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Explorations in Linguistic Typology

Complementation

Explorations in Linguistic Typology

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Research Centre for Linguistic Typology, La Trobe University

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Preface

This volume includes a typological introduction, plus revised versions of ten of the sixteen presentations at the International Workshop on ‘Complement clauses and complementation strategies’, held at the Research Centre for Linguistic Typology, La Trobe University, 16–21 August 2004. Chapter 12, on Dyirbal, has been added in order to include an account of a language which lacks complement clauses and relies entirely on complementation strategies. An earlier version of Chapter 1 had been circulated to contributors, to ensure that the detailed studies of complementation clauses and complementation strategies in individual languages were cast in terms of the same typological parameters. This is the third monograph in the series *Explorations in linguistic typology*, which is devoted to volumes from workshops sponsored by RCLT.

The week of the workshop was an exhilarating experience, with the participants assisting each other in understanding and explaining how individual languages work, and with the group as a whole coming to grips with the general nature of and mechanisms for complementation. All of the authors have pursued intensive investigations of languages, some of them little known in the literature. They were asked to write in terms of basic linguistic theory—the cumulative framework in which most descriptive grammars are cast—and to avoid formalisms (which come and go with such frequency that any statement made in terms of them will soon become dated and inaccessible).

We owe a special debt of gratitude to Siew Peng Condon, Executive Officer of RCLT, for organizing the workshop in a most efficient and caring manner.

This volume owes its existence to the vision and care of Professor Michael Osborne, Vice-Chancellor and President of La Trobe University. He sponsored the establishment of RCLT within La Trobe’s Institute for Advanced Study, and specified that its activities should include International Workshops with stringent quality control. Professor Osborne opens each workshop, launches our volumes, and every year hosts a convivial dinner for the participants.

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Abbreviations

/	intonation break
< ... >	encloses complement clause
>	argument tracking (subordinate>matrix), in Chapter 10
1	1st person
2	2nd person
3	3rd person
A	transitive subject
ABS	absolutive
Ac	A-construction
ACC	accusative
ACT	active
ACTN	action
AGT	agent
ANAPH	anaphora
ANIM	animate
APASS	antipassive
APPLIC	applicative
ART	article
ASSUM	assumed
AUG	augmentative
AUX	auxiliary
BEN	benefactive
BV	borrowed verb
CAUS	causative
CC	copula complement
CERT	certain
CL	classifier
COLLCL	collective classifier
COMIT	comitative
COMP	complement clause, complementizer
COMPL.STRAT	complementation strategy
COMPZR	complementizer
CONJ	conjunction
CONSTR	construct state
COP	copula
COUNTER	counter-expectation
CS	copula subject
CTR	controlled clause

DAT	dative
DEC	declarative
DEF	definite
DEM	demonstrative
DEP	dependent
DESID	desiderative
DIM	diminutive
DIR	directional
DIST	distal
DISTNT	distant
DISTR	distributive
DS	different subject
du	dual
E	extension to core
e	eyewitness
EMPH	emphasis
ERG	ergative
EVID	evidential
exc	exclusive
EXCES	excessive
EXIST	existential
FEM, F, f	feminine
FOC	focus
FP	far past tense
FRUST	frustrative
FUT	future
GEN	genitive
HAB	habitual
HON	honorific
IMP	imperative
IMPERS	impersonal
INCEP	inceptive
INCH	inchoative
INDEF	indefinite
INDEP	independent
INDIC	indicative
INFER	inferred
INFIN	infinitive
INST	instrumental
INTENS	intensifier
INTER	interrogative
INTR	intransitive
IP	immediate past tense

IPART	illocutionary particle
IRR	irrealis
ITER	iterative
LOC	locative
log.ad	logophoricity (coreference with addressee)
log.sp	logophoricity (coreference with speaker)
MANR	manner
MASC, M, m	masculine
MOD	modal
n	non-eyewitness
NARR	narrative
NCL	noun class
NEG	negation
nf	non-feminine
NOM	nominative
NOM.ACT	action nominalization
NOMN	nominalization
NOM.RES	result nominalization
NOM.SVC	nominalized serial verb construction
NOMZ	nominalizer
NP	noun phrase
NPAST	non-past
NR	nominalizer/relativizer
nsg	non-singular
NVIS	non-visual
O	transitive object
OBLIG	obligative
Oc	O-construction
p	person
PART	particle
PARTIC	participle
PASS	passive
PAST	past (no abbrev)
PAST.CLOSE	past (earlier today)
PAST.YEST	past (yesterday)
PAT	patient
PER	perfect
PERV	perfective
PG	Pennsylvania German
pl, PL	plural
PNAME	personal name
PO	prepositional object
POSS	possessive, possessor

POTEN	potential
PP	prepositional phrase
PREP	preposition
PRES	present
PROG	progressive
PROX	proximal demonstrative
PURP	purposive
PURP.CL	purposive clause
R	restricted set of verbs which take complements
RECIP	reciprocal
REDUP	reduplicated
REFL	reflexive
REL	relative
REM	remote
REP	reported
RES	resultative
RP	recent past tense
S	intransitive subject
S _a	'active' S, marked like A
SEQ	sequential
SEQ.CL	sequential clause
sg	singular
S _o	'stative' S, marked like O
SS	same subject
SUB	subordinator
SUB.CL	subordinate clause
SUBJ	subjunctive
SUBORD	subordinate
SVC	serial verb construction
TAM	tense-aspect-mood
TOP	topic
TR	transitive
U	unrestricted set of verbs which can occur in complement clauses
V	verb
VCC	verbless clause complement
VCS	verbless clause subject
VIS	visual
VZR	verbalizer
WCPG	Waterloo County Pennsylvania German

Complement Clauses and Complementation Strategies in Typological Perspective

R. M. W. DIXON

1. Introduction

In many languages, certain verbs—notably ‘see’, ‘hear’, ‘know’, ‘believe’, ‘like’, and often also ‘tell’ and ‘want’—can take a clause, instead of an NP (noun phrase), as a core argument. This is called a complement clause. To quote examples from English, alongside *I believe [John’s denial]_O*, with the NP *John’s denial* as the O (object) argument of *believe*, we can have *I believe <that John did not do it>_O*, where the complement clause *that John did not do it* is O argument. (Throughout this volume, a complement clause is enclosed within diamond brackets, <...>.)

It seems that the majority of the world’s languages have complement clauses. But a sizeable number lack this grammatical construction. Such languages still do have some grammatical mechanism for stating what a proposition is which is seen, heard, believed, known, liked, etc. These mechanisms are called complementation strategies.

This chapter describes the semantic types of verbs which take complement clauses or which enter into complementation strategies, in §4. There is then discussion of the grammatical criteria for recognizing complement clauses, leading into consideration of the varieties of complement clauses, and the correlation between their meanings and the types of verb they may occur with, in §§5–6. Then, in §7, there is an outline of the types of complementation strategy.

The following chapters provide illustration from eleven languages. Pennsylvania German and Israeli (Chapters 2–3) are like English in just having complement clauses. We find both one or more types of complement clauses

and one or more complementation strategies in Jarawara, White Hmong, Dolakha Newar, Akkadian, Tariana, Goemai, Matses, and Kambara (Chapters 4–11). Dyirbal, described in Chapter 12, lacks complement clauses and relies entirely on complementation strategies.

This volume builds on previous work on complementation (for example, Noonan 1985), presenting an integrated analytic framework based on inductive typological study of a wide variety of languages. The theoretical parameters presented here relate to wider cognitive issues. The kinds of verbs taking complement clauses or expecting complementation strategies—and the structures and meanings of complement constructions—relate to the nature of the human mind, the ways in which information is coded and communicated, and the way in which language is acquired. The results reported here provide a linguistic matrix which may be applied by psychologists, anthropologists, and philosophers in a variety of kinds of practical investigation.¹

2. Types of complex sentences

There are three basic ways, shown in Fig. 1, in which two clauses can be linked together to form a complex sentence. These will be briefly illustrated from English.

(a) *Coordinate and non-embedded subordinate constructions.* A main clause is linked to a second clause by (i) a coordinate linker such as *and*, *but*, *or*; (ii) a temporal subordinate linker such as *after*, *before*, *while*, *till*, *until*; (iii) a logical subordinate linker such as *since*, *because*, *if*, *although*, *even though*, *unless*, *in spite of*; (iv) a contrastive linker such as *however*, *moreover*, *nevertheless*, *therefore*, *accordingly*, *on the other hand*, *at all events*, *still*; or (v) the purposive linker *in order* (*for... to/that*).

Types (i) and (v) are illustrated in:

- (1) John came in and (Mary) closed the door
- (2) The librarian cancelled the journal subscription (*in order*) (*for the university*) to cut costs

In (1) we have two clauses each of which can stand by itself but are here linked by *and*; if the two clauses have the same subject this may be omitted from the second clause. In (2) the main clause describes something done for a purpose, so that the event described by the second clause—introduced by (*in order*)

¹ There have been many useful studies concerning children's acquisition of complement clause types, the great majority of these relating to English. See, for example Limber (1973), Bloom et al. (1989), Diessel and Tomasello (2001), Tomasello (2003) and further references therein.

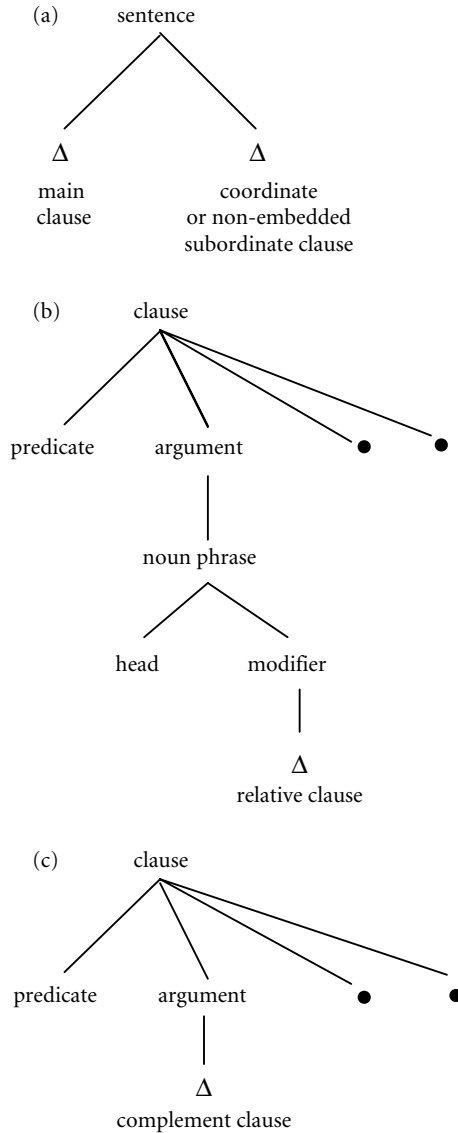


FIG. 1. Types of clause linking

for... to—will follow. Here just the main clause can stand on its own. Like (1), the two clauses may have the same subject and this is then omitted from the second clause, plus the preceding preposition *for*. The *in order* can be included or omitted with no difference in meaning.

Effectively, any verb may occur in the first clause and in the second clause of (1) and (2), just so long as the whole sentence makes sense. That is, the verbs used must be semantically appropriate, each to the other.

(b) *Relative clause constructions.* A relative clause is part of an NP which fills an argument slot (subject, object, etc.) in a clause. The relative clause modifies the head of the NP (which is generally a noun) and helps to focus on its referent in the same way that other modifiers such as demonstratives and adjectives do. For example:

- (3) (a) [Which car]_O did you buy?
 (b) I bought [the red car [(that/which) we looked at on Saturday]]_O

The identity of the car is specified by two modifiers, adjective *red* and relative clause (*which/that*) *we looked at last Saturday*. Note that the relative clause is here introduced by either *that* or *which*, which can be omitted when the argument common to main clause and complement clause (here, *the red car*) is not in subject function in the relative clause.

Any verb may function in a relative clause, irrespective of which verb is used in the predicate of the main clause, so long as the whole sentence makes sense.

(c) *Complement clause constructions.* As mentioned in §1, a complement clause functions as a core argument of a clause. In most instances, this argument can be either a complement clause or an NP. There may be a number of complement clause possibilities, as for *heard* in English:

- (4) (a) I heard [the result]_O
 (b) I heard <(that) Brazil beat Argentina>_O
 (5) (a) I heard [the game]_O
 (b) I heard <Brazil('s) beating Argentina>_O

For sentences (4a–b), the O argument refers to a fact; this can be shown by an NP like *the result* or by a complement clause introduced by *that*; the *that* may be omitted. For sentences (5a–b), the O argument is an activity, which can be shown by an NP such as *the game* or a complement clause marked by *-ing* on the verb and optional 's on the subject. Sentences (4a–b) would be used when the speaker just heard the final score; in contrast, sentences (5a–b) describe the speaker's listening to the full unfolding of the match, perhaps via a radio commentary.

A complement clause has the following basic properties:

- (I) It has the internal constituent structure of a clause.
 (II) It functions as a core argument of a higher clause.

This characterization will be refined in §5.1.

There is one vital difference between a complement construction in (c), on the one hand, and a coordinate or non-embedded subordinate construction in (a) and a relative clause construction in (b), on the other hand. In (a) and (b) any verb has the potential to function in each clause of the construction. In (c), the set of verbs which may function in a complement clause is also effectively unrestricted (labelled as U). But the set of verbs which may take a complement clause as an argument is severely restricted (and can be called R). As mentioned before it typically includes ‘see’, ‘hear’, ‘know’, ‘believe’, and ‘like’. If a language has an indirect speech construction, then verbs like ‘tell’ will take a complement clause. When the concept of wanting is coded through a lexical verb, this is also likely to take a complement clause. For languages lacking a complement clause construction, the verbs just mentioned will enter into complementation strategies.

§6 below describes the semantic types of verb which are likely to have a complement clause as an argument.

In every language which has complement clauses, these are always likely to fill an O argument slot for one set of verbs. In some languages, complement clauses may also occur in other core functions; there is discussion in §5.1.

Different types of complex sentences may have similar surface structures, so that care has to be taken to distinguish them. Consider the relative clause construction in (6a) and the complement clause construction in (6b).

- (6) (a) I dislike [that man [(who is) painting his front door blue]]_O
 (b) I dislike <that man(’s) painting his front door blue>_O

In (6a) the relative clause (*who is) painting his front door blue* serves to identify which man it is I dislike. There is no indication that I dislike what he is doing (I may quite like blue doors); I just dislike him as a man. But in (6b) what I dislike is the activity; I may perfectly well approve of the man in general terms. In their full forms, the two sentences are clearly distinct. However, *who is* may be omitted from a relative clause construction such as (6a), and a POSS ING complement clause such as that in (6b) may omit the ’s from the subject (indeed, some speakers prefer always to omit ’s). With these omissions, (6a) and (6b) have the same form, *I dislike that man painting his front door blue*. They may be distinguishable only by discourse context or by sentence stress—this is likely to go on *man* in (6a) but on either *paint* or *blue* in (6b).

We can now compare a non-embedded subordinate clause structure with (*in order*) *to* in (7a) and a complement clause construction in (7b).

- (7) (a) [He ran] [(in order) to catch a glimpse of the King]
 (b) [He wanted <to catch a glimpse of the King>_O]

Run is an intransitive verb, and *he ran* can be a self-contained sentence. It may be—but need not be—extended by an *(in order) to* clause, as in (7a). In contrast, *want* is a transitive verb and must take an O argument; in (7b), this is the complement clause *to catch a glimpse of the King*. Now *in order* can be omitted from (7a) and the two sentences would then be identical but for the main clause verb, *ran* or *wanted*. They may be distinguished by the possibility of including *in order* in (7a) but not in (7b) and by the fact that *He ran* can be a full clause, whereas *He wanted* is incomplete; it involves a transitive verb which requires an O argument (this can be an NP or a complement clause).

Languages which lack a complement clause construction are likely to employ some other construction type as a complementation strategy. Two of the possibilities are a relative clause construction and a purposive *(in order) to* complex clause.

When a language uses a relative clause construction as a complementation strategy, it is likely to miss a distinction such as that shown in (6a–b). That is, a given sentence may be ambiguous between a relative clause meaning, as in (6a), and a complement clause meaning, as in (6b). The ambiguity would be resolved by discourse context and/or by sentence stress.

When clauses linked by something like ‘(in order) to’ are used as a complementation strategy, there may be no apparent distinction between sentences such as (7a) and (7b), save the verb in the first clause. In fact, the underlying difference lies in the verbs. Something like ‘run’ is self-sufficient; it can be followed by a purposive clause but does not have to be. In contrast, a verb like ‘want’ carries the expectation of a following purposive clause, to specify what is wanted.

The relative clause and the purposive complementation strategies are both described for Akkadian in Chapter 7 and for Dyirbal in Chapter 12. The purposive strategy is also found in Goemai (Chapter 9). A survey of these and other complementation strategies is in §7.

The grammatical phenomenon of complement clauses has received copious attention since the 1960s (with works such as Rosenbaum 1967). An excellent state-of-the-art survey of twenty years ago is in Noonan (1985, slightly updated version on web). The term ‘complementation strategy’ was introduced in Dixon (1995). As the notion of complement clause has been more clearly defined over the past decades, it has become apparent that some

of the constructions which had been termed complement clauses would be more appropriately viewed as complementation strategies.²

3. Core arguments

There are two universal clause types:

- Intransitive clauses, with an intransitive predicate and a single core argument, which is in intransitive subject function (S).
- Transitive clauses, with a transitive predicate and two core arguments, which are in transitive subject (A) and transitive object (O) functions. That argument whose referent does (or potentially could) initiate or control the activity is in A function. That argument whose referent is affected by the activity is in O function (see Dixon 1994: 113–27).

It must be noted that S, A, and O are simply abbreviatory labels for these core functions. One could, alternatively, always write out in full ‘intransitive subject’, etc. S, A, and O are useful as a way of conserving breath and ink; in addition, they do not carry any implication that S should be more similar in its properties to A rather than to O. Note that A does not indicate any particular semantic role, such as ‘agent’; nor does O necessarily connote ‘patient’. In fact, each of the syntactic functions S, A, and O covers a range of semantic roles.

In some languages a further argument has special status, and can be added to an intransitive and/or to a transitive clause; this is conveniently referred to as E (for ‘extension to core’). In such a language there are the four clause types, with core arguments:

- | | | | | |
|-----|-----------------------|---|---|---|
| (a) | intransitive | S | | |
| (b) | extended intransitive | S | | E |
| (c) | transitive | A | O | |
| (d) | extended transitive | A | O | E |

² Noonan (1992: 220–8, 194–200) refers to ‘complementation types’ in Lango (Nilotic family within Nilo-Saharan), not distinguishing between complement clauses and complementation strategies. In fact two of his types appear to be complement clauses (shown by complementizer *ni* and with the verb marked for subjective or non-subjective), whereas the other two types appear to be strategies—one appositional (for example, literally ‘the woman pressed/forced the man; he winnowed millet’) and the other involving an infinitive nominalization. Noonan’s much-quoted paper (1985) also fails to distinguish between complement clauses and complementation strategies (and this follows through to the updated revision of the paper for the revised edition of the Shopen three-volume set, details in references).

E is typically marked by dative case. Note that a divalent clause with S and E is clearly distinct from a divalent clause with A and O. In a nominative-accusative language, an extended intransitive clause will have one argument marked as nominative (S) and the other as dative (E), while a transitive will have one argument marked as nominative (A) and the other as accusative (O). In an absolutive-ergative language, an extended intransitive involves absolutive (S) and dative (E) whereas a transitive has ergative (A) and absolutive (O).

In those languages with an extended intransitive clause type, only a rather small set of verbs may function as its predicate. Extended intransitive verbs typically refer to Attention ('see', 'hear', etc.), Liking and Wanting; that which is seen, heard, liked, or wanted is the E argument. These are among the verbs which typically take complement clauses. Thus, if E is recognized as a core argument for a given language, there is a high chance that it can be filled by a complement clause.

Many languages have a small set of extended transitive (or ditransitive verbs), such as 'give', 'tell', and 'show'. In some it is the 'gift' which is O and the 'recipient' which is E, etc.; in others the reverse. With a verb like 'tell' or 'show', the E argument may be filled by a complement clause, as in English *John_A told/showed Mary_O <that the house had burned down>_E.*

Most languages also have a minor but significant clause type, copula clauses. It is useful to recognize two functions: copula subject (CS) and copula complement (CC), as in the English sentence [*John*]_{CS} *is* [*a doctor*]_{CC}. (*A doctor* here is best recognized as an argument of the copula verb, rather than as a 'predicate'.) The label 'subject' is used to cover S, A, and CS.

If a language has complement clauses they are always likely to relate to O argument (and also to E, if there is an extended intransitive construction type). In some languages a complement clause (or a particular type of complement clause) may also relate to S and/or A and/or CS and/or CC. More details of this are given in §5.1.

4. Semantic types of verbs

A discussion of complementation is most perspicuous if we first recognize that the lexemes of every language fall naturally into a number of 'semantic types', each type sharing a common element of meaning and of syntactic function. Each open word class (recognized on internal grammatical criteria within the language) has associated with it a number of semantic types.

The verb types first divide into:

- Primary types, whose arguments can all be just NPs (or bound pronouns in a head-marking language); for example, *carry* as in *John_A carried [the box]_O*. Some Primary verbs may, optionally, have a clause as—or relating to—one argument; for example *know* does, as in *I_A know <that Madrid is the capital of Spain>_O*.
- Secondary types, whose arguments cannot all be just NPs or pronouns. That is, one argument must be a clause, as in *Mary_A wants <to go>_O*.

Within a general typological framework it is, in fact, more useful to talk of ‘Secondary concepts’; these include ‘can’, ‘must’, ‘try’, ‘begin’, ‘want’, and ‘make’. The Secondary concepts may be realized by affixes, modifying words, or by verbs. When a Secondary concept is realized by a verb (a Secondary verb) then it relates to another verb through a complement clause construction or through a complementation strategy. Secondary concepts and Secondary verbs are discussed in §4.2. (There is a full discussion of the semantic types associated with verbs in English in Dixon 2005.)

A complementation construction involves two verbs:

- (a) The complement-taking verb, in the main clause. As mentioned before, this is chosen from a restricted set (R) of Primary-B and Secondary verbs; see §§2–3. The full membership of the set varies from language to language but certain verbs typically recur, including ‘see’, ‘think’, ‘know’, and ‘like’ (if, indeed, these verb lexemes occur in the language).
- (b) The verb in the complement clause, or the non-main verb in the complementation strategy. This set of verbs is effectively unrestricted, and is labelled ‘U’. The only constraint is likely to be semantic compatibility between R and U.

4.1. Primary verbs

Primary verbs, those for which all arguments can be NPs or pronouns, divide into two sets:

- Primary-A—all arguments must be NPs or pronouns.
- Primary-B—all arguments can be NPs or pronouns but one argument can alternatively be a complement clause (sometimes, more than one argument can be).

The Primary-A semantic types include Motion (verbs such as ‘run’, ‘drop’), Rest (‘stand’, ‘hold’), Affect (‘burn’, ‘build’), Giving (‘give’, ‘lend’), Corporeal

(‘eat’, ‘laugh’). When used in their primary senses, all arguments must be NPs or pronouns. (However, a number of these verbs in English have metaphorical or idiomatic senses which may involve complement clauses; for example, <That he had been passed over for promotion>_A *stung* <John’s pride>_O. And some Primary-A verbs in English can take an optional oblique argument which may be a complement clause; for example, [Mary]_S *cried over* <the policeman’s having shot her dog>.)

Primary-B verbs are the prototypical complement-taking verbs in every language. Most of them can have an NP/pronoun or a complement clause as O argument. The main Primary-B semantic types are:

ATTENTION, including

- (a) see, hear, notice, smell, show
- (b) recognize, discover, find

THINKING, including

- (a) think (of/about/over), consider, imagine, dream (of/about)
- (b) assume, suppose
- (c) remember, forget
- (d) know, understand
- (e) believe, suspect

LIKING, including

- (a) like, love, prefer, regret
- (b) fear
- (c) enjoy

SPEAKING, including

- (a) say, inform, tell (one sense)
- (b) report
- (c) describe, refer to
- (d) promise, threaten
- (e) order, command, persuade, tell (one sense)

The complement clauses for Speaking verbs (and sometimes for certain Thinking verbs) constitute ‘indirect speech’. Some languages lack this grammatical technique and simply employ ‘direct speech’; for example, ‘John promised: “I’ll go”’ rather than ‘John promised (that) he would go’. In such languages, Speaking verbs lack complement clauses, and do not enter into complementation strategies.

Most verbs in English consist just of a verb root. Others are a kind of phrasal verb, involving verb and preposition in their lexical form; for example, *refer to*, *decide on*, *think about*. The argument which follows one of

these phrasal verbs behaves like a direct object (O function). For example, it can become the S argument within a passive derivation; compare *They_A had thought about* <*John's having nominated Mary*>_O and <*John's having nominated Mary*>_S *had been thought about (by them)*. (Further arguments are in Dixon 1991: 13–14, 271–4; 2005: 14–15, 289–93.)

In some languages there are intransitive verbs with adjective-type meanings—and in others there are adjectives themselves—which take a complement clause. Most of these relate, semantically, to some of the Primary-B (or Secondary) types, and have similar complement-taking properties. English has, for example, pairs such as:

ADJECTIVE	VERB	ADJECTIVE	VERB
unsure (of/about)	doubt	fond (of)	enjoy
sorry (about)	regret	eager (for)	want
afraid (of)	fear		

Following a general rule of English grammar, a preposition drops when immediately followed by a *that* or *for* or *to* complementizer. The preposition is retained in *I am afraid of* <*John's getting drunk again*> but omitted from *I am afraid* <*that John may get drunk again*>. (Table 2 of Chapter 3 lists complement-taking adjectives in Israeli.)

It is unusual to encounter a noun (or NP) which can govern a complement clause. However, in English (and in Israeli, see (17–19) in Chapter 3), we find sentences like:

- (8) (a) John_A told me_O [the news]_E
 (b) John_A told me_O <that Fred had broken his leg>_E
 (c) John_A told me_O [[the news] <that Fred had broken his leg>]_E

The message which John purveys can be realized by an NP in (8a), or by a complement clause in (8b), or by both together in (8c). Sentence (8c) has a complex O argument, involving an NP and a complement clause in apposition. (Note that it would be unhelpful to suggest that the clause *that Fred had broken his leg* is a complement clause (or a relative clause) to *the news*.)

4.2. Secondary concepts

Every language has a set of what it is convenient to call 'Secondary concepts', including 'not', 'can', 'try', 'want', and 'make'. They cannot be used by themselves but must be linked to a verb (or to another verb, if the Secondary concept is realized by a verb), which is either explicitly stated or understood from the context.

A Secondary concept may be realized in one of the following ways:

- (i) As an affix to a verb. For example, Macushi, a Carib language from South America, has verbal suffixes which include *-yonpa* 'try', *-pia'itĩ* 'begin', and *-aretĩ'ka* 'finish' (Abbott 1991: 120–1). Fijian has a prefix *via-* 'want to'.³
- (ii) As a Secondary sense of an affix, often one from a TAM system; for example, the 'intention' modality suffix in Jarawara (with feminine form *-(ha)bone* and masculine form *-(hi)bona*) can be used with the sense 'should' or 'want to'.
- (iii) As a word modifying the verb, or modifying the whole clause; for example *not*, and auxiliaries *can*, *must*, etc. in English.
- (iv) As a lexical verb. There are then two main possibilities for how such a Secondary verb (which will belong to set R of complement-taking verbs) may relate to another verb (of set U):
 - The Secondary verb takes a complement clause (with U as predicate) as one of its arguments.
 - The Secondary verb is linked to U through one of a number of complementation strategies; these are discussed in §7.

It is useful to briefly list the main types of Secondary concepts and their properties.

(a) SECONDARY-A. The Secondary concept provides no addition to the semantic roles associated with the verb to which it is related. These concepts are particularly likely to be realized by a verbal affix, or by a modifier to a verb or to a clause. If they are realized as lexical verbs (of set R) then they may be transitive or intransitive. If transitive, the complement clause in O function must have the same subject as the set R verb, as in English *She_A began <writing the letter>_O*. If intransitive, then the complement clause will be in S function. For instance, in Fijian one says, literally, '<that I go>_S is-must' for 'I must go' and '<that I go>_S is-not' for 'I am not going'. Secondary-A concepts include:

- (i) Negators 'not', 'don't'.
- (ii) Modal-type, such as 'can', 'should', 'must', 'might'.

³ A few Primary-A verbs referring to motion (prototypically 'come' and 'go') have alternative realization as verbal affixes in some languages. Other Primary verbs almost never (or never) have alternative realization as affixes. Some verbs can be grammaticalized to become affixes (with a shift of meaning); they then cease to be Primary verbs.

- (iii) Beginning-type, such as 'begin', 'start', 'continue', 'stop, cease', 'finish'.
- (iv) Trying-type, such as 'try', 'attempt'.

When a Secondary-A concept is realized as a Secondary verb which takes a complement clause in O function, the main and complement clauses must have the same subject; for example, in English, *Mary_A tried/continued <to write a novel>_O*.

(b) SECONDARY-B includes 'want', 'wish (for)', 'hope (for)', 'intend', 'plan (for)', 'pretend'. Languages vary in their treatment of these concepts. They may be realized as transitive verbs which take a complement clause in O function, or as extended intransitives which have it in E function. In English, the same type of complement clause can be used whether or not the main and complement clauses have the same or different subjects; for example, *I want to go first* and *I want Mary to go first*. In some languages, different varieties of complement clause are required for 'same subject' and for 'different subject'; see the end of §6. And in some languages, verbs like 'want' and 'try' may only be used when the subjects are the same (as with Secondary-A verbs).

A defining characteristic of a Secondary-B verb is that even when (as in English) the subjects may differ, the expectation is that they are most likely to be the same, and the subject token in the complement clause is then generally omitted. (It may be possible to include it, but only for special contrastive emphasis; for example, *I want (me/myself) to go first*.)

(c) SECONDARY-C includes 'make', 'cause', 'force', 'let', and 'help'. This kind of Secondary concept can be realized by a verbal affix which increases the valency of the verb by one, adding a 'causer/helper' role. Or it may be realized through a Secondary verb, taking a complement clause as O argument. A defining characteristic of Secondary-C verbs (in contrast to Secondary-B) is that main and complement clauses are likely to have different subjects. In the unusual event of the subjects being the same, it is unlikely that the subject token in the complement clause can be omitted; for example *I forced myself to go first* (not **I forced to go first*) in English.

I began this section by stating that a Secondary concept requires a lexical verb, which it modifies. A Secondary concept may be realized as a verb, which then belongs to the restricted set, R, of complement-taking verbs. Then the point was made that whereas a Primary-B verb *may* take a complement clause in one argument slot (or may take just an NP, as in *John_A knows [the truth]_O*, alongside *John_A knows <that you poisoned the dog>_O*), a

Secondary verb *must* relate to a second verb (from the unrestricted set, U) through either a complement clause construction or a complementation strategy.

However, a complement clause verb (and the associated complementizer) may be omissible if they would be understood by the addressee, on the basis of the context in which the utterance occurs and information which speech act participants share. One can say *John_A is beginning <to write a detective story>_O* or *John_A is beginning <to read a detective story>_O* or *John_A is beginning <to typeset a detective story>_O*, and so on. Any of these can be shortened to *John is beginning a detective story*, if the addressee(s) can supply the omitted complement clause verb—if they know that John is a writer of detective stories (and the speaker is describing this aspect of John's life, not what he does to relax in the evenings), or if they know that all John ever does with respect to detective stories is to read them, or if they know that he is a typesetter (and the speaker is describing a current work task). That is, a speaker will only say something like *John is beginning a detective story* if they consider that the addressee(s) should be able to infer the semantic content of the unstated complement clause verb.

This point can be further demonstrated by a conjunction of two abbreviated sentences, such as *John is beginning a detective story and Mary (is beginning) a historical novel*. Either John and Mary are authors, each beginning to write a work belonging to their respective genres, or they are both readers, or both typesetters, and so on. This abbreviated conjunction could not be used if John were beginning to write and Mary to read or typeset, or vice versa. They must be engaged in the same sort of activity if the underlying full complement clause construction is to be abbreviated. That is, in the conjunction *John_A is beginning <to X a detective story>_O* and *Mary_A is beginning <to Y a historical novel>_O*, the verbs X and Y in the complement clauses must have the same meaning, as a condition for this conjunction to be reduced to *John is beginning a detective story and Mary (is beginning) a historical novel*. Similar examples and arguments can be given for *finish*, *want*, *try*, and indeed for all other Secondary verbs.

(There are, as would be expected, special variations in individual languages. For example, in English a complement clause verb may be replaced by its nominalization, as head of an NP; one might say *John caused the explosion* as an alternative to *John_A caused <something to explode>_O*. And there can be idiomatic shortenings, as in English *John forced the door/window/lock* (sc. to open).)

5. Complement clauses

5.1. Grammatical criteria

A constituent is recognized as a complement clause when the following four criteria are satisfied.

- (I) It has the internal constituent structure of a clause, at least as far as core arguments are concerned. That is, S, A, and O (or other) arguments, if not omitted by a grammatical rule associated with a particular complement clause construction, should be marked in the same way as in a main clause (allowing for the fact that part of the marking for a type of complement clause may attach to its subject) and have much the same grammatical properties.
- (II) It functions as a core argument of a higher clause. In every language in which complement clauses occur they function as O argument and/or as E argument; there are sometimes other possibilities as well.
- (III) A complement clause will always describe a proposition; this can be a fact, an activity, or a potential state, etc.
- (IV) In every language which has complement clauses, they function as a core argument (generally O or E) for verbs with meanings such as 'see', 'hear', 'know', 'believe', and 'like' (insofar as the language has such verbs); and also for 'tell' if there is an indirect speech construction, and for 'want' if this Secondary concept is realized as a lexical verb.

The criteria can be illustrated one at a time. First compare the English sentences (9a) with a complement clause as A argument, and (9b), with an NP as A:

- (9) (a) <John's playing the national anthem>_A pleased Mary_O
 (b) [John's playing of the national anthem]_A pleased Mary_O

The complement clause in (9a), *John's playing the national anthem* has similar structure to a main clause, with an A NP, *John* (with possessive 's, one marker of this variety of complement clause in English) and an O NP, *the national anthem*, which immediately follows the verb with no preposition intervening. The verb of the complement clause is *play*, with suffix *-ing*, the other marker of this kind of complement clause in English.

In contrast, *John's playing of the national anthem*, in (9b), is an NP where the nominalization *playing* is head noun, *John's* is possessive modifier, and *of the national anthem* is a post-head modifying prepositional phrase (similar to *of the table* in *the legs of the table*).

There are three criteria for distinguishing between a complement clause, as in (9a), and an NP, as in (9b):

- (i) In the complement clause, the O NP, *the national anthem*, immediately follows the verb, as in a main clause. In the NP, the underlying O must be marked by *of*.
- (ii) In the NP, the possessor *John's* is a modifier of the head noun and can be replaced by another modifier such as the article *the*, giving *The playing of the national anthem pleased Mary*. In (9a), the subject, *John*, bears 's, which is a marker of this variety of complement clause; *John's* cannot here be replaced by *the*; that is, we cannot have **The playing the national anthem pleased Mary*.
- (iii) The verb of the complement clause, *playing*, may be modified by an adverb. As in a main clause, this typically follows the object (<*John's playing the national anthem competently*> *pleased Mary*). The head noun of the NP, the nominalization *playing*, can be modified by an adjective, which must precede it ([*John's competent playing of the national anthem*] *pleased Mary*).

These two structurally different—although superficially similar—sentences have different meanings. (9a) states that Mary was pleased with John (who might in the past have often appeared to be rather unpatriotic) having played the national anthem, whereas (9b) describes how she was pleased by the manner of his playing it, so mellifluously. Each sentence could be reduced to *John's playing pleased Mary*, which would be ambiguous between the two syntactic structures and meanings.

What makes (9a) and (9b) such an intriguing pair of sentences is that the verb *play* adds *-ing* in being nominalized, the same suffix that marks the verb of one variety of complement clause. Many verbs in English have different forms in the two circumstances. Compare:

COMPLEMENT CLAUSE	NP WITH NOMINALIZATION AS HEAD NOUN
John's refusing the offer	John's/the refusal of the offer
John's demolishing the building	John's/the demolition of the building
John's discovering the money	John's/the discovery of the money
John's knowing the secret	John's/the knowledge of the secret

Each pair shows a semantic difference similar to that between (9a) and (9b).

One does find, in the literature, statements such as 'it is generally accepted that English complement clauses are simultaneously NPs and S[entence]s'

(Stenson 1981: 63). First, they are clauses and not sentences.⁴ And secondly, they are certainly not NPs. Sentences (9a–b) clearly contrast a complement clause and an NP, as alternative fillers of the same argument slot in a main clause.⁵

In summary, when a verb in English is nominalized it functions as a noun (this is often called a deverbal noun) and will then function as head of an NP. There is another variety of nominalization, of a complete clause; this may well be used as a complementation strategy (see §7.3). Both nominalizations of verbs and—in most languages—nominalized clauses are grammatically quite different from complement clauses.

The second criterion that a complement clause must satisfy is to function as an argument of a higher clause.⁶ This can first be illustrated for English, a language with rather strict constituent order. A complement clause is recognizable by its position within the main clause—S and A arguments immediately precede the verbal phrase, and the O argument immediately follows it. This leads to the recognition of the complement clause in (10) as being in S function, that in (11) in A function, and that in (12) in O function.

(10) <That John was an academic>_S didn't matter (to Mary)

(11) <John's having ignored her mother>_A annoyed Mary_O

(12) Everybody_A knew <that John had not committed any crime>_O

In English, most clauses involving a transitive verb can be passivized, with the original O argument being reassigned to S function and the original

⁴ The post-Bloomfieldian and Chomskian schools fail adequately to distinguish between clause and sentence; 'sentence' tends to be used when 'main clause' is intended. In general linguistic terminology, a sentence has an obligatory main clause and an optional number of subordinate clauses. Several sources refer to 'sentence-like complement clauses', meaning 'main-clause-like'. Craig (1977) talks of 'complement sentences' rather than 'complement clauses'. Noonan (1985: 42) begins his seminal article by saying 'by complementation we mean the syntactic situation that arises when a notional sentence or predication is an argument of a predicate'. At the least, the word 'simple' should be included before 'sentence'.

⁵ The post-war American tradition failed to distinguish between argument slot in clause structure, and the class of items that may fill it. They employed an oversimplified structural formula:

sentence consists of NP and VP

There was then no alternative to saying that a complement clause was a kind of NP. A theoretically more adequate characterization is:

sentence consists of main clause and optional subordinate clauses

main clause consists of a predicate, a number of core arguments and a number of optional peripheral arguments

corresponding to an argument slot in clause structure there may be an NP or a complement clause.

⁶ This criterion was usefully discussed in Rosenbaum (1967), an early work on complement clauses.

A argument being moved to the end of the clause, marked with *by* (and being optionally omissible). This applies to many complement clauses in O or A function. For example, the passive of (12) is

- (12) (a) <That John had not committed any crime>_S was known
(by everyone)

Sentences (13) and (14) have an Activity and a Potential complement clause, respectively, in O slot, with (13a) and (14a) being the corresponding passives.

- (13) The police_A had observed <John's taking the money>_O
(13) (a) <John's taking the money>_S had been observed (by the police)
(14) [The organizers]_A had already decided <for Mary to lead the parade>_O
(14) (a) <For Mary to lead the parade>_S had already been decided (on)
(by the organizers)

Passivization involving a complement clause in A function can be seen in (11a), relating to (11).

- (11) (a) Mary_S was annoyed (by <John's having ignored her mother>)

A Fact or Activity complement clause in A function can also undergo passivization, as in:

- (15) <That John always ignored her mother>_A annoyed Mary_O
(15) (a) Mary_S was annoyed (<that John always ignored her mother>)
(16) <For John to marry Mary>_A would please Nancy_O
(16) (a) Nancy_S would be pleased (<for John to marry Mary>)

As mentioned in §4.1, there is a general rule in English that a preposition, such as *by*, is dropped when immediately followed by a complementizer, such as *that* or *for* or *to*. For this reason, there is no *by* before *that* in (15a) or before *for* in (16a), in the way that there is before the complement clause in (11a).

English does not have any extended intransitive verbs, but there are extended transitives (or ditransitives) and, as mentioned in §3, a complement clause can then function as E argument, as in *The doctor_A promised Mary_O <that he would cure her>_E*. And in English a complement clause may function as copula complement (CC), as in (17), or as copula subject (CS), as in (18).

- (17) [The truth]_{CS} is <that John did it>_{CC}
(18) <That John did it>_{CS} is true_{CC}, or It_{CS} is true_{CC} <that John did it>_{CS}

There are few examples of transitive verbs which may take complement clauses as both A and O arguments. A small number of verbs in English do have these properties; they include *implicate*, *show*, *demonstrate*, *relate to*, *depend on*, and *result from*. For example *<John's having carried the log home>_A shows <that he is a strong fellow>_O*.

The languages described in Chapters 2–10 show varying possibilities for the functions of a complement clause within a higher clause. Pennsylvania German (Chapter 2) appears to be rather similar to English, allowing a complement clause in functions O, A, S, E, CS and CC. Israeli (Chapter 3) has functions O, S, E, CS, and CC, but not A. Complement clauses are restricted to O function in White Hmong, Tariana, Goemai, Kambera (Chapters 5, 8, 9, 11). In Akkadian (Chapter 7), both types of complement clause occur in O function, and in S for a passive clause; just the infinitive (potential/activity) type can also be in CS function, and oblique function (after a preposition). Four varieties of complement clause are distinguished for Dolakha Newar (Chapter 6)—two varieties occur just in O function, one in O or S, and the fourth just in S function (or, for one verb, Stimulus role).

A similar picture of complement clause functions is found when we examine languages beyond those described in this volume. For Panaré (Carib family, Venezuela), only O function is available (Payne and Payne 1999). For Ainu (isolate, Japan), the attested functions are O and S, not A (Onishi 1996). In Basque, a complement clause may be in O or in copula subject (CS) function (Curnow 1998).

Criterion (II) states that a complement clause should always fill a core argument slot, as in (c) of Fig. 1. This applies to almost all of the corpus of several hundred complement clauses in Jarawara (Chapter 4). There are three exceptions, in which a complement clause is modified by an adjective or a possessed noun, just as the head noun of an NP can be. This suggests that, just in Jarawara, a complement clause effectively functions as head of an NP which is an argument of a higher verb; that is, as the 'head' in (b) of Fig. 1. (Jarawara does have relative clauses; see Dixon 2004. There is no example of a complement clause as head of an NP being modified by a relative clause; nor would there be likely to be, the complication being too great.)

The third criterion specifies that a complement clause must refer to a proposition, something involving at least one participant who is involved in an activity or state. It cannot refer just to a place or a time. In English, *I_A saw [(the place) where John lives]_O* or *I_A know [(the time) when John came home last night]_O* each involves an NP as O argument, with *place* and *time* as heads, each being modified by a relative clause. The head (plus *the*) can be omitted, the

NP then consisting just of a headless relative clause, specifying place or time. These do not involve complement clauses.

The fourth criterion states that a complement clause must be in O (or E) function for one or more of a set of prototypical complement-taking verbs. On a text count, complement clauses in Jarawara (Chapter 4) occur most often in S function. Whereas English has a transitive verb *begin*, the corresponding verb in Jarawara is intransitive. The translation of *He_A began <laughing>_O* is, literally, ‘<His laughing>_S began’. A complement clause may in Jarawara be the S argument for a verb of motion or of quantity; one says, literally, ‘<His carrying it>_S went’ for *He went carrying it*, and ‘<His doing it>_S was two’ for *He did it twice*. But complement clauses still do function as O argument for prototypical complement-taking verbs such as ‘hear’, ‘remember’, ‘know, understand’, and ‘want, like’, satisfying criterion (IV). (And complement clauses can also be in A function for the causative form of an intransitive verb; see Chapter 4.) Matses (Chapter 10) has just one verb taking a complement clause; this is the extended intransitive verb ‘want’, which takes a complement clause in E function, satisfying the criterion.

It is possible to get what appears to be a coordinated set of complement clauses, as in English *Mary_A knows <(that) John is stupid and (that) Tom is clever>_O* and *I_A want <John to sing and Mary to dance>_O*. Now many types of complex sentences in English can be explained through ellipsis from a combination of simple clauses; for examples *John likes apples and Mary pears* is taken to relate to the underlying *John likes apples and Mary likes pears* with the second occurrence of *likes* omitted. In similar fashion, the coordinated complement clauses just quoted could be said to be reductions from *Mary_A knows <(that) John is stupid>_O and Mary_A knows <(that) Tom is clever>_O* and from *I_A want <John to sing>_O and I_A want <Mary to dance>_O* respectively. It is a matter of choice whether one decides to pursue this analysis, or instead to say that a number of compatible complement clauses of the same type may be coordinated as the complex filler for a core argument in the higher clause. (And see Genetti’s discussion of this question for Dolakha Newar, in Chapter 6.)

In some languages a clause which includes a complement-taking verb, R, is simply juxtaposed to a clause including a second verb, U; this must be distinguished from a complement clause construction. An illustration is provided by Watkins (1984: 235) from Kiowa (Kiowa-Tanoan family, USA):

- (19) à-ńn mágyá èm-k^hóydé-t’ò·
 1sg-think+that might 2sg-turn.back-FUT
 ‘I thought that you might turn back (lit. I think that; you might turn back)’.

No evidence is provided that (*mágyá*) *èm-k^hóydé-t'ò* functions as a constituent of the main clause *à-ò n*, that it is a complement clause. It is likely that we have here a complementation strategy in which clauses 'I think that' and 'you might turn back' are apposed, with 'that' of the first clause referring to the second clause. This kind of strategy is discussed under (a) in §7.4.

5.2. Types, structures, and meanings

At the beginning of §5.1, a criterion for a constituent being recognized as a complement clause was given: that it should have the internal structure of a clause, at least as far as core arguments are concerned. Some types of complement clause are marked by a special form (often, possessive) of the subject, but otherwise the marking of core arguments should be maintained. Hence the recognition—in (9a–b)—of *John's playing the national anthem* as a complement clause (here the object NP, *the national anthem*, simply follows the verb, as it would in a main clause) and of *John's playing of the national anthem* as an NP (here *the national anthem* is marked by preposition *of*). (As mentioned above, there are other, confirmatory, criteria.)

Complement clauses may be more or less similar to main clauses; this has to be carefully delineated for each complement clause type. Questions to be answered include:

(a) Are the core arguments marked in the same way in complement clauses as in main clauses? Do they have the same grammatical possibilities as core arguments in main clauses?

(b) If the language is head marking, can the complement clause include the same bound pronominal elements as a main clause?

(c) Can the complement clause include peripheral constituents (of time, place, etc.) in the same way that a main clause can? (Languages vary on this.)

(d) Can the complement clause be negated? It appears that all complement clauses may be negated in Pennsylvania German, Israeli, White Hmong, Tariana, and Kambara (Chapters 2, 3, 5, 8 and 11) but not in Jarawara (Chapter 4). In Matses (Chapter 10), it is possible to elicit a negated complement clause, but this is quite uncommon. Dolakha Newar (Chapter 6) allows negation in three of its four types of complement clause, and with the verb 'pretend' but not with attention verbs from a further type. Complement clauses in Akkadian (Chapter 7) may be negated but require a different negator (the same as in other kinds of subordinate clause) from that used in main clauses. In Goemai (§2 in Chapter 9), a negator may only be included at the end of a sentence; there is then ambiguity between whether it applies to the main clause or to the complement clause.

(e) Can the complement clause be marked for tense and/or aspect and/or modality, as a main clause can be? If a language has several varieties of complement clauses, they may vary with respect to this property. In English, for instance, a THAT complement clause has the full possibilities for including modals and tense, as in a main clause. But ING and FOR TO complement clauses may not include modals or tense, although they can feature the auxiliary *have -en* (which may in this context mark past tense) and the imperfective auxiliary *be -ing*. Typically, complement clauses show less tense/aspect/modality choices than does a main clause. In Tariana (Chapter 8) two of the four varieties of complement clause may not include tense/evidentiality specification. In Jarawara, a complement clause cannot specify tense/evidentiality or modality, and it may only include four of the six 'echelons' of miscellaneous suffixes; see Chapter 4.

(f) Can the complement clause be marked for mood (taking this in a narrow sense, generally just declarative, imperative, and interrogative)? In fact, a complement clause is not uncommonly marked as interrogative but only rather rarely as imperative (it is in Russian).

(g) Can the verb of the complement clause choose from the same set of derivational processes (which may include some or all of: affixation, reduplication, internal change, and prosodic change) as the verb of the main clause?

Further questions are:

(h) Does the complement clause occur at the same position in the main clause as would an NP filling the same argument slot? May or must a complement clause be extraposed to the end of the main clause?

(i) How does the structure of the complement clause compare with the structures of other kinds of subordinate clause in the language?

There is also the matter of the coreferentiality of arguments between main clause and each type of complement clause.

(j) Relating together the subjects of main clause and complement clause, which of the following applies: the subjects must be the same; they can be the same or different; or they must be different? (For some types of complement clause and a certain semantic type of verbs there may be a requirement that the O argument of the main clause be coreferential with the subject of the complement clause.)

There may also be optional or obligatory ellipsis of an argument in the complement clause which is coreferential with an argument in the main clause. And in some languages the subject of a complement clause may or

must be ‘raised’ into the main clause; the conditions under which this happens need to be clearly stated.

We can get a situation where a certain NP has one function in the main clause and another in the complement clause. Consider, in English:

(20) Mary persuaded John <that he should hit Fred>

(21) Mary persuaded John to hit Fred

In (20), *John* is O argument of the main verb *persuade* and the coreferential pronoun *he* is S argument for the complement clause verb *hit*. In (21), *John* has both argument functions simultaneously. It is unprofitable to put forward the limited view that an NP can have only one function and then to try to decide which of the two functions to assign to *John* in (21). A reflexive pronoun ending in *-self* can only be used when coreferential with another NP in the same clause. Note that one can say *Mary forced herself to hit John* (the *herself* is in the same clause as *Mary*) and also *Mary forced John to hit himself* (the *himself* is in the same clause as *John*); this shows that in (21) *John* is functioning both as O for the first clause and as A argument for the second one.

True, when *John* is replaced by a pronoun, the object form *him* is used (rather than the subject form *he*). But this is simply a matter of surface realization (the pronoun has to have one form, not two), not affecting the fact that *John/him* actually has two functions simultaneously, as O argument in the main clause and as S argument in the complement clause. In all linguistic analysis, one must take care to distinguish function from form.

If a language has complement clauses, the number of types varies. There is just one type in each of Jarawara, Goemai, Matses, and Kambera (Chapters 4, and 9–11), two in Akkadian (Chapter 7)—and in Irish (Stenson 1981)—four in each of Dolakha Newar and Tariana (Chapters 6 and 8), five in White Hmong (Chapter 5), six in Israeli (Chapter 3), and seven in Pennsylvania German (Chapter 2). There are, in fact, three recurrent types of complement clause, whose typical properties will now be outlined.

I. Fact type

- Generally refers to the fact that something took place.
- Typically, has similar structure to a main clause, with full possibilities for negation, tense-aspect marking, etc., and for bound pronominal reference in a head-marking language.

- The time reference of a Fact complement clause is generally independent of that in the main clause, and the two clauses may show different tense-aspect values.
- Typically, marked as a complement clause by a complementizer element (similar to English *that*). This may be omissible under certain conditions, the complement clause then being recognized as such perhaps by its position within the main clause. There may be a preference (or even a requirement) that a Fact complement clause—as a ‘heavy constituent’—be extraposed to the end of the main clause; this applies in Finnish, Irish, and Jacaltec. In English, a complement clause may be extraposed provided that *it* is left in the appropriate slot. For example, (10) can be recast as *It_s didn’t matter (to Mary) <that John was an academic>_s*. (Other varieties of complement clause may be extraposable, but not so commonly as the Fact type.)

Most frequently, a complementizer form has additional functions in the grammar; for example, *that* in English is also a marker of a relative clause, and a nominal demonstrative. Complementizers have often developed from a demonstrative, or from a verb such as ‘be like’ or ‘say’. In Mokilese (Austro-nesian; Harrison 1976: 266–8), the grammatical element *pwa* functions as a clause linker ‘because, so that’ and as the marker of a Fact complement clause. It has the same form as the verb *pwa* ‘say’ and is probably historically derived from it. The complementizer *pwa* is sometimes omitted, this being particularly common after the verb *pwa* ‘say’.

Most of the complementizer words mentioned in Chapters 2–10 have additional functions in the language. For example, in Akkadian (Chapter 7) complementizer *kīma* ‘that’ also functions as ‘a preposition and adverbial conjunction with a range of meanings: “as”, “like”, “instead of”, “when”, “because”’. In Tariana (Chapter 8), the complementizer *-ka* also marks a type of sequential clause. When a complementizer does not have any other function in the grammar, it frequently shows a transparent etymology. For example, in Dolakha Newar (Chapter 6) complementizer *khā* is plainly derived from noun *khā* ‘talk, matter, news’. And in Goemai (Chapter 9), complementizer *goepe* ‘probably goes back to spatial preposition *goe* “location at a place” plus the noun *pe* “place”’.

Fact complement clauses may have some other marking, beyond a complementizer. In Irish, a Fact clause includes complementizer *go* ‘that’ and, in addition, the verb is in a dependent form indicated by ellipsis of the initial consonant if it is a regular verb and a suppletive form if irregular (Stenson 1981: 52).

As stated, a Fact complement clause will have a similar structure to a main clause. Its subject may or may not be identical to the subject of the main clause; but if it is the same, it is unlikely to be omitted.

II. Activity type

- Generally, refers to some ongoing activity, relating to its extension in time.
- Typically, has some structural similarities to a noun phrase, although it must retain crucial characteristics of a clause in order to be analysed as a complement clause. The subject may be marked like a possessor in an NP. The verb may have a special form, but this must be distinguishable from a verbal nominalization (which is a noun, and functions as head of an NP). The similarities and differences between an Activity complement clause and an NP whose head is a deverbal noun were brought out in the discussion of the English sentences (9a–b) in §5.1.
- Typically, has available less specification of tense and/or aspect and/or modality and/or negation than a main clause (partly, through use of a special verb form). An Activity complement clause may well have different time reference from that of the main clause. In a language where it cannot include a grammatical tense marker, the time reference has to be shown by lexical means; for example, in English *Today I_A do remember <seeing him last Wednesday>_O*.
- In a head-marking language, an Activity complement clause may not be able to include the same bound pronominal elements as does a main clause.
- The subject of an Activity complement clause may or may not be the same as the subject of the main clause; if it is, it may be omissible.

III. Potential type

- Generally, refers to the potentiality of the subject of the complement clause (which is almost always the same as some argument in the main clause) becoming involved in an activity.
- Typically—having satisfied the requirement to be analysed as a complement clause—has less structural similarity to a main clause than a Fact complement clause, and has less structural similarity to an NP than an Activity clause.
- Generally, lacks the tense-aspect and similar choices available to a main clause. And, where a main clause includes bound pronouns, may lack these.

- As a rule, has implicit reference to the same time as, or a later time than, that of the main clause.
- The verb generally has a special form (sometimes called ‘infinitive’; see Appendix for the sometimes misleading nature of such a label); the verb may be marked in a similar way to dative (or some other) case on an NP.
- In some languages, a Potential complement clause must have the same subject as its main clause, and statement of the subject must (or may) be omitted from the complement clause.

Many languages do have three types of complement clause with properties similar to those just given (as does White Hmong, described in Chapter 5), but there is a good deal of variation. Irish has just two varieties, one clearly of the Fact type, while the other combines the properties and meanings of the other two types; the same applies for Akkadian (Chapter 7). Jarawara has a single type of complement clause, whose formal properties most resemble those outlined for the Activity type, while its meaning encompasses Activity and Potential; the verb takes a special form, which has some similarities to—and some differences from—a nominalization, and first- and second-person singular subjects (but not the non-singulars) are expressed as possessives.

There can be further possibilities within each complement clause type. Finnish has the three standard types, but the Activity type can involve either a ‘present participle’, used when the activity described by the complement clause is at the same time or later than that of the main clause, or a ‘past participle’, used when it precedes it; and there are two varieties of Potential complement clause (so-called ‘infinitives’), used with different sets of verbs (Sands 2000).

Yimas (Lower Sepik family, Papuan area, New Guinea; Foley 1991: 384–402) constitutes an exception to the typical schema set out above. Complement clauses involve a verb marked with *-ru*, which also forms nominalizations. There is a choice of four complementizers, which follow the complement clause: *-mpwi* (lit ‘talk’) for a complement clause referring to speech or language, as in ‘I tried to tell them to buy betelnut’; *-wampug* (‘heart’) for desire, as in ‘he feels like eating sago’; *-nti* (‘act’) for action, as in ‘I’m tired of building houses’; and *-wal* (‘custom’) for customary activity, as in ‘smoking tobacco is bad’.

Many languages also have interrogative complement clauses, similar to English I_A *don’t know* <whether he will come>_O, or I_A *don’t know* <who will come>_O. These are most often similar in structure to the Fact type (although, of course, individual languages do vary). For example, in Tzotzil, a Fact-type

complement clause can be introduced either by *ti* 'that' or *mi* 'whether' (Robinson 1999).

6. Semantic types of verbs and types of complement clauses

Each of the semantic types of verbs has a common element of meaning. Each type of complement clause, in a given language, has a certain reference. Which type of complement clause can be used with a given complement-taking verb depends on the interrelation of these two semantic parameters. It is useful to deal, one at a time, with the complement-taking semantic types presented in §§2–3, and survey how they typically relate to the three recurrent types of complement clauses discussed in §5.2. Examples are provided from English, which has a fairly prototypical set of complement clauses.⁷

Primary-B types

ATTENTION

(a) verbs such as 'see', 'hear', 'notice', 'smell', 'show'

- Prototypically take an Activity complement clause, describing the perception of a continuous activity; for example I_A *noticed* <*Mary*(*'s*) *weeding the garden*>_O.
- May also take a Fact complement clause, for the perception that some activity is completed, or of some state; for example I_A *noticed* <*that Mary had weeded the garden*>_O and I_A *saw* <*that John was incompetent*>_O.

(b) 'recognize', 'discover', 'find'

- Are expected to take a Fact complement clause; for example I_A *discovered* <*that Mary had resigned*>_O.

THINKING

(a) 'think (of/about/over)', 'consider', 'imagine', 'dream (of/about)'

- Depending on the senses of a verb 'think' in a particular language, it may relate to a Fact complement clause, such as $John_A$ *thinks* <*that Mary is clever*>_O, or to an Activity one, as in $John_A$ *is thinking about* <(Mary(*s*)) *weeding the garden*>_O.

(b) 'assume', 'suppose'

- Generally restricted to a Fact complement clause.

⁷ And English has more besides these. A fairly full account is in Dixon (1991: 32–50, 207–66; 2005: 36–53, 230–85).

(c) 'remember', 'forget'

- Similar to set (a). One can remember (or forget) just the fact that something happened, or else the details of the activity involved; for example I_A remembered <that I had visited Paris>_O (but couldn't recall anything I did there) and I_A remembered <visiting Paris>_O (and had a clear recollection of every part of the holiday). English is perhaps unusual in also permitting a Potential complement clause, as in I_A remembered <to lock the door>_O. (See examples (12–13) in Dixon 1995: 186.)

(d) 'know', 'understand'; (e) 'believe', 'suspect'

- Are generally restricted to a Fact complement clause. The verb 'know' may also have a second sense 'know about', and can then take an Activity clause.

LIKING

(a) 'like', 'love', 'prefer', 'regret'; and (b) 'fear'

- Most frequently relate to an Activity complement clause, as I_A like/fear <John's getting drunk>_O. They may also be used with a Fact clause, as in I_A like (it) <that John gets drunk>_O or I_A fear <that John may get drunk>_O. Note the optional inclusion of *it* (or an NP such as *the fact*) before a Fact clause in English with *like*, *love*, and *prefer* (but not with *fear*). English also allows a Potential complement clause with *like*, *love*, *prefer*, and *fear* (but not with *dislike* and *regret*); for example I_A 'd like <to go>_O and I_A fear <to go>_O.

(b) 'enjoy'

- Refers to a pleasant perception which is extended in time and expects an Activity complement clause.

SPEAKING

A not insignificant number of languages lack the grammatical device of indirect speech, using only direct speech. Rather than 'Mary told John that he should go' or 'Mary told John to go', one might have to say 'Mary told John: "(You) go!"'⁸ As mentioned in §4.1, direct speech should—save in exceptional cases—not be regarded as a complementation strategy, but instead as a grammatical mechanism quite distinct from any form of complementation.

⁸ A variety of other strategies may be utilized for reporting what someone else has said, as an alternative to complement clauses. See Güldemann and von Roncador (2002) and Aikhenvald (2004, Chapter 4).

Other languages do employ a complement clause construction of indirect speech. There is a fair range of verbs of speaking and they tend to select different varieties of complement clauses.

(a) ‘say’, ‘inform’, ‘tell’ (one sense)

- Are generally confined to a Fact clause.

(b) ‘report’

- May take a Fact or an Activity clause.

(c) ‘describe’, ‘refer to’

- Typically take an Activity clause.

(d) ‘promise’, ‘threaten’

- Generally take a Potential complement clause, which may be in indirect object slot.

(e) ‘order’, ‘command’, ‘persuade’, ‘tell’ (one sense)

- Also generally take a Potential clause.

In English, sets (d) and (e) may alternatively take a Fact complement clause, so long as this includes a modal element which describes the potentiality; for example, *I_A persuaded John_O <to go>* and *I_A persuaded John_O <that he should go>*.

There may be a verb *tell* (*about*) with a wide range of meaning, corresponding to several of the Speaking semantic subtypes. In English we have (a) *I_A told Mary_O <that it was late>*, and (c) *I_A told Mary_O about <Brazil’s having scored four goals>*, and (e) *I_A told Mary_O <to go>*.

Goemai, from the Chadic family, is unusual in that there is no direct speech. If one wants to quote what someone said then it must be done through reported (or indirect speech), which is a complementation strategy. A set of logophoric pronouns facilitates this. As stated in §3.4 of Chapter 9, the reported speech copies precisely what was said (including any errors).

Genetti, in Chapter 6, puts forward convincing evidence for a direct quote in Dolakha Newar having the status of a ‘complement clause’, although it can involve several clauses or even just an interjection (but it is most commonly a single clause). One significant factor is that whereas in other languages the quote margin must either follow or precede direct speech—as in English ‘*I’ll go*,’ *Mary told John* or *Mary told John ‘I’ll go’*—in Dolakha Newar the direct quote complement clause frequently intrudes into the middle of the quote clause—for example, literally, ‘speaker-ERGATIVE_A <direct speech>_O say’. Another piece of supporting evidence is that the complete sentence may have

prosodic unity, with no intonation breaks before or after the direct speech (just like an NP in O function).

We sometimes find that two Primary-B verbs, which differ only in that one has a positive and the other a negative meaning, take different types of complement clause. In White Hmong (Chapter 5) *nyiam* ‘like’ may take Fact, Activity, or Potential complement clauses, while *ntxub* ‘hate’ is restricted to the Fact variety (showing the wider pragmatic possibilities of ‘like’ in this language). In English, verbs like *persuade* and *encourage* take a FOR TO complement clause while their antonyms, *dissuade* and *discourage*, take the rather different FROM ING type; compare *I persuaded/encouraged Tom to go* with *I dissuaded/discouraged Tom from going*. This can extend to complementation strategies: in Dyirbal (Chapter 12), *gigal* ‘tell to do, let do’ takes the purposive complementation strategy while *jabil* ‘tell not to do, refuse to allow’ requires the relative clause strategy.

Secondary types

When Secondary concepts are realized as complement-taking verbs, their likely complement clause possibilities are:

SECONDARY-A

(i) Negators ‘not’, ‘don’t’

- Generally take Fact complement clause. Noonan (1985: 132) quotes examples from Fijian⁹ and from Shuswap.

(ii) Modal type, such as ‘can’, ‘should’

- Likely to take Potential complement clause; ‘can’ may also take a Fact clause.

(iii) Beginning type, such as ‘begin’, ‘start’, ‘continue’, ‘stop’, ‘cease’, ‘finish’

- Generally accept an Activity clause; for example in English *He_A began/continued/finished <washing the clothes>_O*. May also describe the potentiality of getting into, or continuing with, or ceasing from an activity, as in *He_A began/continued/ceased <to wash the clothes>_O*. (See Dixon 1991: 172–9 and 2005: 177–83 for discussion of the different complement clause possibilities for these verbs.)

⁹ But note that Noonan quotes from an old source which glosses *ena* as ‘future’. All modern grammarians of Fijian would say that future is marked just by *na* with the initial *e* being the 3sg subject pronoun which cross-references the complement clause, in S function. That is:

e _s	na	sega	<ni	lako	[ko	koya] _{s>_s}
3sg	FUT	not	THAT	go	ARTICLE	3sg

‘He won’t go (literally, it will not be the case, that he goes).’

(iv) Trying type, such as ‘try’, ‘attempt’

- For ‘try’ and ‘attempt’, the prototypical complement clause is Potential. (In English, the verb *try* also has the sense of ‘testing, tasting’ and can then take an Activity clause, as in *He_A tried <eating the pie>_O*.)

SECONDARY-B verbs such as ‘want’, ‘wish (for)’, ‘hope (for)’, ‘intend’, ‘plan (for)’, ‘pretend’.

- Typically take a Potential complement clause.
- Some of them may—like ‘promise’ and ‘persuade’—alternatively take a Fact complement clause which includes a modal.

In English, *want* is directly pragmatic, referring to something which could be achieved, and is limited to a Potential complement clause. *Wish*, in contrast, may have wistful overtones, referring through a Fact clause to something that could not be realized, as in *I_A wish <that I could have talked with Aristotle>_O*.

The complement clause of ‘hope (for)’ may refer to the potentiality of something happening in the future, or to the fact of something which has already happened but concerning which the speaker does not yet have information. For the latter sense a Fact complement clause will be appropriate; for example, in English *I_A hope <that John did lock the door last night>_O*.

‘Pretend’ behaves pretty much like other Secondary-B verbs, except that it often refers to the present or past. As a consequence, a Fact complement clause need not include a modal; for example, in English *I_A pretended <that I was a preacher>_O*.

SECONDARY-C verbs, such as ‘make’, ‘cause’, ‘force’, ‘let’, and ‘help’.

- Take a Potential complement clause.

Make and *let* in English appear to differ from other Secondary-C verbs in that they omit *to* from a Potential complement clause when in active voice; compare *They forced John to go* and *They made John go*. However, the *to* has to be included in the passive; one must say *John was made to go (by them)*, and not **John was made go (by them)*. The omission of *to* from an active clause with *make* and *let* is a minor matter of realization, and by no means sets them apart as a distinct set of complement-taking verbs.

