as a complementiser, as in (64a), or in frame-comment relative constructions (64b); clauses are prosodically separated by a pause:

(64)   Korafe
   a.   *Nu   kote-tira   **amo**,   uvu   kafuru-ri.*
        3SG   think-AOR.3s.FN   DX2.T/F   water   deep.water-be
        'He thought that the water was deep.'   (Farr 1999: 279)

   b.   *Gagara vare-da   a-ira   **amo**,   nan-da   komana-ri.*
        girl   garden-LOC   go-AOR.3s.FN   DX2.T/F   1SG-GEN   friend-be
        'The girl who went to the garden is my friend.'   (Farr 1999: 281)

9.   Final discussion and conclusion

This study of clause-linking in Austronesian-Oceanic (and a few Papuan languages) has shown a variety of strategies (coordination, clause-chaining, subordinate clauses), marked by conjunctive markers, less or non-finite verb forms (reduplication, nominalisation), adpositional markers (mostly for cause or concomitance), mood markers (contrasting irrealis vs. realis markers) in clause-chaining (Takia), in conditional and some complement clauses.

   The focus has been on types of subordination based on informational hierarchy (topic and focus markers), or referential hierarchy markers (articles, definite markers, demonstratives), as well as on clause ordering.

   Clauses involving sequential, logical and causal continuity are mostly expressed by (±syndetic) coordination, clause sequencers, and clause chaining strategies; while less or non-finite clauses (such as tail-cueing strategies) are mostly used with resumptive, anaphoric and backgrounding functions (see Table 1 below). Case-marking is another possible strategy: in Roviana, adverbial subordinate clauses display neutral case marking (in contrast with the ergative-absolutive system of main clauses) and occur in sentence-initial position as adsentential foci/topic clauses. Similarly, in Hua (Papuan), conditional clauses, which are presupposed, are in the nominative, and Haiman (1980: 412) describes them as functional equivalents of Latin ablative absolute constructions (see Thompson & Longacre 1985: 200–203).

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Similar facts occur cross-linguistically, in Dyirbal same reference is marked in topic chains with absolutive case, sometimes using antipassive detransitivisation (Dixon 1972: 71; cited in Dik 1997: 319). In Kiranti languages, adsentential topic clauses (which are outside the main clause) are marked with the ergative absolute, functionally equivalent to Latin absolute constructions (Bickel 1999: 74).

> "The core function of ergative clauses in Kiranti is to signal a sentential topic, a frame for the main assertion. The ergative case marker indicates the source, the cause, as well temporal and spatial circumstances, it is used in tail-head linkages and has further been grammaticalised into a marker of causal subordination."   (Bickel 1999: 40–45).

Conjunct participles and absolute constructions actually fulfil the same ad-sentential, topic function. Informational structure and their morphemes are thus used as complex clause hierarchy markers and indicators of subordination, specifying the referential and informational status of the propositional contents (in a frame–comment template, or a restrictor clause – main clause template). Some of the informational structure markers often originate from a pool of connectors or coordinators: additive or sequential connectors express clause sequencing, logical and topic continuity, while contrastive-adversative coordinators mark topic shift, counter-expectancy and concessive values. In relative clauses (ad-nominal specifiers) and in complement clauses, the use of former coordinators reanalysed as subordinators often arises from the expression of some former additive asserted information, while the use of definite or demonstrative markers generally refers to backgrounded and referential information in the subordinate clause.

Referential hierarchy with endophoric demonstratives and deictic markers is another source of subordinating devices via propositional anaphora and presupposition, prior to some other assertion. They serve as tracking devices, like the 'the former, the latter', or as correlative markers, and they use the proximal-distal grades as distinct pointing or selective devices (see Culioli's notions of *pointage* and *fléchage* operations, 1990). Demonstratives also display pragmatic functions as focus or topic markers, generally indicating topic shift or contrast.

