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Introduction

This dissertation will begin by presenting Kankanaey, a language of the Philippines, in its linguistic setting. It will then give an overview of the theoretical model used in this analysis, Role and Reference Grammar, as presented in Van Valin and LaPolla (1997) and Van Valin (2005). Chapter 2 begins the description of the Kankanaey language by examining the lexicon and predicate formation. Chapters 3 and 4 present reference phrases and simple clauses. Chapter 5 explores the details of complex constructions. Chapter 6 puts together the evidence for grammatical relations, while chapter 7 lays out the resources of this language to express information flow in context.

The research behind this analysis was carried out by the author and her husband, Lawrence Allen, under the auspices of SIL Philippines from 1975 to the present, but primarily up to 1997 in intermittent but extended residence in the municipalities of Kibungan, Atok and Kapangan in Benguet Province.

A diverse corpus of written texts and transcribed oral texts authored by Kankanaey speakers formed the data base from which the examples were drawn. This corpus included oral tradition narratives, poetry, extemporaneous lyrics, personal-experience and historical narratives, recipes and explanatory texts, formal hortatory discourses, and personal letters. A 5000-root Kankanaey-English dictionary with many spontaneously-generated example sentences was also consulted for corroboration of the description and analysis. Some examples, particularly in the earlier chapters, were simplified from the original texts¹. A few examples came from texts translated from English to Kankanaey by a Kankanaey speaker, but they were not used as the basis for analysis unless other original material also evidenced the construction in question. Because we lived in three different dialect areas of the Kankanaey-speaking region, some dialect differences in syntax were observed, but this sketch reflects most closely the dialect spoken in Kibungan, Benguet, home of most of the native authors².

¹ All names and other non-syntactic details have been changed in the examples to protect identities.

² Please see the References at the end for acknowledgements of all my contributors.

Chapter 1 Introduction to Kankanaey and to Role and Reference Grammar

1.1 The Kankanaey language in its context

Kankanaey³ (ISO: KNE) is spoken by some 150,000 people living in the provinces of Benguet, Nueva Vizcaya, Ilocos Sur, La Union, and Mountain Province on the island of Luzon, the Philippines. The *Ethnologue* (Lewis 2009) classifies Kankanaey as Austronesian, Malayo-Polynesian, Northern Philippine, Northern Luzon, South-Central Cordilleran, Central Cordilleran, Nuclear Cordilleran, Bontok-Kankanay. Kankanaey is the southernmost of the Nuclear Cordilleran languages, and its range abuts the large Iloko-speaking coastal plain on the west. South and southeast is the Ibaloi language, of the Southern Cordilleran group. To the east the Kankanaey area shares a boundary with Tuwali Ifugao and Amganad Ifugao, and to the north are the Northern Kankanay and Central Bontok languages. Maps of the Austronesian language family region and a language map of the Cordilleran region of the Philippines are found on pages iv-vi.

Typological studies of Austronesian languages, notably Himmelmann (2005), as well as more specific studies and surveys of Philippine languages, such as Reid (1974, 2002, 2004), have provided a wealth of information with which to compare and contrast the Kankanaey data. This section will first highlight some of the general characteristics of Austronesian languages, and show how these characteristics are exemplified in typical Philippine languages, including Kankanaey. Well-documented languages in the wider area include Bahasa Indonesia in the neighboring country to the south, Cebuano in the central Philippines, and Sama in the southern Philippines. The focus will then narrow to compare the features of Kankanaey with Tagalog, which has long been studied as representative of Philippine-type languages, and with Iloko. As the *lingua franca* of the Cordillera, Iloko has exerted a significant influence on other languages in the area. Finally, Kankanaey will be compared to two languages with which it is closely related, Bontok to the north and Tuwali Ifugao to the east.

³ “Kankanaey” is pronounced [kənkə'nɛʔij]

Very little has been published on the Kankanaey language. This author has written five short studies on various aspects of the language, and Lawrence Allen has published three phonological studies as well as editing and contributing to many publications in the Kankanaey language itself. Patterson (2007) reanalyzes the morphophonemics of reduplication in Kankanaey.

1.1.1 Austronesian and Philippine-type languages

Austronesian is one of the largest language families in the world—*Ethnologue* (Lewis 2009) lists 1257 languages in that category. In the Austronesian family, the Malayo Polynesian group contains a further subgroup of 179 Philippine languages, of which fifty-two are in northern Luzon and eight share the Nuclear Cordilleran grouping with Kankanaey. Among others, Blust (1999) and Ross (2002) have used various criteria, both phonological and lexical, to trace the history of these languages and to subdivide Austronesian into typological groups, without perfect consensus. Himmelmann (2005:111) suggests geographical criteria to group the Austronesian languages, defining Western Austronesian as non-Oceanic Austronesian languages, and Philippine languages as those in the Republic of the Philippines. Adelaar (2005) gives a historical account and perspective with new groupings. Not surprisingly, with these differing approaches, the category ‘Philippine’ or ‘Philippine-type’ is not always clearly defined, nor is Northern Philippine a subgroup at the same level in all taxonomies.

1.1.1.1 Morphology

This study touches on the morphophonemics of Kankanaey only when necessary to separate morphemes in order to understand examples. The complex morphophonemics are very typical of Philippine-type languages. For example, its homorganic nasal, which is realized as a velar nasal before vowels but assimilates in various ways before consonants, is common throughout the Austronesian family (Himmelmann 2005:118). Another widespread morpheme is the infix <um> (<om> in the Kankanaey orthography). The form is shared, but the functions in Kankanaey cover a different set than in many other languages.

Reduplication is a morphological process that is productive in all Western Austronesian languages (Himmelmann 2005:121). Kankanaey uses a subset of all the types of reduplication that are possible, mostly to express aspectual concepts. Many Kankanaey roots have repeated syllables, probably fossilized forms of historical root formation.

1.1.1.2 Lexicon

Many Austronesian languages tend to have lexical bases that are underdetermined as to word class (Himmelmann 2005:128). The Kankanaey lexicon is made up of roots which may

be used in their base form or with affixation. The word class is determined by the affixation and the function of the word in a clause, either to predicate or to refer. Himmelmann refers to this type of lexicon as having morphologically and syntactically subcategorized roots.

Reid (2002) gives a comprehensive listing of the wide variety of labels that have been used for Philippine-language nominal markers. In this study they are labelled ‘Reference Phrase Markers’. Reid and Liao (2004) note that Bontok has three distinct ‘case’ markers for nominal phrases, Iloko to the west of the Kankanaey has only two, while Kabayan Inibaloi, abutting the Kankanaey area to the south and east, has five.

Kankanaey does not have many prepositions, but the oblique marker *si* can often be translated into English with a preposition, based on the semantics of the nuclear word. This oblique marker precedes adjuncts and is an obligatory concomitant of what few prepositions there are.