These correlations describe many of the types of complement clauses associated with complement-taking verbs, for languages which have something similar to the three basic types of complement clauses. There are, however, a number of variations on the general theme, and points of extra detail in

individual languages. For example, one lexeme may combine meanings from what were set out above as distinct semantic types. In Jarawara, the verb *-nofa-* may mean ‘like’, ‘want’, and ‘desire’, while *-wato-* covers ‘know’, ‘understand’, ‘learn’, and ‘remember’ (recall that there is just one type of complement clause in this language). In Fijian, *nanu-ma* means both ‘think’ and ‘remember’ (and takes all varieties of complement clause) while *nui-ta’ina* combines ‘rely on’ and ‘hope for’ (the Fact complement clause is preferred, although Potential may also be possible).

Some complement-taking verbs, by their meanings, expect to have main and complement clauses share the same subject; for example, ‘try’. These will then naturally take a variety of complement clause which requires identical subjects, as the Potential type does in some languages. Other verbs, such as ‘want’, may allow same or different subjects; it is not uncommon for these two to take different kinds of complement clause for the two possibilities.

In the studies which follow in the present volume we find the same construction used for both same and different subjects of ‘want’—similar to English *I want to sing* and *I want John to sing*—in Israeli, Jarawara, Dolakha Newar, and Akkadian (Chapters 3–4, 6–7). But different possibilities apply in:

- Pennsylvania German (Chapter 2): a Bare complement clause for same subject; a complement clause introduced by *as* ‘that’ or an interrogative complement clause for different subjects.
- White Hmong (Chapter 5): a serial-verb-type complementation strategy for same subject; a Potential complement clause for different subjects.
- Tariana (Chapter 8): serial verb construction strategy for same subject and a nominalization strategy for different subject.
- Matses (Chapter 10): complement clause for same subject; verbal suffix *-paşun* for different subjects.

The differentiation may also apply to complementation strategies (and beyond):

- Goemai (Chapter 9): either a Purposive complementation strategy or a biclausal construction for same subject; just a biclausal construction for different subjects.
- Dyrirbal (Chapter 12): verbs of wanting are all intransitive and their S can be coreferential with S or O of a following verb in purposive inflection. There is no simple way of expressing a different-subject intention, such as ‘I wanted John to go’; depending on the circumstances, one could be specific and say something like ‘I told John to go’.

In Jacaltec (Mayan family; Craig 1977: 234–8) ‘would like’ (literally ‘stomach wants’)—with main and complement clause having the same subject—takes a Potential clause if the verb of the complement clause refers to an activity, but a Fact clause if the verb refers to a state. Thus, literally ‘I would like <to see him>’ but ‘I would like <that I be rich>’. When the subjects of the two clauses differ, only a Fact complement clause may be used; we get, literally ‘I would like <that you sleep>’. (See also Dixon 1995: 215 on Kamaiurá.)

When a certain verb may accept more than one variety of complement clause, the choice can be determined by the relation between main clause and complement clause arguments (same or different subject, as just illustrated), or by the nature of the state or activity referred to by the complement clause. This was exemplified by (4–5) in §2— I_A *heard* <*that Brazil beat Argentina*>_O (I just heard the result) as against I_A *heard* <*Brazil’s beating Argentina*>_O (I listened to the radio commentary on the entire match). The choice of complement clause here functions as an ‘evidentiality strategy’ (see Aikhenvald 2004: 120–3).

Another example of this is from Jacaltec. Craig (1977: 267–8) discusses two complementizers which can be used in Fact clauses: ‘the choice between *chubil* and *tato* depends on the attitude or belief of the speaker. . . . The use of *chubil* denotes a high degree of credibility or certainty, and the use of *tato* introduces a notion of disbelief or reservation about a hearsay’. (Craig provides examples of the two complementizers with ‘say’, ‘recognize’, and ‘make public’.)

7. Complementation strategies

A restricted set, *R*, of complement-taking verbs is found in all languages, although its composition varies somewhat; typical members include ‘see’, ‘think’, ‘know’, and ‘like’. In some languages all verbs in set *R* take a complement clause involving a verb from the unrestricted set, *U*; in others only some do; in others none do. Verbs from set *R* which cannot take a complement clause will be linked to a verb from set *U* through some other grammatical construction; these are called complementation strategies.

Rather few of the grammars which deal with complementation provide explicit criteria for recognizing a putative complement clause as an argument of the verb in the main clause. Some of the phenomena which have been called complement clauses are undoubtedly not this, but rather complementation strategies. Since most grammarians do not explicitly distinguish between complement clauses and complementation strategies, it is difficult to

provide a full account of the latter. However, the richness of complementation strategies reported in this volume enables a start to be made. The sections which follow discuss serial verb constructions, relative clauses, nominalizations, and clauses linked together within one sentence.

7.1. *Serial verb construction strategy*

In a serial verb construction (SVC), two (or, sometimes, more) verbs function together like a single predicate and are conceived of as describing a single action. The most common variety of SVC is asymmetrical, with a Major member (covering a wide range of verbs) and a Minor member (one of a small set of verbs); see Aikhenvald and Dixon (2005). A language with SVCs typically has a number of distinct asymmetrical varieties, where the Minor set for each variety is semantically homogeneous. Recurrent varieties include Direction (for example, ‘go’, ‘come’, ‘return’) and Association (‘be with’, ‘be together’). They also include all kinds of Secondary verbs except negation.

There may be a variety of asymmetrical SVC where the Minor member is a Secondary-A verb such as ‘can’ or ‘must’ or ‘begin’ or ‘stop’ or ‘try’. An example from Tariana (Aikhenvald 2003: 433) is, with the serial verb underlined:

- (22) wa-rapa wa-thaka wha
 1pl-dance 1pl-stop we
 ‘We stopped dancing for a while.’

SVCs as a complementation strategy with Secondary-A verbs are reported for Dyirbal (Chapters 12) and for Tariana (further examples and discussion in Chapter 8). For Goemai (Chapter 9), the serial verb construction strategy is used for Primary-B Attention verbs and for Secondary verbs ‘finish’, ‘taste/have ever done’, and ‘hate/insist on doing’. White Hmong (Chapter 5) has a complementation strategy used with secondary verbs which is like a serial verb construction but differs in that the second verb (from set U) can be independently negated.

There may be a variety of asymmetrical SVC whose Minor member is a Secondary-B verb such as ‘want’, ‘plan’, ‘intend’ (also found in Tariana). The general rule is that all verbs in an SVC should have the same subject. This naturally applies to Secondary-A verbs, but it means that Secondary-B verbs may be restricted to the same subject sense when used in an SVC.

Secondary-C verbs such as ‘make’, ‘cause’, ‘force’, ‘let’, and ‘help’ are sometimes found in a special subtype of SVC—the ‘switch function’ subtype—where the O argument of the Minor verb (the Secondary-C item) is identical

to the A argument of the Major verb. An example from North-east Ambae (Austronesian, Vanuatu; Hyslop 2001: 303) is:

- (23) mo vai ngire dolegi ra=mo inu=e
 REALIS make 3nsg all 3nsgS=REALIS drink=3sgO
 ‘He made all of them drink it.’

Whereas SVCs typically provide a complementation strategy for Secondary verbs, they rather seldom do so for Primary-B verbs. One example is in Goemai (Chapter 9) where the SVC strategy is used with verbs from the Attention semantic type.

When SVCs are used with Primary verbs, it is often by analogy with Secondary verbs; for example, ‘order’ may be coded in a similar way to ‘make’, and ‘know how to’ in a similar way to ‘can, be able to’. Further work is needed to explore the possibilities of Primary-B verbs as Minor Member within an asymmetrical SVC.

Detailed discussion of SVCs in a range of languages will be found in the preceding volume in this series, Aikhenvald and Dixon (2005).

7.2. *Relative clause strategy*

In a complement clause construction, the complement-taking verb (from set R) is predicate of the main clause, with the verb from set U functioning as predicate of a complement clause which fills an argument slot in the main clause. In an asymmetrical SVC, R and U occur together in the main clause predicate. When complementation is achieved through a relative clause strategy, the verb from set U is predicate within a relative clause which modifies the head of an NP, which is in turn an argument of the main clause whose predicate is a verb of set R.

The relative clause strategy is typically used with verbs that would take an Activity complement clause in a language which works with complement clauses. Dyirbal uses this strategy, with complement-taking verbs of the Attention and Thinking types. An example from a Dyirbal story is:

- (24) ŋaja_A bura-n [gayu-ŋga nyalŋga_S wanda-ŋu]_O
 1sg see-PAST cradle-LOCATIVE child hang-REL
 ‘I saw the child hanging in a cradle.’

Note that in Dyirbal a relative clause is marked by verbal suffix *-ŋu*, in place of a TAM ending.

Now in English there is a distinction between a relative clause construction, as in (25a), and a complement clause construction, as in (25b).

- (25) (a) I_A saw [the child [(who was) hanging in a cradle]]_O
 (b) I_A saw <the child('s) hanging in a cradle>_O

Sentence (25a) states that I saw a child, with the relative clause specifying which child it was I saw. In contrast, (25b) states that I saw a happening, a child's lying in a cradle.

In Dyirbal this distinction cannot be made. Sentence (24) is potentially ambiguous between the two readings, (25a) and (25b). However, there is no significant difference in meaning between (25a)—relating to seeing a child who is hanging in a cradle—and (25b)—relating to seeing a child hanging in a cradle—so that little is lost. The specific import of (24) will be inferred from the discourse context in which it occurs.

Whereas a complement-taking verb such as 'see' can take a complement clause in a language which has complement clauses, in a language lacking complement clauses it may carry the *expectation* of occurring in an appropriate complementation strategy.

But whereas there is little semantic difference between a complement clause and a relative clause construction for an Attention verb such as 'see', the difference is considerable with a verb from the Liking type. In §2, we considered:

- (6) (a) I dislike [that man [(who is) painting his front door blue]]_O
 (b) I dislike <that man('s) painting his front door blue>_O

Sentence (6a) indicates that I dislike that man (irrespective of what he is doing) whereas (6b) states that I dislike what he is doing (never mind what I think about him as a man). If a Relative Clause complementation strategy were to be used with a verb of Liking, there would be ambiguity between meanings (6a) and (6b) with the likelihood of severe confusion resulting.

In fact, it appears that a Relative Clause strategy is unlikely to be used with Liking verbs. In Dyirbal, for instance, such verbs take a Purposive complementation strategy; see §7.4 and Chapter 12. Note that a Relative clause strategy is also discussed in Chapter 7, for Akkadian.

7.3. Nominalization strategy

'Nominalization' is used to describe a process (and its result) by which something with the properties of a nominal can be derived from a verb or adjective, or from a complete clause. English is replete with deverbal nominalizations—*playing*, *refusal*, *demolition*, *discovery*, and *knowledge* were mentioned in §5.1. There are also some nominalizations of verb-plus-object, such as *wife-bashing*. In other languages, a full clause can be nominalized; see the

discussion by Genetti (in Chapter 6) of varieties of nominalization in Tibeto-Burman languages.

Languages lacking a full range of complement clause constructions will often employ some kind of nominalization as a complementation strategy. For North-east Ambae, Hyslop (2001: 392) contrasts the verb ‘tell’ occurring with a Fact-type complement clause, in (26), and with a nominalization strategy, in (27).

- (26) mo verve<huri.vo mo tarani [na havena]>_O
IRREALIS tell THAT IRREALIS want ACCUSATIVE what
'He tells what he wants (lit. he tells that he wants what).'
- (27) mo veve [na no-na tarani-ana]_O
IRREALIS tell ACCUSATIVE CLASSIFIER-GENERAL WANT-NOMINALISER
'He tells what he wants (lit. he tells his wants).'

In (26), the complement clause functions as O argument of ‘tell’; it includes a realis marker and an object NP marked by *na*. The O constituent in (27) has the structure of an NP, with accusative marker and classifier preceding the nominalized verb, *tarani-ana*, which is NP head.

Kham (Tibeto-Burman, Watters 2002: 331–41) uses nominalization as its complementation strategy (and has no complement clauses). Generally, the implicit subject of the nominalized verb should be identical to the subject of the main clause. The same-subject sense of ‘want’ takes this strategy, as in:

- (28) ηa: a-tə cuh-si-u
 1sg PROXIMATE-SUPERESSIVE sit-MIDDLE-NOMINALIZER
 ηa-pəǎ̃-zya
 1sg-want-CONTINUOUS
 ‘I want to sit here/on this.’

In order to express desire with different subject, a quite different strategy is required in Kham, involving direct speech. One has to say something like, literally ‘‘May they just go away’’, we were saying to ourselves’ for ‘We want them to go away’.

In Quechua (Weber 1989: 288–95; 1983), ‘want’ with different subject is expressed through a complement clause construction, with complementizer *-na*, literally ‘He_i wants him_j to kiss me’. But ‘want’ with same subject involves a nominalized form of a verb, literally ‘I want [kissing-her]’; the nominalization is marked by suffix *-y*, which is also used to derive a concrete noun from a verb (for example, *miku-* ‘eat’, *miku-y* ‘food’, Weber 1989: 51).

Nominalization is recognized as a complementation strategy for Akkadian, Tariana, Goemai, and Matses (Chapters 7–10). The complement-taking verbs with which it occurs differ from language to language, but ‘know’ appears to recur. In Chapter 6, Genetti describes a type of complement clause as a clausal nominalization.

7.4. *Complementation strategies involving linked clauses*

Other complementation strategies involve the R and U verbs being in different clauses which are linked together within a sentence, neither being embedded within the other. There are a number of possibilities here.

(a) **Apposition.** The two clauses may simply be in apposition (alternatively called parataxis, or juxtaposition), with an NP or pronoun or demonstrative—which is one argument (generally in O function) of the clause that includes the complement-taking verb (from set R)—having reference to the entire apposed clause, which includes the verb from set U. An example from Kiowa was provided at (19) in §5.1, literally ‘I think that; you might turn back’ where the ‘that’ of the first clause refers to the second clause. Interestingly, *that* complement clauses in English are said to have evolved from a structure of this kind, with the demonstrative *that* being grammaticalized to become complementizer *that* when a sentence such as ‘I_A saw that_O; he_S came’ was reanalysed as ‘I_A saw <that he came>_O’ (Hopper and Traugott 1993: 185–9). (And see Deutscher in Chapter 7 below and 2000: 66–91 for a similar development in Akkadian.)

Bontkes (1985: 197–202) describes an appositional construction in Suruí (Tupí family, Brazil), where the clause with the complement-taking verb comes last:

- (29) *été* *awuru* *sádé* *a-peyare;* *ewe* *íkin* *o-or*
 THEN dog IMPERFECTIVE 3-bark THAT see 1sg-come
 é
 SENTENCE.MARKER
 ‘Then I came and saw the dog barking (lit. then the dog was barking;
 I came and saw that).’

Here the ‘that’ of the second clause refers to ‘the dog was barking’. Note that the first clause in (29) can include any tense-aspect marker.

The appositional strategy is particularly suited for use with complement-taking verbs which, in other languages, occur with Fact and Activity complement clauses, especially verbs like ‘know’ and ‘see’. This strategy is described for Akkadian and Goemai (Chapters 7 and 9).

(b) **Clause chaining.** Some languages have a device of ‘clause linking’, whereby a number of clauses referring to distinct but related events are placed in sequence. There is one main clause (often the last in the chain), marked for the full set of verbal categories. Other (‘medial’) clauses may just mark whether they have the same or different arguments to a following clause. Just occasionally, clause chaining can function as a complementation strategy, as in Motuna, a Papuan language from the Solomon Islands (Onishi 2004).

There can be other clause-chaining strategies, for example, sequential subordinate clauses in Tariana (Chapter 8) and sequential and consequence clauses in Goemai (Chapter 9). For Matses (Chapter 10), Fleck describes a further kind of complementation strategy which he terms Adverbialization; this is used with Primary-B verbs of Attention, Thinking, Speaking, and Liking, and with Secondary-A verbs of Beginning and Trying.

(c) **Purposive linking.** As pointed out in §2, there is a considerable syntactic difference between the two sentences in English *He ran to catch a glimpse of the King* and *He wanted to catch a glimpse of the King*. Their full structures are:

- (7) (a) [He ran] [(in order) to catch a glimpse of the King]
 (b) [He wanted <to catch a glimpse of the King>_O]

Sentence (7a) consists of two intransitive clauses, linked by *in order to*, which can be reduced to just *to*. Sentence (7b) has a transitive main verb with a Potential complement clause as its O argument; this variety of complement clause in English is marked by *to* (which cannot be expanded to *in order to*).

Languages which lack a Potential complement clause construction—illustrated in (7b)—may use purposive clause linking, similar to (7b), as a complementation strategy. Whereas a clause involving any verb (intransitive or transitive) can be linked to a following purposive clause (for example, ‘He went to bathe’ or ‘He took the car to get it repaired’), a verb like ‘want’ may carry the expectation of a following purposive clause, as a complementation strategy (something like ‘He wanted to bathe’ or ‘He wanted to get the car repaired’).

Interestingly, verbs which take a purposive complementation strategy are often intransitive and extended intransitive. This applies for *waln̄garray* ‘want (to do something to satisfy a persistent emotional worry or desire)’ in Dyirbal (Chapter 12) and for *djäl* ‘want, desire, like, love’ in the Australian language Djambarrpuyngu (Wilkinson 2004). They can, however, be transitive, as in Akkadian and Goemai (Chapters 7 and 9). The purposive strategy is attested with verbs such as ‘remember’, ‘like’, ‘promise’, ‘threaten’, ‘persuade’, ‘tell (to do)’, ‘order’, ‘want’, and ‘try’; it is not attested with Attention verbs.

There are undoubtedly other kinds of clause linkage which can function as complementation strategies. In Chapter 9, Hellwig describes the reported speech strategy for Goemai, which is the only mechanism for indicating what someone said, there being in this language no direct speech construction.

Deutscher (mentioned in Chapter 7, in more detail in 2000) describes how, in Akkadian, a linked clause construction has developed into a bona fide complement clause construction. In judicial statements the form *kīma* at first had the meaning 'as', so that one could say 'I_A prove-him_O, *kīma* (as) a slave'; this developed into 'I_A prove-him_O, *kīma* he is a slave'. It was then generalized to sentences like 'I_A prove-him_O, *kīma* he ran away'. Finally, the *kīma* clause was reanalysed as O argument of 'prove': 'I_A prove < *kīma* (that) he ran away >_O', where *kīma* is now the marker of a Fact complement clause, filling the O slot within the main clause (Deutscher 2000: 55). Another early use of *kīma* was as a clause linker 'because' as in 'I informed the governor *kīma* (because) the barley was not collected'; this use of *kīma* was also reanalysed as complementizer, giving 'I informed the governor < *kīma* (that) the barley was not collected >'; the construction type was then extended to 'know', 'see', and 'hear'. There were thus two complementation strategies of different kinds—one involving *kīma* with the meaning 'as' and the other having *kīma* with the meaning 'because'—which converged to become a Fact-type complement clause construction with *kīma* as the complementizer 'that'.

Heine and Kuteva (2002) list a variety of diachronic sources for complementizers; these undoubtedly point to further kinds of complementation strategies, which could develop into complement clause constructions.

In summary, in a language which lacks a complement clause construction, a complement-taking verb (from set R) carries the expectation of entering into one or more complementation strategies, some of the varieties of which were surveyed above.

8. The individual studies in this volume

The eleven chapters which follow each provide a full and insightful account of complementation in a language with which the author has intimate knowledge, based on extensive fieldwork (or, in the case of Akkadian, full acquaintanceship with all available materials).

The first two chapters deal with languages which have an extensive set of complement clauses and thus no need of complementation strategies. Pennsylvania German as spoken by a Mennonite Anabaptist community in Canada (Chapter 2) is genetically close to English and, as expected, shows similar types of complement clause (seven in all); but there are significant differences.

Kate Burridge describes the three patterns of Potential complementation, explains the differences of meaning between non-Fact clause types, and reconstructs the development of *fer* from being a benefactive preposition to becoming a complement clause marker. In Chapter 3, Ghil'ad Zuckermann describes a similarly rich system of six varieties of complement clause in Israeli (Modern Hebrew); these may well be due, at least in part, to prolonged contact with Indo-European languages. The same marker may be used for relative clauses and for Fact complement clauses, criteria being provided for distinguishing the two constructions.

The languages described in Chapters 4–11 employ both complement clauses and complementation strategies. Dixon describes in Chapter 4 how Jarawara (Arawá family, Brazil) has a single variety of complement clause which can be O argument for verbs like 'want, like', 'know, understand', and 'hear' but has the rather unusual property of also being S argument for verbs of motion and for stative verbs (one says, literally, '<His singing> was good' for 'He sang well'). There is also a quite minor complementation strategy (which could, alternatively, be regarded as a further type of complement clause), dealing just with indirect speech. In Chapter 5, Nerida Jarkey recognizes both complement clauses and one complementation strategy in White Hmong (Hmong-Mien, or Miao-Yao, family). There are two varieties of Fact clause, two kinds of Potential clause, and an Activity complement clause. The strategy is similar to a serial verb construction but differs in being able to negate each verb on an individual basis.

Carol Genetti, in Chapter 6, describes four kinds of complement clause and one strategy (which involves a grammatical auxiliary) for Dolakha Newar (Tibeto-Burman family). She is, in essence, dealing with 'complement constructions', which are generally a single clause but can be more complex. Genetti argues strongly that direct speech satisfies criteria to be considered a complement construction; for example, it is framed by the quote clause. Old Babylonian Akkadian is dealt with in Chapter 7; Guy Deutscher describes Fact and Potential varieties of complement clauses, and also six complementation strategies. He also describes diachronic changes which led to what was a prepositional and adverbial conjunction, *kīma*, developing into the marker of Fact complements.

Tariana (Arawak family, Brazil), described by Alexandra Aikhenvald in Chapter 8, shows four varieties of complement clause and four complementation strategies. This complexity is in part the combination of genetically inherited features, typical of Arawak languages, and areal features diffused from Tucanoan languages spoken in the same linguistic area. For example, the serial verb construction strategy is of Arawak origin whereas the nominalization

strategy is borrowed from Tucanoan. For Goemai (Chadic branch of Afroasiatic, Nigeria; Chapter 9), Birgit Hellwig recognizes one type of complement clause, with a Fact meaning, and six complementation strategies. There is in this language no distinction between direct and indirect speech; speech is quoted exactly as said, but within a 'reported speech' complementation strategy.

Matses (Panoan family, Peru and Brazil) has one type of complement clause, used with a single—albeit frequent and important—verb, 'want'. There are also, as David Fleck describes in Chapter 10, two complementation strategies: nominalization—used mostly as copula subject when the copula complement is an adjective—and a range of types of adverbializations, marked by suffixes 'while', 'when', and 'after'. Marian Klamer shows in Chapter 11 that, in the Austronesian language Kambera, 'nominal clauses' have a minor use as complement clauses (occurring with just eight verbs in the corpus). There is also a 'controlled clause' complementation strategy, employed with a number of Primary-B and Secondary verbs, plus three motion verbs. Like many Australian languages, Dyirbal has no complement clauses. As described by Dixon in Chapter 12, it makes do instead with three complementation strategies: relative clauses, purposive constructions, and a limited variety of serial verb constructions.

9. Conclusion

In every language there are one or more grammatical processes for relating the action or state described by one verb (from an unrestricted set, U) to an argument of another verb (from a restricted set, R).

The most common verbs in set R have meanings such as 'see', 'hear', 'know', 'believe', and 'like' and often also 'tell' (these are Primary-B verbs). Their object argument may refer to an object (through a noun or pronoun) or to an activity or state (through a verb).

A number of universal 'Secondary concepts'—including 'can', 'begin', 'try', 'want', and 'make'—have varying realization across languages; they may be an affix to a verb, or a modifier to a verb or a clause, or a lexical verb (a Secondary verb). If realized as verbs, they also belong to set R, and will enter into the same sort of grammatical relations with another verb as do Primary-B verbs.

A common grammatical means for linking verbs R and U is through a complement clause construction. The set U verb is predicate of a complement clause which functions as one argument for the set R verb, in the main clause. Alternatively, there may be one of a number of complementation strategies.

R and U may together make up one predicate, in a serial verb construction. Or U may be predicate of a relative clause which functions within an NP that functions as an argument of verb R. Or a nominalization of U may be head of an NP which is an argument for R. Or two clauses (one with R and the other with U as predicate) may be linked together at the sentence level in one of a number of ways—in apposition (with one argument of the clause with R referring to the complete clause with U), or in a clause chain (with R being the main and U a subordinate verb), or through the clause with U being linked by a purposive inflection to the main clause, with R. Some languages work entirely in terms of complement clauses, others only through complementation strategies, while a further set combine the two.

Complement clauses are likely always to function as O argument for some verbs. Depending on the language, they may also be in S and/or in A and/or E and/or CS and/or CC function. There are three recurrent types of complement clause, each with its typical meaning and grammatical properties (including whether main and complement clause subjects can be the same or different). Each of the types has typical co-occurrences with verbs from set R (but note that there are many variations on this scheme).

- Fact complement clauses are often found with Primary-B verbs such as ‘think (of/about/over)’, ‘imagine’, ‘dream (of/about)’, ‘assume’, ‘remember’, ‘forget’, ‘know’, ‘understand’, ‘believe’, ‘recognize’, ‘discover’, ‘say’, ‘inform’, and ‘report’; and with Secondary verbs such as ‘not’, ‘can’, and ‘wish’.
- Activity complement clauses are often used with Primary-B verbs such as ‘see’, ‘hear’, ‘like’, ‘fear’, ‘enjoy’, and ‘describe’. Also with Secondary verbs such as ‘begin’ and ‘continue’.
- Potential complement clauses tend to be used with Primary-B verbs such as ‘promise’, ‘threaten’, ‘order’, and ‘persuade’. And with such Secondary items as ‘should’, ‘try’, ‘want’, and ‘make’.

The various complementation strategies do not have direct semantic correspondence with the types of complement clauses. Tentative associations with complement-taking verbs are (note that much more work is needed on complementation strategies):

- Serial verb constructions—typically with Secondary verbs.
- Relative clause constructions—typically with ‘see’, ‘hear’, ‘discover’, ‘think of’, ‘dream about’.
- Nominalization and Clause Chaining—may be almost equally acceptable with any verb.

- Apposition—typically with verbs which take Fact and Activity complement clauses, such as ‘know’ and ‘see’.
- Purposive linking is particularly suitable for verbs such as ‘remember’, ‘like’, ‘promise’, ‘threaten’, ‘persuade’, ‘tell (to do)’, ‘order’, ‘want’ and ‘try’; it is unlikely to be used with Attention verbs.

Appendix: Notes on terminology

There are many good things in the literature on complementation but also a number of confusions. Some of the statements made, and some of the terminology used, seem ill chosen.

1. The term ‘infinitive’ is used by grammarians in many different ways and can be the source of much misunderstanding. The term goes back to Latin grammarians who used it to refer to the form of a verb which—unlike the verb form in a main clause—was not marked for the person and number of a subject; it did show tense. This was a nominalization, which functioned as an indeclinable neuter noun.

In English, preposition *to* plus the root form of a verb was labelled ‘infinitive’, on the basis of translation equivalence from Latin. In fact *to* and *demolish* do not form a constituent in a simple sentence like *John wanted to demolish the building* (*demolish* and *the building* do). Then the form without *to*, here *demolish*, came to be called the ‘bare infinitive’. But an infinitive in Latin was a nominalization which had some of the syntactic possibilities of a noun. The bare verb form *demolish* is not a nominalization; it cannot be preceded by an article (the nominalization of this verb is *demolition*).

Indeed, some of the most respected grammarians of English have declared that the label ‘infinitive’ should not be used for this language. Henry Sweet (1876) observed: ‘It is important to observe that English has no infinitive, except from a historical point of view’, while Erades (1956: 445) concluded his discussion of this matter with: ‘It would seem most consonant with truth and best calculated to avoid creating an impression of identity between essentially different grammatical concepts, if we altogether dropped the term “infinitive” from English grammar.’

In view of the great variety of current uses of ‘infinitive’ the most satisfactory course is surely to shun the term. (I have never felt any need for it in the grammars I have written, and neither have many others.) For those who insist on employing the term, an explicit definition is required, in terms of the grammar of the language under study. (If ‘infinitive’ is to be used with its traditional sense of a nominalization, then there may be a contradiction in talking of an ‘infinitive complement clause’; a nominalization will function as head of an NP, and a complement clause is something quite different from an NP.)

Just three of the authors in this volume retain the term. For Israeli (Chapter 3) Zuckermann simply defines 'infinitive' as the 'tenseless form of the verb'; it includes the dative preposition *le-* attached to the 'allegedly historical basic verb form'; it appears not to be a nominalization. For Dolakha Newar (Chapter 6), Genetti states that verbs suffixed with the infinitive suffix *-i* 'may not function as heads of noun phrases and may only modify nouns in a few limited structures (possibly all calques on Nepali)'. For Akkadian (Chapter 7), Deutscher defines 'infinitive' as 'a morphologically nominalized form of the verb, which takes case endings (but not number or gender endings, and is always singular and masculine for the purposes of agreement), and does not inflect for person and tense'. He explains that an 'infinitive complement clause' refers to a clause headed by a *morphologically* nominalized verb. It then appears that the two functions of the 'infinitive' in Akkadian have similarities to the two functions of an *-ing* form in English, as illustrated in (9a–b). For Pennsylvania German (Chapter 2), Burridge sensibly talks of BARE (rather than 'infinitive') complement clauses, which are built around what has been called the 'bare infinitive' form of the verb.

2. The term 'finite' appears not to have been used in Greek and Latin grammars but to have been quite recently coined, as a faulty back-formation from 'infinitive'. The first use has been traced to Lindley Murray's *English grammar*, first published in 1795. In the fourth edition of 1798 we find 'finite verbs are those to which number and person appertain'. This is complementary to the definition of 'infinitive', as lacking person and number marking; 'finitive' would have been a more congruent label.

The term has since been used in a wide variety of different ways. For example, the current *Oxford English dictionary* defines it as '(of a part of a verb) having a specific number and person', whereas *The Oxford dictionary of English grammar* (Chalker and Weiner 1994: 151) provides the definition 'having tense' and the *Random House dictionary* proffers 'a verb form that distinguishes person, number and tense and also mood or aspect'. The most satisfactory definition is perhaps that in *The concise Oxford dictionary of linguistics* (Matthews 1997: 129): 'any verb whose form is such that it can stand in a simple declarative sentence'; but not all uses in the current linguistic literature conform to this. And care would have to be taken in applying Matthews's definition; for example, in some languages the verb in a Fact complement clause may be marked for all of the categories open to the verb in a main clause except for mood; consideration should then be given as to whether it should be called 'finite'.

As with 'infinitive', the safest course is to shun the term (as many grammar writers do, including me). Anyone who cannot resist using 'finite' should clearly define it, in terms of the grammatical system of the language they are describing. A few of the contributors to this volume retain the term, effectively referring to a form of a verb which could occur in a main clause.

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Complement Clause Types in Pennsylvania German

KATE BURRIDGE

1. Setting the scene¹

The Pennsylvania German (PG) described here is the Canadian variety spoken by Mennonite Anabaptists of Swiss-German origin currently living in Waterloo County, Ontario. Since the 1870s, the Mennonites (more than any other Anabaptist group) have been experiencing continued factionalism and the result is a complex array of different splinter congregations. For convenience, they are usually divided into two groups: the *Plain Folk* and the *Non-Plain Folk*. The Plain Folk are religiously the most conservative. In Canada they are largely made up of Old Order Mennonites (12 per cent of the roughly 30,000 Swiss-German Mennonites in Ontario). There are two main groups of Non-Plain Folk. The first, the least conservative group, includes the Progressive Mennonites. Their members are generally indistinguishable from mainstream Canadians. The second group, the Modern Plain, comprise largely Markham Mennonites (around 20 per cent of the total Mennonite population). Sociologically and linguistically, this group remains closely bound to the Old Orders—many were originally Old Order themselves and all have close family who are ‘plain’. Generally, competence in PG accords with the degree of religious conservatism. The Old Orders are totally bilingual English and PG (and their bilingualism is supported by stable diglossia), but among the Non-Plain Folk, language proficiency ranges from fully competent speakers to semi-speakers.

¹ This chapter has depended on the kindness and generous support of so many members of the Mennonite community in Waterloo County. To all these people, as always, I am hugely grateful for their continued friendship and their time and patience in answering my constant and tiresome questions. I am also grateful to Kersti Börjars, whose insights helped me better understand PG complementation, and to the workshop participants for their comments and suggestions. And to the RCLT, especially Bob Dixon, thank you for a wonderful workshop!

My corpus of Waterloo County Pennsylvania German (WCPG) includes conversations, stories, and elicited data from the late 1980s until the present. It is based primarily on the language of the Old Order Mennonites and the Markham Mennonites. I also draw from the small reservoir of older written work to gain insights into earlier forms of complementation. From the 1930s we have a slim volume of poetry written by the Old Order Mennonite Ben Sauder. Poetry is, of course, not ideal for a syntactic study, but can provide interesting additional data if used cautiously. There are also three other sources dating from the 1970s: a collection of sentences (unpublished) compiled by Alan Buehler (a former Old Order), Alan Buehler's autobiography, and two short taped interviews of Old Order farmers recorded and transcribed in 1969 (Karch and Moelleken 1977).

1.1. *Linguistic backdrop*

What is now a fairly homogeneous language throughout the Pennsylvania German-speaking areas grew out of a blend of the many different dialects that came into Pennsylvania during the first wave of immigration in the seventeenth century—from the Palatinate in Germany and surrounding areas like Bavaria, Hessen, Swabia, and Württemberg in Germany, as well as the German-speaking areas of Switzerland. The outcome of this linguistic melting pot is a language which, in phonology and grammar, resembles most closely the modern German dialect of the eastern Palatinate—Rhein-Frankisch. The languages are similar in structure, although prolonged isolation from continental German and increased contact with English have meant Pennsylvania German has diverged considerably. There are also some residual Alemannic elements from the original melting pot; for example the diminutive suffix *-li* and aspects of the verbal morphology.

The following provides a brief sketch of the grammatical details necessary for understanding the structural features of complementation in this language. WCPG has a two-case system for nouns (common and dative) and three genders: masculine, feminine, and neuter. Pronouns preserve both an accusative and dative case, although this distinction is collapsing, especially for younger speakers (and also those from the less conservative religious groups). Verbs inflect for person and number. There is no preterite, with the exception of the verb *sei* 'to be'. The past is a complex form built around the auxiliary *hawwe* (all transitive verbs and most intransitives) and *sei* (intransitives expressing movement or change of condition).

Relevant to the discussion of complementation is a feature of verb placement known as the verbal brace. In main clauses, this brace construction

involves complex tenses. Specifically, the main verb in second position and the ‘non-finite’ verbal elements in final position form an imaginary bracket or brace around all other sentence constituents. In subordinate clauses, the initial subordinating conjunction and all clause-final verbal elements form a similar bracket around the other clausal constituents. Increasingly in WCPG, however, elements (including ‘light’ constituents) are appearing outside the verbal brace.

Changes in the verbal brace

Main Clause $S \mathbf{V}^1 X \mathbf{V}^2 \rightarrow S \mathbf{V}^1 X \mathbf{V}^2 Y / S \mathbf{V}^1 \mathbf{V}^2 X)$

Sub. Clause **Conj** $S X V \rightarrow \mathbf{Conj} S X V Y / \mathbf{Conj} S V X)$

2. Introduction

WCPG has a range of different complement clauses. The following sketches the structure and basic meanings of each of the clause types.²

2.1. *AS and WH complement clauses*

Clauses with *as* ‘that’ are the prototypical expression of Fact type complement clauses.³ These clauses have the full structure of a main clause—they must have a subject and they show the complete range of modal, tense-aspect, and negation possibilities. They differ only with respect to the position of the verb, which generally appears in end or near-to-end position. As expected, these clauses typically indicate that ‘something took place’ (Chapter 1 above). They refer to facts, activities, events, or states, but as unitary episodes with no mention as to how they are distributed over time. Their time-aspect reference is independent of the main clause.

(1) *ich glaab net <as ich noch elter waar>_O*

I think not that I still older was

‘I don’t think that I was any older.’

Under certain discourse conditions the verb may appear in second position; in other words, with main clause word order. These verb-second clauses are characteristically assertive and carry the bulk of new information, often setting the scene for what follows in the discourse.

² Note, in the interests of simplicity I have chosen to omit detailed morpheme glosses in these examples. The spelling system I adopt is roughly based on that of Standard German; however, I have retained the original spelling for examples from written sources. Elicited sentences are always indicated.

³ In some varieties of PG, though not commonly WCPG, *as* is also a relative clause marker.

- (2) no uff ee mol hot des meedle g'sehne <as ei ieren
 then at one time has the girl seen that oh her
 frack is viel viel kaetzer wie die annere iere>_O
 dress is much much shorter than the others theirs
 'Then suddenly this little girl saw that, oh, her dress was much much
 shorter than those of the others.'

The complementizer *as* is frequently omitted, routinely so with verbs of cognition or communication like *meene* 'to think'. The clauses are then structurally identical to main clauses.

- (3) un er hot no gemeent <ø er will doch aa helfe datt>_O
 and he has then thought he will but also help there
 'And so he thought he will also help out there.'

'Main clauses' like *Ich glaab* 'I guess' or *Ich denk* 'I think' favour the omission of *as*. These sentence fragments are more like discourse parentheticals. They are modal-like in their meanings (akin to epistemic particles like *maybe*) and can float freely about a sentence.⁴ In this case, the complement clauses are always highly assertive and convey information that is new and non-topical. They are what push the discourse forward.

- (4) Ich glaab <ø es hett ziemlich schlimm sei misste
 I think it had rather bad be must
 bis ich sie net g'wore hett>
 until I them not wore had
 'I think it'd have to have been pretty bad for me not to wear them.'

When AS clauses occur as the subjects, they are extraposed to the end of the main clause and impersonal *es* appears in subject position. Speakers generally find the unextraposed versions unacceptable, at best contrived (as one speaker put it, *juscht net wie me schwetzte deed* 'just not as we would speak').

- (5) es waar die mode <as die gleene meed arig arig
 it was the fashion that the small girls very very
 katze freck g'hat hen>_{CS}
 short frocks had have
 'It was the fashion that the small girls had very very short frocks.'
 ?*As die gleene meed arig arig katze freck g'hat hen waar die mode.

⁴ Cf. Thompson and Mulac (1991) on the shift from English main clause *I think (that)* to the epistemic phrase *I think*; also Genetti, Chapter 6 below.

AS clauses can also complement a range of adjectives:

- (6) sie sette froh un dankbar sei <as sie ebbes
 they should happy and thankful be that they something
 hen fer esse>
 have to eat
 ‘They should be happy and thankful that they have something to eat.’

PG also has a range of verbs that take interrogative complement clauses. These typically seek clarification about whatever is expressed in the complement clause. They are similar to AS clauses in that they show main clause structure. However, the complementizers cannot be omitted.

- (7) er soll sie froge <eb sie recht budder mache>_O
 he shall her ask if they proper butter make
 ‘He shall ask her if they make proper butter.’

2.2. *BARE complement clauses*

Certain verb types demand a complement clause built around the so-called ‘bare infinitive’; in other words, the base form of the verb. They have no complementizer and the verb string typically consists of a single verb. Negation is rare, but possible.

- (8) no hot sie als e bissel gezoppt an ierem fer
 So has she always a little tugged on her for
 brawiere <ien lenger mache>_O
 try him longer make
 ‘So she kept tugging a little on hers to try making it longer.’

BARE complement clauses fall within the Activity type. There is always a close link between the action or event referred to by the main verb and that referred to by the complement clause verb. The stretch of time covered by the two verbs overlaps and frequently the subjects are coreferential. Typically the events referred to in the complement clause extend over a period of time and, not surprisingly, they can often be translated by an English gerund.

These clauses have no overt subjects. The understood subject corresponds to a constituent in the main clause (in 8 the subject) or else is general (i.e. ‘anyone’). With verbs of perception, the subject of the complement is always understood to be the object of the main clause.⁵

⁵ The complement clauses that follow verbs of perception are problematic with respect to their grammatical function. In (9), for example, the clause looks at first blush like some sort of modifying clause of the main clause object (akin to a relative clause). Nonetheless, the interpretation here is that the speaker has witnessed the whole event of this person coming through the door. I have chosen,

- (9) ich hab ien gsehne <die daer reikumme>_{OC}
 I have him seen the door in.come
 'I saw him coming through the door.' [elicited]

Occasionally, these clauses occur as main clause subjects, in which case they appear in first position.

- (10) <en ganze pei esse bei sich selwert>_A macht ien net
 a whole pie eat by REFL self makes him not
 recht satt fiele
 right full feel
 'Eating a whole pie by himself doesn't fill him up.' [elicited]

2.3. FER complement clauses

WCPG has three different patterns of Potential complementation also built around the base form of the verb. These constructions typically project to an event or an activity in the future (although they may occasionally coincide with the time reference of the main clause). In current-day WCPG the most widespread of these complement clauses combines a complementizer *fer* 'for' with the base form of the verb in end or near-to-end position. As example (11) illustrates, *fer* also marks adverbial (purposive) clauses.

- (11) mein Daed hot sich immer arig g'faericht
 my Dad has REFL always very feared
 <fer in de heh geh fer ebbes schaffe>_O
 for in the high go for something do
 'My Dad was always terrified to go high in order to do something.'

These clauses lack overt subjects. The understood subject generally coincides with a constituent in the main clause and the interpretation depends on the verb. In the previous example the subject is coreferential with the main clause subject. With verbs like *froge* 'ask', the missing subject is interpreted as referring to the same entity as the main clause object.

- (12) sie hot de Daadi g'frogt <fer imber griege vum schtor>_O
 she has de Dad asked for ginger get from.the store
 'She asked Dad to get ginger from the store.'

If the reference cannot be found in the main clause, the interpretation becomes general; in other words, it can be anyone:

therefore, to analyse these clauses (and others like them; e.g. (32), (35)) as complements and have labelled them object complements (OC).

- (13) <fer datt anner laafe>_{CS} waer sadde dumm
 for there towards walk would.be sort.of daft
 'To walk there would be sort of daft.' [elicited]

FER complement clauses can involve raising: (14) subject-to-subject raising, (15) subject-to-object raising, (16) object-to-subject raising:

- (14) er scheint <fer en ehrliche man sei>_S
 he seems for an honest man be
 'He seems to be an honest man.' [elicited]
- (15) ich hab ien als ghalde <fer e bissel arm sei>_O
 I have him always held for a little poor be
 'I've always considered him to be a little bit stupid.' [elicited]
- (16) de Ephriam is leicht <fer please>_{CS}
 the Ephriam is easy for please
 'Ephriam is easy to please.' [elicited]

FER complement clauses typically consist of a single verb form, although it is possible to have infinitive forms of auxiliary verbs, as in the following example.

- (17) es speit mich <fer so spod kumme sei>_A
 it troubles me for so late come be
 'I'm sorry for having come so late.' [elicited]

Where these clauses occur as subjects, they are usually extraposed, as in the previous example and (18) below. Speakers find unextraposed versions (like 13 above) contrived.

- (18) es waer hatt uff ien <fer uns sehne geh>_{CS}
 it would.be hard on him for us see go
 'It'd be hard on him to see us go.'

The negator *net* generally appears within the complement clause. I have no naturally occurring sentences where negation precedes *fer*; speakers find examples like (19') marginal.

- (19) <fer net seller frack kaafe>_S waer sadde dumm
 for not that dress buy would.be sort.of stupid
 'Not to buy that dress would be stupid.' [elicited]
- (19') ?net fer seller frack kaafe waer sadde dumm

FER complement clauses can also be introduced by an interrogative word.

- (20) un die menschte junge leit deed aa verschtee
 and the most young people would also understand
 <was fer saage>_O
 what for say
 'And most young people would also understand what to say.'

These clauses also occur as the complement of adjectives.

- (21) ich waar g'rischt <fer dabber de daer naus schiesse
 I was prepared for quickly the door out shoot
 ins weschhaus>
 in.the wash.house
 'I was prepared to quickly shoot out of the door into the wash-house.'
- (22) die buwe waare noch zu jung <fer tactful sei> weescht
 the boys were still too young for tactful be you.know
 'The boys were still too young to be tactful, you know.'

2.3.1. *VUN complement clauses* WCPG also has a VUN complement clause that is built around the preposition *vun* 'from' and the bare verb form.

- (23) er hot mich uffg'halde <vun mei aerwet faeddich mache>_E
 he has me interrupt from my work ready make
 'He prevent me from finishing my work.'

These clauses appear to be calques of English FROM-ING clauses. They are confined to those inherently negative verbs that carry some kind of 'prevent' meaning, such as *schtoppe* 'stop', *verhinnere* 'prevent', and *uffhalde* 'interrupt'; all involve an activity that in some way obstructs the event described in the complement clause.

2.4. *ZU complement clauses*

A second type of Potential complement clause involves *zu* 'to' in combination with the base form of the verb. The *zu* marker, however, is now very much in decline, having been virtually replaced by the *fer* 'for' complementizer just described. Sentences like the following are no longer found in WCPG.

- (24) es iss nimmi dawaert, <Schulde zu mache>_{CS}
 it is never worth debts to make
 'It is never worth making debts.' [Sauder's poetry]

The future orientation of these *zu* clauses is clear from a comparison of the following two sentences from Buehler's autobiography.

- (25) soh dahn in April 1912 hahvich awfahngah <shahfah
 so then in April 1912 have.I begun work
 als gnehcht>_O
 as hired man
 'So then in April 1912 I began working as a hired man.'
- (26) dah gasoline engine huhd yehts awfahgnah <tsoo
 the gasoline engine has now begun to
 gahbrowcht vairah>_O
 used be
 'The gasoline engine now began to be used.'

The BARE complement clause in (25) implies sameness of time, whereas the clause in (26) projects to an event in the future. Its future orientation is obvious from Buehler's English version of this sentence—'Gasoline engines were just beginning to come into use'.

In current WCPG, the *zu* marker most commonly appears in fixed expressions like *nix zu duh/mache* 'nothing to do': *Es muss schee sei fer nix zu duh hawwe* 'It must be lovely to have nothing to do.' There is also the typical age variation expected of linguistic change. For example, older speakers may use a *zu* marker in construction with interrogative words, while younger speakers prefer *fer*.

- (27) sie hot nimmi gewisst <was zu/fer mache>_O
 she has never known what to do
 'She never knew what to do.'

Raising constructions also retain vestiges of ZU complementation that reflect these age differences. For example, older speakers are more likely to produce (28); younger speakers example (14) given earlier.

- (28) er scheint <en ehrliche man zu sei>_S
 he seems an honest man to be
 'He seems to be an honest man.' [elicited]

Older speakers will sometimes use ZU complement clauses with adjectives, especially comparative constructions.

- (29) er is zu faul <zu schaffe>
 he is too lazy to work
 'He is too lazy to work.'

2.5. *FER-ZU complement clauses*

Earlier written sources provide examples of a non-finite complement construction signalled with *fer-zu* 'for-to'. The following examples illustrate subject complement clauses, the second with extraposition.

- (30) <fer Sauder zu haysa>_{CS} is doch gar ke Shand
 for Sauder to be.called is but absolutely no shame
 'To be called Sauder is no shame at all.' [Sauder's poetry]
- (31) ahs is hied hahd <fawah ahn ahldey drehsh mahsheen
 It is today hard for an old thresh machine
 tsoo finah>_{CS}
 to find
 'It is hard today to find an old threshing machine.' [Buehler's autobiography]

Strikingly, there are no such examples in my corpus of current WCPG. Language consultants find these sentences old-fashioned and artificial.

3. **Verb types and complementation**

The following is a brief discussion of the main semantic types of verb in PG that can take complement clauses of some kind.

3.1. *Primary verbs***Attention**

Verbs of perception such as *sehne* 'see', *haere* 'hear', *vermaerke* 'notice', *schpiere* 'feel', and *rieche* 'smell' typically take BARE complement clauses. However, where speakers are expressing knowledge about something, AS clauses are more usual (as in example (33)) often with a coreferential pronoun in the main clause).

- (32) ich hab noch niemand ghaert <sage>_{OC}
 I have yet no one heard say
 'I haven't yet heard anyone saying [...].'
- (33) ich hab's g'schpiert <as er uffgricht waere is>_O
 I have.it sensed that he excited become is
 'I sensed that he became excited.'

Similarly, verbs like *finne* 'find' and *ausfinne* 'discover' take AS complement clauses or BARE complement clauses where the duration of the activity is being emphasized.

- (34) wu die fraa vum haus aus'funne hot <as
 when the woman from.the house out.found has that
 de Daed draa is ins schteddel geh>_O
 the Dad at.it is in.the village go
 'When the woman from the house found out that Dad was going into
 town [...].'
- (35) sie hen ien g'funne <draa e loch grawe>_{OC}
 she have him found at.it a hole dig
 'They found him digging a hole.' [elicited]

Thinking

Verbs of cognition (including *denke* 'think', *meene* 'mean', *vermute* 'presume', *vernumme* 'assume', *draame* 'dream', *glawe* 'believe', *wisse* 'know', *verstehe* 'understand', *verzweifl* 'doubt') generally take AS clauses, and occasionally FER clauses when they refer to some sort of projected activity or event.

- (36) no hab ich gedenkt <ø ich glaab net as es waar is>_O
 then have I thought I believe not that it true is
 'Then I thought, I don't believe that it is true.'
- (37) ich hab gedenkt <fer in schteddel geh>_O
 I have thought for in town go
 'I thought of going into town.' [elicited]

Verbs such as *erinnere* 'remember' and *vergesse* 'forget' are the most flexible of the thinking verbs (cf. Dixon 1995: 186 for English).

- (38) die schuh hen gebasst — ich kann nimmi erinnere
 the shoes have fitted — I can no.longer remember
 <as sie net hen>_O
 that they not have
 'The shoes fitted—I can't remember any more that they didn't.'
- (39) du weescht as ich remember hab <sie sel saage>_O
 you know that I remember have she that say
 'You know that I remembered her saying that.'
- (40) ich kann mich nimmi erinnere <fer de offer abdrehe>_O
 I can REFL never remember for the stove turn off
 'I can never remember to turn off the stove.' [elicited]

The verb *laenne* 'to learn, teach' also takes the full range.

- (41) sie waar gelaent <as me dut immer e bissel blendi
 she was taught that one does always a little plenty
 koche fer middag>_O
 cook for midday
 'She was taught that we always cook quite a lot for the midday meal.'
- (42) un die henn all gelaennt <Deutsch schwetze>_O
 and they have all learnt German speak
 'And they all learnt to speak Pennsylvania German.'
- (43) laern <fer Pennsylvanie Deutsch lese>_O
 learn for Pennsylvania German read
 'Learn to read Pennsylvania German.'

The semantics of verbs like *ausmache* 'conclude', *vornehme* 'resolve', and *decide* 'decide' is such that they can happily occur with either Fact or Potential complement clauses.

- (44) un nod hen sie decid <∅ sie kumme noch
 so then have they decided they come still
 rei de trailer sehne>_O
 inside the trailer see
 'So then they decided to come inside to see the trailer.'
- (45) un nod hot er decid <fer nach Wallenstein bike>_O
 so then has he decided for to Wallenstein bike
 'So he decided to bike to Wallenstein.' [elicited]

Liking

Verbs of liking such as *gleiche* 'like', *frehe* 'rejoice', and *meinde* 'mind' typically take BARE complements and occasionally FER clauses.

- (46) mei Maem hot arig gegliche <koche un backe>_O
 my Mum has really liked cook and bake
 'My Mum always really liked cooking and baking.'
- (47) ich freh mich <fer dich sehne>_O
 I rejoice REFL for you see
 'I'm delighted to see you.' [elicited]

Where the understood subject of the complement clause does not correspond to the main clause subject, these verbs take finite complement clauses with an interrogative or *as* complementizer. (Note, the subjunctive indicates the complement clause event has not yet been realized.)

- (48) deedscht du gleiche <wann ich sei schweschder nochemol
 Would you like if I his sister again
 phone deed>_O
 phone would
 'Would you like me to phone his sister once again.'

'Annoying' and 'fearing' verbs appear with AS or FER complement clauses:

- (49) es baddert mich <as ich spod bin>_A
 it bothers me that I late am
 'It bothers me that I am late.' [elicited]
- (50) es baddert mich <fer spod sei>_A
 it bothers me for late be
 'It bothers me to be late.' [elicited]
- (51) ich hab bang <mir kumme zu spod anner>_O
 I have fear we come too late there
 'I'm afraid we are arriving there too late.' [elicited]
- (52) ich hab bang <fer spod kumme>_O
 I have fear for late come
 'I'm afraid to come late.' [elicited]

Speaking

Verbs of communication such as *sage* 'say', *vorsaage* 'announce', and *verzehle* 'report' are restricted to AS clauses. The complementizer is omitted when the verb is directly communicating something, and present when it is imparting knowledge of something.

- (53) no hot ieren Daed g'saat zu iene <ø sie sette
 so has their Dad said to them they should
 froh un dankbar sei>_O
 happy and thankful be
 'So their Dad told them they should be happy and thankful.'
- (54) mei Daed hat als g'saat vun eme mann was g'saat
 my Dad has always said of a man who said
 hat <as de oscht wind is en arig fauler wind>_O
 has that the east wind is a very lazy wind
 'My Dad always told a story about a man who said that the east wind is a very lazy wind.'

Verbs like *verspreche* 'promise' with a stronger future orientation can take FER as well as AS complement clauses.

- (55) ich hab versproche <fer iem helfe>_O
 I have promised for him help
 'I promised to help him.' [elicited]
- (56) er hot mich versproche <ø er kummt in zeit>_O
 he has me promised he comes in time
 'He promised me that he will arrive in time.' [elicited]

'Ordering' verbs such as *verschwetze* 'persuade', *foddere* 'demand', *frooge* 'ask', *zuspreche* 'encourage', *eilaade* 'invite', *verbiede* 'forbid' usually take FER clauses where the person addressed is the subject in the complement clause. Some may also occur with interrogative clauses.

- (57) sie hot ien g'frot <fer sie mitnemme>_O
 she has him asked fer her with.come
 'She asked him to take her with him.' [elicited]
- (58) sie hot ien g'frot <eb er sie mitnemme deed>_O
 she has him asked if he her with.come would
 'She asked him if he would take her with him.' [elicited]

3.2. Secondary verbs

Modal verbs

PG has seven identifiable modal verbs: *welle* 'want to', *misse* 'have to', *selle* 'be supposed to', *kenne* 'be able to', *daerfe* 'be allowed to', *maage* 'like to' (rare), and *brauche* 'need to'. In terms of their auxiliariness, PG modals are currently located somewhere in between English modals and Standard German modals; they are considerably less verb-like than their Standard German counterparts, but lack some of the grammatical properties shared by the class of English modals. Nonetheless, sentences like the following are best analysed as monoclausal.

- (59) ich will mene exercise kriege
 I want more exercise receive
 'I want to get more exercise.' [elicited]

Beginning

Aspectual verbs like *beginne* 'begin', *staerte* 'start', *aahalde* 'continue', and *stoppe* 'stop' typically take BARE clauses and under certain circumstances FER clauses. (See also §2.3.1 for negative verbs that take VUN + the bare verb.)

- (60) sie hot aag'fange <sich zu die kinner beklage>_O
 she has begun REFL to the children complain
 'She began complaining to the children.'
- (61) sie hot aag'fange <fer e fens baue>_O
 she has begun for a fence build
 'She began to build a fence.' [elicited]

Trying verbs

The verb *brawiere* ‘try, attempt’ also typically appears with BARE and occasionally FER complement clauses.

- (62) sie hot ien als brawiert <schtobbe>_O
 she has him always tried stop
 ‘She always tried stopping him.’
- (63) no hot sie awwer so hatt brawiert <fer alles
 so has she but so hard tried for everything
 sauwer halde>_O
 clean keep
 ‘So she tried just so hard to keep everything clean.’

Wishing

‘Wishful thinking’ is in direct conflict with Mennonite faith and speakers appear uncomfortable with blunt expressions of desire. The verb *winsche* ‘wish’ has now disappeared, and in its place is *wotte*. Although originally a preterite form of modal *welle*, *wotte* has now reacquired all the trappings of a fully-fledged lexical verb (cf. Burridge 2002). It can no longer take BARE complements; e.g. **Ich wott kumme* ‘I want to come’ and subject reference identity is no longer a requirement. *Wotte* now takes only AS clause complements (with a preterite subjunctive modal indicating the speaker is not counting on the wish being fulfilled).

- (64) wenn ich juscht noch een Wunsch hett deed ich wotte
 if I just still one wish had would I wish
 <∅ ich kennt kumme>_O
 I could come
 ‘If I had just one more wish, I would wish I could come.’ [elicited]

‘Hoping’ verbs offer less direct expressions of desire and generally appear with FER complement clauses, occasionally with AS clauses.

- (65) ich hoff <fer glei fatt geh>_O
 I hope for soon away go
 ‘I hope to go soon.’
- (66) ich hoff <∅ mir sehne enanner glei widder>_O
 I hope we see one.another soon again
 ‘I hope we’ll see one another again soon.’

An interesting verb in this group is *zehle* ‘intend’. It derives from the lexical verb *zehle* ‘to count’ (e.g. *Ich zehl achtzich* ‘I count eighty’), but can also appear in an array of different expressions conveying intention. Sentence (a) is an impersonal expression with an expletive *es* subject and a following AS clause;

(b) involves a FER clause with the complement clause subject raised to main clause subject; (c) is a modal-like use of *zehle* with a BARE clause complement.

- (67) (a) es is gezeht <ø er kumt speder>_s
 it is intended he comes later
 'It is intended that he comes later.' [elicited]
- (b) er is gezeht <fer speder kumme>_s
 he is intended for later come
 'He intends to come later.' [elicited]
- (c) er zehlt <speder kumme>_o
 he intends later come
 'He intends to/will come later.' [elicited]

Conservative PG speakers have strong mental reservations about discussing the future—to talk about future happenings is viewed as arrogance. This has given rise to an array of tentative future expressions calqued on English (e.g. *sei supposed* 'be supposed', *plaenne* 'plan', *figgere* 'count on'). Through frequency and associated routinization and semantic-pragmatic loss, *zehle* is well on the way to grammaticalizing into a future auxiliary (cf. Burridge 2002). Example (c) above illustrates what has now become most usual expression of future time.

'Making' verbs like *zwingen* 'force' take FER complement clauses, while *mache* 'make' and *losse* 'let' only BARE clauses.

- (68) er waar gezwengt <fer frieh geh>_o
 he was forced for early go
 'He was forced to go early.' [elicited]
- (69) er hot mich gemacht <e lied singe fer sie>_o
 he has me made a song sing for her
 'He made me sing a song for her.' [elicited]

Helfe 'help' can take BARE or FER complement clauses.

- (70) sie hen g'holfe <melke bei hand>_o
 they have helped milk by hand
 'They helped milk (the cows) by hand.'
- (71) no mol ee daag waar die aent am helfe <fer
 so once one day was the aunt at.the help for
 babier abgratze vun de wand>_o
 paper scrape from the wall
 'So one day the aunt was helping to scrape paper from the wall.'

The verbs *scheine*, *sieme* 'seem, appear' and *haeppene* 'happen' take the full gamut of complement clause possibilities:

- (72) (a) es scheint <∅ er is en ehrliche man>_s
 it seems he is an honest man
 (b) er scheint <en ehrliche man sei>_s
 he seems an honest man be
 (c) er scheint <fer en ehrliche man sei>_s
 he seems for an honest man be
 'He seems to be an honest man.' [elicited]

3.3. Summary

TABLE 1. Summary of complement clauses and verb types

	AS/WH	BARE	FER
Primary verbs			
'see'	✓	✓	
'discover'	✓	✓	
'think'	✓		✓
'remember'	✓	✓	✓
'learn'	✓	✓	✓
'like'	✓	✓	✓
'annoy'	✓		✓
'fear'	✓		✓
'say'	✓		
'promise'	✓		✓
'order'	✓		✓
Secondary verbs			
modals		✓	
'begin'		✓	✓
'try'		✓	✓
'wish'	✓		
'hope'	✓		✓
'intend'	✓	✓	✓
'force'			✓
'make'		✓	
'help'		✓	✓
'seem'	✓	✓	✓

3.4. *Adjectives and complement clauses*

PG adjectives show a predictable range of complement clause possibilities, mirroring the primary verbs that are similar in meaning. For example, the adjective *bekimmert* ‘concerned’ takes the same complement clause types as the related ‘annoying’ group of verbs.

- (73) sie waar ganz bekimmert <as ieren mann vielleicht
 she was quite concerned that her husband perhaps
 ball draa is verhungere>
 soon at.it is starve
 ‘She was quite concerned that her husband was perhaps on the point
 of starving.’
- (74) sie waar bekimmert g’weest <fer gut koche>
 she was concerned been for good cook
 ‘She was concerned to cook well.’

3.5. *Tentative fer versus confident zu*

In this section I explore the semantic differences between the three patterns of non-finite complementation:

1. bare verb form
2. *zu* + bare verb form (older speakers/special constructions)
3. *fer* + bare verb form

Activity complement clauses of type (1) are used when there is a close link between the action or event referred to by the main verb and that referred to by the verb of the complement clause. The stretch of time covered by the two verbs overlaps and typically the subjects are coreferential. Verbs taking these complement clauses are verbs of movement, verbs of perception, modal verbs (depending on how these are analysed), and also verbs like *helfe* ‘help’, *gleiche* ‘like’, *brawiere* ‘try’, and *laenne* ‘learn’. Potential complement clauses of types (2) and (3) both project to an event or an activity in the future. Where they differ, however, is in the degree of confidence in the projected outcome. Clauses with the complementizer *fer* clearly favour contexts that are less real. This difference coincides with what Wierzbicka (1988: 111–32) and Dixon (1991: 225–34) have described for *for-to* versus *to* in English (cf. also Jespersen 1909; Bresnan 1979). While both are future oriented, *to* has firmer expectations of effectiveness—as Wierzbicka puts it, the ‘for-to versions sound more helpless and less confident’ (p. 120).

There are two occasions where these meaning differences are conspicuous. The first occurs in the language of those older speakers who retain more

robust traces of *zu* complementation. In this case, it is instructive to see how *zu* alternates with the newer *fer* marker. Differences are not always apparent, especially out of context, but where context is supplied these speakers typically prefer *fer* when the event in the lower clause is less certain. For example, when presented with the simple sentence ‘I have thirty cows to milk’ all speakers agreed that either *zu* or *fer* was possible for the (nominal) complement clause here. However, when more context was provided clear preferences emerged. If speakers were assumed to be in the middle of milking and were explaining they had thirty more cows to milk before they were done, overwhelmingly they produced (75a). If they had just met someone for the first time and were explaining the various activities on the farm, including the fact that there were thirty cows to be milked, speakers were more likely to produce (75b).

- (75) (a) ich hab thirty kieh <zu melke>
 (b) ich hab thirty kieh <fer melke>
 I have thirty cow to/for milk

The event of milking the cows in the first scenario is strongly associated with the (immediate) future. It is more certain—some cows had just been milked and another thirty were about to be. The orientation in the second scenario, however, is less specific. The speaker is simply making a general statement.

The semantic contribution of *fer* can also be inferred from examining verbs like *helfe* ‘help’ that take complement clauses with both *fer* and the bare verb form. *Fer* typically shows a more hypothetical orientation and often appears where there is a subjunctive in the higher clause. In (76) the appearance of *fer* follows from the tentativeness of the main clause subjunctive. The clause expresses a potential event.

- (76) es kennt helfe <fer ihn besser behaeve>_O
 it could help for him better behave
 ‘It could help him to behave better.’ [elicited]

Compare also earlier examples (70) and (71). In both, the activities in the main clause and in the complement clause are happening at the same time, but in (71) there is less confidence in the outcome expressed in the complement clause—the wallpaper may never be scraped from the wall.

Similarly, *fer* clauses are only tolerable with *gleiche* ‘like’ when there is a subjunctive in the higher clause.

- (77) ich really deed gleiche <fer e tiescher sei>_O
 I really would like for a teacher be
 ‘I would really like to be a teacher.’ [elicited]

In sentences like *Ich gleich kaffee drinke* 'I like drinking coffee' the enjoyment coincides with the activity and FER clauses are unacceptable. *Deedscht du gleiche fer e kobbli kaffee hawwe* 'Would you like to have a cup of coffee' was only marginally acceptable, despite its future component. Like (77) it refers to an unrealized activity, but it differs in the nature of the event in the complement clause. Example (77) is a wistful thought—the modifier adds to the sense of a yearning. The outcome may never eventuate and is certainly less assured than the possibility of a cup of coffee!

Similarly, with the verb *brawiere* 'try': BARE clauses indicate a sense of engaging in an activity (as in (62) earlier), FER clauses involve more effort and a stronger sense of undertaking to accomplish something (as in (63)). Not surprisingly, a subjunctive in the higher clause often triggers FER.

- (78) ich deed brawiere <fers Deutsch laenne>_O wenn ich
 I would try for.the German learn if I
 juscht mee zeit hett
 only more time had
 'I would learn German, if only I had more time.' [elicited]

The semantic differences between *zu* and *fer* arise naturally from their different position along the grammaticalization scale. *Zu* began life as a preposition with the interpretation of purpose or goal, but is well advanced along the grammaticalization scale as an infinitive marker and the purpose/goal sense is now well and truly bleached out. By comparison, *fer* is a younger complementizer with more of its prepositional force intact (originally benefactive > sense of purpose).⁶

4. Concluding remarks: the rise of FER complement clauses

It is very common typologically for benefactive prepositions to develop into purposive markers and for purposive markers to extend to general complementizers. The changes are paradigm examples of the twin processes of reanalysis and analogy at work (cf. Harris and Campbell 1995: 62 on the development of English *for-to* complements). Certainly, FOR-TO purposives appear in some continental German dialects, including Frankish (Lockwood 1968:154) and Pfälzisch (Henn 1980). So the seeds for the current PG con-

⁶ The prepositional properties of *fer* are still very apparent in aspects of its behaviour. For instance it is still able to form prepositional *da*-compounds in those situations where in English we find a stranded *to*. (I am grateful to Mark Loudon for reminding me of this.) *Er schteht net uff bis er reddi is fer uffschtehe* 'He doesn't get up before he's ready to get up' versus *Er schteht net uff bis er reddi is dafer* 'He doesn't get up before he's ready for it'.

struction were probably planted when the various dialects spoken by the Anabaptist settlers blended into one language. However, the PG development is puzzling in at least two respects.

For one, the spread of the construction to complement clauses and the accompanying disappearance of *zu* are innovations that remain peculiar to PG. As Börjars and Burridge (forthcoming) describe, only Luxemburgish has a *fir-ze* construction that is showing some expansion from adjuncts of purpose to a general complementation. The second aspect relates to the speed of the change. FER-ZU clauses have now completely disappeared and *fer* has virtually replaced *zu* in all complement constructions. Both FER-ZU and ZU clauses were around in the 1970s; they are commonplace in Buehler's autobiography, for example. Even allowing for the fact that Buehler was an older speaker when he wrote his autobiography, this has been a remarkably fast change. Change of this nature is generally glacially slow. Compare the spread of the *to* marker in English. It started to extend from purposive to complement functions as early as the Old English period, but even into the 1500s *to* was still competing with the bare infinitive.⁷

As studies of ethnosyntax have shown, cultural preoccupations generate specialized constructions (cf. Enfield 2002). I gave two such examples in §3.2. For a community of speakers uncomfortable with expressions of desire, *wotte* (the 'subjunctive of modest wish') easily develops as a favourite construction to express desire and thereby degrammatizes. A cautious expression of future time like *zehle* 'to count' is also made-to-measure and speakers' routine use of it seals its fate as a future auxiliary. In a belief system that subordinates self-will and self-love to the will of God it is also not difficult to see how speakers might favour the more tentative *fer-zu* over the more confident *zu* construction and how this would then assist the grammaticalization process. Frequency is an important force behind the conventionalization of grammaticalized morphemes (cf. Traugott and Heine 1991) and, clearly, the reasons behind discourse frequency are often cultural. DuBois puts it neatly: 'Grammars code best what speakers do most' (1985: 363).

