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Cross-linguistic Functions of Complement Clauses in Oral Monologic Texts

by

Lindsay Morrone

B.A., Linguistics, University of Connecticut, 2013

THESIS

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Abstract

Complement relations are widely identified as a type of subordination, which is traditionally defined as the combination of an independent clause and a dependent clause. A complement clause is traditionally defined as a dependent clause that refers to an event or proposition functioning as an argument of a main clause. This study takes a non-traditional, functional-typological view of subordination and complement relations following the Asymmetry Assumption (Cristofaro 2003, cf. Langacker 1991). From this perspective, subordination is an asymmetrical relation between functionally-linked states of affairs (SoAs) such that the profile of one overrides the other. Complement relations are those in which the semantics of an SoA entails that another SoA is referred to. Cross-linguistic studies of complementation (Givn 1980, Noonan 1985/2007, and Cristofaro 2003) describe the semantics of complement-taking predicates (CTPs), the structural characteristics of complements, and correlations between them. Complement types are distinguished based on the semantic relation between CTP and complement, implied by the meaning of the CTP.

Through an analysis of complement clauses within their larger context it will be shown how their discourse functions correlate with semantic CTP categories. A wide range of semantic CTP types is used in order to see how they can be grouped together based on the discourse functions of their complements. The data consists of 25 oral monologic texts from a sample of 12 geographically and genetically diverse languages. A clause-by-clause analysis of each text revealed five major discourse functions of complement clauses: to express a secondary discourse sequence, facilitate the main progression of discourse, elaborate preceding or subsequent information, orient a situation within a discourse mode, and indicate a climactic or salient point in the discourse context. The findings of this study further reveal that complement relations expressing an intention toward or purpose of a particular course of events are found to pattern with certain discourse functions. This suggests that these semantic features deserve more attention in a classification of semantic CTP categories.

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Chapter 1

Introduction

1.1 Overview

Complex sentence constructions express multiple states of affairs (SoAs) through the combination of clauses. The SoAs in complex sentences express various types of semantic relations and may be more or less semantically integrated. The two major types of complex sentence constructions are coordination and subordination. Traditionally, a coordination relation is defined by the combination of two independent clauses, and a subordination relation is the combination of an independent clause and a dependent clause. The three basic types of subordination constructions that are usually distinguished are adverbial, relative, and complement constructions. Traditionally, adverbial clauses function to modify a main clause, relative clauses function to modify an argument of a main clause, and complement clauses refer to an event or proposition that functions as an argument of a main clause.

Subordination constructions have various functions in discourse. There is not a one-to-one correspondence between discourse function and type of subordinate clause. For example, an attested function of both temporal and conditional adverbial clause types is to delimit sections of narrative discourse (Matthiessen & Thompson, 1988).

This investigation will be concerned with the cross-linguistic discourse functions of complement constructions, and how they correlate with semantic classes of complement-taking predicates (CTPs). Complement types are distinguished based on the semantic

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relation between CTP and complement that is implied by the meaning of the CTP. The relationship between CTP and complement may be more or less semantically integrated. The event expressed by the complement clause may be semantically integrated with the event expressed by the main clause predicate to a greater or lesser degree. Different discourse functions are expected between complements that involve close semantic integration with the CTP and complements expressing an event that is semantically distinct from the CTP.

In order to describe the range of specific discourse functions of complements, complement constructions must be analyzed along with the context in which they occur. Lengthy stretches of discourse from a single speaker offer sufficient context for determining the discourse functions of subordinate clauses. Therefore, data surveyed for this investigation are oral monologic texts of various styles from a geographically diverse sample of 12 languages: Alaaba, Arapaho, Chantyal, Hualapai, Itzaj Maya, Kolyma Yukaghir, Korowai, Maonan, Mapuche, Nguna, Supyire, and Wardaman.

1.2   Objectives

An overview of complementation will be presented based on the previous typological literature. Prior work in this area describes the semantics of CTPs, the formal characteristics of complement constructions, and correlations between them. The goal of this thesis is to expand upon work in this area by addressing the discourse functions of complement clause constructions from a functional-typological perspective.

The distinction between given and new information is expected to be a major factor in describing the discourse functions of complements in oral monologic texts.

The present analysis of complementation within cross-linguistic texts seeks to establish correlations that can be found between the semantics of CTPs and the various discourse functions of complement constructions, and provide a full account of these discourse functions based on substantial, cohesive stretches of discourse. It is expected that a range of discourse functions can be established that corresponds to overlap-

ping semantic categories of CTPs. Complements that have a high degree of semantic integration with their CTP are predicted to contribute to the main sequence of discourse. Complements that express unrealized situations are predicted to describe an expected or intended course of events that is subsequently complicated. Complements that express reported speech or thought are predicted to signal a secondary discourse sequence.

This analysis has revealed five major discourse functions of complement clauses: to express a secondary discourse sequence, facilitate the main progression of discourse, elaborate preceding or subsequent information, orient a situation within a discourse mode, and indicate a climactic or salient point in the discourse context.

Chapter 2

Theoretical Background

This chapter describes previous works on complementation that take a cross-linguistic perspective. The first section will describe Givón's (1980) implicational hierarchy of complement relations. An overview of Noonan's (1985/2007) structural complement types is provided in Section 2.2.1. The semantic classes of CTPs presented in Section 2.2.2 are described based on Noonan's classification of semantic CTP types combined with Cristofaro's (2003) discussion of those types which she includes in her typological study of subordination. Section 2.3 describes an improved version of Givón's implicational hierarchy from Cristofaro (2003), the Complement Deranking-Argument Hierarchy, and other relevant aspects of Cristofaro's work on subordination.

2.1 Givón (1980)

Givón's (1980) typology of complementation suggests several systematic correlations between the semantics of CTPs and the form of their complements. The three semantic classes of CTPs he discusses are manipulative, modality, and cognition-utterance. He demonstrates how these types of CTPs are situated along a semantic binding dimension, which is based on the hierarchic implicational scale that can be established from the semantics of manipulative CTPs. The binding dimension involves the mapping of the traditional and logic-based notions of implicativity and factivity/presupposition in a way that is neither discrete nor strictly logic-based. Furthermore, Givón shows that the semantic binding dimension correlates with the syntactic

coding of complements using data from the Creole language Krio and many other languages.

2.1.1 Semantic Binding

Within a typological framework, Givón (1980) establishes a hierarchic implicational scale based on the semantics of complement-taking predicates. He analyzes manipulative, modality, and cognition-utterance semantic classes of CTPs from a typological, non-traditional perspective. Through his semantic analysis he shows that particular types of CTPs may be scaled along a semantic binding dimension, from which the form of their complements may be predicted within and across languages. The notion of 'binding' is more general than the traditional and logic-based notions of 'implicativity' and 'factivity/presupposition' which overlap to some extent with the binding dimension depending on the type of CTP (Givón, 1980, p. 333). The four portions of the semantic binding dimension for complement relations are, from highest to lowest: success in action, emotional commitment, epistemic commitment, and epistemic quantification (Givón, 1980, p. 347).

Manipulative CTPs such as 'make', 'have', 'cause', 'tell', and 'request' in English occupy the highest part of the semantic binding dimension, success in action. Givón (1980, p. 335-336) defines three factors relevant to scaling manipulative CTPs along a sort of semantic continuum: binding, independence, and success:

i. Binding: "The stronger the influence exerted over the agent of the complement clause by the agent of the main-clause verb, by whatever means, the higher is the main-clause verb on the binding scale".

ii. Independence: "The higher a verb is on the binding scale, the less is the agent of its complement clause capable of acting independently".

iii. Success: "The less independence possessed by the embedded-clause agent, and the higher the main-clause verb on the binding scale, the more is the intended

manipulation likely to succeed".

Success seems to correspond to the realization of the complement event of a manipulative predicate in discourse. Complement events that are most likely to succeed are realized in the discourse context, complement events that are less likely to succeed may be realized at a later time or remain unrealized throughout the discourse context. This depends on both the potential for the agent of the CTP to affect the agent of the complement predicate and the potential for the agent of the complement predicate to be affected.

The binding strength of an intended causative act tends to be greater than an unintended causative act because the CTP agent acts more deliberately in intended causation, thus exerting a stronger influence over the complement agent. Givón classifies 'make' and 'have' as intended causation predicates, and 'cause' as prototypically unintended. Intended causation predicates may be further distinguished by the semantic property of mediation, that is, whether they are mediated or direct causative acts. The independence of a complement agent in direct causation tends to be greater than in mediated causation because a direct influence exerted over the complement agent implies greater potential for the agent of the complement predicate to be affected by that influence. Givón classifies the intended-causation manipulative predicates 'make' and 'have' as direct and mediated causation, respectively. The following hierarchy in 1 is posited by Givón for the implicative predicates 'make', 'have', and 'cause', and based on the same factors for scaling manipulative CTPs this is extended to non-implicative manipulative and modality predicates in 2 (1980, p. 336).

(1)   MAKE>HAVE>CAUSE

(2)   TELL>REQUEST/ASK>WANT>HOPE

That the "modality" predicates 'want' and 'hope' in English can be scaled in the same domain as the non-implicative manipulative predicates 'tell', 'request', and 'ask'

shows that modality CTPs can also be applied to the same kind of semantic binding dimension. However, the factors for scaling modality predicates are not defined in quite the same way as for manipulatives. The notion of "success" is the same, but "binding" and "independence" involve a relation between the intention of the CTP agent toward the event expressed by the complement predicate and the realization of that event, rather than influence of the CTP agent over the complement agent (Givón, 1980, p. 342).

Cognition-utterance CTPs such as 'know', 'think', 'say', and 'pretend' do not fit into the semantic binding dimension in the same way as manipulative and modality verbs. The semantic properties of this class of CTPs require an extension of the binding scale from the manipulative domain to the cognition-utterance domain. Cognition-utterance verbs are scaled by emotional commitment, or the degree to which the CTP agent is committed to the truth of the complement clause, at the lower end of the binding scale (Givón, 1980, p. 345). The predicate 'say' is at the lowest point on the binding scale according to Givón (1980, p. 346), and involves epistemic quantification rather than any emotional commitment. Whereas cognition-utterance CTPs in which the agent is more emotionally committed to the proposition expressed by the complement are at a higher position on the scale compared to other CTPs of the same semantic type, manipulative CTPs in which the agent is more emotionally committed to the success of the event expressed by the complement are at a lower position on the scale compared to other CTPs of the same semantic type (Givón, 1980, p. 336-337). This point illustrates the continuous nature of the binding scale and suggests overlap between certain aspects of semantic classes of CTPs.

2.1.2   Syntactic Coding

Based on this binding scale, the syntactic form of complements may be predicted within and across languages. The syntactic structure of complements as described by Givón (1980) will be outlined in this section. In the previous section, the seman-

tic binding dimension was presented as a domain in which CTPs can be organized hierarchically according to their binding strength. Binding strength was described as the degree of intention or emotional commitment that the CTP agent has toward the realization of the complement SoA and/or the complement agent. In this way, the notion of binding strength is non-discrete and makes finer semantic distinctions than more traditional, logic-based semantic classifications of CTPs, thus allowing for a more refined organization of CTPs. The following summary will describe cross-linguistic properties of the syntactic structure of complements and how they can be predicted from the semantic binding strength of CTPs.

Givón asserts that there is an inverse correlation between the binding strength of a CTP and the syntactic resemblance of its complement to an independent clause such that "the higher a verb is on the binding scale, the less would its complement tend to be syntactically coded as an independent/main clause" (1980, p. 337). Givón (1980, p. 337-338) elaborates this general prediction in terms of three structural parameters and how they specifically predict independent-clause-like complement structure:

The first parameter is the extent to which the syntactic expression of the complement agent resembles that in the CTP. The complement agent is least likely to be marked in the same way as the CTP agent for those at the higher end of the binding scale. This indicates the complement agent's lack of control over the SoAs. The second parameter is the extent to which the syntactic expression of tense-aspect-modality (TAM) in the CTP is maintained by the complement. The complement is more likely to have reduced TAM marking for CTPs higher on the binding scale. This indicates the complement's lack of independence. The third parameter is the extent to which the complement predicate is raised into the CTP, i.e. structurally integrated into the CTP, resembling the syntactic expression of a single event. More structural integration is observed with CTPs at the higher end of the binding scale.

Complementation in Krio reflects the correlation between the binding scale and

syntactic coding (data from Givón, 1980, p. 338-346). The scaling of Krio manipulative CTPs is indicated syntactically by the distinct complement types they occur with. This is illustrated by the following uses of the "strong attempt" non-implicative manipulative CTP 'tell', arranged from highest to lowest position on the binding scale.

(3)   a. a tẹl am [*fọ* lẹf].

'I told him to leave'. (strongest command)

   b. a tẹl am [*mẹk* i lẹf].

'I told him that he must leave'. (weaker)

   c. a tẹl am [*se* i fọ lẹf].

'I told him that he should leave'. (weaker yet)

   d. a tẹl am [*se mẹk* i lẹf].

'I told him that he may/could leave'. (weakest)

The italicized morphemes *fo* 'for' in 3a, *mek* 'make' in 3b and 3d, and *se* 'say' in 3c are "complementizer particles" which code the strength of the command expressed by the CTP. These examples support the prediction following the first parameter. The complement agent in 3a is not marked the same as the CTP agent; it is not syntactically expressed in the complement clause. Examples 3b-d, in which the complement agent is coded in the same was as the CTP agent, are lower on the binding scale. Based on the semantic gradation demonstrated by the non-implicative manipulative CTP 'tell' and its use with distinct syntactic complement types, Givón (1980, p. 339) posits the following hierarchy of Krio complementizer particles in the same manner as the hierarchy of English CTPs in 1 and 2.

(4)   fọ>mẹk>se

A range of manipulative CTPs that can convey a 'permission' sense are illustrated in Krio by 5a-d. In these examples, it is evident that the CTP *mek* 'make' is higher

than *gri* 'agree' on the binding scale.

(5) a. a mek   *mȩk* i   kam.
         I make make he come

         'I let him come'. (and he did come; strongest)

     b. a gri   *fǫ*   *mȩk* i   kam.
         I agree for   make he come

         'I allowed him to come'. (weaker; less implicative)

     c. a gri   *mȩk* i   kam.
         I agree make he come

         'I agreed that he may come'. (weaker still; non-implicative

     d. a gri   *lȩ* i   kam.
         I agree let he come

         'I agreed to allow him to come'. (weakest)

Compared to the preceding examples, 5a-d are all lower on the binding scale. This is reflected by the syntactic coding. The complement agent is coded as the subject of the complement predicate in the form of a CTP agent, and there is no coding of the complement agent as the object of the CTP. Givón (1980, p. 341) approximates the location of this particular point along the coding scale at a gradual change from implicativity to non-implicativity. He also adds the complementizer *lȩ* 'let' to the Krio syntactic coding hierarchy from 4 above *se* and below *mȩk*.

(6) fǫ>mȩk>lȩ>se

Givón (1980, p. 324-344) shows Krio syntactically codes complements of modality CTPs in way similar to complements of manipulative CTPs, using the following examples to illustrate.

(7) a. a begin [wǫk].
         I begin work

         'I began to work'. (I wasn't working before; I started then for the first time)

b. a begin [fɔ wɔk].
   I begin for work

   'I began to work', 'I resumed working again'. (after pause)

c. a dong [wɔk].
   I done work

   'I'm done working', 'I've worked', 'I've finished working'.

d. a dong [fɔ wɔk].
   I done for work

   'I temporarily stopped working'. (while doing something else)

The use of the naked verb stem to express the complement predicate similarly occupies the topmost part of the syntactic coding hierarchy, as exemplified by 7. There is a similar strength-difference with non-implicative 'want', shown by 8, and a similar gradation with 'try' in 9 and 'decide/agree' in 10.

(8) a. a wan [go na ɔs].
        I want go to house

        'I want to go home'. (stronger)

     b. a wan [fɔ go na ɔs].
        I want for go to house

        'I'd like to go home'. (weaker)

(9) a. i tray [fix ing-ka].
        he try fix his-car

        'He tried to fix his car'. (and may have succeeded)

     b. i tray [fɔ fix ng-ka].
        he try for fix his-car

        'He tried to fix his car'. (and maybe succeeded)

     c. i tray fɔ mɛk i fix ng-ka.
        he try for make he fix his-car

        'He tried to fix his car'. (but didn't succeed)

     d. i tray [mɛk i fix ng-ka].
        he try make he fix his-car

        'He tried to fix his car'. (but failed)

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(10) a. i gri [fix di ka].
      he agree fix the car
      'He decided to fix the car'. (strong commitment)

    b. i gri [*fɔ* fix di ka].
      he agree for fix the car
      'He agreed to (try and) fix the car'. (weaker commitment)

The CTP 'plan/think' has a weaker degree of commitment than 'want', 'try', or 'decide' and accordingly, 11 shows that it cannot be used with complement types associated with the top of the hierarchy, i.e. the naked verb stem, but rather the coding of its complement is associated with the lowest coding point on the scale, namely the complementizer *se*. As 12 demonstrates, this coding point is the only way that complements of 'hope' can be coded, which is even lower on the semantic binding hierarchy than 'plan'.

(11) a. i tink [*fɔ* go na Watalu tumara].
      he think for go to Watalu tomorrow
      'He's planning to go to Watalu tomorrow'.

    b. i tink [*se* i *go*-ebul go na Watalu tomorrow].
      he think that he MOD-able go to Watalu tomorrow
      'He thinks that he may (be able to) go to Watalu tomorrow'.

    c. *i tink go na Watalu tumara.
      he think go to Watalu tomorrow

(12) a. *i op go na Watalu tumara.
      he hope go to Watalu tomorrow
      trans

    b. *i op *fɔ* go na Watalu tumara.
      he hope for go to Watalu tomorrow

    c. i op *se* i *go*-ebul go na Watalu tumara.
      he hope that he MOD-able go to Watalu tomorrow
      'He hopes that he will (be able to) go to Watalu tomorrow'.

These examples show a correlation between semantic binding and syntactic coding with modality CTPs that is similar to that with manipulative CTPs. Implicative, i.e.

'successful' predicates are the highest, intentional or volitional predicates are in the middle, and emotional attachment predicates are the lowest. The three parameters for syntactic coding have been shown to also apply to modality CTPs.

Cognition-utterance CTPs occupy the lowest portion of the semantic binding hierarchy, thus they are predicted to use syntactic coding points at the lowest portion of the coding hierarchy. Complements of 'say', semantically the lowest cognition-utterance CTP, can be either direct or indirect quotes. According to Givón, direct quotes are semantically the least dependent on the CTP, and syntactically, their coding resembles that of the main clause the most. This indicates that the syntactic coding is correctly predicted from the parameters described above for the lowest portion of the binding hierarchy. He provides further evidence for correlations between the hierarchies with the following examples, which demonstrate the use of the lowest syntactic coding point, the complementizer *se*, with 'know' in 13a and 'think' in 13b (Givón, 1980, p. 346).

(13)   a. a no   *se* i   bin-sik.
          I know that he been-sick
          'I know that he's been sick'.

       b. a tink *se* i   bin-sik.
          I think that he been-sick
          'I think that he's been sick'.

2.1.3   Generalizations

Givón (1980, p. 370) asserts an implicational hierarchy prediction based on the correlations observed cross-linguistically between syntactic coding points the the semantic binding scale:

(14)   *Implicational hierarchy prediction:* "If a point on the semantic hierarchy of binding is coded by a certain syntactic coding device, then a semantically higher point cannot be coded by a syntactically lower point. Rather, it will

be coded either by the same coding point, or by a higher coding point on the syntactic coding scale".

This prediction generalizes how syntactic coding principles correlate with the semantic dimension. Givón (1980, p. 371) further offers an explanation for the implicational hierarchy prediction in terms of four syntactic coding points: degree of structural integration, degree of freedom of action, degree of freedom of the agent, and the use of complementizing subordinators.

In terms of the degree of structural integration principle, more semantically independent complements are correlated with less syntactic integration into the main clause. The highest degree of structural integration is exhibited by forms involving predicate raising of the complement verb, lexicalization of both verbs, and integration of the complement's arguments into the case-marking of the main verb.

According to the degree of freedom of action principle, more semantic dependency between two clauses in terms of time and factuality is correlated with a greater likelihood that the tense-aspect-modality of the CTP will be applicable to the complement verb rather than separate coding of tense-aspect-modality. Tense-aspect-modality reduction, which is evident with forms such as infinitives, nominalizations, bare-stem, full joint lexicalization, exhibit the greatest degree of freedom of action.

The generalization arising from the degree of freedom of agent principle is that more control of the complement agent over complement event is correlated with a greater likelihood of it being coded with the case-marking of the CTP agent. Types of such case-marking, from highest to lowest on this scale, are nominative, dative, and accusative.

The use of complementizing subordinators is a strategy used to syntactically separate a main clause from a subordinate clause. It can be generalized that semantic independence between CTP and complement is likely to show structural separation in the form of subordinating morphemes between main clause and complement clause.

2.2 Noonan (1985)

2.2.1 Structural Complement Types

Specific languages vary as to the types of forms that may be used to express complements. According to Noonan (1985/2007, p. 54-55), these types may be identified based on morphological features, the syntactic relation between complement predicate and its arguments, and the syntactic relation between complement and CTP. Depending on the language, some types may be associated with subordinating morphemes such as complementizers which overtly identify a clause as a complement. This is a syntactic feature that structurally separates the main clause and subordinate clause. Noonan asserts that their use is pragmatic rather than grammatical because they may be optional or determined by the context.

Noonan (1985/2007, p. 75) classifies six distinct morphological complement types: indicative, subjunctive, paratactic, infinitive, nominalization, and participle. Indicative complement clauses in a particular language express complement verbal predicates as an S-like ("sentence-like") form nearly identical to independent declarative clauses in that language. Subjunctive complement clauses in a particular language express complement verbal predicates as an S-like form that differs from independent declarative clauses in that language such that the range of inflectional categories is typically reduced. Paratactic complement clauses in a particular language express complement verbal predicates as syntactically independent clauses in that language; they are not used with complementizers, and are interpreted as a separate assertion. Infinitive complement clauses in a particular language express complement verbal predicates in a non-S-like form which has the same object relations as indicative clauses in that language. Nominalization complement clauses in a particular language express nominalized complement predicates which may have the internal structure of a noun in that language. Participle complement clauses in a particular language

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express adjectivalized or adverbialized complement predicates as a non-S-like form which may have the structure of adjectives in that language.