Many Austronesian languages have more than one negator. Kambera of eastern Indonesia (Klamer 2005:723), for example, has five forms, including a ‘not yet’ negator. Kankanaey has two simple negators, one that modifies states, nominals and whole propositions, and the other that modifies dynamic predicates. Like Kambera, it also has a ‘not yet’ negator.

Discourse particles, “small, uninflected words that are only loosely integrated into the sentence structure” (Fischer 2006:4), expressing speaker attitude toward the truth or relevance of an utterance, are common in Indonesian (Ewing 2005:254) and many Philippine languages, including Kankanaey.

1.1.1.3 Predicates

Linguists working in the Philippines have yet to agree on how to describe and characterize the complex systems of predicate formation in the over 100 languages of the country. Reid and Liao (2004) in their survey found that certain predicating affixes have common forms throughout the Philippines. Thus they posit three typical Actor-referencing affixes: MAG-, -UM- and MANG-. Dynamic Undergoer-referencing affixes are typically similar to -EN, -AN, I-, and I...AN. Prefixes typically similar to MA- mark Statives. Other affixes may be used for other types of predicates in the different languages, but these eight are nearly universal in the Philippine languages that they surveyed, and have close counterparts in Kankanaey.

Himmelmann (2005:112ff) has proposed a category that he calls ‘symmetrical voice languages’ as a subset of Austronesian languages that includes Philippine-type languages. Not all of the characteristics that he lists fit the Kankanaey data. He describes symmetrical voices as independent from each other (one not derived from another) with a syntactically equivalent

Actor voice and Undergoer voice. The alternative analysis, in Himmelmann's view is an ergative analysis in which the Actor-voice is analyzed as an antipassive (Himmelmann 2002:14). Neither analysis⁴ fits the Kankanaey data satisfactorily. Himmelmann's defining features for Philippine-type languages (2005:113) do include Kankanaey characteristics—at least two different Undergoer voices, clitic phrase markers, and pronominal second-position clitics. Kankanaey, like many other languages in the area, also shows split-intransitivity based on semantic differences and affixation differences between intransitive predicates that index an Actor vs. an Undergoer.

Ross (2002: 439) suggests that verbs in Philippine-type languages have at least four different possible role-indexations: Actor, patient, local, and some other (such as instrumental, benefactive, etc.) An analysis proposed by Walter Spitz (2001) for Hiligaynon names ten voices, constrained by event phase—inception for Actor voices, exhaustion for Undergoer. The analysis of Kankanaey proposed in this dissertation suggests that predicate affixation reflects the assignment of macrorole status to either one or two arguments, and that an Undergoer voice is the default expression of two macroroles. Both Actor and Undergoer voices have thematic-role indexing variations.

Givón (1994) notes that a major component of transitivity is the relative topicality of the Actor and Patient in a semantic event; an 'inverse' voice may encode a P argument that is more highly topical than the A argument. Some Philippine linguists have found an 'inverse' pattern in argument ordering, for example, in Cebuano (Payne 1994) and Obo Manobo (Brainard and VanderMolen 2006). Kankanaey handles the situation of a more-topical patient by dropping the agent of dynamic Undergoer voices or using the passive state voice.

Existentials in many Western Austronesian languages are clearly differentiated from verbs; in Kankanaey the existentials generally occur unaffixed, but may also take some predicating affixation. Many other languages have a locative predicate, such as the Tagalog *nasa* 'is in/at'; in Kankanaey the existential serves as the predicate with locative phrases.

Talmy (1991, 2000) suggests a division between what he calls verb-framed languages and satellite-framed languages. Verb-framing involves encoding the path or trajectory of motion within the predicate rather than expressing it in a 'satellite' expression. Huang and Tanangkingsing (2005) in their study of motion verbs found that in the six Western

⁴ It is beyond the scope of this study to present arguments against certain analyses. Definitions of key terms such as 'syntactic transitivity' would clarify some of the apparent contradictions. This analysis of Kankanaey uses the RRG model, with its concept of a clause core that holds both direct and oblique arguments. Syntactically, transitive clauses have two direct arguments, while intransitive clauses have only one.

Austronesian languages they studied, greater attention is typically given to path rather than manner information in motion events. Motion roots exhibit very high path salience in Kankanaey as well, eliminating the need for specific prepositions. An oblique referent is most often sufficient to identify the direction or location of motion.

1.1.1.4 Grammatical relations

An ergative pattern of NP distribution is “very rare” in Austronesian languages, according to Himmelman (2005:158). Kankanaey reference phrases have a clearly ergative pattern of distribution, in that the single argument of an intransitive clause takes the same marking as the Undergoer argument in a transitive clause. An ergative analysis of NP distribution presupposes that core arguments are clearly distinguished from obliques, which is indeed the case in Kankanaey. Reference phrase markers and pronouns have distinct oblique forms. An ergative analysis also suggests that a transitive absolutive Actor would be a marked construction, which is also the case in Kankanaey, with its intransitive Actor voice and marked Antipassive voice.

Core (clitic) pronouns are displaced to a second position in many western Austronesian languages. Kankanaey clitic pronouns follow this rule, and often take a different case form in their displaced position. Other Austronesian languages, such as Makassar in south Sulawesi (Jukes 2005:664), have a similar case-shifting phenomenon with displaced clitic pronouns.

Woollams (2005:541) finds ‘identificational’ clauses in Karo Batak to have a subject-predicate order except when the first NP is clearly focal (as in *wh*- questions or with focal marker). Nias, related to the Batak languages of Sumatra, is also analyzed as having an NP in the predicate-initial position with a case-marked headless relative clause as its argument (Brown 2005:569). Zertoun (2005) notes this same construction in Tsoa of Taiwan, considering the first NP to be the predicated constituent, and uses the term ‘nominal clauses’ for the second NP. Indonesian (Ewing 2005:235) has a cleft construction in which a headless relative clause serves as subject of a specific-nominal predicate. Kankanaey has an equative clause structure similar to these, although the labels used in RRG are different.

The issue of ‘subjecthood’ has been explored and debated in many Philippine-type languages, as summarized in Himmelmann (2005:152-159). This study of Kankanaey uses the RRG concept of a ‘privileged syntactic argument’, which is defined by its properties for each separate construction.

1.1.2 Tagalog, a meso-Philippine language

Several linguists have offered analyses of Tagalog, a major language in the Philippines, including Foley and Van Valin (1984), Kroeger (1993), Halpern (1998) and Himmelman (2005b). Kankanaey shares many features with Tagalog, but differs in important ways as well.