The close-knit nature of the PG speech community probably also has a role to play here. As Trudgill (1995) points out, where there is shared ground between speakers the reduced need for elaboration leads to phonological reduction, which in turn can feed the development of new grammatical structures. The PG speech community is small and isolated. There is no social

⁷ As Visser (1963–73: §901) concludes, 'it took a long time for the particle *to* to be reduced from a preposition expressing motion, direction... to a semantically empty sandhi form, functioning as a mere sign of the infinitive'.

distance and people are deeply involved with one another. As Enninger (1985: 255) describes it, 'intra-group interaction is performed in the solidarity network of brethren and sisters which is at the same time a kinship network of close to distant relatives, i.e. *die freundschaft*'. It is very likely that the speed of the changes in PG also relates to the increased allowance for inference in this close-knit community.

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Complement Clause Types in Israeli

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Complement clauses in Israeli (aka 'Modern Hebrew') demonstrate *inter alia* that the fascinating, new, 'semi-engineered' language is caught in a war between prescriptivism and descriptivism. For example, the prescribed complementizer *ki* 'that' is possible and comprehensible but—as opposed to the usual complementizer *she*-‘that’—unproductive (see §4.2). By and large, authors of Israeli grammars attempt—deliberately or subconsciously—to force a 'Mosaic' grammar, which is Semitic, on a 'mosaic' language, which is made up of both Semitic and Indo-European components.

1. Basic information

The Israeli language emerged in *Eretz Yisrael* (lit. 'Land of Israel', which at the time was known as Palestine) in the late nineteenth and early twentieth century. It is one of the official languages—with Arabic and English—of the State of Israel (established in 1948). Israeli is spoken to varying degrees of fluency by the 7 million citizens of Israel—as a mother tongue by most Israeli Jews (whose total number exceeds 5.3 million), and as a second language by Israeli Muslims (Arabic speakers), Christians (e.g. Russian and Arabic speakers), Druze (Arabic speakers), and others. It is also spoken by some non-Israeli Palestinians, as well as by a few Diaspora Jews.

The genetic classification of Israeli has preoccupied linguists since the beginning of the twentieth century. The still prevalent, traditional school suggests that Israeli is Semitic: (biblical/Mishnaic) Hebrew *revived*. I call this the 'phoenix model', as the phoenix rises from the ashes. The revisionist position, by contrast, defines Israeli as Indo-European: Yiddish *relexified*, i.e.

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A note on the transcription: whereas *á* is primary stress, *à* is secondary stress. If a stress is not mentioned in a bisyllabic word, it means that there are two possible stresses.

Yiddish is the ‘substratum’, whilst Hebrew is only a ‘superstratum’ providing the lexis and lexicalized morphology (cf. Horvath and Wexler 1997). I call this the ‘cuckoo model’, as the cuckoo lays eggs in the nest of another bird. My own *mosaic* view is that Israeli is simultaneously Semitic and Indo-European. Both Hebrew (in use as the Jewish liturgical language but lethargic as a vernacular for more than 1,700 years) and Yiddish (the revivalists’ mother tongue, the contribution of which was not intentional, hence the term ‘semi-engineered’) act as its *primary contributors* (rather than ‘substrata’). Israeli, therefore, falls into a mixed category of its own, as a ‘phoenicuckoo hybrid’ (which often also resembles a magpie as it collects features from various languages other than Yiddish and Hebrew).

Although Israeli phonetics and phonology are primarily Yiddish and its morphology is mainly Hebrew, the European contribution to Israeli is not restricted to particular linguistic domains and is evident even in its morphology. Thus, the term ‘Israeli’ is more appropriate than ‘Israeli Hebrew’, let alone the common signifiers ‘Modern Hebrew’ or ‘Hebrew’ *tout court* (cf. Zuckermann 1999, 2003, 2006).

2. Grammatical profile

Israeli is a fusional synthetic language, with non-concatenative discontinuous morphemes realized by vowel infixation. Consider, for example, *yoháv* ‘love:3msgFUT’, i.e. ‘(he) will love’; *mitahévet* ‘fall.in.love:fsgPRES’, i.e. ‘(she) is falling in love’—both formed from the root *’h.b.*, but fitted into two distinct verb-templates. Compare also the following two verbs based on the root *n.d.b.*: *yenadvú* ‘volunteer:3plFUT’, i.e. ‘(they) will volunteer (others)’; and *hitnudávti* ‘volunteer:1sgPAST:COERCIVE/INDUCIVE.hit-a-é- + -u-á-’, i.e. ‘I (was) volunteered (by force)’.

However, Israeli is much more analytic than (biblical/Mishnaic) Hebrew. Whereas the Hebrew phrase for ‘my grandfather’ was *sav-í* ‘grandfather-1sgPOSS’, in Israeli it is *sába shel-i* ‘grandfather GEN-1sg’.¹ Still, Israeli sometimes uses the Semitic feature known as ‘construct-state’ (Israeli *smikhút*, glossed here as CONSTR), in which two nouns are combined, the first being modified or possessed by the second. For example, *repúblika-t banánot*, lit. ‘Republic-CONSTR bananas’, refers to ‘banana Republic’; and *mevakér ha-mdiná*, lit. ‘comptroller DEF-state’, is ‘State Comptroller’. However, unlike in Hebrew, the construct-state is not highly productive in Israeli (see Zuckermann forthcoming). Compare the Hebrew construct-state *’em ha-yéled*

¹ Etymologically, *shel* ‘of’ (GEN) consists of the relativizer *she-* ‘that’ and the (dative) preposition *le* ‘to’.

'mother:CONSTR DEF-child' with the more analytic Israeli phrase *ha-íma shel ha-yéled* 'DEF-mother GEN DEF-child', both meaning 'the mother of the child', i.e. 'the child's mother'.

Israeli is a head-marking language. It is nominative-accusative at the syntactic level and partially also at the morphological level. As opposed to Biblical Hebrew—whose constituent order is VAO(E)/VS(E)—but like Standard Average European (cf. Zuckermann forthcoming) and English, the usual constituent order of Israeli is AVO(E)/SV(E). Thus, if there is no case marking, one can resort to the constituent order. Israeli is characterized by an asymmetry between definite Os and indefinite Os. There is an accusative marker, *et*, only before a definite O (mostly a definite noun or personal name). *Et-ha* is currently undergoing fusion and reduction to become *ta*. Consider *taví l-i et ha-séfer* 'give:2msgsimp (puristically FUT²) DAT-1sg ACC DEF-book' (i.e. 'Give me the book!'), where *et*, albeit syntactically a case marker, is a preposition (cf. Danon 2002), and *ha* is a definite article. This sentence is realized phonetically as *taví li ta-séfer*.³

2.1. Nouns

Israeli nouns show number, normally only singular and plural. Each noun is either m(asculine) or f(eminine), the latter often being created by adding a suffix to the unmarked masculine. For instance, whereas *manhíg* is 'male leader', *manhig-á* is 'female leader' (note the addition of the feminine suffix *-a*). Similarly, *khayál* is 'male soldier' and *khayél-et* is 'female soldier'; *profésor* is 'male professor' and *profésor-it* is 'female professor'.

Pronouns have 'case forms' consisting of a preposition plus a suffix: nominative (e.g. *aní* 'I'), accusative (*ot-í* 'me'), dative (*l-i* 'to me'), and genitive (*shel-í* 'my'). However, NPs which are not pronouns do not bear case marking. The only exceptions are the above-mentioned accusative marker *et* (or *ta*), and the lexicalized allative ('to/towards') case (which, serendipitously, is based on the historical accusative case, see Weingreen 1959), e.g. *ha-báit* 'the house' > *ha-báyt-a* 'to the house'; *yerushaláim* 'Jerusalem' > *yerushaláym-a* 'to Jerusalem'; *tsafón* 'north' > *tsafón-a* 'to the north'. New allative phrases, e.g. *tel avív-a* 'to Tel Aviv', are not normally used unless one is trying to sound high-flown or jocular.

² Note that unlike Hebrew, in Israeli many semantically imperative constructions consist of morphologically future verbs.

³ Israel's first Prime Minister, David Ben-Gurion, did not like the *et* particle and would have liked to have replaced *taví li et ha-séfer* with *taví li ha-séfer*. (It has been suggested that he was not keen on diplomatic relations with *etyópya* 'Ethiopia' for the same reason.) However, such a puristic attitude is hardly ever seen these days and *taví li ha-séfer* is non-native.

Adjectives agree in number, gender, and definiteness with the nouns they modify, e.g. *ha-yéled ha-gadól*, lit. 'DEF-boy DEF-big', i.e. 'the big boy'; *yeladím gdolím*, lit. 'boy-impl big-impl', i.e. 'big boys'.

2.2. Verbs

As opposed to Biblical Hebrew, which had only a perfect/imperfect distinction, Israeli has three tenses: past, present, and future. In the past and future, verbal forms differ according to gender, number, and first, second, and third person. However, in the present tense, verbs are only conjugated according to gender and number and there is no person distinction. The historical reason is that the forms of the Israeli present can be traced back to the Hebrew participle, which is less complex than the historical perfect and imperfect forms.

Verbs are transitive, intransitive, or ambitransitive (labile). Ambitransitivity is usually of the S=A type, e.g. *dan shatá etmòl* 'Dan_s drank yesterday' (cf. *dan shatá etmòl bíra* 'Dan_s drank yesterday beer_o'). However, owing to Americanization, there are more and more ambitransitive verbs of the S=O type, e.g. *ha-séfer mokhér tov* 'The-book_s sells well' (cf. *grísham mókher et ha-séfer tov* 'Grisham_s sells ACC the-book_o well'); *yésh po máshehu she-meriakh ra* 'There.is here something_s that-smells bad' (cf. *aní meriakh po máshehu ra* 'I_s smell here something_o bad').

In addition to the rich plethora of inflected verbal forms, there is a tenseless form, which is usually referred to in Hebrew linguistics as the 'infinitive' (see §4.4, §4.5), cf. Israeli *makór natúy*, lit. 'inflected origin'. It consists of the allegedly historical basic verb form (Israeli *makór*, lit. 'origin, source'; often similar to the second person masculine singular imperative form, which derives from the historical imperfective), preceded by the dative preposition *le-* (or *li-* or *la-*), which can refer to 'in order to'. For example, *le-nashék* 'INFIN-kiss', i.e. 'to kiss' (cf. *nashék* 'kiss:2msgIMP'); *li-shmór* 'INFIN-guard' (cf. *shmór* 'guard:2msgIMP'); *la-lékhét* 'INFIN-go' (cf. *lekh* 'go:2msgIMP').

2.3. Clauses

The main clause in Israeli consists of (a) clause-initial peripheral markers, e.g. discourse markers; (b) NP(s) or complement clause(s); (c) a predicate—either verbal, copular, or verbless; (d) clause-final peripheral elements, e.g. discourse markers. The only obligatory element is the predicate, e.g. *higáti* 'arrive:1sgPAST'. Sentences (1), (2), and (3) are examples of a verbal, copular, and verbless clause, respectively.

- (1) [ester]_A {[akhlá]_V [tapúakh]_O}
 Esther eat:3fsgPAST apple
 'Esther ate an apple.'
- (2) [ester]_{CS} {[hi]_{COP} [akhót shel-ì]_{CC}}
 Esther COP:fsg sister GEN-1sg
 'Esther is my sister.'
- (3) [ester]_{VCS} {[khakham-á]_{VCC}}
 Esther clever-f
 'Esther is clever.'

There are many types of subordinate clause, e.g. adverbial (denoting time, place, condition, concession, reason, result, goal, state, comparison), adjectival/relative, nominal/complement. I shall first describe the difference between a *she*- complement clause and a relative clause (§3). Just like English *that*, the relativizer *she*- also acts as a complementizer. Only after having established a clear distinction between relatives and *she*- complements shall I go on to describe the six main structural types of complement clauses, and their syntactic functions (§4).

3. The difference between *she*- complement clauses and relative clauses

Unlike a relative clause, which is only part of an argument (O/S/A/E), a complement clause is itself an argument (O/S/A/E). Consequently, there are several criteria to distinguish between relative and complement clauses in Israeli: passivization, topicalization, coordination, and interrogation. Whereas only complement clauses can undergo passivization and topicalization, only relative clauses can be coordinated with adjectives. In interrogation, a complement clause answers a different type of question from that answered by a relative clause.

3.1. *Passivization*

A complement clause—but not a relative clause—can be the target of passivization. Consider the following complement clauses:

- (4) [anì] {yodéa <she-hì yaf-á>_O}
 I know:msgPRES COMP-she beautiful-fsg
 'I know that she is beautiful.'
- (5) {yadúa l-ì} <she-hì yaf-á>_S
 know:msgPRES:PASS DAT-1sg COMP-she beautiful-fsg
 'It is known to me that she is beautiful.'

In (5) the complement clause from (4) is the target of passivization, just like an NP object. On the other hand, in (6), *she-niytá yafá* ‘who became beautiful’ behaves like an adjective and cannot be the target of passivization, i.e. it is a relative clause.

- (6) raíti et [ha-ishá [she-niytá yaf-á]_{REL}]_O
 see:1sgPAST ACC DEF-woman REL-become:3fsgPAST beautiful-fsg
 ‘I saw the woman who became beautiful.’

3.2. Topicalization

A complement clause—but not a relative clause—can be topicalized, as, for example, in (7), which is based on (5):

- (7) [[ze] <she-hí yaf-á>]_S {yadúa l-i}
 PROXmsg COMP-she beautiful-fsg know:msgPRES:PASS DAT-1sg
 ‘That she is beautiful is known to me.’

Sentence (8) is topicalization by fronting of the complement clause in (9):

- (8) [[ze] <she-yóram ohév et íris>]_O kul-ánu
 PROXmsg COMP-Yoram love:msgPRES ACC Iris all-1pl
 yodím
 know:mplPRES
 ‘That Yoram loves Iris we all know.’
- (9) kul-ánu yodím <she-yóram ohév et íris>_O
 all-1pl know:mplPRES COMP-Yoram love:msgPRES ACC Iris
 ‘We all know that Yoram loves Iris.’

Israeli prefers not to begin a sentence with a *she*- clause. The solution the language has found is to insert a *ze* ‘that, this’ demonstrative as an external head. The result is that the *she*-complement clause is in apposition to *ze*. In other words, once the complement clause is put in a sentence-initial position, it has to transform into a complex O (or S in the case of passivization—see (7)) consisting of an NP and a complement clause in apposition (see §4.1). The result is ‘complementary distribution’ of a complement clause and a complementation strategy of sorts—as in the case of Tariana (Chapter 8).

That said, it is indeed possible to topicalize the complement clause without *ze*. However, such a structure is highly marked, rare, and requires intonation of topicalization, with a rising-falling contour at the end of the topicalized constituent:

- (10) <she-yóram ohév et íris>_O kul-ánu yodím
 COMP-Yoram love:msgPRES ACC Iris all-1pl know:mplPRES
 ‘That Yoram loves Iris we all know.’

3.3. Coordination

While a complement clause cannot be coordinated with an adjective, a relative clause can. After all, the relative clause within an O is itself a modifier of the NP heading the O. Consider the relative clauses in (11) and (12):

- (11) raíti [yaldá [she-hí khakham-á]_{REL}]_O
 see:1SGPAST girl REL-COP clever-fsg
 'I saw a girl who is clever.'
- (12) raíti [yaldá yaf-á [she-hí khakham-á]_{REL}]_O
 see:1SGPAST girl beautiful-fsg REL-COP clever-fsg
 'I saw a beautiful girl who is clever.'

In (12), an adjective is added to (11). Such a move is impossible in the case of (13), which contains a complement clause:

- (13) koév l-i <she-ló notním la-kélev ókhel>_s
 hurt:msgPRES DAT-1SG COMP-NEG give:mpLPRES to:DEF-dog food
 'It hurts me that no food is given to the dog.'

3.4. Interrogation

Whereas a complement clause could serve as an answer to a question beginning with *what* (Israeli *ma*, cf. *What* did you hear? I heard that Danny was coming), a relative clause could serve as an answer to a question beginning with *which* (Israeli *éyze*, cf. *Which* fruit do you like here? I like the fruit which is red). That said, in the case of a complex O/E (see §4.1), the complement clause can also serve as an answer to a question beginning with *which* (e.g. *Which* news did you hear? I heard the news that Danny was promoted).

4. Structural types of complement clauses

Israeli has six main types of complement clause, classified here according to structure (e.g. the complementizer type):

- (a) *she*- 'that' (§4.1)
- (b) *ki* 'that' (§4.2)
- (c) *im* 'if'/interrogative (§4.3)
- (d) 'infinitive' (§4.4)
- (e) *im*/interrogative + 'infinitive' (§4.5)
- (f) reduced complement clause (§4.6)

All these types are used in the O slot. All except (f) can be used in the A/S slot—see (5) and (16) for (a) and (33) and (48) for (c). Complements (a), (b), and (c) can take all the TAM properties available to main clauses. However, (d) and (e) can only take an infinitive and the verb in (f) must be in the present tense. Negation is possible within all Israeli complement clauses. In (d) and (e), the negator has to appear right before the ‘infinitive’. Raising is possible only in (f)—see (43).

4.1. *She-‘that’ complement clause*

This is the unmarked, most common complement clause, often used as a fact complement clause but also for activity and potential meanings:

- (14) hu amár l-i <she-én l-o késef>_O
 he say:3msgPAST DAT-1sg COMP-EXIST.COP:NEG DAT-3msg money
 ‘He told me that he had no money.’
- (15) shamáti <she-ha-profésor-it tekudám>_O
 hear:1sgPAST COMP-DEF-professor-FSG promote:3fsgFUT:PASS
 ‘I heard that the female professor will be promoted.’

Although *she-* complement clause usually appears in the O slot, it can easily be in the S slot (see (5) above) and even in the A slot—just like in Yiddish and other European languages—as follows:

- (16) {[margíz]_V [ot-à]_O} <she-okhlím khatul-ím>_A
 annoy:msgPRES ACC-3fsg COMP-eat:mplPRES cat-pl
 ‘It bothers her that cats are eaten.’

By and large, *she-* complement clauses can follow almost all PRIMARY-B verbs, as well as all verbs denoting SECONDARY CONCEPTS other than Beginning SECONDARY-A verbs (see Tables 1 and 2).

The Israeli complementizer *she*-[fe] ‘that’ can be traced back to the Hebrew complementizer *she-* ‘that’, which derives from the Hebrew relativizer *she-* ‘that’. There is no consensus about the origin of the latter. It might be a shortened form of the Hebrew relativizer ‘*asher* ‘that’, which is related to Akkadian ‘*ashru* ‘place’ (cf. Semitic *‘*athar*), similar to the case of Goemai (Chapter 9). Alternatively, Hebrew ‘*asher* derived from *she-*, or it was a convergence of Proto-Semitic *dhu* (cf. Aramaic *dī* below) and ‘*asher*. The Hebrew relativizer ‘*ashér* is the origin of the Israeli relativizer *ashér* ‘that’, which is much less common than the Israeli relativizer *she-* ‘that’. Whereas Israeli *she-* functions both as complementizer and relativizer, *ashér* can only function as a relativizer.

Complex O/E with an NP and a *she-* complement clause in apposition

Like *that* complement clauses in English, *she-* complement clauses can sometimes appear in a complex O/E argument involving an NP followed by a complement clause in apposition (cf. (8) in Chapter 1, as well as Dixon 1991: 141–2). The NP can be a noun like *ha-uvdá* ‘the fact’ or *ha-khadashót* ‘the news’ or *ha-teórya* ‘the theory’ or *ha-hanakhá* ‘the assumption’, as in (17):

- (17) hem satrú et [[ha-hanakhá]_{NP} <she-yésh
 they contradict:3plPAST ACC DEF-assumption:f COMP-EXIST.COP
 khaím akhréy ha-mávet>]_O
 life after DEF-death
 ‘They contradicted the assumption that there is life after death.’

Obviously, the noun is modifiable by an adjective before the apposed complement clause:

- (18) hem satrú et [[ha-hanakhá ha-rovákh-at]_{NP}
 they:m contradict:3plPAST ACC DEF-assumption:f DEF-common-f
 <she-yésh khaím akhréy ha-mávet>]_O
 COMP-EXIST.COP life after DEF-death
 ‘They contradicted the common assumption that there is life after death.’

However, non-modifiable words can also be used in complementation. Consider the adverb *kakh* ‘so, thus, that’ and the masculine singular proximal demonstrative *ze* ‘this, that’, which, like a generic noun, can act as the head of an apposed complement clause. *Kakh* and *ze* are often used in the case of a complement-taking verb which requires a preposition. They can be added between the verb and the complementizer *she-*. However, this is not a necessity and Israeli allows *she-* after a preposition, as follows:

- (19) hen makhú al [(kakh/ze) <she-ló natnú
 they:f protest:3plPAST on (so/PROXmsg) COMP-NEG give:3plPAST
 l-o avodá>]_E
 DAT-3msg work
 ‘They protested that he was not given work.’

The difference between *kakh* and *ze* is that *kakh* sounds high-register, whereas *ze* sounds colloquial. That said, only *ze* can occur after a complement-taking verb with no preposition. Furthermore, when the complementation occurs at the beginning of a sentence, it is only possible to use *ze* (see §3.2).

4.2. *Ki* ‘that’ complement clause

Instead of using the *she*-complementizer, an Israeli formal writer could use the rare complementizer *ki* ‘that’, which derives from the Hebrew complementizer *kī* ‘that’, from *kī* ‘because’. (Hebrew *kī* was replaced by ‘*asher/she*’ owing to the calquing of Aramaic *dī/zī*, which functions both as complementizer and relativizer—cf. Deutscher 2000: 64). Consider the following minimal pair:

- (20) ha-neeshám taán <**ki** hu khaf mi-péssha>_O
 DEF-accused:msg claim:3msgPAST COMP he clean from-crime
 ‘The accused claimed that he was innocent.’
- (21) ha-neeshám zuká [**ki** hu khaf mi-péssha]_{CAUS}
 DEF-accused:m acquit:3msgPAST:PASS CAUS he clean from-crime
 ‘The accused was acquitted because he was innocent.’

Whereas in (20) *ki* introduces a complement clause, in (21) it introduces a causal clause. But such versatility can easily result in ambiguity, for example after the verb *hevín* ‘understand’:

- (22) hevánti [**ki** kvar hisbíru et
 understand:1msgPAST REL/CAUS already explain:3plPAST ACC
 ze]_{CAUS/COMP}
 PROXmsg
 ‘I understood that it has already been explained.’
 OR ‘I understood because it has already been explained.’

Consequently, *ki* is often avoided even by Israelis attempting to write in a high register.

As opposed to *she*-, I believe that *ki* should be categorized as a prescriptive complementizer *tout court*. That said, some French-speaking immigrants to Israel use the complementizer *ki* less rarely than other Israelis because of the phonetic similarity to the French complementizer *que* ‘that’.⁴ Bendavid (1967: 147) calls this multiple causation phenomenon *hidamút sheló midáat* ‘sub-conscious assimilation’—cf. ‘use intensification due to phonetic matching’ (Zuckermann 2000: 316).

With regard to the distribution of *ki*, although it can replace *she*- in most cases, it cannot do so, for example, following *LIKING* verbs such

⁴ French *que* is traceable back to Proto-Indo-European **kwe*, which is also the origin of Modern Persian *ke* (cf. Haig 2001: 200), and which has been alleged to be ultimately related to Hebrew *kī*. If this is the case, the phonetic similarity between French *que* and Israeli *ki* cannot be put down to pure serendipity—cf. ‘incestuous phono-semantic matching’ in Zuckermann (2003).

as *aháv* 'love, like', *saná* 'hate', *heedif* 'prefer' (see Table 1). As opposed to *she*-complements, *ki* complements cannot follow verbs denoting SECONDARY CONCEPTS.

Furthermore, whereas *she*- complement clauses can be topicalized in colloquial speech (see (10)), *ki* clauses cannot be. The reason for this syntactic restriction might be that whereas topicalization is colloquial in Israeli, *ki* is highly prescriptive, resulting in a clash. Unlike *she*-, *ki* complement clauses are not normally the target of passivization.

4.3. *Im* 'if'/interrogative complement clause

Both *im* 'if' and interrogative complement clauses can follow almost all ATTENTION verbs, as well as conception, memory, knowledge, credence, and prediction (THINKING) verbs, and saying, proposition, report, asking, and demonstration (SPEAKING) verbs.

4.3.1. *Im* 'if' complement clause *Im* 'if' complement clauses—in contradistinction to interrogative complement clauses—can also follow LIKING verbs, as well as modal and emotive verbs denoting SECONDARY CONCEPTS. *Im* clauses often, but not always, have a potential—rather than fact/activity—meaning. Consider (23):

- (23) aní tohé <im atá rotsé la-vó>_O
 I wonder:msgPRES if you:2msg want:msgPRES INFIN-come
 'I wonder if you would like to come.'

Im complement clauses can be the target of passivization. They can follow all Primary-B verbs except those of supposition, remorse, promise, and command—see Table 1. This distribution is similar to the case of interrogative complement clauses, although the latter can follow command verbs.

4.3.2. *Interrogative complement clause (vis-à-vis direct speech)* In addition to the verbs already mentioned in §4.3.1, interrogative complement clauses—as opposed to *im* 'if' complement clauses—can follow command SPEAKING verbs. Interrogative clauses often, but not always, have a potential—rather than fact/activity—meaning. Consider (24):

- (24) hi giltá l-i <matáy [ha-hor-ím shel-à]
 she reveal:3fsgPAST DAT-1SG when DEF-parent-pl GEN-3fsg
 yagíu>_O
 arrive:3plFUT
 'She revealed to me when her parents would arrive.'

Historically, one might regard the interrogative complement clause as a semi-direct speech clause: *emór li: “matáy atà ba?”* > *emór li matáy atà ba* > *amárta li [matáy atà ba]*—Tell me: ‘when [do] you (2msg) come?’ > Tell me when you (2msg) come > You (2msg) told me [when you (2msg) come]. Direct speech is commonly used in Israeli, for example in informal speech or storytelling. Unlike English, the present tense in Israeli direct speech does not become past in indirect speech, and there is no change of constituent order. Thus, besides the distinct intonation, the only difference between an interrogative complement clause and direct speech is the pronoun used. Juxtapose (25) and (26):

- (25) hu shaál ot-ì <ma **anì** rotsé>_O
 he ask:3msgPAST ACC-1sg what **I** want:msgPRES
 ‘He asked me what I wanted.’
- (26) hu shaál ot-ì: [ma **atà** rotsé ?]_{Direct Speech}
 he ask:3msgPAST ACC-1sg: what **you:2msg** want:msgPRES ?
 ‘He asked me “What do you want?”’

Although I have no doubt that European languages such as Yiddish (a primary contributor to Israeli) are an important source for Israeli interrogative complement clauses, such clauses seem to have pre-existed in Hebrew (the other primary contributor to Israeli). Consider, for instance, the Biblical Hebrew sentence *lo noda’ [mi hikkáhu]* ‘it be not known [who hath slain him]’ (Deuteronomy 21: 1). Such multiple causation, or multi-sourcedness, corresponds with the Congruence Principle, according to which if a feature exists in more than one contributor—whether primary or secondary—it is more likely to persist in the target language (see Zuckermann 2003, 2006; cf. ‘convergence’ in Thomason and Kaufman 1988).

Interrogative + *she*- relative clause

Interrogative complement clauses should not be confused with relative clauses which modify an interrogative functioning as an NP, as follows:

- (27) dání makír et [[mi]_{NP} [she-higía
 Danny know:msgPRES ACC who REL-arrive:3sgPAST
 etmòl]_{REL}]_O
 yesterday
 ‘Danny knows the one who arrived yesterday.’
- (28) yósi ve-rúti mitkhardtím al [[ma]_{NP} [she-hèm
 Yossi and-Ruthie regret:mplPRES on what REL-they
 asú]_{REL}]_E
 do:3plPAST
 ‘Yossi and Ruthie regret what they did.’

- (29) hu hitkavén le-[[má]_{NP} [she-hù amár]_{REL}]_E
 he mean:3msgPAST to-what REL-he say:3msgPAST
 'He meant what he said.'
- (30) ahávti <[[ekh]_{NP} [she-hì hirtsetá]_{REL}]_O
 like:1sgPAST how REL-she lecture:3fsgPAST
 'I liked the way she lectured.'

4.4. 'Infinitive' complement clause

Complement clauses beginning with a tenseless verb, commonly referred to as 'infinitive' (see §2.2) are often potential (31), but they can also describe activity (32).

- (31) [hem] {bikshú mi-dáni <li-knót mataná le-natalí>_O}
 they ask:3plPAST from-Danny INFIN-buy present to-Natalie
 'They asked Danny to buy a present for Natalie.'
- (32) od lo síamnu <le-haavír et ha-khafats-ím>_O
 still NEG finish:1plPAST INFIN-move ACC DEF-item-pl
 'We have not yet finished moving the items.'

'Infinitive' complement clauses can appear in the S slot, as follows (see also (48)):

- (33) <le-hitahév>_S {ze khashúv}
 INFIN-fall.in.love COP important
 'To fall in love is important.'

The following verb types do not use the 'infinitive' complement clause: (a) ATTENTION; (b) THINKING: supposition, credence, prediction; (c) LIKING: remorse; (d) SPEAKING: proposition. All the others do—see Tables 1 and 2.

4.5. Im/interrogative + 'infinitive' complement clause

Im/interrogative + 'infinitive' complement clauses can follow almost all ATTENTION and SPEAKING verbs, as well as conception, memory, knowledge, and prediction (THINKING) verbs, but not LIKING verbs. Consider (34) and (35):

- (34) [hi] {tagíd l-i <im li-fgósh ot-à be-[yóm
 she say:3fsgFUT DAT-1sg if INFIN-meet ACC-3fsg in-day
 khamishí]>_O}
 fifth
 'She will tell me whether to meet her on Thursday.'

The ambiguity here—either ‘she will tell me on Thursday’ or ‘we shall meet on Thursday’—exists in Israeli too.

- (35) [ha-more le-nehigá] {masbír <ekh le-hatslíakh
 DEF-teacher to-driving explain:msgPRES how INFIN-succeed
 ba-tést>_O}
 in:DEF-test
 ‘The driving teacher explains how to succeed in the test.’

4.6. *Reduced complement clause*

In Israeli it is difficult to distinguish between a reduced complement clause and an NP object followed by a participle acting as a modifier (either a relative clause or a deverbal adjective).⁵ Consider (36):

- (36) raíti [kélev noshékh]_O
 see:1sgPAST dog bite:msgPRES
 ‘I saw a biting dog.’
 OR ‘I saw a dog biting.’
- (37) raíti et <ha-kélev noshékh>_O
 see:1sgPAST ACC DEF-dog bite:msgPRES
 ‘I saw the dog biting.’

In (37), there is a complement clause, although the object of ‘biting’, a transitive verb, is not mentioned. Reduced complement clauses are in the present and it impossible to change their tense. In (36) there are two possible readings: either a mere NP object (‘a biting dog’) or a complement clause (‘a dog biting’). One of the criteria which can be used to distinguish between the two readings is to check whether an object can be added to the verb (or participle), in this case *noshékh* ‘biting’. This works in the case of transitive verbs. If it is possible, then it is a complement clause.

- (38) raíti <kélev noshékh ot-à>_O
 see:1sgPAST dog bite:msgPRES ACC-3fsg
 ‘I saw a dog biting her.’

Sentence (38) is based on (36) but whereas (36) is ambiguous, (38) is not. Similarly, (39) is based on (37):

- (39) raíti et <ha-kélev noshékh ot-à>_O
 see:1sgPAST ACC DEF-dog bite:msgPRES ACC-3fsg
 ‘I saw the dog biting her.’

⁵ Cf. formal generative linguists’ ‘complement *small* clause’ and infinitival ECM (Exceptional Case Marker), e.g. Rothstein (1995).

The picture gets complex when considering (40):

- (40) raíti et [**ha**-kélev **ha**-noshékh]_O
 see:1SGPAST ACC DEF-dog DEF-bite:msgPRES
 'I saw the biting dog.'

The modifier *ha-noshékh* 'DEF-bite:msgPRES' can be analysed either as a deverbal adjective (with the *ha* appearing due to the required definiteness agreement between nouns and adjectives) or as a reduced relative clause (with *ha*-as a 'relativizer', as opposed to the unmarked *she*-). Supporting the relative clause analysis is the fact that it is possible to add an object to the clause in (40). In that case, however, *hanoshékh otá* 'that is biting her' will *have* to be a relative clause modifying the dog—see (41). However, here some native speakers perceive a change of meaning.

- (41) raíti et [**ha**-kélev [**ha**-noshékh ot-à]]_O
 see:1SGPAST ACC DEF-dog REL-bite:msgPRES ACC-3fsg
 'I saw the dog that is biting her.'

Although the *noshékh* 'biting' complement clauses involve a transitive verb, from (37) one should conclude that whenever the noun is definite but the following participle/verb is not, there is a complement clause. Consider (42), where *noshévet* 'blowing' is an intransitive verb:

- (42) shamáti et <ha-rúakh noshév-et>_O
 hear:1SGPAST ACC DEF-wind:f blowing-f
 'I heard the wind blowing.'

It is possible to raise the subject of the complement clause to the O slot within the main clause, as follows:

- (43) shamáti ot-[à]_i <[Ø]_i noshév-et>_O
 hear:1SGPAST ACC-3fsg Ø blowing-f
 'I heard it [the wind] blowing.'

Finally, compare (43) with (44), where the construct-state is an NP object, not a complement clause. The head of the NP *neshivá* 'blowing' is a deverbal noun ('gerund'). (One might consider such nominalization a complementation strategy.)

- (44) shamáti et [[neshivá-t ha-rúakh]_{CONSTR}]_O
 hear:1SGPAST ACC blowing-CONSTR DEF-wind
 'I heard the blowing of the wind.'

5. Complement-taking verbs

Table 1 features the distribution of complement clauses among verb types outlined in Chapter 1. The symbol '✓' means 'possible' whereas '∼' means 'possible but unlikely'. A blank means 'does not occur'.

TABLE 1. Classification of Primary-B verbs

Type	Verb	Translation	Semantic Class	complement clause type						
				<i>she-</i>	<i>ki</i>	<i>im</i>	inter	infin	inter+ infin	reduced
A	raá	see	perception	✓	~	✓	✓		✓	✓
T	shamá	hear	perception	✓	~	✓	✓		✓	✓
T	sam lev	notice	perception	✓		✓	✓		✓	
E	heriakh	smell	perception	✓						
N										
T	gilá	discover	discovery	✓	~	✓	✓		✓	✓
I	matsá	find	discovery	✓	~	✓	✓		✓	✓
O	khasáf	uncover	discovery	✓	~	✓	✓		✓	✓
N	badák	check		✓	~	✓	✓			
	khasháv	think	conception	✓	~	✓	✓	✓	✓	
	shakál	consider	conception	~		✓	✓	✓	✓	
	dimyén	imagine	conception	✓	~	✓	✓	~	✓	✓
	khalám	dream	conception	✓	~	~	✓	✓	✓	
	heniakh	suppose	supposition	✓	~					
	shiér	assume	supposition	✓	~					
T	savár	presume	supposition	✓	~					
H		(high register)								
I	tahá	wonder	supposition			✓			✓	
N										
K	zakhár	remember	memory	✓	~	✓	✓	✓	✓	✓
I	shakhákh	forget	memory	✓	~	✓	✓	✓	✓	✓
N	hevín	understand	knowledge	✓	~	✓	✓		✓	
G	yadá	know	knowledge	✓	~	✓	✓	✓	✓	
	hikír	be familiar with	knowledge						✓	
	heemín	believe	credence	✓	~	✓	✓			
	khashád	suspect	credence	✓	~					
	nikhësh	guess	prediction	✓	~	✓	✓		✓	
	nibá	predict	prediction	✓	~	✓	✓		✓	
	khazá	foresee	prediction	✓	~	✓	✓		✓	

(Continued)

TABLE 1. (*Continued*)

Type	Verb	Translation	Semantic Class	complement clause type				
				<i>she-</i>	<i>ki</i>	<i>im</i>	inter+ infin	reduced
L	aháv	love, like	preference	✓	✓		✓	✓
	saná	hate	preference	✓	✓		✓	✓
I	heedíf	prefer	preference	✓	✓		✓	✓
K	matsá khen	like	preference	✓	✓		✓	
I	beenáv							
N	hitkharét	regret	remorse	✓				
G	pakhád	fear	fear	✓	✓		✓	
	khashásh	be afraid	fear	✓	✓		✓	
	nehená	enjoy	joy	✓	✓		✓	
	amár	say	saying	✓	~	✓	✓	✓
	hodía	notify	saying	✓	~	✓	✓	✓
	sipér	tell	saying	✓	~	✓	✓	✓
	yidéa	inform	saying	✓	~	✓	✓	✓
	teér	describe	proposition	✓	~	✓		✓
	taán	claim	proposition	✓	~	✓		✓
	hisbír	explain	proposition	✓	~	✓		✓
	tsién	mention	proposition	✓	~	✓		✓
	heelíl	allege	proposition	✓	~	✓		✓
	diveákh	report	report	✓	~	✓		✓
S	perét	detail	report	✓	~	✓		✓
P								
E	hivtiákh	promise	promise	✓	~		✓	
A	iyém	threaten	promise	✓	~		✓	
K	hizhír	warn	promise	✓	~			✓
I								
N	makhá al	protest	complaint	✓	~			
G	hitlonén	complain	complaint	✓	~			
	kavál al	complain	complaint	✓	~			
		about (high register)						
	tsivá	order	command	✓	~	✓	✓	✓
	horá	order	command	✓		✓	✓	✓
	pakád	command	command	✓		✓	✓	✓
	hiftsír	urge (in)	requesting	✓	~		✓	
	(be)	(high register)						✓
	bikésh	request	requesting	✓	~		✓	✓
	(mi)	(from)						

TABLE 1. (*Continued*)

Type	Verb	Translation	Semantic Class	complement clause type					
				<i>she-</i>	<i>ki</i>	<i>im</i>	inter	infin	inter+ infin reduced
	darásh (mi)	demand (from)	requesting	✓	~			✓	✓
	shaál	ask	asking			✓	✓		
	hokhíakh	prove	demonstration	✓	~	✓	✓	✓	
	liméd	teach	demonstration	✓	~	✓	✓	✓	✓
	lamád	learn	demonstration	✓	~	✓	✓	✓	
	herá (le)	show (to)	demonstration	✓	~	✓	✓	✓	
	shikhnéa	convince	demonstration	✓			✓	✓	✓

There are verbs which always require a preposition following them, e.g. *makhá* ‘protest’—see (19). Many others, however, may require a preposition to follow them only in specific circumstances. Tables 1 and 2 mark whether a specific complement clause can follow the verb regardless of whether or not the verb requires a preposition between the verb and the complement clause. Note that no ‘infinitive’ complement clause follows a preposition.

Some verbs, especially negative promise ones such as *hizhír* ‘warn’, require *irrealis* semantics and can take the prescriptive complementizers *pen*, *bal*, *levál*, and *shéma* ‘lest’, resulting in a rare type of Israeli complementation, which cannot be the target of passivization:

- (45) *hizhárti* *ot-ò* <*bal/levál/pen/shéma* *yedabér*>_E
 warn:1sgPAST ACC-3msg lest speak:3msgFUT
 ‘I warned him not to speak.’

Negation and modality are often interlinked in Israeli. Consider *ma she-ló taasé*, lit. ‘what REL-NEG do:2msgFUT’, i.e. ‘whatever you do’, as well as the following minimal pair:

- (46) *hodíu* *le-dalít* <*she-[[má]* [*she-hì* *taasé]*_{REL}_S
 notify:3pmpAST to-Dalit COMP-what REL-she do:3fsgFUT
yaazór>_O
 help:3msgFUT
 ‘Dalit has been notified that what she will do will help.’

TABLE 2. Classification of verbs denoting Secondary concepts

Type	Element	Translation	Semantic Class	complement clause type					
				<i>she-</i>	<i>ki</i>	<i>im</i>	<i>inter</i>	<i>infin</i>	inter+ <i>infin</i> reduced
S E C O N D A R Y A	tsaríkh	should	modal	✓				✓	
	khová	must	modal	✓				✓	
	yitakhén	might, perhaps	modal	✓					
	(lo) batúakh	(un)sure	modal	✓					
	khavál	not worthwhile	modal	✓	✓			✓	
	kedáy	worthwhile	modal	✓	✓			✓	
	kef	fun	emotive	✓	✓			✓	
	tov	good	emotive	✓	✓			✓	
	atsúv	sad	emotive	✓	✓			✓	
	yafé	beautiful	emotive	✓	✓			✓	
	hitkhíl	begin	beginning					✓	
	himshíkh	continue	beginning					✓	
	hifsík	stop	beginning					✓	
	siém	finish	beginning					✓	
	gamár	finish	beginning					✓	
S E C O N D A R Y B	nisá	try	trying	✓				✓	
	hishtadél	try hard	trying	✓				✓	
	ratsá	want	wanting	✓				✓	✓
	kivá	hope	wanting	✓				✓	
	ikhél	wish	wanting	✓				✓	
	hitkavén	intend	wanting	✓				✓	
	tikhnen	plan	wanting	✓		✓		✓	✓
	hityamér	pretend	wanting					✓	
	heemíd	pretend	wanting	✓					
	paním								
	asá	make	making	✓					✓
	garám	cause	making	✓				✓	✓
	(le-) hekhriakh	(DAT) force	making	✓				✓	✓
	hirshá	allow	making	✓				✓	✓
	(le-) natán (le-)	(DAT) allow (DAT)	making	✓				✓	✓
	azár (le-)	help (DAT)	making	✓				✓	✓
	hitnadév	volunteer	making					✓	

- (47)

hodíu	le-dalít	<she-má	she-hì	lo	taasé
notify:3pmpAST	to-Dalit	COMP-what	REL-she	NEG	do:3fsgFUT
yakhshílu	ot-à>O				
fail:3plFUT	ACC-3fsg				

‘Dalit has been notified that no matter what she does, she will fail.’

6. Secondary concepts

Table 2 features the distribution of complement clauses among verb types denoting secondary concepts outlined in Chapter 1. It is clear from the table that, by and large, secondary verbs in Israeli do not take the *ki* ‘that’, *im* ‘if’, interrogative, or interrogative+‘infinitive’ complement clause.

As one can see in the ‘emotive’ section in Table 2, some Israeli adjectives can take a complement clause as an argument—cf. the cases of Matses (Sentences (20) and (21) in Chapter 10) and Goemai (Chapter 9; note, however, that Goemai ‘adjectives’ are actually verbs coding property concepts). Consider (48), said to be the last words of Yosef Trumpeldor, soldier and early pioneer-settler in *Eretz Yisrael*, spoken on 1 March 1920, when he was mortally wounded while defending Tel Hai, a settlement in the Galilee:

- (48)

tov	<la-mút	beád	arts-énu>S
good	INFIN-die	for	land-1plPOSS

‘It is good to die for our country.’ (cf. *Dulce et decorum est pro patria mori*.)

7. Concluding remarks

Israeli has six main types of complement clause and does not require complementation strategies. It can use direct speech (see §4.3.2) and nominalization (see end of §4.6). Israeli complementizers (other than the archaic *pen*, *bal*, *levál*, and *shéma*) all have some other grammatical function. Thus, Israeli provides yet another illustration of the statement that ‘the great majority of complementizers are homonymous with some other grammatical form in that language’ (Dixon 1995: 184). One of the main difficulties is how to distinguish between a reduced complement clause and an NP object with a modifier. By and large, Israeli complementation types and their frequency correspond with Yiddish and Standard Average European, although the forms used are Hebrew.

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Complement Clause Type and Complementation Strategy in Jarawara

R. M. W. DIXON

Jarawara has just one type of complement clause (and a minor complementation strategy, for indirect speech). If the last vowel in the predicate is *a*, this is raised to *i* as a mark that it is a complement clause (note that all syllables are CV and there are four vowels, *i*, *e*, *a*, and *o*). Throughout this chapter, the predicate (of a main clause or of a complement clause) is enclosed within braces, { ... }, a multi-word NP within square brackets, [...] and—as elsewhere in the volume—a complement clause within angle brackets, < ... >. The function of a core argument is shown by subscript _S, _A or _O.

A complement clause can be the O argument of prototypically complement-clause-taking verbs such as ‘want, like’, ‘know, understand’, ‘fear’, ‘remember’, ‘see’, or ‘hear’, as in:

- (1) <inamatis_S {ohi ni}>_O {o-mita-ra o-ke}
 spirit(m) cry AUX:COMP 1sgA-hear-IPef 1sg-DECf
 ‘I heard a spirit’s crying.’

It is this property which justifies recognition of this clause type as ‘complement clause’. However, complement clauses in Jarawara are also—and most frequently—found as S argument of an intransitive verb, typically a verb of motion or rest. For example:

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To accord with space constraints, this is a somewhat abbreviated account of the syntax of complement clause constructions in Jarawara; however, all the essential points are included. A full account is in chapter 17 of Dixon (2004a).

- (2) <Haimoto_S {mee kana ni}>_S
 name(m) 3nsgS run AUX:COMP
 {to-wa-k(a)-imisa-witiha}
 AWAY-APPLIC-be.in.motion-UP-FROM.PLACEF
 'Haimoto and others run up and away.'

Here the complement clause *Haimoto mee kana ni* 'Haimoto and others' running' is in S function for the main clause predicate *to-wa-k-imisa-witiha* 'be in motion up and away'. Literally 'Haimoto and others' running goes up and away'. Note that the S argument of the complement clause is jointly realized by third-person non-singular pronoun *mee* 'they (two or more)' in the predicate and by NP *Haimoto*; that is, 'they (two or more) one of whom was Haimoto'. (Verb root *-ka-* 'be in motion' plus suffix *-imisa* 'up' give *-kimisa*.)

Complement clauses also function as S argument of stative verbs such as 'be one, alone', 'be two', 'be many', 'be good', 'be strong', 'be audible', 'be far, be long time', 'be finished, accomplished', and 'start' as in:

- (3) <inamati_S {haa ni}>_S {jana na-ma-hare-ka}
 spirit(m) call.out AUX:COMP start AUX-BACK-IPem-DECM
 [ajata jaa]
 near AT
 'The spirit started calling out close by.'

Whereas in English the transitive verb *start* takes a complement clause in O function, as in *The spirit started calling out*, in Jarawara the verb *jana -na-* 'start' is intransitive and takes a complement clause as S argument. Literally 'The spirit's calling out started close by'.

1. Basic information

Jarawara is spoken as first language by about 170 people living in seven jungle villages on the left side of the Purús river (a major southern tributary of the Amazon) in Brazil. Jamamadí (about 250 speakers) and Banawá (about 120) are mutually intelligible with Jarawara and all three can be considered dialects of a single language, conveniently called Madi. This belongs to the small Arawá family (quite distinct from Arawak), together with Paumarí, Kulina-Dení, Sorowahá, and the extinct Arawá (see Dixon 1999).

2. Grammatical profile

This is a highly synthetic language, basically agglutinative (with just a little fusion). It is headmarking, with the predicate including pronouns relating to

TABLE 1. Structure of a main clause

-
1. Clause-initial peripheral markers—discourse markers, peripheral NPs, subordinate clauses, etc.
 2. NP(s) and/or complement clause(s) in core function(s)—S in an intransitive, A and/or O in a transitive clause. (There are ordering preferences but no constraints; nothing concerning syntactic function can be inferred from ordering.)
 3. Predicate.
 4. Clause-final peripheral elements, including peripheral NPs—for example, *ajata jaa* in (3)—and subordinate clauses.
-

core arguments, S, A, and O. Core NPs do not bear any case marking and nouns are not marked for number. Number is shown by the corresponding pronoun within the predicate, as with *mee* in (2). Each free noun is either f(eminine) or m(asculine), the gender not being shown in the form of the noun but by agreement within its NP and with items at the end of the predicate. F is the unmarked gender; for example, all pronouns (whatever the sex of their referents) take feminine agreement. We find f agreement on the main clause predicates in (1) and (2). In (1), with *o-*, first-person singular A pronoun of the main clause. In (2) the S argument of the complement clause has two parts—m noun *Haimoto* and third-person non-singular pronoun *mee*; it is *mee* which engenders the f agreement on the main clause predicate. In (3), both immediate past eyewitness tense suffix and declarative suffix in the main clause are in m form, in agreement with the S argument of the complement clause, the m free noun *inamati* ‘spirit’.

2.1. Clause structure

The structure of a main clause is set out in Table 1. Note that the predicate is the only obligatory element, and can by itself comprise a clause (or a sentence).

2.2. Verb parameters

Verbs are classified in terms of two independent parameters:

- TRANSITIVITY. Leaving aside copulas, each verb is one of:
 - (a) intransitive, such as *kana -na-* ‘move fast, run’ and *-ka-* ‘be in motion’ in (2), and *jana -na-* ‘start’ in (3) and (15);
 - (b) transitive, such as *-wato-* ‘know, understand’ in (21) and *hisi -na-* ‘sniff’ in (12–13);

(c) ambitransitive of type S = O, such as *-mita-* ‘hear, be audible’ and *bisi -na-* ‘scratch, be scratched’—used transitively in (1) and (7) respectively;

(d) ambitransitive of type S = A, such as *ohi -na-* ‘cry, weep (for)’, *haa -na-* ‘call (to/for)’, and *-hijara-* ‘speak, tell’—used intransitively in (1), (3), and (15) respectively.

● INFLECTING/NON-INFLECTING. Verbs divide into:

(i) inflecting verbs, which themselves take prefixes and suffixes, such as *-ka-*, *-wato-*, *-mita-*, and *-hijara-*.

(ii) non-inflecting verbs, which do not themselves take affixes but must be followed by an auxiliary, which does. About a dozen verbs take auxiliary *-ha-*—including *hawa -ha-* ‘be finished, accomplished’, in (9), (12b), (13b), and (18)—with the remaining several hundred taking *-na-*; these include *kana -na-*, *jana -na-*, *hisi -na-*, *bisi -na-*, *ohi -na-*, and *haa -na-*.

Compare:

- | | |
|--|--|
| (4) <i>o-ka-hara</i>
1sgS-be.in.motion-IPef
‘I was in motion.’ | (5) <i>kana o-na-hara</i>
run 1sgS-AUX-IPef
‘I ran.’ |
|--|--|

In (4), 1sg S pronominal prefix *o-* and immediate past eyewitness feminine suffix *-hara* are added directly to the inflecting verb root *-ka-*, whereas in (5) they are added to the auxiliary, *-na-*, of the non-inflecting verb root, *kana*.

2.3. Predicate structure

This is the most intricate part of the grammar. The basic structure of the predicate (leaving aside a couple of complexities which are not relevant to the discussion of this chapter) is in Table 2.

All suffixes are optional. Those in slots G and J always have distinct f and m forms, while most items in D, E, and F show gender when predicate-final. Gender agreement is with the S argument in an intransitive and with either A or O in a transitive clause.

The basic forms of pronouns are set out in Table 3. It will be seen that 3sg animate and 3 inanimate are always zero for core functions.

2.4. A-constructions and O-constructions

Each clause in Jarawara has one core argument marked as syntactic pivot, and this functions as discourse topic. The pivot argument in a given clause will

TABLE 2. Basic structure of the predicate of a main clause

A	First pronominal position; obligatory in all transitive clauses—marks O
B	Second pronominal position; obligatory in all clauses—marks S or A
C	Prefixes
C1	First prefix slot: one of 1sg S/A <i>o-</i> ; 2sg S/A <i>ti-</i> (both transferred from slot B); <i>hi-</i> , which is marker of an O-construction when both A and O are 3rd person; and <i>to-</i> ‘away’
C2	Second prefix slot: applicative <i>ka-</i> .
C3	Third prefix slot: causative <i>-na-</i> (on verb) in (26), <i>niha-</i> (on auxiliary)
D	Verb root, inflecting or non-inflecting (predicate head)—obligatory
E	Auxiliary, required if verb is non-inflecting
F	One or more miscellaneous suffixes (all optional). These divide into six echelons (or macro-slots):
F1	16 suffixes in 3 slots, including <i>-imisa</i> ‘up’ and <i>-witiha</i> ‘from place’, both in (2), <i>-ma</i> ‘back’ in (3), <i>-ki</i> ‘coming’ in (25)
F2	3 suffixes in 3 slots, including <i>-mina</i> ‘in the morning’ in (8–9)
F3	2 suffixes in 1 slot, including <i>-saa</i> ‘still’
F4	20 suffixes in 5 slots, including <i>-raba</i> ‘do a bit’, <i>-kabote</i> ‘do immediately’, <i>-ihina</i> ‘can’
F5	6 suffixes in 2 slots, including <i>-naba</i> ‘do all night’
F6	7 suffixes in 5 slots, including <i>-bisa</i> ‘also’ in (8–9), <i>-ra</i> negator in (10) and (22), <i>-ine</i> ‘continuous’ in (12a), (13a), and (24)
G	Tense-modal suffixes: 3 past tenses (immediate, IP, recent, RP, and far past, FP), each with an evidentiality specification, eyewitness (e) or non-eyewitness (n); and five modalities (future, intentional, hypothetical, realis, reported)—all optional (generally only one is chosen but there can be two, as in (17))
H	Third pronominal position, repeating information about S, A, or O pronoun or the O-construction marker <i>hi-</i> (from slot A or B) under certain conditions. (Full information on the third pronominal position in a main clause—including the main clause of a complement clause construction—is in Dixon 2000, 2004a.)
J	Mood: declarative, backgrounding, four imperatives, two interrogatives, etc.—and marking of a dependent clause, as in (7)—optional.

generally be coreferential with the pivot argument in the preceding and/or in the following clause. In an intransitive clause the S argument is pivot. There are two varieties of transitive clause: an A-construction (Ac) in which the A argument is pivot, and an O-construction (Oc) in which the O argument is pivot. Ac’s and Oc’s show identical structural possibilities; for example, the O argument is marked by a pronoun in slot A, and the A argument by a pronoun in slot B, for both construction types.

Some critical differences are (a full account is in Dixon 2000, 2004a):

- Suffixes in predicate slots G and J (and items in D–F, if predicate-final) always agree with the A argument in an Ac, but generally with the O

TABLE 3. Basic forms of pronouns

	<i>slot A, pronoun in O function</i>	<i>slot B, pronoun in S/A function, and also slot H</i>	<i>possessor within NP</i>
1sg	owa	o-	oko
2sg	tiwa	ti-	tika
3sg animate	ø	ø	hinaka
3 inanimate	ø	ø	—
1nsg inclusive	era	ee	ee kaa
1nsg exclusive	otara	otaa	otaa kaa
2nsg	tera	tee	tee kaa
3nsg animate	mee <i>or</i> mera	mee	mee kaa

argument in an Oc. (They always agree with the S argument in an intransitive clause.)

- When A and O are both third person (whether singular or non-singular) an Oc includes *hi-* in the first prefix slot to its predicate, but an Ac does not.

For example, a story about Botenawaa getting sick and then being cured included the Oc:

- (6) Botenawaa_O {mee hi-na-(a)mose}
 name(m) 3nsgA Oc-CAUS-be.good:m
 ‘They are curing Botenawaa (lit. they make-be-good Botenawaa).’

The inclusion of prefix *hi-* shows that this is an Oc. Verb (slot D) *na-mosa* (causative prefix *na-* plus intransitive verb *-amosa-* ‘be good’) has its final *a* raised to *e*, showing m agreement, with the O argument, *Botenawaa*. The corresponding Ac would be *Botenawaa mee na-mosa*, without the *hi-* prefix, and with the verb preserving its final *a*, for f agreement with the A argument, 3nsg pronoun *mee*. (Recall that all pronouns take f agreement.)

3. Structure of a complement clause

There is only one kind of complement clause in Jarawara, but it has a wide semantic range. It may refer to an Activity, being then translated into English by a ‘S ING clause—as in (1) ‘I heard a spirit’s crying’—or have Potential meaning, being then translated into English by a (FOR) TO clause—as in (10) ‘He doesn’t want to eat anything’. (It is scarcely ever translatable by a THAT

clause, referring to a Fact.) And, as seen in (2) and (7), some complement clause constructions in Jarawara would not be translated with a complement clause in English (or in many other languages).

A major mark of a complement clause is that, if the final vowel of the predicate would be *a*, this is replaced by *i*; thus, auxiliary *na* becomes *ni* in (1-3). If the final vowel is something other than *a*, then this remains and other criteria are required to recognize that we are dealing with a complement clause (the criteria are summarized in §6).

A complement clause functions as a core argument (S, A, or O) of a main clause, and goes into the same position as an NP in that function, before the predicate (slot 2 in Table 1). A main clause can include a post-predicate NP (in slot 4), extending the information already given about a core argument; for example, ‘I shot a tapir’ (core NP and predicate), ‘a big tapir’ (post-predicate NP). The corpus does not include any instance of a complement clause in post-predicate position.

Of the elements in main clause structure, shown in Table 1, only the middle two (core arguments and predicate) apply to a complement clause; that is, there can be no clause-initial or clause-final peripheral elements. Like a main clause, a complement clause only rather seldom includes two core NPs, but this does happen, as in:

- (7) <jomee_A awa_O {bisi ni}>_S {waa-hii}
 jaguar(m) tree(f) scratch AUX:COMP stand-DEPM
 ‘If (you come across) a jaguar standing scratching a tree.’

The complement clause *jomee awa bisi ni* ‘the jaguar’s scratching the tree’ is S argument for the verb *waa-hii* (which is marked as a dependent clause by m suffix *-hii*, here meaning ‘if’). This sentence is, literally ‘If a jaguar’s scratching a tree would stand’.

The structure of a complement clause predicate, shown in Table 4, is an abbreviated version of the structure of a predicate in a main clause; compare with Table 2. It will be seen that the predicate in a complement clause may not include:

- three of the forms from the first prefix slot: 1sg S/A pronoun *o-*, 2sg S/A *ti-*, and Oc marker *hi-*.
- miscellaneous suffixes from the fifth and sixth echelons, F5 and F6
- tense-modal suffixes, slot G
- the third pronominal position, slot H
- mood suffixes, slot J.

TABLE 4. Structure of the predicate in a complement clause

A	First pronominal position, as in a main clause
B	Second pronominal position, as in a main clause, but with different form for 1sg and 2sg
C	Prefixes
C1	First prefix slot: only <i>to-</i> 'away', as in (20)
C2	Second prefix slot: applicative <i>ka-</i> , as in a main clause
C3	Third prefix slot: causative <i>na-</i> ~ <i>niha-</i> , as in a main clause, used in (14)
D	Verb root
E	Auxiliary, as in main clause
F	One or more miscellaneous suffixes, but only from the first four echelons, F1–F4

Thus, tense-modal and mood suffixes (and the third pronominal position, which comes between them) are confined to main clauses. Like all suffixes, these are optional in main clauses. On a textual count, about 44 per cent of main clauses include a tense-modal suffix, and about 80 per cent of indicative clauses include a declarative or backgrounding mood suffix (imperatives and interrogatives generally include an appropriate mood suffix).

Miscellaneous suffixes are divided into six echelons on a series of criteria. For example, only first and second echelon suffixes are repeated in verbal reduplication. And only affixes from the first four echelons may be included in a complement clause. To illustrate this, the predicate of the main clause in (8) includes second echelon (F2) suffix *-mina* 'in the morning' and sixth echelon (F6) suffix *-bisa* 'also', plus declarative mood suffix *-ka* (in m form, agreeing in gender with the S argument, which is a male proper name).

- (8) Okomobi_S {afi na-mina-bisa-ka}
 name(m) bathe AUX-MORNING-ALSO-DECM
 'Okomobi also bathed in the morning.'

When this becomes a complement clause in S function to the intransitive verb *hawa* *-ha-* 'be finished, accomplished', in (9), the second echelon suffix *-mina* remains on the complement clause predicate, but sixth echelon suffix *-bisa* (and declarative *-ka*) can only be included on the predicate of the main clause. The complement clause predicate ends with *-mina*, whose final *a* is raised to *i* as a mark that this is a complement clause.

- (9) <Okomobi_S {afi na-mini}>_S {hawa
 name(m) bathe AUX-MORNING:COMP be.finished
 to-ha-bisa-ka}
 AWAY-AUX-ALSO-DECM
 'Okomobi has also completed his morning bathe (lit. Okomobi's
 bathing in the morning is also finished).'

The only way of marking negation in Jarawara is by verbal suffix *-ra*, which belongs to the sixth echelon of miscellaneous suffixes. Thus, negation cannot be specified in a complement clause, only in the main clause. For example:

- (10) <jama_O {kabi}>_O {nofa-re}
 thing(f) eat:COMP want-NEGM
 ‘He (a sick man) doesn’t want to eat anything (lit. he doesn’t want
 [his] eating anything).’

In (10), m agreement on the last suffix of the main clause predicate, with final *a* raised to *e*, indicates that the A argument of the main clause (and of the complement clause, see §3.4) is of masculine gender (here, a man). The transitive inflecting verb *-kaba-* ‘eat’ has its final *a* raised to *i* to indicate that it is the predicate of a complement clause.

In Jarawara, negation may only apply to a complete (main) clause, not to an argument within it (whether an NP or a complement clause). The language thus lacks the possibility of a contrast between negation in a complement clause and in a main clause, as in English *I remember that he didn’t go* and *I didn’t remember that he went*.

The end of the predicate in a main clause shows gender agreement with the pivot argument; in (1) we find f agreement with the A argument, 1sg pronoun *o-* (recall that all pronouns take f agreement). Gender agreement is shown by tense-modal (slot G) and/or mood (J) suffixes, if present; note that both of these are missing from a complement clause. If a main clause lacks tense-modal and mood specification, then its predicate must end in an inflecting verb (slot D) or an auxiliary (E) or a miscellaneous suffix (F). If this final element ends in vowel *a* (as it does in the majority of cases), then the *a* is retained for f agreement—as in (2)—and raised to *e* for m agreement—as in (6) and (10).

A complement clause differs from a main clause in that its predicate does not show gender agreement. A final *a* is raised to *i*, as the mark of a complement clause, whatever the gender of the pivot argument within the complement clause; note that the pivot is m in all of (1) (3), (7), and (9–10), but f in (2).

But if a complement clause is in pivot function within the main clause, then the end of the predicate in the main clause shows gender agreement with the pivot of the complement clause. Examples (2–3), (9) have an intransitive complement clause as the S—pivot—argument within an intransitive main clause. In (2) the complement clause pivot is realized by NP *Haimoto* (a man’s name, and thus m) and by third-person non-singular pronoun *mee*. The pronoun takes precedence and engenders f agreement on the end of the

main clause predicate. In (3) and (9) the S argument of the complement clause is an m noun, which engenders m agreement on the end of the main clause predicate. In (7) the S argument for the intransitive main clause is a transitive Ac complement clause. The complement clause pivot is the A argument—m noun *jomee* ‘jaguar’—and this determines m agreement on the end of the main clause predicate.

Compare the following ‘minimal pair’ of complement clause constructions, the first with an Ac and the second with an Oc as main clause, each having an intransitive complement clause as O argument and 1sg pronoun *o-* as A argument:

- (11) (a) <jara_S {toho ni}>_O {o-mita o-ke}
 non-Indian(m) cough AUX:COMP 1sgA-hear 1sg-DECf
 ‘I heard the non-Indian’s coughing.’
 (b) <jara_S {toho ni}>_O {o-mita o-ka}
 non-Indian(m) cough AUX:COMP 1sgA-hear 1sg-DECM
 ‘I heard the non-Indian’s coughing.’

The Ac, (11a), would be used to continue a discourse in which the established pivot was ‘I’; for example ‘I came and heard the non-Indian’s coughing’. In contrast, the Oc, (11b), would be used when the established pivot was ‘the non-Indian’; for example ‘The non-Indian came and I heard him coughing’.

In the Ac, (11a), the declarative suffix, *-ke*, has f form, agreeing with the A argument in the main clause which is a pronoun. In the Oc, (11b), the declarative suffix is *-ka*, showing m agreement with the pivot (m noun *jara*) in the complement clause which is itself in pivot function within the main clause. The Oc in (11b) does not show prefix *hi-* since it is not the case that both A and O arguments are third person. It is recognized as an Oc by the m form of the declarative suffix, showing that the pivot of the main clause is the complement clause in O function (whose own pivot has m gender).

It was mentioned that the predicate of a complement clause cannot include pronominal prefixes 1sg *o-* and 2sg *ti-*, for S and A functions. What happens is that these are replaced by the possessive forms *oko* and *tika* (see Table 3), placed at the beginning of the complement clause. When the main clause in (12a) becomes a complement clause, in (12b), prefix *o-* is removed from its predicate, with *oko* being included, like an NP in A function.

- (12) (a) sina_O {hisi o-ne o-ke}
 snuff(f) sniff 1sgA-AUX:CONT 1sg-DECf
 ‘I am sniffing snuff.’

- (b) <oko_A sina_O {hisi ni}>_S {hawa
 1sgPOSS snuff(f) sniff AUX:COMP be.finished
 to-ha-ke}
 AWAY-AUX-DECf
 ‘I have finished sniffing snuff (lit. my sniffing snuff is finished).’

If an S or A argument is a non-singular pronoun, this is shown by a separate word within the predicate, immediately before the verb (rather than by a prefix); and it is retained unchanged in a complement clause. Thus, substituting first-person non-singular exclusive *otaa* for first singular *o-* in (12), we get:

- (13) (a) sina_O {otaa hisi n(a)-ine-ke}
 snuff(f) 1nsg.exclA sniff AUX-CONT-DECf
 ‘We are sniffing snuff.’
 (b) <sina_O {otaa hisi ni}>_S {hawa
 snuff(f) 1nsg.exclA sniff AUX:COMP be.finished
 to-ha-ke}
 AWAY-AUX-DECf
 ‘We have finished sniffing snuff (lit. our sniffing snuff is finished).’

(Both (12a) and (13a) include the sixth echelon miscellaneous suffix *-ine*, with continuous meaning. In (12a) underlying *o-na-ine* becomes *one*, and in (13a) *na-ine* becomes *nine*.)

A main clause Oc in which both A and O arguments are third person bears prefix *hi-* on its predicate. As shown in Table 4, a complement clause may not include *hi-*; this is simply transferred to the predicate of the main clause. The main clause given in (6), *Botenawaa_O {mee hi-na-mose}* ‘They are curing Botenawaa’, an Oc, becomes complement clause as S argument to the main clause verb *-jabo-* ‘be far, be a long time’, in:

- (14) <Botenawaa_O {mee na-mosi}>_S {hi-jabo hi-ka}
 name(m) 3nsgA CAUS-be.good:COMP Oc-be long Oc-DECm
 ‘They are curing Botenawaa for a long time (lit. their making-be-good Botenawaa is long).’