2.2.2 Semantic Classes of CTPs

Noonan (1985/2007) distinguishes the following semantic types of CTPs:

(i) Utterance
(ii) Propositional attitude
(iii) Pretence
(iv) Commentative
(v) Knowledge
(vi) Fearing
(vii) Desiderative
(viii) Manipulative
(ix) Modal
(x) Achievement
(xi) Phasal
(xii) Perception
(xiii) Negative
(xiv) Conjunction

A further type of semantic subordination relation will be considered in this study that is not widely considered a type of complementation, namely that expressed by a main clause and a dependent purpose clause.

2.2.3.1 Utterance

Utterance predicates (Noonan, 1985/2007, p. 121-124; Cristofaro, 2003, p. 108-109) describe a transfer of information from an agent to an addressee who may or may not be overly expressed. Additionally, they may evaluate the attitude of the speaker toward the proposition expressed in the complement. English utterance predicates include *say*, *tell*, *report*, *promise*, and *ask*. Complements of utterance CTPs express a quotation either directly or indirectly. Complements of direct utterance predicates

can only be S-like because they report an actual utterance. Indirect utterance CTPs report an adaptation of the speaker's viewpoint rather than an actual utterance. The morphosyntactic form of indirect complements may indicate this difference, for example, when deictic or shifter categories such as pronouns, locatives, and tense are reoriented in order to adapt the viewpoint of the speaker (Jakobson 1957, cited in Noonan, 1985/2007, p. 121). Complements of indirect utterance predicates may be s-like, but they can also have a more reduced form. According to Cristofaro (2003, p. 108), indirect reported speech refers to both the dependent state of affairs (SoA) which is described by the utterance and the main SoA which is that someone uttered something, whereas direct reported speech only refers to the SoA that someone uttered something because the complement of direct utterance CTPs expresses the sounds of an utterance, not the semantics of the utterance, therefore it does not refer to a SoA.

2.2.3.2 Propositional Attitude

Propositional attitude predicates (Noonan, 1985/2007, p. 124-126; Cristofaro, 2003, p. 107) express an attitude of the speaker or subject toward the truth or falsehood of the proposition expressed by the complement. The attitude that these types of CTPs express is in regard to the degree of commitment or certainty of the veracity of the proposition denoted by the complement. Positive propositional attitude CTPs in English include *believe, think, suppose,* and *assume*; negative propositional attitude CTPs in English include *not believe, doubt,* and *deny.* The semantic role of the subject is that of experiencer rather than agent and therefore, according to Noonan, the subject may not be overtly expressed, as in examples 15 and 16 (Noonan, 1985/2007, p. 125).

(15)   It's certain that Hugh will be defeated.

(16)   It's possible that Perry will lose.

According to Cristofaro, the English CTPs *be certain* and *be possible* exemplified in

15 and 16 express a direct evaluation of the mood value of the complement, whereas CTPs in which the experiencer is overtly expressed indirectly convey a propositional attitude.

Noonan (1985/2007, p. 125) recognizes a cross-linguistic tendency about the expression of propositional attitude: the subject's attitude toward the proposition tends to be expressed by the CTP, whereas the speaker's attitude toward the proposition tends to be expressed by adverbials, choice of complementizer, and complement type. This can be exemplified by examples 17, and 18 from Noonan (1985/2007, p. 125)).

(17)   Olaf stupidly believes that the Mets will win.

(18)   Olaf stupidly guesses that the Mets will win.

In 17 and 18, the propositional attitude of the experiencer, namely Olaf, expresses a positive commitment toward the certainty of the proposition that the Mets will win. The inherent semantics of the CTP believe conveys a greater likelihood of the truth of the proposition than the CTP guess, therefore the experiencer's degree of commitment toward the certainty of the proposition is stronger in 17 than 18. On the other hand, both 17 and 18 express the speaker's negative attitude toward the proposition, indicated by the adverbial *stupidly*. In 19, the CTP is the same as 18 thus the experiencer's propositional attitude is positive, however, use of the adverbial *correctly* rather than *stupidly* expresses the speaker's propositional attitude as positive rather than negative.

(19)   Olaf correctly guessed that the Mets would win.

Examples 20 and 21 demonstrate a contrast in the speaker's propositional attitude based on the choice of complementizers: *ko* and *ngo* (Givón and Kimenyi 1974, cited Noonan, 1985/2007, p. 125-126).

(20)   Yatekereže   ko   amazi yari   mare-mare.
        think.3SG.PAST   COMP   water be.3SG   deep
        'He thought that the water was deep'.

(21) Yatekereže   ngo   amazi yari   mare-mare.
     think.3SG.PAST   COMP   water be.3SG deep

'He (misguidedly) thought that the water was deep'.

The speaker's propositional attitude is neutral in example 20, whereas the speaker's propositional attitude is negative in example 21.

In any case, propositional attitude CTPs express neither the truth-value nor the realization of the proposition, only the mood evaluation. The proposition is never presented as factual in regard to the time reference of the SoA expressed by the CTP.

2.2.3.3 Pretence

Pretence predicates (Noonan, 1985/2007, p. 126-127) describe a situation in a non-real world, such as *pretend* and *make believe* in English. Depending on the construal of the SoA, the subject of pretence CTPs such as *pretend* and *make believe* may fill the semantic role of experiencer or agent; imagine always has an experiencer as the subject, and *fool* (*into thinking*) and *trick* (*into thinking*) always express an agent. These predicates convey the implication that the proposition expressed by their complement is false, however, they do not express anything about the realization of the proposition. The complement predicate's time reference is independent of the pretence CTP.

The interesting thing about pretence predicates is that they establish an alternate, non-real world. Rather than expressing the possibility for a SoA to be realized or an attitude toward its veracity, they express an assertion within a non-real world. This explains the use of indicative rather than subjunctive complement type with presence CTPs in languages such as Russian which make a realis/irrealis distinction (data from Boris Plant (p.c.); cited in Noonan, 1985/2007, p. 127),

(22) Ja pritvorjalsja, čto   Ivan prišël.
     I   pretended   COMP   Ivan came.INDIC

'I pretended that Ivan came'.

(23) * Ja pritvorjalsja, čtoby Ivan prišël.
　　 I pretended COMP Ivan come.SJNCT

　　 'I pretended that Ivan came'.

and in languages such as Spanish, which make an assertive/non-assertive distinction
(data from Andrés Gallardo (p.c.); cited in Noonan, 1985/2007, p. 127).

(24) Aparentaron que vino.
　　 pretended.3PL COMP came.3SG:INDIC

　　 'They pretended that he came'.

(25) * Aparentaron que viniera.
　　 pretended.3PL COMP come.3SG:SJNCT

　　 'They pretended that he came'.

The Russian pretence CTP *pritvorjatsja* 'pretend' in 22 and the Spanish pretence
CTP APARENTARON 'pretend' in 24 take indicative complement types; the ungram-
maticality of 23 and 25 show that it is not possible to use the subjunctive complement
type with these CTPs in either language.

2.2.3.4 Commentative

Commentative predicates (Noonan, 1985/2007, p. 127-129), traditionally called fac-
tives, are like propositional attitude CTPs in that they express a mental attitude
and their subject fills the semantic role of experiencer when the subject is human.
However, they differ from propositional attitude CTPs in that they express an emo-
tional evaluation or judgment toward the proposition expressed by the complement
rather than a commitment or certainty. In English, *regret*, *be sorry*, and *be sad* are
commentative CTPs that convey an emotional reaction to or evaluation of the propo-
sition; *be odd*, *be significant*, and *be important*, convey a judgment. The complements
of commentative CTPs are considered presupposed because emotional evaluations
and judgments are typically expressed for events or states rather than propositions
(Rosenberg 1975, cited in Noonan, 1985/2007, p. 128). Furthermore, they are con-
sidered comments on the information expressed in the complement, which is usually

background information that has already been established as topic in the discourse context, so their complements are discourse-dependent and have independent time reference.

The indicative complement type is typically used with commentative CTPs. Languages may also use nominalized complement types with these CTPs since they are discourse dependent. English permits S-like 26 and nominalized 27 types.

(26) Nelson regrets that Perry got the nod.

(27) Nelson regrets Perry's getting the nod.

2.2.3.5 Knowledge

Predicates of knowledge and acquisition of knowledge (Noonan, 1985/2007, p. 129-130; Cristofaro, 2003, p. 106) such as *know*, *realize*, *find out*, and *forget* in English, express either the state of knowledge or the manner of its acquisition. The subject of these CTPs is always an experiencer. Like commentative CTPs, their complement predicates are presupposed to be true; however, knowledge CTPs may assert new information rather than necessarily expressing old or background information. This is demonstrated by the contrast between example 28, which contains a knowledge CTP, and 29, which contains a commentative CTP (data from (Noonan, 1985/2007, p. 129)).

(28) I discovered that Sally left Herman.

(29) I regret that Sally left Herman.

Complements of knowledge CTPs have independent time reference and are not discourse-dependent, therefore their complement is typically indicative.

2.2.3.6 Fearing

Predicates of fearing (Noonan, 1985/2007, p. 130-132) express an experiencer's attitude of fear toward the realization of the event expressed by the complement, which

has independent time reference. These are predicates such as *be afraid, fear, worry,* and *be anxious*. Languages have various negation strategies for complements of fearing CTPs. This variation can be demonstrated by examples from Noonan (1985/2007, p. 130-131) in Jacaltec (30) (data from Craig 1977), Latin (31-32) (data from Greenough et al. 1903), and Russian (33-34).

(30) Is   eagal léi   [go   dtiocfaidh sé].
     COP fear   with.her COMP come.FUT   he
     'She's afraid that he'll come'.

(31) Vereor   [ne   accidat]
     fear.1SG NEG happen.3SG
     'I fear that it may happen'.

(32) Vereor   [ut   accidat].
     fear.1SG COMP happen.3SG
     'I fear that it may not happen'.

(33) Ja bojus', [kak   by   on ne   prišël].
     I fear.1SG COMP SJNCT he NEG come.SJNCT
     'I'm afraid that he may come'.

(34) Ja bojus', [čto   on prišël].
     I fear.1SG COMP he come.FUT:INDIC
     'I'm afraid that he'll come'.

Negation is not assigned to affirmative interpretations of complement predicates. This is demonstrated by the Jacaltec example 30. On the other hand, Latin assigns negation to affirmative interpretations 31 but not to negative interpretations 32; in both examples, the complements express a simple possibility. Negation is also assigned to affirmative interpretations in Russian, but only if the complement expresses a simple possibility as in 33. When the complement expresses a greater degree of certainty for an event to occur, as in 34, negation is not assigned to affirmative interpretations. Additionally, the Russian examples show a distinction between a more certain and less certain complements of fearing CTPs by the use of the indicative and subjunc-

tive, as well as different complementizers. In 33, the indicative and complementizer *kak* are used, and the complement predicate expresses the event 'he may come'. In 34, the subjunctive and complementizer *čto* are used, and the complement predicate expresses the event 'he will come'.

Non-S-like complement types are frequently used with fearing CTPs. S-like complements of fearing CTPs may be reduced to infinitives, exemplified by the following English examples from Noonan (1985/2007, p. 131).

(35)   a. I was afraid that I fell asleep.
          b. I was afraid that I would fall asleep.
          c. I was afraid that I left.
          d. I was afraid that I would leave.

(36)   a. I was afraid to fall asleep.
          b. I was afraid to leave.

The infinitive complements in 36a and 36b are reduced versions of the S-like complements in 35a-b and 35c-d, respectively. This reduction involves the deletion of the complement subject due to the equi-relation entailed in these constructions. The subject of the complements in 35 and 36 is the same as the subject of the CTP they occur with, expressed as a first person singular pronoun. However, the subject is only overtly expressed with the complement in 35; the subject is omitted from the complement in 36. This is evidence of a meaning difference between 35a-b and 36a, and between 35c-d and 36b regarding the control of the subject. In 35 the subject is an experiencer and can be interpreted as having potential control over the event expressed by the complement predicate; in 36 the subject is merely an experiencer.

2.2.3.7 Desiderative

Desiderative predicates (Noonan, 1985/2007, p. 132-135; Cristofaro, 2003, p. 103-104) express the desire of the subject, an experiencer, for the realization of the SoA expressed by complement predicate. They express the opposite emotional attitude

that fearing CTPs express. Desiderative CTPs in English include *want, wish, desire,* and *hope.* Noonan distinguishes three semantic classes within the desiderative CTP class: *hope-, wish-,* and *want-*classes.

Complements that occur with the *hope-*class have independent time reference, are not typically reduced, and tend to use the indicative. Predicates in this class express the experiencer's desire for the realization of a SoA that is not definitively realized or unrealized. Because the realization of the SoA expressed by the complement predicate is not known, and desire is the opposite emotional attitude of fear, Noonan considers the *hope-*class of desiderative CTPs the 'true counterparts' of fearing CTPs.

Complements that occur with the *wish-*class have independent time reference as well. The major difference between predicates in this class and the *hope-*class is that *wish* predicates typically convey a contrafactive interpretation, that is, the complement predicate they occur with usually has a false implication, or at least a more unlikely possibility of realization than complements of *hope* predicates. This difference is indicated morphologically in English by the tendency for subjunctive complements to occur with *wish-*class predicates. The modal *will* tends to be used with *hope-*class predicates that refer to the future, unlike *wish-*class complements, which tend to be subjunctive and therefore refer to the future using *would.* This is demonstrated in 37 and 38. These and other examples in this section are taken from Noonan's discussion of the three classes of desiderative CTPs.

(37)   I hope that John will come.

(38)   I wish that John would come.

The use of *will* in the complement of a *hope-*class desiderative CTP in 37 expresses a definite possibility, and in 38 the modal *would,* the past subjunctive form of *will,* is used in the complement of the *wish-*class desiderative CTP. Subjunctive complements do not occur with *hope-*class desiderative CTPs:

(39)   * I hope that I was/were twenty again.

(40)   I wish that I were twenty again.

Predicates that occur with the *want*-class have dependent time reference, and express the experiencer's desire for the future realization of an unrealized SoA of a complement predicate, even if that SoA is unrealizable.

(41)   I want John to come.

(42)   He wants to be twenty again; he's a bit crazy.

The *want*-class predicate in 41 occurs with a complement expressing a SoA that has the potential for future realization; this example can be compared to 37 and 38. The *want*-class predicate in 42 occurs with a complement expressing a SoA that does not have the possibility of future realization; this example can be compared to 39 and 40.

The potential realization of the SoA expressed by the complement may be in the control of the experiencer or another entity. Cristofaro (2003, p. 103) exemplifies this with the following example:

(43)   a. She wanted him [to rewrite that chapter].
       b. She wanted [to rewrite the chapter].

In 43b, the experiencer of the SoA expressed by the CTP has control over the realization of the unrealized SoA. In 43a, the other participant of the SoA expressed by the CTP has control of the realization of the complement SoA.

Furthermore, a main clause in the subjunctive or another mood distinction may express the semantic relation between a desiderative CTP its complement using only a single clause to express the two separate SoAs. Noonan (1985/2007, p. 134) describes this as the main clause having the 'force' of the desiderative complement relation between a main SoA and a dependent SoA. For example, this occurs in Catalan with the subjunctive (data from Yates 1975),

(44) Que   tinguin   bon   viatge.
     COMP have.2PL:SJNCT good   journey

'Have a good trip' (lit. 'I hope you have a good trip').

and in Greek with the optative.

(45) Fúgoi.
     flee.3SG:OPTATIVE

'May he flee' (lit. 'I want him to flee').

2.2.3.8 Manipulative

Manipulative predicates (Noonan, 1985/2007, p. 136-137; Cristofaro, 2003, p. 104-105) involve causation such that they express an SoA or an entity as the cause of an act of manipulation upon an affectee. The act of manipulation results in SoA expressed by a complement predicate whose subject is coreferential with the affectee. Due to the participant coreference that occurs between a manipulative predicate and its complement predicate, the complement clause is typically reduced. Since the notion of causation necessitates a particular order of cause and effect, complements of manipulative CTPs have dependent time reference. These types of CTPs can be divided into two semantic types of expressions: causation and request. Both involve attempted manipulation. However, the attempted manipulation involved in causation expressions is implied to be successful while the attempted manipulation involved in request expressions conveys no such implication.

Manipulative CTPs that express causation, e.g. *make*, *force*, and *press*, convey that the act of manipulation was successful. However, this does not entail the realization of their complement SoA. The lexical meaning of CTPs may convey whether the complement SoA is interpreted as realized or non-realized in a particular language. This is the case in English, as shown by Noonan's interpretation of *force* in 46a and *press* in 46b. On the other hand, some languages convey the realized/non-realized distinction through the choice of complement type. The Lango manipulative-causative

CTPs *press* and *force* share the form *òdìò* but can be distinguished based on the use of an indicative complement in 47a and the use of a subjunctive complement in 47b (data from Noonan, 1985/2007, p. 136-137).

(46)   a.   I forced Hugh to resign.
            (implies Hugh resigned)

       b.   I pressed Hugh to resign.
            (quite neutral as to whether or not Hugh resigned)

(47)   a.   Dákô   òdìò   lócè òtètò   kwèrí.
            woman   pressed.3SG   man forged.3SG:INDIC hoe
            'The woman forced the man to forge a hoe'. (lit. 'The woman pressed the man; he forged a hoe'.)

       b.   Dákô   òdìò   lócè nî   òtĕt   kwèrí.
            woman   pressed.3SG   man COMP to.forge.3SG:SJNCT hoe
            'The woman pressed the man to forge the hoe'.

Although 48-50 (from Cristofaro, 2003, p. 104) all use the English predicate *make*, it is apparent that each use has different degrees of binding strength according to Givón's aforementioned semantic binding hierarchy.

(48)   She made him [buy a desktop computer].

(49)   His ignoring other people's needs makes me [feel really angry].

(50)   This pollen makes me [sneeze].

The complements of the CTP *make* in the above examples are all reduced, and the predicates expressed by the complements all follow in time from the time reference of the CTP.

Manipulative CTPs that that express a request, e.g. *ask* and *order*, refer to an unrealized SoA because successful manipulation is not implied based on their inherent semantic meaning. Use of the English predicate *order* is exemplified in 51 (Cristofaro, 2003, p. 104).

(51)   They ordered him [to go].

The complement in 51 is of the infinitive complement type and thus is reduced; the subject of the complement predicate does not need to be expressed since it is coreferential with the affectee, namely *him* referred to by the CTP.

"Causatives" are a subtype of manipulative CTP that express as a single syntactic clause which conveys more than one SoA. In other words, a causative construction expresses a causative semantic relation between two SoAs, but is not structurally manifested as two separate clauses. A Japanese example is presented in 52 and an Amharic example is presented in 53b, which can be compared to the Amharic simple independent clause in 53a.

(52)   Boku   wa   Mary   ni   o   wakar-(s)ase-ru.
       I   TOP   Mary   to   this understand-cause
       'I will make Mary understand this'.   (Kuno 1973:139; cited in Cristofaro
       2003:105)

(53)   a. Yɨmət'al.
           come.FUT:3SG.MASC.SUBJ
           'He'll come'. (Mariam Assefa Morrisey (p.c.); cited in Noonan 1985/2007:137)

       b. Yamət'əwal.
           come.CAUSE:FUT:3SG.MASC.OBJ:3SG.MASC.SUBJ
           'He'll bring it'. (lit. 'He'll cause it to come'.) (Mariam Assefa Morrisey
           (p.c.); cited in Noonan, 1985/2007, p. 137)

In 52, two SoAs are syntactically expressed as a single clause by a predicate with a verbal affix. The notion of *make* is expressed by a form that is affixed to the predicate *understand*. These examples demonstrate that syntactic integration may arise from the semantic integration of multiple concepts expressed together.

2.2.3.9 Modal

Predicates expressing epistemic modality belong to the propositional attitude CTP category, thus Noonan (1985/2007, p. 137-139) and Cristofaro (2003, p. 100-102) re-

gard modal CTPs as those expressing moral obligation or necessity; Noonan groups them with predicates expressing ability in his typology of complement relations. English modal CTPs include *can, be able, ought, should, may,* and *be obliged.* Complements of modal CTPs have a dependent time reference; the CTP situates the complement SoA at a future or potential time SoA, so the time is necessarily subsequent to the time reference of the CTP. This is why languages may use reduced complement types with modal CTPs. An infinitive complement type is used with the English modal CTP in 54 subjunctive complement type is used with the English modal CTP in 55. The Albanian example in 56 and the Lori examples in 57 demonstrate the use of subjunctive complement types with the predicate 'be able'.

(54)   It's necessary for Leon to be in Fresno by three.

(55)   Leon must be in Fresno by three.

(56)   Njeriu   mundeshte   te   vjedhë   pulën.
       man   was.able.3SG   COMP   steal.3SG.SJNCT   chicken
       'The man was able to steal a chicken'.

(57)   Pia   i-tæres   ke   tile-ye   bedoze
       man   PROG-was.able.3SG   COMP   chicken-OBJ   steal.3SG:SJNCT
       'the man was able to steal a chicken'.

The CTP in 54 is "impersonal" and expresses obligation regarding the realization of the complement SoA situation in general, whereas the CTP in 55 expresses obligation on the part of the agent to bring about the complement SoA. This contrast illustrates that modal CTPs may be one- or two-place predicates (Goossen 1985; cited in Cristofaro, 2003, p. 101).

A different situation can be observed for CTPs such as *know how, can,* or *be able* (as in 56 and 57). There are two SoAs involved in such complement relations: the fact that an agent is able to bring about an SoA, and that SoA that the agent is able to bring about (Cristofaro, 2003, p. 101). In examples 56 and 57, the complement relation involves the man's ability to steal a chicken and that it was possible for

the man to steal the chicken. Noonan (1985/2007, p. 138) claims that these two examples favor a one-place analysis with subject-raising from a semantic point of view, but overall they favor a two-place analysis.