1.1.2.1 Clitics

Clitic pronouns and clitic particles in Tagalog contrast with their Kankanaey counterparts in several ways. Tagalog, as well as other Philippine languages, moves pronouns in clusters, but Kankanaey is much more constrained in that only the transitive Actor or the single-argument pronouns are clitics and available for displacement. Tagalog clitic pronouns and particles show complex placement and ordering patterns while Kankanaey simply orders the single clitic pronoun before any clitic particles. Anderson (2008), using an Optimality Theory-based analysis, found that phonology, morphology and syntax all affect the clitics in Tagalog. Halpern (1998:105) proposed that verbal clitics are “associated with an ordered set of slots” defined by grammatical and phonological factors, noting that Tagalog orders monosyllabic pronouns before particles, which in turn precede bisyllabic pronouns, all following the clause-initial element. Another definition of clitic placement is suggested by Kroeger (1993:121), who notes that in Tagalog “clitics occur immediately after the first daughter of the smallest maximal projection which contains them.” This is a wider definition than is needed for describing the placement of Kankanaey clitics, especially the pre-verbal displacement to the position (sometimes called the *Wackernagel* position) immediately following modifiers that occur as the first word of the clause.

1.1.2.2 Negation

Himmelmann (2005:140-41) notes that in Tagalog “there are no particles, negators or other kinds of grammatical markers which would clearly distinguish between a verbal and an equational clause type.” By contrast, many Austronesian languages have a choice of negators (e.g. Malay, and Kimaragang Dusun, a language closely related in syntax and morphology to Tagalog (Kroeger 2005:397)). In both these languages the negator for predicates formed by adjectives and verbs is different from the negator used with NP predicates in equative clauses. In Kankanaey there are also two negators, but their distribution as noted above is defined by dynamic vs. non-dynamic predicates, clearly distinguishing between verbal and equative clause types.

1.1.2.3 Existential constructions

Examining the existential in Tagalog, Sabbagh (2009) found four distinct types. He analyzes the Tagalog existential as an impersonal clause with no subject. Kroeger (1993) also notes the lack of any nominative argument with existential predicates. Himmelmann (2005b), however, notes that a nominative phrase (*ang*-marked phrase or nominative pronoun) in an existential clause expresses a possessor. In contrast, Kankanaey existentials function as predicates, taking the same kind of single argument as intransitive predicates. Possession is expressed on the single argument of existentials as on any other phrase, i.e. with the genitive/ergative case.

1.1.2.4 Noun phrase construction

Many who have analyzed Tagalog include nominals without phrase markers as indefinite noun phrases (e.g. Sabbagh 2009, Kroeger 1993). Kankanaey distinguishes definite and indefinite reference by an indicator on the phrase markers (determiners). Kankanaey nominals without phrase markers function as predicates in Kankanaey.

The case-marking functions of Philippine noun phrase markers differ from language to language. In Tagalog, *ang* assigns nominative case to the ‘subject’ or ‘privileged argument’ of a clause. The marker *sa* is used to mark “dative case” (Kroeger 1993:13) for goals, recipients, locations, and definite objects; all other non-nominative arguments take *ng*. In contrast, Cebuano *sa* covers actors in Undergoer voice and undergoers in Actor voice (Himmelmann 2005a:144). Kankanaey reference phrase markers divide the roles differently—absolutive vs. ergative vs. oblique—and as noted above can specify definiteness on each marker.

1.1.2.5 Clause structure

Both Tagalog and Kankanaey have a default predicate-initial clause order. Direct arguments have a more free order in Tagalog than Kankanaey’s rigid VSO order. Tagalog has an inverted SVO order, in which the initial S is followed by *ay*. Kankanaey does not have a similar construction, although both languages displace clitic pronouns to a pre-predicate position when there is a displacing element preceding the predicate.

Tagalog and Kankanaey share a similar equative construction, where two NPs with the same case marking (*ang* in Tagalog, *di(n)* in Kankanaey) are juxtaposed and interpreted to be coreferential. Himmelmann (2005:356) analyzes the first NP as the predicate, the analysis taken in this study of Kankanaey as well. Kroeger (1997:148; 2009:819, 822-23) views the second NP as the predicating element, a headless relative clause in a pseudocleft construction, although there is no overt relative marker (present in headed relative clauses). Kroeger also identifies

non-case-marked nominals serving as predicates as indefinite NPs, but this is a broader interpretation of NP than is taken in this study of Kankanaey.

1.1.2.6 Complex constructions

Tagalog has been analyzed as having modal verbs (Kroeger 1993:68), or ‘pseudo verbs’ (Schachter and Otnes 1972:262). These words do not have verbal marking, but they can take arguments. Kankanaey has equivalents to many of the Philippine-type pseudo verbs; they precede the clause core and take no predicate affixation. However, while argument pronouns do attach to them, they do not exhibit a predicate-argument relationship with the pronouns. Instead, Kankanaey “pseudo verbs” are analyzed by their grammatical function as modals or adverbials and by the level within the clause which they modify.

In linked clauses, both Tagalog and Kankanaey have restrictions on the affixation that may be used in the linked clause and the function of the gapped argument. Nominalized clauses are also common in both languages, but they are difficult to compare, being analyzed from varying theoretical presuppositions.

1.1.3 *Iloko, a northern Philippine Cordilleran language*

Iloko (Ilocano/Ilokano) is spoken by nearly 7 million people (9 million by some sources) in the broad lowland areas of the northern Philippines (see the map on p. x). Of the major languages of the Philippines, Iloko is the one most closely related to Kankanaey. A “pidginized form” (Lewis 2009) of Iloko is the trade language throughout the Luzon Cordillera, and is used by many Kankanaey speakers in their business and other contacts with the larger community. Some points of similarity and difference with Iloko are of interest.

1.1.3.1 Pronouns

Iloko personal pronouns are phonologically very similar to Kankanaey, and have 3 sets for the clause core, but not along the same functional lines as Kankanaey. Iloko has Actor/possessor pronouns, absolutive pronouns that cover S and U functions, and an independent set that serves predicatively (Rubino 2005:333, Table 11.5). In Kankanaey there are Actor/possessor pronouns, absolutive pronouns that express the S relation, and independent predicative pronouns that also serve the absolutive U function. Table 1.1 compares the patterning of the personal pronouns in both languages, giving just one example in each group.

Table 1.1. Iloko and Kankanaey pronoun patterns

Person/number	Transitive Actor/possessor	Single- Subject	Transitive Undergoer	Independent/ Predicative
ILOKO				
ERGATIVE:1s (and 1p, 2s, 2p, 3s)	= k(o)	= ak		siak
UNDIFFERENTIATED 1 + 2 (and 1 + 2p, 3p)	= ta			data
KANKANA'EY				
DIFFERENTIATED:1s (and 1p, 2s, 2p)	= k(o)	= ak	sakʔen	
ACCUSATIVE: 1 + 2 (and 1 + 2p, 3p)	= ta		daita	
ERGATIVE: 3s	= na	Ø/sisya		sisya

Iloko pronouns have some similarities in their split system to Kankanaey, in that the speaker and addressee pronouns take a more differentiated pattern (Iloko is ergative while Kankanaey is completely differentiated) but combinations of speaker and addressee and 3rd-person plural group together in taking another pattern (accusative in Kankanaey and undifferentiated in Iloko). The third person singular pronoun in both languages follows an ergative pattern.

