Negation and Negative Pronouns in Chontal Mayan

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Gabrielle Tandet

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Abstract

This thesis describes and analyzes negation and negative words in Chontal Mayan, a language of southern Mexico. It provides a detailed overview of the different strategies of negation in Chontal and their distribution, focusing on clausal negation and negative indefinites. For each of these, the data is presented, explained syntactically, and contextualized typologically.

Clausal negation in Chontal is shown to be marked by a negative particle that is the head of a phrase NegP, which is above TP in the syntactic structure. Negative indefinites are divided into two classes, negative pronouns and noun phrase negators, and shown to pattern differently with respect to their co-occurrence with clausal negation; they are also demonstrated to be inherently negative. I then address the problem for compositionality posed by the appearance of negative words with negative morphemes, arguing that an agreement-based approach best accounts for these facts in Chontal.

I also propose an explanation of the distribution of split ergativity in Chontal. Split ergativity appears with positive imperfective intransitives but disappears under negation. This is argued to be the result of an embedding predicate u, which appears only under negation and selects an intransitive complement that can only take absolutive marking. I explain why past analyses of split ergativity in Mayan are incapable of accounting for these facts in Chontal.

This thesis is the first syntactic analysis of negation in any Mayan language. As such, it provides linguists with new data, coupled with theoretical work, that can facilitate future work in fields from the syntax of negation to micro-variation within Mayan linguistics.

Table of Contents

Chapter 1: Introduction

The goal of this thesis is to describe and analyze negation and negative words in Chontal Mayan, a language of southern Mexico. It will provide a detailed overview of the different strategies of negation in Chontal and their distribution, discussing clausal negation, constituent negation, and negative indefinites. The thesis will consist of two main parts. The first part will describe clausal negation in Chontal, while the second part will explore negative indefinites in Chontal. Both parts will use this descriptive data to explain the syntactic structures underlying different kinds of negation in Chontal, providing an analysis of the underlying syntactic structure of negation and demonstrating which existing theories are able to account for the Chontal data and where existing theories fall short. I will also situate these features of Chontal in a cross-linguistic typological context, highlighting similarities between the structures in Chontal and in other languages.

This thesis will be the first detailed syntactic analysis of negation in any Mayan language. As such, it will be a first step toward expanding the boundaries of syntactic analyses of negation beyond Indo-European languages and evaluating the proposed theories in light of this new data. It will also have relevance beyond the literature on the syntax of negation. I will propose an explanation for the problem of split ergativity in Chontal, which appears to disappear unexpectedly under negation, and I will discuss issues ranging from movement and its diagnostics to bilingualism and language change as they relate to negation in Chontal.

1.1 Negation: What and Why

Bond (2007b:3) defines negation as "a superordinate grammatical category that models a direct contrast between a state of affairs in some unrealized world (the concept(s) expressed by a counterpart affirmative) in relation to the real world or a different unrealized world, projected as a perception or belief of the speaker." Every language has some way to express negation, making it a fundamental, universal property of human language (Bernini & Ramat, 1991). However, strategies of negation vary widely across different languages, so a cross-linguistic examination of negation can tell us what possibilities the grammar allows in this domain (Zanuttini, 2001).

Moreover, analyses of negation can reveal structural information about many other properties of language. Negative markers occur in the same domain as markers of features such as tense, aspect, and mood, and it interacts and is often sensitive to these, which can reveal properties of a language's tense-aspect-mood system that are not immediately apparent (Zanuttini, 2001). Negation also frequently parallels other structures, such as wh-questions, and an exploration of the similarities and differences therein can highlight facts about both (Haegeman, 1995). Additionally, negation operates at the interface of syntax, semantic, and pragmatics, so an investigation of negation can shed light on all three independently and tell us about their intersections.

This thesis contributes to the existing literature on negation by providing an analytical description of negation in a language family for which no such analysis exists. As such, it will enable comparisons between Mayan negation and negation in other language families and provide more data to enhance our understanding of what different

possibilities exist in the realm of negation. The next section details the importance of such work.