2.2.3.10 Achievement

Achievement predicates (Noonan, 1985/2007, p. 139) have been previously discussed as implicative predicates (Karttunen 1971a; cited in Noonan, 1985/2007), and either refer positively to the manner or realization of achievement, or negatively to the manner of or reason for lack of achievement. Examples of positive achievement CTPs in English are *manage*, *chance*, *dare*, *remember to*, *happen to*, and *get to*, and negative achievement CTPs in English are *try*, *forget to*, *fail*, and *avoid*. The complements of both positive and negative achievement CTPs have dependent time reference, because the time reference of the (lack of) achievement must be the same as the event (or lack thereof). Therefore, languages may use reduced complement types with this class of CTP, as shown by the following examples from Noonan (1985/2007, p. 139).

(58)   Zeke tried eating spinach.

(59)   Nelson avoids taking baths.

The use of nominal complement types with the English achievement CTPs *try* in 58 and *avoid* in 59 exemplify that complements to achievement CTPs, particularly those that are negative, often express names of activities or background propositions.

The negative achievement CTP *kám-u-haan(i)* 'prevent' in 60 takes the nominal complement in bold (data from Schneider-Blum, 2007).

(60)   ʔIsíicc(i)   ʔetar-óon(i),   sub-ít(i)
       PRON3SG:M:ABL   back-TN:M:LOC   morning.prayer-TN:F:NOM
       ʔaag-too   wokt-íicc(i)   jammar-éen(i),
       enter-3SG:F/3PL:PERF.REL   time-TN:M:ABL   begin-VN:INSTR
       ʔarríicc-ut(i)   ʔaag-tóo-t(i)   ʔíill(a),
       light-SI:F:NOM   enter-3SG:F/3PL:PERF-CL:F:NOM   up.to

wáa	ʔag-iiccíi	ʔicc-át(a)	ʔit-iiccíi,
water.TN:M:ABS	drink-VN:ABL.LV,	food-TN:F:ABS	eat-VN:ABL.LV

gag-ú	kám-u-haan(i).
self-TN:M:ABS	prevent-VN:ABS-CL:M:LOC

'Apart from this, from the beginning of the time of morning prayer up to sunset, one has to keep oneself away from drinking water and eating food'.

2.2.3.11 Phasal

Phasal predicates (Noonan, 1985/2007, p. 139-42; Cristofaro, 2003, p. 102-103) are CTPs that express development over time. In other words, they are aspectual predicates. CTPs in this semantic class refer to a particular phase of the complement SoA. Phasal CTPs may refer to an SoA's inception, e.g. *begin* and *start*, continuation, e.g. *continue* and *keep on*, termination, e.g. *finish*, *stop*, and *cease*, or iterativity, e.g. *repeat* and *resume*. The time reference of their complements is dependent because it is necessarily the same as the time reference of the CTP, and therefore reduced complement types are used.

The complement types associated with phasal CTPs in a language may vary based on which phase of the SoA is referred to, because each is associated with a different aspect; inception is associated with inceptive/inchoative aspect, continuation with progressive/durative aspect, and termination with perfective/completive aspect. Some languages, such as Chantyal, may lack complement types which can express such aspectual contrasts. Instead, an adverbial clause form, such as a converb construction, may be used to express the complement SoA. S-like and nominalized complement types are used in Chantyal, yet complement SoAs of phasal CTPs are expressed by converbs with aspectual senses (data from Noonan, 1985/2007, p. 140).

(61)   a.   Ram   ca-wa   thali-i.
            Ram   eat.NZN   begin-PERF
            'Ram began to eat'.

      b.   Ram-sə   sya   ca-wa   thali-i.
            Ram-ERG   meat   eat-NZN   begin-PERF

'Ram began to eat meat'.

(62) Ram ca-wa   ci-i
      Ram eat-NZN   sit-PERF
      'Ram continued to eat'.

(63) Ram ca-kəy   ci-i
      Ram eat-PROG   sit-PERF
      'Ram continued to eat'.

(64) Ram ca-si   cɦin-ji.
      Ram eat-SEQ   finish-PERF
      'Ram finished eating'. (lit. 'Ram, having eaten, finished'.

The Chantyal phasal CTP *thali-* 'begin' is used with a nominalized complement type in 61, while the complement SoA of *ci-* 'continue' can be expressed with a nominalization as in 62 or a progressive converb as in 63. As 64 demonstrates, Chantyal uses sequential converbs with *cɦin-* 'finish' which convey the perfective aspect.

Noonan (1985/2007, p. 141) comments on the argument structure of clauses expressing phasal CTPs by discussing the intransitive and transitive uses of the CTP *ca-* 'eat' in 61a and 61b, respectively. Since the case associated with *Ram* is attributed to *ca-* rather than *thali-* 'begin', *Ram* can be analyzed as the subject of *ca-* and not *thali-* in 61a. Since the ergative case must be associated with *Ram* if *ca-* takes a direct object, in 61b, *Ram* can be analyzed as the subject of *ca-* and the phrase *Ram-sə sya ca-wa* as the subject *thali-*. This implies that *thali-* takes a single, clausal argument, which is reflected by an alternative English translation to 61b: *Ram's eating meat began.* Noonan's analysis contrasts with the assumption that these cases involve subject-raising.

Across languages, strategies alternative to using two distinct clauses can be observed for the expression of phasal complement relations. Some languages use verbal affixes or particles to express phasal relations (Bybee, Perkins, and Pagliuca 1994; cited in Noonan, 1985/2007, p. 141). Furthermore, some languages use repetition of

the complement SoA to convey a continuation phasal relation, as exemplified in 65 from Taiora (data from Vinvent 1973; cited in Noonan, 1985/2007, p. 142)

(65) Otu   bi otu   bi otu   bi-ro.
      go.down go go.down go go.down go-3SG
      'He continued going down'.

2.2.3.12 Perception

Immediate perception predicates (Noonan, 1985/2007, p. 142-4; Cristofaro, 2003, p. 105) refer to the experiencer's perception of an SoA. In English, perception CTPs include *see*, *hear*, *watch*, and *feel*, and even the mental predicate *imagine*. The perception of a SoA has the same time reference as that SoA, therefore complement SoAs to immediate perception SoAs have dependent time reference and are typically expressed using reduced complement types.

This semantic class of CTP is often used with participle complement types, and in some languages, a construction similar to a participle is used in which the complement SoA is expressed as a relative clause construction whose head is the direct object. The latter strategy is employed in French as shown by 66 (data from June Mathias (p.c.); cited in Noonan, 1985/2007, p. 142) and in Spanish as shown by 67 (data from Pat Sever (p.c.); cited in Noonan, 1985/2007, p. 142), although infinitive complement types are usually used with perception CTPs in both languages.

(66) Marie voit Roger qui   mange les pommes.
      Mary   sees Roger RPRO   eat   the apples
      'Mary sees Roger eating the apples'.

(67) Oigo   a   Juan que   toca   la   guitarra.
      hear.1SG to   John COMP play.3SG the guitar
      'I hear John playing the guitar'.

Since many CTPs that are used in the perception sense may also be used in the knowledge sense, some languages may distinguish between the two sense by complementizer use. Example 68 from Malay, a language in which the complementizer

bahwa is usually optional, shows that it is not possible to use the complementizer with perception predicates such as *teingok* 'watch' (data from Galust Mardirussian (p.c.); cited in Noonan, 1985/2007, p. 143).

(68) Saya měn-engok (*bahwa) orang itu sědang měn-churi ayam.
     I   TRANS-watch (COMP) man the PROG TRANS-steal chicken
     'I watched the man stealing the chicken'.

Although this Malay perception CTP does not have an additional knowledge CTP sense, use of *bahwa* is not permitted.

All of the examples in this section have illustrated the use of strategies outside of the languages' complement systems for the expression of the complement SoA referred to by a perception CTP. Another strategy specific to immediate perception CTPs can be observed in the Russian example in 69 (Noonan, 1985/2007, p. 143).

(69) Ja videl kak Boris čitaet knigu.n
     I saw COMP Boris read book
     'I saw Boris reading a book'.

In 69, an indicative complement type is used with the complementizer *kak*. The only other uses of *kak* in Russian complement relations are those involving fearing CTPs and the subjunctive complement type.

2.2.3.13 Negative

Negative predicates (Noonan, 1985/2007, p. 144) express negation as a CTP rather than using a negative particle, conjunction, or verbal stem. These are only employed by a few languages cross-linguistically. Complements of negative CTPs have a dependent time reference because it is the same time reference as the CTP. Negative predicates are used in Fijian, as shown by 70 (data from Churchward 1941; cited in Noonan, 1985/2007, p. 144), and in Shuswap, as shown by 71 (data from Kuipers 1974; cited in Noonan, 1985/2007, p. 144).

(70) a. Ena lako ko   koya.
          FUT go   ART he
          'He will go'.

      b. Ena sega ni   lako ko   koya.
          FUT NEG   COMP go   ART he
          'He won't go'.

(71) a. χəqpnwθw'n.
          understand.1SG
          'I understand'.

      b. Táʔ k   s-xəpqnwθw'n.
          NEG ART NZN-understand.1.SG
          'I don't understand'.

2.2.3.14 Conjunctive

Conjunctive predicates (Noonan, 1985/2007, p. 144-145)) are conjunctions equivalent to *and* and *and then* in English, except they function as two-place predicates This type of CTP is used in only a few languages cross-linguistically, and depending on the meaning of the conjunctive CTP, the time reference can either be independent or dependent. The following examples taken from Noonan (1985/2007, p. 145) illustrate the Lango conjunctive CTP construction.

(72) Àcámò   rìngó àtê   màttò   pì.
      ate-1SG meat   and.then.1SG drink.INF   water
      'I ate meat and then I drank water'.

(73) Áˈbínô   pìttò   kɔtí   tê   dòngɔ̀.
      Come.1SG   plant.INF seeds and.then.3SG   grow.INF
      'I'll plant the seeds and then they'll grow'.

(74) Òtèdò   rìngó òtê   càmmò.
      cook.3SG mean   and.then.1PL   eat.INF
      'He cooked the meat and then we ate it'.

The Lango conjunctive predicate 'and then' occurs with the habitual aspect, and is inflected for person. This strategy uses infinitive forms for the complement SoA.

2.2.3.15 Purpose

A purpose clause expresses an intention on the part of the subject, usually an agent, toward the realization of an SoA. These are dependent clauses that semantically express an intentional or purposive complement relation. Purpose clauses express SoAs that tend to be unrealized in this type of complex predicate relation. Although purpose predicates are generally not discussed as complement clauses, they can be used to express a semantic complement relation. The main SoA that they depend on expresses a sense of intention toward the undertaking or achievement of the dependent SoA expressed by the predicate of the purpose clause. For example, three purpose clauses occur in the following excerpt from the Itzaj Maya text "The Town Fiesta" (Hofling, 1991), in lines 46, 47, and 49.

(75) 44. I   b'a-lah,
           and   TEMP-PROX
           'And now',

      45. mia   ich   a'-k'in-oo'   he'la'
           DUB   in   DET-day-PL   OST-PROX
           'I think that during these days'

      46. b'el   ki-ka'a   **ki-chun-u'**
           go   1PL-go   1PL-begin-SPM
           'we are going to begin it',

      47. tumen   b'el   u-ka'a   **ti   ts'iib'-(b')-il,**   **u-hu'um-il**
           because   go   3-go   to   write-PAS-INTRAN   3PPR-book-POS
           'because it is going to be written (in) the official book'

      48. yok'   u-[,]-p'at-äl,   u-k'ab'a'
           SUB   3-remain-INTRAN   3PPR-name
           'so the names remain'

      49. tulakal   a'-[,]-mak-oo'   k-u-b'el-oo'   **ti   meyah-eh**.
           all   DET-person-PL   INC-3-go-PL   SUB   work-REL
           'of all of the people that are going to work'.

The purpose clause predicates *ki-chun-u'* in line 46, *ts'iib'-(b')-il* in line 47, and *meyah-eh* in line 49 describe an intended events that have not yet been realized. They are complements of the main clauses *ki-ka'a*, *u-ka'a*, and *k-u-b'el-oo'*, respectively, which semantically convey an intention toward the realization of the SoAs referred to by the dependent clauses in bold.

2.3 Cristofaro (2003)

Complementation is traditionally defined, for example in Noonan (1985/2007, p. 46), as a dependent clause that functions as an argument of an independent clause. Cristofaro (2003, p. 95-98) explains the shortcomings of basing this definition on an assumption about the particular formal characteristics of the complement relation. Cross-linguistic evidence shows that complements do not necessarily function as arguments and are not necessarily embedded. Thus, traditional definitions of complement relations that assume complements function as syntactic arguments do not hold up. This has also been pointed out by Thompson (2002), who argues that complementation can occur as the combination of CTPs as epistemic, evidential, and evaluative "frames" or "fragments" for the complement clauses they occur with. A definition capable of accounting for typological evidence should instead be functional, i.e. not determined by formal features. According to Cristofaro, for any type of subordination relation, the semantic relation between the main SoA and the dependent SoA is one of entailment; the main SoA entails the dependent SoA. Cristofaro uses the terms 'dependent SoA' and 'main SoA' to express the notions referred to as 'complement SoA' and 'CTP SoA' in previous sections of the present chapter. A SoA can be identified as dependent based on assertiveness tests (Cristofaro, 2003, Ch. 2).

Cristofaro's semantic classes of CTPs, and discussion of the morphosyntactic phenomena associated with them, directly builds upon previous work from Noonan (1985/2007) and has been addressed in Section 2.2.3. In order to describe the distribution of morphosyntactic phenomena across semantic types of complement rela-

tions illustrated in Section 2.2.3, Cristofaro establishes the Complement Deranking-Argument Hierarchy, which is an improvement on the implicational hierarchy established by Givón (1980), summarized in 2.1. In turn, Cristofaro establishes a correlation between this major implicational hierarchy and the semantic characteristics of complementation.

2.3.1 The Asymmetry Assumption

The Asymmetry Assumption approach to subordination is similar to earlier approaches in more formal frameworks (Haiman 1985:section 2.1, Haiman and Thompson 1984, Mathiessen and Thompson 1981, Foley and Van Valin 1984; cited in Cristofaro, 2003, p. 33). This is the approach that Cristofaro takes in her survey of subordination relations. From this perspective, subordination is considered a cross-linguistic phenomenon that can be defined as an asymmetrical relation in which two SoAs are functionally linked, the profile of one overriding the other, and can be identified by assertiveness tests without regard to the formal manifestation of such a relation (Cristofaro, 2003, p. 39). The functional definition of subordination that she proposes is

> [A] situation whereby a cognitive asymmetry is established between linked SoAs, such that the profile of one of the two (the main SoA) overrides that of the other (the dependent SoA). This is equivalent to saying that the dependent SoA is (pragmatically) non-asserted, while the main one is (pragmatically) asserted (Cristofaro, 2003, p. 33).

The Asymmetry Assumption encompasses complement, adverbial, and relative types of semantic relations, distinguished based on semantic and functional rather than formal criteria. These correspond to the aforementioned types of subordination constructions: complement clause constructions, adverbial clause constructions, and relative clause constructions. According to the Asymmetry Assumption, complement

relations are those in which the semantics of a SoA entails that another SoA is referred to (Cristofaro, 2003, p. 38).[1]

2.3.2   Semantic Features

Level of Clause Structure

According to a Functional Grammar model (Dik, 1989, 1997a, 1997b; Hengeveld, 1989, 1990; Siewierska, 1991) that is partially derived from Foley and Van Valin Jr (1984) and Lyons (1977) (cited in Cristofaro, 2003, p. 109-110), the structure of clauses can be described in terms of four levels ordered hierarchically such that the lower levels are encompassed by the higher levels, and each level is classified by different types of entities and functional properties. The four levels from most to least basic are as follows:

(i) Predicates and terms
(ii) Predication
(iii) Proposition
(iv) Clause (or utterance) from a global point of view

Considering the most basic level, predicates refer to properties or relations, and terms

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[1]Langacker also takes a nontraditional view of complex sentence constructions, which can be considered the Cognitive Grammar version of the Asymmetry Assumption:

> Despite their familiarity,... such standard terms as coordination, subordination, relative clause, etc. do not necessarily refer to notions that are clearly defined or thoroughly understood, nor can they be accepted as representing an optimal, revelatory, or even adequate classificatory system. Indeed, it is doubtful that any single classification could accommodate the actual diversity of multiclausal constructions together with the many kinds and degrees of similarity displayed by overlapping subgroups. A better strategy is to examine individually the various factors that figure in a full characterization of such constructions; a particular construction is then defined by a constellation of properties, each of which is shared by certain others (Langacker, 1991, p. 419).

The 'constellation of properties' involves three factors: the structural resemblance of construction to a typical independent clause in a particular language, forms which function to connect two SoAs, and global organization. This definition accounts for the cross-linguistic variation and overlapping categories of complex sentence constructions more adequately than the discrete traditional categories. He offers the following non-traditional definition of subordination from this perspective: "a subordinate clause is... describable as one whose profile is overridden by that of a main clause" (Langacker, 1991, p. 436).

refer to entities that can be situated in space, time, and reality. The second level, predication, results from the successful application of predicate to terms and refers to SoAs ("states of affairs") (Dik 1989, p. 46; cited in Cristofaro, 2003, p. 110). An SoA is the notion of some situation that may exist in some possible world, and can be evaluated for its existence. The proposition is the third level; this accounts for the evaluation of or attitude toward SoAs, i.e. what is said or thought about them. Propositions refer to content that can be evaluated for its veracity. The highest level, that of the clause from a global standpoint, involves the entirety of the speech situation. Specifically, the clause (or utterance) refers to the speech act itself, which can be evaluated for its felicity.

(76)   In case you haven't heard, Marilyn allegedly gave the letter to Rob surreptitiously during the staff meeting. (Siewierska 1991, p. 40, cited in Cristofaro, 2003, p. 110).

Siewierska (1991) describes the English example in 76 in terms of these four levels. In order to most clearly exemplify this functional model of clause structure, Siewierska's description of 76 as it is paraphrased by Cristofaro is quoted in full:

> [The utterance in 76] consists of a predication built on the predicate 'give' and the terms it requires, as well as the manner satellite 'surreptitiously'. This predication is located in time by the past tense operator and in space by the satellite 'during the staff meeting'. It is built into a proposition by means of the quotative satellite 'allegedly', which indicates that the speaker has come to the propositional content indirectly, and thus cannot be held responsible for its veracity. Finally, the illocutionary satellite 'in case you haven't heard' mitigates the basic illocutionary force of the utterance by relating the felicity of the speech act to the state of the hearer's knowledge (Siewierska 1991, p. 40-42, cited in Cristofaro, 2003, p. 110).

The predication and proposition levels of clause structure are relevant to complement relations. Different semantic complement relations apply to different levels of clause structure. Knowledge, propositional attitude, and utterance relations are associated with the proposition level because they express what is said, thought, believed, or known about SoAs. In other words, they involve a SoA and propositional content that refers to it. Manipulative and perception relations are associated with the predication level because they express the (possible) realization of SoAs. They involve an SoA and a distinct situation by which it was caused, requested, or perceived. Modal, phasal, and desiderative predicates function to modify individual SoAs which indicates that they pertain to the predicate level. However, complement relations expressed by modal, phasal, and desiderative predicates that involve two distinct SoAs carry out this function by relating one SoA to another. Therefore when two separate SoAs are involved in modal, phasal, and desiderative relations, they pertain to the predication level (Cristofaro, 2003, p. 110-111).

Predetermination

Some semantic features of complement relations are predetermined by the inherent semantic meanings of those relations. Semantic features of the dependent SoA such as time reference, aspect value, mood value, and participants may be predetermined depending on the semantic class of CTP (Cristofaro, 2003, p. 113-115).

Knowledge, propositional attitude, and utterance relations do not involve an entailment about the time reference of the linked SoAs, demonstrated by different time reference possibilities in 77 (Cristofaro, 2003, p. 113).

(77)   a. He knows/thought/said [she would be late].

        b. He knows/thinks/says [he was late].

Complement relations involving all of the other semantic classes of CTP do predetermine the time reference of the dependent SoA. For example, the time reference

of dependent SoAs in phasal complement relations is predetermined in regard to the time immediately before the CTP as well as the time immediately after (Givón, 1973). This was discussed in Section 2.1.1; see examples **??** and **??** for detailed examples of how time reference is entailed by phasal CTPs.

The same distinction can be made between knowledge, propositional attitude, and utterance relations on the one hand, and all other types of complement relations on the other hand for the aspect value of the dependent SoA. Predicates with undetermined time reference also have undetermined aspect value, and predicates with predetermined time reference also have predetermined aspect value.

In terms of mood value, all semantic classes of CTPs predetermine the dependent SoA in various ways. The mood value in modal and desiderative relations is irrelevant because it does not matter whether or not the SoA actually occurs. Manipulative predicates predetermine whether the dependent SoA is realized or not. In the case of successful manipulation as well as perception relations, it is entailed that the dependent SoA actually does occur. The truth of relevant propositional content is entailed in knowledge relations, while propositional attitude and utterance relations predetermine the dependent SoA as non-factual.

Participants involved in the linked SoAs of complement relations are undetermined by desiderative, perception, knowledge, propositional attitude, and utterance relations. Modal, phasal, and manipulative CTPs predetermine participants between linked SoAs. For example, in manipulation relations, it is predetermined that the same participant causing the dependent SoA is also the participant affected by the act of manipulation.

Semantic Integration

The concept of semantic integration was initially discussed in Section 2.1. This is a semantic feature of subordination relations defined by Cristofaro (2003, p. 117) as the degree to which the main and dependent SoAs are interconnected. According to

Givón, what underlies this notion is 'the spatio-temporal integration of two events into a single event frame' (Givón, 1990, p. 526). However, Cristofaro (2003, p. 118-122) argues for a distinction between integration of the spatio-temporal/referential type and integration into single event/SoA frame based on their different roles in semantic integration, and in turn discusses the semantic integration involved in the complement relation types she recognizes. The following summary of this argument and discussion will account for the motivations behind Cristofaro's Semantic Integration Hierarchy and how it improves upon previous work in complementation.

Tight interconnectedness between main and dependent SoAs can be exemplified by the relation between phasal CTPs and their complements. These predicates are at the top of Givón's integration hierarchy, and Cristofaro agrees that such complement relations exemplify two SoAs that belong to one SoA frame. However, her explanation for the semantic integration of phasal complement relations is that starting, finishing, or continuing an action are a part of the action itself. This differs from Givón's criteria for semantic integration, namely spatio-temporal contiguity and referential integration. For example, he considers the spatio-temporal contiguity of perception relations such as that in 78 to be evidence for the interconnectedness of two SoAs such that the perception act could not have occurred without the occurrence of the perceived SoA.