Demonstrative pronouns in Iloko express a five-way range of visible and temporal distance, while Kankanaey has only three. Iloko and Kankanaey clitic pronouns are displaced to the *Wackernagel* (clause-2nd) position, but Kankanaey displays no agent neutralization, and less pronoun portmanteau than Iloko.

1.1.3.2 Noun phrases

Iloko noun phrase markers distinguish singular from plural, and proper from common; there is also a demonstrative-based marker that specifies definiteness. As case markers they differentiate only between core and oblique status, unlike Kankanaey markers that assign ergative and absolutive case, with separate oblique marking.

Iloko uses six reduplication patterns (Rubino 2005:329) to express various types of aspectual information in nominal and verbal morphology, only three of which are productive in Kankanaey, with somewhat overlapping functions.

Iloko has extensive nominalizing affixation, including complete sets for manner gerunds, instruments, and locatives that correlate to the predicating affixation. Kankanaey has a much smaller inventory of nominalization, but shares the feature of nominalizing an Actor with the *maN*-prefix.

1.1.3.3 Predicates

Predicate affixes in Iloko mirror the Kankanaey affixes almost exactly, with very similar distinctions based on the semantics of the absolutive argument. Actor and Undergoer voices are distinguished as well as ‘potentive’-mood variations (Rubino 2005:340), which in this sketch are analyzed for Kankanaey as passive voice affixation in Undergoer voice.

Iloko has two negators, *saan* for general negation and *di*, which is the preferred form with verbs (Rubino 2005:332). The distinction between stative and non-stative negation that Kankanaey exhibits is not as sharp in Iloko.

1.1.3.4 Clause

As outlined by Rubino (2005:331-32) Iloko clauses have the same canonical constituent order as Kankanaey:

VERB (+ERG) + ABS (+ adjunct)

Equational clauses are defined for Iloko as those that take a noun phrase or prepositional phrase as the predicate. Equational clauses with nominal-phrase predicates are used to contrast or identify referents, as in Kankanaey.

Existentials in both languages are used to express existence, location and possession. In Iloko, the argument of the existential is not case-marked, unlike Kankanaey. The negative existential is a single word, and takes a case-marked argument.

1.1.4 Other Cordilleran languages

The minority languages of the Philippines have been studied for many years. Numerous articles, dictionaries, and text collections have been published by linguists associated with SIL Philippines, the Linguistic Society of the Philippines and other organizations. The minority languages in the Kankanaey area have been classified as noted above; Kankanaey is included in the Nuclear Cordilleran group. Reid and Liao’s (2004) overview of typical structures and processes in Philippine languages include those in the Nuclear Cordilleran group. This group is comprised of Kankanaey, Bontok, Northern Kankanaey, Finallig, Balangao, and four Ifugao languages, as noted on the map that follows. This analysis will be limited to just a few of the many parallels between Kankanaey, Bontok, and Tuwali Ifugao.

1.1.4.1 Bontok

Kankanaey shares a large percentage of its lexical inventory with Bontok to its north. Some phonological differences, for example some fricatives where Kankanaey has plosives, give a first impression of unintelligibility that is easily resolved in a short time of conversational interaction.

Kankanaey follows the Bontok pattern with a reference-phrase marker that is bound when ergative and free-standing when absolutive. Furthermore, Kankanaey is similar to Bontok in using demonstrative-related markers. Kankanaey has a set of three (speaker-associated, addressee-associated, remote) where Bontok has but two. These demonstrative-related markers have a very weak deictic function.

Bontok allows independent pronouns to follow displaced clitic pronouns, like Tagalog. Kankanaey does not allow that pattern. In most syntactic patterns, though, Bontok and Kankanaey show themselves to be very closely related.

1.1.4.2 Tuwali Ifugao

Tuwali Ifugao, one of the Ifugao dialects in the Nuclear Cordilleran group, is spoken to the east of the Kankanaey area. Other than Reid's areal work (e.g. 1974, Reid and Liao 2004), the main research on this language has been done by Richard and Lou Hohulin.

Like Bontok, Tuwali Ifugao (hereafter T. Ifugao) differs from Kankanaey phonologically, making mutual comprehension difficult at first. The lexicon is substantially different from Kankanaey as well, placing T. Ifugao further from Kankanaey than its northern neighbors like Bontok. The system of noun phrase markers is more complex in T. Ifugao than Kankanaey, although several forms are nearly homophonous.

Like Kankanaey, T. Ifugao has different negators for stative and non-stative predicates, and a separate negative-existential form. With verbs, T. Ifugao further differentiates negative past from negative non-past.

The basic predication affixation of both Bontok and T. Ifugao follows Reid and Liao's prototypical list. Syntactic constructions show many similarities between Kankanaey and T. Ifugao such as the equative clause construction. Nominalization (topicalization in Hohulin's terms) is used in both languages for WH-questions and contrastive focus. Both languages share the special form for nominalized transitive agents (*maN-*) noted in §1.1.3.2 regarding Iloko.

1.1.5 *Conventions used in this sketch*

Examples are presented with the dash (-) indicating morpheme breaks in both the Kankanaey (*italics*) and the gloss lines. The equal sign (=) indicates clitic elements. Chevrons <...> indicate an infix. A discontinuous morpheme may have a single chevron pointing toward its other half, and the tilda ~ follows a reduplicative prefix. The period (.) indicates multiple-word morpheme glosses.

The symbol [ʔ] represents glottal stop following a consonant; glottal stop is also required intervocally and word initial before a vowel but is not written unless necessary for a particular example. The digraph *ng* represents the velar nasal; the letter *e* represents a close central unrounded vowel. Morphophonemics distorts some of the affixed words, especially segment deletion, vowel harmony and nasal assimilation. These are given a fuller display or the underlying vowel used when it is helpful.

Pronouns are identified by person, number, and class; demonstratives by proximity to person, and class. Affixes are tagged to reflect their indexing function, but may not be separately glossed when irrelevant to the example. Tables of affixes and pronoun classes are located when introduced, as well as in the Appendix.

1.2 Role and Reference Grammar – a practical model

1.2.1 *Introduction*

To describe a language, one needs a framework within which to work. Describing a language in a theory-neutral manner is difficult and may lead to ad-hoc definitions and labels. RRG has proven to be a very practical framework for the description of Kankanaey, and the author hopes by this dissertation to demonstrate the usefulness of RRG as a tool for field linguists.

RRG looks at language structure from four perspectives—the surface forms, the underlying semantic structure, the modifying grammatical elements, and the pragmatic information structure—and provides mechanisms for discovering, describing and integrating them all.

The surface forms are the basis for the morphosyntactic representation. The constituents occur in their actual order in the ‘constituent projection’ diagrams. Nodes in these tree diagrams identify levels of constituent grouping. A separate but similar constituent projection is used for noun-phrase analysis.

The second perspective, the underlying semantic structure, provides a clear system of lexical decomposition. For predicates, this system is an *Aktionsart*-based method of

representing the semantics of predicates with their arguments. The semantic representation is linked to the syntactic structure by means of an algorithm, or set of steps. The semantic roles of arguments are correlated with macroroles called Actor and Undergoer. Syntactic rules are based on the macrorole assignment and status of the arguments that appear in the surface forms. General and construction-specific rules comprise the syntax-semantics linking algorithm.