Here the *hi-* prefix, indicating that the complement clause is a transitive Oc, is moved onto the main clause verb *-jabo-*, which is intransitive and could not in its own right take an Oc prefix. The predicate of the main clause shows m agreement, with the pivot—m noun *Botenawaa*, which is in O function—of the Oc complement clause, which is itself in pivot (S) function in the main clause. (By a rule of Jarawara grammar, prefix *hi-* is repeated in the third pronominal position in the main clause, before the mood suffix, when—as here—there is no tense-modal suffix present.)

3.1. *Functional possibilities for complement clauses*

A complement clause construction has a main clause and a complement clause. There are, potentially, three possibilities for complement clause (intransitive clause, transitive Ac, and transitive Oc) and five possibilities for its function in the main clause (S of an intransitive, A or O of an Ac, or A or O of an Oc), thus giving $3 \times 5 = 15$ potential combinations. As set out in Table 5, only eight of these occur in the corpus.

The constraints on clause types in a complement clause construction appear to be:

1. An Ac complement clause cannot function as A argument of an Ac main clause.
2. If one of the clauses in a complement clause construction is an Oc, then the other must be intransitive. That is, if 'transitive Oc' occurs in the first column, then 'intransitive' must be in the third column, and vice versa.

If a clause includes two NPs, in A and O function, these may occur in either order. The same applies when there is an NP in one core transitive function and a complement clause in the other; the corpus includes examples of all ordering possibilities.

There are examples of iteration, that is, a complement clause within a complement clause. For example:

- (15) <<oko_S {hijari}>_S {jana ni}>_S {ohari-hara o-ke}
 1sgPOSS speak:COMP start AUX:COMP be.one-IPef 1sg- DECf
 '(At the meeting of chiefs) I started to speak (just) once (lit. my speaking's starting was once).'

TABLE 5. Types of complement clause construction

<i>type of complement clause</i>	<i>function of complement clause in main clause</i>	<i>type of main clause</i>	<i>examples include</i>
intransitive	S	in intransitive	(2–3), (9), (15–16), (18)
intransitive	O	in transitive Ac	(1), (11a), (25)
intransitive	A	in transitive Ac	(19)
intransitive	O	in transitive Oc	(11b)
intransitive	A	in transitive Oc	(26)
transitive Ac	S	in intransitive	(7), (12b), (13b), (24)
transitive Ac	O	in transitive Ac	(10), (21–3)
transitive Oc	S	in intransitive	(14), (17)

Here the verb *-ohari-* ‘be one, be alone’ is main clause predicate, with *jana-na-* ‘start’ as the first embedding and *-hijara-* ‘speak’ in the inner embedding (all three verbs are intransitive).

3.2. Modification of a complement clause

An NP in Jarawara generally has a free noun as head. This can be modified by one or more of a small set of fourteen adjectives (see Dixon 2004a, 2004b) and/or by one or more of a set of about 175 inalienably possessed nouns, which may agree in gender with the head noun. The latter refer to body and other parts and also cover ‘smell’, ‘name’, ‘companion’, ‘dream’, and ‘all’. (Examples of NPs including possessed nouns are in (16), (21), and (28).) The corpus includes just three examples of a complement clause followed by a modifier. Adjective *jokana* ‘real’ is used in ‘[<my beer drinking> real] is not habitual’ (‘I don’t drink beer very much’); and possessed noun *watari* ‘dream’ is in ‘[<a pole being straight> dream] I saw’ (‘I saw a straight pole in the dream’).

When the Jarawara people built me a house, visitors from other villages admired the woven thatched roof, and said:

- (16) [<[*jobe* *baje* *efe*]_S {*boto* *ni*}> *nafi*]_S
 thatch(m) palm.sp(m) leaf:m weave.roof AUX:COMP all
 {*amosa-ka*}
 be.good-DECM
 ‘All of the palm-leaf thatch weaving is good.’

Here the complex NP *jobe baje efe* ‘palm leaf thatch’ is S argument for *boto-na-* ‘weave roof’. The S argument for the main clause, with verb *-amosa-* ‘be good’, consists of the complement clause *jobe baje efe boto ni* ‘the palm leaf thatch weaving’ modified by possessed noun *nafi* ‘all’.

This suggests that, in Jarawara, rather than saying that a complement clause functions as core argument in the main clause, we could say that it functions as head of an NP (and may be modified by adjective or possessed noun) with the NP functioning as core argument.

3.3. Pronominal raising

If a transitive clause, whose A argument is shown by a pronoun, is in S function in a transitive main clause, then the pronominal A may optionally be ‘raised’, to attach to the predicate of the main clause. Thus we may have (12b) and (13b) without raising, or (12b’) and (13b’), with raising (note that raising leads to no difference in meaning).

- (12) (b) <oko_A sina_O {hisi ni}>_S {hawa
 1sgPOSS snuff(f) sniff AUX:COMP be.finished
 to-ha-ke}
 AWAY-AUX-DECf
 'I have finished sniffing snuff (lit. my sniffing snuff is finished).'
- (b') <sina_O {hisi ni}>_S {hawa
 snuff(f) sniff AUX:COMP be.finished
 o-ha-ke}
 1sgA(ofCOMP)-AUX-DECf
 'I have finished sniffing snuff (lit. my sniffing snuff is finished).'
- (13) (b) <sina_O {otaa hisi ni}>_S {hawa
 snuff(f) 1nsg.exCA sniff AUX:COMP be.finished
 to-ha-ke}
 AWAY-AUX-DECf
 'We have finished sniffing snuff (lit. our sniffing snuff is finished).'
- (b') <sina_O {hisi ni}>_S {otaa hawa
 snuff(f) sniff AUX:COMP 1nsg.exCA (ofCOMP) be.finished
 to-ha-ke}
 AWAY-AUX-DECf
 'We have finished sniffing snuff (lit. our sniffing snuff is finished).'

It will be seen that the raising of the A pronoun from the complement clause is independent of whether it is a singular form—such as 1sg, which has the form *oko* in (12b) but reverts to being prefix *o-* in (12b')—or a non-singular form—such as 1nsg.exc *otaa*, which has the same form (and positioning, immediately before the verb) in the complement clause of (13b) and in the main clause of (13b').

What we have is a complement clause in S function within the main clause; there is, in underlying structure, no pronoun in the S slot of the main clause. With raising, the A pronoun from the complement clause fills the S pronominal slot in the main clause. Note that the pronoun can only be stated in one clause, not in both. That is **oko sina hisi ni hawa o-ha-ke* and **sina otaa hisi ni otaa hawa to-ha-ke* are unacceptable.

It will be seen that there are two quite distinct processes of 'raising' from complement clauses to main clause in Jarawara:

1. The prefix *hi-* from an Oc complement clause in S function in a main clause *must* be transferred to the predicate of the main clause, as in (14).
2. A pronominal argument in A function within a complement clause which is in S function in an intransitive main clause *may* optionally be transferred to the predicate of the main clause, as in (12b'), (13b').

That these are two independent processes can be seen from the fact that both may apply to the same sentence, as in:

- (17) <Sesowi_O {siba ni}>_S
 Jesus(m) look.for AUX:COMP
 {mee hi-jabo-mata-mona-ka}
 3nsgA(ofCOMP) Oc-be.long-FPnm-REPORTEDM- DECM
 ‘They are said to have looked for Jesus for a long time (lit. their
 looking for Jesus was said to be lengthy).’

Here both the A pronoun, 3nsg *mee*, and the Oc marker, *hi-*, from the complement clause are raised to the main clause predicate.

A-to-S is the only type of pronominal raising found in Jarawara. We do not get raising of an S pronoun—from a complement clause in S function in the main clause—to the main clause predicate. One can say, with 1sg as S argument for intransitive verb *-tafa-* ‘eat’ in a complement clause which is in S function to main clause verb *hawa -ha-* ‘be finished’:

- (18) <oko_S {tafi}>_S {hawa to-ha-ke}
 1sgPOSS eat:COMP be.finished AWAY-AUX-DECf
 ‘We have finished eating (lit. our eating is finished).’

But it is not possible to say, with S-to-S raising, **tafi hawa o-ha-ke*.

Neither is it possible to raise an S pronoun—from a complement clause in A function within a transitive main clause—into A pronominal slot in the main clause predicate. That is, one can say:

- (19) <oko_S {jee ni}>_A jara_O {na-tafi-ara-ke}
 1sgPOSS yell AUX:COMP non-Indian(m) CAUS-waken-IPef-DECf
 ‘My yelling wakened the non-Indian.’

but not **jee ni jara o-na-tafi-ara-ke*. And, as shown in Table 5, a transitive complement clause cannot function as A argument within a main clause; thus, the possibility of A-to-A raising does not occur.

Until the 1970s there was no tradition of systematically distinguishing between S and A arguments; a single label, ‘subject’, would be used for both. This distinction is needed not only for languages with ergative grammar but for *all* languages—even those, such as Jarawara, which appear to have an entirely accusative-type structure. A and S must be distinguished in order to state succinctly that there is raising of A-to-S, but not of S-to-S or S-to-A (or A-to-A).

3.4. Shared arguments

Complement clause constructions in Jarawara show quite restricted possibilities for argument sharing. The only sharing encountered involves:

- (i) The S argument in an intransitive complement clause, or the A argument in a transitive Ac complement clause (each of which is in O function in the main clause); and
- (ii) The A argument of the main clause.

(When I tried to elicit complement clause constructions with other kinds of argument sharing, consultants instead offered different construction types, with a nominalized clause or a dependent clause, in slot 1 or 4 of main clause structure, in Table 1.)

An example of S argument in the complement clause being identical to the A argument in the main clause is:

- (20) <{to-ki}>_O {o-nofa o-ke}
 AWAY-be.in.motion:COMP 1sgA-want 1sg-DECf
 'I want to go (to the other village) (lit. I want [my] going).'

Note that the shared pronominal argument is stated just once, in the main clause, in (20) and also in (21) and (23). Alternatively, *-nofa-* could have different subjects in the two clauses; for example, 'I want <your going>' (that is, 'I want you to go').

We have the A argument shared between main clause and complement clause in (10) and:

- (21) <[jama hani]_O {awi}>_O {o-wato}
 thing(f) design:f see:COMP 1sgA-know
 'I know how to read (lit. I know [my] looking at writing).'

Here the O argument of the complement clause is NP *jama hani* 'writing', made up of free noun *jama* 'thing' and possessed noun *hani* 'design, picture' (the possessed noun is in f form, agreeing with the inherent gender of the free noun).

One day the nurse at the Jarawara medical post refused to call a plane to take a sick man to hospital. I was told:

- (22) Hesiani_A <afiao_O {haa ni}>_O
 name(f) plane(m) call AUX:COMP
 {nofa-tee-ra-mone-ke}
 want-HABITUAL-NEG-REPORTED-DECf
 'Hesiani (the nurse) is said never to want to call the plane (lit. Hesiani is said to habitually not want [her] calling the plane).'

Here the proper name *Hesiani* is in A function for both clauses. It is analysed as occurring just in the main clause, by analogy with the statement of a shared pronominal argument just in the main clause, in (20–1) and (23).

Most examples of complement clause constructions with shared arguments involve *-nofa-* ‘want, like’ or *-wato-* ‘know, understand’ as main clause verb. However, in (23) the main clause verb is *wati -waha-* ‘remember’:

- (23) <hijama_O {kabi}>_O {wati o-waha o-ke}
 peccary(m) eat:COMP remember 1sgA-NOW 1sg-DECf
 ‘I remember eating peccary (lit. I remember [my] eating peccary).’

The inclusion of—and identity of—a third pronominal position in the main clause of a complement clause construction is subject to complex rules, relating in part to whether or not a tense-modal suffix is present; full details are in Dixon 2004a.

3.5. Differences between complement clauses and nominalized clauses

Jarawara also has nominalized clauses, which typically function as subject of a copula clause or as a peripheral element (marked by a postposition with meaning such as ‘when’ or ‘since’). They differ from complement clauses in a number of respects, including:

1. 1sg and 2sg pronominal S/A prefixes *o-* and *ti-* are retained in nominalized clauses, whereas they are replaced by *oko* and *tika* in complement clauses. The Oc prefix, *hi-*, is retained in a nominalized clause, but not in a complement clause.
2. A nominalized clause may include any miscellaneous suffix, whereas a complement clause is restricted to the first four echelons. Neither clause type may include tense-modal or mood suffixes. Whereas a complement clause does not show gender agreement (all final *a* being raised to *i*), a nominalized clause does; m is shown by final *a* being raised to *e* (not to *i*) whereas for f final *a* is raised to *i*. Unlike complement clauses, nominalized clauses may not engender gender agreement on the predicate of a main clause.

Nominalized clauses corresponding to complement clauses *inamati ohi ni*, in (1), and *oko sina hisi ni*, in (12b), would be *inamati ohi ne* and *sina hisi o-ni* respectively.

There are two other kinds of subordinate clauses—dependent clauses and relative clauses—which differ from complement clauses and from nominalized clauses in function and structure (for instance, both may include tense-modal suffixes). A dependent clause has its own predicate-final marker—as in (7)—and can only occur in slot 1 or 4 of clause structure, in Table 1. A relative clause functions as modifier within an NP. Note that a dependent clause can include a complement clause as one argument, illustrated in (7).

4. Complement-taking verbs

We can usefully discuss these verbs in sets, as they take a complement clause in S, O, or A function.

4.1. In S function

The majority of complement clauses in the corpus are S argument to an intransitive verb.

- Verbs of motion are very common as main verb in a complement clause construction, especially *-ka-* ‘be in motion’, as in (2) (this is far and away the most frequently occurring verb in the language). Typically, a Jarawara will say, literally, ‘Their shooting arrows went along’ for ‘They went along shooting arrows’.
- Verbs of rest are less common; there is an example with *-waa-* ‘stand’ in (7).
- Stative verbs such as *-amosa-* ‘be good’ in (16) and *-jabo-* ‘be far, be a long time’ in (14) and (17). A Jarawara will say ‘My paddling was strong’ for ‘I paddled fast’, ‘His hiccuping was audible’ for ‘He could be heard hiccuping’, and ‘Your talking is good’ for ‘You talk well’.
- Quantity verbs such as *-ohari-* ‘be one, be alone’ in (15). To express ‘I tied two knots (in my shoelaces)’ one would say, literally ‘My tying was two’.
- Secondary-A verbs referring to starting and stopping, including *jana -na-* ‘start’ in (3) and (15), and *hawa -ha-* ‘be finished, accomplished’ in (9), (12b), (13b), and (18).

I know of one intransitive verb which, it appears, must take a complement clause (never an NP) as S argument. This is *forima -na-* ‘do something well (often, do something better a second time that was not done so well the first time)’. The complement clause verb can be ‘ask’ (that is, ‘ask nicely’) or ‘dance’ or ‘build’, as in:

- (24) <jobe_O {hiri ni}>_S {forima o-ne
house(m) build AUX:COMP do.properly 1sgA(of COMP)-CONTf
o-ke}
1sg-DECLf
‘I am building the house properly (lit. my building the house is done properly).’

The A argument of the complement clause, 1sg *o-*, is here raised into the S pronominal slot of the main clause predicate.

4.2. In O function

There are rather fewer complement clauses in O than in S function. The verbs they occur with include prototypical complement-clause-taking verbs from Primary-B, Secondary-A, and Secondary-B types¹, including:

- Attention verbs such as *-mita-* ‘hear, taste, smell’, as in (1) and (11a–b); and *wati -waha-* ‘remember’, as in (23). There are examples of complement clauses in O function to *-awa-* ‘see’ (for example, ‘I saw the tape-recorder going round’), but speakers would sometimes prefer a sequence of two clauses, such as ‘My father shot a jaguar, I saw him’. (This should no more be regarded as a complementation strategy that should the English translation; it is an alternative to complementation.)
- Mental state (Thinking) verb *-wato-* ‘know, understand, be able to’, as in (21).
- Verb *-nofa-* ‘want, desire, like, love, be pleased with, be friends with, have good feelings towards’ (which spans Liking and Wanting), as in (10), (20), and (22).
- The Secondary-A verb *to.tomi -na-* ‘try’, as in ‘I (A) tried <my shooting a monkey>_O’.
- Verb *-nakomeha-* ‘fear’, as in:

- (25) <jomee_S {ka-ki}>_O {o-nakomeha o-ke}
 jaguar(m) be.in.motion-COMING:COMP 1sgA-fear 1sg-DECf
 ‘I fear a jaguar’s coming.’

Note that (25) indicates that the speaker fears a jaguar might come (it is not here yet). If the jaguar were in the vicinity then this complement clause construction would not be appropriate. One would instead use an intransitive construction ‘I (S) am scared due to the jaguar’, where ‘due to the jaguar’ is a peripheral NP marked by postposition *ehene* ‘due to, as a result of’.

4.3. In A function

The corpus includes very few instances of a complement clause in A function, either within an Ac or an Oc. All examples involve the causativized form (by prefix *na-* ~ *niha-*) of an intransitive verb. For example, ‘The man’s falling over made me laugh’, ‘My sniffing snuff made me cough’. In (19) an

¹ The Secondary-C concept, ‘making’, is expressed by a verbal prefix. Of Secondary-A concepts, ‘not’ is shown only by a sixth echelon miscellaneous suffix. There is a fourth echelon miscellaneous suffix *-ihina* ‘can do, it is possible to do’. And the intention verbal suffix can mean ‘should’, ‘need to’, ‘intend to’ and ‘plan’, see (27). (These are all included in Table 2.)

intransitive complement clause ‘my yelling’ is in A function within an Ac main clause, ‘My yelling wakened the non-Indian’. In (26), an intransitive complement clause ‘the dog’s barking’ is in A function within an Oc main clause:

- (26) <jomees_s {habo ni}>_A {owa na-tafi-are o-ke}
 dog(m) bark AUX:COMP 1sgO CAUS-weaken-IPem 1sg-DECL
 ‘The dog’s barking woke me up.’

This is recognizable as an Oc since the mood suffix agrees in gender with the O argument, 1sg pronoun *owa* (and this pronoun is repeated, as *o-*, in the third pronominal position). If it were an Ac, mood would agree with the pivot (*jomee* ‘dog’, which is m) of the complement clause which is in A function in the main clause. (A rule of Jarawara grammar specifies that the tense-modal suffix agrees with the A argument in such an Oc; full details are in Dixon 2000, 2004a.)

5. A complementation strategy for indirect speech

Many languages express indirect speech through a type of complement construction, a ‘that’ clause. This is missing in Jarawara. There is instead what can be called a ‘complementation strategy’, where a clause of indirect speech functions as O argument to the transitive verb *ati -na-* ‘say, ask’.

In one story, a Jarawara man travels in the forest with a white friend, who gets bitten by an ant in a rather delicate place. The storyteller uses an indirect speech construction:²

- (27) [{kijo o-ne-hibona}]_O {ati ne-mari-ka}
 rub 1sgA-AUX-INTENTIONm ask AUX-FPm-DECLm
 ‘He asked that I should rub him.’

The first clause is a transitive O-construction, as indirect speech. The O is the male speaker, realized only through m agreement on the intention suffix. The A of the main clause (an A-construction), with *ati -na-*, is shown only by the m forms of the far past eyewitness tense and declarative mood suffixes.

The very next sentence in this text has almost the same statement rendered in direct speech. The direct speech is again the O argument for *ati -na-* ‘say, ask’:

² Clauses of direct and indirect speech, which are O arguments of *ati -na-* ‘say, ask’, are enclosed within square brackets, [...], in (27) and (28).

- (28) [⁰kobati!, o-tenehe_O {kijo ti-na-habana ti-ke'}]_O
 friend 1sg-scrutum:m rub 2sgA-AUX-FUTUREf 2sg-DECf
 {ati ne-mari-ka}
 say AUX-FP_m-DEC_m
 ‘‘Friend!, you’ll rub my balls (where they were bitten by an ant)’’, he
 said.’

The initial clauses of (27) and (28) have the same reference—the A argument of the direct speech in (28) is *ti-* ‘you’ whereas for the indirect speech, in (27), it is *o-* ‘I’; the O of the direct speech is *o-tenehe* ‘my balls/scrotum’ whereas for the indirect speech it is ‘him’ (shown by *m* cross-referencing).

There are two main differences between direct and indirect speech. The first, as already mentioned, is shift in argument reference. The second is that direct speech may take the full possibilities of a main clause, including tense-modal and mood suffixes; this is illustrated in (28). In contrast, indirect speech may not include a mood specification, although it can—unlike a complement clause—include a tense-modal suffix, such as *-hibona*, intention, in (27). An indirect speech clause is also unlike a complement clause in not raising a final *a* to *i*, or in replacing 1sg and 2sg *o-* and *ti-* by clause-initial *oko* and *tika*.

One could argue that this construction (which is only used for indirect speech) is a second variety of complement clause. I prefer to regard it as a complementation strategy since it does not relate to any of the prototypical complement-clause-taking verbs, given in Criterion (IV) of §5.1 in Chapter 1.

6. Conclusion

Jarawara has just one type of complement clause, with a wide range of meaning. A complement clause shows some similarities to, but significant differences from, a nominalization.

A complement clause can be O argument to a verb such as ‘know, understand’, ‘want, like’, ‘hear’, and ‘see’. But it is more often in S function to verbs of motion and rest, verbs of number and state (typically coded by adjectives in other languages), and verbs such as ‘start’, ‘be finished’, and ‘take a long time’. Quite rarely, it is in A function to the causative version of an intransitive verb. A complement clause may not include any peripheral elements, but can include one or two core NPs, and a shortened version of the predicate (lacking tense-modal and mood suffixes).

A clause can be recognized as complement clause through a variety of properties, including:

- (a) Its position in the main clause, after initial peripheral elements and before the predicate.
- (b) Raising of predicate-final *a* to *i*.
- (c) Replacement of first- and second-person singular S/A prefixes *o-* and *ti-* by clause-initial possessive pronouns *oko* and *tika* respectively.
- (d) Transfer of prefix *hi-* from an O-construction complement clause to the predicate of the main clause.
- (e) If a transitive complement clause is S argument of an intransitive main clause, optional raising of a pronominal A argument from the complement clause to S pronominal slot in the main clause predicate.
- (f) If a complement clause is in pivot function for the main clause, the main clause predicate will show gender agreement with the pivot argument of the complement clause.

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Complement Clause Types and Complementation Strategy in White Hmong

NERIDA JARKEY

1. Vital statistics

White Hmong (*Hmoob Dawb*), along with the mutually intelligible Green Mong (*Moob Ntsuab*), belongs to the language family referred to as Hmong-Mien by many American linguists (e.g. Ratliff 1992: 16–17), and as Miao-Yao by Chinese and some Western scholars (e.g. Enwall 1995: 16–17).¹

The Miao languages are spoken by around eight million speakers in the southern provinces of China, mainly Guizhou, Hunan, Yunnan, Sichuan, Guangxi, and Hubei (Enwall 1995: 13). Southerly migration of speakers of the Hmong subgroup since the eighteenth century has resulted in a population of nearly one million spread across Burma, Thailand, Laos, and Vietnam (Enwall 1995: 13). After the end of the Vietnam War, tens of thousands of the Hmong of Laos fled to Thailand, and many have since been relocated to Western countries, including America (now over 180,000 (Tapp 2004: 2)), France (10,000 (Chanson 1993: 9)), and Australia (1,800 (Lee 2004: 11)).

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¹ A number of ideas have been advanced concerning the wider genetic affiliations of this language family. Chinese scholars regard it as Sino-Tibetan. Haudricourt (1971) considers it to be a link between Austroasiatic and Tibeto-Burman, and Benedict (1975) places it, with Tai and Austronesian, in his Austro-Tai grouping. All of these suggestions are highly speculative.

2. Typological profile

White Hmong is basically an analytic, isolating language. There are no derivational or inflectional affixes. With some exceptions (word compounds, borrowed words, etc.) words are monomorphemic and monosyllabic (the syllable coinciding with a single tone).

The segmental component of a syllable is predominantly consonant plus vowel, closed only by a syllable-final velar nasal (indicated by a doubling of the vowel in the orthography). Initial consonants can be simple or complex, complexity involving pre-nasalization, affrication, and aspiration. Vowels can be monophthongs or diphthongs. Hmong has seven phonemic tones, indicated orthographically by a syllable-final consonant.

This language is thoroughly nominative-accusative. The basic constituent order of core arguments in an intransitive clause is SV, in a transitive clause, AVO. The order in copula clauses is CS, copula, CC. Head modifier order is maintained with a few exceptions, for example possessives precede nouns and some adverbs precede verbs (Fuller 1985: 40).

Nouns are not marked for number, case, or gender. However, instantiated NPs—those that refer to one or more than one instance of their referent—always co-occur with a classifier.² The basic order in the NP is: POSSESSOR + NUMERAL/QUANTIFIER + CLASSIFIER + NOUN + ATTRIBUTE + DEMONSTRATIVE. Nouns function as NP head and as possessors and (occasionally) attributes. (For example: *kuv ob tug phooj-ywg Asmelikas ntawd* (1sg two CL friend America this) ‘These two American friends of mine’.)

Hmong has no clear tense morphemes, time reference being conveyed by context, time words, and aspectual modification. Most morphemes indicating aspect, modality, status, and mood appear before the verb. Important exceptions are the morphemes *lawm*, expressing perfect aspect, which appears sentence finally (borrowed from Chinese), and *tau*, indicating potential modality, which appears post-verbally (grammaticized from the verb *tau* ‘get’, see fn. 4). Note that *tau* ‘get’ has also been grammaticized preverbally

² An instantiated NP is not necessarily definite, nor even specific:

(i) *kuv xav yuav ob tug qaib*
 1sg want buy two CL chicken
 ‘I want to buy two chickens.’

The NP *qaib* ‘chicken’ in this example is indefinite and non-specific, but is quantified and thus instantiated, and so occurs with a classifier. Indefinite, non-specific nouns that are not quantified, along with generic nouns, do not refer to instantiations of their referents and so are not classified (Jarkey 1991: 38–40).

to express perfective aspect. A number of other common morphemes indicating aspect and modality are either derived from verbs, or are verbs.

Nearly all verbs are strictly transitive or intransitive. The deictic motion verbs *mus* ‘go’, *tuaj* ‘come’, and *los* ‘come home’ are exceptions. They can be used intransitively in a serial verb construction (SVC) to indicate direction of motion, but appear in a canonical transitive pattern to introduce a goal of motion. (Verbs in series are underlined here and in §3.)

- (1) (a) [cov Hmoob]_{A/S} dim Nplog-teb_O mus
 COLLCL Hmong escape Laos-country go
 ‘The Hmong escaped (from) Laos.’
- (b) [cov Hmoob]_{A/A} dim Nplog-teb_O mus
 COLLCL Hmong escape Laos-country go
 Thaib-teb_O
 Thailand-country
 ‘The Hmong escaped (from) Laos and went (to) Thailand.’

In (1a), the verb *mus* ‘go’ is used intransitively, simply to indicate that the motion event, the escape from Laos, was *away* from the point of view of the speaker. In (1b), on the other hand, *mus* ‘go’ is used transitively to introduce the goal of motion, *Thai-teb* ‘Thailand’.

Another minor exception to the norm in terms of constituent order and transitivity is the verb *muaj*. This verb is used transitively to mean ‘have’ (*nws muaj nyiaj* (3sg have money) ‘he has money’), but used intransitively in presentative existential clauses (*muaj ob tug tsov* (have two CL tiger) ‘there are two tigers’).

3. Further grammatical preliminaries

3.1. Serial verb constructions

Hmong is a language rich in productive serial verb constructions. SVCs involve more than one verb appearing in a single clause to express different facets of a single event. At least four distinct types of SVC can be identified: Cotemporal, Pivotal (or Causative), Attainment, and Disposal. All SVCs contain at least one shared core argument, and the verbs share all operators—aspect, modality, time reference, status (including polarity), and mood—as well as peripheral constituents of time and place (Jarkey 1991).

The shared arguments in a SVC often have the same function in relation to each verb in the series, as in (1b) (A=A; Cotemporal SVC), (2) (A=A, O=O; Attainment SVC), and (3) (A=A, O=O; Disposal SVC):

- (2) nws_{A/A} tua raug liab_{O/O}
 3sg shoot hit.the.mark monkey
 'He shot a monkey successfully.'
- (3) nws_{A/A} pov [lub pob]_{O/O} tseg
 3sg throw CL ball discard
 'He threw the ball away.'

Alternatively, the function of the shared argument may differ with respect to each verb, as in (1a) (A=S; Cotemporal), (4) (A=S; Cotemporal), and (5) (O=S; Pivotal):

- (4) nws_{A/S} nqa [lub pob]_O mus
 3sg carry CL ball go
 'He carried the ball away.'
- (5) nws_A pov [lub pob]_{O/S} los rau kuv
 3sg throw CL ball come to me
 'He threw the ball to me.'

3.2. *Locative phrases and spatial deictics*

Telic motion verbs in Hmong take a locative argument in O function, expressing Source, Path, or Goal of motion.

- (6) [cov Hmoob]_{A/A/A} hla Dej-Na.Koom_O dim [hauv
 COLLCL Hmong cross river-Mekong escape inside
 Nplog-teb]_O mus Thaib-teb_O
 Laos-country go Thailand-country
 'The Hmong crossed the Mekong, escaping from Laos and going to Thailand.'

Stance and location verbs also take locative arguments in O function, expressing the location of the subject (e.g. *nyob tsev* 'at home'). These locative arguments all refer specifically to the location of the subject, rather than simply to the location of the event as a whole, so are regarded as core locatives.

Locative arguments can be proper nouns referring to places (*Thaib-teb* 'Thailand'), certain common nouns (e.g. *tsev* 'home', *khw* 'market'), or 'locative phrases' (*hauv Nplog-teb* 'inside Laos'). Locative phrases consist of a 'spatial deictic' followed by a noun phrase.

Spatial deictics belong to a small, closed class of morphemes that indicate something about the spatial properties of the place they refer to. Examples include *tom* 'place-distant', *ntawm* 'place-nearby', *nram* 'place-down', *hauv* 'place-inside'. Although, like prepositions, they convey spatial information,

spatial deictics differ from prepositions in that they do not indicate the semantic role of the noun phrase that follows them:

- (7) nws_A mus ntawm khw_O
 3sg go nearby market
 'He went (to) market nearby.'
- (8) nws_S khiav ntawm khw
 3sg run nearby market
 'He ran (about) (at the) market nearby.'

In (7), the locative phrase *ntawm khw* 'place-nearby market' functions as a core locative argument in O function for the telic motion verb *mus* 'go', indicating the goal of the motion. In (8), the same locative phrase, *ntawm khw*, introduced by the same spatial deictic, *ntawm*, functions as a peripheral locative argument for the atelic motion verb *khiav* 'run', indicating the location of the entire event (see Jarkey 1991: 41–4). The role of a locative phrase as core or peripheral locative is relevant to the analysis of complementation involving secondary concepts (§5).

4. Complement clauses

Hmong has a variety of the complement clause types introduced in Chapter 1, occurring with a range of verb types, also described in Chapter 1. Verbs taking complement clauses are from both the Primary-B types (all arguments can be NPs, but one can be a clause) and the Secondary types (not all arguments can be NPs, but one must be a clause). Secondary verbs that take complement clauses are of the Secondary-B type (with meanings like 'want', 'intend', 'pretend') and the Secondary-C type (with meanings like 'make', 'force', 'let', 'help').

The Fact type of complement clause, referring to an action, event, or situation that is asserted (or questioned) as a fact, is clearly the most common and is the one used with the widest range of verbs. It is followed in both frequency and range of co-occurring verbs by the Potential type, referring to the potential of the complement clause subject to do something or to be in a certain situation, and then the Activity type, referring to an ongoing action or event.

The constructions discussed in this section all clearly fulfil the first criterion for complement clauses, as described in Chapter 1: they have the basic internal structure of a clause. Within any constraints imposed by the semantics of a particular construction, the complement clause can be independently

modified for aspect, modality, time reference, and status, and can contain independent peripheral constituents of time and place. Independence in status includes independence in polarity for all complement clause types, the negative morpheme *tsis* appearing in realis clauses, and (*tsis*) *txhob* in irrealis ones.

Because of the typological characteristics of the language, it is more difficult in some cases to determine whether these clauses satisfy the second criterion: argument status. The number and type of syntactic tests that can be used to determine the argument status of a putative complement clause in this language are extremely limited.

All the constructions described in this section clearly conform to the expected constituent order of an argument in O function. However, other tests, such as agreement and passivization, cannot be applied. There is a passive-like construction in Hmong, involving the verb *raug* 'hit the mark, encounter', but its use is restricted to animate Undergoers.

There is one test that is useful in distinguishing a constituent that is an argument from one that is not. Constituents that are arguments (core or peripheral) can appear clause initially as topics with no coreferential 'trace' where they would otherwise appear. A topic may be unmarked, as in (26), or may be marked by the topic morpheme *mas*, as in (12). This test is used in the discussion that follows, both to establish the argument status of complement clauses and to distinguish the complementation strategy from complement clauses.

4.1. *Fact type*

4.1.1. *Asserting a fact and expressing uncertainty about a fact with* (*hais*) *tias* The complementizer (*hais*) *tias* introduces a complement clause expressing an asserted Fact in O function, the optional *hais* only rarely appearing. Both *hais* and *tias* are derived from verbs meaning 'say, speak'. This is still the principal use of *hais*. On the other hand, *tias* is no longer used as a verb in writing, but can occur in speech (Jaisser 1984: 39).

The argument status of a (*hais*) *tias* clause is confirmed by its acceptability in topic position, with no 'trace' appearing in the main clause:

- (9) (a) kuv_A to.taub <(hais.)tias lawv_{CS} yog Hmoob_{CC}>_{COMP}
 1sg understand THAT 3pl COP Hmong
 'I understand that they are Hmong.'
- (b) <((hais.)tias) lawv_{CS} yog Hmoob_{CC}>_{COMP} mas, kuv_A
 THAT 3pl COP Hmong TOP 1sg
 yeej to.taub kawg mas
 definitely understand INTENS IPART
 '(That) they are Hmong, I really have understood for sure.'

Notice that the complementizer is optional when the complement clause appears as topic in (9b). Notice also that the main clause in this topic construction is emphasized in a variety of ways (here by the adverb *yeej* ‘definitely’, the post-verb intensifier *kawg*, and the illocutionary particle *mas* ‘for sure’). The reason for this may be partly related to the information structure of the clause—the Fact complement presenting old information and the main clause, new. However, perhaps even more important here is the fact that speakers feel that a sentence is ‘unfinished’ if a transitive verb appears sentence finally, even if its object appears elsewhere in the sentence. This is related to the phenomenon of ‘boundedness’ with transitive verbs (Hopper and Thompson 1980: 285–6).

Clauses introduced by (*hais*) *tias* are structurally identical to main clauses. The complement clause can express aspect and modality (10), time reference, status (11), and negative (11) independently of the main clause. The subject of a (*hais*) *tias* clause may be the same as (10) or different from (11) the subject of the main clause; if the subjects are the same, ellipsis is optional in the complement (10).

- (10) [[tus neeg]_A yuav tsev_O]_A to.taub <tias yuav.tsum
CL person buy house understand THAT should
tau txais [\$2,000.00 nyiaj-dipaxiv]_O>_{COMP}...
PERV borrow money-deposit
‘The person buying the house understands that (s/he) should have borrowed a \$2,000.00 deposit...’

- (11) [lub tsev.hais.plaub]_A nrhiav.pom <tias AIW_A yuav tsis
CL court discover THAT will NEG
pab [tus menyuam]_O>_{COMP}...
help CL child
‘The court discovered that Automatic Income Withholding will not help the child...’

Further evidence of the independence of a (*hais*) *tias* clause is that it can include its own peripheral constituents of time (12) and place, and can even contain its own topic (12).

- (12) ...koj_A paub <tias Phaj.Hauj_{O/S} mas tsuas xa los
...2sg know THAT (name) TOP only send come
txij.li [zaum no] lawm xwb>_{COMP}
until time this PER only
‘...you know that the Pahawh (a divinely inspired script), (I) have only sent (it) for a time now.’

Complement clauses introduced by (*hais*) *tias* are used not only to assert a fact, but also to indicate uncertainty or to enquire about a fact. In this usage they function in the same way as ‘wh-’ complements in English. The complementizer (*hais*) *tias* is occasionally dropped altogether (as in (18), in which the verb *paub* ‘know’ introduces a question regarding a fact). The structure of the complement clause is identical to the structure of a question; ‘wh-’ words are not fronted in questions in Hmong.

- (13) lawv_A tsis to.taub <tias peb_A hais txog dabtsi tiag>_{COMP}
 3pl NEG understand THAT 1pl speak about what really
 ‘They don’t understand what we are really talking about.’

lit: ‘... that we are really talking about what?’

- (14) ...yuav ntsuam tau <tias koj_A puas tsim.nyog tau
 ...will investigate POTEN THAT 2sg INTER suitable get
txais kev.pab_O>_{COMP}
 receive support

‘...(they) will be able to investigate whether you are eligible to receive support.’

lit: ‘... that are you eligible to receive support?’

As mentioned, Fact clauses with (*hais*) *tias* are by far the most common complement type, and occur with the widest range of verb types: many of the Primary-B verbs of Attention, Thinking, Liking, and Speaking, and some of the Secondary-B verbs, such as *vam* ‘hope’ and *ua txuj* ‘pretend’.

There is reason to distinguish the use of (*hais*) *tias* with Speaking verbs from that with other verb types. With Speaking verbs (*hais*) *tias* introduces direct speech rather than indirect speech complements. The fact that the orthographic conventions of the roman Hmong orthography are still being established means that direct speech is not always punctuated as such:

- (15) ...Soob.Lwj_A thiaj tau cheem tias neb_S tos tso,...
 ...name therefore PERV insist THAT 2du wait first
 ‘...so Shong Lue insisted, “You two wait first, ...”’

While other (*hais*) *tias* clauses appear after the verb and its adverbs in the normal O position, (*hais*) *tias* clauses with Speaking verbs are generally extraposed, coming after indirect objects:

- (16) [tus nus]_A txawm hais rau [tus muam] hais.tias,
 CL brother then say to CL sister THAT
 ‘koj_A yuav kuv_O’ (Jaisser 1984: 31)
 2sg marry 1sg
 ‘Then the brother said to the sister, “Marry me”.’

Notice that (*hais*) *tias* is still employed even when the main verb is *hais* ‘say, speak’ as in (16).

4.1.2. *Topic with txog* (*hais*) *tias* The morpheme *txog* is used as a verb meaning ‘reach, arrive’, and has also been grammaticized as a preposition meaning ‘until’ (Jarkey 1991: 316–19). The word *txog* often occurs after a Speaking or Thinking verb to introduce a NP indicating the topic of speech or thought. In this role it is translated by the preposition ‘about’ (as in (13)). Finally, it occurs with the complementizer (*hais*) *tias* to introduce an entire clause indicating the topic of speech or thought.

As with clauses introduced by (*hais*) *tias*, those introduced by *txog* (*hais*) *tias* have a high degree of independence from the main clause. The complement clause in (17) has independent time reference (‘long ago’), aspect (perfective), and status (‘really’), and that in (18) is independently negated.

- (17) nws_A tau nco.qab <txog-tias thaum-ub nws_S twb
 3sg PERV remember ABOUT-THAT time-distant 3sg really
 tau los pheej.xeeb.tsheej tub_{CC} rau Hmoob...>_{COMP}
 PERV come be.born son to Hmong
 ‘He remembered about (the fact) that he really had come to be born
 a son to a Hmong (family) long ago...’
- (18) ...Hmoob_A... pheej txhawj txhawj <txog-tias tsis
 ...Hmong continue worry worry ABOUT-THAT NEG
 paub <[Hmoob Suav]_A noj tsiab.peb.caugo rau
 know Hmong China eat New.Year at
 thaum.twg>_{COMP}...>_{COMP}
 when
 ‘...Hmong (who live in different countries) continue to worry about
 not knowing when the Chinese Hmong celebrate New Year, ...’

Complement clauses introduced by *txog* (*hais*) *tias*, like those introduced by (*hais*) *tias*, can be used to express a question about a fact, similar to a ‘wh-’ complement in English.

- (19) ...tsis muaj leej.twg_S paub <txog-tias [tsob tshuaj no]_S
 ...NEG have someone know ABOUT-THAT CL herb this
 nyob rau qhov.twg...>_{COMP}
 be.located at where
 ‘...there wasn’t anyone (who) knew about where these herbs were...’
 lit: ‘...about where were these herbs...?’

4.2. *Potential type*

4.2.1. *Intention/will with kom* The complementizer *kom* introduces a Potential complement in O function, expressing the potential of the complement clause subject to perform a certain action or be in a certain state.

An important difference between these complement clauses and those of the Fact type is that, while the Fact complementizer (*hais*) *tias* can introduce a complement with either the same or a different subject, the Potential complementizer *kom* only introduces a complement with a different subject. It indicates the will/intention/purpose of the main clause subject regarding the action or situation of the complement clause subject (Mottin 1978: 130). Thus *kom* can be used in sentences like ‘He wants me to marry you’ but not in ones like ‘He wants to marry you’ (see §8, (45) and (47)). This is clearly a consequence of the fact that this complementizer is derived from the verb *kom*, ‘order’ (still in frequent use).³

Like clauses with (*hais*) *tias*, those with *kom* can appear sentence initially as topic, confirming their status as arguments.

- (20) (a) kuv_A nyiam <kom nws_S mus>_{COMP}
 1sg like to 3sg go
 ‘I like him to go.’
 (b) <kom nws_S mus>_{COMP} mas, kuv_A nyiam ntua
 to 3sg go TOP 1sg like more
 ‘For him to go, I prefer.’

Notice however that, unlike (*hais*) *tias*, *kom* is not optional when the clause appears in this position.

An element common to all uses of *kom* is that the second verb is unrealized at the time referred to by the first verb. This is a key difference in meaning between Potential complements with *kom* and Fact complements with (*hais*) *tias*, which introduce a second verb whose realization is either asserted or questioned. The difference is illustrated in the examples below, in which the same verb, *txiav-txim* ‘decide’, appears—in (21) with (*hais*) *tias*, and in (22) with *kom*:

- (21) ...yog lawv_A txiav.txim <tias kuv_{CS} yog [tus menyuam
 ...COP they decide THAT 1sg COP CL child
 no leej.txiv]>_{CC>COMP}
 this father
 ‘... if they decide that I am this child’s father, ...’

³ The word *kom* is also used as a conjunction meaning ‘so that, in order to’ (Jaisser 1984: 53 ff).

- (22) ...Vaj.Leej.Txi_A tau txiav.txim <kom txij.no.lawm.tom.ntej
 ...God PERV decide TO from.now.on
 mas [ib tiam.neeg]_{CS} twb yog [85 xyoos]_{CC} lawm
 TOP one generation surely COP 85 year PER
 xwb>_{COMP}...
 only
 ‘...God decided that, from now on, one generation will be only
 85 years...’

In (21), with the Fact complement introduced by (*hais*) *tias*, the issue of whether or not the writer is the child’s father is already an accomplished fact before any decision about its veracity is made. In (22), with the Potential complement introduced by *kom*, the newly established length of a generation is not, of course, realized until after God’s decision about it. Note that both of these complementizers are translated as ‘that’ in English in these examples.

Apart from certain constraints related to their semantics, *kom* clauses have the same sentence-like properties as Fact complements. As shown in (22), a *kom* clause can contain its own topic and can express time reference independently of the main clause. Ellipsis of a *kom* clause subject is common (23). The fact that a *kom* clause is unrealized at the time referred to by the main clause means that the time reference possibilities are limited. For the same reason the usual negative morpheme *tsis* is replaced by (*tsis*) *txhob*, the negative that appears in all irrealis contexts:

- (23) yog koj_A xav <kom tsis txhob xa nyiaj
 if 2sg want TO NEG IRR.NEG send money
 tuaj...>_{COMP}
 come
 ‘If you don’t want (people) to send money...’
 lit: ‘...want (people) not to...’

Jaisser (1984: 63) shows that some verbs that take *kom* complement clauses allow an alternative pattern in which the subject of the complement clause appears as the O argument in the main clause (24b). It can also appear in both slots (24c):

- (24) (a) kuv_A ntuas <kom Lis_S mus>_{COMP}
 1sg advise TO name go
 (b) kuv_A ntuas Lis_O <kom mus>_{COMP}
 1sg advise name TO go
 (c) kuv_A ntuas Lis_O <kom Lis_S mus>_{COMP}
 1sg advise name TO name go
 ‘I advised Lee to go.’

The verbs that allow this pattern are manipulative verbs: Primary-B Speaking verbs like *ntxias* ‘entice’, *qhia* ‘tell’, *hu* ‘call’, *cheem* ‘insist, detain’, *txwv* ‘forbid, prevent’, and at least one of the Secondary-C verbs, *yuam* ‘force’. These verbs share the feature that their subjects can be thought of as acting directly on the subject of the complement clause.

All verbs that take a *kom* complement clause indicate will/intention toward another party, but not all are manipulative. Non-manipulative verbs include some Primary-B verbs (*nyiam* ‘like’), Secondary-B verbs (*xav* ‘want’, *vam* ‘hope’), and Secondary-C verbs (*txiav txim* ‘decide’).

These non-manipulative verbs allow the subject of the complement to appear only in the complement clause; there is no direct action on this participant, so it never appears as an O argument in the main clause:

- (25) (a) ...*koj_A* *tsis* *nyiam* <*kom nws_A* *kov* *koj_O...*>_{COMP}
 ... 2sg NEG like TO 3sg touch 2sg
 ‘...you don’t like him (to) touch you...’
- (b) *...*koj_A* *tsis* *nyiam* *nws_O* <*kom kov* *koj_O...*>_{COMP}
 ... 2sg NEG like 3sg TO touch 2sg

Example (25b) is unacceptable, because the intended meaning is not ‘you don’t like *him*’, but rather ‘you don’t like *him* (to) touch you’.

4.2.2. *Indirect expression of intention/will with tias kom* The Fact meaning of (*hais*) *tias* and the Potential meaning of *kom* combine in the complementizer *tias kom*, to convey a more indirect, more objective expression of will regarding another party than with *kom* alone. The meaning of clauses introduced by *tias kom* is often very similar to English *that* clauses containing a modal:

- (26) *yawg* *Saddam_A*, *hais* <*tias-kom* [*pej.xeem Asmeskas*]_S
 old.man name say THAT-TO population America
 quaj *thiab* *ntsaj...*>_{COMP}
 cry and groan
 ‘That Saddam, (he) told the American people that (they) should cry
 and groan...’

While the Fact complementizer (*hais*)*tias* in this position would report what Saddam actually said, and the Potential complementizer *kom* would indicate his direct expression of will (‘he told them to...’), *tias kom* is somewhat less direct (‘he said that they should...’).

When a manipulative verb, such as *yuam* ‘force’, takes a NP object (the manipulatee) before the complement clause, the sense of indirect will conveyed by this complementizer allows a third party to be introduced as the subject of the complement clause, resulting in a causative sense:

- (27) (a) kuv_A yuam lawv_O <tias-kom Lis
 1sg force 3pl THAT-TO name
 mus>_{COMP} (Jaisser 1984: 70)
 go
 ‘I forced them to have Lee go.’

Like other complement clauses, a *tias kom* clause can appear sentence initially as a topic, demonstrating its status as an argument:

- (27) (b) <(tias-)kom Lis mus>_{COMP} mas, kuv_A yeej tau
 THAT-TO name go TOP 1sg definitely PERV
 yuam lawv_O mas
 force 3pl IPART
 ‘To have Lee go, I definitely forced them.’

The *tias* component of this complex complementizer is optional in this position, while the *kom* component must appear, in line with their use as simple complementizers.

As expected, complement clauses with *tias kom* have a wide range of sentence-like properties. In (28), for example, we see that the verb in the complement clause can be independently negated:

- (28) ...[tus sau]_A hais <tias-kom tsis txhob muab [peb
 ...CL write say THAT-TO NEG IRR.NEG take 1pl
 cov lus Hmoob]_{O/O} sau sib txuas>_{COMP}...
 COLLCL word Hmong write RECIP join
 ‘... the person who wrote to say that (we) should not write our
 Hmong words joined to each other...’

4.3. Activity type with zero marking

Activity complements, like all other complement types in Hmong, occur in O function. They commonly appear after verbs of Attention (e.g. *pom* ‘see’, *hnov* ‘sense’) and Liking (e.g. *nyiam* ‘like’, *ntshai* ‘fear’), as well as after some verbs of Thinking (e.g. *ua npaum siab* ‘dream’, *nco qab* ‘remember’) and Speaking (e.g. *piav* ‘describe’).

These complements differ significantly from all other types in the language in that they follow the complement-taking verb directly, rather than being linked to it by a complementizer. Nevertheless, their status as arguments can be demonstrated by the fact that they can appear sentence initially as topic, with no ‘trace’ after the main verb:

- (29) (a) kuv_A nyiam <mus khw_O>_{COMP}
 1sg like go market
 ‘I like going shopping.’

- (b) <mus khw_O>_{COMP} mas, kuv_A nyiam tshaj.plaws li
 go market TOP 1sg like exceedingly IPART
 OS
 IPART
 ‘Going shopping, I like so much.’

Example (29) shows that, when the subject of an Activity complement is the same as that of the main clause, it does not appear in the complement clause. A different subject in the complement clause is also possible with this complement type:

- (30) Hmoob_A ntshais tsam <Suav_A paub txog [Hmoob
 Hmong fear greatly Chinese know about Hmong
 COV ntawv], ...>_{COMP}
 COLLCL writing
 ‘... the Hmong greatly feared the Chinese knowing about the
 Hmong writing, ...’

Although Activity complements, by virtue of their function of focusing on an unfolding action or situation, are not independent of their main clause in terms of time reference, they do exhibit independence in other ways. The Activity complements in both (31) and (32) have independent locative arguments, and their own adverbial modification as well. In (33) the complement clause is independently negated.

- (31) nws_A ...pom <[cov ntsaum.kab.rwg]_S
 3sg ...see COLLCL species.of.ant
 nkag zom.zaws [saum lub tsev pob.lauj] nqis los>_{COMP}
 crawl slowly top CL house earthen descend come
 ‘(He) saw ants crawling slowly down from the top of the earthen
 house ...’
- (32) ...ua.ciav nws_A txawm hnov <hla plaws [nws
 ...somehow 3sg then sense cross suddenly 3sg
 ko.taw]_O>_{COMP}
 feet
 ‘... then somehow he had felt (something) suddenly cross (over)
 his feet.’
- (33) ...tab.sis ntshai <tsis muaj tus_O los nrog kuv tham>_{COMP}
 ...but fear NEG have CL come with 1sg chat
 xwb
 only
 ‘...but (I) only fear not having someone to come and chat with me.’

5. The complementation strategy

While complement clauses are used both with Primary-B verbs and with some Secondary verbs in Hmong, the complementation strategy is used only with Secondary verbs. The complementation strategy employed in Hmong involves a serial-like construction. Although this strategy does not conform completely to a narrow definition of serialization, for the reasons given below, it can probably be thought of as simply a step along a continuum between serialization and complementation in terms of the closeness of the juncture (see below for further discussion).

With the exception of negative and of potential modality, Secondary-A concepts (Modal type, Beginning type, and Trying type) are expressed with this serial-like construction.⁴ In this construction the verb from the restricted set (R) is followed by the verb from the unrestricted set (U) (defined in Chapter 1):

- (34) Yog koj_A tau khaub.thuas_O, yuav.tsum tsis txhob los
 if 2sg get influenza should NEG IRR.NEG come
 nyob rau [hauv chav.ua.mov.noj]
 be.located at inside dining.room
 'If you have 'flu, (you) should not come into the dining room.'
- (35) lawv_S pib sib tham [thaum peb teev]
 3pl start RECIP chat time three hour
 'They started chatting to each other at three o'clock.'
- (36) [tus tub]_S pheej tsis nta.dej
 CL boy continue NEG shower
 'My son keeps on not showering.'
- (37) nws_A sim tsav tsheb_O [nram hav-dej]
 3sg try drive car down valley-water
 'He tried to drive the car down (in) the river valley.'

⁴ The negative morphemes (*tsis* and *tsis txhob*) are words that modify the clause (described in Chapter 1 as one way of realizing a Secondary concept). Potential modality is also expressed by a word that modifies the clause, through a grammaticized use of the verb *tau* 'get' in a construction that is clearly derived from a very productive type of serial verb construction, referred to as an 'Attainment SVC' (Jarkey 2004: 178). In an Attainment SVC, the first verb, an activity or accomplishment, is one that expresses some kind of extrinsic or intrinsic goal, and the second verb, an achievement, describes the successful attainment of that goal (illustrated in (2)). In expressions of potential modality, *tau* appears after a verb that may or may not have a goal. Here, it also describes successful 'attainment', not of the goal of the action, but of the performance of the action itself:

- (i) kuv_A hais tau [lus Hmoob]_O
 1sg speak POTEN word Hmong
 'I am able to speak Hmong'

While both verbs in each of these examples share time phrases (35) and locative phrases (37), the second verb can be negated independently of the first, a feature that distinguishes these constructions from true SVCs in this language (see §3). Either the regular negative *tsis* (36) or the irrealis negative (*tsis*) *txhob* (34) is used, depending on the meaning.

This complementation strategy is also used for some Secondary-B concepts (*xav* ‘want’ (with same subject), *ua txuj* ‘pretend (same subject)’, *yuav* ‘intend, will’ (same subject)), and some Secondary-C concepts (*cia* ‘let’, *pub* ‘give (permission)’, *kheev* ‘consent’, *kam* ‘agree’). As with the Secondary-A verbs, the second verb in these sentences can also be negated if it is semantically appropriate (39). Furthermore, this second verb can take independent peripheral locative (38) and time (40) phrases (see §3 regarding the status of the locative phrase in (38) as a peripheral locative).

- (38) [cov menyuam]_S xav ua.si [nram pas-dej]
COLLCL child want play down pond-water
‘The children want to play down (at) the pond.’
- (39) Kuv_A ua.txuj tsis pom koj_O, tab.sis kuv_A twb hlub koj_O
1sg pretend NEG see 2sg but 1sg indeed love 2sg
‘I pretend not to see you, but I do love you.’
- (40) [kuv txiv]_A kheev kuv_S mus tag.kis thiab
1sg father consent 1sg go tomorrow also
‘My father consents (for) me (to) go tomorrow too.’

The fact that the second verb in the constructions above exhibits some independence from the first indicates that serialization is not involved, at least not in the narrow sense. However, in spite of their limited independence, these constructions also need to be distinguished from constructions involving complement clauses. Observe what happens in a topic construction:

- (41) (a) [mus khwv]_O mas, kuv_A xav mus tshaj.plaws li
go market TOP 1sg want go exceedingly IPART
os
IPART
‘Going shopping, I want (to) go so much.’
- (b) *[mus khwv]_O mas, kuv_A xav tshaj.plaws li os
go market TOP 1sg want exceedingly IPART IPART
‘Going shopping, I want so much.’

In sentences like these, the verb from the unrestricted set (U) must appear after the complement-taking verb (R), even when it also appears, along with any arguments it introduces, in the topic. Thus this verb and its arguments do not fulfil the criteria for a complement clause; they cannot appear sentence initially as topic with no ‘trace’ appearing after the complement-taking verb. (Compare, for example, (20) with the Primary complement-taking verb *nyiam* ‘like’.) These sentences are thus regarded as involving a complementation strategy rather than a complement clause.

The Secondary-C permissive verbs, such as *cia* ‘let’, *pub* ‘give (permission)’, *kheev* ‘consent’, and *kam* ‘agree’, constitute an exception to a general rule that Secondary verbs (R) that relate to a verb (U) with a different subject generally take a complement clause. For example, the Secondary-B verbs *xav* ‘want’ and *vam* ‘hope’ take a Potential complement with *kom* when the complement clause has a different subject, as do the Secondary-C verbs *ua* ‘make’, *yuam* ‘force’, and *txiav txim* ‘decide, rule’. The fact that the Secondary-C permissive verbs are exceptions to this rule, and involve the serial-like complementation strategy rather than taking a complement clause with *kom*, can be attributed to their meaning. A potential complement with *kom* would not be appropriate with these verbs, even in cases involving a different subject, because *kom* clauses always express the will or intention of the main clause subject, rather than simply his or her assent.

6. Verbs and verb types

Table 1 gives a list of Primary and Secondary verb types, with examples of each type and the complement types that co-occur with each example.

7. Comparison of use of different complementizers with the same verb

Comparing examples in which the same verb appears with a range of different complement types helps to illustrate the differences clearly.

7.1. The verb *xav* ‘think, want’

Jaisser (1984: 79) gives an excellent illustration of the difference between complement clauses with (*hais*) *tias*, *kom*, and *tias kom*:

- (42) nws_A xav <tias kuv_A yuav yuav koj_O>_{COMP}
 3sg think THAT 1sg will marry 2sg
 ‘He thinks that I will marry you.’

TABLE 1. Complement-taking verbs in White Hmong

Verb type	Examples (attested)	Complement type(s)
Primary verbs:		
Attention	<i>pom</i> ‘see’, <i>hnov</i> ‘sense’ (hear, feel, smell)	Fact (<i>hais</i>) <i>tias</i> Activity with zero marking
	<i>nco tau</i> ‘recognize’, <i>nrhiav</i> <i>pom</i> ‘find, discover’, <i>ntsuam</i> ‘investigate’	Fact (<i>hais</i>) <i>tias</i>
Thinking	<i>xav</i> ‘think’ (cf. Secondary use for <i>xav</i> below)	Fact (<i>hais</i>) <i>tias</i> Topic <i>txog</i> (<i>hais</i>) <i>tias</i> Potential <i>kom</i> Indirect Will <i>tias kom</i>
	<i>txhawj</i> (<i>xeeb</i>) ‘worry’, <i>nco qab</i> ‘remember’, <i>to taub</i> ‘understand’, <i>paub</i> ‘know’	Fact (<i>hais</i>) <i>tias</i> Topic <i>txog</i> (<i>hais</i>) <i>tias</i>
	<i>ua npau suav</i> ‘(make a) dream’	Fact (<i>hais</i>) <i>tias</i> Activity with zero marking
	<i>xam</i> ‘reckon, guess’, <i>ntsuas</i> ‘estimate’, <i>kww yees</i> ‘guess, assume’, <i>kaj</i> ‘suppose’, <i>ntseeg</i> ‘believe’	Fact (<i>hais</i>) <i>tias</i>
Liking	<i>nyiam</i> ‘like’	Fact (<i>hais</i>) <i>tias</i> Activity with zero marking Potential <i>kom</i>
	<i>ntxub</i> ‘hate’	Fact (<i>hais</i>) <i>tias</i>
	<i>ntshai</i> ‘fear’, <i>zoo siab</i> ‘be happy’	Fact (<i>hais</i>) <i>tias</i> Activity with zero marking
	<i>lom zem</i> ‘enjoy’	Fact (<i>hais</i>) <i>tias</i> Activity with zero marking
Speaking	<i>hais</i> ‘say, speak’, <i>qhia</i> ‘tell, teach’	Fact (<i>hais</i>) <i>tias</i> Topic <i>txog</i> (<i>hais</i>) <i>tias</i> Potential <i>kom</i> Indirect Will <i>tias kom</i>
	<i>teb</i> ‘answer’, <i>nug</i> ‘ask’, <i>qw</i> ‘shout’, <i>quaj</i> ‘cry’, <i>hawv</i> ‘cry out’, <i>hu</i> ‘call’, <i>yws</i> ‘mutter’, <i>ntxhi</i> ‘whisper’	Fact (<i>hais</i>) <i>tias</i>
	<i>piav</i> ‘explain, describe’	Fact (<i>hais</i>) <i>tias</i> Topic <i>txog</i> (<i>hais</i>) <i>tias</i> Activity with zero marking
	<i>lees</i> ‘acknowledge, accept’	Fact (<i>hais</i>) <i>tias</i> Indirect Will <i>tias kom</i>

TABLE 1. (Continued)

Verb type	Examples (attested)	Complement type(s)
	<i>zeem</i> 'admit', <i>dag</i> 'lie', <i>cog lus</i> 'promise', <i>yeem</i> 'agree', <i>hawv</i> 'threaten', <i>cem</i> 'scold', <i>foom</i> 'curse', <i>hnyos</i> 'ridicule', <i>laug</i> 'assure'	Fact (<i>hais</i>) <i>tias</i>
	<i>ntxias</i> 'entice', <i>txhib</i> 'excite', <i>txib</i> 'direct', <i>tso</i> 'summon', <i>txw</i> 'dissuade'	Potential <i>kom</i>
	<i>qhia</i> 'tell, instruct', <i>thov</i> 'ask, beg', <i>txwv</i> 'forbid'	Potential <i>kom</i> Indirect Will <i>tias kom</i>
	<i>ntuas</i> 'advise, urge'	Fact (<i>hais</i>) <i>tias</i> Potential <i>kom</i> Indirect Will <i>tias kom</i>
Secondary verbs:		
Modal type	<i>txawj</i> 'be able', <i>yuam tsum</i> 'should'	Serial-like strategy
Beginning type	<i>pib</i> 'start', <i>pheej</i> 'continue'	Serial-like strategy
Trying type	<i>sim</i> 'try', <i>rau siab ntso</i> 'put (one's) heart into it' (lit: put in liver steadily)	Serial-like strategy
Secondary-B type	<i>xav</i> 'want (SS)', <i>yuav</i> 'intend', <i>tsiav txim</i> (SS) 'decide'	Serial-like strategy
	<i>ua txuj</i> 'pretend'	Fact (<i>hais</i>) <i>tias</i> Serial-like strategy
	<i>vam</i> 'hope'	Fact (<i>hais</i>) <i>tias</i>
	<i>xav</i> 'want' (DS)	Potential <i>kom</i>
Secondary-C type	<i>ua</i> 'make'	Potential <i>kom</i>
	<i>yuam</i> 'force'	Potential <i>kom</i> Indirect Will <i>tias kom</i>
	<i>txiav txim</i> 'decide, rule (DS)'	Fact (<i>hais</i>) <i>tias</i> Potential <i>kom</i>
	<i>cia</i> 'let', <i>pub</i> 'give (permission)', <i>kheev</i> 'consent', <i>kam</i> 'agree (to)'	Serial-like strategy

- (43) nws_A xav <kom kuv_A yuav koj_O>_{COMP}
 3sg want TO 1sg marry 2sg
 'He wants me to marry you.'

- (44) nws_A xav <tias-kom kuv_A yuav koj_O>_{COMP}
 3sg think THAT-TO 1sg marry 2sg
 'He thinks that I should marry you.'

We can further compare:

- (45) nws_A xav <txog-tias yuav koj_O>_{COMP}
 3sg think ABOUT-THAT marry 2sg
 ‘He thinks about marrying you.’
- (46) nws_A xav yuav koj_O
 3sg want marry 2sg
 ‘He wants to marry you.’

In (42) we see the verb *xav* with a Fact complementizer (*hais*) *tias*, reporting the actual thoughts of the subject, while in (43), with the Potential complementizer *kom*, *xav* is interpreted not as ‘thinking’ but ‘wanting’ in regard to the actions of another party. The complex complementizer *tias kom* in (44) conveys an indirect expression of will, ‘think... should’, and *txog* (*hais*) *tias* in (45) indicates the topic of thought, ‘think about’, rather than reporting the actual thoughts themselves. When *xav* is used with the serial-like complementation strategy in (46), the ‘wanting’ interpretation arises again, but this time it is understood to be in regard to the subject’s own actions, not those of another party.

7.2. The verb *piav* ‘explain, describe’

Like *xav* ‘think, want’, the verb *piav* has two different translations depending on the structure in which it appears.

- (47) nkawd_A... piav rau nws tias peb_A mas kuj tsis
 2du explain to 3sg THAT ipl TOP so NEG
 muaj [dab.tsi luag cav.toob.cav.xib]_O...
 have anything like goods
 ‘They... explained to him, “So we do not have anything like goods...”’
- (48) [tsab ntawv no]_A mas piav <txog-tias vim.li.cas
 CL paper this TOP explain ABOUT-THAT why
 koj_S thiaj tsis txaus.siab rau [tej uas luag_A
 2sg therefore NEG be.satisfied to COLLCL REL other
 ua rau koj]_{>COMP}
 do for 2sg
 ‘This letter, (it) explains about why you are therefore not satisfied with things that others do for you.’
- (49) ...nws_A txawj piav <nws_S mus>_{COMP}
 ...3sg know.how describe 3sg go
 ‘...he can describe him going.’

In (47) and (48), with the Fact complementizers (*hais*) *tias* and *txog* (*hais*) *tias*, *piav* is translated as 'explain': the actual explanation appearing with (*hais*) *tias* and the topic of the explanation with *txog* (*hais*) *tias*. In (49), however, with an Activity complement clause, *piav* is translated as 'describe'; it suggests a vivid description of an unfolding event, rather than an explanation about it.

8. Conclusion

All complement types in White Hmong occur in O function, and the language utilizes Fact, Potential, and Activity complement clause types as well as a serial-like complementation strategy.

Fact types involve the complementizer (*hais*) *tias*, introducing a clause that either asserts or questions a fact, and *txog* (*hais*) *tias*, introducing a topic of speech or thought. The same or different subjects can occur in the two clauses. Potential types use *kom* to convey a direct expression of will, and *tias kom* to convey an indirect expression of will, regarding the action or situation of another party. Thus the two clauses must have different subjects. Activity types have no complementizer and report the unfolding of a situation, event, or action involving either the same or a different subject. Complement clauses in this language occur with both Primary-B and some Secondary verb types.

The complementation strategy is restricted to Secondary verb types and involves a serial-like construction in which the verb from an unrestricted set (U) follows the complement-taking verb (R). This strategy is distinguished from serialization because the second verb (U) can be independently negated and can take its own peripheral locative and time phrases; it is distinguished from complement clauses because the verb from the set U cannot appear without the complement-taking verb, even when it appears in a topic. Same subject is most common, but different subjects do occur with Secondary-C permissive verbs.

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Complement Clause Types and Complementation Strategy in Dolakha Newar

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1. The language

Newar is a Tibeto-Burman language with about 800,000 speakers spoken in the Kingdom of Nepal. The majority of the Newar population is found in the Kathmandu Valley, the Newar ancestral home. There are a number of Newar villages throughout Nepal, many of which have distinct language varieties. Dolakha is one such village. It is located approximately 140 kilometres north-east of Kathmandu. The variety of Newar spoken in Dolakha is mutually unintelligible with the varieties spoken in the Kathmandu Valley, so on these grounds Dolakha Newar can be considered a separate language as opposed to a separate dialect. Members of the Dolakha Newar community estimate that there are about 5,000 speakers of Dolakha Newar. Many of them have left the village and now reside in Kathmandu and other parts of Nepal. The language is still in use within this tightly knit community; however, most of the children are not learning to speak it.

2. Basic grammatical facts

2.1. *Morphology*

Dolakha Newar is morphologically more analytic than synthetic. It has very little derivational morphology but does have inflectional morphology, particularly on the verb. The morphology is primarily agglutinative; only a few simple phonological rules governing vowel sequences obscure morpheme boundaries. The language is also mixed with regards to head and dependent

marking, as the verb agreement constitutes a head-marking pattern while NP case marking constitutes dependent marking.