(78)   She saw him [come out of the theater]. (Givón, 1990, p. 526)

(79)   When I go to the Institute at weekends, there are not many people around. (Cristofaro, 2003, p. 119)

(80)   The man [wearing the purple shirt] is now walking in the garden. (Cristofaro, 2003, p. 119)

Cristofaro claims that spatio-temporal contiguity and referential integration are neither necessary nor sufficient conditions for the semantic integration of main and

dependent SoAs into one SoA frame. To support this claim, she reflects on 79 and 80 which express an adverbial relation and relative relation, respectively. Although there is spatio-temporal contiguity between the linked SoAs in 79, Cristofaro observes that there is no direct connection between going to the Institute at weekends and not many people being around. Therefore, the two SoAs are not integrated into a single SoA frame. The same conclusion can be reached regarding 80; although this is an instance of referential integration and a participant is shared between linked SoAs, no direct connection can be discerned between wearing a purple shirt and walking in the garden.

The lack of direct connection between spatio-temporally contiguous main and dependent SoAs in 79 and 80 indicates that interconnectedness of SoAs does not arise from spatio-temporal contiguity. Among the factors that Cristofaro does regard as resulting in semantic integration are the feature of phasal relations such that two SoAs are part of the same global frame, and the feature of manipulative and perception relations such that two SoAs are related in terms of occurrence. These are factors that weaken the boundaries between SoAs and contribute to semantic integration, unlike spatio-temporal contiguity, which is merely a likely feature of interconnected SoAs.

Cristofaro discusses types of complement relation in terms of semantic integration and in turn, posits a hierarchy of CTPs in these terms, inclusive of CTP classes that Givón's semantic binding hierarchy does not account for. Phasal and modal CTPs are ranked with the highest degree of interconnection between SoAs. The case described above for phasal CTPs in which the dependent and main SoAs belong to the same global frame suggests the erosion of the boundary between the SoA which profiles the phase of an action and the SoA which refers to the action. Modal CTPs are used to express a complement relation between a SoA and the possibility or necessity of the occurrence of that SoA. In this way, the two SoAs involved are not part of the

same global frame, and therefore modal CTPs have less semantic integration with the complement predicate than phasal CTPs. Nonetheless, modal CTPs refer to SoAs that express a necessary or possible condition and do not involve autonomous participants, and thus cannot be defined independently of the SoA to which they apply. This indicates a conceptualization of the two SoAs in modal complement relations that is semantically integrated to a high degree.

Complement relations involving manipulative CTPs vary in the degree of semantic integration of the linked SoAs. For example, the CTP 'make' expresses a direct causation relation, but the causation may be more or less intentional depending on its use, as shown by 48-50. Example 48 shows more intentionality driving the act of manipulation that causes the realization of the SoA referred to by the complement predicate than examples 49 and 50. In either case, the SoA referred to by the CTP brings about another SoA directly, yet they are part of distinct SoA frames and their separate conceptualizations involve unshared participants. Therefore, the the linked SoAs have an eroded boundary but are less semantically integrated than those involving phasal and modal CTPs.

Cristofaro ranks manipulative CTPs such as 'order', desiderative, and perception CTPs even lower in terms of semantic integration. They express commands, desires, or perception acts that would not occur, or at least would not make sense, without reference to some SoA that has the possibility of realization or a perceived SoA. In this way, the linked SoAs are semantically integrated. However, their interconnectedness is reduced because they do not express a direct relation with the SoA referred to by the complement predicate; rather, the linked SoAs occur independently. According to Givón's semantic binding scale discussed in Section 2.1.1, the modality class of CTPs involve the intention of the CTP agent toward the realization of the SoA expressed by the complement predicate. Manipulative CTPs such as 'order' and desiderative CTPs are part of Givón's modality class, and a factor involved in those

Table 2.1 – CTPs and Semantic Integration

Semantic integration: The Semantic Integration Hierarchy	No semantic integration
Phasals > Modals > Manipulatives ('make') > Manipulatives ('order'), Desideratives, Perception	Knowledge, Propositional attitude, Utterance

CTPs is 'preference', i.e. the dependent SoA is a desire or interest of a participant of the main SoA. Givón (1990, p. 528-530) considers preference to be a factor in semantic integration of linked SoAs such that CTPs involving preference indicate greater interconnectedness between linked SoAs than CTPs not involving preference. However, Cristofaro argues that the occurrence of the dependent SoA is not necessarily dependent on or affected by some participant's desire or interest, therefore preference is not a component of semantic integration. From this view, manipulative CTPs such as 'order' and desiderative CTPs determine the interconnection of linked SoAs similar to perception CTPs.

Knowledge, propositional attitude, and utterance CTPs express a relation between an SoA and propositional content which refers to an SoA. The relation they express is indirect, and there is no semantic integration between the main and dependent SoAs. They are not part of the semantic integration hierarchy in Table 2.1 (from Cristofaro, 2003, p. 122), which represents the semantic integration involved in the CTPs that Cristofaro uses in her cross-linguistic survey.

2.3.3 Cross-linguistic Coding

Cristofaro uses the following morphosyntactic parameters to compare each type of complement relation to the others in a language (2003, p. 82):

(i) balancing vs. deranking, generally
(ii) balancing and deranking, specifically:
    (a) lack of TAM distinctions
    (b) lack of person agreement

<blockquote>

     (c) coding of TAM distinctions different than in independent clauses

     (d) coding of person agreement different than in independent clauses

     (e) nominal morphology (adpositions, case marking on verb)

  (iii) no overt expression of verb arguments

  (iv) different coding of verb arguments than in independent clauses in terms of alignment patterns and possessor marking

</blockquote>

In this way, implicational generalizations can be quantified for complement relation types. Cristofaro (2003) reports data that follow from the parameters regarding verb form and coding of participants which give rise to cross-linguistic generalizations and thereby permit the Complement Deranking-Argument Hierarchy exemplified in 81. The ranking of CTPs in this hierarchy differs from that in the Semantic Integration Hierarchy in Table 2.1.

(81)   The Complement Deranking-Argument Hierarchy (Cristofaro, 2003, p. 125, 131)

       Modals, Phasals > Manipulatives ('make', 'order'), Desideratives > Perception > Knowledge, Propositional attitude, Utterance

Cristofaro (2003) addresses the hierarchy in 81 in terms of the parameters above concerning the form of the verb. Regarding balancing and deranking in general, a language that uses deranking for one type of CTP on the Complement Deranking Hierarchy also uses deranking for each type of CTP to its left. The same holds for the lack of coding of A or S arguments. Similarly, regarding specific coding phenomena involving in deranking, a language that lacks expression TAM or person agreement distinctions for one class of CTP also lacks TAM or person agreement distinctions for each type of CTP to its left.

Other morphosyntactic parameters do not conform to the ranking of CTP types in 81: nominal morphology such as adpositions and case marking on the dependent verb, and the coding of TAM distinctions and person agreement distinctions different than in independent clauses. According to Cristofaro, these parameters do not pattern in

the same way as those which obey 81; she exemplifies the distribution of nominal morphology on the dependent verb with the following ranking (2003, p. 128):

(82) Case marking/adpositions on the dependent verb (Cristofaro, 2003, p. 125)

Modals, Phasals, Desideratives, Manipulatives, Perception > Knowledge, Propositional attitude, Utterance

The distribution of TAM and person agreement distinctions, on the other hand, cannot be ranked hierarchically. Cristofaro attributes this to their infrequent use and lack of cross-linguistic data. Nonetheless, she asserts that when special forms are used for the overt expression of TAM or person agreement, the ranking of complement relation types they occur with approximately follows the Complement Deranking Hierarchy.

2.3.4   The Complement Deranking-Argument Hierarchy

The Complement Deranking-Argument Hierarchy in 81 describes the morphosyntactic coding of complements in terms of ordered patterns of variation (Cristofaro, 2003, p. 131). The morphosyntactic parameters listed in the previous section follow either the Complement Deranking-Argument Hierarchy or the modified version in 82. Cristofaro suggests that the reason why these logically distinct phenomena each follow the same ordered pattern of variation lies in the the semantic features of complement relations discussed in Section 2.3.2: level of clause structure, predetermination, and semantic integration and how they correspond with those patterns (2003, p. 132-136).

There is a strong correlation between predetermined semantic features of the dependent SoA and a lack or reduced morphological coding of those semantic features. Predetermined values for time reference, aspect, and/or mood correspond to the coding of TAM distinctions that is not usually found in independent clauses because such coding tends to be reduced, and they correspond even more strongly with a lack of TAM distinctions. A similar correspondence is observed between predetermined participants and the lack or reduced coding of person agreement distinctions.

Chapter 3

Method

3.1 Data

The language sample includes twelve geographically diverse languages from four major areas of the world: Africa, Eurasia, Southeast Asia/Oceania, and the Americas. There is a wide variety of language structures represented in the text sample. For example, some languages use serial verb constructions, some utilize switch-reference systems, and a range of word order strategies are represented across the sample. The texts were obtained from reference grammars. They are transcriptions of uninterrupted oral discourse, ranging from approximately 50 to 150 clauses in length. All texts were originally spoken by a single native speaker and include a transcription in the original language, an interlinear morpheme translation, and an English translation. Since the authors of the reference grammars vary, the transcription process and presentation of the texts vary. The text types are primarily narrative, including folk tales, personal narratives, and semi-historical narratives.

3.1.1 Africa

Alaaba has SOV word order and uses deranked forms. Alaaba is a Cushitic language spoken in Ethiopia by about 204,000 people (Schneider-Blum, 2007, p. 1). Three texts are included from Alaaba: a folktale "Hyena and Lion", a procedural text "Marriage", and an informational text "Islam". They were collected and transcribed between

November 2003 and April 2004 by Schneider-Blum (2007), who was asked to omit or change several aspects of the discourse, which is indicated in the footnotes of the transcriptions.

Supyire is an SVO language that uses serial verb constructions. It is a Senufo language spoken by the Supyire people who inhabit Southeastern Mali. The texts were created by the consultant Ely Sanogo and other native speakers, then recorded and transcribed with help from the creators; the gloss was added by the author of the grammar and includes information that is not actually present in Supyire (Carlson, 1994, p. 3-6).

3.1.2 Eurasia

Chantyal has SOV word order and uses deranked forms. The Chantyal are a group of less than 10,000 people with approximately 2,000 speakers; the language is within the Tamangic group of Bodic, a division of Tibeto-Burman (Noonan, 2005). Most texts were originally spoken by Ram Bhulanja. They were recorded and then transcribed. Jagman Chhantyal transcribed a number of the texts from tape, and the material was discussed with and checked by Chantyal native Ram Bhulanja (Noonan, 2003, 2005). Translations can be attributed to Ram Bhulanja and Michael Noonan.

Kolyma Yukaghir is an SOV languages that uses deranked forms. It is a Yukaghir language spoken by about 50 people in Russia; although Yukaghir languages are considered isolated, they have a suggested affiliation with the Uralic family (Maslova, 2003). The two Kolyma Yukaghir texts from Maslova (2003), spoken by Vasilij Gavrilovich, were recorded in 1992. The author of the grammar created the gloss and checked all controversial/questionable sentences with native speakers.

3.1.3 SE Asia/Oceania

Maonan has SVO word order and uses serial verb constructions. It belongs to the Kam-Sui group of the Kam-Tai language family, and is spoken in several counties of

China by about 70,000 people actively (Lu, 2008, p. 44). The Maonan texts were obtained by the author of the grammar during two periods of fieldwork: May-June 2004 and April-November 2005. They were originally spoken by a native speaker such as the consultant Mr. Tan Xingai, recorded and transcribed.

Nguna has SVO word order and uses balanced forms. It is spoken by around 1,000 people in the Vanuatu island group; less than 800 speakers live on the island of Nguna and the others live on nearby islands (Schütz, 1969a). The Nguna texts (Schütz, 1969b) were created by native speakers, primarily the principle informant Jack Tavimasoe, and obtained through tape recordings. The informant initially transcribed the recordings in conventional orthography which was changed into a segmental phonemic transcription by comparing the script to the tapes. They include a translation, gloss, and further corrections suggested by Jack Tavimasoe and Mrs. Murray in footnotes (Schütz, 1969b).

Korowai has SOV word order and uses serial verb constructions and a switch-reference system. It belongs to the Awyu-Dumut group of Papuan languages, and its approximately 4,000 speakers live in the Irian Jaya province of Indonesia (van Enk & de Vries, 1997, p. 3, 9). The nine Korowai oral texts collected by van Enk and de Vries (1997) were narrated by different native speakers from different clans. The author of the grammar did not edit for speech errors, hesitations, repetitions, or false starts.

Wardaman has free word order and uses V+N predicates. Wardaman is a Yangmanic language spoken in Australia. There are only about 30 adults over 40 who speak the language regularly (Merlan, 1994). The texts were created by native Wardaman speakers, primarily Elsie Raymond. They were obtained orally, then transcribed. The author of the grammar credits Oliver Raymond, Ruby Allison, and other relatives of Elsie Raymond for help with transcription, and notes that the informants often checked the grammatical forms (1994, p. 10).

3.1.4 The Americas

Hualapai has SOV word order and uses a switch-reference system. Hualapai is a Pai branch of the Yuman language family, which approximately 1,000 people speak in or near Peach Springs, Arizona (Watahomigie et al., 2001). The Hualapai texts were collected from native speakers such as Mrs. Tim McGee on the Hualapai reservation in 1959, recorded in 1973, and transcribed by either Werner Winter with help of granddaughters of Mr. and Mrs. McGee in 1979 or his assistant Christel Jarr/Mrs. Andrew Butcher in 1973. Editing was done by Werner Winter; this included a morphological analysis of form, with preference given to allomorphic variants found in the texts instead of renderings of the basic morpheme shape (Winter, 1998, p. 3-4).

Arapaho has free word order and uses polysynthetic forms. The Arapaho historical narratives "Old Story" was composed and written down by a group of native-speaking teachers. The creators and Dr. Andrew Cowell from the University of Colorado contributed to the translation. The teachers' translation was modified by Dr. Cowell to more closely reflect the original Arapaho; he also added the gloss and pitch accents (Cowell & Moss, 2008). The Arapaho text "The Scout's Escape" is a historical narrative spoken by Paul Moss, who switches frequently switches between the perspective of the character in the story and the perspective of the listeners to the story (Cowell & Moss, 2005).

Itzaj Maya has VSO word order and uses balanced forms. It only has a few dozen speakers and belongs to the Yukatekan Maya language family, which are spoken in the lowlands of Guatemala, Mexico, and Belize (Hofling, 2000). The Itzaj texts are from Hofling (1991). They were created by the primary consultant Fernando Tesucún and two other native speakers, recorded by tape, transcribed into conventional orthography, and translated into Spanish.

Mapuche has SVO word order and uses mostly balanced forms. The texts were created by fluent Mapuche speakers such as Luis Quinchavil who prepared and read

his narratives aloud from paper while recorded on tape in 1978/79 in the author's house in the Netherlands; Quinchavil also helped translate the Mapuche texts into Spanish (Smeets, 2008, p. 371). Presumably, the English translation is by grammar author. Supplementary words in the English translations which are not represented by the Mapuche text are in brackets.

3.2   Coding Procedures

One text from each language in the sample was coded and analyzed by Dr. Bill Croft and students in the Typology of Information Structure seminar that I took during the Spring 2014 semester at the University of New Mexico. I refined the original coding of these texts before including them in the analysis of complement clause discourse functions presented here. Additional texts from each language were also included in this analysis. They were coded based on the following procedures, which were fine-tuned throughout the seminar.

Each clause was coded for construction type, aspect, time reference, modality, mode of discourse, local organization, subordinate relations, and expressions of time, place, and actor. Independent and dependent clause construction types were distinguished in order to observe the functions of complement clauses compared to main clauses and other dependent clause types. Aspectual and temporal constructions were coded, which facilitated the analysis of continuity and discontinuity in temporally-based text types. Changes in time, place, and actor were tracked in order to analyze the various "changes in direction" that may occur within the discourse. Actors were considered to be human participants or any personified participant. Personification was defined as having the human characteristic of speech. Coding the discourse mode of each clause was helpful for dividing the text into smaller cohesive stretches of discourse. This allowed for the analysis of boundary-marking functions within larger discourse contexts.

3.3 Discourse Analysis

3.3.1 Information Status

The matrix in Figure 3.1 shows the four possible information statuses that can be established based on the distinction between discourse-old and discourse-new information on one hand, and between hearer-old and hearer-new information on the other. The hearer-new, discourse-old information status in the bottom left corner of the matrix is not found in naturally occurring discourse (Prince 1992, cited in Birner & Ward, 1998, p. 15).

Hearer-old, discourse-old: Information which has been previously evoked in the current discourse, and which the speaker therefore believes is known to the hearer	Hearer-old, discourse-new: Information which has not been evoked in the current discourse, but which the speaker nonetheless believes is known to the hearer
Hearer-new, discourse-old: Theoretically, information which has been evoked in the current discourse, but which the speaker nonetheless believes is not known to the hearer	Hearer-new, discourse-new: Information which has not been evoked in the current discourse, and which the speaker does not believe to be known by the hearer

Figure 3.1 – Possible Information Statuses
(Birner & Ward, 1998, p. 15)

3.3.2 Theory of Discourse Modes

Smith (2003) recognizes five major discourse modes: narrative, description, information, argument, and report. The way in which she characterizes each mode is according to primary situation entity, temporality, and progression. The report mode, which is rarely found in discourse contexts other than news reporting, will not be discussed further due to lack of cross-linguistic natural language data.

The three situation entities she recognizes are abstract entities such as facts and

propositions, general statives, and situations consisting of events and states (Smith, 2003, p. 32). Situation entities in the narrative mode are primarily specific events and states. The same situation entities in addition to ongoing events and states are the primary situation entities of the description mode. The information mode expresses general statives primarily, and also expresses facts and propositions. Facts, propositions and general statives are the primary situation entities in the argument mode.

The progression of each mode is characterized in a different way. In the narrative mode, the discourse sequence progresses based on time because narrative events are dynamic and bounded in time. Unbounded events and states in the description mode progresses based on space because they are located statically in space. Progression in the information and argument modes is metaphorical, because the domain of progression is neither temporal nor spatial. The information mode progresses through a semantic domain, and the argument mode progresses through a line of reasoning.

A discourse mode may be characterized as either temporal or atemporal. According to Smith, discourse modes that feature generalized situation entities, namely the information and argument modes, are atemporal because the states of affairs expressed in these modes are not located in time and space. Furthermore, the progression of these modes is metaphorical rather than sequenced. The narrative and description modes are temporal because the states of affairs expressed in these modes are sequenced and located in time and space.

Procedural discourse does not fully conform to any of the five major discourse modes that Smith discusses. Some elements are characteristic of the narrative mode, and others are characteristic of the information mode. Therefore, the procedural mode can be considered a subtype of the narrative and information modes, depending on which its characteristics resemble most for any given procedural text. The primary situation entities expressed in procedural discourse are generic events. These are gen-

eralized yet dynamic situations that resemble both general statives and events. Procedural situations are similar to general statives that can be frequent in the information and argument modes in that they are generalized states of affairs and often habitual. However, they are crucially different in that they are sequenced. Events, which are prominent situation entities in the narrative, description, and report modes, are also sequenced. However, events in these modes are typically bounded in time, whereas generic events may be unbounded and generalized. Generic events are uniquely characteristic of the procedural mode in terms of primary situation entity. They are similar to elements of the primary situation entities in both the narrative and information modes. Generic events in procedural discourse are sequential relative to each other more so than SoAs sequenced relative to time, space, semantic domain, or line of reasoning. Although procedural discourse advances in its own distinct way, it may be most similar to narrative advancement since both involve sequential progression and events. The procedural mode would be considered atemporal under Smith's reasoning that modes with generalized primary situation entities are atemporal. However, since the progression of the procedural mode is sequenced rather than metaphorical, there is arguably some sense of temporality associated with this mode. Although generic events in the procedural mode do not progress through time, the occurrence of any event necessarily takes time. The order of generic events constitutes a timeline relative to the procedure in which they occur. Thus, procedural sequence can be considered a generalized ordinal sequence.

Chapter 4

Analysis

This chapter presents a functional-typological analysis of the discourse functions of complement clauses in texts from 12 structurally and geographically diverse languages. Excerpts from the texts are provided in the following sections to exemplify the discourse function categories. The line numbering of these examples reflects the original source. Complement clause constructions appear in bold in the original language, except for direct speech complements which appear within quotations.

Complement clauses were collected from a variety of text types and were analyzed based on their semantic type of CTP. CTP types are based on Noonan's (1985/2007) classification, which is adopted by Cristofaro (2003). A wide range of semantic categories was chosen so that broader categories could be established with consideration to discourse functions rather than semantic features alone. Five major discourse functions of complement clauses were identified: 'secondary discourse sequence', 'progression of main discourse sequence', 'elaboration', 'abstract', and 'climax'. An important distinction is required between two opposite types of elaboration: 'repetition' and 'foreshadowing'. First, the distribution of the data will be outlined in Section 4.1. Then, each function will be defined, exemplified, and discussed in terms of semantic CTP categories in Sections 4.2-4.6.

4.1   Distributions

A total of 436 tokens were collected. This is reflected in Tables 4.1 and 4.2, but not in Tables 4.3 and 4.4 because there is not always a one-to-one correspondence between a complement and a particular function. A single complement clause may function in more than one way in the discourse. For example, complements serving the abstract or climax function may also progress the main discourse sequence.

Table 4.1 shows the number of complement clauses that were collected in each language according to the semantic type of their CTP. Three or more complements were found for each of the semantic CTP categories discussed in Section 2.2.2 with the exception of fearing, negative, and conjunctive CTPs, which did not occur in the texts analyzed. Two different types of CTP were found in Wardaman, and five or more different types of CTP were found in the other languages. Complements of phasal and utterance CTPs were found in every language, and the other types of CTP were found in three or more languages.