Third, grammatical modifiers are described in a separate representation (called the ‘operator projection’) that correlates grammatical information with the morphosyntactic representation. These modifiers are ordered according to the levels that are identified in the ‘constituent projection’ mentioned above, both for clauses and for noun phrases.

Lastly, RRG addresses the functional issue of information flow by using a ‘focus projection’. This simple diagram indicates the actual extent of focus (new information) in a construction, compared with the possible extent of the ‘focus domain’ of the construction.

The following discussion will expand this overview of RRG to give the reader a fuller introduction to the RRG model. It will also provide a preview of the specific application and adaptation of the model to the analysis of Kankanaey.

1.2.2 Constituent projections

RRG proposes a linear, layered conception of syntactic organization, without positing any underlying forms or movement rules. The layers in this organization are represented as nodes in a ‘constituent projection’ display as in Figure 1.1.

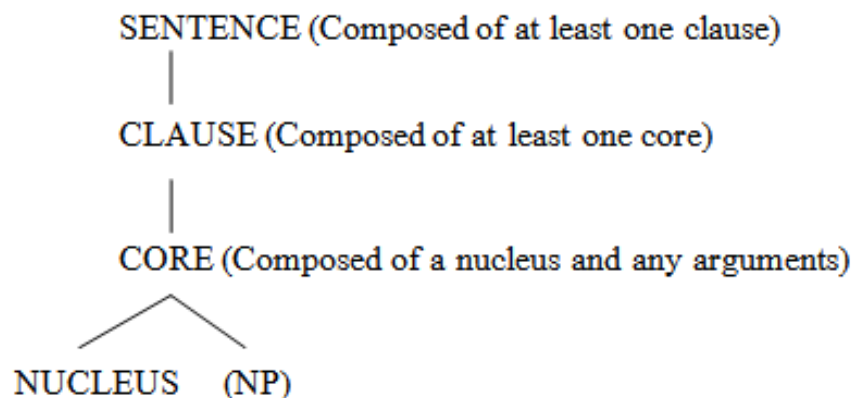


Figure 1.1. Constituent projection (basic)

1.2.2.1 Core constituents

As seen in Figure 1.1, a sentence is composed of at least one clause, which in turn is composed of at least one core. Figure 1.2 below displays the constituent projection of a Kankanaey core. Within the clause core are the nuclear predicating element and its arguments, expressed traditionally as noun phrases. In RRG noun phrases are termed reference phrases (RP). This term is especially appropriate for Kankanaey due to the high percentage of reference phrases that are nominalized clauses. The order in which the constituents of the core occur is language-specific. Kankanaey is a predicate-initial language and can take up to three arguments.

Adverbs that modify the nucleus are not core elements, but are found in positions preceding or following the nucleus. These positions are called nuclear peripheries. Peripheries are connected by arrows to the node at the appropriate level. The full constituent projection of a core is shown in Figure 1.2.

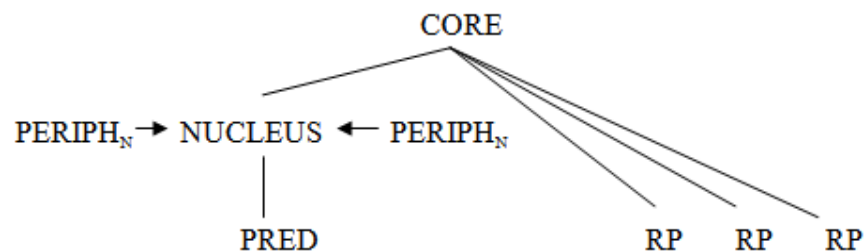


Figure 1.2. Core constituents

1.2.2.2 Clause constituents

Within a clause, core-level modifiers such as adverbial phrases are placed in peripheral positions either preceding or following the core. There are also optional peripheral positions that precede and follow the clause level. In this way, modifying information is represented at the appropriate level but is kept separate from the essential structure. See Figure 1.3.

Two other positions are represented in Figure 1.3—a Pre-core Slot and a Post-core Slot for core information that occurs outside the core but inside the clause. In many languages, new information that comprises the actual focus domain is found in one of these positions. Kankanaey makes very limited use of these slots. Note in Figure 1.3 that the peripheries for clause and core levels are labelled as such.

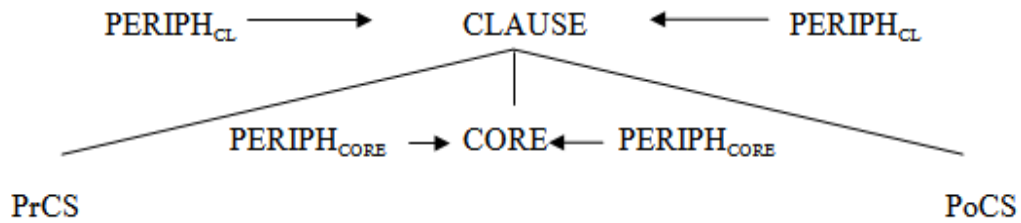


Figure 1.3. Clause constituents

1.2.2.3 Sentence constituents

As a sentence grammar, the highest level addressed by RRG is a ‘TEXT’ node to accommodate multiple-sentence constructions (Van Valin 2005:192). For Kankanaey, this node is labeled ‘Sentence Complex’. As displayed above in Figure 1.1, a sentence consists of at least one independent clause.

Furthermore, a sentence may have information in detached positions. These are labelled the left-detached position (tagged LDP) and right-detached position (RDP). Detached positions are identified by an overt detachment marker. In Kankanaey, either an intonational pause or a detachment particle separates the information in the detached positions from the main clause. The detached positions may hold words, phrases, or clauses. The pragmatic function of the left-detached position is to orient the hearer in some way to the central clause that follows, whether time/space orientation, participant orientation, or logical orientation. The right-detached position tends to carry explanatory information related to the central clause. Figure 1.4 displays the constituent projection of the upper levels of syntactic structure.

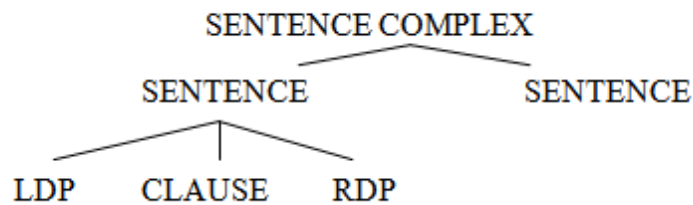


Figure 1.4. Sentence complex and sentence constituents

An example of the constituent structure of a Kankanaey clause is displayed in Figure 1.5. Note that only the predicate, arguments, and peripheral phrase are represented as constituents. Abbreviations are given in the footnote.