Case is marked on noun phrases by a series of clitics which are morphologically bound to the last element of the noun phrase. A arguments are marked with the ergative case marker *-na/-n*. The case-marking pattern is consistent and does not exhibit split ergativity. S arguments are not case-marked. O arguments are marked with the dative case marker *=ta* when they are human and given (Genetti 1997). A small number of predicates require a dative-marked experiencer and an unmarked stimulus argument; most of these are calques on Nepali, an Indo-Aryan language which is the national language of Nepal.

Nouns and pronouns are the only lexical classes in this language which function as arguments of verbs without any further morphological modification (with the exception of case marking). Compounding is quite limited and nouns do not directly modify other nouns. Nouns do not function as heads of predicates, although they may occur as copula complements. In addition to case, nouns are morphologically marked for number and discourse status.

Verbs of matrix clauses carry suffixes which agree with the subject in person, number, and, for second person, honorific status. Matrix verbs also inflect for one of four tenses: past habitual, past, present, and future, with separate negative paradigms for the negative and imperative. There are three verbal prefixes: the negative *ma-*, the prohibitive *da-*, and the optative *tha-*.

Verbs in this language fall into quite strict transitivity classes. There are several places within the verb paradigm where transitivity is marked morphologically. For example, intransitive verbs take the suffix *-a* for the third-person singular past, whereas transitive verbs take the suffix *-ju/-cu*. Only a handful of verbs are labile (or ambitransitive) with the possibility of inflecting either way. Intransitive verbs may be made transitive by the addition of the causative suffix *-ker-*. There is no detransitivizing construction.

2.2. Syntax

2.2.1. *Clause structure* Dolakha Newar is a verb-final language. Intransitive clauses have the structure SV. Transitive clauses have the unmarked order AOV, although OAV is also common, the order being pragmatically determined. Right dislocation of O and A arguments is found infrequently. Copular clauses have an optional copular subject followed by a copula complement, most commonly containing an NP or an adjective. The copula *khyañ* is frequently omitted; its use is generally emphatic. The copula *jur-* indicates entrance into a state and, due to its aspectual nature, may not be dropped.

Dolakha Newar has a grammatical subject, identified by the ability to trigger person and number agreement in the verb and several other morpho-syntactic features (see Genetti 1994: 187–9). The language also has grammatical objects. This category consists of the O of transitive clauses and both the O and the recipient argument of ditransitive clauses (referred to as ‘E’ for ‘extended transitive argument’). There is no evidence for a morphosyntactic distinction between direct and indirect objects. For a full discussion, see Genetti (1997).

2.2.2. *Clause combining* Like many languages of the Himalayan region, Dolakha Newar makes extensive use of clause combining. In the production of natural discourse, speakers are able to skilfully weave together multiple types of dependent clauses, producing multi-layered complex sentences. Dependent clauses regularly precede the matrix clause; the presence of an inflected matrix clause verb indicates the end of a syntactic sentence. With the exception of direct quotation, dependent clauses do not inflect for tense or for person/number of subject. Instead, there is a small set of suffixes which indicate dependent clause type and hence the syntactic relationship of dependent clauses to surrounding elements.

Probably the most frequent type of dependent clause is the one I refer to as ‘the participial construction’, with the term ‘participial’ being used in the sense of ‘conjunctive participle’ in South Asian linguistics. In Genetti (2005), I provide a full description and analysis of this construction and argue that it may be analysed as an ‘Asian converb’. Here I will only mention that the construction is used both to incorporate auxiliary verbs into clauses as well as to indicate sequential events, e.g. *oŋ-an con-a* [go-PARTIC stay-3sgPAST] may be translated either as ‘is going’ (with *con-* functioning as a marker of progressive aspect) or as ‘went and stayed’ (a sequence of events). In addition to this general converb, there are a number of other converbs which are used to mark a variety of temporal and logical relations between clauses. Some of these are suffixed directly to verb stems whereas others must affix to nominalized stems (Genetti 1991).

Of crucial importance to the current chapter are the remaining four dependent verb forms. The infinitive suffix is *-i*. Infinitive verbs occur most commonly in constructions with Secondary-A verbs and in purpose constructions. They also participate in various other morphologically complex verbal expressions. Verbs suffixed with the infinitive may not function as heads of noun phrases and may only modify nouns in a few limited structures (possibly all calques on Nepali).

The other three suffixes crucial to the current study are analysed as ‘nominalizers’ within Tibeto-Burman linguistics. They are used for a range of functions as is typical of Tibeto-Burman languages (e.g. Matisoff 1972, Noonan 1997, Bickel 1999, DeLancey 1999). It is important to note, however, that nominalization in this language family is different from in many other languages. It does not generally entail a derivational process that creates a deverbal noun which then may head a noun phrase (Chapter 1, §7.3). This type of nominalization may be referred to as ‘verbal nominalization’. By contrast, Tibeto-Burman languages have ‘clausal nominalization’ (Thompson and Longacre 1985), a process which takes an entire clause (or series of clauses) as its scope. In Dolakha Newar, nominalized clauses have three functions: (1) they may modify nouns within the noun phrase, either as relative clauses or as nominal complements; (2) they may function as noun phrases in subject or object role (but not in peripheral roles); (3) they may occur ‘non-embedded’ as main clauses. The latter structure is particularly characteristic of conversational discourse, and many examples appear to be focus constructions (see also Bickel 1999). These three functions of nominalization in Dolakha Newar are exemplified in examples (1–3):

- (1) [[indira gandi=ta_O syā-ku]_{REL} mi=ta]_O syāt-cu.
Indira Gandhi=DAT kill-NR1 man =DAT kill-3sgPST
‘(They) killed the man who killed Indira Gandhi.’
- (2) [chana nimtiŋ chuŋ-a]_S ma-khe
2sgGEN benefit cook-NR2 NEG-COP
‘It is not the case that I cooked it for your benefit.’
- (3) [phāsi bi-e le]_{CLAUSE}
hanging give-NR2 PART
‘It was by hanging (that they killed him).’

There are three verbal suffixes in paradigmatic relation which are used in nominalizations. They are glossed NR1, NR2, and NR3, with ‘NR’ being an abbreviation of ‘nominalizer/relativizer’. Of the three, NR3 *-iuri* is the most semantically transparent and the least commonly used. It has an irrealis meaning, e.g. *hākhen cō-iuri* [front stay-NR3] ‘the one who might be in front’ contrasts with *hākhen coŋ-gu* [front stay-NR1] ‘the one who was in front’. The relative distribution of NR1 and NR2 is much more complex and depends on the syntactic environment of the nominalization. Thus the factors which underlie the distribution of the suffixes in relative clauses are different from those that underlie them in complement clauses, which are different again from those found with their non-embedded uses. It appears

that the distinction has at its heart the notion of transitivity, with NR2 being more likely to occur in more transitive environments, and NR1 in less transitive environments; however, this is a simplification (see Genetti 1994: 154–69 for further details).

3. Complement clauses

There are four types of complement clauses in this language. Simple nominalized clauses may occur in either S or O function. Nominalized clauses plus the complementizer *khā* are restricted to the O position, as are the pervasive direct-quote complements. Infinitival complements may occur in S function or in the stimulus role in a dative-experiencer construction.

It should be noted that although the majority of complements in Dolakha Newar are single clauses, the language also allows all four types of complements to be filled by multi-clausal constituents. Consider example (4):

- (4) <[thōsi=e kawāph]_O dak-e hā-en ta-e>_O
 meat=GEN ball make-PARTIC bring-PARTIC put-NR2
 khon-ai.
 see-SGPRES
 ‘He saw that she had made, brought, and put meatballs.’

Here the nominalized complement of the verb *khon*- ‘see’ consists of a series of three clauses combined by the participial construction. Dixon (at the end of §5.1 in Chapter 1) discusses coordinated complement clauses in English, suggesting that they could be analysed as reductions of coordinated complement clauses in English. He cites the example *I_A want <John to sing and Mary to dance>_O* which can be analysed as a reduction of *I_A want <John to sing>_O* and *I_A want <Mary to dance>_O*. Such an analysis cannot apply to Dolakha Newar simply because the English type of verbal ellipsis is never attested in this language; verbs must be overtly expressed. Instead, complex complements arise as the natural result of complementation structures interacting with an independent clause-combining strategy of the language (specifically the participial construction, a type of Asian converb (Genetti: 2005)).

3.1. Simple nominalized complements

Simple nominalized complements are marked by one of the three nominalizers on the final verb. They do not occur with a complementizer. They may occur in S or O function. In O position, simple nominalized complements

most commonly occur as objects of perception verbs, although they are also found with the verb *sukār-* 'pretend'.

When simple nominalized complements occur as complements of perception verbs, the A of the matrix and the A of the complement must be non-coreferential. Examples are given in (5) and (6); complement clauses are in square brackets:

- (5) jaba jin_A <[u jāṅgal]_S hal-gu>_O tār-agi.
 when 1SGERG this bird call.out-NR1 hear-1SGPRES
 'Whenever I hear this bird call out.'
- (6) <pharsi=_n_A [thau mica=_{ta}]_O phon-a>_O khoṅ-an
 pumpkin =ERG REFL daughter=DAT ask.for-NR2 see-PARTIC
 'Seeing that the pumpkin had come to ask for his daughter
 (in marriage) ...'

Note that the arguments of the complement clause are case-marked for their relationship with the complement verb. For example in (6), both the A argument *pharsi=n* and the O argument *mica=ta* are assigned case by the transitive verb *phon-* 'ask for'. This structure can be contrasted with that in (7), where the subject of the complement clause is assigned dative case by the matrix verb, in a construction commonly called 'raising':

- (7) cilā=_n_A ninpatti <ām̐ta kho-en con-gu>_O khon-ai
 goat=ERG daily 3SGDAT cry-PARTIC stay-NR1 see-3SGPRES
 'The goat sees her crying every day.'

The functional difference between these examples is that (6) is a fact-type complement clause, referring to an entire situation, whereas (7) is an activity-type complement clause; the goat sees the girl as she cries. The latter meaning is reinforced by the use of the auxiliary verb *con-* 'stay', which indicates progressive aspect. However, such case marking of the complement subject as matrix object is optional. There are several cases in texts with activity-type complements which do not show raising, as in (8):

- (8) <jogi thikreṅ-an con-a>_O khoṅ-an
 yogi stand-PARTIC stay-NR2 see-PARTI
 'Seeing the yogi standing there ...'

In elicitation, consultants are happy to accept examples both with and without the dative case marking on the complement subject; my consultants have not identified a meaning difference that correlates with the presence or absence of the dative case marker. However, raising is only possible when the

complement clause does not have an O that could be dative marked. For example, in (9) the ergative pronoun unambiguously marks the subject of the complement clause:

(9) Elicited

jin_A <āmun_A puja_O yeŋ-a>_O sor-agi
 1SGERG 3SGERG ceremony do-NR2 watch-1SGPRES
 'I watch him worship (someone or something).'

If the third-person pronoun were in dative case, it would refer to the object of the complement clause, rendering the translation 'I watch someone worship him'. Two dative-marked noun phrases occurring in the same complement clause are avoided and sound awkward to my consultants.

The case-marking facts unambiguously establish complements of perception verbs as full clauses. The fact that they are grammatical objects of perception verbs can be established by two arguments. One is that perception verbs are transitive, assigning ergative case to the A argument and requiring transitive affixes. As there is no other independent O referent, it stands to reason that the complement clause functions as the O.

The second argument comes from constituent order. The complement clause is generally positioned between the A argument and the matrix verb, the unmarked position for O. However, as in transitive clauses with two NPs, it is possible to have the complement clause precede the A, e.g. example (9) above can also take the form <āmun puja yeŋ-a> jin sor-agi without any change in basic meaning. Thus we see that complements of perception verbs and O arguments have the same behaviour with regard to constituent order.¹

It should be noted that complements of perception verbs may not be suffixed by the irrealis nominalizer NR3. This is presumably due to the semantic incompatibility between direct perception and an unrealized event. The other two suffixes are distributed with respect to the transitivity of the complement verb, with NR1 occurring primarily with intransitive predicates and NR2 occurring regularly with transitive predicates.

The other verb which takes a simple nominalized complement is the verb *sukār-* 'pretend'. Unlike the case with perception verbs, the subject of the

¹ While causation is another test that in some languages may establish the grammatical status of arguments, in this language causation of a transitive verb creates a clause structure with two objects. The O of the causativized verb does not undergo any morphosyntactic changes, so causativization is irrelevant to the task at hand.

complement verb and the A of this verb are necessarily coreferential. This results in the subject of the complement clause being omitted, as in (10):

- (10) $\bar{a}mun_A$ <*dij-a*>_O *sukār-ju*.
 3sgERG sleep-NR2 pretend-3sgPAST
 'He pretended to sleep.'

The ergative case marking on $\bar{a}mun$ clearly marks it as the subject of *sukār-ju*.

Simple nominalized complements are also found occurring in two constructions in S role. Both cases involve verbs which typically function as copulas, but which function as intransitive verbs in this construction, allowing only one argument (the complement). In one construction, the nominalized clause occurs before the stative verb (usually copula) *khyañ*. The construction is used to emphasize the speaker's belief in the proposition of the nominalized clause, and can be translated as 'it is true that' or 'it is a fact that', as in (11):

- (11) <*bilacini=n na-e*>_S *khyañ*
Bilacini=ERG eat-NR2 COP
 'It is true that Bilacini ate them.'

Negation is prohibited on complements of perception verbs due to semantic incompatibility; one cannot directly observe an event which does not take place. Consultants prefer to translate English sentences like 'I saw him not working' with the equivalent of 'I saw him pretend to work', or 'When I looked at him he wasn't working'. On the other hand, complements of *sukār-* 'pretend' may be negated by the prefix *ma-*, e.g. $\bar{a}mun$ <*ma-na-e*> *sukār-ju* 'he pretended not to eat'.

The second construction with simple nominalized complements in S role involves the sequence *ju-en con-a*, made up of the participial form of the verb *jur-* 'become' followed by the verb *con-* 'stay' in the verbal auxiliary slot. The concatenation of these morphemes would normally mean 'is becoming'; however, this construction is widely used to mean 'it turned out that', with a mild element of mirativity, or the expression of surprise at the turn of events. (Different speakers use this construction with different frequencies, so the mirative force varies.) The nominalized status of the preceding clause argues that it is a complement which serves as an S. However, the expression *ju-en con-a* is often significantly reduced phonologically, and this, together with its semantic shift, suggests that the construction can also be seen as a nominalized clause plus evidential. This construction is exemplified in (12):

- (12) <[*thi-mā rājā*]_O *nāplañ-a*>_S *ju-en con-a*.
 one-CL king meet-NR2 become-PARTIC stay-3sgPAST
 'It turns out they met a king.'

Simple nominalized complements may include all the syntactic and semantic richness of matrix clauses, including the marking of negation, with the exception of the categories tense and person/number of subject. Since the tense and person/number suffixes are in paradigmatic alternation with the nominalizers, it is impossible to express these categories on nominalized clauses.

3.2. *Nominalized complement plus khā*

The second complement type in Dolakha Newar could be seen as a subtype of the first, differing only in the presence of a complementizer. However, this complement type has a different meaning and is used with cognition and utterance verbs, so it seems best to treat it as distinct.

In this complement type, the final verb of the complement clause is suffixed either by the irrealis nominalizer or NR2 and is followed by the complementizer *khā*. This complementizer is transparently derived from a noun of the same form which refers either to a topic that has been orally discussed or to a fact transmitted through speech. It may be translated as ‘talk’, ‘matter’, ‘news’, etc., as the context warrants. This noun also constitutes the first part of the lexicalized compound verb *khā lār-* ‘to talk’. An example of this complement type is given in (13):

- (13) āpsin_A <[ām jāl]_O ta-en ta-e khā>_O
 3plERG that net put-PARTIC put-NR2 COMP
 ma-si-u
 NEG-know-3PAST.HAB
 ‘They didn’t know about the net having been put there.’

This construction is clearly derived from the ‘nominal complement’ construction in which a nominalized dependent clause modifies a noun within a noun phrase.² Example (14) illustrates this structure:

- (14) [[gōgar=na_A khēja_O tho-e]_{CLAUSE} bākhan]_{NP}
 rooster=ERG egg lay-NR2 story
 ‘The story of the rooster laying the egg.’

Returning to the example in (13), it is possible to provide two distinct syntactic analyses. One analysis views the nominalized clause as the

² Nominal complements differ from relative clauses in two ways. First, the head noun does not have a semantic or grammatical role in a nominal complement clause, as in example (14). Also, nominal complement clauses may have all arguments specified. By contrast, relative clauses in this language have an obligatory gap in the position of the shared argument.

complement object of the transitive verb *sir*-‘know’ with *khā* acting as a complementizer. This analysis is represented in (13) by square brackets and glossing. The second analysis views *khā* as a nominal head of the object noun phrase with the nominalized clause functioning as its complement, in other words, fitting the translation ‘they didn’t know the talk of the net being put there’. This structure may be represented as in (15):

- (15) āpsin [[ām jāl ta-en ta-e]_{NOMINAL.COMPLEMENT}khā]_O ma-si-u

The construction can be seen in either light, but two arguments favour the former, grammaticalized alternative. The first argument is semantic. The information in the complement clause does not need to represent something spoken *per se*. It may instead represent an idea or a fact, as in example (13). In the narrative this example was taken from, there is no explicit discussion about the putting of a net; the complement refers only to the fact of the net’s presence. Thus the specific meaning of *khā* as referring to a spoken event is gone. This semantic bleaching is expected under grammaticalization.

The second argument in favour of viewing *khā* as a complementizer and the nominalized clause as a complement is that *khā* never has nominal properties. It cannot pluralize or co-occur with demonstratives as heads of nominal complements do.

As with simple nominalized complements, the internal clausal structure of the complement clause is the same as in a non-embedded clause. Case marking is found on complement arguments in accordance with their relation with the complement verb. All semantic categories found in main clauses may again be realized in the complement, including negation but with the exception of person and number of the subject and tense.

However, raising is not possible, which again demonstrates that this complement type is distinct from simple nominalized complements.

The status of these complements as objects can be established by the fact that the verbal predicates which they complement are necessarily transitive. In addition, their unmarked position is between the subject of the matrix verb and the verb itself, although again they may be positioned before the matrix subject, like other noun phrases. Example (16) has such ordering:

- (16) Elicited
 <jī kəθmənɖu oŋ-a khā>_O [jana mā=n]_A
 1sg Kathmandu go-NR2 COMP 1sgGEN mother=ERG
 sir-ju.
 know-3sgPAST
 ‘My mother knew about my going to Kathmandu.’

Nominalized complements with *khā* are either of the fact type or the potential type. The fact type complements occur with NR2 while the potential type occur with the irrealis NR3 (NR1 does not occur). Activity-type complements, on the other hand, are conveyed by simple nominalized complements. Examples (17–19) nicely contrast these meanings:

- (17) Elicited: Activity type with simple nominalized complement
 minu=n_A <rām ye-u>_O tār-ju.
 Minu=ERG Ram come-NR1 hear-3sgPAST
 ‘Minu heard Ram come.’
- (18) Elicited: Fact type with nominal complement plus *khā*
 minu=n_A <rām yeŋ-a khā>_O tār-ju
 Minu=ERG Ram come-NR2 COMP hear-3sgPAST
 ‘Minu heard about Ram’s coming.’
- (19) Elicited: Potential type with nominal complement plus *khā*
 minu=n_A <rām yer-iuri khā>_O tār-ju
 Minu=ERG Ram come-NR3 COMP hear-3sgPAST
 ‘Minu heard that Ram might/will come.’

3.3. Direct-quote complements

In the production of narrative in Dolakha Newar, speakers make extensive use of direct quotation. The most frequent quotative verb is *hat-* ‘say’. This verb is ditransitive with an ergative subject and two objects.³ One object refers to the dative-marked addressee of the quotative verb and the other refers to what is said. This can be realized as a simple NP, as in (20):

- (20) jin_A chanta_E [thi-gur khā]_O har-i
 1sgERG 2sgDAT one-CL matter say-1FUT
 ‘I will tell you one thing.’

However, it is more common to have the quotative NP be a direct quote, consisting of any unit appropriate to conversational discourse, from an exclamation or vocative expression to an entire complex sentence or even multiple sentences. In (21), the direct quote consists of an exclamation and two imperative sentences, one being only a verb, and the other being a clause with a grammatical auxiliary *bir-* ‘give’ licensing a benefactive argument. (To aid the reader, the direct quote is put into italics.)

³ Genetti (1997) discusses the grammatical relation of object in Dolakha Newar, and explicitly argues that the object category cannot be further divided into either direct and indirect or primary and secondary object.

- (21) māji=n_A <lau! ō! ota_E [parāsar risi=ta]_E kho_O
 boatman=ERG lo go:IMP 3sgDAT Parasar Risi=DAT river
 tār yeŋ-an bi-u>_O hat-cu hā
 cross do-PARTIC give-IMP say-3sgPAST EVID
 ‘The boatman said: “Lo! Go! Ferry Parasar Risi across the river.”’

It is clear that direct quotes as in (21) have the internal syntactic structure of typical clauses and sentences and can encode any morphological category of the language. For example, the arguments are case-marked and the verbs are finite. Since the speaker is mimicking the speech of a character, they make it sound realistic by producing direct quotes which have all the characteristics of independent sentences; they frequently contain evidential particles, interjections, and other features commonly found in conversation. Most embedded direct quotes in my data consist of a single sentence of one or two clauses in length. Some (like (21)) contain more than one syntactic sentence, whereas others might contain only an interjection (e.g. *oho!*). We thus may wish to consider these to be “complement constituents” rather than the more narrowly defined “complement clauses”.

To prove that these constituents are complements, one must provide evidence that they are objects of the quotative verbs. The main reason for considering these to be objects comes from the syntactic and prosodic cohesiveness of quotative sentences. Full argumentation for this point is provided in Genetti and Slater (2004); the primary arguments will be summarized here. Quotative verbs are clearly ditransitive in argument structure, licensing an NP in object position that can be filled with a nominal (as in (20)). Subjects of quotative verbs are ergative-marked and the usual position for the quoted material is, as with other objects, between the subject and the quotative verb. However, the quoted material may precede the subject; this constituent-order flexibility is typical of arguments.

Another point is that an analysis that takes quoted material as independent of the quotative predicate results in problematic fragments. For example, if the quoted material in (21) constitutes an independent sentence, then the ergative morphology on *māji* ‘boatman’ cannot be easily attributed to the later transitive verb.

Finally, it is often the case that there are not intonation breaks between the A argument and the quoted material, or between the quoted material and the quotative verb (Genetti and Slater 2004). This prosodic unity reinforces the syntactic unity of these constructions.

Thus, the syntactic and prosodic evidence strongly argues that the embedded direct quotes in Dolakha Newar are syntactic objects and hence

complements of the quotative verb. This appears to be an unusual pattern typologically, as can be seen by comparing the other languages described in the current volume. The extent to which a similar analysis can be applied to other languages which are typologically similar (e.g. other languages of South or Central Asia) is a question for future exploration.

It should be noted that quotative complements are frequently followed by *haŋ-an*, the participial form of the verb *hat-* ‘say’. This is even found directly preceding the verb ‘say’, resulting in a repetition of the verb, as in (22):

- (22) <*chi do-ō*>_O *haŋ-an* *hat-cu*.
 2sg PROHIB-go say-PARTIC say-3sgPAST
 ‘She said: “Don’t you go.”’

This ‘double say’ construction is common throughout South Asia (e.g. Hock 1982, Saxena 1988, Masica 1991: 403, Noonan 1999). This construction is not only used with utterance verbs, but also with verbs of cognition or emotion; the construction allows for the direct expression of a particular hope, thought, or fear. Consider example (23):

- (23) Elicited
ām_s <*khicā=n ŋyā-eu*>_O *haŋ-an* *gyāt-a*.
 3sg dog=ERG bite-3sgFUT say-PARTIC afraid-3sgPAST
 ‘He was afraid the dog would bite.’
 Lit. ‘Saying “the dog will bite”, he feared.’

Here the direct quote *khicā=n ŋyā-eu* ‘the dog will bite’ is embedded as the complement object of the verb *hat-* ‘say’. Since *haŋ-an* is the participial (converb) form of the verb, it modifies the verb *gyāt-* ‘be afraid’, specifically expressing the reason for the fear. This strategy thus does not involve the direct complementation of *gyāt-*, which is an intransitive verb so does not take an object, but it still allows the relationship between clauses to be expressed with the quotative frame. In line with this conclusion is the fact that there is little evidence that *haŋ-an* is functioning as a grammatical element (i.e. as a complementizer) in this construction. Instead, *haŋ-an* appears to be part of a conventionalized syntactic pattern that speakers make use of in natural discourse. Full argumentation in favour of this position can be found in Genetti (2005).

Since the example in (23) does not constitute complementation, but still expresses a relationship between two clauses that other languages express with complement clauses, one may wish to consider this a complementation strategy. I prefer not to do so for two related reasons. First, the structure exemplified in (23) can be used to indicate the reason for a fear generally; it is

not required that the entire proposition expressed in a clause constitute the reason for the fear. For example, the same structure would be used for the sentence ‘Saying “they have a dog”, he was afraid’. This sentence does not mean that he was afraid that they possessed a dog (as in English *He feared they had a dog*), but simply implies that the presence of a dog instilled the fear. Thus the semantic relationship allowed between the predicates is broader than that which holds when ‘fear’ takes a complement clause in other languages. Second, a direct quote followed by *haŋ-an* can be used not only to express a reason for feeling afraid, or suspicious, or hopeful, but to express the reason for any action. For example, it would be the appropriate construction for a sentence such as ‘Saying “I’m not well”, she went home’. In Chapter 1 (§7.2), Dixon writes, ‘in a language lacking complement clauses [a verb] may carry the expectation of occurring in an appropriate complementation strategy’. The verb *gyāt-* exemplified in (23) is a simple intransitive verb. There is no more expectation that this verb will occur in a construction to express its reason than there is for any other predicate. Thus what occurs here is not a complementation strategy, but a very general construction that allows an inferable causal relationship between a proposition expressed by a direct quote and the proposition of the following clause.

It is interesting to contrast the quotative complements discussed above with another strategy for the incorporation of direct speech which does not entail complementation. This strategy appears to be a calque on a pattern in Nepali. This construction places the ergative-marked A and the optional dative-marked E (addressee) before the quotative verb, which is necessarily finite. This is then generally followed by the morpheme *ki*, a ‘complementizer’ borrowed from Nepali, and then the quoted speech. This structure is illustrated in (24):

- (24) āmun_A hat-ai ki [*chin_A janta_O da-syāt*].
 3SGERG say-3SPRES COMP 2SGERG 1SGDAT PROHIB-kill
 ‘He said “Don’t kill me”’

Such constructions do not constitute complementation in Dolakha Newar as the positioning of the quoted material is postposed after the finite verb; rather these constitute a distinct construction for the incorporation of direct speech (see discussion of direct-speech constructions in Chapter 1, §6). Note that the arguments relating to syntactic cohesiveness that applied to direct quotes positioned between the A argument and the verb do not apply here. In addition, this construction does not allow the constituent-order flexibility commonly found with objects.

3.4. *Infinitive complements*

There are three verbs in the language which take infinitive-marked complements. Two of these verbs are modals. One is the verb *jir*-‘should; be appropriate’. This is a Primary-B verb despite its modal meaning (see §4.1, Chapter 1), as it may take a nominal subject, e.g. *ām jir-a* ‘that is appropriate’. The other verb is *mal*- ‘must; be necessary’, a Secondary-A verb.⁴ Both of these verbs are intransitive and they both take a complement clause ending in an infinitive verb as their S argument:

- (25) <[doli bu]_S nichi dālāṅ-an cō-i>_S mal-a.
 doli carry:NR1 all.day fast-PARTIC stay-INFIN must-3sgPAST
 ‘The doli carrier must be fasting all day.’

Lit. ‘It is necessary for the doli carrier to be fasting all day’

- (26) Elicited
 <chin_A mucā=ta_E lokhu_O ton-ke-i>_S jir-a.
 2sgERG child=DAT water drink-CAUS-INFIN appropriate-3sgPAST
 ‘You should make the child drink water.’

Lit. ‘It is appropriate for you to make the child drink water.’

The primary argument that these examples include complements in subject role is that the matrix verb is always in third person. It does not agree with the person and number of the complement subject, as can be seen in (26). (This may be contrasted with the complementation *strategy* discussed in §4 where verbs denoting Secondary concepts agree with the subject of the lexical verb.) Semantically, the situation as a whole is construed as being either necessary or appropriate. Syntactically, the clause acts an abstract argument triggering third-person agreement on the verb. The fact that these complements are independent clauses may again be determined by the case-marking facts; contrast the unmarked subject of the intransitive complement verb in (25) with the ergative subject of the transitive complement verb in (26).

The third verb which takes an infinitive complement has a different argument structure from the two modals. The verb is *yer*-, which means ‘come’ when used independently, but means ‘like to’, ‘want to’, or ‘be skilled at’ when used with a clausal complement. As a complement-taking predicate, *yer*- has a dative-subject argument structure; the experiencer argument is in dative case and the stimulus argument is a complement clause with an infinitive verb:

⁴ This verb may occur with two nominal arguments, but the meaning changes to ‘need’. This is sufficiently different to consider this to be an independent (although historically related) lexical item.

- (27) janta_{EXP} <pāṇ ekdam na-i>_{STIM} yer-a.
 1sgDAT fruit INTENS eat-INFIN come-3sgPAST
 'I like to eat much fruit.'

This structure is unique in that the coreferential subject argument is case-marked by the complement-taking predicate rather than by the complement verb. Other than this, however, the complement clause retains its independent clausal properties; for example, it may have object arguments which may be case-marked. Expression of the categories of tense, person, number are not possible as the infinitival suffix effectively usurps their position. Speakers reject negation of infinitival complements, preferring to express negation on the complement-taking predicate, or to find a suitable rephrasing of the intended meaning.

4. Complementation strategy: infinitive verb plus grammatical auxiliary

There is one complementation strategy in Dolakha Newar. It occurs with a wide variety of verbs which denote Secondary concepts, including modal-type, beginning-type, and trying-type Secondary-A concepts, the Secondary-B concept 'want', and the Secondary-C concept 'let', as well as the Primary-B verbs 'forget' and 'remember'. These various concepts are realized in the language as auxiliary verbs which follow the lexical verb in infinitive form. In this language auxiliary verbs have the following properties: they directly follow the main verb which is affixed with non-finite morphology; they have a variety of meanings in the semantic domain of tense/aspect/modality; they do not have any effect on the morphosyntactic structure of the clause, including its valency. (The only exception is *bir-* 'give' which is used in an applicative construction not relevant here.) Examples (28–30) illustrate this construction for several verbs:

- (28) thamus māyā=ku jīt-ai ju-i pha-ita rā?
 2sgHON love=LOC win-BV⁵ happen-INFIN able-2sgHON:FUT PART
 'Will you be able to win in love?'
 (29) jin_A khā_O lā-i sar-agi.
 1sgERG talk talk-INFIN know.how-1sgPRES
 'I know how to talk.'

⁵ The gloss 'BV' stands for borrowed verb; this suffix is used on all intransitive verb stems borrowed into the language from Nepali. The stems are then followed by *jur-* which holds the native inflections.

- (30) āmun_A [ām=ri sugā=ta]_O syār-i mwāl-ai
 3SERG that=IND parrot=DAT kill-INFIN try-3SGPRES
 'He tries to kill the parrot.'

In the constructions, the clause which precedes the auxiliary verb is a cohesive unit, with case marking assigned to nominal arguments by the lexical verb. For example, in (30), the subject is in ergative case and the object is in dative case. The analytical question is whether these cohesive clauses are arguments and hence complements of the Secondary verbs in a complex sentence, or whether the Secondary verbs have the status of auxiliaries and these examples are monoclausal.

The primary argument in favour of analysing the Secondary verbs as auxiliaries comes from verb agreement. A comparison of examples (28) to (30) illustrates that the Secondary verb agrees in person, number, and honorific status with the subject of the lexical verb. (This pattern is in contrast with that found with infinitive *complements* discussed in §3.4, where the modal verb is always in third person.) The agreement patterns found here are expected with monoclausal structures. Subject agreement is realized on the final verb of the clause, whether it has lexical or auxiliary function. On the other hand, if the structures in (28) to (30) are analysed as biclausal, one cannot explain the conflict in subject properties, with case being assigned by the verb of one clause, but agreement being realized on the verb of another.

Constituent-order restrictions also argue for a monoclausal analysis. While object complements enjoy freedom of positioning with respect to the subject of the complement-taking predicate, one cannot move the subject of the lexical verb to directly precede the auxiliary, as shown in (31):

- (31) Elicited
 *khēja_O ηyār-i jin_A lumonker-gi.
 egg buy-INFIN 1SGERG forget-1SGPAST
 'I forgot to buy eggs.'

This restriction is not found with nominal arguments, e.g. in [ām khā] jin lumonker-gi 'I forgot that talk' the subject pronoun follows the object noun phrase ām khā.

5. Complement-taking Verbs

I have been able to identify eighteen complement-taking verbs in Dolakha Newar that can be classified as Primary-B verbs. Table 1 presents the Primary-B verbs in this language, their classification, and the types of

TABLE 1. Classification of Primary-B verbs

Group	Verb	Translation	Class	Simple Nom.	Nom. + khā	Direct quote	INFIN	AUX Strategy
1	khon-	‘see’	Attention: Perception	X				
	tār-	‘hear’	Attention: Perception	X	X			
	sor-	‘watch’	Attention: Perception	X				
	khā lār-	‘talk’	Speaking	X				
2	thāhā jur-(N)	‘came to know’	Thinking		X			
	prasta jur-(N)	‘became clear’	Thinking		X			
	patālyā yet-(N)	‘discover’	Thinking		X			
3	hat-	‘say’	Speaking		X	X		
	ṇen-	‘ask’	Speaking		X	X		
	thāhā dat-(N)	‘have knowledge’	Thinking		X	X		
4	sir-	‘know’	Thinking		X			
	bicār yet-(N)	‘think’	Thinking		X			
	cīn yet-(N)	‘decide’	Thinking		X			
	pir yet-(N)	‘worry’	Thinking		X			
5	lūwonker-	‘remember’	Thinking		X			X
	lūmonker-	‘forget’	Thinking		X			X
6	jir-	‘should; be appropriate’	Modal				X	
	man par-ai jur-(N)	‘like’	Liking				X	

complementation structures and strategies they enter into. They have been sorted into six groups based on their complementation patterns. Verbs which involve lexemes borrowed from Nepali are noted by (N); often the native form and the Nepali form are interchangeable.

The verbs in Group 1 consist primarily of verbs which denote direct perception of an activity and hence take simple nominalized complements. The verb *tār-* ‘hear’ may additionally be used with fact-type complements (‘hear about’) in which case the nominalized complement plus *khā* is used. Group 1 also contains the compound verb *khā lār-*. Since this is an utterance verb, one would expect this to fall into Group 3; however, it has idiosyncratic behaviour due to its meaning and its structure. Unlike the other utterance verbs, this verb refers to general talk rather than to a specific utterance, as in English ‘he began to talk’ or ‘he talked about going to Dolakha’. Hence, it does not occur with direct-quote complements. The factual nature of the verb may lead one to expect that it would be used with a nominalized complement plus *khā*; however, since the morpheme *khā* is already part of the verb, my consultants feel that to use it as a complementizer is redundant.

Group 2 consists of cognition verbs in the Thinking category. Each verb refers to the attainment of factual knowledge, so the nominalized complement plus *khā* is appropriate.

Group 3 primarily contains utterance verbs; the inclusion of the verb *ṭhāhā dat-* ‘to have knowledge’ in this group is semantically odd, but like the utterance verbs, it does take a direct-quote complement in addition to the nominalized complement plus *khā*. With verbs in this group, the direct-quote complement is found with direct quotation, whereas the nominalized complement plus *khā* is found with indirect quotation and may be translated as ‘ask about’, etc.

Group 4 differs from Group 3 in only allowing complements with *khā* which again express generally what someone is, for example, worrying about. If one wished to express the worry specifically, one would have to use the verb ‘say’ which has its own complement, i.e. ‘he worried, saying X’ (see §3.3, example (23)).

Group 5 is rather different, consisting of the verbs for ‘remember’ and ‘forget’. Like the verbs of Group 4, these verbs only take a true complement when they refer to a general topic, e.g. *āmun_A <khēja_O ṇyār-iuri khā>_O lūmonker-ju* ‘he forgot about buying eggs’. When these verbs are used to denote remembering or forgetting to perform an activity, they function as auxiliary verbs (see §4), e.g. *āmun_A khēja_O ṇyar-i lūmonker-ju* ‘he forgot to buy eggs’.

Finally, Group 6 contains verbs which commonly are found as Secondary verbs, but which in this language may occur exclusively with nominals. These are, however, highly restricted, in that they may only take infinitive complements.

6. Secondary concepts

Of the secondary concepts, there are only three in Dolakha Newar that are not coded by verbs: negation, which is coded by the prefix *ma-*; prohibition, which is marked by the prefix *da-*; and direct causation, which is marked by the derivational suffix *-ker*. There remain fifteen verbs which are used to denote Secondary concepts. Two of these ('hope' and 'fear') co-occur with quotative verbs so do not themselves involve direct complementation or complementation strategies. The remaining thirteen verbs are listed in Table 2, together with their complementation patterns.

Only three of the verbs denoting secondary concepts take true complements. These are the two modals in Group 1, both of which take infinitive complements, and the verb *sukār-* 'pretend', which takes a simple nominalized complement. By far the most common pattern is for Secondary concepts to be realized as auxiliary verbs, as in Group 3.

TABLE 2. Classification of verbs denoting Secondary concepts

Group	Verb	Translation	Class	Simple Nom.	INFIN	AUX
1	mal-	'must, be necessary'	A: Modal		X	
	yer-	'like; want; be skilled at'	A: Modal		X	
2	sukār-	'pretend'	B	X		
3	twārtār-	'stop'	A: Beginning			X
	suru yet-(N)	'start'	A: Beginning			X
	dhun-	'finish'	A: Beginning			X
	ṭen-	'about to'	A: Beginning			X
	phar-	'able'	A: Modal			X
	sar-	'know how'	A: Modal			X
	mwāl-	'try'	A: Trying			X
	kosis yet-(N)	'try'	A: Trying			X
	cahai yet-(N)	'want'	B			X
	bir-	'let' (< 'give')	C			X

7. Conclusions

This chapter has described four types of complements and one complementation strategy in Dolakha Newar. Especially central to these structures are clausal nominalization and the embedding of direct quotation, both of which are essential components in the creation of complex syntactic structures. Since nominalization in this language has clausal scope, this is a natural strategy for the creation of clausal arguments. In addition, the use of nominalized clauses to modify nouns within an NP produced the basic structure which allowed the abstract *khā* to evolve into a grammatical complementizer. It should be kept in mind, however, that clausal nominalization in this language does much more than this; complement clauses are just one facet of this complex syntactic domain.

The embedding of direct quotes as objects of utterance verbs comes about through the interaction of constituent order, transitivity, and case marking. Since any verb which takes a notional O argument is transitive and assigns ergative case to its subject, quotative structures naturally entail a tight AOV structure with quotes functioning as object complements.

The complementation structures of this language can thus be seen as emerging from the complex interaction of a series of other, independent facts of the language. These structures in turn combine with other structures to create further complex patterns. The result is a linguistic fabric of many colours and textures, dizzyingly complex, and beautiful to behold.

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Complement Clause Types and Complementation Strategies in Akkadian

GUY DEUTSCHER

1. Basic information

Akkadian is the earliest known Semitic language. It was spoken in ancient Mesopotamia, the ‘land between the rivers’ (Tigris and Euphrates), in an area which roughly corresponds to today’s Iraq. It was written in the cuneiform script, on clay tablets. Akkadian is one of the earliest and longest attested languages, with a history spanning more than two thousand years. The first written attestations are from around 2500 BC, and the language was spoken until around 500 BC, when it was displaced by Aramaic. From the second millennium BC, two distinct dialects of Akkadian emerged, Babylonian and Assyrian. Babylonian was spoken in the southern part of Mesopotamia, and Assyrian in the north. The history of the Akkadian language is conventionally divided into four main chronological periods:

Old Akkadian (2500–2000 BC)	
Old Babylonian	Old Assyrian (2000–1500 BC)
Middle Babylonian	Middle Assyrian (1500–1000 BC)
Neo-Babylonian	Neo-Assyrian (1000–500 BC)

Over such a time span, significant changes in the language are evident. However, as the emphasis in this volume is synchronic rather than diachronic, this chapter will concentrate on one period and one dialect: Old Babylonian. This is considered the ‘standard’ or ‘classical’ phase of the language, both by scholars today, and by the Babylonians and Assyrians themselves, who in later periods tried to emulate it in their poetry and even some prose genres. So henceforth, the term Akkadian should be read as ‘Old Babylonian Akkadian’.

The diachronic perspective is explored in depth in Deutscher (2000a), and will be mentioned briefly in §7.

2. Typological profile

Akkadian is a typical Semitic language in all but constituent order. It is synthetic and nominative-accusative in both morphology and syntax. The core arguments in a verbal clause are S, A, and O, and in a copular clause, CS and CC. Akkadian has mostly dependent marking. Nouns have three cases: nominative, accusative, and genitive. All prepositions take the genitive case. Pronouns also show a dative case. Nouns distinguish between singular, plural, and, in the earlier periods, also dual. There are two genders, masculine and feminine.

As in other Semitic languages, the verbal morphology is based on consonantal roots and internal vowel patterns, combined with prefixing, suffixing, infixing, and gemination. Verbs have three tenses, traditionally called ‘past’, ‘perfect’, and ‘present’ (which should more accurately be called ‘non-past’, because it can be used for future and various modal nuances). Other forms of the verb include an imperative, a purposive, and a stative, which functions as a predicative verbal adjective. There is also a nominalized verbal form that is traditionally called infinitive (see §3.2).

Many verbs, including complement-taking verbs such as ‘see’, ‘know’, ‘hear’, ‘say/speak’, could be termed ambitransitive of the S=A type. Ambitransitives of type S=O are very rare (one example is *gamārum* ‘come to an end/finish’). Akkadian is a strict verb-final language, an ‘un-Semitic’ feature which is due to convergence with Sumerian (see Deutscher 2000b). Nevertheless, inside the NP and PP, word order is the ‘VO’ type: N-G, N-REL, Prepositions, N-DEM. Both AOV and OAV orders are common. The only constituents that can follow the verb are the bound object pronoun suffixes: *āmur-šu* (‘1sgA:saw-3msgO’), and interestingly, fact-type complement clauses, which after around 1700 BC migrate to post-verbal position (see §3.1.1).

As (1) shows, there is no verb in copular clauses, but there is an optional particle *-ma* on the CC, which generally comes after the CS (but before it when the CS is a pronoun, as in (8) and (12) below). The gloss ‘soul.of’ marks the ‘construct-state’ on the head noun in a possessive construction, which is morphologically realized by the loss of final *-m* of the case endings, or of the whole case ending.

- (1) [napišti māt-im]_{CS} eql-um-ma_{CC}
 soul.of land-GEN field-NOM-PART
 ‘the soul of the land is the field.’

3. Complement clauses

There are two types of complement clauses in Akkadian. The first is a fact-type complement, which is introduced by the complementizer *kīma*, and the second covers the two other meanings, activity and potential.

3.1. *kīma* complement clauses

3.1.1. *General structural features* *Kīma* complement clauses are similar in meaning to English ‘that’ complements, and appear mainly with the verbs ‘know’, ‘believe’, ‘complain’, ‘inform’, ‘see’, ‘hear’, ‘prove/establish’, and more rarely with speech verbs. The complement clause is always introduced by the complementizer *kīma*. The verb in the *kīma* clauses is inflected for person, tense, and aspect, and only differs from verbs in declarative main clauses in having a subordinative suffix *-u*. (This suffix also appears on verbs in relative and adverbial clauses.) The negation word in subordinate clauses is *lā*, instead of the main clause negation *ul*. These differences are demonstrated by (2) a *kīma* complement clause, and (3) which has two independent clauses in apposition:

- (2) <*kīma* *še’-am* *lā* *imḥur-u*>
 <COMP barley-ACC not(SUBORD) 3sgA:received-SUBORD>
 bēl-ī *īde*
 lord-1sgPOSS 3sgA:know
 ‘My lord knows that he didn’t receive the barley.’
- (3) *še’-am* *ul* *imḥur* *bēl-ī* *īde*
 barley-ACC not(INDEP) 3sgA:received lord-1sgPOSS 3sgA:know
 ‘He didn’t receive the barley, my lord knows (this).’

When the verb already has A agreement suffixes (e.g. 2fsg A agreement consists of *t-* prefix and *-ī* suffix), the subordinative *-u* is not added, so the verb in the complement clause is indistinguishable from a main verb:

- (4) *anāku* <*kīma* *ṣeḥḥert-am* *lā* *t-iš-ī*>
 1sgA <COMP young.girl-ACC not(SUBORD) 2sgA-have-f>
 ul *īde*
 not(INDEP) 1sgA:know
 ‘I didn’t know that you don’t have a young girl.’ (AbB 1:134)

The verb in *kīma* complements cannot be in the imperative or in the purposive forms, but can appear in any tense and aspect. *Kīma* complements can also be copular clauses, as in (5):

- (5) <kīma [napišti māt-i]_{CS} [eq-l-um-ma]_{CC}> ul tide
 <COMP [soul.of land-GEN]_{CS} [field-NOM-PART]_{CC}> not 2msgA: know
 ‘Don’t you know that the soul of the land is the field?’ (AbB 9:48:14)

Further, one *kīma* can govern two clauses in coordination, as in (16) below.

Before around 1700 BC, the *kīma* clauses are always preverbal, and usually in sentence-initial position, so if A is realized by an independent NP, the order is usually COMP-A-V. More rarely, the complement can be embedded between A and V. There is no significant difference in meaning between the two alternatives, as can be seen from the parallel examples below, both from letters from the chancellery of the same king (Abi-ešuḫ, 1711–1683 BC).

- (6) <kīma 30 puḫādī... ana Bābili lā tublā-nim>
 <COMP 30 lambs to Babylon not 2mplA:brought-DIR>
 PNAME_A iqbī’-am
 PNAME_A 3msgA:said-1sgDAT
 ‘PNAME told me that you did not bring the 30 lambs to Babylon.’
 (AbB 2:75:5)
- (7) PNAME_A <kīma puḫādī... ana ekall-im lā
 PNAME_A <COMP lambs to palace-GEN not
 tubl-am> iqbī’-am
 2msgA:brought-DIR> 3msgA:said-1sgDAT
 ‘PNAME told me that you did not bring the lambs to the palace.’
 (AbB 2:64:5)

From the late Old Babylonian period, around 1700 BC, *kīma* complement clauses start migrating to post-verbal position, as in (8), initially as an option, but in later periods as the norm. *Kīma* complements thus become the only non-bound constituents that follow the verb (relatives and adverbials remain preverbal, except for negligibly rare examples).

- (8) amātū-ki ištenemmeā <kīma lā bēles-sina anāku>
 maids-2fsgPOSS 3fplA:hear:ITER <COMP not lady-3fplPOSS 1sgS>
 ‘Your servants will keep hearing that I am not their lady.’ (AbB 6:188:7’)

Kīma complements are almost always found in O function. They are never found in A function, and only rarely in S function, always as a result of passivization of the main verb:

- (9) <kīma [tupšikk-um šū] lā labirta-šunu>
 <COMP [corvée.work-NOM DEM:msg:NOM] not old.debt-3mplPoss>
 ina [bīt nikkass-i] innamer
 in [house.of accounting-GEN] 3msg:saw:PASS
 ‘It was seen in the accounting office that this corvée work was not their
 old debt.’ (AbB 10:13:15)

The rarity of *kīma* complements in S function may simply reflect the fact that verbs such as ‘hear’ and ‘see’ are rarely passivized. The verb ‘know’, which is the most common verb that takes *kīma*-complements, is never passivized.

3.1.2. *The emergence of kīma complements* In addition to introducing complement clauses, *kīma* is a preposition and adverbial conjunction with a wide range of meaning: ‘as’, ‘like’, ‘instead of’, ‘when’, ‘because’. Adverbial clauses introduced by *kīma* are often structurally indistinguishable from complement clauses. In fact, Deutscher (2000a: 37–65) argued that *kīma* complements developed historically from adverbial clauses. Two main routes seem to converge: the one is the bleaching of the causal meaning of *kīma*, the other is through the equative meaning of *kīma*.

The bleaching of the causal meaning can be demonstrated by (10), which is the earliest example of a *kīma* clause that can be considered a complement clause:

- (10) PNAME šupur-ma <kīma nār-um sekret>
 PNAME write:IMP:msg-PART <COMP river-NOM blocked:3fsg:STAT>
 šūdi-šum
 know:CAUS:IMP:msg-3msgDAT
 ‘Write to PNAME and inform him *because/that* the river is blocked.’
 (TA:40:3’)

The second diachronic development which results in *kīma* complements starts with the equative meaning of *kīma* ‘as’ and can be seen with two verbs used in legal contexts to mean ‘prove/establish/convict’. In the initial stage (11), the verb ‘prove/establish’ appears in a construction of the type ‘establish’ X *kīma*(=as) Y, which has two NP arguments, an O argument (X) and an oblique argument (Y) introduced by *kīma*:

- (11) <kīma waras-su> ukān-šu
 <COMP slave:NOM-3msgPOSS> 3msgA:establish-3msgO
 ‘He establishes him_X as his slave_Y.’ (CH §282)

In (12), the phrase introduced by *kīma* has been expanded to a whole (copular) clause, resulting in a situation where the X element appears twice

in the sentence, both as the O of the main clause, and as the CS of the *kīma* clause:

- (12) <kīma [mār Nippur-i]_{CC} šū_{CS}>
 <COMP [citizen.of Nippur-GEN]_{CC} 3msg:NOM_{CS}>
 ubtirrū-šu
 3mplA:established-3msgO
 ‘They established him_X that he_X is [a citizen of Nippur]_Y.’ (BE 6/2:62)

The next stage is to get rid of the X element as an O argument of the main verb, since it is now redundant, resulting in a genuine complement clause, as in (13):

- (13) <kīma ... ina [bīt PNAME] wašb-u>
 <COMP in [house.of PNAME] 3msg:live:STAT-SUBORD>
 ubirrū
 3mplA:established
 ‘They established that he has been living in the house of PNAME.’
 (AbB 6:181:19’)

Deutscher (2000a: 54 ff.) offers a fuller discussion of the differences between the constructions, and the historical process involved.

3.1.3. ‘*Raising*’ There are two constructions in which a constituent of the *kīma* clause appears outside it, neither of which, however, can be considered as ‘raising’. The first construction, which appears mostly with the verb ‘know’, does not involve movement from complement clause to main clause, but extraposition out of both clauses, to topic position. The subject of the complement is in sentence-initial position, and in the nominative case:

- (14) awīl-**um** <kīma jā’um> ul tīde
 man-NOM <COMP 1sgPOSS> not 2msgA:know
 ‘(concerning the field of my servant,) the man, don’t you know that (he is) mine?’ (AbB 9:198:5)

An initially more promising candidate for a ‘raising’ construction is (12) above, where the subject of the complement clause appears as a pronominal object of the main verb. However, historically, what is behind such constructions is not the raising of an argument from the complement clause into the main clause, but rather a process of merger of two arguments of the proving verbs into one complement clause.

3.1.4. *Recursion* There is just one example in my corpus with recursion of two *kīma* complements:

- (15) <kīma ina lā wašābi-ja
 <COMP in not presence-1sgPOSS
 <<kīma še'-um ina bīt PNAME lā
 <<COMP barley-NOM in house.of PNAME not
 ibašš-û>>
 3msgS:exist-SUBORD>>
 ana šarr-im taqb-û> ešme
 to king-GEN 2msgA:said-SUBORD> 1sgA:heard
 'I heard that in my absence you told the king that there is no barley
 in the house of PNAME.' (AbB 12:172:12')

Such constructions are rare probably because the double initial embedding is very difficult to process. Slightly less rare are infinitive complements within a *kīma* complement:

- (16) <kīma <<ana miks-i makās-i>>
 <COMP <<to tax-GEN collect:INFIN-GEN>>
 taprikā-ma adi inanna
 2mpl:prevented-PART until now
 miks-u lā immaks-u>
 tax-nom not 3msg:collect:PASS-SUBORD>
 [mākis Bābili] idbub
 tax.collector.of Babylon 3msgA:complained
 'The tax collector of Babylon complained that you prevented collecting
 the taxes so that taxes have not been collected yet.' (AbB 11:89:7)

3.2. *Infinitive complement clauses*

The second type of complement clause is traditionally called an 'infinitive' clause, and covers the two other types, 'potential' and 'activity'. The 'infinitive' is a morphologically nominalized form of the verb, which takes case endings (but not number or gender endings, and is always singular and masculine for the purposes of agreement), and does not inflect for person and tense. Note that the term 'infinitive' here refers only to the *morphological* properties of this verbal form, not to its syntactic properties. Syntactically, the infinitive has a wide range of uses. In particular, the infinitive can behave syntactically either as a verb (and head a clause) or as a noun (and head an NP). In (17), the infinitive 'do' heads an NP: the O argument 'work' is realized as a genitive in a normal possessive construction (head noun in construct state, followed by the genitive). When the (morphological) infini-

tive behaves syntactically as a noun, as in (17), it will be said to introduce a (syntactic) nominalization:

(17) (Syntactic) nominalization (with infinitive verb as head of NP)

epěš šipr-im ušaddi
do:INFIN.of work-GEN 3msgA:prevented
'He prevented the performing of the task.'

However, the same morphological form can also behave as a predicate. The infinitive cannot head a main clause (except in a few uncertain poetic examples), but it can head a subordinate clause. Like any other verb, it then appears in clause-final position and takes verbal arguments, as in (18), where the O argument 'task' appears in the accusative. Like verbs, it is then also negated by the (subordinate) negation word *lā* in immediate preverbal position (cf. (2) above). When the (morphological) infinitive behaves (syntactically) as a verb, which is itself an argument in a main clause, as in (18), it will be said to introduce an 'infinitive complement clause'.

(18) Infinitive complement clause (with infinitive verb as head of a clause)

<šipr-am epěš-am> iqbi'-am
<task-ACC do:INFIN-ACC> 3msgA:said-1sgDAT
'He told me to do the task.'

Infinitive complement clauses are generally used with activity and potential meanings, and would typically be translated in English either with an infinitive ('tell him <to do...>') or with an *-ing* form ('he saw them <stealing...>'). The infinitive verb itself is marked as an argument of the main verb by its position before the main verb and by the case ending it takes.

3.2.1. *Infinitive in O function in the main clause* When the infinitive is in O function in the main clause, it appears in the accusative case. Its own

TABLE 1. Structural possibilities for overt NP arguments in infinitive complement clauses.

		Function of the infinitive clause within the main clause		
		S/CS (rare)	Object	Oblique
Case marking of overt NP arguments within the infinitive clause	Subject	NOM (23)	—(nominalization, (33))	GEN
	Object	NOM (24)	ACC (18)	GEN (26) or ACC (27)
	Oblique	GEN (23)	GEN (20)	GEN (25)

O argument also appears in the accusative, as in (18) above. The subject (S or A) of the infinitive clause cannot be expressed. (When the subject of the complement clause needs to be overtly expressed, a nominalization is used instead, as in (33) below.) The identity of the subject in the infinitive complement clause is thus supplied by an argument of the main clause, such as the indirect object, as in (18). Alternatively, the identity of the subject can just be picked up from the context. In the following example, the context makes clear that if a subject is to be supplied, it would have to be ‘my lord told *you* to give ...’

- (19) <[puḫti eql-im šuāti]_O nadān-am>
 <[substitute.of field-GEN DEM:msg.GEN]_O give:INFIN-ACC>
 bēl-ī iqtabi
 lord-1sgPOSS 3msgA:said:PER
 ‘My lord said to give a substitute for this field.’ (AbB 3:74)

Prepositional arguments and oblique roles can freely appear in the infinitive complement clause:

- (20) <ana PNAME nadān-am> aqbi-kunūšim
 <to PNAME give:INFIN-ACC> 1sgA:said-2mplDAT
 ‘I told you to give (her) to PNAME.’ (AbB 6:156)

Infinitive complements in O function are just as likely to appear in sentence-initial position (19), or embedded between an overt A NP and the main verb (21). Note also that it is very common for the O of the infinitive complement (here ‘field’) to be extraposed to sentence-initial position:

- (21) BÜR.IKU A.ŠÀ šarr-um <nadān-am> iqbi’-am
 6.5 hectare field king-NOM <give:INFIN-ACC> 3msgA:said-1sgDAT
 ‘the king told me to give 6.5 hectare field.’ (AbB 4:114:10)

3.2.2. *Infinitive in S or CS function in the main clause* As with *kīma* complement clauses, infinitive complement clauses never appear in A function, but they can (much more rarely) appear in S function due to passivization (22).

- (22) [ribbat rē’-ī] ša <šuddun-um>
 arrears.of shepherd-PL:GEN REL <collect:INFIN-NOM>
 iššaparak-kum
 write:3msg:PASS-2msg.DAT
 ‘the arrears of the shepherd, which it was written to you to collect.’
 (i.e. ‘which you were ordered to collect’) (AbB 13:33:7)

As opposed to *kīma* complements, infinitive complements can also appear in CS position (as in (24) below). When the infinitive clause is in subject (S or

CS) function, its own A, S, or O arguments can all be realized as verbal arguments. In (23), the S of the infinitive complement ('annual dues') is in the nominative, befitting its role within the complement clause:

- (23) <igis-ûm ana Bābili sanāq-um>
 <annual.dues-NOM to Babylon:GEN arrive:INFIN-NOM>
 iqqabû
 3msg:said:PASS:SUBORD
 '(Where) the annual dues arriving in Babylon was ordered.'
 (AbB 2:14:7)

When an infinitive complement in subject position has an O argument, this argument is in the *nominative* case. In (24), for instance, the O argument 'silver' of the infinitive 'weigh' takes a 'logically incorrect' case for its role within the complement clause. This is an instance of case agreement with the infinitive verb, rather than 'raising' to main clause, as can be seen from the parallel construction in oblique role in (26).

- (24) <kasp-um_O šaqāl-um>_{CS} gimill-um ša ...
 <silver-NOM weigh:INFIN-NOM> favour-NOM REL ...
 'Weighing (i.e. paying) silver is a favour which ...' (AbB 1:124:30)

3.2.3. *Infinitive in oblique function in the main clause* Infinitive complement clauses also appear in various oblique roles, after prepositions such as *aššum* 'about/concerning', *ana* 'to', *ina* 'in/on'. In such constructions, the infinitive verb appears in the genitive case (just like NPs, which are always in the genitive after prepositions):

- (25) ina [tuppi šarr-im] aššum <PNAME ana Bābili
 in [letter.of king-GEN] about <PNAME to Babylon
 ṭarād-im> iššapr-am
 send:INFIN-GEN> 3msg:write:PASS-1SGDAT
 'In the king's letter it was written to me about sending PNAME to Babylon.'
 (AbB 13:63:11)
 (i.e. in the king's letter I was ordered to send PNAME to Babylon.)

S, A, and O arguments can be realized in the infinitive clause, but all take the genitive case, again, in a 'hybrid' construction, which while still clearly verbal (rather than an NP), shows case agreement between the argument and the infinitive verb, so that the arguments do not take the logical case of their role in the infinitive clause. Example (26) shows this with an O argument 'sheep':

- (26) *ana* <*immer-ī* *šām-im*> *tašpur-am*
 to <*sheep-PL:GEN* *buy:INFIN-GEN*> *2msgA:wrote-1sgDAT*
 ‘You wrote to me to buy sheep.’ (AbB 9:218:15)

Although constructions such as (26) are very common, there is also an equally common way of avoiding them, by extraposing the O argument of the infinitive clause into sentence-initial position, that is, placing the O argument before the preposition that governs the infinitive clause. The O argument then appears with the ‘logical’ accusative case:

- (27) *šibūt-am*_O *ana* <*epēš-im*> *aqbi-šum*
 need-ACC to <*do:INFIN-GEN*> *1sgA:said-3msgDAT*
 ‘I told him to do the needed (things).’ (AbB 11:115:4)

The underlying process here is not raising, for the noun ‘need’ takes the accusative case not because it has any role in the main clause, but because it is the O argument of the infinitive complement ‘do’. That this is not raising can be seen from parallel constructions, such as (28), where the infinitive clause is an adverbial, and thus its O argument ‘this letter’ has no O function in the main clause, but still appears in the accusative:

- (28) [*tupp-ī* *anni-am*]_O *ina* *amār-im* ...
 letter-1sgPOSS DEM:msg-ACC on see:INFIN-GEN ...
 ‘On seeing this letter of mine ...’

While the prepositions *ana* ‘to’ and *aššum* ‘about’ started historically by introducing infinitive complements in oblique roles (‘in order to’, ‘concerning’), they underwent a common process of bleaching of their adverbial meaning (see Haspelmath 1989). Example (27) above already shows that infinitive clause introduced by *ana* can be used with a meaning indistinguishable from infinitive clauses in O function, as in (19) and (21).

Finally, with the proving verbs, infinitive clauses generally appear after the preposition *ina* ‘in’, in a construction corresponding to English ‘to convict someone_O of (= *ina*) having done something’:

- (29) [*dajān-am* *šuāti*]_O *ina* <[*dīn* *idīn-u*]_O
 [judge-ACC this:ACC] in <[judgement.of 3msgA:judged-SUBORD]
 en-ê-m> *ukannū-šu*
 change:INFIN-GEN> 3mplA:convict-3msgO
 ‘They will convict this judge of having changed the judgement that he gave.’ (CH §5)

- (31) *šibû-um ina qāti-ja amši-ma ul*
 wish-NOM in hand-1sgPOSS 1sgA:forgot-PART not
aqbi-kum
 1sgA:said-2msgDAT
 ‘A wish was in my hand, I forgot, and did not tell you.’
 (i.e. I had a wish, but I forgot to tell you) (AbB 6:57:20)
- (32) *ina aḫīt-im ešme-ma...*
 in neighbourhood-GEN 1sgA:heard-PART...
 ‘I heard (it) in my neighbourhood and ... (the managers were under-provided with workers).’ (AbB 13:78:1)

It seems that with attention verbs, this construction emphasizes the intention behind the act of perception. So (32) implies ‘I have made enquiries and heard that...’, rather than ‘I happened to hear that...’. When the order of the attention verb and the perceived event is reversed, however, it is precisely the unintended nature of the perception which is stressed. For example, ‘20 of us went to gather chaff and many chariots and foot-soldiers were marching towards GN, and we saw (this)’ (AbB 10:150:9) means ‘we happened to see that...’.

4.3. (Syntactic) Nominalization

As mentioned earlier, an infinitive verb can behave syntactically as either a noun or a verb. When it is the head of an NP (as in 17 above), it introduces a (syntactic) nominalization. In such cases, the infinitive behaves as a normal noun in all respects, except that it is always singular and masculine. This NP can appear in any position in the main clause, and the arguments of the infinitive verb (A, S, or O) appear *after* it, in the genitive case, or as bound possessive pronouns, just as in any NP. In (33), the S argument is realized by the possessive pronoun *-šunu* ‘their’:

- (33) PNAME u PNAME... ana šēri-ka
 PNAME and PNAME to presence-2msgPOSS
alāk-šunu ešme
 go:INFIN-3mplPOSS 1sgA:heard
 ‘PNAME and PNAME, I heard their visiting to you.’ (TA:45:6)

It seems that the choice between nominalization and infinitive complement clauses is not determined so much by considerations of meaning, but by structural reasons. As explained in §3.2.1 above, when the infinitive verb is in O function in the main clause, its S argument cannot be realized. In such cases, nominalization is used, as in (33) above.

4.4. *Apposition*

Apposition of two clauses without a coordinating particle is found mainly with the verb ‘know’, which can come before or after the other clause, with no obvious difference in meaning:

- (34) ul tīde ana kâšim-ma taklāku
 not 2msgA:know in 2msg:GEN-PART 1sg:trust:STAT
 ‘Don’t you know? I trust in you.’ (AbB 13:74:13)
- (35) tupšarr-um aššum eql-im anna ipul
 scribe-NOM concerning field-GEN yes 3msgA:answered
 bēl-ī īde
 lord-1sgPOSS 3msg:know
 ‘The scribe answered yes concerning the field, my lord knows.’
 (AbB 2:90:5)

4.5. *‘As you know’*

The ‘as you know’ construction does not appear in the ‘official’ list of complementation strategies, but in Akkadian it is used very often with the verb ‘know’ and with attention verbs, as an alternative to *kīma* complements, perhaps to avoid too heavy or too complex complement clauses. What would have been the ‘complement clause’ appears as the main clause, and the complement-taking verb is in an adverbial clause, introduced by *kīma*, which should here be translated ‘as’:

- (36) kīma tīd-û [ša ana Bābili illak-u]
 as 2msgA:know-SUBORD [REL to Babylon 3msgS:go-SUBORD]
 rīqūs-su alāk-am ul ile”i
 emptiness-3msgPOSS go:INFIN-ACC not 3msgA:can
 ‘As you know, he who goes to Babylon cannot go empty handed.’
 (AbB 11:16:12)

4.6. *Relative clause construction*

Embedded indirect questions are not generally used in Old Babylonian Akkadian (but develop in later periods). Two strategies are used instead: direct questions (‘what did he do? find out!’ for ‘find out what he did’) and a relative clause strategy, as in (37) and (38). In (37), the O argument is headed by an NP, followed by the relative particle *mala* ‘as much as’. In (38), the O argument is a ‘headless relative’, headed by a relative particle *ša*:

- (37) [še'-am mala ina eqel PNAME ibbašû]
 [barley-ACC REL in field.of PNAME 3msgS:exist-SUBORD]
 l-ibirrū
 PURP-3mpl:determine
 'They should determine the barley, as much as (there) was in PNAME's field.' (AbB 2:28:11)
 (i.e. they should determine how much barley was available in PNAME's field.)
- (38) [ša PNAME īpuš-anni] bēl-ī atta ul
 [REL PNAME 3msgA:did-1sgDAT] lord-1sgPOSS 2msgA not
 tīde
 2msgA:know
 'Don't you my lord know that which PNAME did to me?' (AbB 12:125:4)
 (i.e. don't you know what PNAME did to me?)

4.7. Direct speech

Speech is almost always reported directly. The reported speech is mostly introduced by a construction with a quotative particle *umma*. In Old Babylonian Akkadian (the dialect and period described in this chapter) the reported speech does not constitute an argument of the main speech verb, and it is thus not a complement clause. Nor is it a complementation strategy according to the definition of Chapter 1. For a diachronic overview of the grammaticalization of the quotative construction, and its development in later periods towards a complement clause, see Deutscher (2000a: 66–91).

5. Complement-taking verbs

Compared to modern European languages, Akkadian is quite poor on complement-taking verbs, especially those that denote abstract mental states and attitudes. One will look in vain for verbs such as 'suppose', 'assume', 'imagine', 'pretend', 'guess', 'doubt', 'regret', or 'hope'. The main complement-taking verbs are listed below.