Table 4.2 shows the number of tokens according to the syntactic realization of the complement relation for each semantic type of CTP. Three syntactic structural types are distinguished based on whether the complement predicate and CTP are syntactically realized as separate clauses, the CTP is realized as an auxiliary form, or the complement predicate and CTP occur in a monoclausal construction. Utterance complement relations were considered to be monoclausal when there was no overt expression of a CTP, but direct speech was indicated by quotations marks and/or the overt expression of an utterance CTP in the translation. Manipulative-causative complement relations that have a monoclausal syntactic relation often involve the expression of a caused event with a causative morpheme, and are common in the Alaaba and Kolyma Yukaghir texts. This type of relation is realized as a monoclausal structure more frequently than the other semantic types of complement relations. Complement relations that are most frequently expressed using auxiliary or monoclausal structural

types are the modal, phasal, and manipulative-causative semantic categories. This corresponds to their position at the top of Cristofaro's semantic integration hierarchy from Table 2.1 on page 46.

Tables 4.3 and 4.4 show the number of tokens according to their corresponding function in the text. Table 4.3 is organized by the semantic category of the CTP. The secondary discourse sequence function is associated with only two CTP categories, utterance and manipulative-request, and has the highest number of tokens. Complements of utterance and manipulative-request CTP were not associated with any other function. Complements of commentative CTPs were also associated with only one function, the climax. The progression and abstract functions were identified for a wide range of CTP types. This is also true for the repetition type of elaboration, however, not the foreshadowing type of elaboration. Only complements of desiderative CTPs and purpose clauses were found for the foreshadowing function.

Table 4.4 is organized by the structural type of the complement relation. Complements functioning to identify the climax or a climactic point in a text and their CTPs were always realized as separate clauses. The monoclausal structures associated with the secondary discourse sequence function are the aforementioned instances of direct speech that do not occur with any overt expression of a CTP. The progression, elaboration, and abstract functions were identified for complements that occur with their CTPs in all three structural types. The separate clause type tends to be the most common, monoclausal the second most common, and the auxiliary structure seems to be the least favored of the syntactic realization types. The structural types of complement relations associated with the progression function is the most evenly distributed. Those associated with the elaboration function seem fairly evenly distributed for the repetition subtype, however, the foreshadowing subtype has a strong tendency to be associated with complement relations expressed by separate clauses. Two complements that have foreshadowing function occur with CTPs realized as an

Table 4.1 – Tokens per CTP category by language

	Supyire	Alaaba	Kolyma Yukaghir	Chantyal	Maonan	Nguma	Korowai	Wardaman	Arapaho	Itzaj Maya	Hualapai	Mapuche	Total
Modal	9	12				7				2			33
Phasal	4	1	1	4	8	3	4	2	4	1	1	2	35
Causative	3	24	16	2	4	7					2		58
Request	3	2			1		3						9
Desiderative	1	1	2	1	3	4	1		3	3			19
Purpose	5	6	1	2					1	1	2		18
Perception			3	3	3	1	1				3	2	16
Achievement		1		1	3								5
Pretence			1			1						1	3
Comment	1	1							3			4	9
Knowledge		1	1		2				2	5		3	14
Prop Attitude	7	3			3	1					1	1	16
Utterance	1	23	17	19	24	7	76	27	2	1	2	2	201
Total	34	75	42	32	51	31	85	29	15	16	11	15	436

Table 4.2 – Tokens per CTP category by structure

	Separate Clause	Auxiliary	Monoclausal	Total
Modal	5	25	3	33
Phasal	7	17	11	35
Causative	9	10	39	58
Request	9			9
Desiderative	15	2	2	19
Purpose	17		1	18
Perception	16			16
Achievement	5			5
Pretence	3			3
Comment	9			9
Knowledge	14			14
Prop Attitude	16			16
Utterance	187		14	201
Total	312	54	70	436

Table 4.3 – Tokens per discourse function by CTP category

	Modal	Phasal	Manipulative-Causative	Manipulative-Request	Desiderative	Purpose	Perception	Achievement	Pretence	Commentative	Knowledge	Propositional Attitude	Utterance	Total
Secondary				9									201	210
Progression	23	18	52				13	5			3	14		128
Elaboration (Repetition) (Foreshadow)	10 (10)	15 (15)	20 (20)		19 (2) (17)	14 (2) (12)	2 (2)				8 (8)	2 (2)		90
Abstract	5	4	2		1	4		1			1	1		19
Climax						3	6		3	9	4	2		27
Total	38	37	74	9	19	21	21	5	3	9	15	19	201	

Table 4.4 – Tokens per discourse function by structure

	Separate Clause	Auxiliary	Monoclausal	Total
Secondary	196		14	210
Progression	51	33	44	128
Elaboration (Repetition) (Foreshadow)	49 (23) (26)	18 (16) (2)	23 (22) (1)	90
Abstract	10	6	3	19
Climax	27			27
Total	334	57	84	
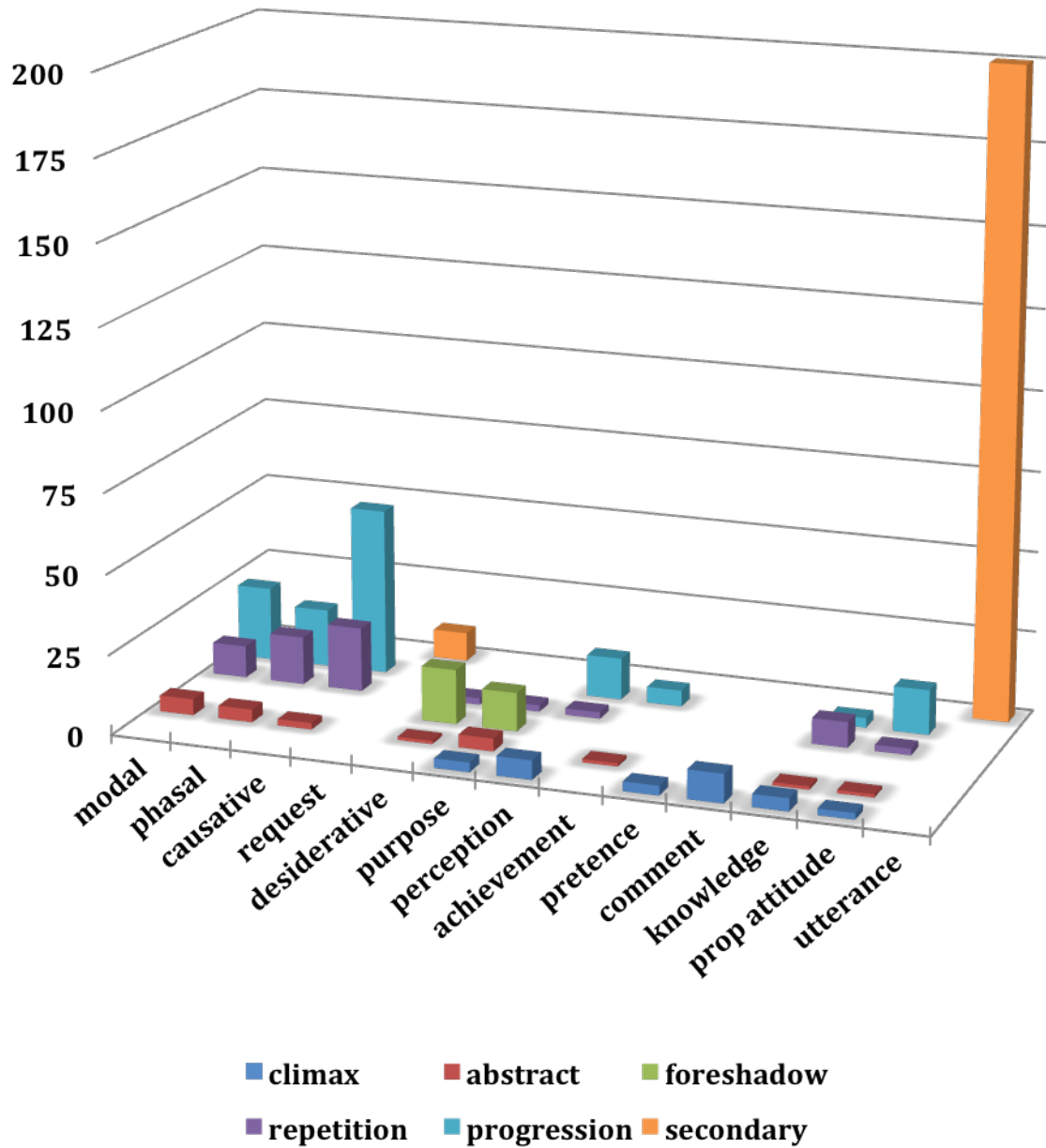
Figure 4.1 – Distribution of complement clause functions across CTP types

auxiliary form and one occurs in a monoclausal structure with its CTP, while 26 complements occur with CTPs that are separate clauses.

The frequency distribution of the five major discourse functions across CTP categories is graphically represented in Figure 4.1 on the previous page, with the elaboration function separated into the repetition and foreshadowing types.

4.2   Secondary Discourse Sequence

A secondary discourse sequence should be distinguished from the main sequence because situations expressed in the speech or thought of actors in a text have a sequential progression that is independent of the rest of the discourse. The secondary sequence of discourse arises from communication between or thoughts of actors. In other words, it is characterized by the transfer of information and information situated in a mental space. Complements that function as part of the secondary discourse sequence occur with utterance CTPs like 'say' and manipulative CTPs that express a request like 'ask' and 'order'. Manipulative-request CTPs that serve the secondary discourse sequence function are similar to utterance CTPs in that they describe a transfer of information from agent to addressee, where the agent is an actor in the discourse. Like indirect utterance CTPs, they report an adaptation of the actor's viewpoint rather than an actual utterance. However, they differ from utterance CTPs in that they also express the semantic feature of attempted causation. The SoA expressed by a manipulative-request CTP is an act of manipulation such that a causer attempts to bring about the realization of the SoA expressed by the complement.

Table 4.5 shows that the secondary discourse sequence was signaled by all complements of utterance and manipulative-request CTPs found in the texts. There were 201 complement clauses of utterance CTPs and only 9 of manipulative-request CTPs. The tendency for speech complements to function as part of the secondary discourse sequence more frequently than complements of manipulative-request CTPs can be attributed to the tendency for narratives to convey dynamic communicative interac-

tions between actors. In other words, narrative texts across languages seem to express conversation between actors by attributing speech acts to each actor in a turn-taking style.

<div align="center">

Table 4.5 – Secondary Discourse Sequence Function

</div>

CTP Type	Function Total	CTP Type Total	% CTP Type	% Function
Utterance	201	201	100	95.7
Request	9	9	100	4.3
	210	210	100	

Reported speech is more likely to be used to convey such two-way communicative interactions because it expresses information that is being transferred. This is illustrated by example 83 in which two actors engage in an argument that is expressed by direct speech complement. There does not seem to be as strong of a tendency for narratives to convey communication between multiple actors in a more one-sided way, as in example 86 on page 67. In this example, a manipulative-request complement relation is used to express a request that one actor, the agent, communicates to another actor, the affectee. This expresses attempted causation rather than the transfer of information. The following discourse context expresses successful manipulation and does not develop the communicative interaction further.

Example 83 shows a portion of the secondary discourse sequence in a Wardaman personal narrative that is characterized by the argument mode. Direct speech complements in this example all serve the secondary discourse sequence function. They occur in lines 357, 358, and 360 and are indicated by quotations.

(83)   Wardaman: Elsie Raymond Talking of Her Girlhood (Merlan, 1994)

356.   0-yana-rri   nganu   yawarlmiyn
       3SG-say-PST   1SG-DAT   [name]

       'Yawarlmiyn said to me'.

357.   "mawuya-warang   yi-wo-ndi: mawuya-warang   yi-wo-ndi:"
       poison-having-ABS   2SG-give-PST   poison-having-ABS   2SG-give-PST

<div align="center">

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</div>

"'you gave him food with poison in it, you gave him food with poison in it'".

358. "boisinim   yi-yana-rri".
     [poison]   2SG-AUX-PST

     "'you poisoned him'".

359. 0-yana-rri   nganu.
     3SG-say-PST   1SG-DAT

     'she said to me'.

360. ngayugu   nga-yana-rri   "wongo   boisinim   nga-wo-ndi".
     1SG-ABS   1SG-say-PST   not   [poison]   1SG-give-PST

     'and I said, "I didn't poison him"'.

In example 83, the transfer of information occurs between actor 1, coded as first person singular, and actor 2, *Yawarlmiyn*. The secondary discourse mode in this example progresses through a line of reasoning since the actors are arguing contradictory views. Therefore, the speech complements are in the argument mode. In fact, most SoAs in the secondary discourse sequence in the texts examined are in the argument mode or sometimes the information mode.

By contrast, the main discourse sequence is characterized by the primary situations of a text that follow the type of progression of the main discourse mode of that text. Situation in the main discourse sequence are those which actors participate in rather than talk or think about. Whereas reported speech and thought are expressed from the viewpoint of some actor, situations in the main discourse sequence are from the viewpoint of the speaker. For example, the utterance predicates in lines 359 and 360 in example 83, 'said' *-yana-rri*, express situations in the main discourse sequence because they are events reported by the speaker. They occur in the narrative mode; they are dynamic events that progress based on a temporal sequence.

Complements that express the interior speech of a single actor can be considered part of the secondary discourse sequence because they describe the cognitive process

of connecting ideas along a line of reasoning. This is similar to SoAs referred to by speech complements which describe a communicative act used to convey ideas. In line 15 of example 84, the CTP nai^6 'think' takes the indirect utterance complement in lines 15-16. The complement SoA describes the mental line of reasoning of actor 1, third person singular $man2$ 'he', which follows from the preceding context.

(84) Maonan: Rubbing Lips with Ham (Lu, 2008)

13. ju^4 kam^3 sə:ŋ^3 ʔna:k^7 kʰje^1 wo^3 ja:n^1 ^{n}da:u^1
   moreover not want give other.person know house 1PL:INCL
   hɔ^3.
   PCL.

   'But they just didn't want the others to know what had happened to the family'.

14. kja:u^1 na:i^6 ne^5 ɦu^4 pje^1 li:u^4 li:u^5 kam^3 mɛ^2 ʔdat^8
   time/round this PCL rice sell ASP:PFC PCL not have CL
   na^4.
   eat.

   'Well, the rice had been sold out by now. And they had nothing to eat'.

15. kam^3 ʔdai^4 na^4 kʰa:u^3 li:u^5 man^2 tsi^1 nai^6 **la^5 kon^5**
   not obtain eat wine PCL 3SG then think PCL before
   ^{n}da:u^1 ʔda:i^2 ṇa:u^6,
   1PL:INCL good be.at,

   'Now there was no wine, either. He then thought "We were well off before'.

16. **ʔdai^4 na^4 na:n^4. na:i^6 ^{n}da:u^1 kɔ^3 vɛ^4 ʔdat^8 kja^3**
   obtain eat meat. this 1PL:INCL FOC make CL fake
   na:k^7 kʰje^1.
   give other.person.

   'We could eat meat. Now let's make something fake to cheat other people"'.

The information in lines 13-14 describe a complication for the speaker of the interior speech complement. This is referred to by the complement SoA, which prompts the

particular line of reasoning that he thinks through, i.e. the argument mode.

The indirect speech complement in lines 46 and 47 of example 85 reports a transfer of information from actor 1, expressed by the verbal pronoun marker *eu* 'they', and an unexpressed addressee. This is a procedural text that describes a ritual of the Nguna society using generalized events, therefore the SoA refers to a generalized speech act rather than an actual utterance.

(85)   Nguna: Installation of a Chief (Schütz, 1969b)

    46.   go   ragi   waina   eu   naga   **eu**   **ga**   **viragi**.
          and   time   that   they   say   they   int.   bring
          'Then they say they'll bring'.

    47.   **na-wota**   **paki**   **tooko**   **aneana**,   eu   poo.
          chief   to   seat   his   they   comp.
          'the chief to his seat'.

    48.   mari   **sokisoki**   **sua**   **tooko**   **aneana**.
          make   prepare   comp.   seat   his
          'They have already prepared his seat'.

In example 86, lines 55 and 56 constitute the complement of the manipulative-request CTP *pyi* 'tell' in line 54. The SoA *bwɔ́n* 'hit' is used with the subjunctive in line 56 and has unrealized event modality.

(86)   Supyire: The Farmer and the Bush People (Carlson, 1994)

    54.   Kà   nɔ̀gɔ̀-lyè-ŋì   sì   u   pyì-i-bìì   pyi
          DS   person-be.old-DEF.G1S   NARR   G1S   child-G1P-DEF.G1P   tell
          'So the old man told his children'.

    55.   **na**   **pi**   **Ø**   **fwora**   **a**   **u**   **tɛgɛ**.
          that   G1P   SUBJUNC   go.out   SSC   G1S   help
          'that they should come out and help him'.

    56.   **pi**   **Ø**   **lùpà-àn-re**   **bwɔ̀n**.
          G1P   SUBJUNC   mosquito-G4-DEF.G4   hit
          'hit the mosquitos'.

57. Kà pi   ì   fwóra a   nà-ŋi   lùpà-àn-re
    DS G1P NARR go.out SC man-DEF.G1S   mosquito-G4-DEF.G4
    bwɔ́n
    hit

    'So they came out and hit the man's mosquitos'.

58. fó   mà sà ù   bò.
    till SS go G1S kill

    'till they killed him'.

The same SoA is used again in line 57, but has realized event modality. In this line, *bwɔ́n* 'hit' occurs in an independent clause that functions as part of the main discourse sequence. The realization of the event was anticipated by the request SoA referred to by the complement of the manipulative-request CTP, which indicates that SoAs in the secondary discourse sequence can convey an attempt to bring something about or problem solve through the communication of ideas.

Sometimes, the secondary discourse sequence may contain the climax of the story. Although this strategy is usually used to express SoAs of less importance than those in the primary discourse sequence, it may also be used to express SoAs of the most importance in the primary discourse sequence. Complements that function to signal the secondary discourse sequence may have other types of additional functions that may be more or less crucial to the main thread of the discourse. For example, line 48 of "Hyena and Lion" in example 87[1] contains a direct speech complement that contains the climax of the folktale.

(87) Alaaba: Hyena and Lion (Schneider-Blum, 2007)

46. Dúuk'-y(i)   keʔ-yóocc(i),   [ʔís(i)
    take.into.mouth-CV1 get.up-3SG:M:PERF.ABL   PRON3SG:M:NOM
    godab-á-s(i)   ʔáag-y(i)]
    stomach-TN:M:ABS-PC:3SG:M   enter-CV1
    godab-i-si   ʔaaz-éen(i)   **hill-éet(a)**
    stomach-TN:M:GEN-PC:3SG:M   inside-TN:M:LOC   intestines-TN:F:ABS

---

[1]Brackets in line 46 indicate changes requested by Alaaba speaker: change from *ʔís(i) ʔáagg(i) godabás(i)* (in recorded text) to [*ʔís(i) godab-á-s(i) ʔáag-y(i)*]; omit [*ka*].

[ka]	ʔaf-yo	milaac'-íin(i)
DEM1:ABS	seize-3SG:M:PERF.REL	razor.blade-TN:M:INTR
mur-ú	ʔáf-y(o).	
cut-VN:ABS	seize-3SG:M:PERF	

'After he (the lion) had eaten him, he (the rat) entered his stomach and while in his stomach he took the blade, which he had taken, to slit the intestines'.

47.

"Yimáan(i)	Yím(i),	ʔám-y(i)	fúl-(i)!"	y-ée..
Ratty	Rat.NOM	come.CV1	leave-IMP:SG	say-3SG:M:PERF

"'Ratty Rat, come out!" he said'.

48.

"[ʔÁn(i)]	**ful-ó-t(a)**	ʔaag-yóom(i)-baʔ(a)
PRON1SG:NOM	leave-INT1-CL:F:ABS	enter-1SG:PERF-NEG
fufurs-o-táa-t(i)		beelú"
disturb-INT1-CL:F:ABS.LV-CL:F:NOM		CONTR
y-ée-s(i).		
say-3SG:M:PERF-PC3SG:M		

"'I didn't enter to leave, but for disturbing (i.e. euphemism for 'killing') you," he answered him'.

49. Y-éen(o).
say-3POL:IMPERF

'So they say'.

However, the speech complement itself does not identify the climax; that function is served by the complements of the CTP within the speech complement.

Further examples of this discourse function is demonstrated in line 19 of example 93 on page 80, lines 43-45 of 94 on page 81, line 8 of example 99 on page 88, line 66 of example 96 on page 84.

4.3   Progression of Main Discourse Sequence

A complement functions to progress the main discourse sequence of a text when it moves the sequence forward by describing an SoA that follows sequentially from the previous SoA in the main line of discourse. Usually the SoA invokes information that is entirely new to the discourse and is expressed by a predicate that has not been

used in the prior discourse context. Most complements serving this function in the text sample express SoAs that resemble the primary situation entity for the discourse mode of the section in which they occur. For example, the primary situation entities in the narrative mode are dynamic, bounded events, and in the information mode they are general statives (see section 3.3.2 for further discussion).

Table 4.6 shows that complements of manipulative-causative CTPs have this discourse function more frequently than complements of any other semantic CTP type based on the text sample. About 70 percent of all complements of manipulative-causative CTPs examined in the texts function to progress the main discourse sequence, and these complements constitute about 40 percent of all complements that serve this function. The 52 complements of manipulative-causative CTPs that progress the main discourse sequence were found to mainly express SoAs with realized event modality, and only occasionally unrealized event modality. They occur in sections of the texts characterized by the information, procedural, narrative, and description modes of discourse. This is a wider range of discourse modes than complements of the other semantic CTP types listed in Table 4.6. Complements of modal, propositional attitude, and knowledge CTPs tend to have this function in the information and argument modes, while complements of phasal, perception, and achievement CTPs were found to serve this function mainly in the narrative mode and occasionally in the description mode. The stronger attraction between complements of manipulative-causative CTPs and the main progression function can be explained by the semantics of the manipulative-causative relation. The notion of causation entails a causing event and a caused event. A manipulative-causative relation between such cause and effect situations may vary in terms of their semantic integration and does not necessarily entail successful causation. However, the order of cause and effect is necessitated by this semantic type of complement relation. The sequential order of multiple events is not entailed in this way for any other semantic type of complement relation.