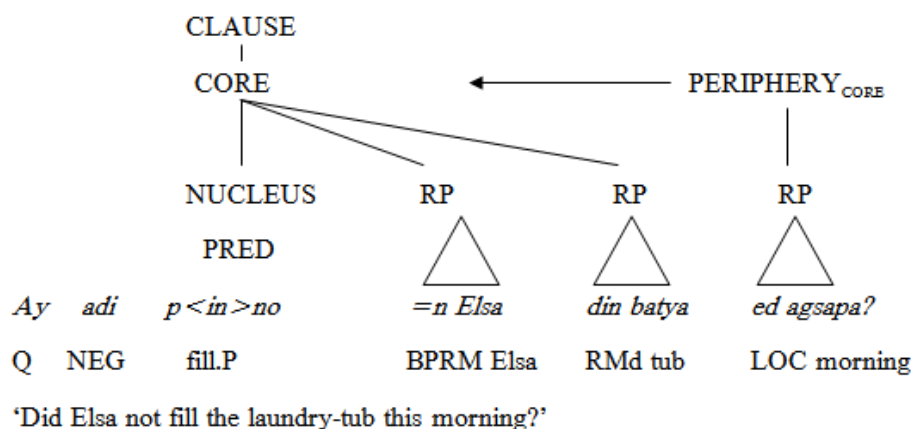


Figure 1.5. Kankanaey clause constituent projection example⁵

1.2.2.4 Reference phrases

RRG analyzes reference phrases (RP) as having a layered structure similar to the clause. RP constituent projections, like clauses, have nodes for core and nucleus. The RP has an argument position for possessive or other genitive-type phrases. Peripheral positions for adjectives and relative clauses are also part of the constituent projection for RPs. The openness of the theory to acknowledging any type of word as the nucleus of an RP is very appropriate for Kankanaey, where a reference phrase may be identified as a reference-phrase marker followed by a core whose nucleus holds an affixed or un-affixed lexical root.

Figure 1.6 shows an example of an RP constituent projection display for Kankanaey.

⁵ RP 'Reference Phrase', PRED 'predicating word', = 'bound morpheme', Q 'question word', NEG 'negator', P 'perfective', HSY 'hearsay, an evidential', BPRM 'bound personal reference-phrase marker', RMd 'reference-phrase marker definite', LOC 'marker for temporal/spatial location'

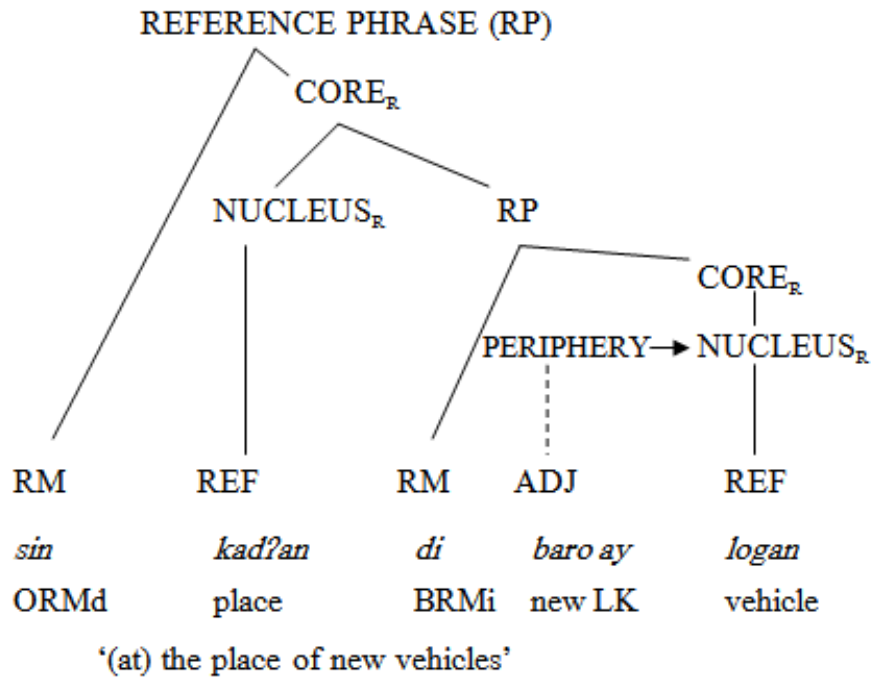


Figure 1.6. Kankanaey RP constituent structure example

1.2.3 Semantic structure

1.2.3.1 Logical structures

RRG proposes that the logical structure (LS) of a predication, with its argument positions, forms the basis for syntactic representation. The LS theory expands on Dowty’s (1979) representational scheme based on Vendler’s (1967) *Aktionsart* classification. A predicate is identified as a member of a particular classification depending on reliable grammatical tests that have been established for English and other languages. As one example, Test 3 (Van Valin 2005:35-6) presents the criterion “occurs with adverbs like *quickly* or *slowly*,” effectively assigning the feature [–punctual] to activities, accomplishments, and active accomplishments. This dissertation proposes a modified set of tests adapted for Kankanaey that enables the same classifications to be identified.

Each *Aktionsart* predicate type has its own semantic representation based on the distinction between states and activities. Predicates are represented in Logical Structure representations as constants marked with a prime accent ('). State and activity predicates are differentiated by the absence or presence of **do'**. Thus a state is represented as **predicate'** (x) or (x, y) while an activity is represented as **do'** (x, [**predicate'** (x) or (x, y)]). (The variables represent arguments of the predicates.) A very small set of modifiers such as CAUSE and BECOME build the other

Aktionsart types from those two predicates. The lexical representations for *Aktionsart* classes from Van Valin (2005:45) are given in Table 1.2. Abbreviations are in the footnote.

Table 1.2. Lexical representations for *Aktionsart* classes⁶

Class	Logical structure
STATE	predicate' (x) or (x, y)
ACTIVITY	do' (x, [predicate' (x) or (x, y)])
ACHIEVEMENT	INGR predicate' (x) or (x,y) INGR do' (x, [predicate' (x) or (x, y)])
SEMELFACTIVE	SEML predicate' (x) or (x, y) SEML do' (x, [predicate' (x) or (x, y)])
ACCOMPLISHMENT	BECOME predicate' (x) or (x, y) BECOME do' (x, [predicate' (x) or (x, y)])
ACTIVE ACCOMPLISHMENT	do' (x, [predicate' (x) or (x, y)]) & INGR predicate' (z, x) or (y)
CAUSATIVE	[α] CAUSE [β], where α , β are logical structures of any type

The modifier BECOME has traditionally been used to express an accomplishment, although technically an accomplishment is a process leading to an achievement (thus PROC + INGR). Because Kankanaey has a contrast between processes that have a specified end result and those that do not, this study includes the operator PROC in its lexical decomposition of Kankanaey process predicates.