Attention verbs such as *amārum* ('see') and *šemûm* ('hear') take *kîma* (fact-type) complements when they describe indirect or figurative perception (that is, when 'hear' means 'hear it said that . . .', and when 'see' means 'understand', or 'work out by seeing'). With direct perception, these verbs take infinitive complements or nominalization (on the grounds for choosing between these, see §4.3 above). They can also be used with coordination (to stress the

intention, or lack thereof, behind the act of perception, depending on the order of the verb and the perceived event, see §4.2). They are also often used with the ‘as you know’ construction.

Thinking (or more appropriately for Akkadian, **knowledge**) verbs, such as *idûm* (‘know’), *lamādum* (‘learn’), *qiāpu* ‘trust/believe’, appear with *kīma* complements, apposition, and the ‘as you know’ construction. There is no obvious difference in meaning between *kīma* clauses and apposition. The verb ‘forget’ only seems to be used with coordination (as in (31) above). The verb ‘remember’ does not seem to be a complement-taking verb in Akkadian: one can remember a thing or a person, but not ‘remember that...’ or ‘remember to...’. One can, however, ‘remind someone to...’ and this is done with the purposive construction: ‘remind the gentleman and he should secure the money’, for ‘remind him to secure the money’. There is no verb for ‘think’, the closest would be ‘speak in your heart’, or ‘plan’.

Liking verbs such as *palāhum* (‘fear’), *magārum* (‘let’, ‘agree’) generally appear with infinitive complements in Old Babylonian.

Speaking verbs such as *qabûm* (‘say’, ‘speak’, ‘order’), *dabābum* (‘speak’, ‘complain’), *šapārum* (‘write’, ‘order in writing’), *apālum* (‘answer’) appear with the following constructions. In the **non-manipulative** sense, they appear most commonly with direct speech (see §4.7). Much more rarely, indirect speech is used, and is realized with a *kīma* complement (as in (6), (7) above), whose structure is identical to the structure of *kīma* complements with other complement-taking verbs. It seems that *kīma* complements with speech verbs appear mainly when some shade of adverbial meaning (‘because’) is still present in the context.

In their **manipulative** sense (‘order’, ‘tell to do’), speaking verbs appear with infinitive complements or with the purposive construction, and the choice between the two is determined by the tense. There is a very strict division of labour between infinitive complement clauses and the purposive construction: infinitive complements are only used when the main verb is in the past, and purposive constructions are used when the main verb is in non-past, including imperative:

- (39) Past:
 ana PNAME alāk-am taqbi
 to PNAME go:INFIN-ACC 2msgA:said
 ‘You said to PNAME to go.’
 (You told PNAME to go.)

(40) Non-Past:

ana PNAME qibi-ma l-illik
 to PNAME say:IMP:msg-PART PURP-3msgS:go
 ‘Speak to PNAME, and he should go.’
 (Tell PNAME to go.)

It is clear why the purposive construction in (40) is inherently unsuitable for expressing manipulation in the past: the purposive form of the verb is necessarily non-past, and had a different form of the verb been used (e.g. ‘I spoke to him and he went’), this would imply successful manipulation (so it would not be possible to complain ‘I told you to do something, so why didn’t you?’). On the other hand, I do not see any obvious reason why infinitive complements are not used in non-past, but they never are in the texts, although there are thousands of examples where they could have been.

The ‘proving verbs’ *kunnum* and *burrum*, which can mean any of ‘prove/establish/convict’, are used with *kīma* complements and with infinitive complements introduced by the preposition *ina*. (On the reasons for choosing one or the other see §3.2.3.)

6. Secondary concepts

Negation is realized by a negation word usually immediately before the predicate.

Modality type: the verb *le’ûm* (‘be able to’) usually takes infinitive complements in Old Babylonian. The concept of obligation (‘should’) is expressed with a purposive prefix on the verb (see §5.1). Modal nuances such as obligation and ability can also be implicit in the non-past verbal form.

Beginning type: ‘begin’ (literally, to ‘seize/set one’s hand to’), and ‘finish’ can appear with infinitive clauses, but often in oblique function, with their arguments raised to the main clause:

- (41) šamaššamm-û ina sapān-im gamer
 sesame-PL:NOM in crush:INFIN-GEN 3msg:finish:STAT
 ‘The sesame is finished in crushing.’ (AbB 14:61:5)
 (i.e. crushing the sesame has finished.)

The verb ‘finish’ can also appear with the coordinating construction ‘to finish and do something’, and then it generally has the adverbial meaning ‘do it completely’:

- (42) eql-am gummer-aššum-ma idn-aššum
 field-ACC finish:IMP:msg-3msgDAT-PART give:IMP:msg-3msgDAT
 ‘Finish to him and give him the field.’ (AbB 4:33:8)
 (i.e. give him the field completely/in its entirety.)

Trying type. The verb *šarāmum* ‘try/make an effort/strive’ can appear in the coordination construction (rather like English ‘try and ...’):

- (43) širim-ma šu-ši-aš-šu
 try:IMP:msg-PART CAUS-GO.out:IMP:msg-DIR-3msgO
 ‘Try and get him out.’ (AbB 14:113:29)

Secondary-B: ‘want’ type nuances are generally expressed with the purposive form of the verb (in first person) ‘let me do something’.

Secondary-C: causative is expressed with a prefix/infix or with gemination of the second root consonant. The verbs ‘agree’ (*magārum*), and ‘let’ (*nadānum*, literally ‘give’) can appear with infinitive complements, as can ‘prevent’ ((16) above).

7. Historical developments

Deutscher 2000a is a detailed examination of the historical development of complement clauses in Akkadian and the diachronic changes in the distribution of the complement clauses and complementation strategies. In outline, there is a clear trend during the historical period towards fact-type complements and towards embedded indirect questions, which in later periods take over some of the functions which were earlier expressed with infinitive complements and with complementation strategies, such as apposition and coordination. During the historical period, we can also observe the rise of a direct speech construction, which in later periods (in the first millennium BC) turns into a more general complement clause construction used with verbs such as ‘hear’ and ‘fear’, not just with speech verbs. This is described in Deutscher (2000a: 66–94).

8. Conclusion

Akkadian has two complement clauses, a fact-type clause which resembles a main clause in structure, and an ‘infinitive complement clause’, with a verbal form that is morphologically nominalized, but can behave syntactically as a verb. The latter covers the activity and potential types. Nevertheless, with some complement-taking verbs, both types of complement clauses can be

used, and the choice between them depends either on nuances of meaning (e.g. direct vs. indirect perception) or on purely structural concerns to do with marking the arguments of the complement clause. Akkadian also has a variety of complementation strategies, including nominalization, a purposive construction, coordination, apposition, and a relative clause construction. Some of these seem freely interchangeable with complement clauses (e.g. apposition and *kīma* complements with the verb ‘know’), some are in tense-based complementary distribution with complement clauses (purposive and infinitive with verbs of manipulation), and sometimes the choice between complementation strategy and complement clause (e.g. nominalization and infinitive complement clause) depends mostly on the structural possibilities of the respective construction in dealing with the different arguments of the clause.

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Abbreviations of text editions

- AbB *Altbabylonische Briefe in Umschrift und Übersetzung* (Leiden: Brill, 1964–)
- BE *The Babylonian expedition of the University of Pennsylvania* (Philadelphia, 1893–)
- CH *Codex Hammurabi*, ed. E. Bergmann (Rome: Pontificium Institutum Biblicum, 1953)
- TA R. M. Whiting, *Old Babylonian letters from Tell Asmar* (Chicago: The Oriental Institute of the University of Chicago, 1987)

Complement Clause Types and Complementation Strategies in Tariana

ALEXANDRA Y. AIKHENVALD

1. Background

Tariana has four types of complement clauses and four complementation strategies which include nominalizations, sequential subordinate clauses, and serial verb constructions. Complement clauses can only occur in O function, while nominalizations can be used in any other function, except for A. Unlike objects expressed with noun phrases, neither complement clauses nor most nominalizations can be targets of passive or any other valency-changing derivation.

Tariana is an endangered North Arawak language spoken by about 100 people in the linguistic area of the Vaupés river basin (north-west Amazonia, Brazil). A fascinating property of this area is its institutionalized ‘multilingual exogamy’ operating between speakers of Tariana and of languages belonging to the East Tucanoan subgroup (with Tucano as its major representative). One can only marry a person who belongs to a different language group (that is, a Tariana can marry a Tucano, or a Wanano, but not another Tariana). There is a strong cultural inhibition against language mixing viewed in terms of borrowing morphemes. Long-term interaction between East Tucanoan languages and Tariana has resulted in the rampant diffusion of grammatical and semantic patterns (though not so much of forms) and calquing of categories. A detailed study of areal diffusion and marriage patterns is in Aikhenvald (2002a).¹

¹ Tariana used to be a continuum of numerous dialects (one for each of several hierarchically organized clans). The only dialect that survives is that of the Wamiarikune, the lowest-ranking clan; within it there are two varieties (Santa Rosa: all children but one do not speak the language) and Periquitos (children do speak the language; but the influence of East Tucanoan languages is stronger).

At present, Tucano is rapidly gaining ground as the major language of the area. As a result of this encroaching dominance, innovative speakers of Tariana display more Tucano-like patterns in their language than do traditional speakers.

A striking feature of Tariana is the way in which the language combines features shared with genetically related Arawak languages and patterns acquired via areal diffusion from genetically unrelated East Tucanoan languages; there are also independent innovations. Comparison with Baniwa of Içana and Piapoco, two North Arawak languages closely related to Tariana but spoken outside the Vaupés area, is particularly instructive. Tariana shares about 85–8 per cent lexicon with Baniwa and about 60–70 per cent with Piapoco; but their morphology and syntax are very different. The structure and usage of both complement clauses and complementation strategies have been affected by the rampant diffusion of patterns from the neighbouring East Tucanoan languages. A combination of areally diffused and inherited patterns partly accounts for the complexity of the Tariana complementation.

2. Typological profile and clause types

Tariana is a polysynthetic agglutinating language with some fusion. Its head-marking properties are inherited from the proto-language, while dependent marking was acquired by areal diffusion from East Tucanoan languages (see detailed discussion in Aikhenvald 2002a). For instance, unlike most other Arawak languages, grammatical relations in Tariana are marked by cases, calquing an East Tucanoan pattern. Constituent order mostly depends on discourse; word order within some constituents is fixed and within others depends on what is in focus. Open classes are nouns and verbs; underived adjectives form a closed class of about thirty members.

Nominal categories are noun classes (with agreement marked on adjectives) and classifiers (on numerals, demonstratives, in possessive constructions, and on verbs in relative and purposive clauses); number; and case. Nouns are inflectionally complex (there can be double agreement in noun class; double marking of grammatical function; and double marking of number).

Verbal categories include tense (fused with evidentiality), various aspects, moods, valency-changing derivations, etc. The structure of a verbal word in Tariana is fairly complex. A simple predicate has one prefix position, up to nine suffix positions, and over ten enclitic positions (see Aikhenvald 2003a: 253–4). Most enclitics are ‘floating’, that is, they attach either to the predicate or to any focused constituent (see Aikhenvald 2002b).

Just as in most Arawak languages, grammatical relations in Tariana are marked with personal prefixes, roughly on an active-stative basis. There is no object marking on the verb. Every verbal root in Tariana is either prefixed or prefixless. Prefixed verbs can be transitive (e.g. *-wapeta* ‘wait for something’), ditransitive (*-bueta* ‘teach’), ambitransitive ($A = S_a$, e.g. *-hima* ‘hear, see, think, understand’, or $O = S_a$, e.g. *-thuka* ‘break’) or active intransitive (S_a , e.g. *-emhani* ‘walk around’). Most prefixless verbs are stative intransitive (e.g. *kasitana* ‘be annoyed’); some are $A = S_o$ ambitransitives (e.g. *nhesiri* ‘like (not food)’ or $O = S_o$ ambitransitives (*hui* ‘like (food); be tasty’).

Grammatical relations are also marked by cases, on a subject/non-subject basis, as shown in Table 1. This system was calqued from East Tucanoan; the markers are of Arawak origin (the core case markers go back to reanalysed locative and oblique markers: Aikhenvald 2003b).

Prefixless verbs fall into two additional types. A prefixless stative S_o verb is shown in (1). Its subject, ‘her husband’, takes the zero subject case. (If focused, it would take the *-ne/-nhe* case.)

- (1) harame-pu-pidana du-saniri
 be.scared-AUG-REM.PAST.REP 3sgf-husband
 ‘Her husband (S_o) got very scared’

Prefixless ‘oblique subject’ verbs (this constituent is termed S_{io} : see Aikhenvald 2001) cover physical and emotional states, and three complement-clause-taking Secondary-A verbs (‘be difficult’, ‘be difficult (to see)’, ‘be easy (to see)’). Unlike prefixless stative verbs, their only argument is in the object case—see (2).

- (2) adaki-pidana di-na
 be.fever-REM.PAST.REP 3sgnf-OBJECT.CASE
 ‘He had fever’ (lit. him was.fever)

Two further oblique cases are the instrumental *-ne* and the locative *-se*. All the case markers appear once per noun phrase, and go onto its last constituent (see Aikhenvald 2003a: 139–62).

TABLE 1. Grammatical relations and core cases in Tariana

Grammatical function	Discourse status	Nouns	Pronouns
subject (A/S)	non-focused	-Ø	
	focused	-ne/-nhe	
non-subject (Non A/S)	non-topical	-Ø	-na
	topical	-nuku	

In addition to simple verbs, Tariana has a variety of complex predicates which include passive, admirative, and a few more, with modal meanings (see Aikhenvald 2003a: 458–9). Contiguous multi-word serial verbs consisting of several grammatical and phonological words are highly productive (see Aikhenvald 2005).

When several clauses are combined to form one sentence, all but the main clause are marked differently depending on whether their subject is the same as, or different from, that of the main clause. This feature (known as switch-reference: see Roberts 1997 for an up-to-date account) is shared with Tucanoan languages, and provides a useful criterion for distinguishing subjects ($A/S_a/S_o$), alongside case marking and same-subject requirement in serial verb constructions. The subjecthood of the S_{io} constituent is somewhat problematic: it is treated on a par with $A/S_a/S_o$ in serial verbs, but not with respect to switch-reference or case marking (see Aikhenvald 2001). The major definitional property of direct objects (which are marked in the same way as obliques) is that they can be targets of the passive derivation, while obliques cannot. Any non-subject constituent can be promoted to the subject slot provided it is more topical than the underlying subject (see Aikhenvald 2003a: 283–5). The subject then triggers classifier agreement on the verb, marked with the suffix *-ni* (this is called topic-advancing derivation).

Tariana has a variety of deverbal agent, object, action, and instrumental nominalizations. Of these, only agent nominalizations can be targets of passives or the topic-advancing derivation. The three fully productive nominalizations employed as complementation strategies (§4) are *-nipe* ‘action, state, and object nominalization’; *-mi* ‘past action, result, and locative nominalization’; and *-ri* ‘non-past nominalization; concomitant action or state’. All nominalizations formed on prefixed verbs cross-reference the A/S_a constituent. Like any other noun phrase, a nominalization can be preposed or postposed to the verb. Nominalizations take only a subset of nominal morphology. They cannot take a plural marker. For the purpose of agreement with modifiers they are treated as collective inanimate nouns, take the plural form of diminutive *-tupe*, and require that the specifier article occur in its singular form.

If a nominalization has a second argument, it cannot be case-marked. Such an argument occurs preposed to the nominalization, e.g. *payaru pa-ni-nipe* (manioc.whiskey IMPERS-make-NOM.ACT) ‘one’s making of manioc whiskey’. Constructions containing a nominalization with an overtly expressed A/S_a are similar to possessive constructions in the innovative younger speakers’ Tariana, e.g. *ñamu di-ni-nipe* (evil.spirit 3sgnf-do-ACT.NOM) ‘evil spirit’s doing’, *ñamu di-whida* (evil.spirit 3sgnf-head) ‘evil spirit’s head’, literally, ‘evil spirit his head’. In contrast, in traditional Tariana, possessive constructions of the

TABLE 2. Main clauses, complement clauses, subordinate clauses, and relative clauses

PROPERTIES	MAIN	COMPLEMENT CLAUSES	SUBORDINATE CLAUSES	RELATIVE CLAUSES
separate value for tense and evidentiality	yes	no (except for purposive clauses and clauses marked with interrogatives)	some	no
switch-reference	no		yes (some)	no
relative tense	no		yes: simultaneous/preceding	yes: simultaneous/ preceding/following
person marking prefixes	full set			‘relative’ prefix replaces person prefixes
classifier agreement with the inanimate S	no ^a	no	no (except for purposive clauses: see §3.2)	yes
interrogative pronouns as subordination markers	n/a	yes	no	yes
case marking on the clause	no	possible	possible (with some exceptions)	possible
ability to occur as predicate head	n/a	no	most	yes
fixed constituent order	no	yes: verb final		no

^a Except if the predicate is in the topic-advancing form.

structure Possessor-Possessed require that the possessed noun take an indefinite cross-referencing marker, e.g. *di-whida* (3sgnf-head) 'his head' and *ñamu i-whida* (evil.spirit INDEF-head) 'evil spirit's head'. That is, nominalizations with an overtly expressed A/S are closer to possessive structures in the innovative Tariana than they used to be in the traditional language.

Tariana distinguishes several types of dependent clause which differ from each other and from the main clauses in a number of properties. They are contrasted with main clauses and with each other in Table 2.

Dependent clauses allow the expression of a reduced set of verbal categories (especially tense and evidentiality). Non-indicative moods and modalities cannot be expressed in dependent clauses at all. Dependent clauses are somewhat similar to noun phrases in that they can be case-marked. Unlike non-clausal noun phrases dependent clauses cannot be targets of passive or the topic-advancing derivation. Complement clauses cannot be coordinated with non-clausal noun phrases; separate clauses are used then.

The marking of grammatical relations within complement clauses and subordinate clauses is the same as that in main clauses. In contrast, relative clauses require different person marking on the verb: the relative prefix *ka-* replaces all other person marking prefixes, and there are relative-clause-specific verbal suffixes (see chapter 23 of Aikhenvald 2003a). All non-main clauses can include peripheral arguments which are marked as they are in main clauses. All clauses are negated in the same way. Complement clauses show more affinities with subordinate clauses than with relative clauses in most features.

Different complementation strategies are employed (a) if a complement clause cannot occur with a verb of a particular group, or (b) if a clausal complement is in the S function, as an alternative to complement clauses. In addition, innovative speakers tend to prefer a Tucano-like complementation strategy to complement clauses. Complementation strategies are addressed in §4. A brief conclusion is in §5.

3. Complement clauses

Table 3 features the types of complement clauses in Tariana and the verbs they occur with. The position of most complement clauses with respect to the main clause is fixed, except for those marked with interrogative pronouns only. All complement clauses but one share their marking with other clause types; but their morphosyntactic properties are different. The last two types of complement clause are characteristic of innovative speakers.

TABLE 3. Complement clause types

COMPLEMENT CLAUSE MARKING	VERBS USED WITH	SEMANTIC TYPE	MARKING SHARED WITH
Subordinator <i>-ka</i> (§3.1)	attention; <i>wade</i> ‘be likely to’	fact, activity potential	sequential subordinate clauses
Purposive (§3.2)	be difficult, be easy; remain; appear; ask (for)	potential, activity	purposive clauses
Interrogative (§3.3)	attention, speech; knowledge	fact, activity	interrogative and relative clauses
‘Mixed type’ (§3.4)	perception	potential	none

3.1. Complement clauses marked with *-ka* ‘subordinator’

Complement clauses marked with the subordinator *-ka* are used in the O slot of verbs of attention. Like all non-main clauses they can take the case marker *-nuku* if topical. The major differences between *-ka* complement clauses and *-ka* sequential clauses are summarized in Table 4. The marker *-ka* is an enclitic because it acquires a secondary stress and conforms to other criteria for clitics (detailed in Aikhenvald 2002b).

I–III. A complement clause, in the O slot of a perception verb, is illustrated in (3). It precedes the main clause, and cannot have separate value for tense and evidentiality. The clitic *-ka* occurs on the predicate of the complement clause.

- (3) <iya di-nawa-ka>_O wa-ka-na
rain 3sgnf-pass-SUBORD 1pl-see-REM.PAST.VIS
‘We saw that the rain passed (or was passing)’

A *-ka* complement clause, in the O slot of the secondary A verb *wade* ‘be likely to’, is shown in (4). Unlike the clause illustrated in (3) it follows the main clause.

- (4) wade-na <na-inu na-ñha-ka>_O
be.likely-REM.PAST.VIS 3pl-kill 3pl-eat-SUBORD
‘They (powerful shamans) are likely to kill and eat (people)’

Note the absence of separate tense-evidentiality marking on the complement clause. In contrast, a sequential clause containing the same marker *-ka* can either precede or follow the main clause, and can have its own tense-evidentiality value, as shown in (5).

TABLE 4. Complement clauses and sequential clauses containing the enclitic *-ka*

PROPERTIES	COMPLEMENT CLAUSES WITH <i>-KA</i>		SEQUENTIAL CLAUSES WITH <i>-KA</i>
	verbs of attention	secondary verb 'be likely to'	no restrictions on the verb in the main clause
I. Position with respect to the main clause	precedes	follows	can precede or follow
II. Placement of the clitic <i>-ka</i>	always on the predicate		on any focused constituent
III. Separate value for tense and evidentiality	no		yes
IV. Case marking on the clause	topical non-subject case	none	topical non-subject and locative cases
V. Semantics	fact, activity	potential	'after', 'when', 'while', 'if'
VI. Coreferentiality with the A/S of main clause	no restrictions	A/S(main)= A/S (complement)	no restrictions
VII. Ability to be coordinated with another clause or NP	no		yes
VIII. Ability to occur as predicate head	no		yes

- (5) [pa-pita-ka] [pa-daki kiaku
 IMPERS-wash-SUBORD IMPERS-body strong
 pa-ña-ka-pida]
 IMPERS-beat-SUBORD-PRES.REP
 hya-se salikida-mhade [hya uni
 you.pl-CONTRAST strength-FUT you.pl water
 pa-pita-ka]
 IMPERS-wash-SUBORD
 'When one washes, when one reportedly hits one's body strongly, you
 will be strong, if you wash in water'

In a sequential clause, the subordinator *-ka* can occur on any focused constituent, and not necessarily on the predicate, as is the case in (6). If the subordinator appeared on the predicate, this example could be that of a complement clause, since the main clause contains a verb of perception.

- (6) [hikayu-ka di-a phianiri] nhua nu-ka-mhade
 like.this-SUBORD 3sgnf-say 2sg+father I 1sg-see-FUT
 nu-anhi-sita
 1sg-recognize-PER
 'If/when your father speaks thus, I will recognize (him)' (not:
 I recognize your father speaking)

IV. If topical, a *-ka* complement clause of a verb of attention can take the topical non-subject case marker *-nuku*. This is illustrated in (7).

- (7) <naha na-yena-ka-nuku>_O
 they 3pl-pass.by-SUBORD-TOP.NON.A/S
 dhima-tha-pidana
 3sgnf+hear-FRUST-REM.PAST.REP
 'He heard (in vain) them passing by (but to no avail)'

Complement clauses of the verb *wade* 'be likely to' take no case marking.

A sequential clause can take locative marking (not just topical non-subject marking, as can the complement clause: this is illustrated in chapter 22 of Aikhenvald 2003a).

V. The semantic differences between complement clauses and sequential subordinate clauses are shown in (3–7) above: the meaning of the sequential clauses is to do with temporal sequence (and may also imply condition), while complement clauses refer to fact and activity. The secondary verb *wade* 'be likely to' takes potential complement clauses.

VI. There are no restrictions on coreferentiality of the subject of a complement clause to a verb of attention with the subject of the main clause. These are not coreferential in (3) and (7); an example of coreferential A/S of the main, and of the complement clause, is under (8).

- (8) <nu-ñu-ka nuka>_O nu-ka-na
 1sg-go.up-SUBORD 1sg+arrive 1sg-see-REM.PAST.VIS
 'I saw that I'd arrived on high ground'

Sequential clauses have no restrictions on the coreferentiality of arguments either. In contrast, the A or S of the *-ka* complement clause of *wade* 'be likely to' has to be coreferential with its A or S. (If it is not coreferential, a different, also biclausal, construction is used.)

VII. Two sequential clauses marked with *-ka* can be coordinated, via juxtaposition—which is impossible for complement clauses. An example is under (9).

- (9) [kayu pi-ni-ka] [puwhi-ka] pi-wha-nha phia
 thus 2sg-do-SUBORD be.glad-SUBORD 2sg-sit-PRES.VIS.INTER you
 'Having done this, are you sitting being happy?'

VIII. A sequential clause can be a head of intransitive predicate on its own—see (10).

- (10) [dekina dhipa-ka-se] wa:-na
 afternoon 3sgnf+take-SUBORD-LOC 1pl+go-REM.PAST.VIS
 sei.hora [dhipa-ka-se-na]_{Predicate.head}
 six.o'clock 3sgnf+take-SUBORD-LOC-REM.PAST.VIS
 'At the very point when it became afternoon, we went (off). It was
 (exactly) when it became six o'clock'

Once again, complement clauses are not used this way.

The origin of the Tariana subordinator *-ka* deserves special mention. Tariana shares the subordinator *-ka* as a marker of complement clauses with Baniwa of Içana, its closest relative.² The *-ka* complement clauses in the two languages differ in two respects. First, *-ka* complement clauses in Tariana only occur with verbs of attention, while in Baniwa they are used with a wider variety of verbs, including 'want'. (Tariana, just like Tucano, uses a serial verb

² This marker in the same function is attested in Bare (Aikhenvald 1995), as part of subordinating morphemes in Piapoco (Klumpp 1990: 188–9), and possibly also as a complementizer (Klumpp 1990: 224). Also see Metzger (1998), on the functions of *-ka-* in Arawak, Tucanoan, and other South American languages. I have no data concerning the origin of the complement clauses with *wade* 'be likely to'; no cognates have so far been found for this verb.

construction if the subject of ‘want’ is the same as that of the embedded clause, or a nominalization if the subjects are different.) Secondly, in Tariana the *-ka* complement clause is preposed to the main clause, and in Baniwa it is postposed—compare (11a) and (11b). The translation is the same. Also see Aikhenvald (2002a: 161–2).

Baniwa

- (11) (a) *ri-kapa-pida* <*ri-wha-ka-pida* *kadzawata*>_O
 3sgnf-see-REP 3sgnf-sit-SUBORD-REP like.this

Tariana

- (11) (b) <*kayu* *di-wha-ka*>_O *di-ka-pida*
 thus 3sgnf-sit-SUBORD 3sgnf-see-PRES.REP
 ‘He reportedly saw him sitting like this’

The suffix *-kã* in Tucano marks different subject in clause combining and is also employed as a complementation strategy with verbs of perception. Any subordinate clause in Tucano precedes the main clause, and a clause marked with *-kã* ‘different subject’ is no exception (Ramirez 1997, Vol. 1: 272):

Tucano

- (12) [*koô* *bu’ê-kã*]_{COMPLEMENTATION.STRATEGY} *ĩ’yâ-mi*
 she study-DS see-PRES.VIS.3sgnf
 ‘He sees her study’ (lit. ‘she studying (different subject), he sees’)

The *-ka* complement clauses in Tariana contain a marker inherited from the proto-language. Its functions as a complementizer have been reduced through matching a lookalike in the contact language. The position of the clause it is in also changed to align with Tucanoan patterns. This is a process known as ‘grammatical accommodation’ (defined in Aikhenvald 2002a: 5). It involves grammatical change whereby morphemes with a phonological shape similar to those in a contact language acquire new meanings found in the contact language. Further examples of how Tariana morphemes acquire Tucano-like meanings under the influence of Tucano lookalikes are discussed in Aikhenvald (2002a: 148–51, 214, 225–7).

The interaction of genetic and areal patterns in the Tariana *-ka* complement clauses is summarized in Table 5.

3.2. *Purposive-marked complement clauses*

Tariana has two purposive markers, with an evidentiality distinction of their own. Unlike main clauses which distinguish five evidentials (visual, non-visual, inferred, assumed, and reported), all purposive clauses distinguish

TABLE 5. Inherited and diffused features in Tariana *-ka* complement clauses

	Baniwa of Içana (Arawak)	Tariana (Arawak)	Tucano (East Tucanoan)
<i>-ka</i> ‘complementizer’	yes		a lookalike <i>-kã</i> ‘DS’; major function: marking clause chaining
contexts used	most Primary-B, Secondary-A and B (11a)	Primary-B ‘attention’ (3, 7, 8, 11b)	Primary-B ‘attention’ as complementation strategy (12)
position of clause	postposed to the main clause	preposed to the main clause	

visual *-karu* and non-visual *-hyu*. Complement clauses marked with the purposive have the same distinction. Table 6 contrasts complement clauses with purposive marking and purposive subordinate clauses. No purposive-marked clauses take any case markers. Instead, they can occur with the nominal future marker *-pena*.

I–II. A complement clause can fill an O slot of a complement-clause-taking verb with a non-canonically marked argument (see a non-canonically marked argument in (2)), as shown in (13).

- (13) <du-haniri-ne pa-sape-hyu>_O manhina-ma-na
 3sgf-father-INST impers-speak-PURP.NVIS be.hard-EXCES-REM.PAST.VIS
 nu-na_{SIO}
 1sg-OBJECT.CASE
 ‘It was hard for me [to speak with her father]’

The verb ‘ask’ (in itself a serial verb construction, in square brackets, whose literal meaning is ‘greet-hear’) also takes a complement clause marked with purposive, as in (14). However, the complement clause is postposed to the main clause.

- (14) pi-na [nu-sata nhuma-na]
 2sg-OBJECT.CASE 1sg-greet 1sg+hear-REM.PAST.VIS
 <pi-wha-nipe pi-kalite-karu>_O
 2sg-sit-NOMN 2sg-tell-PURP.VIS
 ‘I asked you to tell your life(story)’

A purposive clause can either precede or follow the main clause.

TABLE 6. Purposive-marked complement clauses and purposive clauses: a comparison

PROPERTIES	COMPLEMENT CLAUSES WITH PURPOSIVE MARKING		PURPOSIVE SUBORDINATE CLAUSES
Verbs	I. complement-clause-taking verbs with non-canonically marked arguments: be difficult; be easy	II. ask	any verb
I. Position with respect to the main clause	precedes	follows	can either follow or precede
II. Syntactic function	O		purpose (oblique constituent)
III. Interrogative subordinator	<i>kwe</i> 'how/what' (optional)	none	
IV. Semantics	potential		purpose 'in order to'
V. Coreferentiality with an argument of the main clause	S_{io}	O	no requirements
VI. Ability to be coordinated with another clause or NP	no		yes
VII. Classifier agreement	no		yes (with S/O)
VIII. Ability to occur as predicate head	no		yes

III. Two verbs meaning ‘be difficult’ (*mahyuna* ‘be hard’ and *manhina* ‘be hard (to see, understand)’) can also occur with the subordinator *kwe* ‘how/what’, as shown in (15). This is not used with the verb ‘be easy’, *kanhina*, or ‘ask’.

- (15) ne <(kwe) pa-thaka-hyu>_O mahyuna-ma-pidana
 then how/what IMPERS-CROSS-PURP.NVIS be.hard-EXCES-REM.PAST.REP
 na-na
 3pl-OBJECT.CASE
 ‘It was hard for them to cross (the rapids)’

IV. The complement clauses marked with purposive have potential meaning, while purposive clauses mark purpose—see (16).

V. The A/S of the predicate of the complement clause with verbs ‘be difficult’, ‘be easy’ is always coreferential with the *S_{io}* constituent (which, despite the object case it takes, has a certain number of subject properties), as in (13): ‘it was hard for *me_i* to speak_i with her father’. The A/S of the verb ‘ask’ is coreferential with O. There are no such restrictions for purposive subordinate clauses.

VI. As is the case with all complement-clause-taking verbs, an NP can occur in the same slot as a clause (see the first clause in (13)). But the two cannot be coordinated; neither can two complement clauses. (Two purposive subordinate clauses can be coordinated, just like *-ka* sequential clauses in (9).)

VII–VIII. Example (16) illustrates classifier agreement with the object marked on a purposive subordinate clause, and the ability of a purposive clause to be the head of an intransitive predicate (underlined).

- (16) dinheiro wa-na pi-panoa [panisi wa-phi-karu-dapana]_{PURP.CL}
 money 1pl-OBJECT.CASE 2sg-send house 1pl- buy-PURP.VIS-CL:HOUSE
 São Gabriel-se waka-karu-dapana-mhade_{PURP.CL.AS.HEAD.OF.PREDICATE}
 São.Gabriel-LOC 1pl+arrive-PURP.VIS-CL:HOUSE-FUT
 ‘Send us money for us to buy a house. It will be a (house) for us to arrive at in São Gabriel’

This is comparable to how a sequential subordinate clause can head a predicate—see (10). None of these properties is characteristic of complement clauses.

Purposive markers in Tariana are shared with Baniwa of Içana; both mark purposive subordinate clauses. The ways in which purposives are used in Tariana complement clauses are similar to Tucano future nominalizations

(see Aikhenvald 2002a: 122–3, on other aspects of their functional similarities). We can thus hypothesize that the purposive-marked complement clauses in Tariana developed as a result of language contact.

3.3. Complement clauses marked with interrogative pronouns

Interrogative pronouns mark complement clauses which occupy the O slot of verbs of perception and verbs of speech. They take the full set of tense-evidentiality values characteristic of main clauses, and can precede or follow the main clause. Speakers vary in whether they employ the declarative set of evidential markers, with five distinctions; or the interrogative set, with only three specifications: visual, non-visual, and inferred (which correspond to the inferred, assumed, and reported specification in the declarative system). The spread of this type of complement clause could have been influenced by Tucano and Portuguese (see Aikhenvald 2002a: 165–6). An example is in (17). No evidentials are used in the main clause, since it contains an imperative.

- (17) pi-sata-thara phima di-na
 2sg-greet-PRECATIVE 2sg+hear 3sgnf-OBJECT.CASE
 <kida-nha kaweni>_O
 how.much-PRES.VIS.INTER cost
 ‘Ask him how much (it) costs’

Complement clauses of this kind are also found in Baniwa and in Piapoco; their appearance may be due to the influence of Portuguese and Spanish.

The difference between a complement clause and a direct speech complement lies in the intonation: if (17) were a biclausal construction with an interrogative direct speech complement, there would be a pause between the two clauses, and a slightly rising intonation on the second clause characteristic of a question.

Unlike the complement clauses outlined in §§3.1–2, complement clauses with interrogative pronouns cannot be case-marked, and do not have to have a fixed constituent order. In this, they are closer to main clauses than other complement clauses.

Of all the ‘thinking’ Primary-B verbs, complement clauses marked with interrogatives can only occur with the verb of knowledge, *-yeka* ‘know’ (also see §4.1). Its negative counterpart, the inherently negative proclause *hāida* ‘I don’t know’ (used exclusively with first person), can only take an interrogative-marked complement clause. Note that *hāida* is not a verb.

- (18) *hāida* <kanapada-dapana alia alia-mha
 I.do.not.know how.many-CL:HOUSE EXIST EXIST-PRES.NVIS
Yawhipani-se>_O
Iauaretê-LOC
 ‘I do not know how many houses there could be in Iauaretê’

This is the only negator expressed as a Secondary-A predicate (see Table 9). Since *hāida* does not take NP arguments, a complement clause in (18) cannot be replaced with an NP. This is unlike any other complement-clause-taking predicate head. *Hāida* is typically used as a short response to questions directed at first person. A negated form of *-yeka* ‘know’ is employed under all other circumstances (see discussion in §4.1.2).

3.4. Complement clauses of mixed type

Innovative speakers employ an additional kind of complement clause in the O slot of verbs of perception. Its predicate is marked with *-ka*, just as in §3.1, and it contains an interrogative *kwe* ‘how/what’, as in (19). These clauses have all the properties of the *-ka* complement clauses, except for one: they cannot be case-marked (just like the interrogative-marked clauses in §3.3).

- (19) <*kwe* di-a-ka>_O wa-ka wha
 how/what 3sgnf-go-SUBORD 1pl-see we
 ‘We’ll see what happens’ or ‘We’ll see what is going to happen’

The same structure occurs in the traditional language, but with a somewhat different meaning. All interrogative pronouns in Tariana are polysemous: they also have a distributive meaning, e.g. ‘who’ also means ‘whoever’, ‘where’ means ‘wherever’, and so on. The sentence in (20), from a story told by the oldest speaker of Tariana, Américo Brito, contains some of the same morphemes as in (19), but the meanings of the two are not identical. In the story, (20) is preceded by a description of various activities the Tariana people were involved in back in the good old days that only Américo was old enough to see all of.

- (20) <*kwe* na-ni-ka>_O nu-ka-na
 how/what/whatever 3pl-do-SUBORD 1sg-see-REM.PAST.VIS
 ‘Whatever they did, I saw (it)’

The tendency to introduce interrogative pronouns in complement clauses and in complementation strategies is typical of those who mostly speak Tucano.

TABLE 7. Complement clauses: a comparison

PROPERTIES	COMPLEMENT CLAUSES WITH -KA		COMPLEMENT CLAUSES WITH PURPOSIVE MARKING		COMPLEMENT CLAUSES WITH INTERROGATIVES	MIXED TYPE
	attention	'be likely, capable'	'be difficult', 'be easy'	'ask'	perception, speech, knowledge	perception
(ii) Position with respect to the main clause	precedes	follows	precedes	follows	precedes or follows	precedes
(iii) Separate value for tense and evidentiality	no		yes (evidentiality distinctions same as in purposive subordinate clauses)		same as interrogative or declarative clauses	no
(iv) Case marking on the clause	yes		no			
(v) Semantics	fact/activity	potential	potential		fact, activity	potential
(vi) Subordinating pronoun	none		optional <i>kwe</i> 'how/what'	none	interrogatives	<i>kwe</i> 'how/what'
(vii) Coreferentiality with the A/S of main clause	no restrictions	A/S coreferential	S _{io} coreferential	no restrictions		

3.5. *Properties of complement clauses: a comparison*

The four major types of complement clauses are contrasted in Table 7. As has been shown above, their major differences lie in: (i) verb types employed, (ii) position with respect to the main clause, (iii) separate value for tense and evidentiality, (iv) case marking on the clause, (v) the semantics of the clause, (vi) the presence of a subordinating interrogative pronoun, and (vii) coreferentiality with the A/S of main clause.

The properties shared by all complement clauses are:

- I. All complement clauses can be replaced with an NP. The only complement-clause-taking negator, meaning ‘I don’t know’, is unusual in that it can only take an interrogative-marked complement clause which cannot be replaced with an NP.
- II. All complement clauses occupy the O slot.
- III. No complement clause can be the target of passive or other valency-changing derivation.
- IV. No complement clause can be coordinated with another clause or with an NP.
- V. No complement clause can be the head of an intransitive predicate.

4. **Complementation strategies**

The choice of one of four complementation strategies—serial verb construction, quasi-serial verb construction, sequential subordinate clause marked with *-ka*, and nominalizations—in place of a complement clause depends on (a) type of verb (see §4.1) and (b) type of syntactic function of the clausal complement (see §4.2). Table 8 summarizes these correlations.

TABLE 8. The choice of complementation strategies over a complement clause

TYPE OF STRATEGY	CONDITIONS
Serial verb construction	some Primary-B and A, most Secondary-B and C (§4.1.1)
Quasi-serial verb construction	Secondary-A modal type (§4.1.2)
Sequential subordinate clause	some Primary-B verbs (including all stative verbs) (§4.1.3) Secondary-C verb ‘make’ (§4.1.3)
Nominalizations	some Primary-B and Secondary-B verbs (§4.1.4) syntactic function of clausal complement (§4.2)

4.1. *Complementation strategies and types of verb*

Verbs which cannot take complement clauses employ a complementation strategy. We discuss these one by one. Table 9 features the distribution of complement clauses and complementation strategies among verb types (following the types outlined in Chapter 1).

4.1.1. *Verb serialization* A number of Primary-B verbs, two kinds of Secondary-A verbs (BEGINNING and TRYING types) and most Secondary-B

TABLE 9. Verb types, complement clauses, and complementation strategies

PRIMARY-B		
ATTENTION:		
(a) see, hear, show	}	-ka complement clause (§3.1), interrogative-marked complement clause (§3.3), mixed-type complement clause (§3.4)
(b) recognize, find, discover		
THINKING:		
think, assume, suppose, remember		-ka complement clause (§3.1), nominalization (§4.1.4)
dream		nominalization (§4.1.4)
forget, lie		serial verb construction (§4.1.1)
know (that), teach		nominalization (§4.1.4), interrogative-marked clause (§3.3)
understand		-ka complement clause (§3.1) (same verb as 'hear')
believe, etc.		nominalization (§4.1.4)
LIKING:		
(a) like, enjoy		-ka complement clause (§3.1)
love, cherish		nominalization (normally only takes an NP) (§4.1.4)
regret, be sorry		-ka sequential subordinate clause (§4.1.3)
(b) fear		-ka sequential subordinate clause (§4.1.3)
SPEAKING:		
(a–d) say, report, tell		nominalization (§4.1.4)
(a) ask		purposive-marked complement clause (§3.2)
(e) order, command		serial verb construction (§4.1.1)
SECONDARY-A		
(i) negator		<i>hāida</i> 'I do not know': interrogative-marked clause (§3.3)
(ii) modal type:		-ka complement clause (§3.1)
capable/likely		serial verb construction (§4.1.1)
be able, know how to		serial verb construction (§4.1.1)
not be able (intrinsic capacity)		quasi-serial verb construction (§4.1.2)
not know how to		serial verb construction (§4.1.1)
need		serial verb construction (§4.1.1)
be easy, be difficult		purposive-marked complement clause (§3.2)

TABLE 9. (*Continued*)

(iii) beginning type	serial verb construction (§4.1.1)
(iv) trying type	serial verb construction (§4.1.1)
SECONDARY-B	
want (SS), be unwilling, intend, pretend, play at, imitate	serial verb construction (§4.1.1)
want (DS)	nominalization (§4.1.4)
plan for, arrange	NP, rarely nominalization (§4.1.4)
SECONDARY-C	
make, cause, force, help	serial verb construction (§4.1.1)
make	biclausal construction similar to <i>-ka</i> sequential and complement clause (§4.1.3)

and C verbs occur as Minor components of asymmetrical serial verb constructions. Any verb can occur in the Major component slot. Serial verb constructions in Tariana are sequences of verbs with no marker of syntactic linkage, which form one predicate, sharing the same person marking and tense, aspect, mood, modality, and evidentiality values. Details are in Aikhenvald (2006).

The only Primary-B verbs which have to be serialized are verbs of order and command (SPEAKING type, subtype e) and the verb of forgetting and lying (THINKING type; see Aikhenvald 2003c: 158, on how the two meanings are disambiguated through the use of evidentials). In serial constructions involving verbs of order and command, and also Secondary-C verbs meaning ‘make’, ‘cause’, and ‘help’, both verbs are marked for the same subject, despite the fact that their underlying subjects are different. In (21) the person who is ordering (‘I’) and the person to whom the order is issued (‘he’) are not the same; yet the serial verb requires the same cross-referencing on both components. A serial verb construction is in square brackets.

- (21) [nu-ira-de nu-nu] di-na
 1sg-order-FUT.CERT 1sg-come 3sgnf-OBJECT.CASE
 ‘I will order him to come’ (lit. I-order I-come him)

One Secondary-A verb of modal type, *ira* ‘need’; all the verbs of beginning and trying type; all Secondary-B verbs (with the exception of ‘plan’); and all Secondary-C verbs (with the exception of *-ni* ‘make, do’) occur in serial verb constructions (see details in Aikhenvald 2006).

4.1.2. *Quasi-serial verb constructions* The Secondary-A modal verb *-yeka* ‘know how to; be able to’ is used in a serial verb construction, where it follows

the major verb, e.g. *ka-phyā ka-yeka* (REL-whistle REL-can) ‘the one who knows how to whistle; the one who can whistle’. When negated, it can be used either in a serial verb construction or in a quasi-serial verb construction (always following the major verb.) The only difference between serial verb constructions and quasi-serial verb constructions is the presence of the subordinator *kwe* ‘how/what’ in the latter. In the meaning of ‘not know/not to have a skill how to do something’, *-yeka* requires the subordinator. A quasi-serial verb construction is in curly brackets.

- (22) ne kwe {ma-ni-kade nu-yeka-na}
 then how/what NEG-do-NEG 1sg-know.how.to-REM.PAST.VIS
 malie-ne
 knife-INST
 ‘Then I did not know (how to cut the whole tapir) with a knife’
 (the knife was not big enough)

In a serial verb construction, *-yeka* means ‘be able to’, referring to an intrinsic uncontrollable ability, as in (23). A shaman was unable to die—he was immortal.

- (23) [ma-yami-kade-tha-pidana di-yeka] diha-yana
 NEG-die-NEG-FRUST-REM.PAST.REP 3sgnf-be.able he-PEJORATIVE
 ‘The nasty one (shaman) could not die’

4.1.3. *Sequential subordinate clauses* Sequential subordinate clauses are employed as complementation strategy with Primary-B verbs of liking. All these verbs are stative (S_o). They rarely occur in serial verb constructions (Aikhenvald 2003a, 2006), and do not take complement clauses. To say ‘I am annoyed at X doing Y’, or ‘I am sorry that X did Y’ the only option is to use a sequential subordinate clause, as shown in (24). A sequential clause can be marked with the subordinator *-ka* (or any other subordinator: see list in Aikhenvald 2003a: 515–31). Their properties were summarized in Table 4.

- (24) [kay du-ni-ka] hanipa kawalikupeda
 thus 3sgf-do-SUBORD much regret/be.sorry
 di-ya-ka-pidana diha du-sa-niri
 3sgnf-stay-DEC-REM.PAST.REP he 3sgf-spouse-MASC
 ‘She having done thus, her husband regretted it’

This sentence is ambiguous: it can be interpreted as ‘her husband regretted (it) after she did thus’, or ‘he regretted that she did that’. In the context of the

story either reading appears appropriate. The second reading is somewhat preferred because within the story the man is sorry for his wife and for the ritual blunder she had committed. Along similar lines, (9) can also be understood either as ‘are you sitting being happy at having done this’ or ‘are you sitting being happy after having done this’. The ambiguity can be resolved only by context.

Sequential clauses marked with the subordinator *-ka* occur with verbs of THINKING, e.g. *-hima* ‘think, feel, understand, hear’, *-hime(ta)* ‘think, feel’,³ *-awada* ‘remember, think of past or future’, *-anihta* ‘reason, think’. The preferred structure is however different from (24): the verb of thinking occurs in a subordinate clause. Instead of saying ‘I think that it is right’, one says *nhume-ta-ka pawali-naka* (1sg+think+CAUS1-CAUS2-SUBORD right-PRES.VIS) ‘me thinking, it is right’. Another, more frequent, alternative is a nominalization: see the next section.

4.1.4. *Nominalizations* Nominalizations are used as complementation strategies with Primary-B verbs of the THINKING type, e.g. ‘teach’ and ‘know (that)’ in (25). Here, a nominalized serial verb construction ‘reach, arrive’ meaning ‘be sufficient’, with two overtly marked arguments ‘money’ and ‘to me’, takes just one marker of action nominalization *-nipe*. The serial verb construction and its arguments are in square brackets.

- (25) nuha matji nu-rena-ka-mha [nu-na dineru
 I bad 1sg-feel-DEC-PRES.NVIS 1sg-OBJECT.CASE money
 ne: meru-kade di-uka-nipe] phia
 NEG NEG+reach-NEG 3sgnf-arrive-NOM.ACT] you
 pi-yeka-tha-pada
 2sg-know-FRUST-COUNTER
 ‘I am in a bad way, you do know that money is not sufficient for me’
 (and are not sending me any)

The verbs of mental processes mentioned at the end of §4.1.3 typically occur in the form of *-ri* nominalization whose main meaning is ‘non-past nominalization and concomitant action’. A frequent way of saying ‘I think that this is right’ is *nhua nhume-ta-ri-nuku pawali-naka* (I 1sg+think+CAUS1-CAUS2-NOM-TOP.NON.A/S right-PRES.VIS) ‘to my thinking it is right’.

³ The verb *-hima* takes a *-ka* complement clause when used as a perception verb. The verb *-hime(ta)* is formally a causative of *-hima*; see Aikhenvald (2000) on the semantics of causative morphology with transitive verbs in Tariana.

Primary and Secondary-B verbs which express secondary concepts and typically take only NP arguments include *tapulisa* ‘dream’, *-mesa* ‘cherish’, *-hepa* ‘answer, obey’, a serial verb *-hepa -de* (obey have) ‘believe’, and *-kakwa* ‘plan for’ and *-wa* ‘mark, arrange’. All of them can also take nominalizations as arguments, especially in the innovative Tariana.

Synchronically, different meanings of a polysemous verb can be differentiated by the complementation strategy it occurs with. The verb *-wa* in the meaning of ‘try’ is obligatorily serialized and expresses a Secondary-A concept. The same verb also means ‘plan, mark, arrange’, expressing a Secondary-C concept. In this meaning it can only take an NP or a nominalization.

The choice of a nominalization as a complementation strategy with Primary-B verbs of speaking and Secondary-B verb ‘want’ depends on whether the subject of the clausal complement is coreferential with that of the verb in the main clause or not.

If its subject is not coreferential with that of the verb in the complement, the verb ‘want’ requires a nominalization (we can recall, from §4.1.1, that serial verb constructions have to have the same subject). The *-ri* nominalization is the preferred option:

- (26) du-yami-ri-pida di-na-tha diha
 3sgf-die-NOMN-PRES.REP 3sgnf-want-FRUST he
 ‘He wanted her to die in vain, I am told’

Innovative speakers tend to use nominalizations as a complementation strategy where a complement clause is expected in the traditional variety. This agrees with the patterns in Tucano and other East Tucanoan languages.

A prominent feature of Tucano complementation and clause linking in general is the use of nominalized verb forms (see Ramirez 1997, Vol. 1: 132, 279–311; 1997, Vol. 3: 204–5). Innovative speakers tend to use nominalizations instead of complement clauses.

A nominalization with a verb of perception—where a *-ka* complement clause would be appropriate—is illustrated in (27). The translation is the same in both languages. The Tariana example comes from an innovative speaker. A traditional speaker would have used a *-ka* clause.

Tucano

- (27a) marî diakĩhi buû a‘tî-gĩ’
 we straight.towards agouti come-NOMN.MASC.SG
 akôro-mi
 hear-PRES.VIS.3nfs

Tariana

- (27b) wa-dalipa phifi di-nu-ri phema-ka-naka
 1pl-towards agouti 3sgnf-come-NOMN IMP+hear-DEC-PRES.VIS
 ‘One can hear an agouti come towards us’

This usage is not considered good style by traditional speakers.

4.2. *Complementation strategies, and the syntactic function of clausal complement*

Unlike complement clauses which can only occur in the O function, deverbal nominalizations can occupy any slot except for A. An example of a nominalization in S slot is (28). Note that the nominalization has an overtly marked object (the verb ‘work (on) rubber’ is transitive). Unlike complement clauses, a nominalization can be an argument of a postposition, e.g. *du-sape-mi kayu* (3sgf-say-NOM.RES like) ‘in agreement with what she’d said’.

- (28) diha iri wehpani-nipe di-sisa-na
 ART sap 1pl+work-NOM.ACT 3sgnf-end-REM.PAST.VIS
 ‘Our working on rubber finished’

Nominalizations can be used in lieu of complement clauses, to distinguish between activity and fact. We saw, in §3, that complement clauses cover both and are thus ambiguous. The *-mi* nominalization explicitly focuses on the result, and the *-nipe* nominalization on the activity. That is, (29) and (30) are alternatives to (3), but their meaning is somewhat different.

- (29) iya di-nawa-nipe wa-ka-na
 rain 3sgnf-pass-NOM.ACT 1pl-see-REM.PAST.VIS
 ‘We watched (the process of) the rain passing’
 (30) iya di-nawa-mi wa-ka-na
 rain 3sgnf-pass-NOM.RESULT 1pl-see-REM.PAST.VIS
 ‘We saw the (result or the place of) the rain passing’

5. Conclusions

Tariana has four types of complement clauses and four complementation strategies. Two complement clauses share their morphological marking with a sequential and with a purposive subordinate clause; these differ in numerous properties (Tables 4 and 6). Another complement clause contains interrogative pronouns. The fourth clause, characteristic of the innovative Tariana, is of mixed type—it contains interrogative pronouns and the complementizer *-ka*.

A clause can be recognized as a complement clause through a variety of properties which include its ability to be replaced with an NP or a nominalization, lack of separate marking for tense and evidentiality, its inability to be coordinated with another clause or NP and to head an intransitive predicate. Parameters of variation include the position with respect to the main clause, the ways clauses are marked, and the amount of case morphology they can take. All complement clauses are O arguments to a verb.

The choice of a complementation strategy over a main clause is conditioned by the following factors.

- A. VERB TYPE. Some Primary-B and A, most Secondary-B and C verbs obligatorily occur in serial verb constructions; one Secondary-A modal type verb requires a quasi-serial verb construction, which differs from regular serial verbs by the presence of a subordinator *kwe* 'how/what'; some Primary-B verbs require sequential subordinate clauses; and some Primary-B and Secondary-B verbs can only take nominalizations as clausal complements. Direct speech complements are used with verbs of speaking.
- B. SYNTACTIC FUNCTIONS OF A CLAUSAL COMPLEMENT. If a clausal complement is in a function other than O, a nominalization is to be used. A clausal argument cannot be in A function.

Innovative speakers tend to use NOMINALIZATIONS as a complementation strategy where a complement clause is expected in the traditional language, following the patterns in the dominant Tucano language.

All the complement clauses bear an impact of language contact. The marking of *-ka* complement clauses and of purposive clauses is inherited from the proto-language, but their syntactic properties are largely due to areal diffusion from Tucano. Complement clauses with interrogative pronouns are a feature of most indigenous languages of the area, perhaps enhanced by the recent contact with national languages, Spanish and Portuguese. The use of nominalizations has been influenced by Tucanoan patterns.

Apposition of clauses can replace any other strategy or any complement clause as a preferred stylistic option in storytelling. This is undoubtedly the oldest strategy, and the only one Tariana shares with the North Arawak languages Piapoco and Baniwa of Içana. This could indicate its Arawak roots, especially since apposition of clauses does not appear to be at all widespread in Tucanoan languages.

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Complement Clause Type and Complementation Strategies in Goemai

BIRGIT HELLWIG

This chapter discusses one complement clause type and several complementation strategies in Goemai, a West Chadic language (Afroasiatic, Chadic, West Chadic A, Angas-Goemai, Southern Branch) that is spoken in the Jos Plateau area of Central Nigeria.

The Jos Plateau is an old language area, where speakers of non-related Chadic and Benue-Congo languages have been in contact over many centuries, leading to the emergence of near-identical grammatical structures in the different languages (Ballard 1971; Gerhardt and Wolff 1977). Due to the scarcity of available information, it is not known whether the patterns reported in this chapter are shared by the different Jos Plateau languages. Over the past fifty years, the type of contact has changed, and one single language, Hausa, has become the dominant *lingua franca*. As a result, languages like Goemai are in the process of being replaced: Hausa has developed into the main means of everyday communication as well as into the first, and often only, language acquired by children.

Goemai shows similarities to other West Chadic languages in the semantic extensions of the complement clause and the complementation strategies, but it differs in the obligatoriness of its complementizer, and in the restricted use of nominalization (see e.g. Burquest 1973 for Angas; Dimmendaal 1989 and Newman 2000: 97–108 for Hausa; Frajzyngier 1991; 1993: 435–72 for Mupun;

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Schuh 1998: 353–69 for Miya; Seibert 1997: 31–2, 104–5 for Ron of Daffo). Generally, complementation in Chadic languages is characterized by great diversity. It has proved difficult to reconstruct any forms, but there are assumptions about shared grammaticalization patterns and functions. Frajzyngier (1996) shows that there are different types of complement clauses (and complementation strategies),¹ which are sensitive to (i) semantic types and (ii) evidential categories. In the first case, Chadic languages often distinguish between complement clauses that occur with Primary-B concepts and those that occur with modal-type Secondary-A and Secondary-B concepts. For example, Frajzyngier (1996: 227–72) assumes that Proto-Chadic had one polysemous verb ‘like/want’—with the desired interpretation being conveyed through the type of complementizer. Throughout this chapter, similar patterns and distinctions are reported for Goemai. In the second case, Frajzyngier (1996: 273–302) argues for differences in the coding of direct and indirect evidence, which is attested for verbs of attention and thinking. In particular, he assumes that many Chadic languages first used speech act verbs to introduce reported speech; in the course of grammaticalization, they were used to introduce indirect evidence and hypothetical situations, and—in some languages—have developed into general complementizers (1996: 105–206). This chapter shows that Goemai differs from this cross-Chadic pattern: its complementizer does not originate in a speech act verb, and there is no grammatical distinction between different types of evidence.

This chapter is structured as follows: §1 gives typological background information; §2 discusses complement clauses and §3 complementation strategies; §4 is a brief conclusion.

1. Typological background

Goemai has the following typological characteristics:

- AVO/SV constituent order, noun-genitive and preposition-noun orderings;
- predominantly isolating (but with some recently developed nominal morphology, and remnants of Chadic verbal morphology);
- nouns function as heads of NPs, and are unmarked (for gender and case, and, with few exceptions, for number);
- verbs function as heads of predicates, and are generally unmarked;

¹ A distinction between ‘complement clause’ and ‘complementation strategy’ is not made.

- TAM categories are expressed through free particles, and the most common form is the unmarked verb;
- constructional alternations are used in place of valence-changing morphology;
- extensive use of verb serialization.

In the absence of cross-referencing of arguments and case marking, constituent order is the main means for coding core arguments. But notice that some core arguments (3sg subjects and non-animate objects) are not expressed if their referent is recoverable from the linguistic context. Given this omission of core arguments, it is not possible to rely on constituent order alone when determining the argument structure of a verb and when distinguishing core from peripheral arguments. Instead, additional criteria are used. These criteria are summarized below, as they play some role in §2.1 when determining the syntactic status of complement clauses.

Usually, core arguments are unmarked (as *hen* '1sg' and *jap lwa* 'small animals' in (1a)),² while peripheral arguments are marked by a preposition or a prefix (as *ni* '3sg' in (1a)). In certain contexts, such as in the presence of the particle *yi*, direct objects precede this particle (as *jap lwa* 'small animals' in (1a)), and peripheral arguments follow it (as *ni* '3sg' in (1a)). This pattern holds true even if O is a heavy constituent (as *pe goed'e lu naan hok* 'the place where the house of god is' in (1b)). Furthermore, a subgroup of verbs marks number on the verb stem, agreeing with one of the core arguments:³ simplified, such verbs mark their S argument in the intransitive construction (1c), their O argument in the transitive patient/theme construction (1a), their A argument in the transitive range construction (1d), and neither in the transitive indirect causation construction (1e).

- (1) (a) *de hen_A t'ong two [jap lwa]_O*
 SO.THAT 1sg IRR kill(PL) DIM(PL) meat/animal
 yi n-ni
 SUBORD COMIT-3sg
 '(...) so that I would kill small animals with it.'

² I use an adapted version of the practical orthography developed by Sirlinger (1937). The following symbols may not be self-explanatory: *p'*, *t'*, *k'*, *f'*, *s'*, *sh'* = non-aspirated obstruents; *b'*, *d'* = implosives; *oe* = [ɔ]; *û* = [u], *â* = [ɔ]. A solidus '/' in an example indicates an intonation break.

³ Number marking on the verb is a typical Chadic feature (Newman 1990). In present-day Goemai, this process is not productive anymore: only a small part of the verbal lexicon marks for number; and although different plural formatives can be reconstructed, these are phonetically eroded and are usually not recognized by speakers as separate morphemes. If a verb marks for number, singular marking is used with single individuals, collectives, and masses, while plural marking is used with multiple individuals.

- (b) de ji_A man
 so.THAT sgm.log.sp know
 [pe goe-d'e lu naan hok]_O yi
 place NOMZ-exist settlement god DEF SUBORD
 '(...) so that he knows the place where the house of god is.'
- (c) [moe-gurum hok]_S mûarap
 NOMZ(PL)-person DEF die(PL)
 'The people have died.'
- (d) mûep_A mya hen_O
 3pl relate(PL) 1sg
 'They are related to me.'
- (e) mûep_A luut men_O
 3pl fear(SG) 1pl
 'They cause us to be afraid (i.e. we fear them).'

Verbs usually occur in more than one of the transitive and intransitive constructions illustrated in (1a) to (1e) above, and their syntactic possibilities are largely predictable on the basis of their lexical aspect and thematic roles. Verbs can be grouped into the following transitivity classes: ditransitive verbs (the two verbs *poe* 'give' and *k'wat* 'pay'), transitive patient/theme verbs (as *two* 'kill' in (1a)), transitive range verbs (as *mya* 'relate' in (1d)), intransitive verbs (as *mûarap* 'die' in (1c)), ambitransitive verbs (of the S = O type) that alternate between intransitive and transitive patient/theme uses (e.g. *b'ang* 'become/make red') or between intransitive and transitive indirect causation uses (e.g. *was* '(cause) sneeze'), ambitransitive verbs (of the S = A type) that alternate between intransitive and transitive range uses (e.g. *swar* 'laugh (at something)'), and transitive verbs that alternate between the three transitive uses.

Like many other Chadic languages (Frajzyngier 1996), Goemai does not have sentential conjunctions and instead makes extensive use of serialization and apposition. The two strategies are similar in that they receive no formal markings, but differ considerably in that there are restrictions on the expression of person, TAM, and polarity in serialized clauses, but not in apposed clauses. In addition, the following forms introduce different types of clauses: *goepe* ~ *goefe* ~ *pe* (temporal clauses; 'that'-clauses occurring in apposition to NPs), *yi* ~ *yin* (reported speech), *de* and *degoe* (purpose clauses), *goe* (sequential clauses), and *yi* (consequence clauses). These clauses place similar restrictions on the expression of negation, but differ in their possibilities of expressing person and TAM independently from the main clause. Finally, Goemai often nominalizes entire clauses (similar to Tibeto-Burman languages,

see Genetti, Chapter 6)—but while this strategy is extensively used in other areas of the grammar, it only plays a marginal role in complementation. These types of clauses are discussed in more detail in §3.

2. Complementation

2.1. Introduction

Table 1 lists the complement-taking verbs in Goemai. All of them are Primary-B verbs (as defined in Chapter 1), i.e. they alternatively occur with NPs as their core arguments. The verbs are grouped according to the semantic types outlined in Chapter 1, and the table notes their basic transitivity, their possibility to occur with the complement clause (see §2.2), the syntactic function of that clause, and the types of complementation strategies allowed (see §3).

The label ‘complementation strategies’ is used here to subsume different strategies by which a second verb relates to an argument of a first verb (see Chapter 1). Their inclusion in Table 1 is motivated by the observation that the Goemai complement clause serves a restricted purpose (to code a fact complement) (see §2.2). If speakers intend to express any other semantics (e.g. activity or potential), they have to shift to one of the complementation strategies (see §3). The table furthermore lists some verbs that cannot occur with a complement clause. These verbs were included to show the variation within semantic types and to illustrate similarities and differences found in complementation strategies.

The Goemai complement clause is not used to express any secondary concept (as defined in Chapter 1). Instead, Goemai uses the strategies listed in Table 2. Notice that the verbs in Table 2 are not secondary verbs, as they alternatively occur with NP arguments.

As discussed in Chapter 1, a complement clause has the properties of a clause and functions as an argument of a verb. The Goemai complement clause clearly constitutes a clause; similarly, all complementation strategies are more similar to clauses than to nominals (see the following sections for details). The second criterion poses some problems, though, because Goemai regularly omits core arguments, does not cross-reference arguments on the verb, and does not have morphologically marked voice alternations. It is thus difficult to establish the syntactic status of a clause. Jarkey reports (in Chapter 5) similar difficulties for another isolating language.

In Goemai, all possible candidates for a complement clause follow the predicate (as in (2a)), i.e. they occur in the place where an NP in O function

TABLE 1. Complement-taking verbs in Goemai

Verb	Transitivity	Complement clause (and its function)	Complementation strategies
Attention:			
<i>na</i> 'see'	tr (range)	yes (O)	SVC, apposition, nominalization
<i>kat</i> 'find (out)'	tr (range)	yes (O)	SVC, apposition, nominalization
<i>k'oeleng</i> 'hear, smell'	tr (range)	yes (O)	SVC, nominalization
Thinking:			
<i>rang</i> 'think'	tr (range)	yes (O)	purpose
<i>k'oerek</i> 'remember'	tr (range)	yes (O)	purpose
'remind'	tr (ind. caus.)	no	
<i>men</i> 'forget'	tr (range)	yes (O)	sequential
<i>man</i> 'know'	tr (range)	yes (O)	sequential
<i>tap</i> 'know not'	tr (range)	yes (O)	
'cause ignorance'	tr (ind. caus.)	no (but see §2.2)	
<i>s'uun</i> 'dream'	tr (range)	yes (O)	
Speaking:			
<i>kut</i> 'say, order'	tr (range)	yes (O)	reported speech, purpose
<i>k'wal</i> 'say, order'	tr (range)	yes (O)	reported speech, purpose
<i>t'em</i> 'report'	tr (range)	yes (O)	reported speech
<i>gwam</i> 'persuade'	tr (range)	no	purpose
<i>kok</i> 'persuade'	tr (range)	no	purpose
Liking and evaluation:			
<i>zem</i> 'like'	tr (range)	yes (O)	apposition
'cause to like'	tr (ind. caus.)	no (but see §2.2)	
<i>nyang</i> 'hate, refuse'	tr (range)	yes (O)	apposition
'cause to hate'	tr (ind. caus.)	no (but see §2.2)	
<i>luut</i> 'fear'	tr (range)	yes (O)	apposition
'cause to fear'	tr (ind. caus.)	no (but see §2.2)	
<i>sh'a</i> 'desire'	tr (range)	yes (O)	apposition
<i>sh'ang</i> 'be pleasant (to)'	ambitr	no (but see §2.2)	
<i>d'ong</i> 'be good (for)'	ambitr	no (but see §2.2)	
<i>k'e</i> 'be enough (for)'	ambitr	no (but see §2.2)	

would appear (as in (2b)). However, the absence of such an NP is not necessarily evidence that the clause constitutes an argument of the verb (as in (2a)): recall that a non-animate referential O is omitted whenever its referent is recoverable from the linguistic context (see §1). It is possible that

TABLE 2. Secondary concepts expressed by verbs

Strategy	Secondary concepts
SVC	<i>lat</i> 'finish', <i>k'yam</i> 'taste (have ever done)', <i>nyang</i> 'hate (insist on doing)'
Purpose	(a) trying: <i>k'yam</i> 'taste (try)', <i>shin</i> 'do (try)' (b) wanting: <i>zem</i> 'like', <i>sh'a</i> 'desire', <i>nyang</i> 'hate'
Sequential	(a) beginning: <i>tangoede</i> 'begin', <i>s'oe nkyem</i> 'continue' (b) enabling: <i>b'oot</i> 'be able', <i>poe</i> 'give (let)', <i>nyang</i> 'hate (not allow)'
Consequence	causing: <i>shin</i> 'do (cause)', <i>s'a</i> 'make'

the second clause—whatever its syntactic status—makes the O recoverable. That is, the second clause could be in apposition to the first, and example (2a) would translate as 'I heard (it). That they have died.'