Table 4.6 – Progression of Main Sequence Function

CTP Type	Function Total	CTP Type Total	% CTP Type	% Function
Prop Attitude	14	19	73.7	10.9
Knowledge	3	15	20	2.3
Achievement	5	5	100	3.9
Perception	13	21	61.9	10.2
Causative	52	74	70.3	40.6
Phasal	18	37	48.6	14.1
Modal	23	38	60.5	18
	128	209	61.2	

Complements of manipulative-causative CTPs function to progress the main discourse sequence more frequently compared to other CTP semantic types in the sample. An example of a realized complement SoA of a manipulative-causative CTP in the procedural mode occurs in line 48 of the Nguna procedural text shown in example 85 on page 67. The predicate *sokisoki* 'prepare' is the complement of the manipulative-causative CTP *mari* 'make'. In this case, the predicates seem to be expressed by separate clauses. In languages like Alaaba and Kolyma Yukaghir, the manipulative-causative relation is coded by a causative form on a verb that semantically expresses causation like a manipulative-causative CTP but morphosyntactically is not a separate clause. An example of this is the clause *anil kiel'e-š-u-t jukule* 'drying fish' in line 102 of example 88.

(88)   Kolyma Yukaghir: The Yukaghirs (Maslova, 2001)

101.   tāt   promušl'aj-l$_t$aŋ-pe   promušl'aj-din
       ANPH:ADV   hunt-ANR+DST:AT-PL   hunt-SUP
       kewe-j-nu-l'el-ŋi,   numö   jekl'ie-n
       depart-PFV-IPFV-INFR-PL:SN(3)   home   behind-PROL
       kel-u-nu-l'el-ŋi.
       come-0-IPFV-INFR-PL-SN(3)

       'Then the hunters would go to the forest to hunt'.

102.   īle-pul   numö-ge   pon'ō-l-ben-pe   tiŋ   anil
       some-PL   [home-LOC   remain-ANR-PRNM-PL]   PRXM:AT   fish

kiel'e-š-u-t jukule, kerile ā-de,
dry-CAUS-0-SS:IPFV jukola fish.meal make-SS:MULT
kiel'e-d'ie-de, n'ēr īde-de modo-t
dry-MULT-SS:MULT clothing sew-SS:MULT sit-SS:IPFV
me=suita-n'e-ŋi numö-ge modo-t.
AFF=fuss-COM-PL:SN(3) [home-LOC sit-SS:IPFV

'Others remained at home, drying fish, making fish meal, sewing, or making other things'.

This example shows part of an informational narrative text from Kolyma Yukaghir in the description mode. The predicate *kiel'e-* 'dry' occurs twice in line 102. It is first expressed using the construction *-š-*, which has a causative meaning. Although it does not exactly reflect the English translation, the SoA referred to by the predicate can be understood as 'caused to dry'. This meaning can be understood based on the fact that the same predicate can occur without *-š-*, as it does the second time it is used in line 102. Although the manipulative-causative complement relation in line 102 is translated as a single clause in English, the original language semantically expresses both a causing event and caused event in the clause *anil kiel'e-š-u-t jukule*.

Another example of a monoclausal structure that progresses the main discourse sequence can be seen in line 110 of example 92 on page 78 from the same Kolyma Yukaghir text. The predicate *qoho-* 'shoot' in this line occurs in a single clause with the causative marker *-tā-*; this clause semantically expresses a manipulative-causative complement relation. *Qoho-t(ā)-* also occurs subsequently in line 111, but this manipulative-causative relation does not seem to indicate progression of the discourse sequence. Instead it elaborates on previously mentioned SoAs in the main discourse sequence. The difference in function of *qoho-t(ā)-* between lines 110 and 111 seems to be because a main SoA is referred to by the predicate in line 110 and a dependent SoA is referred to by the predicate in 111. Line 111 expresses the predicate as a complement clause of a pretence CTP, *ta-bun užžō qoho-t-u-l*, which functions to elaborate previously mentioned SoAs in the main discourse sequence. This shows that

complements expressing a manipulative-causative relation may not have a function independent of their CTP, at least when the relation is expressed monoclausally.

Example 89 shows several lines within an argument section of an Itzaj Maya informational narrative. Lines 14 and 17 contain complements functioning to progress through a line of reasoning.

(89) Itzaj Maya: The Town Fiesta (Hofling, 1991)

14. [yok',] yok' ki-wil-ik
    [SUB] SUB 1PL-see-PPM
    'in order for us to see'

15. **wa patal-[kii-...]-ki-mol-ik ta'=k'in.**
    COND ABIL-[1PL-]-1PL-collect-PPM money
    'if we can collect money'.

16. I   tulakal a'-ta'=k'in he'-lo' b'el u-ka'a ti,
    and all   DET-money OST-DIST go 3-go SUB
    'And all of that money is going to'

17. **k'ab'eet-tal to'on**
    need-INCHOAT 1PLL.OPR
    'to be needed by us'

18. ti'ih a'-ki'mak-'ol-al k-u-tal,
    SUB DET-happy-spirit-POS INC-3-come
    'for the fiesta that comes'

19. t-u-mes-i(l) maarso.
    in-3PPR-month-POS March
    'in the month of March'.

In line 14, there is a non-asserted knowledge CTP *-wil-* 'see' that takes the complement clause constituted by line 15. This complement expresses a SoA that refers to acquiring knowledge of whether money is able to be collected by the agent, *-ki-* 'we'. This clause itself is a monoclausal structure that semantically expresses a modal complement relation. The predicate *-mol-* 'collect' is the semantic complement of the

modal *patal-*, which refers to the ability of the agent. This further facilitates the advancement of the argument mode. Line 17 constitutes the complement clause of the modal CTP *b'el u-ka'a* 'going to' in line 16, which expresses information as a generalized future event that logically follows the prior discourse sequence.

In two expository texts in the sample, complements frequently function to progress the main sequence of discourse. One is an informational text in Alaaba and the other is an argumentative text in Supyire. The Supyire argumentative text "The Cause of Discord Between Children and Parents " is the only one in the sample that predominantly features the argument discourse mode. The argument mode is characterized by a primary situation entity of mostly propositions that advance through a line of reasoning. In this Supyire text, complements of modal CTPs often function to progress the main discourse sequence. This is exemplified in line 12, 16 and 17 of example 90.

(90)   Supyire: The Cause of Discord Between Children and Parents (Carlson, 1994)

12.   Mu   sí   ɲ̀-jà   **ǹ-tìn**   **ù**   **è**   **mɛ́**.
       you   FUT   FP-be.able   FP-be.satiated   G1S   in   NEG
       'You can't be satiated with it'.

13.   ɛ,   Mu   ná   wà   kà   wwɔ̀   ù   nà,
       [unglossed]   you   and   IND.G1S   COND   unite   G1S   on
       'If you and someone get together for it',

14.   ná   yìi   ɲya   a   sùpyigi-ré   le   yì-yè   shwɔ̀hɔle
       if   you.PL   NEG   PERF   love-DEF.G4   put   you.PL-REFL   between
       e,
       in
       'if you don't put love between you',

15.   ma-rí-i   yì-yè   **kàànmùcà**-à   mɛ́,
       SS-SEQ-PROG   you.PL-REFL   check-IMPFV   NEG
       'and keep checking on each other',

16.   wajíbé   u   ɲya   ú   wî   **yìi**   **sí**   **m̀-pà**
       necessity   G1S   be   G1S.COMP   it.is.G1S   you.PL   FUT   FP-come
       láhá   **yì-yè**   **nà**
       let.go   you.PL-REFL   on

'it's a sure thing you will eventually separate from each other'

17. E: Yìì   gú   **ǹ-dáhá**   **yì-yè**   **nà**.
     [unglossed] you.PL POT FP-let.go you.PL-REFL on
     'You would separate from each other'.

18. K: nàfùù-ŋi   kùrùgò.
     [unglossed] wealth-DEFG1S because.of
     'because of wealth'.

The auxiliary modal CTPs *sí ǹ-jà* 'can't be' and *gú* 'would' in lines 12 and 17, respectively, take complements that describe situations that are expressed to explain the speaker's reasoning through the expression of generalized, nonspecific events. In line 17, the complement predicate *ǹ-dáhá* 'will separate' is a repetition of the predicate *sí m̀-pà láhá* 'will eventually separate' in line 16, which is also expressed used in complement clause of a modal CTP. However, the modal CTP in line 16 is expressed as a separate clause.

The Alaaba informational text "Islam" predominately features the information mode and contains many sections characterized by the procedural mode as a subtype of the information mode[2]. Generalized, nonspecific events function along the main discourse sequence in the argument mode. This text frequently expresses those using complements of auxiliary modal CTPs to progress the main discourse sequence. This is exemplified in lines 7, 8, and 9 of example 91.

(91)   Alaaba: Islam (Schneider-Blum, 2007)

7.   ʔIslaam-á   ʔih-yo   mánc(u)   **leho**
     Islam-TN:M:ABS become-3SG:M:PERF.REL person.SI:M:NOM six
     ʔimaan-íin(i)   **ʔamáʔn-(u)**   yóo-s(i).
     faith-TN:M:INSTR believe-VN:NOM be.3SG/3PL:PERF-PC3SG:M
     'A man, who is a Muslim, has to believe in six articles of faith'.

8.   Woʔnée-h(u),   **mét'o Magan-íin(i)**   **ʔamáʔn-(u)**
     first-CL:M:NOM only   God-SG:M:INSTR believe-VN:NOM

---

[2]Rather than the procedural mode as a subtype of the narrative mode.

yóo-s(i).
be.3SG/3PL:PERF-PC3SG:M

'First, he has to believe in one (lit. the only) God'.

9. Lamik'íi-h(u),   Magan-íih(a)   mala?ík-kat(i)
   second.LV-CL:M:NOM God-SG:M:DAT angel-PL:NOM
   yoo-sí-g(a)   **?amá?n-u-haan(i)**.
   be.3SG/3PL:PERF-PC3SG:M-SIM believe-VN:ABS-CL:M:LOC

   'The second one is to believe likewise in God's angels'.

10. Sakk'íi-h(u),   kitaab-éen(i)-ka-s(i)
    third.LV-CL:M:NOM book-TN:M:LOC-CL:M:ABS-PC3SG:M
    ?amá?n-u-haan(i).
    believe-VN:ABS-CL:M:LOC

    'Thirdly, one must believe in the (holy) books'.

11. Shoolik'íi-h(u),   gu?ma nabiyy-aakáan(i)
    fourth.LV-CL:M:NOM all   prophet-PL:L/I
    ?amá?n-u-haan(i).
    believe-VN:ABS-CL:M:LOC

    'Fourth, one must believe in all prophets'.

12. ?Ontik'íi-h(u),   k'e?aam-a   bar-éen(i)
    fifth.LV-CL:M:NOM resurrection-TN:F:GEN day-TN:M:LOC
    ?amá?n-u-haan(i).
    believe-VN:ABS-CL:M:LOC

    'Fifth, one must believe in the day of resurrection'.

13. Leik'íi-h(u),   **t'um-u**   **riccúu,**   **hiil-u**
    sixth.LV-CL:M:NOM good-M:NOM thing.SI:M:NOM.LV bad-M:NOM
    ricc-úu,   **Magan-i**   **?add-íiccii-t(i)**
    thing.SI:M:NOM.LV God-SG:M:GEN direction-TN:M:ABL.LV-CL:F:NOM
    y-éen(i),   ?amá?n-u-haan(i).
    say-VN:INSTR believe-VN:ABS-CL:M:LOC

    'Sixth, to believe in saying that good as well as bad things are sent by (are from) God'.

Yóo-s(i) 'be' is an auxiliary construction that expressed a main SoA, which refers to the requirement, duty, or obligation of a dependent SoA to occur. It is used as a modal CTP in lines 7, 8, and 9 in the information mode which are all expressed by

the predicate *ʔamáʔn-* 'believe'. They function to progress the discourse through a semantic domain, namely Islamic beliefs. *ʔAmáʔn-* 'believe' expresses a main SoA in line 13 and functions as a propositional attitude CTP. Its complement also functions to progress the main discourse sequence by describing the sixth Islamic belief.

For complements of phasal CTPs that progress the main discourse sequence, the CTP tends to profile the inception or continuation of an event rather than the completion or habituation of an event. One example is in line 15 of example 90 on page 74, in which the complement relation takes the form of a monoclausal structure.

4.4 Elaboration

Complements that elaborate part of the main discourse sequence are part of the background of the text. They can provide background or additional detail for another entity with a foregrounded role in the main sequential progression of the text. This is a subtype of elaboration that can be considered repetition. Most instances of repetition involve the expression of an SoA using a predicate that has been used in the prior discourse sequence. They look back at the sequence rather than move it forward. They may express an aspectual type of predicate that is not prototypical of the discourse mode of the section it belongs to, or it may occur in the same discourse mode as the dominant discourse mode of the section.

The other subtype of elaboration is foreshadowing. Complements serving this function express SoAs that are new to the discourse and refer to something in the subsequent discourse sequence. Specifically, the SoA may refer to the intention or desire for a particular course of events, and thus either the realization or contradiction of that SoA. The complement SoA almost always has unrealized event modality, which indicates that a course of events may be expected but has not occurred at that moment in the text. They look forward at the discourse without moving it forward. This mainly occurs in the narrative mode.

Table 4.7 – Elaboration-Repetition Function

CTP Type	Function Total	CTP Type Total	% CTP Type	% Function
Prop Attitude	2	19	10.5	3.3
Knowledge	8	15	53.3	13.1
Perception	2	21	9.5	3.3
Purpose	2	21	9.5	3.3
Desiderative	2	19	10.5	3.3
Causative	20	74	27	32.8
Phasal	15	37	40.5	24.6
Modal	10	38	26.3	16.4
	61	244	25	

4.4.1 Repetition

Elaboration of the preceding discourse context through repetition is a function of a wide range of CTP types, as shown by Table 4.7. Complements of manipulative-causative and phasal CTPs seem to have the strongest correlation with this function, while complements of modal and knowledge CTPs were found to serve this function less commonly in the texts examined. Repetition occurred even less commonly with complements of propositional attitude, perception, and desiderative CTPs, and purpose clauses. This range of semantic complement relations seems show significant overlap with the main discourse progression function.

A complement SoA that elaborates a preceding SoA without moving sequential progression forward is exemplified in line 111 of example 92.

(92)   Kolyma Yukaghir: The Yukaghirs (Maslova, 2001)

110.   d'e   tāt   **užžō-le**   **qoho**-tā-nu-l'el-ŋā.
DP   ANPH:ADV   gun-INST   shoot-CAUS-IPFV-INFR-PL:TR(3)

'They began to shoot'.

111.   ta-bun   medī-de   uör-pe   qarbas   johul-ge   modo-t
DST-NR   hear-SS:MULT   child-PL   karbass   throat-LOC   sit-SS:IPFV
šojl-e   titte   quarbas   jömdit'e   tol't'ī-nunnu-l'el-ŋi-le,
stone-INST   3PL   karbass   front.part   knock-HAB-INFR-PL-OF.3

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> "**ta-bun užžō qoho-t-u-l**",   mon-u-t.
> DST-NR   gun   shoot-CAUS-0-OF.1PL   say-0-SS:IPFV
>
> 'When the children heard the noises, they started knocking the prows of the boats with stones, pretending they were shooting too'.

The complement SoA is expressed by a predicate that was previously mentioned in the discourse as a main clause predicate. The predicate *mon-* 'say' is translated as the pretence CTP 'pretend'. The complement predicate *qoho-* 'shoot' was previously used in the main clause construction in line 110, which functions to progress the main discourse sequence in the narrative mode. When this predicate expresses a complement SoA in line 111, it elaborates the preceding narrative event *titte quarbas jömdit'e tol't'ī-nunnu-l'el-ŋi-le* 'they started knocking the prows of the boats with stones' in the same line, which is part of the main thread of discourse. Specifically, the complement SoA describes the manner in which the children started knocking, by pretending to shoot. This elaborates an effect that the shooting event in line 110 had on other actors in the discourse, namely the children. The aspectual construction used to express the complement event is different than that used in the narrative mode for Kolyma Yukaghir, which is the dominant mode of the section in which lines 110 and 111 occur. SoAs that progress the narrative mode are typically expressed with aspectual coding in the perfective. The predicate *qoho-* 'shoot' in line 110 is used with the imperfective *-nu-*. This instance of repetition shows an aspectual contrast with the SoAs along the main discourse progression.

In line 18 of the Alaaba folktale "Hyena and Lion" (93) the asserted clause is *ʔameet-tóo* 'she came'. The nonasserted desiderative CTP *has-eemá-r(a)* 'want' takes the complement *y-éen(i) Heetáan(i) Héet(u) hakká fak'-too* 'say/know where Bunny was/remained' which describes an expected course of events, namely the acquisition of knowledge, specifically regarding the proposition *Heetáan(i) Héet(u) hakká fak'-too* 'where Bunny was/remained'. *Y-éen(i)* 'say/know' is a knowledge predicate that is

also a nonasserted CTP. The proposition *Heetáan(i) Héet(u) hakká fak'-too* 'where Bunny was/remained' as a complement of the knowledge CTP elaborates the current discourse situation by referring to a proposition using information that was previously invoked in the text. The previous information is expressed as an event rather than a proposition in line 17: *heetilcút(i) bicc'á fak'-too-ʔíkk'(i)* 'only the hare remained (was missing)'. Furthermore, the complement serves to foreshadow the arrival of a new referent into the current discourse context, which is expressed by the independent clause *ʔameet-tóo* 'she came' in the same line.

(93) Alaaba: Hyena and Lion (Schneider-Blum, 2007)

17. Kan(i)   ʔuull-a   ʔal-éen(i)   yóo,
     DEM1   land-TN:F:GEN   body-TN:MLOC   be.3SG/PL:PERF
     fóol-(u)   yoo-si   riccíicc(i)
     soul-TN:M:NOM   be.3SG/3PL:PERF-PC3SG:M.REL   thing.SI:M:ABL
     ʔameet-án(o),   heetilcút(i)   bicc'á
     come-3SG:M:IMPERF   hare.SI:F:NOM   only
     fak'-too-ʔíkk'(i).
     remain-3SG:F/3PL:PERF-IRR

     'They were on this land, from all the (kind of) creatures some came, only the hare was missing'.

18. ʔEtaró   fird-á   káan(i)   ʔass-éen(i)
     after   judgement-TN:M:ABS   IND:DEM1:SG:M:ABS   do.CAUS-CV:POL
     keʔ-eemáacc(i)   **Heetáan(i) Héet(u) hakká**
     get.up-3POL:PERF.ABL   Bunny.NOM   where
     fak'-too   y-éen(i)   has-eemá-r(a),
     remain-3SG:F/PERF.REL   say-CV:POL   want-3POL:PERF-TEMP
     ʔetar-óon(i)   ʔameet-tóo.
     back-TN:M:LOC   come-3SG:F/3PL:PERF

     'After they (the creatures) had passed their judgment, when they wanted to know, where Bunny was (lit. remained), she came'.

19. ʔAmeet-too-ʔí-h(u)   Heetáan(i)   Héet(u)
     come-3SG:F/3PL:PERF-EE-CL:M:NOM   Bunny.NOM
     "má   ʔaʔ-taníi-t(i)   t'ées(u)   ʔiillá
     what.ABS   do-PR2.LV-CL:F:NOM   now   until

dunk-i-toontí-h(u)," y-yí zoob-éecc(u)
stay-EE-2SG:PERF-CL:M:NOM say-CV1 lion-SI:M:NOM

t'aʔm-ée-s(e).
ask-3SG:M:PERF-PC3SG:F

'When Bunny arrived, the lion asked her: "What were you doing until now, while you stayed away?"'.

Based on the semantics of the two concurrent CTPs *y-éen(i) has-eemá-r(a)*, 'wanted to know' in line 18, the complement *Heetáan(i) Héet(u) hakká fak'-too* 'where Bunny was/remained' can be considered desired knowledge of the current actor 1, the creatures. The arrival of *Heetáan(i) Héet(u)* 'Bunny' into the narrative 'scene' implies that this desired knowledge has been acquired. This is expressed using tail-head linkage at the end of line 18 and beginning of line 19 with the predicate *ʔameet-tóo* 'came/arrived'. The back-to-back expressions of this event increase its salience, and since this event is foreshadowed by the complement in line 18, the use of tail-head linkage in 93 on the preceding page attests to the additional salience function of the complement.

A complement with an elaboration function may not express the exact predicate that was previously invoked in the discourse, but may express a predicate that is closely related to, implied by, or context-dependent on information previously invoked in the text. One example of this occurs in the Korowai historical narrative exemplified in 94 with the complement of a perception CTP in line 46.

(94)   Korowai: Khenil-Khenil (van Enk & de Vries, 1997)

43. sé   "if-e-kha-p-ta   a   mbelüp
     next   here-TR-CONN-there-LOC   EXCLM   clearing

     di-méma-mon-é   i-mbelüp-ta   ili-debüf
     open-IMMP-2PL.INTENT-EXCLM here-cleaning-LOC   helicopter-way

     le-nè   wai-kha-lè-fé   dé".
     come-SS   move.down-IRR-1PL-EXCLM   QUOTE.3SG.REAL

     'And then he said, "You should open a clearing here at this place, and I will come and land with a helicopter"'.

44. "nokhu   ili-debüf   nokhu   belén   nokhu
    to.us   helicopter-way to.us   do.not.need.to to.us
    wola-lelo-khai"   de-té-tofekho   "o   o   manda-é
    universe-be-3SG.IRR say-3PL.REAL-DS EXCLM EXCLM no-EXCLM
    khésekhan-é   manda-é"   dé
    no-EXCLM   no-EXCLM   QUOTE.3SG.REAL
    "bu-wola-lé-n-da-é   khésekhan-é"
    NEG-universe-be-3SG.INTENT-NEG-EXCLM   no-EXCLM
    dé.
    QUOTE.3SG.REAL

    "'As for us, by helicopter, we are against it, the world will get out of
    order," they said, but he said, "Oh, no, that is not the case, the world
    will not get out of order, no way!"'.

45. "ip-ta   mbelüp   di-felule-mon-do   lai-p-akhu
    here-LOC   clearing   open-NEAR-2PL.INTENT-DS   come-1SG.INTENT-SS
    khamba   mbala-mo-f-é"   dé.
    steel.axe   distribute-SUPP-1SG.INTENT-EXCLM   QUOTE.3SG.REAL

    "'If you soon will have made a clearing at this place, I will come and
    distribute axes," he said'.