1.2.3.2 Macroroles and privileged syntactic argument

Argument positions for each predicate type in this system of lexical representation are represented by variables (x, y), regardless of the specific semantic role each argument may fill. The various semantic role relationships of arguments to their predicate are generalized in RRG into two macroroles, Actor and Undergoer. An argument may be assigned macrorole status, based on its position in the *Aktionsart* logical structure. The Actor-Undergoer hierarchy, shown in Table 1.3 from Van Valin (2005:126), orders the argument positions in relation to their availability for macrorole assignment. (A further predicate DO indicates explicit agency.) The principles for macrorole assignment are listed under the hierarchy in Table 1.3. As argued in Guerrero-Valenzuela and Van Valin (2004), most languages tend to present a mixed system for

⁶ INGR=ingressive (expresses punctual changes of state or activity), SEML= semelfactive (Smith 1997) (punctual events with no result state), PROC= process

undergoer selection and thus need both principles A and B to adequately account for all the patterns.

Table 1.3. The Actor-Undergoer hierarchy

ACTOR				UNDERGOER				
Arg. of	>	1 st arg. of	>	1 st arg. of	>	2 nd arg. of	>	Arg of
DO		do' (x,...		pred' (x,y)		pred' (x,y)		pred' (x)

Actor: assign to highest (left-most) ranking argument in LS

Undergoer:

Principle A: assign to lowest ranking argument in LS (default)

-or-

Principle B: assign to second highest ranking argument in LS

Syntax and verbal morphology interact with macrorole assignment. For example, if an argument in the logical structure is blocked from macrorole assignment, this will be reflected in the form of the verb and the structure of the clause. However, semantic transitivity in terms of two macroroles will not necessarily map into syntactic transitivity in terms of the clause structure. One important result of macrorole assignment is that one of the macrorole-assigned arguments will be chosen to hold a privileged syntactic role in clause structure, often as the 'subject'. This privileged syntactic argument (PSA) may have unique coding and behavioral properties. Language-specific linking algorithms must be established for assigning PSA status to an argument, delineating the privileges of that argument, and providing for the marking and positioning of other constituents.

For Kankanaey, the *Aktionsart* classification and macrorole assignment fit the data very well. Variable pragmatic assignment to Undergoer (Principles A and B) in Kankanaey is especially useful. Included in the Kankanaey linking algorithm is the ergative pattern of PSA assignment in the clause.

Figure 1.7 illustrates part of the analysis of the clause from Figure 1.5. It represents the logical structure of the predicate, macrorole assignment and PSA selection. In the logical structure, 'fill' is shown to be a causative accomplishment predicate, in that the predicate does not denote the specific action, only the effect produced. As the left-most argument, 'Elsa' is assigned the Actor macrorole. The right-most argument, *batya*, is assigned the Undergoer macrorole. In Kankanaey, the Undergoer is the default choice for PSA. This choice then influences the affix on the verb, the order of the arguments, and the type of reference-parse markers on the arguments.

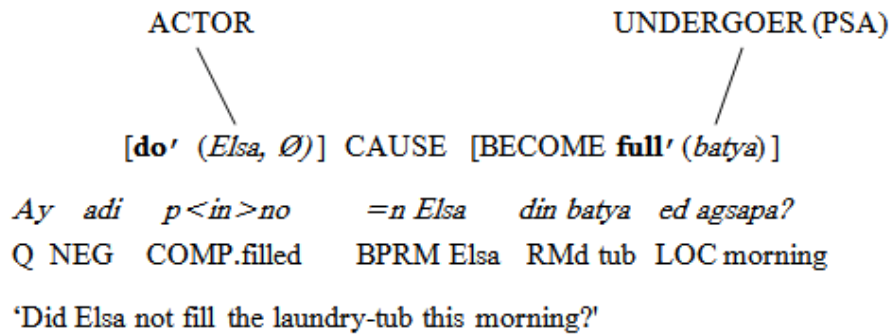


Figure 1.7. Kankanaey predicate logical structure with macroroles and PSA assigned

1.2.4 Operator projection

Grammatical categories such as tense, aspect, negation, and illocutionary force are termed 'operators' in RRG. Operators occur at the clause, core, and nuclear levels in a sentence and are analyzed separately from the clause constituents. Operators that occur in reference phrases, such as number and definiteness, are also analyzed separately. The 'Operator Projection' identifies the layer of the structure that each operator modifies. This is important when analyzing complex constructions. The operators in a clause are shown in Table 1.4, from Van Valin (2005:9).

Table 1.4. Operators in the layered structure of the clause

Nucleus:	Aspect
	Negation
	Directionals (only those modifying orientation of action or event without reference to participants)
Core:	Directionals (only those expressing the orientation or motion of one participant with reference to another participant or to the speaker)
	Event quantification
	Modality (root modals, e.g. ability, permission, obligation)
	Internal (narrow scope) negation
Clausal:	Status (epistemic modals, external negation)
	Tense
	Evidentials
	Illocutionary force

Kankanaey follows these norms in almost every case. One notable exception is the absence of tense. Perfective aspect (a nuclear level modifier expressed by affixation on the predicate) indicates completion and thus realis.

In Figure 1.8 operators are shown for the Kankanaey example sentence. They are represented in the ‘Operator Projection’ using arrows to identify the level being modified. Note that the negation is narrow-scope at the core level, and that perfective aspect (the infix <in>, tagged P) is a nuclear operator. The yes-no question word *ay* ‘Q’ indicates the illocutionary force, a clause-level operator.

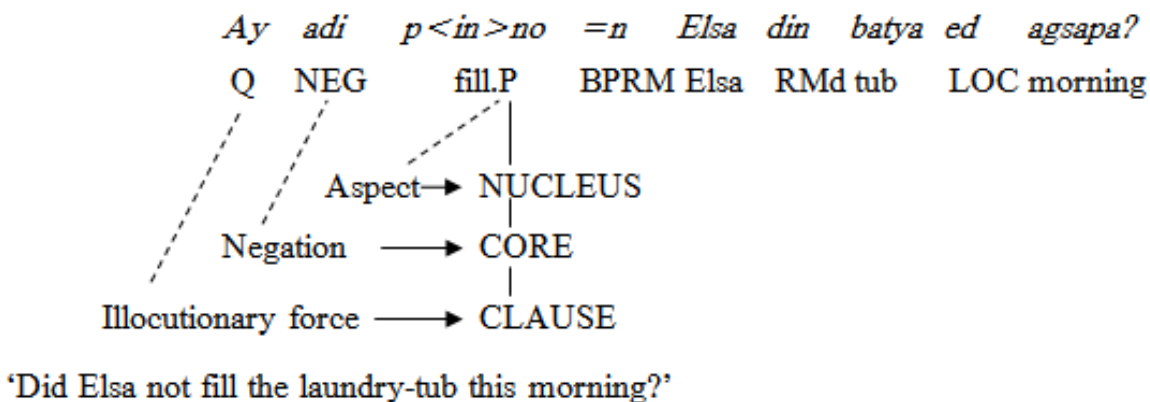


Figure 1.8. Kankanaey clause with operator projection

1.2.5 Information structure

The fourth perspective in the RRG framework examines the pragmatic flow of information. It recognizes the influence of the larger context in a syntactic analysis of any sentence. Constituents of a sentence may express information that is new to the hearer, or that refers to information already known or presupposed. RRG builds upon Lambrecht’s theory of information structure (e.g. Lambrecht 1994), in which topical information is presupposed while focus refers to information that is new. It draws a distinction between the possible domain of focus information in a given structure and the actual focus of a given clause. An entire clause could potentially be new information. However, in the Kankanaey clause that we are using as an example, the information units *=n Elsa* and *din batya* ‘the tub’ and *ed agsapa* ‘this morning’ are presented as definite, known entities. This leaves only the modified nucleus *adi pinno* ‘didn’t fill’ as the focus information. The focus structure projection is shown in Figure 1.9.