- (2) (a) *hen_A k'oeleng <goepe mûep_S mûarap>_O*
 1sg hear THAT 3pl die(PL)
 'I heard that they have died.'
- (b) *mûep_A k'oeleng [d'ûoe fûan]_O*
 3pl hear voice rabbit
 'They heard the voice of the rabbit.'

Fortunately, there are additional criteria that can be used to distinguish an O argument from a peripheral argument (see §1). In particular, only O arguments precede certain morphemes (such as the homophonous particle *yi*, coding progressive aspect and subordination), while peripheral arguments follow. Using this criterion, it can be argued that the clause in (3a) functions as an argument of the verb, and is thus a complement clause, while that in (3b) is not.

- (3) (a) *hen_S d'e t'ong na <goepe [mat hok]_S wul>_O*
 1sg exist PROG see THAT woman(SG) DEF arrive
yi
 PROG
 'I usually notice that the woman arrives.'
- (b) *de zarap_A zem yi [degoe n-marap*
 SO.THAT girls(PL) like SUBORD PURP PURP-step(PL)
gya]_{PURP}
 performance
 '(...) so the girls wanted to dance (lit., so the girls wanted (it) that (they) should dance).'

Another criterion introduced in §1—number marking on the verb to agree with one of its arguments—cannot shed further light on the issue of complementation, as the relevant verbs do not distinguish number. Nor can the scope of negation be used as a criterion: in all types (with the exception of unmarked clauses in apposition), the negation particle occurs at the end of the whole utterance, having vague scope over either the main or the peripheral clause, as illustrated by the two different interpretations of the same utterance in (4a) and (4b) (but see also the discussion in §2.2).

- (4) (a) moe_A man <goepe ni_A s'wa haam_O>_O ba
 1pl know THAT 3sg drink water NEG
 'We didn't know that he drank water.'
- (b) moe_A man <goepe ni_A s'wa haam_O ba>_O
 1pl know THAT 3sg drink water NEG
 'We knew that he didn't drink water.'

On the basis of this discussion, it can be argued that Goemai has one complement clause (see §2.2) and a number of complementation strategies (see §3).

2.2. Complement clause

Goemai has one complement clause type, which is introduced by the complementizer *goepe* ~ *goefe* ~ *pe* (occurring in free variation). This form probably goes back to the spatial preposition *goe* 'location at a place' plus the noun *pe* 'place'; both still occur in Goemai. Another indication of its recent development is that closely related Chadic languages do not share the same form.⁴ The complement clause itself occurs in O function with verbs of attention (5a) and thinking (5b). It is also attested with verbs of speaking (5c) and liking (5d), albeit only infrequently. In all cases, it expresses a fact that was perceived, thought, spoken, or liked—never a potential or an activity (see §3 for these latter readings).

- (5) (a) ni_A na <goepe mis_A hok zem [yit muk]>_O nt'it
 3sg see THAT man(SG) DEF like eye/face 3sg.POSS very
 [goebi yit moe-jar muk yi]_{AS.IF} ba>_O
 AS.IF eye/face NOMZ(PL)-jealous(PL) 3sg.POSS SUBORD NEG
 'She noticed that the husband didn't love her the same as (he loved) her co-wives.'

⁴ Mupun has a complementizer *paa*, which derives from the verb 'think'. It is unlikely that the Goemai form *pe* is cognate to it. Generally, forms that originated in verbs retain some verbal properties—this is true for *paa* in Mupun (Frajzyngier 1993: 435–72), but not for *pe* in Goemai. Furthermore, the semantics of Mupun *paa* and Goemai *pe* differ.

- (b) mûep_A man <goepe gok_S d'e m-pe
 3pl know THAT illness exist LOC-place
 goe-nnoe=hoe>_O
 NOMZ(SG)-LOC.ANAPH=exactly
 'They knew that there was illness in that very place.'
- (c) ni_A kut <goepe dyen ji_S wul>_O
 3sg talk THAT PAST.YEST sgm.log.sp arrive
 'He₁ said that he₁ had arrived yesterday.'
- (d) hen_A zem <goepe mûep_S t'wot m-pe goe-goeme>_O
 1sg like THAT 3pl sit(PL) LOC-place NOMZ(SG)-one
 '(Because of this) I like that (they) sit in one place.'

The complement clause is a clause, not a nominal. It is identical to a simple clause in terms of its argument and TAM marking possibilities; and it can even include peripheral constituents and complex clauses (see (5a) above for a complex complement clause taken from a natural text: it contains A and O arguments, an adverb, an 'as if' clause, and a negative particle). It only differs from a simple clause in that (i) a complement clause is not marked for progressive aspect (as it is not used for coding activity complements; see §3.1) and (ii) the negation particle has to occur at the end of the whole utterance. The subject (A or S) of the complement clause need not be coreferential with that of the main clause (as in (5a), (5b), and (5d) above). If it is coreferential, it cannot be omitted and is usually marked for logophoricity (i.e. indicating coreference, see also §3.4) (as in (5c)). Furthermore, being a clause, the complement clause cannot be conjoined with nominals or modified by any modifier.

The complement clause follows the predicate, unless it is topicalized. In this case it is fronted (6a), behaving like a topicalized NP (6b).

- (6) (a) <pe ni_A shin>_O / hen_A na
 THAT 3sg do 1sg see
 'That he has done (it), I saw.'
- (b) [k'asun hok]_O / moe_A na
 <title> DEF 1sg see
 'The *k'asun* chief, we saw.'

As discussed in §2.1, the complement clause occurs in O function, i.e. preceding morphemes such as the particle *yi*. However, this statement reflects an idealization: while speakers consistently reject utterances where the complement clause follows such morphemes, they nevertheless frequently produce them in natural discourse (7).

- (7) de ji_A man yi
 SO.THAT sgm.log.sp know SUBORD
 <pe [ndoe sââl]_S d'e d'i ba>_O
 THAT some money exist LOC.ANAPH NEG
 '(...) so that he knew that there wasn't any money.'

It is possible that examples like (7) result from a tendency to move heavy O constituents to the end of a clause. However, there are two indications that point against such an interpretation. First, other types of heavy O constituents always remain *in situ* (see (1b) for an example). Second, assuming that heavy constituents are moved because they are hard to process *in situ*, it would be expected that some prosodic means are employed to further lighten the processing load, but this is not the case (e.g. there are no indications in the intonation contour; intonation breaks between *yi* and *goepe* are very rare).⁵

Alternatively, its distributional variation could be a remnant of its diachronic origins. The form *goepe* ~ *goefe* ~ *pe* not only occurs as a complementizer, but also introduces clauses occurring in apposition to NPs (as in (8a) and (8b)). In the presence of morphemes such as the particle *yi*, these clauses always follow, i.e. they do not occur within the NP (and hence do not constitute relative clauses, as the free translation may suggest). Instead, they occur in apposition to the NP (to *ladabi* 'respect' in (8a) and *ko=bi-mmoe* 'everything' in (8b)). Furthermore, these clauses also occur in the absence of any NP, in which case they function as temporal adverbial clauses, linking a main clause event to a previous (8c) or a simultaneous event (8d) (depending on the aspectual marking in the temporal clause).

- (8) (a) goebi ladabi yi /
 AS.IF respect SUBORD
 [goepe pa_A shin ndoe mis pa]_{GOEPE}
 THAT sgf.log.ad do CONJ man(SG) sgf.log.ad.POSS
 '(...) as if (it were) respect that she showed her husband.'
- (b) de ko=bi-mmoe_S goe d'ong yi
 SO.THAT every=thing-what OBLIG good(SG) SUBORD
 [goepe [moe-nda men]_A kut]_{GOEPE}
 THAT NOMZ(PL)-father 1pl.POSS talk
 '(...) so that everything that our fathers have said should be good.'

⁵ I thank Carol Genetti for drawing my attention to this factor.

- (c) [goepe nin [s'a muk]_O n-yit noe
 THAT point/show hand/arm 3sg.POSS LOC-eye/face 1sg.POSS
 lat]_{GOEPE} / hen_S wam
 finish 1sg rotten
 'After (he) had pointed his hand at my face, I became rotten.'
- (d) [goepe ni_S d'yem t'ong s'up [sek muk]_O
 THAT 3sg stand(SG) PROG wash(SG) body 3sg.POSS
 yi]_{GOEPE}
 PROG
 [ndoe goe-rwang]_S jik wa wul
 some NOMZ(SG)-mad come.from return.home(SG) arrive
 'While he stood washing himself, a madman came (from
 somewhere and) arrived.'

In view of this discussion, it seems likely that complement clauses (9a) developed from clauses in apposition (9b), by being reanalysed as O arguments of the verb. Their variable position in natural discourse suggests that this reanalysis is not completed yet. It is furthermore possible that this process will eventually lead to a reanalysis in the scope of negation: negation particles have a vague scope (see §2.1, examples (4a) and (4b)); but out of context, they are always interpreted as having scope over the main verb only (9a). In the case of clauses in apposition, by contrast, they are preferably interpreted as having scope over the second clause (9b).

- (9) (a) hen_A na <pe [mat hok]_A shin shit_O>_O ba
 1sg see THAT woman(SG) DEF do work NEG
 'I didn't see that the woman did the work'
- (b) hen_A na [mat hok]_O [pe shin shit_O ba]_{GOEPE}
 1sg see woman(SG) DEF THAT do work NEG
 'I saw the woman who didn't do the work.'

Finally, *goepe* ~ *goefe* ~ *pe* occurs with a number of ambitransitive and transitive verbs that code a stimulus in S/A function. In this case, the apposed clause follows the intransitive verb or the transitive direct object, while the subject is not overtly expressed (10). Since the subject is not expressed, it looks as if these clauses occur in S/A function, replacing a stimulus NP. However, I prefer to analyse them not as complement clauses, but rather as clauses in apposition (similar to (8b) above), whereby the 3sg subject pronoun *ni* 'it' is omitted because it is recoverable from the context (see also the discussion preceding (2a) and (2b)). This analysis rests on the observation that the only criterion that reliably defines S/A is constituent order—but in (10), the clause in question does not (and cannot) occur preceding the verb.

- (10) sh'ang hen_O [goepe goe_s wul lu=noe]_{GOEPE}
 pleasant 1sg THAT 2sgm arrive settlement=1sg.POSS
 '(It) pleases me that you arrived at my home.'

3. Complementation strategies

The complement clause discussed in §2.2 is restricted to coding fact complements with verb of attention, thinking, speaking, and liking. To express any other kind of semantics (see Chapter 1 for the typology), speakers have to resort to one of the complementation strategies summarized in Table 3. The following sections briefly introduce each strategy, discuss their functions with Primary-B verbs, and compare their interpretations to that of the complement clause. Recall that complementation strategies differ from complement clauses in that they do not constitute arguments of the verb, i.e. in Goemai, they cannot precede morphemes such as the particle *yi* (see §2.1).

3.1. Serial verb constructions (SVCs)

Serialization of verbs is a common phenomenon in Goemai. There are distinct formal subtypes, all of which impose some restriction on person and TAM marking, the sharing of arguments and the scope of negation (see Hellwig (2006) for details). One of these subtypes, the coordinate SVC, codes a temporal relation between two or more subevents. The type of relation depends on the lexical aspect of the first verb: a sequential relation if it is non-stative (11a), and a simultaneous relation if it is stative (11b).

- (11) (a) aas_A mang ûes_O haar
 dog take(SG) bone chew
 'The dog took the bone (and) chewed (it).'

TABLE 3. Complement clause and complementation strategies

Type	Interpretation	Attested Primary-B types
Complement clause	fact	attention, thinking, speaking, liking
SVC	activity	attention
Apposition	personal evaluation	attention, liking
Clausal nominalization	interrogative	attention
Reported speech	reported speech	speaking
Purpose clause	persuasion, order	thinking, speaking
Sequential clause	(dis-)enablement	thinking
Consequence clause	causation	—

- (b) mûep_S t'wot rang nye-rang_O
 3pl sit(PL) think NOMZ-think
 'They sat (and) thought a thought.'

Verbs of attention can occur in the coordinate SVC to focus on a perceived continuous activity—they thus preferably occur in the environment of progressive clauses (as in (12a) where the serial verbs *na d'e* 'see exist' are followed by a progressive-marked clause). The O argument of the first verb is identical to the A/S argument of the second (a so-called 'switch-function' serialization). Notice that the same verb, occurring with the complement clause, expresses a fact reading (12b).

- (12) (a) hen_A na nwang_{O/S} d'e t'ong tok muut_O yi
 1sg see <title> exist PROG pray gods PROG
 'I saw the *nwang* chief praying to the gods (lit. I see the chief exists praying to the gods).'
- (b) hen_A na <goepe nwang_A shin [shit hok]_{O>O}
 1sg see THAT <title> do work DEF
 'I noticed that the *nwang* chief has done the work.'

Serialization and complementation interact in two further ways. First, many Primary-B types (see Chapter 1 for different types) that receive monomorphemic expressions in other languages are expressed by SVCs in Goemai. These SVCs contain one or more of the verbs in Table 1, e.g. *b'ûen na* 'imagine' (lit. watch see), *rang na* 'consider' (lit. think see), *na man* 'recognize' (lit. see know), *lap zem* 'believe' (lit. receive like). In all cases, their complementation possibilities depend on their semantic type.

Second, serialization plays a minor role in expressing evidentiality. The two central verbs of perception, *na* 'see' and *k'oeleng* 'hear, smell', can co-occur in SVCs with *kat* 'find (out)' and *man* 'know' to distinguish between knowledge gained from witnessing an event (13a) as opposed to knowledge gained from hearsay (13b).

- (13) (a) hen_A kat na <goepe goe_{CS} a mûûr_{CC>O}
 1sg find see THAT 2sgm FOC thief
 'I found out (by seeing it) that you are a thief.'
- (b) hen_A kat k'oeleng <goepe goe_A mûûr [jap
 1sg find hear THAT 2sgm steal DIM(PL)
 ke hok]_O toe>_O
 chicken DEF EMPH
 'I found out (by hearsay) that you stole the little chickens.'

Serialization is furthermore attested in the expression of some secondary concepts (see Chapter 1): *lat* ‘finish’ and *k’yam* ‘taste’ occur in an SVC to express the Secondary-A concepts ‘finish’ (14a) and ‘have ever done’ (14b) respectively; and the verb *nyang* ‘hate, refuse’ is used to express the Secondary-B concept ‘insist’ (14c).

- (14) (a) mûep_A s’oe s’oe_O lat
3pl eat food finish
‘They finished eating the food (lit. they eat food finish).’
- (b) hen_A k’yam man mûep_O ba
1sg taste know 3pl NEG
‘I have never known them (lit. I taste know them not).’
- (c) nyang mûaan m-makaranta
hate(SG) go(SG) LOC-school
‘(He) insisted on going to school (lit. (he) refuse (something else) go to school).’

3.2. Apposition

Goemai does not have any clausal conjunctions (although it has recently borrowed *amma* ‘but’ and *ko* ‘or’ from Hausa), and frequently uses apposition to express a conjoined reading. Superficially, clauses in apposition can look similar to SVCs, but they differ in that they are independent of each other, i.e. they are usually separated by a pause, and there are no restrictions with regard to person marking, TAM marking, or negation. Apposition serves as a complementation strategy with verbs of attention (15a) and liking (15b) to express personal judgements and evaluations. Recall that both types also occur with the complement clause. If they occur in the appositional strategy, they stress the personal aspect of the evaluation; conversely, if they occur with a complement clause, they convey a neutral, objective, fact (15c).

- (15) (a) hen_A na yi_S d’ong n-yit noe
1sg see 2sgf good(SG) LOC-eye/face 1sg.POSS
‘I consider you beautiful in my eyes (lit. I see (it), you are beautiful in my eyes).’
- (b) hen_A sh’a d’in gu_S wul b’ak
1sg desire PAST.CLOSE 2pl arrive here
‘I very much liked (that) you came here (lit. I desire (it), you came here).’
- (c) hen_A na <pe d’ong>_O
1sg see THAT good(SG)
‘I noticed (the fact) that (it) is good.’

3.3. *Clausal nominalization*

Goemai makes extensive use of different types of clausal nominalization for forming temporal (16) and relative clauses (17b). Nominalized clauses express A/S arguments in the form of possessive pronouns (e.g. *muk* '3sg.POSS' in (16)), but otherwise have similar possibilities for marking person and TAM (e.g. notice the progressive marking in (16)).

- (16) [goe-t'o muk t'ong b'u'en nayit yi]_{NOMZ.CLAUSE}
 NOMZ-lie(SG) 3sg.POSS PROG watch mirror PROG
 'While he lay watching the mirror (...) (lit. upon his lying watching the mirror).'

Clausal nominalization plays a role in forming interrogative-type complements with verbs of attention (17a). Formally, such examples can be analysed as complement clauses, as they have the internal structure of clauses and occur in argument positions. However, this type of usage is only attested very infrequently, and speakers clearly prefer the strategy exemplified in (17b), where a semantically general noun (such as *bi* 'thing') is followed by a nominalized clause. Given its marginal usage, clausal nominalization is discussed under the heading of complementation strategies.

- (17) (a) *hen_A na [goe-shin muk]_O*
 1sg see NOMZ-do 3sg.POSS
 'I saw what he has done.'
 (b) *patience_A na [bi goe-shin muk]_O*
 <name> see thing NOMZ-do 3sg.POSS
 'Patience saw the thing that he has done (lit. the thing of his doing).'

3.4. *Reported speech*

The morpheme *yi* ~ *yin* 'say' is used to introduce reported speech (as in (18a) and (18b)). Throughout the reported speech, speakers have to indicate coreference with speaker, addressee, or neither, making use of the system of logophoric and non-logophoric pronouns illustrated in Table 4. The form *yin* probably grammaticalized from a verb 'say' occurring as the second verb in an SVC (following a speech act verb). It retains some verbal properties (e.g. it can occur as the predicate of the main clause as in (18b)), but has lost others (e.g. it cannot be marked for TAM). These clauses are not analysed as complement clauses because they do not occur in an argument position (see the discussion in §2.1).

TABLE 4. Logophoric and non-logophoric pronouns used in reported speech

	speaker logophoric	addressee logophoric	non-logophoric
sgm	<i>ji</i>	<i>gwa</i>	} <i>ni</i>
sgf	<i>doe</i>	<i>pa</i>	
pl	<i>du</i>	<i>nwa</i>	
			<i>mùep</i>

- (18) (a) k'wal yin gwa_A goe tu ji_O
 talk SAY sgm.log.ad OBLIG kill(SG) sgm.log.sp
 '(He₁) said that he₂ should kill him₁.'
- (b) yin doe_S yââl m-mat goe
 SAY sgf.log.sp rise(SG) NOMZ-sgf.log.sp.POSS COMIT
 sh'aat doe
 wing sgf.log.sp. POSS
 '(She₁ said) that she₁ rises on her₁ own with her₁ wings.'

Frajzyngier (1996: 205) remarks that '[t]he distinction between indirect and direct speech in Chadic languages is not as sharp as in IE [Indo-European; BH] languages'. One variant of this statement can be observed in Goemai: the strategy above is the only available mechanism for quoting speech, i.e. whenever quoting speech, Goemai speakers need to select the appropriate logophoric and non-logophoric pronouns.⁶ Aside from this change in pronouns, the reported speech remains identical to the original: errors are quoted (e.g. in (19a), the childish form *oelem* is used in place of the correct form *oerem* 'beans'), time reference is from the point of view of the original speaker (19b), and interjections are frequently attested (19c). Recall that verbs of speaking can alternatively occur with a complement clause (see §2.2). In that case, the complement clause reports the fact that was uttered—it does not constitute a faithful representation of the actual utterance, and hence does not have any of the properties illustrated in (19a–c).

- (19) (a) ji_A t'al oelem_O
 sgm.log.sp pluck(SG) beans
 '(He₁ said that) he₁ plucked the beans.'
- (b) dyen k'wal yin d'in ji_S wul
 PAST.YEST talk SAY PAST.CLOSE sgm.log.sp arrive
 m-b'itlung
 LOC-morning
 '(He₁) said yesterday that he₁ arrived earlier today (i.e. he arrived yesterday from the perspective of the current speaker).'

⁶ This pattern is disappearing: younger speakers tend to use Hausa *wai* in place of Goemai *yin*, and they do not use logophoric pronouns anymore. Older speakers consider this usage ungrammatical.

- (c) yin to / hai pa_A goe dap.
 say okay hey sgf.log.ad OBLIG slap
 yin to / hai gwa_A goe k'wak.
 SAY okay hey sgm.log.ad OBLIG hit
 '(He₁ said) that, okay, hey, she₂ should slap (him).'
 (She₁ said) that, okay, hey, he₂ should hit (her).'

3.5. *Purpose*

Goemai has two possibilities for marking purpose clauses: *de...yi* (used to express a different subject, or TAM or polarity from that of the first clause) and *degoe (n-)* (to express identical subject, TAM, and polarity). These two forms can link any two clauses, resulting in a purposive interpretation. They also occur in a non-argument position with some Primary-B verbs, highlighting the potential of an actor to become involved in an activity (see Chapter 1 for potential complement clauses): with verbs of speaking (receiving a reading of 'persuade', as in (20a)), and with some verbs of thinking (receiving a reading of 'remember to do', as in (20b)). They are furthermore used to express the Secondary-A concept of 'trying' (20c) and the Secondary-B concept of 'wanting' (20d). Notice that purpose clauses cannot be used to express 'liking' (see §§2.2 and 3.2).

- (20) (a) ni_A k'wal ndoe hen de hen_S wul yi
 3sg talk CONJ 1sg PURP 1sg arrive SUBORD
 'He persuaded me that I should come.'
 (b) hen_A rang degoe shin shit_O hok
 1sg think PURP do work DEF
 'I thought to do the work'
 (c) k'yam degoe mûaan nd'ûûn lan / s'an t'a
 taste PURP go(SG) INSIDE slippery.ground slip fall(SG)
 '(He) tried (lit. tasted) to walk on slippery ground, (he) slipped
 (and) fell.'
 (d) ji_A zem degoe mûaan goe p'en [ni
 sgm.log.sp like PURP go SEQ remove(SG) 3sg
 nnoe]_O dip
 LOC.ANAPH all
 'He wanted to go and remove him, all (of him).'

3.6. *Sequential*

The sequential is formed by the morpheme *goe*, which is used to express a sequence of events having the same TAM, person, and polarity value. As such, any two clauses can be linked into a sequence. It can furthermore occur with

some Primary-B and Secondary verbs, expressing (dis-) enablement (in (21a) and (21b)) and beginning (21c). Again, the sequential clause occurs in a non-argument position.

- (21) (a) mûep_A man goe shin goesek_O
 3pl know SEQ do this
 ‘They know (how) to do this.’
 (b) poe mûep_O goe doe
 give/let 3pl SEQ come
 ‘Let them come.’
 (c) hen_A tangoede goe shin [shit hok]_O
 1sg begin SEQ do work DEF
 ‘I began to do the work.’

3.7. Consequence

Goemai uses a particle *yi*, which—by itself—marks clauses that describe a consequence or a subsequent development. This type of clause is used to express the Secondary-C concept of causation (22).

- (22) hen_A s’a gwen_O toe gu_S wul yi ba
 1sg make 2pl EMPH 2pl arrive SUBORD NEG
 ‘I caused you not to come.’

4. Conclusion

This chapter has shown that Goemai has one recently grammaticalized complement clause that occurs in O function with verbs of attention, thinking, speaking, and liking, expressing a fact complement. If speakers intend to convey any other type of semantics, they have to resort to different complementation strategies; similar strategies are available for the expression of Secondary concepts.

Each complement clause and complementation strategy is used for limited functions only. The same verb can thus occur with different strategies, triggering different interpretations. Some such examples were given throughout this chapter. This point can further be illustrated with reference to the following phenomenon: Goemai frequently uses metaphorical strategies to express Primary-B and Secondary concepts, i.e. it uses verbs that primarily express a physical concept (e.g. *ya* ‘catch’ or *mang* ‘take’) together with one of the complementation strategies. The resulting interpretation then depends partly on the strategy used. For example, *ya* ‘catch’ can convey the reading

‘suspect’ if it occurs with a complement clause (23a) (like verbs of thinking; see §2.2), ‘tell’ if it occurs with a reported speech clause (23b) (like verbs of speaking; see §3.4), or ‘cause’ if it occurs with a consequence clause (23c) (like verbs of causing; see §3.7).

- (23) (a) ni_A ya <goepe hen_A shin [bi hok]_O toe>_O
 3sg catch THAT 1sg do thing DEF EMPH
 ‘He suspected that I did the thing.’
- (b) ni_A ya men_O yin moe_A shin shit_O n-ji
 3sg catch 1pl SAY 1pl do work BEN-sgm.log.sp
 ‘He₁ told us₂ that we₂ do the work for him₁.’
- (c) hen_A ya gwen_O toe gu_S wul yi ba
 1sg catch 2pl EMPH 2pl arrive SUBORD NEG
 ‘I caused you not to come.’

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Complement Clause Type and Complementation Strategies in Matses

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1. Introduction

The Matses language has only one type of complement clause, which occurs with the only complement-taking verb in the language (*bun* ‘want’). The rest of the notions that are often coded by complement clauses in other languages are coded in Matses by a variety of other grammatical means, including verbal morphology and two complementation strategies. The main complementation strategy is the use of adverbialized clauses, which mark inter-clausal argument tracking and are the basis of clause chaining in Matses. The other complementation strategy, the use of nominalized clauses in some argument positions, is rather limited, but nominalized clauses are interesting in that action nominalizations are difficult to distinguish from cross-linguistically typical complement clauses. In fact, the desiderative complement clause looks very much as if it derived historically from a nominalized clause.

Matses (formerly known as Mayoruna; Panoan family) is spoken in Loreto, Peru, and Amazonas, Brazil, along the Javari river and its tributaries. There are 2,000–2,200 Matses, all of whom speak Matses as their first language, 70–80 per cent being still essentially monolingual. They established peaceful relations with the national societies in 1969, and continue to procure most of their food from traditional subsistence activities (slash-and-burn horticulture, hunting, fishing, trapping, and collection of wild foods), but they are in close contact with the non-tribal population and are quickly abandoning most other aspects of their traditional culture.

2. Typological profile of Matses

Morphologically, the Matses language is primarily suffixing and could be called highly synthetic due to the large number of morphological possibilities and potentially very long words (up to ten-morpheme-long verbs, in elicitation), but the typical number of morphemes per word in natural speech is not large (about 2–5 for verbs, fewer for other word classes). Inflectional and class-changing morphology is fusional, while non-class-changing derivational morphology is mostly agglutinative. Open lexical classes include nouns and verbs; closed classes include postpositions and particles; adjectives and adverbs are closed in the sense that they contain only 55 and 51 roots in the corpus collected, respectively, but they are open in the sense that there are very productive adjectivalization and adverbialization processes.

Matses is predominantly dependent marking, with possessor marking in possessive noun phrases, and strict ergative-absolutive case marking on independent arguments as the principal means of identifying grammatical relations; but it does have nominative-accusative verbal person subject agreement with some inflections. Absolutive (S/O) case is unmarked (-Ø); ergative (A) case is marked with the phrase-level enclitic *-n*, identically to instrumental and genitive cases; all other noun phrases are obliques (optional, peripheral participants) and overtly marked as such by either phonologically bound or free postpositions (e.g. *-bəd* ‘Comitative’, *-no* ‘Locative’, *əkəduk* ‘inside’). No other grammatical categories are obligatorily marked on nouns: e.g. number is marked optionally (on either nouns or verbs), and there is no gender distinction. Most personal pronouns exhibit case-specific forms (e.g. *mibi* ‘2:Absolutive’, *mimbi* ‘2:Ergative’, *min* ‘2:Genitive’), except for the third-person (singular/plural, ergative/absolutive, masculine/feminine, etc.) anaphoric pronoun, which is Ø. Because overt first- and second-person arguments are almost always required and case-specific, and there are no ambitransitive verbs, the simple absence of one or more expected arguments reveals the third-person anaphora.

All verbs are strictly classified according to transitivity classes (Table 1), and their valence can only be altered via overt derivational morphology (causative, applicative, reflexive/anticausative/passive, antipassive, and reciprocal suffixes). As can be seen in Table 1, ‘extended intransitive’ verbs are difficult to characterize, since they are bivalent in that they code two core arguments, yet Matses grammar treats these verbs as intransitive (e.g. transitivity agreement on verbal suffixes and adverbs), treats the subject (S) as an intransitive subject (e.g. zero case marking, control of person agreement, argument

TABLE 1. Transitivity classes of verbs in Matses

Transitivity class Subtype	Valence	Core functions and marking	Number of roots	Examples
Intransitive:				
(simple) intransitive	1	S-Ø	>300	run, cry, fall, bloom, die
extended intransitive	2	S-Ø, E-Ø	c.4	want, forget, not share, have
Transitive:				
(mono)transitive	2	A- <i>n</i> , O-Ø	>300	kill, see, eat, flirt with, know
ditransitive	3	A- <i>n</i> , O-Ø, O-Ø	c.8	give, take from, tell, plait

coreference on clause-chaining subordinate clauses), and treats the non-subject argument (E) as an object-like absolutive argument (e.g. zero case marking, becomes the subject when passivized). In trivalent clauses, the two non-subject arguments (O) both take the absolutive case and are syntactically identical. Thus, the core arguments in Matses are: transitive subject (A), transitive object (O), intransitive subject (S), and extended intransitive non-subject argument (E). Copula subjects (CS) are identical to intransitive subjects, and nominal copula complements (CC) are essentially the same as extended intransitive non-subject arguments. Every clause has one and only one subject (S, A, or CS).

Verbs are minimally inflected for tense, and generally also for mood, evidentiality (obligatory for past tenses), subject person agreement, and/or aspect using portmanteau suffixes and/or suffix combinations. Verbs may take class-changing suffixes in place of inflectional suffixes.

Verb-final constituent order appears to be the most neutral, but ordering of constituents within a main clause is free of syntactic restrictions, while word order within phrases is comparatively rigid. There are no significant ergative or accusative syntactic patterns; i.e. there are no ‘syntactic pivots’ (Dixon 1994).

There is almost no inter-clausal coordination in the language, and subordination is the typical means of clause combination. The basis of subordination in Matses is the expansion of noun, adjective, and adverb syntactic slots by creating subordinate clauses via morphological class changing of verbs: nominalization, adjectivalization and adverbialization. These class-changing processes function essentially the same as for deriving non-verb words from verbs, but in Matses, whole clauses can be nominalized, adjectivalized, or

adverbialized, i.e. when a verb's class is changed, any arguments and obliques/ adverbials associated with it become part of a subordinate clause with main-clause-like syntax, including the case-marking frame. The desiderative complement clause is the only type of subordinate clause that cannot be synchronically identified as created by class-changing suffixes. The internal syntax of the different types of subordinate clauses is essentially the same, and their syntax differs from that of main clauses in only the following ways: (i) constituent order is still essentially free, but the verb must be clause-final in all subordinate clause types; (ii) fourth-person (third-person coreferential) pronouns may be used instead of zero pronouns in some subordinate clause types; and (iii) in some subordinate clause types, coreferential arguments are optionally or obligatorily equi-deleted.

3. The desiderative complement clause: the only complement clause in Matses

One way to express the notion of wanting to do something is to use a desiderative complement clause subordinated to the verb *bun* 'want'. This is arguably the only true complement-taking verb in the language, and the desiderative complement clause is arguably the only type of complement clause in the language (action nominalizations, discussed in the following section, are the other clause type that might be analysed as complement clauses). The verb *bun* can take a noun (1) or a participant nominalization (2) as its object; or it can take a clause marked with the complementizing suffix *-te* as an object complement (3).¹ (All multi-word noun phrases and multi-word subordinate clauses will be enclosed in square brackets, and all complement clauses are enclosed in angled brackets.)

- (1) Ø_S natia mani-Ø_E bun-kid
 3ABS strongly plantain-ABS want-HAB
 'They [bats] strongly desire plantains'
- (2) [piu-mbo ik-kid]_E bun-e-bi
 red-COP.COMPZR be-AGT.NOMZ want-NPAST-1S
 'I want the red one'

¹ Orthography is phonemic and symbols have IPA values unless noted otherwise: *a*, *e*, *ẽ* (*ĩ*), *i*, *o*, *u*, *p*, *t*, *k* (= glottal stop syllable-finally), *b*, *d* (= alveolar flap intervocalically), *m*, *n* (= velar nasal before *k*, = bilabial nasal before *p* or *b*), *s*, *sh* (*ʃ*), *ʃh* (*ʂ*), *ts*, *ch* (*tʃ*), *çh* (*tʂ*), *w*, *j*. A note should be made to avoid confusion between what I call 'copula complementizer' and simply 'complementizer'. All adjectives require an enclitic such as *-mbo* 'Copula Complementizer' in (2) to occur as copula complements of the copula verb *ik*. A complementizer (specifically *-te* 'Complementizer') is a verbal suffix that marks a complement clause, as in (3).

- (3) kuesban-Ø_S <matses-Ø pe-te>_E bun-kid
 bat-ABS Matses-ABS bite-COMPZR want-HAB
 'Bats want to bite Matses'

The verb *bun* takes two arguments that are both marked as absolutive, so the more 'agentive' core argument, the 'wanter', is not ergatively marked. In other words, it is an extended intransitive verb, as described in §2, and it is therefore difficult to assign a grammatical function to the more patientive argument, since it is treated like an object but cannot be called an S (because it is not a subject) or an O (because *bun* is not a transitive verb). Despite the potentially ambiguous case marking on double-absolutive clauses where both arguments are nouns, it is still possible to identify a subject by such means as person subject agreement and inter-clausal argument tracking. And with *bun*, the 'wanter' is always the subject. As such, it is possible to say that *-te*-marked clauses function only as 'E-complements', never as subject complements.

The Matses complement clause can be classified as a 'Potential type' complement clause, as described in Chapter 1. Its internal structure is as follows. The complement subject (i.e. the S or A argument of the complement verb) does not occur overtly and it must be the same as the subject of *bun*, the main verb; i.e. the notional subject of the complement clause must be coreferential with the main clause subject and is obligatorily 'equi-deleted'. Accordingly, this construction does not work for someone wanting somebody else to do something (4a). The verbal inflection *-paṣhun* 'Non-past:Desiderative:2/3' is used for expressing that the speaker wishes for someone else to do something (4b).

- (4) (a) *<mibi cho-te>_E bun-e-bi
 2ABS come-COMPZR want-NPAST-1S
 ('I want you to come')
- (b) mibi_S cho-paṣhun
 2ABS come-NPAST:DESID:2/3
 ('(I wish/It would be great if) you would come')

While the complement subject cannot occur overtly, the object of a transitive complement verb can. It can also occur as a covert third-person pronoun, but if it occurs overtly, it must always occur within the complement clause, preceding the dependent verb (5), as in any subordinate clause. Because the complement subject and the matrix subject must be coreferential and all reflexives are intransitive, the situation never arises where the complement object could be coreferential with the matrix subject, so there is no situation where object equi-deletion could occur. The relation of the complement object to the complement verb is the same as in main clauses (i.e. it takes absolutive marking), with the difference that in active clauses, the object can

occur preceding or following the main verb. The examples in (5) illustrate several syntactic properties of desiderative complement constructions:

- (5) (a) *debi-Ø_S* <*mibi*_O *padpide-en* *kues-te*>_E
 Davy-ABS 2ABS again-MANR:TR hit-COMPZR
 bun-e-k
 want-NPAST-INDIC
 ‘Davy wants to hit you again’ (implies Davy already hit you once)
- (b) *padpide-ek* *debi-Ø_S* <*mibi*_O *kues-te*>_E
 again-MANR:INTR Davy-ABS 2ABS hit-COMPZR
 bun-e-k
 want-NPAST-INDIC
 ‘Again, Davy wants to hit you’

First, the noun *debi* is the overt subject of the main clause verb (*bun*) and is coreferential with the subject of the transitive verb *kues* ‘hit’ in both examples. The fact that *debi* is not ergative-marked shows that it is the complement verb subject that is missing, not the subject of *bun*. Second, the fact that *mibi* can be separated from the complement verb by the adverb *padpide-en* in (5a) shows that *mibi* cannot be in a possessive relation to that verb, because even in possessive noun phrases where the possessor is not overtly genitive-marked, the genitive noun must *directly* precede the possessed entity. Note as well that the transitivity agreement on the adverb treats the complement verb as transitive when it occurs as part of the complement clause (5a), but it agrees with (intransitive) *bun* when it occurs outside the complement clause (5b).

In addition to adverbs, subordinate adverbialized clauses can occur within the complement clause (6a) or outside of it (6b) (S/A>A and S/A>S specify argument coreference between the subordinate clause and the matrix clause; see §4.2).

- (6) (a) <*nes-šhun* *pe-te*>_E *bun-o-bi*
 bathe-after:S/A>A eat-COMPZR want-PAST-1S
 ‘I wanted to bathe and then eat’
- (b) *nes-ašh* <*pe-te*>_E *bun-o-bi*
 bathe-after:S/A>S eat-COMPZR want-PAST-1S
 ‘After bathing, I got hungry’

Note the differences in meaning and argument tracking (*pe* ‘eat’ has a transitive subject). Example (6a) is a case of embedding of subordinate clauses to two levels, and (6b) is a case of two clauses directly subordinate to the same matrix clause.

The complementizer, *-te*, occurs instead of and in place of any inflectional suffixes, rather than in addition to them. Thus, desiderative complements

in Matses have no inflectional possibilities, which eliminates any subject agreement person marking, tense, evidentiality, mode, and some aspect possibilities. Most derivational verbal suffixes can occur on the complement verb, including some that mark aspectual information, and thus some aspect distinctions can be made (7); also, aspect can be marked on the complement verb via reduplication (7b). Thus, aspect is the only TAM possibility available to the Matses complement clause. It should be noted, however, that speakers frown at the majority of attempts to mark aspect on the complement verb.

- (7) (a) \emptyset_S <dëd-kuen-te>_E bun-e-k
 3ABS fell-INCH-COMPZR want-NPAST-INDIC
 ‘He wants to start felling (trees) now (which he never did before)’
 (b) \emptyset_S <nid-an nid-an-te>_E bun-e-k
 3ABS (REDUP=DISTR) go-INCEP-COMPZR want-NPAST-INDIC
 ‘They want to leave (one-by-one)’

We can characterize the external syntax of the complement clause as it relates to the main clause as follows. The complement clause must precede the verb *bun* (8b–c), though not necessarily directly (8d–e), a distribution constraint that does not apply to *bun* when it takes a nominal object (9; cf. 8b).

- (8) (a) debi- \emptyset_S <nid-te>_E bun-e-k
 Davy-ABS go-COMPZR want-NPAST-INDIC
 ‘Davy wants to go’
 (b) *debi_S bun-e-k <nid-te>_E
 (c) *bun-e-k <nid-te>_E
 (d) <nid-te>_E debi- \emptyset_S bun-e-k
 go-COMPZR Davy-ABS want-NPAST-INDIC
 ‘Davy wants to go’
 (e) <nid-te-wid -kio>_E bun-e-k
 go-COMPZR-only-Aug want-NPAST-INDIC
 ‘He is always wanting to leave’
 (9) debi- \emptyset_S bun-e-k nuëkkid- \emptyset_E
 Davy-ABS want-NPAST-INDIC fish-ABS
 ‘Davy wants fish’

The subject of *bun* (i.e. the main clause subject) is free to move around, but does not naturally occur within the complement clause (10). The subject of *bun* may occur covertly as a third-person zero pronoun, in which case no overt subject at all appears in the sentence (11).

- (10) (a) <pambid-Ø_O pe-te>_E bun-e-k debi-Ø_S
 meat-ABS eat-COMPZR want-NPAST-INDIC Davy
 'Davy wants to eat meat'
- (b) ?<pambid-Ø_O debi-Ø_S pe-te>_E bun-e-k
 meat-ABS Davy-ABS eat-COMPZR want-NPAST-INDIC
 'The meat wants to eat Davy'
- (11) Ø_S <uʃh-te>_E bun-e-k
 3ABS sleep-COMPZR want-NPAST-INDIC
 'He/She/It/They want(s) to sleep'/*'He_i wants him_j to sleep'/*'I/You/
 We want to sleep'

If the desiderative clause itself is to be a subordinate clause, as in a clause-chaining construction, *bun* will take the non-finite suffix, and the complement clause will not change at all (12).

- (12) <ʃhubu-Ø_O pe-te>_E bun-ek ʃhëa-Ø_S
 house-ABS eat-COMPZR want-while:S/A>S pygmy.rice.rat-ABS
 cho-kid
 come-HAB
 'Pygmy rice rats come wanting to eat the house (thatch)'

There are two phonetically identical nominalizing suffixes, the very common suffix *-te* 'Instrument Nominalizer/Non-past Patient Nominalizer', and the more restricted *-te* 'Future Action Nominalizer'. (The next section will treat nominalization in more detail.) The latter, the action nominalizer, is the one that is closest semantically to the complementizer, and surely they share a common origin. In light of this, one might hope to analyse desiderative complement clauses as nominalizations, thus simplifying the general description of subordination in Matses. It would make sense, considering that the verb *bun* can take nouns and participant nominalizations as objects. And, in fact, we find that the verb *bun* can take a verb or a clause nominalized with *-te* as its E argument, but only when *-te* is a participant nominalizer as in (13) and (14).

- (13) is-te_E bun-e-bi
 see-INST.NOMZ/NPAST.PAT.NOMZ/COMPZR want-NPAST-1S
 'I want binoculars/a thing to look
 with' (instrument nominalization)
 'I want a television/something for
 looking at' (patient nominalization)
 'I want to see' (desiderative complement clause)

- (14) [kuesban-Ø kues-te]_E bun-e-bi
 bat-ABS kill-INST.NOMZ/COMPZR want-NPAST-1S
 'I want bat killers (22 cal.
 dust shot shells)' (instrument nominalization)
 'I want to shoot (a/the) bat(s)' (desiderative complement clause)

We find that *bun* cannot take other action nominalizations as complements.

- (15) *nid-ak_E bun-o-bi
 go-ACTN.NOMZ want-PAST-1S

But more importantly, we note that action nominalizations (16), including those with *-te* (17), do not exhibit coreference with matrix clause arguments or have equi-deletion requirements, as the desiderative complement clause does.

- (16) [mimbi_A kuesban-Ø_O kues-ak]_{CS} iksa-mbo
 2ERG bat-ABS kill-ACTN.NOMZ bad-COP.COMPZR
 ik-e-k
 be-NPAST-INDIC
 'It is bad that you kill bats'
 (17) [debi-n_A kuëte-Ø_O dëd-te-no]_{PP}
 Davy-ERG tree-ABS fell-FUT:ACTN.NOMZ-LOC
 şhubu-wa-e-mbi
 house-VZR:make-NPAST-1A
 'I'm going to make a house where Davy is going to fell trees'

Thus, if it were not for the obligatory subject coreference and equi-deletion, desiderative complement clauses could readily be called nominalizations. So synchronically, the future action nominalizer *-te* and the complementizer *-te* are best considered separate morphemes that form different types of subordinate clauses that occur in different construction types.

Negation is possible in the main clause and in the complement clause. Negative desiderative complement constructions are generally accomplished by attaching one of the negative verbal suffixes (*-en* 'Negative' or *-a* 'Negative: Perfect') and adding the copular/auxiliary verb *ik* (18), in the way that verbs are typically negated.

- (18) <is-te>_E bun-en-kio_{CC} ik-e-bi
 see-COMPZR want-NEG-COP.COMPZR AUX-NPAST-1S
 'I don't want to look'

Another, less common way to negate desiderative assertions is to negate the complement verb, as in (19).

- (19) <is-en-kio ik-te>_E bun-e-bi
 see-NEG-COP.COMPZR AUX-COMPZR want-NPAST-1S
 'I want to be not looking'

One can imagine that there is a subtle difference in scope between sentences like (18) and (19), but despite considerable work with speakers on this issue, a difference in meaning between (18) and (19) was never confirmed by Matses speakers. Example (18) might be said to represent a case of 'negative raising' as described in Noonan (1985: 90).

4. Complementation strategies

Matses has four types of subordinate clauses: (i) the desiderative complement clause (described above); (ii) adjectivalized clauses; (iii) nominalized clauses; and (iv) adverbialized clauses. The last two of these are complementation strategies and will be described separately in the two subsections of the present section.

4.1. Nominalized clauses

Two main categories of nominalizations occur in Matses, **action nominalizations**, where the nominal element refers to an event, state, or activity (twelve suffixes; Table 2), and **participant nominalizations**, where the nominal element refers to some entity that was involved in the event or state (seventeen suffixes, e.g., *-kid* 'Agent Nominalizer', *-ondaik* 'Distant Past Experiential Participant Nominalizer'; Fleck 2003: 316).

A participant nominalization, be it a single deverbal noun word or a multi-word nominalized clause (e.g. (2)), can be substituted into any noun

TABLE 2. Action nominalizing suffixes in Matses

Tense	Positive		Negative
	Experiential	Inferential	
Remote past	<i>-dennek</i>	<i>-ampik/-nēdampik</i>	(no form)
Distant past	<i>-ondaik</i>	<i>-nēdaik</i>	<i>-nēdakma</i>
Recent past	<i>-bok</i>	<i>-ak</i>	<i>-akma</i>
Future	<i>-te^a</i>		<i>-tema</i>
Generic activity	<i>-ak^a</i>		(no form)

^a There is no evidential distinction for the future or generic/present.

syntactic position, and can take all nominal morphology (with a few minor qualifications), and is the relativization strategy in Matses. Participant nominalizations are nouns, as far as Matses syntax is concerned, and as such have syntactic freedom to fulfil many different functions such as argument and oblique slots in sentences. But they do not function as complementation strategies. Action nominalizations, by contrast, have a rather limited distribution: they can only occur in three noun syntactic slots: (i) as subject of a copula clause with an adjective as a copula complement (20) and (21), (ii) as postpositional object of comparative (22) and locative (23) postpositions, and (iii) as object of the verb *dan* ‘mistake/assume incorrectly’ (24b). (Quoted speech will be in braces.)

- (20) mua-ak_{CS} iksa-mbo_{CC} ik-e-k
lie-ACTN.NOMZ bad-COP.COMPZR be-NPAST-INDIC
‘Lying is bad’
- (21) [debi-Ø nid-bok]_{CS} bēda-mbo_{CC} ik-o-šh
Davy-ABS go-PAST.ACTN.NOMZ good-COP.COMPZR be-PAST-3
‘It was good that Davy left’ [lit. ‘Davy departure was good’]
- (22) {kuen-enda [[[min bēnē utsi-Ø]_S kuen-ak]_{PO}
run.off-NEG.IMP 2GEN husband other-ABS run.off-PAST.ACTN.NOMZ
pad-ek]_{PP}} ka-onda-mbi
like-MANR:INTR say-DISTNT.PAST-1A
‘“Don’t run off like your brother-in-law [lit ‘other husband’] did,”
I told her’
- (23) [[podked-n_{PP} kapu-ašh] [podked-Ø_S nibēd-ak-no]_{PP}
path-LOC locomote-after:S/A>S path-ABS not.be-ACTN.NOMZ-LOC
kapu-kid]_{CC} bēdi-dapa-Ø_{CS} ne-e-k
locomote-AGT.NOMZjaguar-large-ABSbe-NPAST-INDIC
‘Jaguars are ones that walk on paths and then walk where there are no paths’
- (24) (a) opa-n_A šhēkten-Ø_O dan-o-šh
dog-ERG collared.peccary-ABS mistake-PAST-3
‘The dogs mistakenly thought that there was a collared peccary’
- (b) debi-n_A [opa-n_A šhēkten-Ø_O bed-ak]_O
Davy-ERG dog-ERG collared.peccary-ABS grab-ACTN.NOMZ
dan-o-šh
mistake-PAST-3
‘Davy mistakenly thought that the dogs captured a collared peccary’

Other than with *dan*, action nominalizations cannot occur as subject or object complements of active verbs (25).

- (25) (a) *mua-ak-n_A ubi_O nēish-me-e-k
 lie-ACTN.NOMZ-ERG 1ABS get.mad-CAUS-NPAST-INDIC
 ('Lying/his lying makes me mad')
- (b) *[debi-Ø nid-ondak]_O is-onda-mbi
 Davy-ABS go-DISTNT.PAST.ACTN.NOMZ see-DISTNT.PAST-1A
 ('I saw Davy leaving')

Unlike with the desiderative complement clause, all the core arguments of action nominalized clauses can occur overtly (with main clause case-marking frame), and with no coreference restrictions (26). Sentence (26) exemplifies two polysemous senses of the action nominalizer *-ak*, designation of a generic activity (first interpretation) and reference to a specific event (second interpretation). The other action nominalizers in Table 2 only refer to specific events.

- (26) [chido-n_A dada-Ø_O kues-ak]_{CS} iksa-mbo_{CC}
 woman-ERG man-ABS hit-ACTN.NOMZ bad-COP.COMPZR
 ik-e-k
 be-NPAST-INDIC
 'It is bad for women to hit men' activity nominalization
 'It is bad that the woman hit the man' nominalized proposition

Aspect, path, plurality, and other information that is coded by derivational verbal suffixes can also easily be coded on the derived verb, but the inflectional morphology itself is replaced by the nominalizing suffixes. Nevertheless, as can be seen in Table 2, many nominalizers vary for tense and evidentiality, in contrast to the desiderative complementizer *-te*. But unlike verbs heading independent clauses, nominalized verbs have no mode or person agreement possibilities.

This type of clause is quite common as a postpositional object, but as a copula subject it is infrequent, to my knowledge occurring only in copula clauses using one of the two value adjectives in the language, *bēda* 'good' and *iksa* 'bad'. Action nominalizations, therefore, syntactically are not prototypical nominalizations in that they do not acquire full noun status. Likewise, action nominalizations are not prototypical nominalizations semantically, in that they do not refer to a concrete entity. Nominalizations have main-clause-like syntax, so it is not so easy to distinguish these from complement clauses. However, because the main use of action nominalizations is as objects of postpositions, and because they do not function as complements of typical complement-taking verbs like 'see', 'hear', 'know', etc. (grammatical criterion

IV from Chapter 1), the use of action nominalizations in copula subject position is best considered a complementation strategy. I would consider action nominalizations to be intermediate between participant nominalizations and something we would want to call a complement clause.

4.2. *Adverbialized clauses*

The main strategy in Matses for expressing complementation-type notions is the use of adverbialized clauses, which are accomplished by suffixing the subordinated verb with the same category of suffixes that make adverbs from verbs or adjectives. These adverbialized clauses usually function as adverbial clauses and are the main type of clause that make up Matses clause chains (by multi-level subordination), and they are characterized by a large paradigm of portmanteau suffixes that simultaneously code temporal/logical relations and inter-clausal argument coreference involving all the possible coreference relations (Table 3). As will become apparent while reading this section, only some of the adverbializing suffixes in Table 3 are used for complementation strategies, and of these, different ones are used with different semantic verb types.

Dixon's (Chapter 1) 'beginning-type' and 'trying-type' Secondary concepts, when coded by verbs, are expected to have identical subjects and overlapping temporal relations with verbs in their subordinate clauses. These are accordingly coded in Matses by same-subject 'while' clauses, with the suffixes *-ek* 'while: S/A>S' and *-kin* 'while: S/A>A' (this notation specifies argument coreference between the subordinate clause and the matrix clause; for example, with *-kin* the S or A of the subordinate clause is coreferential with the A of the matrix clause; note that *-ek* is used instead when the matrix clause is intransitive). 'Beginning-type' notions are expressed with the begun (27), stopped (28) and (29), or finished (30) action in a 'while' clause subordinate to a matrix clause headed by one of the 'beginning-type' verbs in Table 4.

- (27) aid-n [chido-Ø_O bed-kin]
 that.one-INST woman-ABS capture-while:S/A>A
 tawa-onda-mbi
 begin-DISTNT.PAST-1A
 'With that one [the Dēmushbo woman], I began capturing women'
 (i.e. that was the first woman the speaker ever captured)
- (28) debi-Ø_S chonoad-ek ěněd-o-šh
 Davy-ABS work-while:S/A>S stop-PAST-3
 'Davy stopped working'

TABLE 3. Temporal, logical, and argument coreference relations coded by the 20 known adverbializing suffixes

Suffix	Basic meaning	Extended meanings	Subordinate clause argument	Matrix clause argument
-ek ^{a,b}	while	reason, circumstantial, conditional, concessive, additive	S A	= S
-kin/-en ^b	while	reason, circumstantial, conditional, concessive, additive	S A	= A
-nuk ^a	while	concessive		≠ ^c
-aşh	after	reason, conditional, concessive	S A	= S
-şhun	after	reason, conditional, concessive	S A	= A
-tanek	after	reason	S A	= S
-tankin	after	reason	S A	= A
-anek	after		S A	= S
-ankin	after		S A	= A
-an	after			≠ ^c
	(inferential)			
-bon	after			≠ ^c
	(experiential)			
-şho	when	reason, conditional, concessive	S A O	= O ^d
-ak	when	reason, conditional	O	= S A
-nuk ^a	until		S	= O
-teno	before			≠ ^c
-ek ^a	purpose		S A	= S
-nuşh	purpose	before	S A	= S
-nun	purpose	before	S A	= (S) ^e A
-nuek	purpose	before	S A	= S
-nuen	purpose	before	S A	= A

^a Forms are listed more than once due to their homophonous/polysemous meanings.

^b -ek and -en also function as adjective adverbializers.

^c The 'not equal' sign (≠) indicates switch to a different set of arguments, so that none of the core arguments in the subordinate clause is also in its matrix clause.

^d If -şho serves to mark O = O, it entails A ≠ A.

^e These parentheses signal inter-speaker variation.

- (29) debi-n_A [kuête-Ø_O dēd-kin] ěn-o-şh
 Davy-ERG tree-ABS chop-while:S/A>A stop-PAST-3
 'Davy stopped felling trees'

TABLE 4. Verbs used in adverbialized clauses functioning as complementation strategies

Verb	Meaning	Transitivity	Subordinate verb type	Adverbializing suffix used
beginning-type verbs:				
<i>taë</i>	'begin/start'	intransitive	intransitive	- <i>ek</i> 'while:S/A>S'
<i>tawa</i>	'begin/start'	transitive	transitive	- <i>kin</i> 'while:S/A>A'
<i>ënëd</i>	'stop, end'	intransitive	intransitive	- <i>ek</i> 'while:S/A>S'
<i>ën</i>	'stop, release'	transitive	transitive	- <i>kin</i> 'while:S/A>A'
<i>nain</i>	'finish'	transitive	any	- <i>kin</i> 'while:S/A>A'
try/attempt-type verb:				
<i>tan</i>	'try, attempt, test'	transitive	any	- <i>kin</i> 'while:S/A>A'
thinking-type verbs:				
<i>tantia</i>	'know how'	transitive	any	- <i>kin</i> 'while:S/A>A'
<i>tantia</i>	'know that'	transitive	<i>ke</i> 'say' ^a	- <i>kin</i> 'while:S/A>A'
<i>kiad</i>	'learn'	intransitive	any	- <i>ek</i> 'while:S/A>S'
<i>kiak</i>	'teach'	transitive	any	- <i>kin</i> 'while:S/A>A'
speaking-type verb:				
<i>chui</i>	'tell, promise, ask, report, advise, etc.'	transitive	<i>ke</i> 'say' ^a	- <i>kin</i> 'while:S/A>A'
attention-type verbs:				
<i>is</i>	'see, find, dream'	transitive	any	- <i>šho</i> 'when:S/A/O>O'
<i>tantia</i>	'hear, listen'	transitive	any	- <i>šho</i> 'when:S/A/O>O'
<i>tantia</i>	'think, believe, remember'	transitive	<i>ke</i> 'say' ^a	- <i>šho</i> 'when:S/A/O>O'
liking-type verb:				
<i>dakuëd</i>	'be afraid'	intransitive	<i>ke</i> 'say' ^a	- <i>ašh</i> 'after:S/A>S'

^a The quotative verb *ke* 'say [intransitive]' in this column indicates that the adverbialized clause always involves quotation (direct speech).

- (30) [_{3ABS} _{pos-kin} _{nain-ʃun} _{matses-n_A}
 split.open-while:S/A>A finish-after:S/A>A Matses-ERG
 ʃhubu-_{Ø_O} kënë-wa-kid takpan-_{Ø_O}
 house-ABS enclosure-VZR:make-HAB palm.plank-ABS
 ‘After they finish splitting them open, Matses make walls for their
 house out of the palm planks’

Comparing examples (28) and (29) and looking at the top of Table 4, we can see that we have already encountered one way in which some adverbialized clauses are atypical when they function as a complementation strategy: the requirement for matching transitivity of verbs in the main and subordinate clause is unique to *taē/tawa* and *ēnəd/ēn* complementation constructions.

The transitive verb *tan* ‘try, attempt, test, taste’ is used to code ‘trying-type’ complementation concepts, similarly employing same-subject ‘while’ clauses (31a). This same construction can also have a circumstantial reading, a more typical adverbial-clause-type function (31b).

- (31) (a) dektato-kin tan-nu
 climb.up-while:S/A>A try-INTENT:1
 ‘I will to try to climb up’
- (b) dektato-kin tapu-Ø_O tan-nu
 climb.up-while:S/A>A ladder-ABS test-INTENT:1
 ‘I will test the ladder by climbing up’

An important difference between (31a) and (31b) is that the verb *tan* can have an identifiable O with the non-complementation meaning, but not with the complementation meaning, evidently because in (31a), *tan* does not represent a typical transitive notion. The situation is similar for the transitive ‘start’ and ‘stop’ verbs and for ‘finish’, which allow a noun phrase with their non-complementation polysemous meaning ((32); cf. (30)), but not when they are involved in a complementation-like complex clause.

- (32) debi-n_A tadanke-kin ubi_O ën-o-şh
 Davy-ERG slip-while:S/A>A 1ABS release-PAST-3
 ‘Davy let go of me when he slipped’

Therefore, in the complementation constructions, for these (transitive) verbs at least, the adverbialized clauses are not filling the O slot formally, but they are semantically substituting for it. So, it is possible that this extended function of adverbialized clauses has already been reanalysed as a unique construction type that resembles an object complement construction, while the subordinate clause itself still retains the properties of an adverbialized clause. Several other verbs exhibit this pattern. For example, the transitive verb *tantia* in its ‘know how’ meaning (33) (*tantia* also has the meanings ‘hear’, ‘listen’, ‘know that’, ‘understand’, ‘think’, ‘believe’, and ‘remember’, which are not restricted to same-subject clauses, as will be described below).

- (33) [u-ben-tsëk-bi_S kapu-kin] tantia-en-kio
 1-alone-DIM-EMPH hunt-while:S/A>A know.how-NEG-COP.COMPZR
 ik-e-mbi
 AUX-NPAST-1A
 ‘I don’t know how to hunt alone’

Before moving on to adverbialized clause constructions that do not involve same-subject coreference, I point out two verbs that always occur with same-subject adverbial clauses: *kiad* ‘learn [intransitive]’ and *kiak* ‘teach [transitive]’.

- (34) dadawa-ek mē-kiad-e-bi
 write-while:S/A>S hand-learn-NPAST-1S
 ‘I’m going to learn to write’
- (35) dadawa-kin mibi_O mē-kiak-e-mbi
 write-while:S/A>A 2_{ABS} hand-teach-NPAST-1A
 ‘I’m going to teach you to write’

As can be seen in (35), unlike the other transitive verbs described in this section, *kiak* appears to occur with an overt O in addition to the complement-clause-like adverbialized clause. This may not be an exception, since body-part prefixes can add an extra absolutive-like participant to a clause (Fleck 2006), and *kiak* (and *kiad*) is a verb root that is obligatorily prefixed with a body-part prefix.

Verbs in Dixon’s (Chapter 1) ‘attention’ type complement-taking verb category are also typically coded by adverbialized clauses, but here rather than same-subject inter-clausal coreference, different subjects are not only semantically possible, but anticipated. Matses has just the suffix for coding this expected coreference relation: *-šho* ‘when:S/A/O>O’ (‘when’ means ‘while’ or ‘right after’ in this gloss). When *-šho* is suffixed to a verb subordinated to a matrix verb like *is* ‘see,’ the object of ‘see’ is coreferential with any of the core arguments associated with the subordinate verb, and in complementation-type usages, the action itself could be interpreted as what is coreferential with the O of the matrix verb ((36a), third interpretation). The adverbializing suffix *-šho* marks an immediately perceived event (36a) and (37), unless it is used in combination with the inferential suffix *-ak*, which indicates that the subject of the main verb inferred the occurrence of the event from some resulting evidence (36b) and (38).

- (36) (a) [mimbi_A debi-Ø_O kues-šho] is-o-mbi
 2_{ERG} Davy-ABS hit-when:S/A/O>O see-PAST-1A
 ‘I saw you as you hit Davy’/‘I saw Davy as you hit him’/‘I saw
 you hit Davy’

Note: the hitting could also be with a projectile weapon, in which case it would be possible that only the shooter or the person/animal being shot was seen.

- (b) [mimbi_A debi-Ø_O kues-ak-şho] is-o-mbi
 2ERG Davy-ABS hit-INFER-when:S/A/O>O see-PAST-1A
 ‘I saw (the evidence) that you hit Davy’
- (37) [[ambo-bi madin-Ø_S diad-şho] is-aşh]
 there-EMPH wasp-ABS hang-when:S/A/O>O see-after:S/A>S
 [bëçhun çhëşhë-n]_A tësh-şhun-ne-e-k
 capuchin.monkey black-ERG pull.off-APPLIC-DISTR-PAST-INDIC
 ‘After seeing/finding a wasp nest hanging there, the brown capuchin
 monkey pulls it off’
- (38) [[[umbi bed-ak-şho] is-aşh] {kun
 1ERG grab-INFER-when:S/A/O>O see-after:S/A>S 1GEN
 mado-n chido} ke-aşh] {kun tita}
 son-GEN woman say-after:S/A>S 1GEN daughter-in-law
 ke-onda-şh
 say-DISTNT.PAST-3
 ‘After seeing that I had taken her, he said, “My son’s wife,” and then
 said, “My daughter-in-law”’

There is no word for ‘dream’ in Matses, but the Matses talk about dreaming using this same verb and suffix combination (39) (*uşh-kin* ‘while sleeping’ is optional if the context of telling a dream is already established). The term for ‘show’ also involves this same verb: *is-me* ‘see-Causative’. But the complementation-like use of *is-me* involves apposition (see 43 below for an example of apposition), not clause chaining.

- (39) [[nisi-n_A mibi_O pe-şho] uşh-kin] is-o-mbi
 snake-ERG 2ABS bite-when:S/A/O>O sleep-while:S/A>A see-PAST-1A
 ‘I dreamt that a snake bit you’ lit. ‘While sleeping I saw a snake
 biting you’

Another attention Primary-B verb is the highly polysemous verb *tantia* ‘hear, listen, know how, know that, understand, think, believe, remember’ introduced above with the ‘know how’ meaning expressed using same subject clause. The verb *tantia* occurs with a -*şho* clause when it has a ‘hear’ meaning (40).

- (40) Ø_S nike-ak [Ø_A tonka-şho
 3ABS run.off-NARR.PAST 3ERG shoot.gun-when:S/A/O>O
 tantia-aşh]
 listen-after:S/A>S
 ‘They had run off after hearing him shoot/hearing the firearm report’

Primary-B verbs coding ‘thinking’ notions (as described in Chapter 1) are coded mostly using this same polysemous verb *tantia*, in this case with a combination of clause chaining and direct quotation (41) and (42) (quoted speech enclosed by braces). (All quotation in Matsigenka is direct speech, and it always involves one of two quotative verbs: *ke* ‘say [intransitive]’ or *ka* ‘tell/say to [transitive]’). As above, the adverbialized clause seems to substitute for the O of *tantia*.

- (41) Ø_A [{dachui-an-mane} ke-kin]
 3ERG curse.to.die-APASS-FUT:POTEN:1 say-while:S/A>A
 tantia-e-k
 think-NPAST-INDIC
 ‘They think that they might curse someone to die’
 lit. ‘They think saying, “I might curse someone to die”’
- (42) tantia-en-kio ik-o-mbi [{mibi_{CS} ekekankid_{CC}
 know-NEG-AUG AUX-PAST-1A 2ABS sorcerer
 ne-e-k} ke-kin]
 be-NPAST-INDIC SAY-WHILE:S/A>A
 ‘I didn’t know you were a sorcerer’ Lit. ‘I didn’t know saying “You are
 a sorcerer”’

An option for expressing the same ‘know that’ with the verb *tantia* is apposition to a second clause:

- (43) tantia-e-mbi Ø_O mimbi_A ubi_O muawa-e-k
 know-NPAST-1A 3ABS 2ERG 1ABS lie.to-NPAST-INDIC
 ‘I know that you are lying to me’ Lit. ‘I know it. You are lying to me’

Because the third-person pronoun ('it') is covert in the initial clause in (43), it appears as if the second clause is an object complement of the first clause. There is, however, clear evidence that the two clauses are actually syntactically independent sentences (e.g. either can stand as a complete utterance by itself), so this is neither a complement clause nor a complementation strategy.

Another verb that exploits the ‘adverbialized-clause-with-quotation’ strategy for expressing complement-type notions is *dakuəd* ‘be afraid’. These constructions involve quotation of a verb inflected with the suffix *-nushe* that marks a future potential event (44).

- (44) dakuəd-e-bi [{Ø_A kues-nushe} ke-aʃh]
be.afraid-NPAST-1S 3ERG hit-FUT.POTEN say-after:S/A>S
'I'm afraid that he will hit me' Lit., 'I'm afraid after saying, "He
might hit me"'

Similarly, the polysemous verb *chui* ‘tell, inform, advise, report, describe, ask, promise’ is often used in an adverbialized clause together with a quotative verb, since *chui* itself cannot function as a quotative verb (45).

- (45) [kun ṣhanu-Ø]_O chui-o-mbi [{cho-e-bi}
 1GEN female.cross.cousin-ABS promise-PAST-1A come-NPAST-1S
 ke-kin]
 say-while:S/A>A
 ‘I promised my cousin that I would go’ Lit. ‘I promised my cousin
 saying, “I will go”’

Taking into account Tables 3 and 4, we can make the following generalizations about adverbialization as a complementation strategy: (i) ‘While’ clauses are used to the categorical exclusion of ‘before’/‘Purpose’ clauses and essential exclusion of ‘after’ clauses. (ii) Beginning, attention, thinking, and speaking type verbs use ‘same-subject’ clauses; attention type verbs use ‘object/subject/event = matrix object’ clauses, and no verb types use ‘different arguments’ clauses or ‘object = matrix subject’ clauses. (iii) Verbs that involve spoken or mental activities use quotation in the adverbialized clause.