In many Oceanic languages lacking subordinating conjunctions, informational hierarchy strategies are the only markers of clause hierarchy; they are inherent to the syntactic architecture of the complex clause, not a peripheral discourse level added to the syntactic level. The mere fact that informational and referential hierarchy should be marked by syntactic morphemes and devices such as coordinators, demonstratives, clause order, case markers, is an additional indication that these levels are interrelated and inseparable from the grammar of clause complexes. To quote Lambrecht: "Pragmatically structured propositions are (…) paired with appropriate lexicogrammatical structure." (1994: 334).

Table 1.   Summary

	Tawala (PNG)	Manam (PNG)	Takia (PNG)	Sobei (Irian Jaya)	Kaulong (New Britain)	Nêlêmwa (New Caledonia)	
asyndetic Coordination	SEQ, result contrast, DISJ	+	+	SEQ	SEQ, contrast result DISJ	SEQ	asyndetic Coordination
syndetic Coordination		SEQ DISJ	SEQ contrast DISJ		SS or DS pronouns	SEQ, SIMULT DISJ	syndetic Coordination
clause chaining			SEQ, SIMULT	SEQ			clause chaining
tail-linking			+				**tail-linking**
complementation	embedding (perception); NMZation +adpos.; COMPtizers	juxtaposed & postposed to verbal head volition cognition speech	intention, volition, cognition speech		preposition (speech, cause)	COMPtizer	complementation
subordination	CONJ; NMZation+ postp. (cause, location)	postpos. (cause, result, manner)	NMZation mode mkrs	REL, COMP time, cond	EQUAT, REL time, COND	CONJ (PURP., time, condition)	subordination
topic mkr		COND + focus marker (cause)	time, PURP., COND			EQUAT, REL, COMP	topic mkr
definite demonstr. deictics	REL, time, COND COMP	REL, time, COND	REL, SEQ cause-result, COMP	REL		REL	definite demonstr. deictics
Topic clauses marked by							Topic clauses marked by

Abbreviations

ABS	absolutive	EXC	exclusive
ABL	ablative	EPEN	epenthetic insertion
ACC	accusative	F	feminine
ACT	actor voice	FAM	familiar
ADVS	adversative	FN	finite
ABIL	abilitative	FOC	focus marker
AGT	agent	FR	free pronoun
ANAPH	anaphoric	FRUS	frustrative
AOR	aorist	FUT	future
ART	article	GEN	genitive
ASS	assertive	IPF	imperfective
ATTRIB	attributive	INCONS	inconsequential marker
BEN	benefactive	INCL	inclusive
BF	buffer	INDEF	indefinite marker
CARD	cardinal numeral prefix	INSTR	instrumental
CAUS	causative	INT	intentional, intentive
COM	comitative	LOC	locative
COMP	complementiser	M	masculine
CM	class marking suffix	NEG	negation
CONJ	conjunctive	NEU	neutral marker
CONT	continuous	NM	noun marker
COP	copula	NMZ	nominaliser
CT	contrastive topic/focus	NOM	nominative
CUST	customary, gnomic	N.PIVT	non pivot
DEP	dependency marker	OBL	oblique
DEICT	deictic	P	proper noun mrk
DEF	definite marker	PAT	patient
CTRST	contrastive topic	PFT	perfect marker
DELIM	delimiter	PIVT	pivot
DEM	demonstrative	POSS	possessive
DEP; D	dependent marker	POT	potential
DIM	diminutive	PSI	person indirect
DIR	directional	PREP	preposition
DISJ	disjunctive	PRO	intermediate clausal
DU	dual		proform
DUR	durative	PRON	pronoun
EMPH	emphatic	R	realis
ERG	ergative	R.D	realis dependent marker

REAS	reason marker	STAT	stative
REC	reciprocal	TERM	terminative
RED	reduplication	T/F	topic/focus marker
REF.RED	referential reduced voice	TPC	topic
REFL	reflexive	TR	transitive
REL	relative clause marker	TRV	transitiviser
SEQ	sequential	VAL	valency-changer

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