46. él   de-té-dakhu   de-té   di-felu-té-do
    yes   QUOTE-3PL.REAL-SS   open-3PL.REAL   open-NEAR-3PL.REAL-DS
    do   y-aup   uma-lulo-kha   kü-telo
    DS   his-word   speak-3SG.NEAR-CONN   just-be.3SG.REAL
    dai-ba-té-tofekho   **ili-bü-mo-n-aup-elu**.
    hear-PERF-3PL.REAL-DS   helicopter-beat-SUPP-INF-sound-?

    'They agreed and when they had opened a clearing–the promise he had
    done a couple of days before appeared to come true; they heard the
    humming of a helicopter'.

Lines 43-45 describe the anticipated arrival of a helicopter through reported speech.
The humming of a helicopter is described by the complement clause *ili-bü-mo-n-aup-
elu*, in line 46 which is closely related to the previous discourse context and elaborates
a SoA that progresses the discourse sequence, which is that a promise appeared to
come true.

Several complement clauses from the Maonan folktale "Tiger and Fox" in 95 serve

to elaborate the discourse sequence. In some instances they express a SoA using more 'discourse-old' information and others express information that is more 'discourse-new'.

(95)   Maonan: Tiger and Fox (Lu, 2008)

11.   ka:i⁵   ju⁴   tjam³   **n̪a:u⁶ ja:n¹** li:u⁵ ma¹
      chickens   moreover   confine be.at   house PCL come.back
      ju:n³   tjam³
      completely   confine

      'All the chickens were kept in the house. All the dogs were'

12.   n̪a:u⁶ ja:n¹   li:u⁵ kja:u¹   na:i⁶ ne⁵ tsi¹ kam³ ʔdai⁴
      be.at   house PCL   time/round this   PCL then not   obtain
      n̪a:u⁶ ja:u³   ʔba:n⁴
      be.at.   inside village

      'held in the house. Now he wouldn't look for food in the villages'.

13.   na:i⁶ n̪im¹ **na⁴ la⁵** ljeŋ⁶   lət⁸ zɔ⁴ ta:u¹ ʔbɔ⁶   pa:i¹, kjɔŋ⁵
      this   seek eat   PCL   again roam at   place merely go,   CL
      dɔŋ⁶   ljeŋ¹
      valley remote

      'He then went to other places, went to the remote valleys'.

14.   na:i⁶ pa:i¹. lwɛt⁷   tsi¹   ʔdu⁶ mɛ² dɔ² ʔdeu² sət⁷ ʔja:i³
      this   go.   suddenly then see   have CL   one   tail   very
      gjəŋ⁶. na³   kam³
      long.   face not

      'Suddenly he saw a long-tailed animal, who had a face'

15.   ʔda:u⁴   ma¹   ju⁴   kam³ ʔda:u⁴ mɛu⁴, kam³ wo³
      resemble come.back moreover not   resemble cat,   not   know
      ju⁵
      call

      'that does not look like a dog and nor like a cat. He didn't know what'

16.   **vɛ⁴ dɔ² nam²,** kɔ³ wo³   **dɔ² na:i⁶** ne⁵ ɕi⁴ dzwai⁴
      make CL   at.all, FOC know CL   this   PCL be   most
      ᵐbiŋ¹ pa:i¹ la⁵
      precious go   PCL

      'it is called. He only knew that this animal, well, it is the most precious'

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17. **dzwai⁴ gau²** pa:i¹ la⁵ dzwai⁴ jɔŋ¹ lan⁴ kʰje¹
most shrewd go PCL most stubborn cheat other.person

pa:i¹ la⁵
go PCL

'and shrewd. It is also very good at deceiving others'.

Sometimes repetition can indicate a boundary or facilitate a transition within a text. The complement of a perception CTP in a narrative text from Hualapai indicates a transition to a different actor's perspective through the repetition of an SoA referred to by the complement clause in line 65 of example 96.

(96) Hualapai: Coyote and His Daughter (Winter, 1998)

63. wa-h va-c-t-m
house-A arrive-DJ-PRET-DS

'They arrived at that house, and then'

64. tu' kur we' yam-c-m.
just long DEV leave-DJ-DS

'they left - a long time ago'.

65. **we' yam-c-o-m** ñ-'u-k-ñ,
DEV leave-DJ-APPL-DS SUB-see-SS-?

'When he saw that they had left him',

66. "'-msi-y-k kwe+hkay-a' '-ti+'-yu-m 'i-k.
1-girl-VB-SS thing+other-AA 1-change+1-be-DS 1-say

"'I will change into another girl," she said'.

In line 65, the predicate *yam-* 'leave' is the tail, expressed as the complement of the perception CTP -'u- 'see' in the same line. The same complement predicate is used in line 64 to refer to the same SoA, but is expressed as an independent clause; this functions as the head. The complement in line 65 expresses the leaving event with respect to the perception of an actor other than the agent of that event, namely Coyote (referred to by the same subject morpheme *-k-*, SS in the complement's main clause). The course of events that follow presuppose the perception of the event by Coyote, whereas previously this was not the case.

Repetition also occurs at line 2 of example 102 on page 94 from the Alaaba narrative "Hyena and Lion". There is a boundary between the two lines, separating the abstract and the first narrative section. This kicks off the narrative as a whole. The SoA in line 1 that is restated in line 2 is referred to by the main clause predicate of a purpose clause, *ful-too* 'leave/set out', in both instances.

In example 90 on page 74, there is an instance of repetition with the complement of a modal CTP in line 17, which begins a new section in the argument mode as well as a change in modality. The change in modality indicates a boundary between two sections in the argument mode. This signals a shift in the speaker's line of reasoning. Furthermore, this instance of repetition facilitates the topicalization of the SoA *láhá yì-yè nà* 'separate from each other'. It is not uncommon for complements that have an elaboration function may also be involved in the topicalization of an SoA (see Section 4.5.2).

4.4.2 Foreshadowing

The most common function of complements of desiderative CTPs and purpose clauses is foreshadowing through the expression of an expected course of events. Table 4.8 shows that foreshadowing was a function of 57.1 percent of total purpose clauses examined and 89.5 percent of the total complements of desiderative CTPs examined. Furthermore, complements of desiderative CTPs occurred with this function at a slightly higher frequency of total instances of the foreshadowing function at 58.6 percent. The stronger attraction for complements of desiderative CTPs and elaboration through foreshadowing can be attributed to the fact that these complements express desired events that have not yet occurred at the moment they situated in the discourse sequence. Although it is also characteristic of purpose clauses to express unrealized SoAs as well, the intention or purpose that is expressed by such a relation may be construed as realized at the moment they are situated in along the discourse sequence. Those purpose clauses which do have a foreshadowing function tend to

Table 4.8 – Elaboration-Foreshadowing Function

CTP Type	Function Total	CTP Type Total	% CTP Type	% Function
Purpose	12	21	57.1	41.4
Desiderative	17	19	89.5	58.6
	29	40	72.5	

express an intended desire, therefore the desiderative semantic relation is at the core of this particular discourse function.

Example 97 from an Arapaho narrative text contains a complement in line 11 that functions to describe an expected course of events: *nohk-céihíín-césiikúhnee-t woxhóóx-abii* 'to run off with [their] horses'. This is a complement of the desiderative CTP *béétoh* 'want', which occurs in the same line.

(97) Arapaho: The Scout's Escape (Cowell & Moss, 2005)

10. né'-oonoyoohow-óó3i'.
     then.PAST-watch(TA)-3.PL/3.OBV

     'Then they kept a watch on him'.

11. he'íí3ooní'i nooxéíhi' nih-'ii-béétoh-'úni
     something   maybe   PAST-IMPER-want.to-ADV
     nohk-céihíín-césiikúhnee-t   woxhóóx-abii.[pause]
     with-bring.here-escape(AI)-3   horse-PL.OBV

     'Maybe [there was] something [of theirs] which he wanted to run off with ... he wanted to run off with [their] horses'.

12. hí'in níisóó-',   **hínee héét-ne'ín-o',   won-**
     that   how.it.is(II)-SING that   FUT-know(TI)-3 go.to

     'How things are, that [scout] is going to find out, he's going to'...

13. **beníiinén-no   hii-hoow-éso'oo-níno**.
     soldier-PL.OBV 3.HABIT-NEG-fast(AI)-PL.OBV

     'The soldier['s horses] are not fast'.

14. bééxo'-úúhu' héébet-óóx-ebii.[pause]
     only-ADV   big-horse-PL.OBV

     '[They] only [have] big horses'.

The course of events described by the complement in line 11 is expected on the part of actors in the narrative, namely the Arapaho people, more so than it is expected to be realized by the listener or reader. The expectation for this course of events results in the Arapaho soldier's pursuit of the agent of the complement SoA, the Scout, when he embarks on this course of events.

Complements functioning to describe an expected course of events occur in lines 77 and 78 of 98. In this example, an SoA is described as expected after its realization in the discourse by line 77, while a desire contrary to the expected SoA is described by a complement in line 78. Both instances are morphosyntactically realized as a single independent clause in Arapaho, a polysynthetic language, due to compounding. In line 77, the CTP *-béétoh-* 'want' and its complement predicate *-ciinen-* 'to place down' are compounded, and in line 78 the same CTP is compounded with the predicate *-nee'éetóó-* 'to stay'.

(98)   Arapaho: Arapaho Tribal History (Cowell & Moss, 2005)

    74.   cenih-nó'xuuh-etí-3i'   niinénii-niicíe.
          to.speaker-arrive.with.effort-REFL-3P   tallow-river
          'they reached the Denver area'.

    75.   wohéí néhe' nih'óó3oo héí'-níhi'nee-no'usee-t,
          well   this   white.man when.PERF-rapid-arrive(AI)-3
          'okay, once the white man really started arriving rapidly',

    76.   né'-cih-wo'wuuhu-3i'   yiis-ííhi'   béí'i'ei-niicíe.
          then-to.speaker-move.camp(AI)-3P towards.there-ADV shell-river
          'then they moved to the Casper area'.

    77.   néhe'-nih-'íít-béétoh-**ciinen-éíno'**   óh
          that-PAST-where-want.to.place.down-3P/1P.INCL but
          héí-hoow-ni'oob-éí-n.
          2-NEG-agree(TA)-3P-1.INCL
          'that's where they wanted to place us, but we didn't agree'.

    78.   niinénii-niicíe héénoo
          tallow-creek   rule/obligation

nih-'ii-béétoh-**nee'éetóó**-3i'.
PAST-IMPERF-want.to-that.is.where.located(AI.REL)-3P

'they [Arapahos] wanted to stay in the Denver area'.

79. he'íí-cxooyéin-ííhi' hiit
INDEF-length.of.time-ADV here
né'-cih-noxuutéísee-nó'
then-to.speaker-go.to.river(AI)-1P.INCL

'sometime later we came up to'

The expected course of events described in line 77 is actually realized in the previous line; the information that the course of events is expected is not presented until after the realization of the Arapaho people moving to the Casper area in line 76. In this way, the complement SoA elaborates another SoA in the discourse that is much more similar to the repetition type of elaboration than most other instances of the foreshadowing type of elaboration. The course of events that was desired by the Arapaho people, which was not realized based on information in the the preceding lines, is described by the complement in line 78.

In example 99 there is an example of a purpose clause that describes an expected course of events in line 6. This section of the text is characterized by the procedural mode.

(99) Alaaba: Marriage (Schneider-Blum, 2007)

5. Wo?née-h(u), bókk-(u)
first-CL:M:NOM relative-TN:M:NOM
?aass-ano ?ahinát-(u), ligib-u
take.from.CAUS-3SG:M:IMPERF.REL kind-TN:M:NOM many-NOM
tartíib-(u) yóo-s(i).
step-TN:M:NOM be.3SG/3PL:PERF-PC3SG:M

'First, the find, which the relatives arrange, has many steps'.

6. Horro riccíicc(i) bir-ít(a),
every thing.SI:M:ABL front-TN:F:ASB
c'aww-u-húu jaal-u-síi
husband-SG:M:NOM-CL:M:NOM.LV friend-SG:M:NOM-PC3SG:M.LV

gassim-áan(i)   **c’iic-ú**   **laʔ-íih(a)**
morning-TN:M:LOC   condition-TN:M:ABS   see-VN:DAT
haaft-o   min-í   mar-táa.
adolescent.girl-SG:F:GEN   house-TN:M:ABS   go-3SG:F/3PL:IMPERF

‘First of all, the husband and a male friend of his go early in the morning
to the house of the young lady to see how the conditions are’.

7. Woʔnee   c’iic-ú   láʔ-t(i)   fank’ál-t(i)
    first   condition-TN:M:ABS   see-CV2   return-CV2
    ʔorrooʔ-táa.
    go-3SG:F/3PL:IMPERF

    ‘They get a first impression and return (lit. They see the first condition
    and return)’.

8. Lank’i   c’iic-u-háa   sakk’i-háa
    second   condition-TN:M:ABS-CL:M:ABS.LV   third-CL:M:ABS.LV
    láʔ-t(i),   t’uma-ha-gór(e),   **baaliik’-í**
    see-CV2   good-CL:M:ABS-COND   elder-TN:M:ABS
    soh-eenó-g(a),   bokk-íi[h(a)]   kul-táa.
    send-3POL:IMPERF-SIM   relative-TN:M:DAT   tell-3SG:F/3PL:IMPERF

    ‘If the second and third impression is also good, they tell to (the) relatives
    to send the elders’.

9. **C’íic-(u)**   **t’úma-h(a)**   y-eenó-h(u),
    condition-TN:M:NOM   good-CL:M:ABS   say-3POL:IMPERF-CL:M:NOM
    háaft-ut(i)   ʔass-i-táa
    adolescent.girl-SG:F:NOM   do.CAUS-EE-3SG:F/3PL:IMPERF
    hog-ooccíi-t(i).
    work-TN:F:ABL.LV-CL:F:NOM

    ‘The conditions are said to be good, depending on the work the girl does’.

10. Missaaleetás(i),   wáa   ʔijj-í-t(i)
     for.example   water.TN:M:ABS   carry-EE-CV2
     ʔameet-taa-ʔi-gór(e)   k’aaww-á
     come-3SG:F/3PL:IMPERF-EE-COND   coffee-TN:M:ABS
     faars-i-taa-ʔi-gór(e)   min-í
     boil.CAUS-EE-3SG:F/3PL:IMPERF-EE-COND   house-TN:M:ABS
     hog-taa-ʔi-gorée-t(i).
     clean-3SG:F/3PL:IMPERF-EE-COND.LV-CL:F:NOM

     ‘This is, for example, if she comes carrying water or if she is making

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coffee or if she is cleaning the house'.

A further example of a complement functioning to describe an expected course of events occurs in line 18 of example 93 on page 80; the complement of *has-eemá-r(a)* 'want' expresses a proposition that describes an expected acquisition of knowledge. The next asserted clause that occurs implies that this has been realized.

4.5 Abstract

At the beginning of a text a complement may serve an 'abstract' function by describing a displaced narrative event, or the primary SoA of a text which could also be considered the tellability of that text. Ochs and Capps (2009) consider tellability in terms of narrative discourse as the reason a narrative is told. This function is identified by Labov and Waletzky (1967) as a referential function of a clause within an orientation section, serving to orient the listener to the behavioral situation of the discourse overall. However, it is possible for the abstract function to be extended to an SoA at the beginning of a section in the middle of a text that describes the primary SoA of that section. A complement was determined to function as the abstract of a section within the larger discourse if it occurred at the beginning of a section and the same predicate referring to the complement SoA was used at least one other time toward the beginning of the section. This is similar to the notion of a paragraph topic from Gerdel and Slocum (1976, p. 275, cited in Longacre 1979, pp. 118-119), who claim that a whole clause or sentence may function as a paragraph topic. In these instances, an event functions as a topic, rather than a more time-stable referential entity prototypical of a topic function. The complement SoAs serving this function are referred to in such a way that adds cohesion to the discourse. Complements associated with the abstract function occur with modal, phasal, manipulative-causative, desiderative, achievement, knowledge, and propositional attitude CTPs, and purpose clauses. Table 4.9 shows the wide range of CTP types that take complements asso-

Table 4.9 – Abstract Function

CTP Type	Function Total	CTP Type Total	% CTP Type	% Function
Prop Attitude	1	19	5.3	5.3
Knowledge	1	15	6.7	5.3
Achievement	1	5	20	5.3
Purpose	4	21	19	21.1
Desiderative	1	19	5.3	5.3
Causative	2	74	2.7	10.5
Phasal	4	37	10.8	21.1
Modal	5	38	13.2	26.3
	19	228	8.3	

ciated with this function. None of them have a particularly strong correlation with an abstract function in terms of overall orientation or topicalization; it seems that the abstract function may be associated with just about any semantic complement relation.

4.5.1 Orientation of the Text

In the Itzaj Maya personal narrative "The Town Fiesta", there is purpose clause in example 100, line 5, which is the last line of the abstract. The SoA expressed by the complement functions to orientate the speaker's reason for telling the story.

(100) Itzaj Maya: The Town Fiesta (Hofling, 1991)

1. Tal-een **ti t'äm-b'-äl**
   come-1SG SUB call-PAS-INTRAN
   'I came to be called'

2. **ka' nak'-äk-en t-a'-noh nah**,
   SUB climb-IRREAL-1SG to-DET-big house
   'to climb to the big house (town hall)'

3. tu'ux yan a'-nohoch winik
   where COP DET-great man
   'where the great man (mayor) is',

4. u-nohoch-il a'-kah-eh.
   3PPR-great-POS DET-town-TOP

'the great one (mayor) of the town'.

5. I   b'in-een **in-wu'y-i**   b'a'ax ti'a(')al-en-oo' ti'ih.
    and   go-1SG   1SG-hear-SPM? what   for-1SG-PL   3IOPR

    'And I went to hear why they needed me'.

The main clause predicate in line 5 takes a purpose clause that includes the non-asserted knowledge CTP *in-wu'y-i*, 'to hear' and its complement, and describes the intended acquisition of the knowledge described by the knowledge complement *in-wu'y-i b'a'ax ti'a(')al-en-oo' ti'ih* 'why they needed me'. The intended acquisition of this knowledge is the premise of the personal experience described in the main body of the text.

The abstract of a Chantyal personal narrative in 101 between lines 1-8 orients the text as a whole by describing background information relevant to the past time that the story takes place. This abstract section is characterized by the description mode. The speaker does not begin to use specific, bounded past events, which are characteristic of the narrative mode, until the final SoA of the abstract at line 8.

(101)   Chantyal: The Gun and the Buddha (Noonan, 2005)

1. na ath   bərsə-ra-wa   mu-si-n
    I   eight year-LOC-NOM be-ANT-NPST+SUP.

    'I might have been eight years old'.

2. tala   bɦii-lanə,
    why   say-COND

    'Which is to say',

3. na tin   kəcchya-ri pəri-ma.
    I   three level-LOC   study-IMPF

    'I was in the third grade'.

4. ama   rə   bəw   **Dərmija tato-pani-ri   ɦya-si-wa**
    mother   and father Darmija   hot-water-LOC go-ANT-NOM
    mu-wã,
    be-IMPF

    'Mother and father had gone to Darmija hot springs',

5. rə tɦem-əŋ thyadiri, malday rə Khənə
   and house-LOC eldest+sister second+brother and Khənə
   bɦawju mu-wã.
   elder+brother's+wife be-IMPF

   'and in the house eldest sister, second brother and Khənə, his wife, where

   there'.

6. malday fɦəjə byala-ri **chutti-ri kha-si-wa**
   second+brother that time-LOC leave-LOC come-ANT-NOM
   mu-wã.
   be-IMPF

   'At that time, second brother had come home on leave [from the army]'.

7. khi din-dinəy **Kədi-i** bəw **bɦyana-ma-ru** **əyra**
   he every+day Kadi-GEN father brother+in+law-PL-COM hunting
   kyala-wa-ri fɦya-wã.
   play-NOM-LOC go-IMPF

   'Everyday he used to go hunting with Kadi's father, my brother-in-law,
   and others'.

8. yek din nə iskul-ri Gəwtəm Buddə-ye bare-ri
   one day topic school-LOC Gautama Buddha-GEN about-LOC
   pəri-i.
   study-PERF

   'One day at school we studied about Gautama Buddha'.

Complements of phasal CTPs occur in lines 4 and 6 to express SoAs that refer to displaced narrative events. The phase that is profiled is the result state from the completion of these events. These complements introduce salient actors in the story and the complement SoAs situate location of those actors at the time of the personal experience described by text. In line 7, there is a phasal complement relation expressed by the complex predicate *əyra kyala-wa-ri fɦya-wã* 'used to go hunting'. This describes a habitual event for one of the salient actors in the story, *malday* 'second brother', which is relevant to salient events later in the narrative.

4.5.2 Topicalization of an SoA

In example 102, line 1 contains the complement of a purpose clause that identifies that primary situation entity of the overall narrative text. The purpose clauses in lines 1 and 2 of the Alaaba folktale "Hyena and Lion" (102)[3] are both dependent on the predicate 'leave', and both express the same dependent SoA 'steal' *moggitót(a)* using the same coding strategies. 'Steal' functions as the current discourse topic at this point in the text. The main SoA is used in the sense of 'set out', i.e. it is has an intentional sense, therefore the dependent SoAs 'steal' are unrealized in the discourse context. The semantics of the CTP determine that the complement predicate takes place at a potential or future time relative to the time reference of the CTP. The dependent SoAs are coded morphosyntactically with the intentional verb form and absolutive case. There is a lack of TAM or person agreement distinctions, unlike the expression of 'steal' as a main SoA in an independent clause in line 2, which is coded for person and aspect.

(102) Alaaba: Hyena and Lion (Schneider-Blum, 2007)

1. Woddú, mat-u   bussaw-eeccúu,   mat-u   zoob-éecc(u)
   once   one-M:A/N hyena-SI:M:NOM:LV one-M:A/N lion-SI:M:NOM
   lam-únk(u),   **mogg-i-tó-t(a)**
   two-A/N.EMPH.CL:M:NOM   steal-EE-INT2-CL:F:ABS
   ful-tóo.
   leave-3SG/3PL:PERF

   'Once upon a time, a hyena and a lion both set out to steal'.