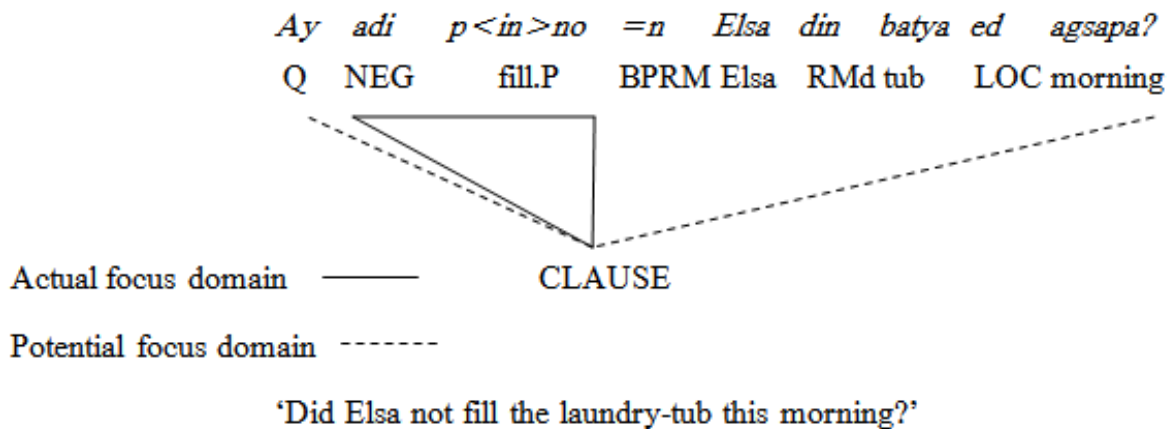


Figure 1.9. Kankanaey example with information structure projection

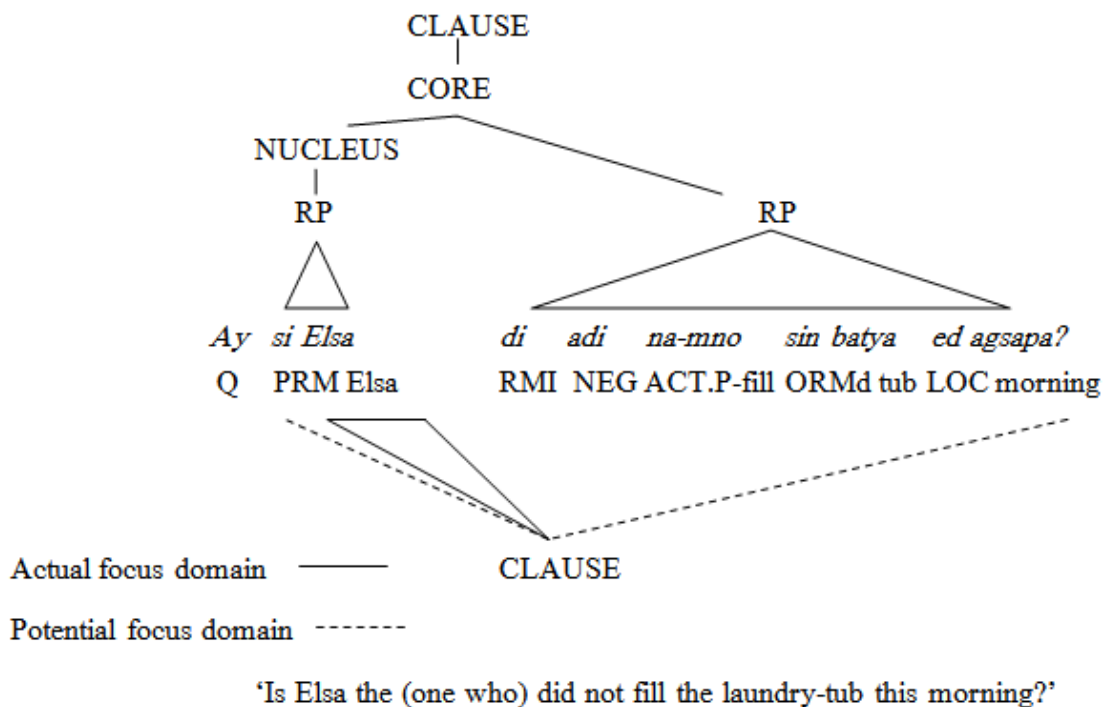


Figure 1.10. Constituent and information structure narrow-focus example

The predicate-first structure of Kankanaey fits with its focus-first tendency, a tendency common to many languages. The information structure analysis explains the syntactic phenomenon in Kankanaey of a narrow-focus RP being placed in the clause-nuclear position. Figure 1.10 above represents the constituent structure and the information structure when the

example sentence is reconfigured to express narrow focus on the constituent *Elsa*. New abbreviations are in the footnote⁷.

1.2.6 Conclusion

This introduction has provided an overview of Role and Reference Grammar and how it has been used to analyze Kankanaey. The ‘layered structure of the clause’ with its several positions gives a clear explanation of how the constituents of a clause are ordered and, more satisfying, an explanation of the hierarchical relationships between them. RRG’s separation of ‘operators’ from the other clause constituents has proved to be helpful in sorting out many confusing details. The analysis of the logical structure of predicates is most helpful in understanding the relationships that arguments have with their predicates. The complicated affixation and voice alternations in Kankanaey lose their mystery when the logical structure is used as the starting point for ‘macrorole’ assignment and syntactic relations. And finally, understanding the pragmatic ‘focus structure’ of clauses has provided a tool that aids linguistic research from clause analysis to whole discourse analysis.

The following chapters will describe the Kankanaey language in detail, using the tools and strategies of RRG. Chapter 2 deals with morphology, especially predicate formation using lexical decomposition. Chapters 3 and 4 deal with the constituents and operators of reference phrases and simple clauses, respectively. Chapter 5 looks at complex constructions, while chapter 6 analyzes those complexities in terms of their privileged syntactic arguments. Chapter 7 deals with the flow of information as it is managed through Kankanaey grammar. Appendices and references follow chapter 7.

⁷ PRM=Personal Reference Phrase Marker, RMi= indefinite Reference Phrase Marker, ORMd=oblique Reference Phrase Marker