5. Conclusions

One striking feature of Matses complementation is that there are relatively few complement-taking verbs. Part of this has to do with the fact that there are highly polysemous verbs that cover multiple complementation-type notions. The verb *tantia* ‘hear, listen, know how, know that, understand, think, believe, remember’ is particularly interesting in that its meanings can be categorized into two Primary-B semantic types (attention and speaking), and it accordingly involves different adverbialized clause types to express notions in these different categories (see Table 4). A second reason for the paucity of complement-taking verbs in Matses is that the verbal suffixes *-chito* ‘Uncertainty’ and *-aṣh* ‘Conjecture’ reduce the need for verbs like the English *assume*, *suppose*, and *might*. Similarly, Matses being a highly synthetic language, many secondary concepts are coded by morphology, including *-en* ‘Negative’, *-a* ‘Negative Perfect’, *-tiad* ‘Abilitative/Desiderative’, and *-tiapi* ‘Negative Abilitative/Negative Desiderative’, all four of which occur in adjectivalized verb constructions (Fleck 2003: 1048–73). Also, the notions ‘cause,’ ‘make,’ and ‘let’ are all coded by the verbal suffix *-me* ‘Causative’ (Fleck 2002). Intention can be coded by verbal inflectional suffixes, especially *-nu* ‘Intention: 1st Person Subject’ and *-enda* ‘Non-past: Permission: 3rd Person Subject.’ Additionally, while there are multiple ‘beginning-type’

TABLE 5. Verbal derivational suffixes coding 'beginning-type' notions

-do	'Inceptive/Inchoative'	-ded	'Iterative: Intermittent'
-an	'Inceptive/Inchoative'	-ban	'Iterative: Plural O'
-kuen/-ben	'Inchoative'	-bud	'Durative'

verbs in Matses that enter into complementation strategies involving adverbialized clauses (§4.2), aspect-marking verbal derivational suffixes are also numerous (Table 5).

Historically, it appears that nominalizations may have a tendency to become complement clauses. Adverbialized clauses do not seem to become more complement-clause-like when they function as complementation strategies; rather, the matrix clause seems to lose its ability to have an O argument in addition to the subordinate clause.

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Complement Clause Type and Complementation Strategy in Kambera

MARIAN KLAMER

1. Introduction

Kambera is spoken by approximately 150,000 speakers in the eastern region of the island of Sumba (province Nusa Tenggara Timur) in Eastern Indonesia. In non-coastal and rural areas of the region, the language is still being spoken by children, while the absence of secondary education and mass media in these areas also limits the influence of Indonesian. Kambera is thus not an endangered language in number of speakers. It is classified as belonging to the Central Malayo-Polynesian subgroup of Austronesian languages (cf. Blust 1993). Native speakers refer to the language as *hilu Humba*, the ‘Sumba language’ (in contrast to *hilu Jawa* ‘Indonesian’). In the past it has been referred to as ‘Sumbaneesch’ (Wielenga 1909), ‘Sumba(a)sch’ (Onvlee 1925), ‘Kamberaas’ (Onvlee 1984), and ‘Bahasa Sumba/Kambera’ (Kapita 1982), and Klammer (1998a) is a recent grammar of the language while Klammer (2005) presents a short overview of it. Additional references on Kambera can be found in these publications. The information presented in this chapter is based on a corpus of twelve hours of spontaneous speech, plus additional elicitation, collected in Sumba during twelve months of fieldwork between 1991 and 1994. All speakers are native speakers, and come from the same village (cf. Klammer 1998a: 4–6). Kambera has one type of complement clause, as well as one complementation strategy, and both are discussed in this chapter.

2. Grammatical overview

Kambera is a head-marking language. A Kambera sentence is built on the basis of a ‘nuclear’ (or ‘minimal’) clause, which consists of a predicate phrase (PredP) (a verbal or nominal phrase that functions as the predicate of the clause) as well as a clitic cluster attached to that PredP.

The grammatical relations assumed for Kambera are intransitive subject (S), transitive subject (A), and transitive object (O). These grammatical relations are marked on the predicate by pronominal clitics. Kambera has two types of O: primary (direct) O (Patients, Themes), and secondary (indirect) O (Recipients, Benefactives, Goals, Locations), and both may be marked (also simultaneously) on the PredP.

The pronominal reference system of Kambera is rather complex (see Klamer 1997, 1998a, 1998b, 2000), but for the purposes of this chapter it is sufficient to present only the following few basic facts. In a declarative, transitive clause the PredP has a verbal head, the A is canonically nominative, and the O accusative (primary O) or dative (secondary O), see (1). The NPs between brackets are syntactically optional.

- (1) (na tau wútu) na-palu-ka (nyungga)¹
 ART person be.fat 3sg.NOM-hit-1S.ACC I
 ‘The big man hit me’

The sentences in (2) illustrate how objects are marked. In case of a ditransitive verb, the secondary O is always cross-referenced, as in (2a). In addition, the primary O may be cross-referenced if it is definite, as in (2b). In such cases, it follows the secondary O marking clitic. In this position, it must be dative because of clitic cluster restrictions.

- (2) (a) (i Ama) na-kei-nja rí
 ART father 3sg.NOM-buy.for-3p.DAT vegetable
 ‘Father buys them vegetables’ (indefinite Patient)
 (b) (i Ama) na-kei-ngga-nya
 ART father 3sg.NOM-buy-1sg.DAT-3sg.DAT
 ‘Father buys it for me’ (definite Patient)

Whether or not an O is cross-referenced depends on the grammatical definiteness of the referent NP. Definiteness is marked by the presence of an article: *na* for singulars, *da* for plurals, *i* for humans. NPs that are

¹ Some conventions for Kambera orthography: ng = [ŋ], ngg = [ŋg], j = [ʃ], nj = [nʃ], y = [j], ny = [nj], b = [β], d = [dʃ], à = [a], á [a:], í = [i:], ú = [u:].

cross-referenced on the predicate are optionally doubled, usually for emphasis or disambiguation.

In the discussion on complement clauses below, the main criterion to analyse nominal clauses as verbal complements is the fact that they may receive overt marking as arguments of the main verb only when they are definite (i.e. have an article).

S is canonically nominative:

- (3) [na ài] na-tambuta [dàngu amung]
 ART wood 3sg.NOM-drop.out with root
 ‘That tree is uprooted’

There are, however, other common strategies to mark S. They include: (i) using a combination of a genitive plus a third-person singular dative clitic. This marking of S expresses that the clause has continuative aspect (Klamer 2000); (ii) using a genitive clitic. Clauses with a genitive subject are referred to as ‘nominal clauses’, and are the topic of §6 below.

The unmarked constituent word order in a Kambera transitive declarative clause is (A)VO, though VOA and VAO are often attested as well (for V, one may also read PredP). What these configurations share is that their O follows the PredP, i.e. the canonical O position is post-verbal. For intransitive clauses the basic word order is VS, though SV is also often attested.

The relative freedom of constituent order in Kambera has to do with the fact that Kambera argument relations are generally marked by the pronominal clitics, rather than by changes in constituent order. In fact, since the full NPs (if present) are used for disambiguation or emphasis, we *expect* their order to be rather free.

In addition to the variable position of NPs, the distributional properties of the argument marking clitics also show a lot of variation. Representing clitics marking S, A, and O as {s, a, o} attached to the PredP (where ‘o’ is either an indirect object (‘io’) or a direct object (‘do’)), two major types of clitic orders are attested; one where A/S is marked with a (nominative) proclitic: a-PredP-o; a-PredP-io-do, s-PredP; and another where A/S is marked with an enclitic: PredP-a-o; PredP-a-io-do; PredP-s. The former type is the standard type, while the latter includes for example nominal clauses (see §6), and clauses with a non-verbal predicate (cf. (5) and (6) below). (For more information, see Klamer 1998a.)

In other words, a uniform statement concerning either the order of nominal constituents or the pronominal markers in Kambera is difficult to make. For the purpose of this chapter, it suffices to say that definite O constituents are marked on the verb as enclitics, and if they are (also)

expressed as NPs, these canonically follow the verb; just like the S marking NPs.

In addition to the pronominal clitics marking the grammatical relations, a nuclear clause also contains clitics that mark modal and aspectual notions of the clause. The entire clitic cluster may contain up to nine clitics. The following is an example of a clause with one verb and six clitics: three mark emphasis/mood, two are pronominal, and one marks iterative aspect:

- (4) njàpu-ma-du-a-na-nya-i nù, na ngara
finished-EMP-EMP-MOD-3sg.GEN-3sg.DAT-ITER DIST ART way
ngia uhu
place rice
'Thus it is finished, (the story about) the way to grow rice'

A Kambera sentence may start with a topicalized, left-dislocated constituent, which may be followed by a conjunction and a negation. Maximally two NPs precede the Pred P plus clitic cluster, maximally two follow it. Postpredicate NPs are followed by locational adjuncts (PPs).

3. Major clause types

Syntactically, Kambera has two major clause types: clauses with a verbal predicate, and clauses with a non-verbal (nominal, numeral, locational) predicate. In verbal clauses, the marking of S/A is variable (e.g. nominative, genitive, and dative), in non-verbal clauses, the S is *always* accusative. Kambera has no copular verb.

- (5) [tau hàmu]-ya (6) [lai nú]_{PP}-ya
 person be.good-3sg.ACC LOC DIST-3sg.ACC
 'she/he's a good person' 'she/he/it (is) there'

Since nominal predicates are inherently states rather than events, the S of a nominal predicate is not a controlling participant. This absence of control makes the S of nominal predicates similar to the O of transitive predicates.²

² Elsewhere (Klamer 1998a, to appear) I describe how the accusative is used to mark (i) the S of imperatives, (ii) S's with a generic or impersonal referent, and (iii) S's of stative verbs that are modified for degree. In addition, the accusative is an option for all intransitive verbs to express (iv) an S that is less in control than it would canonically be expected. The common denominator in all these cases is that S lacks control of the situation/event described by the predicate.

4. Major word classes

Nominals are distinct from verbs because they may be marked for definiteness by an article (cf. above). Nouns can also be quantified by a numeral phrase, and modified by a demonstrative and/or an emphatic pronoun:

- (7) [[[tailu mbua [mbola]] nuna] una]
 three CLF basket DIST.3sg. EMPH.3sg.
 ‘THOSE three baskets’

Typical verbal properties include (i) functioning as a predicate with a nominative S/A, and (ii) the possibility of being modified by a verbal adverb, e.g. *tika* ‘almost’.

Within the category of verbs, intransitive verbs can be distinguished from transitive ones because they have only one semantic argument. As a result, they cannot occur in transitive syntactic constructions. Transitive verbs, on the other hand, have at least two semantic arguments, so if it is at all possible to use a verb with two arguments cross-referenced on the verb, I assume it is transitive. (Of course, arguments of any verb may be left implicit, to be inferred from the context.)

Kambera has no exclusively nominal morphology. There are affixes that derive only verbs: *pa-* derives causatives, and *-ng* derives applicative verbs. There are no structural arguments to distinguish a separate lexical category of adjectives in the language, but it does have a separate category of adverbs (cf. Klammer 1998a).

5. Multi-clausal sentences

Kambera has six conjunctions, and all of them are coordinating. Clause coordination as well as juxtaposition are frequently used strategies to combine clauses. Kambera has three types of clauses that occur as embedded clauses: nominal clauses, controlled clauses and relative clauses. Examples (8–10) illustrate the contrast between a coordinated clause, a nominal clause, and a controlled clause. Coordinated clauses are two independent clauses combined by a conjunction, e.g. *ba* in (8). Nominal clauses, as in (9), have a genitive subject, and may be marked on the main verb by a pronominal enclitic (here *-nya*). Clauses with a controlled subject, as in (10), cannot be cross-referenced as the O of the main verb and are thus not considered syntactic complements of that verb—more explanation is given in §7 below.

- (8) Coordination with *ba* ‘as, when, while, because’:
ku-parahaya-ya; ba nda na-kambàlik
1sg.NOM-trust-3sg.ACC CONJ NEG 3sg.NOM-lie
‘I trust him because he doesn’t lie’
- (9) Nominal clause cross-referenced as O of main verb:
nda ku-pí-nya; [na kambàlik-mu] NP_j
NEG 1sg.NOM-know-3sg.DAT ART lie-2sg.GEN
‘I didn’t know that you were lying/I didn’t know about your lies’
- (10) Embedded clause with controlled subject
ku-parahaya-ya pa-nda kambàlik
1sg.NOM-trust-3sg.ACC CTR-NEG lie
‘I trust him not to lie’

Table 1 presents an overview of the Kambera verbs that take a nominal complement clause (see §6.1), which verbs take a controlled clause strategy (see §7), and which verbs may take both. The table also indicates which verbs have been attested with a quotative construction (see §8). The table represents what is in my corpus, but in fact complement clauses and complementation strategies may apply to further verbs. An empty box means that the construction is not attested in my database; it is unclear whether its absence means that it is ungrammatical or that it is low in frequency. (For logistic reasons, I have not been able to consult native speakers on Sumba island for this chapter.)

The verbs *namu* ‘to love’ and *namung* ‘to remember fondly’³ are included in Table 1 for comparative reasons, although they have neither been attested with nominal complement clauses, nor with controlled structures—instead, they take concrete O’s and occur in coordination structures. The verbs in the ‘Manipulation’ group express a concept where A manipulates O. This manipulation may involve speech, but the Manipulation verbs differ from Speaking verbs because they occur with an object-control clause rather than a quotative construction.

There are a few verbs that score in both the nominal complement column and the controlled clause column. Examples are *píngu*, *njadi*, and *monung*. As indicated in the table, the semantics of these verbs change under influence of the type of embedded clause. For example, *píngu* with a subject controlled clause means ‘to be able to, can’ (see (12)), while *píngu* with a nominal complement clause is translated as ‘to know (about) something’ (see (19)).

³ *Namu-ng* is morphologically related to *namu*. The productive function of the suffix *-ng* is to derive applicatives, but its function in today's *namung* is not (or no longer) transparent.

TABLE 1. *Kambera verbs: complement clauses and complementation strategies*

<i>Verb</i>	<i>Translation</i>	<i>Nominal compl. clause (function in main clause)</i>	<i>Controlled clause</i>	<i>Quotative construction</i>
ATTENTION				
ita	see	O		
rongu	hear	O		x
pàda	notice	O		
THINKING				
pikir (loan)	think			x
patandang	think about, realize	O		x
pangàdang	think about	O		x
marombang	forget		Subj	
manggadipang	dream	O		
píngu	know (about)	O		
	to be able to		Subj	
wài	believe			
parahaya (loan)	trust		Obj	
mbuting	expect	O		
monung	trust	O		
	hope		Subj	
THINKING/LIKING				
namung	remember (fondly)			
namu	love			
mbuhang	want, like, enjoy		Subj	
mangàdat	fear		Subj	
SPEAKING				
paníng	tell			x
panaung	tell			x
parànding/ràndi	promise			x
karuhi	insist, demand			x
palewa	send			x
paràha	command, force		Obj	x
MODAL				
màka	be capable of sth.		Subj	
njadi	be appropriate, be possible	S		x
	be able		Subj	
hàmu	be good	S		

(Continued)

TABLE 1. (*Continued*)

<i>Verb</i>	<i>Translation</i>	<i>Nominal compl. clause (function in main clause)</i>	<i>Controlled clause</i>	<i>Quotative construction</i>
BEGINNING				
pakiring	begin, start with sth.		Subj	
pangalang	continue with sth.		Subj	
duruhung	continue with sth.		Subj	
parenggang	hasten		Subj	
TRYING				
kamang	test, try out		Obj	
MANIPULATION				
bàtirung	threaten		Subj	
dundang	invite		Obj	
pambana	urge, encourage		Obj	
juju	incite		Obj	
rudi	press, force		Obj	
pareta (loan)	order		Obj	
kahiri	forbid		Obj	
MOTION				
mài	come		Subj	
laku	go		Subj	
lua	go		Subj	

Similar differences are found with *njadi* with a controlled clause ('to be able') versus *njadi* plus nominal complement clause ('to be appropriate, to be possible'), and *monung* with a controlled clause ('to hope') versus *monung* with a nominal complement clause ('to trust').

6. Nominal clauses

The first identifying feature of Kambara nominal clauses is that they mark their S/A with a genitive enclitic, as in (11):

- (11) [na apu-mu], katuda-na_s [la pinu bolsak]-ka
 ART granny-2sg.GEN sleep-3sg.GEN LOC top mattress-PRF
 una...
 EMP.3sg.
 'Your granny, she will sleep on a mattress...'

Though they are syntactically independent, the discourse status of nominal clauses is dependent—usually, they represent the background information for a clause that is more prominent in the discourse, while the S/A of the nominal verb is presented as part of the event/situation expressed by the predicate more than an actively involved participant. Nominal clauses may be independent clauses, as well as the main clause in a multi-clause construction, taking for example a controlled clause, as in (12):

- (12) ...ba nda [lalu pingu hàmu]-a-na_S [pa-kareuk]_{ContrCl}
 CONJ NEG too know be.good-MOD-3sg.GEN CTR-talk
 ‘... because he can’t talk very well yet’

Kambera nominal clauses have the external syntax of possessed NPs. They can be clefted, as well as compared:

- (13) [hama pingu-mi_S] [dàngu ama-mi]_{NP}_{PP}
 be.same know-2pl.GEN with father-2pl.GEN
 ‘You (pl) and your fathers are equally bright’

They may be marked for definiteness with an article (sg. *na*, pl. *da*), as illustrated in (14). The function of the article *na* in this example is to make the nominal clause definite so that it can be the referent of the definite demonstrative pronoun *nuna* ‘that one’ in the first clause.

- (14) muda-a nuna, jàka jia [na pala-nda_S]
 easily-just DIST.3sg if EXIST ART cross-3pl.GEN
 ‘That’s easy for us to cross’ (lit. ‘Easily that one, if (it’s) our crossing’)

If a nominal clause is definite, it can be cross-referenced as an argument of the main verb. This is further discussed below.

Internally, Kambera nominal clauses are similar to verbal clauses: they may contain mood and aspect clitics, as in (15a), as well as negations, as in (16). Such grammatical elements cannot occur inside possessed NPs, as illustrated in (15b).

- (15) (a) hili mandai-ma-na_S-i...
 again be.long-EMP-3sg.GEN-ITER
 ‘It (was) some time later...’
 (b) *uma-ma-na-i
 house-EMP-3sg.GEN-ITER

- (16) panau-nya nyuna ka àmbu palu-na_A-nja_O-i
 tell-3sg.DAT he CONJ NEG.irr hit-3sg.GEN-3pl.DAT-ITER
 [da ana-na]
 ART child-3sg.GEN
 ‘Tell him that he shouldn’t hit his children (anymore)’

Note that all of the nominal clauses discussed above are independent, i.e. they do not function as S/A or O of a main verb. There are, however, nominal clauses that do occur in such functions. Since this is a chapter on clausal complementation, the remaining part of this subsection will focus on those, though it is important to note that in my database nominal clauses that function as complements of a main verb are a tiny minority as compared to the nominal clauses that are syntactically independent.⁴

6.1. *Nominal clauses as complement clauses*

In (17) the nominal clause is marked as the S of the main verb *hàmu* ‘be good’. The nominal clause is a definite NP and follows the main verb. Its S is expressed as the enclitic *-na* on *ludu* ‘sing’, and the nominal clause also contains an S NP and a temporal adjunct.

- (17) nda na_S-hàmu ndoku <na ludu-na na tau
 NEG 3SG.NOM-be.good NEG.EMPH ART sing-3sg.GEN ART person
 la rudung>_S
 LOC night
 ‘That people sing at night is not nice at all’

In (18) the nominal clause functions again as the S of the main verb, but now it precedes the main verb. Note that the complement clause refers to the entire event of the meeting, not for example to the manner in which the meeting took place.⁵

- (18) <na hambur-na-nja>_S nda na_S-njadi-a
 ART meet-3sg.GEN-3pl.DAT NEG 3sg.NOM-be.appropriate-MOD
 ‘His meeting of them (i.e. the fact that he met them) was inappropriate’

⁴ In this section, I discuss a subset of the clauses that are called ‘nominal clauses’ in Klamer 1998a (section 4.2): those nominal clauses that function like verbal arguments and are cross-referenced by a pronominal clitic on the verb are referred to as nominal complement clauses. Klamer (1998a: 315–16) also recognizes that these clauses occur as one of the three types of subordinate clauses in Kambara.

⁵ The latter notion would be expressed using *hori* ‘custom’ and a relative clause:

- (i) na hori pa-hambur-na-nja nda na-njadi-a
 ART custom REL-meet-3sg.GEN-3pl.DAT NEG 3sg.NOM-be.appropriate-MOD
 ‘The manner in which he met them was inappropriate.’

In (19) we find a nominal clause in O function. It follows the main verb, i.e. appears in the canonical position for O NPs:

- (19) nda ku-pí-nya_O <na karuhi-na banda>_O
 NEG 1sg.NOM-know-3sg.DAT ART demand-3sg.GEN cattle
 'I do not know about his demanding cattle'

A nominal complement clause can contain a negation. It can also contain two NP arguments, as in (20) and (21) where the O is a definite NP and the A is part of an NP headed by *parai* 'work'. A nominal clause that contains an S NP is illustrated in (22).

- (20) na-ita-ya_O
 3sg.NOM-see-3sg.ACC
 <na katáku-na-nya [na hamayang-na] [parai-na
 ART accept-3sg.GEN-3sg.DAT ART pray-S.GEN work-3sg.GEN
 i Ama-na]>_O
 ART father-3sg.GEN
 'He sees that his prayer is accepted by his father'
 (lit. he sees his_j acceptance of his_k prayer (as) the work of [his_k father]_j)
- (21) ...ba lalu ita dí-na-nya_O-i-ka nú, [...] <na lalu
 CONJ too see be-3sg.GEN-3sg.DAT-ITER-PRF DIST ART too
 mbuha-na-nya
 like-3sg.GEN-3sg.DAT
 '...because he saw only too well the big liking
 [na ana njara] [parai-na nyuna yena i Umbu
 ART child horse work-3sg.GEN he this.one ART Sir
 Mada]>_O
 Mada
 of the foal by Sir Mada' (i.e. that Sir Mada liked the foal very much)
- (22) ku-manggadipa-nya_O <na meti-na na ama-nggu>_O
 1sg.NOM-dream-3sg.DAT ART die-3sg.GEN ART father-1sg.GEN
 'I dreamed about my father dying'

The O of the main verb in (22) is *-nya* and this enclitic is coreferent with the nominal clause as a whole—that is, the event of my father dying. If the clitic had been referring to my father—who died—the sentence would have been:

- (23) ku-manggadipa-nya_O ba na-meti na ama-nggu
 1sg.NOM-dream-3sg.DAT CONJ 3sg.NOM-die ART father-1sg.GEN
 'I dreamed about him, that he (my father) died'

Since only definite O's are cross-referenced, an indefinite nominal clause cannot be cross-referenced with an O marking clitic on the main verb. An illustration is (24).

Articles mark definiteness in Kambera, and since the nominal clause lacks an article, it is grammatically definite and cannot be marked on the main verb. Instead, it occurs in a coordination. Note also that the O of *pàda* 'notice' in the first clause refers to a person, and has the same referent as the S of the nominal clause (*na ama-nggu* 'my father'). This is not an instance of argument raising, since the argument is marked twice—in the first as well as the second clause.

- (24) *hina-ka hi ku-pàda-ya ba <mbeni-na*
 newly-PRF conj 1sg.NOM-notice-3sg.ACC conj be.angry-3sg.GEN
na ama-nggu>
 ART father-1sg.GEN
 'Only then did I notice him, that my father was angry'

In conclusion, Kambera nominal clauses are clauses with a genitive subject that may be marked for definiteness, and occur in comparative constructions in the same way that NPs do. They are generally used as syntactically independent clauses, may be juxtaposed or coordinated to another clause, or govern a controlled clause. The internal structure of nominal clauses is verbal: they contain negations and modal and aspectual clitics. Nominal clauses function as complement clauses when they are cross-referenced as the S or O of a main verb. (I have no examples of nominal clauses in A function.) Nominal complement clauses are, however, a small minority in my database; the majority of the nominal clauses is grammatically independent. In addition, I have found no examples of nominal complement clauses which contain negations and/or aspect or mood enclitics. To me this suggests that such configurations are either ungrammatical or very marked.

7. Complementation strategy: controlled clauses

A second type of embedded clause in Kambera I refer to as 'controlled' clauses. Controlled clauses follow a main verb, and are introduced by a marker of subordination, the proclitic *pa*.⁶ In (25a–b) the contrast between coordination and control is illustrated.

⁶ The morpheme *pa-* that introduces a complement clause is not a prefix but a clitic since it attaches to the edge of a syntactic phrase (the embedded clause) rather than to a morphological base (e.g. a verb), as can be seen in e.g. (28) and (30), where it attaches to a negation and an adverb respectively.

- (25) (a) Two coordinated clauses:

ta-pakiring [ka ta-tinu-nya na lau
 1pl.NOM-start CONJ 1pl.NOM-weave-3sg.DAT ART sarong
 haromu]_{ContrCl}

tomorrow

‘We start (with this) so that we’ll weave the sarong tomorrow’

- (b) Main and controlled clause:

ta-pakiring [pa-tinu-nya na lau haromu]_{ContrCl}
 1pl.NOM-start CTR-weave-3sg.DAT ART sarong tomorrow

‘We start to weave the sarong tomorrow’

By definition, controlled clauses do not have an overt S/A. Their S/A is implied and coreferent with an argument of the main verb—either the main S/A (‘subject control’, shown as ‘Subj’ in Table 1), as in (26), or the main O (‘object control’, shown as ‘Obj’ in Table 1), as in (27):

- (26) pareta-ya ka na-pingu [pa-ràma]
- _{ContrCl}
-
- instruct-3sg.ACC CONJ 3sg.NOM-know CTR-work

‘Instruct him so he knows what to do’

- (27) paràha-na-nja-ka, [pa-laku [pa-himbu
-
- command-3sg.GEN-3pl.DAT-PRF CTR-go CTR-search
-
- iyang]
- _{ContrCl}
- _{ContrCl}

fish

‘He commanded them to go and look for fish’

In a controlled clause the controlled S/A cannot be expressed, with either a nominative nor a genitive (nor any clitic); compare (28a–b):

- (28) (a) ku-parahaya-ya [pa-nda kambàlik]
- _{ContrCl}
-
- 1sg.NOM-trust-3sg.ACC CTR-NEG lie

‘I trust him not to lie’

- (b) ku-parahaya-ya pa-nda *na-kambàlik / *kambàlik-na
-
- 1sg.NOM-trust-3sg.ACC CTR-NEG 3sg.NOM-lie lie-3sg.GEN

Controlled clauses are not analysed as syntactic complements of the main verb for two reasons.⁷ First, because the verb heading a controlled clause may be intransitive and have its own S, so that the controlled clause cannot be the

⁷ Klammer (1998a: 338 v.v.) describes the Kambera controlled clauses in section 8.2 which is called ‘Complement clauses’. The arguments presented in the current chapter show that the Kambera controlled clauses are not actually syntactic complements of the main verb. In the terms of the present book, Klammer 1998a: section 8.2 describes various ‘complementation strategies’ in Kambera.

syntactic argument of the main verb. Examples are the verb *lua* ‘go’ in the second part of (29), and *laku* and *mài* in (30) and (31):

- (29) parenggang [pa-taku wài]_{ContrCl} ka u-lua
 hasten CTR-draw water CONJ 2sg.NOM-go
 [pa-manahu]_{ContrCl}
 CTR-cook
 ‘Quickly draw some water (from the well) so you can go cooking’
- (30) na-laku mài-pa [pa-hili karai-ka]_{ContrCl}
 3sg.NOM-go come-IMPf CTR-again ask-1sg.ACC
 ‘He came yet again to ask me again’
- (31) na-mài [pa-danggang winu]_{ContrCl}
 3sg.NOM-come CTR-sell betel.nut
 ‘He came to sell betel nut’

The second reason why controlled clauses are not considered syntactic arguments of the main verb is because they cannot be marked as such with clitics on the main verb. If the main verb is transitive, it can of course have an O marking enclitic attached to it, but this clitic always refers to a concrete entity, i.e. never to the (proposition of the) controlled clause. This is illustrated in (32–3). If the O of the main verb and the O of the embedded verb refer to the same person, this person is cliticized on both verbs.

- (32) nda ku-mbuha-a-nggau-pa pa-lei-nggau
 NEG 1sg.NOM-want-MOD-2sg.DAT-IMPf CTR-have.as.husband-2sg.DAT
 ‘I no longer want you for a husband’
- (33) na-bàtir-ngga pa-pa-meti-ka nyungga
 3sg.NOM-threaten-1sg.DAT CTR-CAU-die-1sg.ACC I
 ‘He threatens to kill me’

The internal structure of controlled clauses is more restricted than main clauses, because they (i) always lack an overt S/A, and (ii) do not have their own aspect and mood markers. At the same time, controlled clauses may have their own negation, as in (28), and also contain adverbs, as well as full object NPs, as illustrated in (34), which contains the adverb *mema*(ng) as well as the O NP *da makudu* ‘the small ones’:

- (34) jàka u-mbuhang [pa-kahau mema-nja da
 if 2sg.NOM-want CTR-separate immediately-3pl.DAT ART
 ma-kudu]_{ContrCl}
 REL-be.small
 ‘If you want to separate the small ones immediately...’

A sequence of several controlled clauses must involve either subject or object control; a combination of both is ungrammatical, as a comparison of (35a, b, c) shows.

- (35) (a) ta-paràha-ya pa-kaliti njara
 1pl.NOM-force-3sg.DAT CTR-ride horse
 ‘We forced him to ride a horse’
- (b) ta- kama -nya_i pa-paràha-ya_i ka na-kaliti
 1pl.NOM-try-3sg.DAT CTR-force-3sg.ACC CONJ 3sg.NOM-ride
 njara
 horse
 ‘We tried to force him to ride a horse’ (lit. ‘... to force him so he rides a horse’)
- (c)* ta-kama-nya pa-paràha-ya pa-kaliti njara
 1pl.NOM-try-3sg.DAT CTR-force-3sg.ACC CTR-ride horse
 Intended reading: ‘We tried to force him to ride a horse’

In conclusion, Kambera control clauses are a complementation strategy where the S/A or O of the main verb (transitive or intransitive) is coreferent with the unexpressed S/A of the embedded verb. In a number of respects, the Kambera control clauses are similar to the Potential type of complement clauses discussed in Chapter 1. However, since they are not a syntactic complement of the main verb and cannot be cross-referenced as an argument of it, they are not considered complement clauses in this book.

8. Perception verbs and the quotative construction

In §6 we saw that the verb *ita* ‘see’ has a nominal clause complement if the perception is of an activity or an event rather than a person, cf. (20) and (21). *Rongu* ‘hear’ also takes a nominal clause complement in (36):

- (36) na-rongu-ya_O <na kareuku-na i Peteru >_O
 3sg.NOM-hear-3sg.ACC ART talk-3sg.GEN ART Peter
 ‘He heard Peter(’s) talking.’

However, perception verbs taking nominal complement clauses appear to be marginal. More often, the event/activity is expressed in a coordinated clause, as in (37), or as part of a complex NP, as in (38).

- (37) da-rongu-ka ba na-ngàndi-ya-ka tau
 3pl.NOM-hear-PERV CONJ 3sg.NOM-take-3sg.ACC-PERV person
 kawini
 woman
 ‘They heard that he had already taken a wife.’

- (38) nda i-rongu-a nyimi tau kapihu?
 NEG 2pl.NOM-hear-MOD you.pl person to.fart
 'Didn't you all hear someone farting?' (lit. '... hear a farting person?')

In the majority of cases, *ita* and *rongu* have a personal O, followed by a coordinated clause, as illustrated in (39a) and (40a). Here, the O-marking enclitic cannot be used to refer to an event or an activity, as shown by the ungrammaticality of (39b), (40b), and *ita/rongu* cannot govern a controlled clause, as (39c), (40c) illustrate.

- (39) (a) na-ita-ka ba ku-wua-nya mbuku
 3sg.NOM-see-1sg.g.ACC CONJ 1sg.NOM-give-3sg.DAT book
 'He saw me when I gave him a book.'
- (b) *na-ita-ya ba ku-wua-nya mbuku
 3sg.NOM-see-3sg.ACC CONJ 1sg.NOM-give-3sg.DAT book
 Intended reading: 'He saw it, (that) I gave him a book.'
- (c) *na-ita-ka pa-wuanya mbuku
 3sg.NOM-see-1sg.ACC CTR-give-3sg.DAT book
 Intended reading: 'He saw me giving a book.'
- (40) (a) ku-rongu-kau ba u-ludu wàngu ludu hali
 1sg.NOM-hear-2sg.ACC CONJ 2sg.NOM-sing use song holy
 'I heard you singing hymns.' (lit. 'I heard you while you sang using hymns.')
- (b) *ku rongu-ya ba u-ludu
- (c) *ku-rongu-kau pa-ludu

Since it reports audible perception, the verb *rongu* is also frequently attested in combination with a quotative construction.

In a similar way, the verbs of speaking in Table 1 (e.g. *paníng* 'to tell', *paràha* 'command, force') do not occur with a nominal complement clause but rather with a coordinated clause. They usually have the addressee as their O, followed by a direct quote.

A Kambera quotative construction consists of a direct quote juxtaposed to and followed by the verb *wà* 'say', as illustrated in the second clause of (41) below. *Wà* is an intransitive verb used to report speech (among other perceived events, cf. Klamer 2002). Its S is the speaker and is marked with a genitive enclitic. *Wà* can be derived with the applicative suffix *-ng* to become a transitive verb, in which case the additional O refers to the Addressee. The quote itself is never a syntactic argument of *wà*. Kambera speech reports are always expressed by quotative constructions; Kambera syntax does not distinguish direct and indirect speech.

- (41) ‘...ka tàka ku-rongu-a-ya-i hamatuna i
 CONJ arrive 1sg.NOM-hear-MOD-3sg.ACC-ITER with.respect.to ART
 Umbu Mada,
 Sir Mada
 ‘... but then when I heard Sir Mada again,
 “ka ndia” wà-na-ma-a-ngga-i’.
 CONJ NEG say.APPLIC-3sg.GEN-MOD-MOD-1sg.DAT-ITER
 he did deny it to me once again’ (lit. ‘he did say “no” to me again’)

The quotative construction is also used to express thoughts as internal speech, which may be preceded by a clause containing a verb of thinking such as *patandang* ‘think about’:

- (42) ana patandang-na-nya-ka dá la eti,
 DIM think.about-3sg.GEN-3sg.DAT-PERV inside LOC liver
 he thought about her for a bit in his heart,
 ‘jia na ina-nggu-ka ihi’, wà-na
 exist ART mother-1sg.GEN-PERV maybe say-3sg.GEN
 ‘maybe (she’s) my mother’, he thought (lit. ‘maybe my mother exists’,
 he said).

Kambera has no plain verb ‘to think’; *patandang* and *pangàdang* always take as their O an object thought about. Kambera has borrowed the verb *pikir* ‘to think’ from Indonesian, but in Kambera, *pikir* also has an O with a personal referent, while a coordinated quotative clause expresses the thought itself:

- (43) ‘ais’, na-pikir-ya, ‘ka tobu-nya na ana njara...’
 EXCL 3sg.NOM-think-3sg.ACC CONJ kill-3sg.DAT ART child horse
 ‘Oh no’, he thought of him (i.e. his child), ‘if the foal is killed...’

9. Summary and conclusions

Kambera has only one type of complement clause, the nominal complement clause, but this type is not so frequently attested. In general, clause coordination is the preferred strategy to express notions that other languages may express by complement clauses. The coordinated clause may be a simple main clause, but it may also be a quote—especially if the first verb is a verb of speaking or thinking. A very productive complementation strategy is the one where the main verb takes a controlled clause, whose S/A is empty and coreferent with either the S/A or the O of the main verb.

In Kambara, negation is expressed with a clause-initial negator, as illustrated in (17), (28a), and (38). Notions of causation and permission are expressed by deriving a verb with the causative prefix *pa-* (cf. Klamer 1998a).

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Complementation Strategies in Dyirbal

R. M. W. DIXON

1. Introduction

In 1972, I published a description of Dyirbal which described every grammatical pattern in a corpus of forty texts and much other material. A linguist who read the grammar wrote and asked why there was no mention of complement clauses. I knew about complement clauses in English and other languages, and I also knew the grammar of Dyirbal. The language simply has no complement clauses; that is, it has no clauses functioning as core arguments in a higher clause.

As I continued to work on Dyirbal through the 1970s and 1980s—gathering materials for a dictionary/thesaurus, recording and analysing more texts, and pursuing further grammatical study—the question nagged at me as to what Dyirbal might have which would correspond to complement clauses in other languages. Chapter 1 of this volume discusses prototypical complement-clause-taking verbs: ‘see’, ‘hear’, ‘like’, ‘want’, ‘tell to do’, ‘finish’, and others. I came to realize that in Dyirbal each of these verbs carries the expectation of entering into a certain grammatical construction—a purposive construction, a relative clause construction, or a serial verb construction. These constitute what I call ‘complementation strategies’, being roughly equivalent to complement clause constructions in other languages.¹

¹ A complement clause construction is found in very few (if any) Australian languages. For Panjima, from Western Australia, Dench (1991: 196–201) describes a situation rather similar to that in Dyirbal. Relative clause constructions are used as a complementation strategy with verbs such as ‘see’ and ‘hear’, purposive constructions with ‘want’, and both strategies are available for ‘tell’. Wilkinson (2004) describes complementation strategies in Djambarrpuyngu from eastern Arnhem Land (see n. 3). We now await informed study of other languages, from Australia and elsewhere, which lack complement clause constructions.

In English, *see* commonly takes an ING complement clause as O argument, to describe an activity which is seen; this is (c) from Fig. 1 in Chapter 1. In Dyirbal, verbs of seeing carry the expectation of including a relative clause within their O NP, as a way of referring to an activity which is seen, as illustrated by (24) in Chapter 1; this is (b) from Fig. 1 of Chapter 1, used as a complementation strategy. Whereas in English *want* is a transitive verb taking a FOR TO complement clause in O function, in Dyirbal verbs of wanting are intransitive, and carry the expectation of being linked to a further clause by an 'in order to' linker; this is (a) from Fig. 1 of Chapter 1, used as a complementation strategy. And whereas in English *finish* takes a complement clause in O function, in Dyirbal verbs of finishing occur with another verb in a serial verb construction (the two verbs agree in transitivity and final inflection and have the same arguments); this is a third variety of complementation strategy.

Table 1 provides an overview of some of the Primary-B, Secondary-A, and Secondary-B verbs which expect a complementation strategy, and which strategy each relates to.² Note that Dyirbal has no way of expressing the Secondary-C concept of making, neither a lexical verb nor a derivational affix to the verb. Quite simply, one must specify the mechanism of causation. Rather than the vague 'He made me laugh', a speaker of Dyirbal has to specify what was done to bring about this activity; for instance, 'She told me a joke and as a result I laughed' or 'He tickled me and as a result I laughed'. (The nearest thing to a causative verb is *gigal* 'tell to do, let do', which takes a purposive complementation strategy; see (20) in §4.1.)

The concept 'begin' is realized only through a verbal derivational suffix *-yarray* 'start to do, do a bit more'. The use of purposive inflection on a main clause verb deals with Secondary-A meanings such as 'ought to', 'have to', 'need to' (see §4.1). 'Will' is shown by future inflection. Negation is dealt with by a clausal particle *gulu* and 'might' by a clausal particle *yamba*.

2. Background information

Dyirbal was spoken in the mountainous rainforest region of north-east Queensland, Australia, from Malanda in the north almost to Cardwell in the south, and from the east coast as far as Ravenshoe in the west. There were a dozen or so dialects, each mutually intelligible with its neighbours. Those on which I have gathered most information are, from south to north: Girramay (G), Jirrbal (J), Mamu (M), and Ngajan (N). When I began fieldwork in 1963

² There are in the corpus a dozen or so further complementation-strategy-taking verbs, of similar meanings to those listed. Eleven of the verbs in Table 1 have different forms in some dialects; just one dialect form is listed here.

TABLE 1. Verbs expecting complementation strategies

	COMPLEMENTATION STRATEGY
ATTENTION AND THINKING	
<i>transitive</i>	relative clause
bural 'see, look at, read', as in (24) of Chapter 1	
barmil 'look back at'	
walgiy 'look round at'	
duygiy 'look under at'	
rugal 'watch someone/thing going'	
wamil 'look at clandestinely'	
jarmil 'look for something lost'	
jaymbal 'find'	
dijal 'meet by chance, encounter, find', as in (28)	
nyulal 'show'	
ŋambal 'listen, hear about, understand, believe', as in (27)	
ŋurrumil 'think of, imagine, have a premonition about'	
yibirray 'dream about'	
SPEAKING	
<i>transitive</i>	relative clause
buway 'tell'	
jingal 'recount'	
bayal 'sing about'	
manjal 'point out by a shout'	
ŋunjay 'blame', as in (29)	
jabil 'refuse to allow, stop someone doing', as in (30)	
ŋaril 'answer'	
banjul 'won't answer'	
milgay 'grumble at'	
<i>intransitive</i>	
wilimbay, 'call out in fright at'	
<i>transitive</i>	purposive
ŋanbal 'ask', as in (18–19)	
yumbal 'invite to come over'	
yajal 'ask to accompany'	
nungal 'ask to help'	
ŋibay 'ask to do something', as in (22)	

(Continued)

TABLE 1. (*Continued*)

	COMPLEMENTATION STRATEGY
gigal 'tell to do, let do', as in (20)	purposive
nural 'encourage to do, give permission to'	
yaji-jaral 'threaten to do something bad to'	
<i>intransitive</i>	
wajil 'promise to come'	
LIKING AND OTHER PROPENSITIES	
<i>transitive</i>	purposive
ɲuymiy 'like to do something', as in (21), (38)	
jiwal 'dislike'	
<i>intransitive</i>	
wugil 'show off, act proud', as in (17)	
ɲilwal 'tempt to fight'	
<i>intransitive</i>	relative clause
gayga-ganday 'be jealous about'	
murriy 'feel ashamed of having done wrong', as in (26)	
murrɲgiy 'feel sore (physically or mentally)'	
ɲurjiy 'be shy and ashamed', as in (25)	
ɲarjarrmbay 'feel unsettled in mind, be unable to make up one's mind, try to plan', as in (31–2)	relative clause and purposive
WANTING	
<i>intransitive</i>	purposive
walɲgarray 'want to do something to satisfy a persistent emotional worry or desire', as in (15–16)	
garrgiy 'want to go to a place'	
jananbay 'be anxious/getting ready to do something'	
FINISHING AND TRYING	
<i>transitive</i>	serial verb
jayɲul 'finish doing', as in (33), (36)	
ɲunbiral 'try something out'	
ɲurbil 'try, test, taste'	
<i>intransitive</i>	
wuday 'stop doing', as in (35)	
gajilmbarriy, 'pretend to do', as in (34)	

there were around a hundred fluent speakers; today only a handful remain, plus a number of semi-speakers.

3. Basic grammar

Dyirbal has an agglutinative structure, with suffixes but no prefixes. It is dependent marking, but with a split case-marking system. As illustrated in Table 2, we find:

1. one form for S and A functions (nominative case) and another for O function (accusative case), for pronouns;
2. one form for S and O functions (absolutive case, with zero marking) and another for A function (ergative case, with main allomorph *-ŋgu*), for:
 - (a) nouns and adjectives;
 - (b) noun markers, determiner-like elements which may accompany or replace a noun and contain three elements: (i) showing the location of the referent of the noun: *ba(la)*- ‘there’ (the unmarked choice), *ya(la)*- ‘here’, or *ŋa(la)*- ‘non-visible’; (ii) a case suffix, agreeing with that on the noun; (iii) a mark of the noun class (or gender) of the noun— *-n* for feminine, *-l* for masculine, *-m* for edible plants, and \emptyset for neuter. The absolutive masculine form is irregular: *bayi*, when *balal* would be expected.

Note that a noun phrase can include any combination of pronoun, noun, adjective, and noun marker.

TABLE 2. Systems of case inflection in Dyirbal

	nominative-accusative system for pronouns, for example:	absolutive-ergative system for		
		nouns and adjectives	noun markers, for example:	
			feminine	masculine
A	ŋaja ŋinda	-ŋgu	ba-ŋgu-n	ba-ŋgu-l
S		\emptyset	bala-n	bayi
O				
Dative	ŋaygu-na ŋinun-gu	-gu	ba-gu-n	ba-gu-l
Genitive	ŋaygu ŋinu	-ŋu	ba-ŋu-n	ba-ŋu-l

Verbs show strict transitivity; they are either intransitive (with one core argument, in S function) or transitive (with core arguments in A and O functions). And there are two verbal conjugations shown by final *-y* or *-l* on the form of the root. There is a correlation but no coincidence between transitivity and conjugation; about 80 per cent of intransitive verbs are in the *-y* conjugation and about 90 per cent of transitives in the *-l* class. Basic verbal inflections for the two conjugations (with dialect variants) are in Table 3; these suffixes replace the final *-y* or *-l* of the root. Note that there is just one irregular verb, *yanul* 'go', whose past tense form is *yanu* (rather than the expected **yanunyu*). In the southern dialects (J and G) the past tense form also covers present (a future/non-future system), while in the northern dialects (M and N), future also covers present (a past/non-past system).

The case forms shown in Table 2 can be illustrated in simple intransitive and transitive clauses, using intransitive verb *yanu* 'went' and transitive *buran* 'saw', with nouns *yara* 'man' and *yibi* 'woman'.

- (1) [bayi yara]_S yanu, 'The man went.'
- (2) [balan yibi]_S yanu, 'The woman went.'
- (3) ŋaja_S yanu, 'I went.'
- (4) ŋinda_S yanu, 'You went.'
- (5) [bayi yara]_O [baŋgun yibiŋgu]_A buran, 'The woman saw the man.'
- (6) [balan yibi]_O [baŋgul yaraŋgu]_A buran, 'The man saw the woman.'
- (7) ŋaja_A ŋinuna_O buran, 'I saw you.'
- (8) ŋinda_A ŋayguna_O buran, 'You saw me.'

Although Dyirbal has a mixed morphology—with nouns, adjectives, and noun markers inflecting on an ergative but pronouns on an accusative system—its syntax works entirely in terms of an S/O pivot. Two clauses may only be joined in a coordinate structure if they share an argument which is in S or O function in each clause. The occurrence of this argument in the second clause is then generally omitted (or just a noun marker element may be retained). Thus (1) and (5) may be joined together in either order to

TABLE 3. Forms of the main verbal inflections

	-y conjugation	-l conjugation
future	G -njay, JMN -ny	G -ljay, JM -ny, N -:ny
past	-nyu	-n
positive imperative	∅	∅
purposive	GJM -ygu, N -:gu	-li

make one sentence, as in (9). (Note that Dyrirbal has no overt coordinators ‘and’, ‘but’, etc.; coordination is shown by the whole sentence being assigned to a single intonation unit.)

- (9) [bayi yara] yanu [baŋgun yibiŋgu]_A buran, ‘The man went and the woman saw him.’

Here *bayi yara* is understood to be in S function for the first verb, *yanu* ‘went’, and in O function for the second, *buran* ‘saw’.

In order to coordinate two clauses such as (1) and (6), where the common argument ‘the man’ is in A function in the second clause, an antipassive syntactic derivation must be applied to (6). This places the underlying A argument in derived S function, marks the underlying O by dative case, and places the antipassive derivational affix *-ŋa-* (with a verb from the *-l* conjugation) or *-na-* (with one from the *-y* class), between verb root and inflection, yielding (10), which has essentially the same meaning as (6).

- (6) [bala-n yibi]_O [ba-ŋgu-l yara-ŋgu]_A bura-n
 THERE:ABS-FEM woman:ABS THERE-ERG-MASC man-ERG see-PAST
 ‘The man saw the woman.’
- (10) [bayi yara]_S bural-ŋa-nyu [ba-gu-n
 THERE:ABS:-MASC man:ABS see-APASS-PAST THERE-DAT-FEM
 yibi-gu]
 woman-DAT
 ‘The man saw the woman.’

Now (1) and (10) can be coordinated, giving:

- (11) [bayi yara]_S yanu buralŋanyu [baŋgun yibigu], ‘The man went and saw the woman.’

Here *bayi yara* is in S function for both the intransitive verb *yanu* and the derived intransitive *buralŋanyu*.

4. Complementation strategies

The three varieties of complementation strategy will be described one at a time—the purposive, the relative clause, and then the serial verb strategy.

4.1. The purposive complementation strategy

A purposive construction involves one clause (C_1) whose verb bears tense or imperative inflection, and a second clause (C_2) whose verb takes purposive

inflection (the allomorphs are set out in Table 3) in place of a tense choice. Just like simple coordination, the two clauses must share an argument which is in S or O function in each; it is generally omitted from (or shown just by a noun marker in) C_2 . Either the activity of C_1 was done *in order that* that of C_2 should follow, or the activity of C_2 follows *as a natural consequence* of what was described in C_1 . Thus, replacing the past tense inflection of the verb in the C_2 of (9) by purposive suffix *-li*, we get:

- (12) [bayi yara] yanu [baŋgun yibingu]_A burali
 either 'The man went so that the woman should see him.'
 or 'The man went and as a result the woman saw him.'

In (12), the shared argument, *bayi yara*, is in S function in C_1 and in O function in C_2 . In (13) this is reversed, with *bayi yara* being in O function in C_1 and in S function in C_2 .

- (13) ŋaja_A [bayi yara] bara-n baji-gu
 1SG:NOM THERE:ABS:MASC man:ABS punch-PAST fall-PURPOSIVE
 either 'I punched the man and as a result he fell down.'
 or 'I punched the man so that he should fall down.'

Purposive inflection can also occur on the verb of a main clause (although it is found less often in this position than in the second clause of a complex sentence construction such as (12–13)). For example:

- (14) ŋaja_S yanu-li, 'I have to go.'

This implies that there is some reason for which I must go; for example, there may be no food for my family so that I have to go out to hunt. A sentence such as (14) can be translated as 'have to', 'ought to', 'need to', or even 'want to', but only when this implies a desire brought on by some external factors.

Any verb may occur in C_1 and any verb in C_2 of a purposive construction—as in (12–13)—so long as there is some plausible link between the activities referred to. That is, a clause with *yanul* 'go' or *baral* 'punch' may make up a complete sentence, or be the first part of a purposive construction.

But there is a set of verbs which carry the expectation of being followed by a purposive clause, as a complementation strategy. The possibilities for the function of the shared argument in the two clauses are set out in Table 4.

Whereas in English *want* (and other Wanting verbs) are transitive, and take a complement clause as O argument, the corresponding verbs in Dyirbal are intransitive. For example, *walŋgarray* 'want to do something to satisfy a persistent emotional worry or desire' occurs with an intransitive purposive clause in:

TABLE 4. Functions of shared argument in clauses of a purposive complementation strategy

	function in C ₁ , with complementation-strategy-taking verb, with tense or imperative marking	function in C ₂ , with purposive marking	examples
(i)	S	S	(15–16), (32)
(ii)	S	O	(17)
(iii)	O	S	(18–19)
(iv)	O	O	(20–1), (38)
(v)	A } O }	S	(22)

(15) *ŋaja_S walŋgarra-nyu banaga-ygu*, ‘I want to go home.’

Here *ŋaja* is S argument both for *walŋgarra* ‘want’ and for the intransitive verb in purposive inflection, *banagay* ‘go home’, illustrating row (i) of Table 4.

Now if someone should want to do something to someone or something, the purposive clause, C₂, would be transitive with the shared argument in A function. To satisfy the S/O pivot condition, this clause must be recast as antipassive, with the underlying A argument going into S function, and the original O in dative case, as in:

(16) *ŋaja_S walŋgarra-nyu wugu-gu jaŋga-na-ygu*
 1SG:NOM want-PAST food-DAT eat-APASS-PURPOSIVE
 ‘I want to eat some food.’

Row (ii) of Table 4 is illustrated in (17) where the shared argument, *bayi* ‘he’, is S for C₁, with the intransitive verb *wugil* ‘show off’, and O for C₂, with the transitive verb *bural* ‘see’:

(17) *bayi wugi-n yibi-ŋgu_A bura-li*
 THERE:ABS:MASC show.off-PAST woman-ERG see-PURPOSIVE
 ‘He was showing off, for the woman to see (and admire) him.’

There are also transitive verbs which expect a purposive clause. We can get the O of C₁ identical to the S of C₂, as in:

(18) *ŋaygu-na ba-ŋgu-l_A ŋanba-n yanu-li*
 1SG-ACC THERE-ERG-MASC ask-PAST go-PURPOSIVE
 ‘He asked me to go.’

Note that the underlying clauses are *ɲayguna*_O *baŋgul*_A *ɲanban* ‘He asked me’ and *ɲaja*_S *yanuli* ‘for me to go’. Although the 1sg pronoun has a different form in the two clauses, it is in pivot function S or O in each, so that its occurrence in the second clause (here *ɲaja*) is omitted. Row (iii) of Table 4 is illustrated in (18) and also in (19).

- (19) *ɲinda*_A *ɲayguna* *ɲanba-n* *jigarin-gu* *wugal-ɲa-ygu*
 2sg:NOM 1sg-ACC ask-PAST cigarette-DAT give-APASS-PURPOSIVE
 ‘You asked me to give a cigarette (to you).’

Here the purposive clause involves a transitive verb with the shared argument, ‘I’, in A function; it must thus be antipassivized. As in (18) the 1sg pronoun functions as O argument for *C*₁, realized here as *ɲayguna*, and as S argument for *C*₂ (the S form *ɲaja* is here omitted).

It is also possible for the shared argument to be in O function in both clauses, row (iv) of Table 4, as in:

- (20) *ɲaja*_A *bayi*_O *gigan* *gubi-ɲgu*_A
 1sg:NOM THERE:ABS:MASC tell.to.do-PAST tribal.doctor-ERG
mawa-li
 feel-PURPOSIVE
 ‘I told him to be examined (lit. felt all over) by the tribal doctor.’

Here *bayi* ‘him’ is the O argument for both *gigal* ‘tell to do’, in *C*₁, and *mawal* ‘feel’, in *C*₂.

Quite often, we find both O and A identical between *C*₁ and *C*₂, as in:

- (21) *ɲaja*_A *ɲuymi-nyu* *gurugu*_O *gunyja-li*
 1sg:NOM like-PAST grog:ABS drink-PURPOSIVE
 ‘I like to drink grog (lit. I like grog for me to drink grog).’

There is a further possibility, shown in row (v) of Table 4, where the referent of the S of *C*₂ is the sum of the referents of A and O in *C*₁:

- (22) *ɲaygu-na*_O *ba-ɲgu-na*_A *ɲiba-nyu* *ɲali*_S
 1sg-ACC THERE-ERG-FEM call.to.do-PAST 1du:NOM
yanu-li *wabu-ɲgarrru*
 go-PURPOSIVE forest-THROUGH
 ‘She called me, for us two to go through the forest together.’

Here the S argument of *C*₂ is, necessarily, stated.

4.2. The relative clause strategy

A relative clause must have an argument which is identical to the head of the NP it is modifying (this whole NP being an argument of the main clause). In Dyirbal, the identical argument in the relative clause must be in S function, as in (23), or in O function, as in (24). This argument is not stated within the relative clause.

- (23) η ali_A bayi_O balga-n [gulu yanu- η u]_O
 1dual:NOM THERE:ABS:MASC kill-PAST NOT go-RELATIVE
 ‘We two killed him who wouldn’t go (we killed him because he was so lazy and wouldn’t go out).’
- (24) η aja_A [balan bangay]_O bural-ja-nyu
 1sg:NOM THERE:ABS-FEM spear see-LOTS-PAST
 [ba η gugarragu_A galgal-ja- η u]_O
 3dual:ERG leave-LOTS-RELATIVE
 ‘I saw lots of spears which the two (men) had left.’

In each of these examples the relative clause is detached from the noun which it modifies; this is fairly common, but note that word order is remarkably free in Dyirbal. Both verbs in (24) include the derivational suffix *-ja-* ‘action involving many objects’.

Note that only a plain relative clause interpretation is possible for (23). For (24), taken out of context, a complementation strategy interpretation would be possible, ‘I saw the two men leaving lots of spears.’ But in the text from which (24) is taken, the storyteller comes across a pile of spears which two men had left, some time before, outside a house (and from this recognizes it as the men’s house).

As shown in Table 1, a number of verbs expect a relative clause, as a complementation strategy referring to an activity. The possible functions of the identical argument in main clause and in complement clause are set out in Table 5; note that these replicate the first four rows of Table 4 for purposive complementation strategies.

Some verbs expecting the relative clause complementation strategy are intransitive; row (i) of Table 5 is illustrated in (25), for which a little background is needed. A boy and girl were promised in marriage at an early age. When they had reached maturity, the man was expected to claim his promised wife once he had proved himself as a hunter and provider. But if he failed to do so, she would have to go to him, which she would feel shy about. She might say:

TABLE 5. Functions of identical argument within relative clause complementation strategy

	function in main clause	function in relative clause	examples
(i)	S	S	(25)
(ii)	S	O	(26), (31), and (24) in Chapter 1
(iii)	O	S	(27–8), (30)
(iv)	O	O	(29)

- (25) $\eta a_j a_S$ $\eta urji\text{-}nyu$ [$\eta anbal\text{-}\eta a\text{-}\eta u$ $ba\text{-}gu\text{-}l_S$]
 1sg:NOM be.shy-PAST ask-APASS-RELATIVE THERE-DAT-MASC
 ‘I was shy and ashamed at having to ask him (to marry me) (lit. I who was asking him was shy).’

The main clause has intransitive verb $\eta urji$ ‘be shy and ashamed’. Its S argument is pronoun $\eta a_j a$ ‘I’ modified by a relative clause. The underlying form of the relative clause is $\eta a_j a_A \text{ } bayi_O \text{ } \eta anba\text{-}\eta u$, ‘I ask him’, with the identical argument, ‘I’, in A function. This is antipassivized, in order to get the identical argument in the relative clause into S function, i.e. $\eta a_j a_S \text{ } \eta anbal\eta anu \text{ } bagul$.

Sentence (26) describes someone feeling ashamed because they have been grumbled at. Here the identical argument, ‘I’, is in S function for the intransitive main clause verb $murriy$ ‘feel ashamed of having done wrong’, and in O function for the transitive relative clause verb $milgay$ ‘grumble at’. This is row (ii) in Table 5.

- (26) $\eta a_j a_S$ $murri\text{-}nyu$ [$\eta inda_A$ $milga\text{-}\eta u_S$]
 1sg:NOM feel.ashamed-PAST you:NOM grumble.at-RELATIVE
 ‘I felt ashamed at having been grumbled at by you (lit. I, who was grumbled at by you, felt ashamed).’

In (27), the identical argument, ‘him’ is in O function in the main clause and in S function in the relative clause; this is row (iii) in Table 5.

- (27) $\eta a_j a_A$ $bayi_O$ $\eta amba\text{-}n$ [$banaga\text{-}\eta u_O$]
 1sg:NOM THERE:ABS:MASC hear-PAST return-RELATIVE
 ‘I heard him returning (lit. I heard him who was returning).’

Or the relative clause may be underlyingly transitive, with the identical argument in A function; this must then be placed in S function through the clause being recast as an antipassive form, as in:

- (28) η aja_A bayi_O dija-n
 1sg:NOM THERE:ABS:MASC meet.by.chance-PAST
 [[η aygu bulgu-gu] wadil- η a- η u]_O
 1sg-GENITIVE wife-DATIVE copulate.with-APASS-RELATIVE
 'I found him copulating with my wife (lit. I found him, who was copulating with my wife).'

The identical argument is *bayi*, 'him', which is in O function for the main clause verb *dijal* 'meet by chance, encounter, find'. It is in underlying A function in the relative clause, 'He was copulating with my wife', and is placed in S function within an antipassive derivation.

The final possibility is for the identical argument to be in O function in each clause, row (iv) of Table 5. In one story about the olden days, a noise was heard outside the camp at night, said by the old people to be made by a frightening spirit called Dambun. A young girl ignored the old people's warnings and went out to look for the noise, bearing a lighted torch. On finding that the noise was made by a mopoke owl, sitting in the grass, she burst out laughing. Back at the camp, the old people heard this laughter and imagined that it resulted from the girl's being tickled by Dambun. In telling the story many years later, the girl says (this is in Dixon 1972: 387):

- (29) baŋgumaŋgandu_A η aygu-na_O η unja-nyu [dambun-du_A
 3plural:ERG 1sg-ACC blame-PAST spirit-ERG
 gidimba- η u]_O
 tickle-RELATIVE
 'They all put the blame (for the laughing) on me being tickled by Dambun (lit. They blamed me who was being tickled by Dambun).'

The verbs *gigal* 'tell to do, let do' and *jabil* 'stop from doing, refuse to allow' have opposite meanings. Interestingly, they take different complementation strategies, the purposive strategy with *gigal*, as in (20), and the relative clause strategy with *jabil*, as in:

- (30) η aja_A bayi_O jabi-n [η anu- η u]_O
 1sg:NOM THERE:ABS:MASC stop-PAST go-RELATIVE
 'I stopped him from going (lit. I stopped him, who was going).'

Just one verb in my corpus occurs with two complementation strategies. The intransitive *η arjarrmbay* 'feel unsettled in mind, be unable to make up one's mind, try to plan' occurs with the relative clause strategy in (31), where the sense is 'feel restless', and with the purposive strategy in (32), where the meaning is 'can't decide'.

- (31) $\eta a j a s$ $\eta a r j a r r m b a - n y u$ $[b u l g u - \eta g u_A$ $g a l g a - \eta u]_s$
 1sg:NOM feel.unsettled-PAST wife-ERG leave-RELATIVE
 ‘I felt restless (couldn’t settle to do anything) at having been left by my wife (lit. I, who had been left by my wife, felt restless).’
- (32) $\eta a j a s$ $\eta a r j a r r m b a - n y u$ $w u n y a - r r i$ $y a n u - l i$
 1sg:NOM can’t.decide-PAST WHERE-TO go-PURPOSIVE
 ‘I couldn’t decide where to go.’

4.3. *The serial verb strategy*

Some languages have what is called a serial verb construction. This involves two (or sometimes more) verbs which describe a single action and make up one predicate, with no marker of linkage or subordination. The verbs must share, at least, the same subject. (For full details, and further examples, see Aikhenvald and Dixon 2005.)

There are in Dyirbal a number of verbs that I refer to as ‘adverbals’ (Dixon 1972: 41, 64, 301–2). Each can occur in a predicate by itself but typically occurs with a non-adverbial verb whose meaning it effectively modifies. This constitutes an asymmetrical serial verb construction, of which one of the small class of adverbals is the minor member and virtually any non-adverbial verb is the major member. In these constructions the adverbial and verb (a) share the same transitivity value;³ (b) have the same subject, object (if transitive) and peripheral arguments; (c) make the same choice from the inflectional system (the main members of which are shown in Table 3); and (d) form one intonation unit.

Most adverbals are transitive, some are intransitive. The corpus includes about forty adverbals, with meanings such as ‘do well’, ‘do too much’, ‘do quickly’, ‘do for no reason’. It includes a number of items from the Secondary types of Finishing and Trying, illustrated in Table 1.

The verbs in a serial verb construction must have the same transitivity value; both are transitive in (33) and both intransitive in (34). (As previously noted, word order is quite free in Dyirbal; the two members of a serial verb construction can be separated by other words, as in (33).)

- (33) $j a y \eta u$ $m a r a_O$ $b u r b i$
 finish:IMPERATIVE leaf pull.off:IMPERATIVE
 ‘Pull off all the leaves! (lit. Finish pulling off the leaves!).’

³ Djambarrpuynu, another Australian language, lacks complement clauses and like Dyirbal has an array of complementation strategies—dative nominalization (i.e. purposive) clauses, appositional constructions, and serial verb constructions. A difference from Dyirbal is that in Djambarrpuynu the verbs in a serial verb construction do not have to agree in transitivity (Wilkinson 2004).

- (34) bayis gajilmbarri-nyu yanu
 THERE:ABS:MASC pretend-PAST go:PAST
 'He pretended to go.'

If one member of a serial verb construction is basically intransitive and the other transitive, then either the intransitive member must be transitivized (by a causative or applicative derivation process) or the transitive member must be intransitivized (by an antipassive or other process). Sentence (35) links the intransitive adverbial *wuday* 'stop doing' with the transitive verb *baral* 'punch, nail'; here the verb is made intransitive by the antipassive derivation.

- (35) bayis wuda-nyu baral-ŋa-nyu
 THERE:ABS:MASC stop.doing-PAST nail-APASS-PAST
 'He stopped nailing.'

In (36) the verb *mabil* 'cross river' is intransitive, and the transitive adverbial *jayŋul* 'finish doing' takes the reflexive suffix *-yirri-*, here simply functioning as an intransitivizer. The inclusion of *jayŋul* in (36) implies that both sons have crossed the river.

- (36) [ŋaygu daman-jarran]_s Dali-gu mabi-n
 1SG:GEN SON-PAIR Tully-ALLATIVE cross.river-PAST
 jayŋu-yirri-nyu
 finish-REFL-PAST
 'My two sons both crossed the river to Tully.'

A further discussion of serial verb constructions in Dyrbal is in Dixon (2005), including an example of an intransitive adverbial being made transitive, by the applicative derivation, to co-occur with a transitive verb.

5. Discussion

A Secondary-B verb such as 'want' typically has its subject identical with the subject of the activity it relates to: 'I want to do' or 'I want to do something to X' (these are much more frequent than 'I want X to do something to me'). In English the A argument of *want* is likely to be identical with the S or A argument (which is then omitted) of the complement clause which is the O argument of *want*. This is in keeping with the S/A syntactic pivot of English.

But Dyrbal has an S/O pivot. It is in keeping with this that verbs of wanting in this language are intransitive (see Table 1), with their S argument being identical with the S or O argument (which is then omitted) of the following purposive clause. The S-S identity is illustrated in (15). For an S-O example,

walngarranyu could be substituted for *wugin* in (17), ‘he wants to be seen by the woman’. If it is the A argument of the purposive clause which is identical with the S argument of the wanting verb, then the purposive clause must be recast as an antipassive, with the underlying A going into S function, as in (16).⁴

However, as shown in Table 1, verbs of liking are transitive; generally, the main clause (with the liking verb) shares both A and O arguments with the following purposive clause, which is also transitive, as in (21). Like the other items in Table 1, liking verbs expect a complementation strategy. I tried asking whether one could have a one-clause sentence such as:

- (37) $\eta a_j a_A$ [bala-m $\eta arrinyji]_O$ $\eta uymi$ -nyu
 1sg:NOM THERE:ABS:EDIBLE orange like-PRESENT
 ‘I like oranges.’

Speakers were not happy with such a sentence, but stated that a verb such as ‘eat’, in purposive inflection, should be added (as the complementation strategy):

- (38) $\eta a_j a_A$ [bala-m $\eta arrinyji]_O$ $\eta uymi$ -nyu
 1sg:NOM THERE:ABS:EDIBLE orange like-PRESENT
 jaŋga-ygu
 eat-PURPOSIVE
 ‘I like to eat oranges.’

In summary, although Dyirbal has no complement clauses per se, the set of verbs which take complement clauses in languages which have these, here carry the expectation of occurring in one of a number of construction types which we can call complementation strategies. These are the purposive construction, the relative clause construction, and the serial verb construction. Which verb expects which strategy relates to the meaning of the verb, and the meanings of the construction types used as complementation strategies.

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⁴ There is no construction in Dyirbal corresponding to English *I wanted John to go to town* where the two clauses have a different subject (and, in fact, no argument in common). I was informed that one must just say something like ‘I told John to go to town’, using the verb *gigal* ‘tell to do, let do’.

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