2. **Mogg-i-tó-t(a)**   ful-too-gán(i),
   steal-EE-INT2-CL:F:ABS leave-3SG/3PL:PERF-SIM.EMPH
   bussaw-éecc(u),   sáat(a)   dág-y(o),   zoob-éecc(u),
   hyena-SI:M:NOM cow.SG:F:ABS find-3SG:M:PERF lion-SI:M:NOM
   boor-á   mogg-ée.
   ox-SG:M:ABS   steal-3SG:M:PERF

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[3]Brackets in line 4 indicate a requested change by a native speaker that the *fank'ált(i)* be omitted due to a false start

'When they had left to steal, the hyena found a cow, the lion stole an ox'.

3. Sáat(i)   hodoo-tákk'(i).
   cow.SG:F:NOM   pregnant-CL:F:ABS:IRR

   'The cow was pregnant'.

4. Mogg-í-t(i,)   fank'al-t(i)   ʔameet-táni-n(i),   sáat(i)
   steal-EE-CV2   return-CV2   come-PR2-EMPH   cow.SG:F:NOM
   wokk'-áan(i)   k'al-tóo.
   road-TN:M:LOC   deliver-3SG:F/3PL:PERF

   'It was when they were coming back from stealing that the cow gave birth on the road'.

In 102 on the previous page, line 1 constitutes the abstract of the text and the first section of the text (in the narrative discourse mode) extends to line 4. The SoA referred to by the complement clause in line 1 functions to describe an expected course of events. The repetition of this clause in the subsequent line establishes the SoA 'steal' as the current topic of the text. The following predicates 'find' and 'steal' in line 2 occur in independent clauses and express realized SoAs that bring the expected course of events to fruition. The third reference of *moggitót(a)* adds cohesion to the discourse. 'Steal' is referred to a fourth time by the initial converb construction in the deranked clausal chain in line 4, which expresses a change in time. Since changes in time indicate section boundaries in the narrative mode, this wraps up 'steal' as the current discourse topic.

The thematic unity between lines 1-4 in 102 on the preceding page is created by multiple references to a topic, which is clearly established as the SoA 'steal' lines 1 and 2 where it is expressed by a complement of an intentional CTP. Thus, complements of intentional CTPs may function to introduce a new section topic into the discourse if the predicate they express is referred to in such a way that adds cohesion to the discourse. Complements that are involved in the topicalization of an SoA may

also have an elaboration function when an SoA establishes the topic of a section by expressing the same predicate that was introduced in the immediately preceding discourse. This is exemplified in line 2 of example 102 by a purpose clause, and in line 69 of example 103 by a complement of a phasal CTP.

In example 103 from Wardaman, complement clauses in lines 67 and 69 express a past event using the same predicate, *ngorlog-ba* 'talk'. They are both complements of phasal CTPs that profile the habitual character of the complement SoA, which is first introduced in line 67 and established as the topic of the discourse section in line 69.

(103)   Wardaman: Elsie Raymond Talking of Her Girlhood (Merlan, 1994)

66.   ngabobu   nganinggin
      FM-ABS   mine-ABS
      'my father's mothers'

67.   **ngorlog-ba-wu** wud-jingo-ndi-ya-marla   **nganu**
      talk-PS-DAT   3NSG-sit-PST-NAR-ITER   1SG-DAT
      'they used to talk to me'

68.   nangala
      [SS]
      'nangala [i.e. the recorder]'

69.   **ngorlog-ba** wud-jingo-ndi-ya-marla   **nganu**   nan-guya
      talk-PS   3NSG-sit-PST-NAR-ITER   1SG-DAT   that-DU-ABS
      mulurru-wuya:
      old.woman-DU-ABS
      'they used to talk to me, those two old women'

70.   ngayugu   worloba
      1SG-ABS   awake
      'and I awake'

71.   ngorlogba yu   no
      talk-PS   [you know]
      'talking you know'

72. ngorlogba-ya-wa:n   mugurn   nganburr-gi-ndi-ya-wuya   na
    talk-LOC-DF   sleep   2NSG/1SG-AUX-PST-NAR-DU   [now]

    'in talking the two of them put me to sleep now'

73. bujgun   nganburr-yana-rri-ya   yugurni   wirrig-(g)u-min
    wild-ABS   3NSG/1SG-talk-PST-NAR   more   tomorrow-DAT-ADV
    yi-bujgun
    YI-wild-ABS

    'wild people, they didn't talk more to me, until tomorrow, wild people'

The past narrative event of talking is the topic of the section from the Wardaman personal narrative exemplified in 103 that spans lines 66-73. The complement in line 67 additionally progresses the main narrative discourse sequence by introducing a habitual event from the narrator's past. The complement in line 69 additionally functions to elaborate the sequence by reiterating the same habitual event.

This discourse function is further exemplified in example 91 on page 75 in which the general stative ʔamáʔn- 'believe' is topicalized. The topic, which is what a Muslim man must believe, is introduced and established by complements of the modal CTP yóo-s(i) 'be (must)'. The complement in line 7 introduces the topic by generally describing what must be believed by a person who is a Muslim: leho ʔimaan-íin(i), six articles of faith. The first article of faith, to believe there is only one God, is described in line 8 by the complement clause mét'o Magan-íin(i) ʔamáʔn-(u). This establishes the topic by describing one specific article of faith. A complement clause is also used to describe the second article of faith in line 9. In each of the subsequent four lines the other articles of faith are described sequentially, therefore the topic is maintained through line 13. The topic of lines 7 to 13 of example 91 on page 75 is expressed by SoAs in the information mode and serves as semantic domain through which the discourse sequence progresses.

Furthermore, the Alaaba procedural text "Marriage" (99 on page 88) uses complement clauses to structure the thematic unity of a discourse section in the procedural mode that spans lines 6-9. The beginning and end of this section is signaled by

complement clauses in lines 6 and 9 that express the section topic, *c'iic-* 'condition', although different CTPs are used for each expression.

4.6 Climax

Complements serving the climax function highlight the salience or importance of an SoA through comparison to a non-real situation, by bringing attention to the SoA, by describing a complication, or by conveying their an evaluative attitude. The use of complementation rather than a simple, independent clause to express a SoA can increase the importance of that SoA to the reader or listener. This strategy can be employed to ensure that the climax of a narrative will be understood as the most prominent part of the discourse.

The climax or an exciting climactic point in a text is indicated most commonly by complements of commentative and perception CTPs. This is also a function of the three complements of pretence CTPs in the texts. The climax function was also identified for some complements of propositional attitude and knowledge CTPs, and purpose clauses. Table 4.10 shows that 100 percent of total complements of both commentative and pretence CTPs were identified as serving this function. This was the only function identified for these complements. Complements of pretence CTPs express an SoA situated in a non-real world. In the texts examined, they were used in narrative discourse in order to express contrast with an SoA that was situated in a real world context, thus indicating a dramatic and salient point in a story. The majority of the 9 complements of commentative CTPs examined in the texts served this function by expressing an evaluative attitude of the speaker. These complements were used in the argument mode in addition to the narrative mode. They account for the highest percentage of the climax function overall at 33.3 percent. Complements of perception CTPs had the second highest percentage of this function at 22.2 percent. They were used in the narrative mode for 28.6 percent of the total complements of this semantic CTP type in total, and were found in the narrative mode. It seems

Table 4.10 – Climax Function

CTP Type	Function Total	CTP Type Total	% CTP Type	% Function
Prop Attitude	2	19	10.5	7.4
Knowledge	4	15	26.7	14.8
Comment	9	9	100	33.3
Pretence	3	3	100	11.1
Perception	6	21	28.6	22.2
Purpose	3	21	14.3	11.1
	27	88	30.7	

that narrators express events perceived by prominent actors in their stories in order to convey a climactic point of a narrative to their audience.

In line 34 of example 104, the complement of a non-asserted perception CTP expresses an SoA that refers to the motivation for the asserted, main predicate of the complement relation. In line 35 of the same example, the complement of a commentative CTP functions to emphasize the salience of an SoA that was first invoked in the discourse in line 33.

(104)   Mapuche: Missionary (Smeets, 2008)

32. fey   ütrüf-naq-üy;   puw-üy   kiñe pu   malliñ.
    he   throw/fall-go.down-IND[4]-3[3]; arrive-IND[4]-3[3]   one LOC lake

    'he crashed [and] landed in a lake'.

33. welu chum-la-y   rumé ti   wentru, welu ñi
    but   do.how/what-NEG[10]-IND[4]-3[3] -ever the man,   but POSS3
    awion   watro-ka-w-üy.
    airplane break.(intr.)-FAC[33]-REF[31]-IND[4]-3[3]

    'but the man was unhurt, although his plane was destroyed'.

34. kom ti   pu   che   müle-wma   trawü-n-mew
    all the COLL person be-CSVN[4] get.together-PVN[4]-INST
    lef-üy-ng-ün   ñi   pe-me-al
    run-IND[4]-3NS[3]-P[2] POSS3   see-TH[20]-NRLD[9].OVN[4]
    chum-le-n   ti   wentru.
    how/what-ST[28]-PVN[4]   the man

    'all the people that had been at the meeting ran to see how the man was'.

35. rumé ayü-w-üy-ng-ün   ñi   chum-nu-n
    very love-REF[31]-IND[4]-3NS[3]-P[2] POSS3 how/what-NEG[10]-PVN[4]
    rumé.
    -ever

    'they[p] were very glad that he was unhurt'.

Line 114 of the Nguna example in 105 describes a non-real situation in comparison to a previous SoA. This is expressed by the complement *taoa e pei tea vaka-sere* 'the oven has been freed'. This is a complement of the main clause *e tapala* 'it is as if', expressed using a pretence CTP.

(105)   Nguna: Installation of a Chief (Schütz, 1969b)

    112. taliviri ki   taoa go   ragi waina
         around   OBJ.MKR oven and time that
         'around the oven. When'

    113. e   sava taliviri sua   e   tapala **taoa**
         he   run   around   COMP.   it like   oven
         'he has finished running around it, it is as if the oven'

    114. **e   pei tea.vaka-sere**. Go   e   taa
         it   is   freed   and   he   not
         'has been freed, and it'

    115. moro   peani na-tapu-ana.
         in-turn   have   tapu
         'is no longer tapu'.

The climax of the Alaaba folktale "Hyena and Lion" occurs in line 48 of example 87 on page 68, restated below. There are two successive complements in this line that function to introduce a complication and identify a climactic point in a narrative text. They are each complements of the CTP ʔaag- 'enter'. Although this CTP only occurs once, the two complement SoAs are semantically separate complement clause constructions.

(87)   Alaaba: Hyena and Lion (Schneider-Blum, 2007)

46. Dúuk'-y(i)   keʔ-yóocc(i),   [ʔís(i)
    take.into.mouth-CV1   get.up-3SG:M:PERF.ABL   PRON3SG:M:NOM
    godab-á-s(i)   ʔáag-y(i)]
    stomach-TN:M:ABS-PC:3SG:M   enter-CV1
    godab-i-si   ʔaaz-éen(i)   **hill-éet(a)**
    stomach-TN:M:GEN-PC:3SG:M   inside-TN:M:LOC   intestines-TN:F:ABS
    [ka]   ʔaf-yo   milaac'-íin(i)
    DEM1:ABS   seize-3SG:M:PERF.REL   razor.blade-TN:M:INTR
    mur-ú   ʔáf-y(o).
    cut-VN:ABS   seize-3SG:M:PERF

    'After he (the lion) had eaten him, he (the rat) entered his stomach and
    while in his stomach he took the blade, which he had taken, to slit the
    intestines'.

47. "Yimáan(i) Yím(i),   ʔám-y(i)   fúl-(i)!"   y-ée..
    Ratty   Rat.NOM   come.CV1   leave-IMP:SG   say-3SG:M:PERF

    "'Ratty Rat, come out!" he said'.

48. "[ʔÁn(i)]   **ful-ó-t(a)**   ʔaag-yóom(i)-baʔ(a)
    PRON1SG:NOM   leave-INT1-CL:F:ABS   enter-1SG:PERF-NEG
    fufurs-o-táa-t(i)   **beelú**"
    disturb-INT1-CL:F:ABS.LV-CL:F:NOM   CONTR
    y-ée-s(i).
    say-3SG:M:PERF-PC3SG:M

    "'I didn't enter to leave, but for disturbing (i.e. euphemism for 'killing')
    you," he answered him'.

49. Y-éen(o).
    say-3POL:IMPERF

    'So they say'.

The CTP *ʔaag-* 'enter' is a purpose clause because it is used in an intentional sense
similar to the purpose clause dependent on 'leave' from example 102 on page 94.
Although it occurs in a direct speech complement and thus belongs to the secondary
discourse sequence, the SoAs within the reported speech in line 48 of 87 on page 68
will also be considered to have a function in the main discourse. This is because they
describe the most intense point in the narrative by introducing a conflict between

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two actors, the lion and the rat. The CTP *ʔaag-* 'enter' refers negatively to the intended realization of the SoA expressed by the purpose clause predicate *ful-* 'leave'. This purpose clause functions to contradict the expectation of actor 2, the lion. It is evident by the lion's transfer of information to the rat in line 47 that he expected the rat to positively achieve the *ful-* 'leave' event. The same CTP also takes the purpose clause predicate *fufurs-* 'disturb' in the same line. Due to the use of the conjunction 'but' in the complement clause expressing *fufurs-* 'disturb', the CTP refers positively to the intended realization of the SoA it refers to even though the main clause expressing the CTP is negated by the morpheme *-baʔ(a)*. This further contradicts the expectation of actor 2, the lion. The contradicting SoAs expressed by the two purpose clauses in line 48 indicate an intense point in the narrative sequence.

Since the intentions of actor 1, the rat, were previously alluded to in the discourse, e.g. line 46 of 87 on page 68, these purpose clause SoAs describe a culmination that has been prepared for, which lends support to the analysis of these complement clauses having the discourse function of indicating the climax of the story. The complement clause in line 46, *hill-éet(a)...mur-ú* 'to slit the intestines', is a purpose clause, while it's CTP *ʔaf-* 'seize' refers to the intended manner of achievement of the SoA it refers to. The function of the complement is to describe an expected course of events. Furthermore, this complement functions to foreshadow a complication prior to a climax since the course of events described by the SoA it refers to is expected at this point by the audience as well as the rat, one of the main actors throughout the current discourse section, but not the lion, who is the other main referent throughout the current discourse section.

This function is further exemplified by example 93 on page 80 with the complement of a non-asserted knowledge CTP in line 18 within a narrative section.

Chapter 5

Conclusion

This analysis has revealed five major discourse functions of complement clauses: to express a secondary discourse sequence, facilitate the main progression of discourse, elaborate preceding or subsequent information, orient a situation within a discourse mode, and indicate a climactic or salient point in the discourse context. The main discourse sequence is the primary progression of the context as a whole. The main discourse sequence consists of SoAs in a sequential order that can be characterized by the discourse mode. The sequencing may be based on time (narrative), space (description), semantic domain (information), line of reasoning (argument) or a generalized ordinal sequence (procedural). Courses of events along this sequence may be repeated or foreshadowed in order to elaborate the preceding or subsequence discourse context. Such out-of-sequence events look backward or forward on the main discourse sequence, but do not facilitate its progression. The secondary discourse sequence represents a sequence parallel to the main line of discourse progression that involves communication between actors or the cognitive process of connecting ideas.

SoAs in the secondary discourse sequence are the result of using cognition (described by internal speech complements) or a communicative act (described by speech complements and complements of manipulative-request CTPs). The relation between SoAs referred to by complements in the secondary discourse sequence and their main SoAs conveys an attempt to bring something about or to problem-solve through the

connection or communication of ideas and information. Complements of utterance and manipulative-request CTPs typically occur in texts characterized by the narrative and description modes, but they refer to SoAs that are often in the argument mode. This is because communication between actors, including requests and speech acts, and the internal thoughts of actors usually progress through a line of reasoning. This shows that the discourse modes proposed by Smith (2003) progress along more than one dimension; continuity within texts is not entirely linear.

If an SoA presents entirely new information into the main discourse sequence and it resembles the type of situation entity that characterizes the progression of the dominant mode of the discourse section in which it occurs, it is considered part of the main discourse progression. Only five achievement CTPs were found in the texts. Three occur in temporal discourse modes and take complements that function in the main discourse sequence; the other two take complements with this function in the atemporal discourse modes. In the temporal discourse modes, this was identified as a function of complements that occur with phasal, manipulative-causative, and perception CTPs in addition to the three complements of achievement CTPs. These types of CTPs have a semantic relation with their complement predicate that expresses the realization of an SoA in terms of development over time (phasal type), successful causation (manipulative-causation type), perceptual experience (perception type), or manner of achievement (achievement type). Complements of modal CTPs refer to generalized, nonspecific events and complements of propositional attitude CTPs refer to propositions. These are closely tied to the progression of the argument mode, which progresses through a line of reasoning expressed mainly by proposition, facts, and general statives. Several also function to progress the information mode, which progresses through a semantic domain expressed mainly by general statives and sometimes propositions.

SoAs used to elaborate the discourse do not facilitate its sequential progression.

Complement predicates that function to elaborate a text refer to SoAs that typically do not resemble the primary situation entity of the discourse mode that is the dominant mode of the section they occur in. These complement SoAs add detail to a prior or subsequent SoA that participates in the main progression of the discourse sequence. They may simply reiterate information or they may add information about the time, duration, manner, or circumstances of an SoA, convey an expectation or goal, or situate an SoA in a new perspective. The two types of elaboration identified as a function of complement clauses in the texts are repetition and foreshadowing.

A repetition function was identified for complements of modal, phasal, manipulative-causative, desiderative, purpose, perception, knowledge, and propositional attitude CTPs. Although this function is associated with just about any CTP type, it is most common among those that also progress the discourse. These complements elaborate on discourse-old information without moving the progression of the text forward. They may add detail to a previous SoA or situate a discourse-old SoA in discourse-new circumstances. Instances of repetition include the restatement of an SoA mentioned previously in the discourse context, back-reference via tail-head linkage, and the description of an expected course of events that was previously mentioned. When an SoA is repeated it may be referred to by the same predicate as the previous mention, or a different predicate understood to have a similar meaning. The expression of a repeated predicate may vary from its previous expression. For example, the predicate may initially be expressed in a main clause construction while repetition of the predicate may occur in a complement clause construction, and it could be used with different aspectual, modality, and argument structure constructions. A complement was considered to have this function if it expresses a discourse-new predicate but the SoA it refers to was previously alluded to, or is a sub-event of a previous event, or was referred to by a predicate that is understood to be similar in meaning.

Foreshadowing is the opposite of repetition; complement predicates that refer to

foreshadowing SoAs have not been previously mentioned in the discourse but rather are relevant to the subsequent discourse. This is a function of complements of purpose clauses and desiderative CTPs that are unrealized. The foreshadowed SoA is either the realization of the complement SoA or a complication to the realization of the complement SoA. Complements that foreshadow an SoA also do not advance the discourse sequence. They anticipate a subsequent SoA by referring to an SoA with unrealized event modality. These complement relations are semantically characterized by the desire for or purpose pertaining to an SoA that has not yet been realized.

Complement clauses may function in an abstract to orient the discourse mode of an entire text or a section within a text. Complements of modal, phasal, manipulative-causative, desiderative, knowledge, and propositional attitude CTPs, and purpose clauses serve this function. It seems that clauses in just about any semantic complement relation can be associated with this function. In some cases, they occur in the abstract of the text to situate the tellability of a folktale or narrative of personal experience, an overarching topic, or displaced narrative events to provide background relevant to important events in the main discourse sequence. When they occur in a section abstract, the complement predicate refers to an SoA that is expressed more than once in close proximity so it can be established as a new topic in the main discourse sequence. This indicates a boundary within the main body of the text. Due to the boundary marking function of these complement clauses, it can be inferred that their function in an abstract can be explained in the same way as their function in the main discourse sequence. However, there were no instances found in which complements of desiderative and knowledge CTPs progressed the main discourse sequence. There was one instance of each found for the abstract function, and both occur at the very beginning of texts in the narrative mode. It seems that the use of a complement clause in these cases is determined by the very specific topic of the story that is about to be told, coupled with how the speaker decides to introduce the main

body of discourse. It is likely that the opening abstract of a text can be extremely varied in its expression of the overarching topic SoA.

A climactic or exciting point in a text may be indicated by the expression of an SoA using a complement clause. This happens with complements of pretence, commentative, perception, propositional attitude, and knowledge CTPs, and purpose clauses. Complements of commentative and perception CTPs most commonly serve a climax function. The use of these complement relations helps the narrator indicate what it is that makes their story worth telling; by using a complex semantic relation to express (one of) the most crucial SoAs in the text or other SoAs in the surrounding context, the salience of an important part of the text can be increased. Pretence complement relations achieve this when they are used to compare a non-real situation to a real situation along the main discourse sequence. This conveys that an SoA has made an impression on actors in the story. The use of a commentative complement relation does the same thing by conveying an emotional evaluation or judgment of actors towards a main SoA in the previous discourse context. Similarly, perception and knowledge complement relations bring the readers attention to an SoA or information in the discourse context by describing an awareness of one or more actors towards that SoA or information through perceptual experience or the state or acquisition of knowledge. Propositional attitude complement relations, which function in the main discourse sequence in the argument mode, are occasionally used in the narrative mode to indicate a climactic narrative event by describing the speaker or subject's attitude toward a proposition that is relevant to that event, thus directing the reader's attention toward it. Purpose complement relations were found to express climaxes in two narrative texts that culminated in violence. They were exciting points in the story not only for this reason, but because the agent in both cases, a main actor, had some intention that was not expected on the part of another main actor in stories and was never explicitly mentioned as an intention to the reader in the previous discourse

context. The salience of the SoAs involved in the climaxes of the narratives "Hyena and Lion" and "The Farmer and The Bush People" was increased through the use of a purpose complement relation that express an intended SoA using realized event modality, which was not explicitly foreshowed earlier in the discourse context.

This study builds upon previous typologies of complementation by considering the functions of complement clauses in a monologic discourse context and including purpose clauses as a semantic type of complement. Prior work in this area has been concerned with the semantics of CTPs and their syntactic and morphosyntactic complement types. Based on the present discourse-semantic approach and a slightly more inclusive classification of semantic CTP categories, the use of complement clause constructions cross-linguistically can be viewed from a new perspective. Consideration of discourse functions has revealed some common characteristics of semantic complement relation types that can be addressed in a way that was not possible in semantic-(morpho)syntactic approaches.

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