1.2 The Importance of Analytical Descriptions

Documentation of a variety of languages is a critical component of designing and testing a broadly explanatory linguistic theory. Linguistics as a science "depends on access to linguistic diversity" (Comrie, 2007:27). Any linguistic theory must account for the diversity of all possible surface forms found in natural language, and it is impossible to define a universal grammar or discuss what is constant among all grammars without data from a broad diversity of languages (Hale 1998). Data from understudied languages are important to identify the true limits to the possible structures of human language. Without descriptions and analyses of these languages, our theories would be based on relatively few dominant languages with very little cross-linguistic diversity, creating a heavy Eurocentric bias (Bond, 2006). This runs the risk of creating seriously flawed linguistic theories. Stapert (2007) notes that if theories are based and tested only on small sets of data before becoming widely accepted, future data may be forced into that theoretical framework without consideration of more economic or theoretically elegant alternatives, or patterns may be accepted where no pattern actually exists.

In light of this threat to sound linguistic theory, what is needed is more and better analytical descriptions of understudied languages. All languages can make some contribution to the general study of grammar, and oftentimes data from these languages demonstrate the possibility of structures that theories say should not exist (Hale, 1998). Typological rarities from these languages should be documented "with the same amount

of integrity as typological norms," since even rare structures must be accounted for in a theory that defines what is and is not possible in language (Bond, 2007a:7). Coupling these descriptions with syntactic analysis is particularly important. General descriptions are insufficient to enable accurate theories, because mere descriptions frequently provide relatively few examples and leave the reader, who likely has no knowledge of the language, to hypothesize as to the underlying rules governing the structure without the ability to test his or her predictions against what is possible in other realms of the language. Rather, "the range of languages for which reasonably deep and accurate analyses exist must be greatly expanded" (Baker & McCloskey, 2007:294). Theoretical work would benefit greatly from syntactic analyses done by experts of these languages, who can more easily and more accurately ensure that analyses account for all of the facts in a language.

In this context, new work on Mayan languages is particularly informative. Mayan languages are not well documented or explored in the linguistic literature. While there exist reference grammars of most Mayan languages, such grammars are necessarily shallow due to the necessity of describing an entire language in a few hundred pages, and there are far fewer works that provide syntactic analyses of the phenomena in these grammars. More work on Mayan could be of significant value to linguistics because the large number of Mayan languages that are still spoken today allows micro-comparison among different languages in the family. Micro-variation within a family can be extremely productive in revealing new facts and highlighting similarities and differences between languages. Indeed, many modern syntactic theories are rooted in micro-

comparisons of well-studied Indo-European language families like Romance or Germanic.

The present is a uniquely important time to study Mayan languages. England (1998) argues that many Mayan languages are in the process of language death. As younger generations become more bilingual, these languages "show signs of active shift, in which an increasing number of children […] are not learning the Mayan language as a first language, and in some cases not at all," resulting in the emergence of many Maya who do not speak a Mayan language at all. This is true in the case of Chontal, the language on which this thesis focuses. Speakers are transitioning to Spanish, and my conversations with Chontal speakers in the field indicate that more and more children are not learning the language in favor of speaking only Spanish. Micro-comparisons within the Mayan language family could provide a wealth of information to syntacticians, but without new projects of description and analysis, these languages may be lost before linguists get the chance.

One particular area where documentation can reveal a great deal about the underlying structure of languages is in the area of negation. Describing negation in understudied languages is critical for syntactic analyses, because only with data from a broad variety of languages can accurate cross-linguistic theories be formed. To date, negatives have been a highly restricted area of research. Theoretical work on negation has focused on very few languages besides English, almost exclusively restricted to Romance and Germanic languages, resulting in a "stronger than usual bibliographical bias" (Penka & Zeijlstra, 2010; Bond, 2007a:7). This is compounded by the lack of useful descriptive work on negation. Grammars frequently devote only a few pages to

negation and tend to focus exclusively on negation in declarative, indicative verbal clauses (Bond, 2007a).   There are rarely examples of negation of other types of clauses and there is almost never data on negative pronouns, despite its being a central issue in the literature on negation (Dahl, 1979). Extensive analytical descriptions of these phenomena are a critical prerequisite to formulating accurately descriptive theories of negation.

This thesis is a step towards fulfilling the goals outlined by this research paradigm by providing a description and analysis of negation in Chontal Mayan. Chontal is under-studied and under-described even in comparison to other Mayan languages. Many aspects of its negation system have never been described, and the syntactic and semantic implications of Chontal negation have never been explored. There do exist brief descriptions of negation in monoclausal declarative sentences in Chontal, but these still lack examples of negation in sentences with more than one clause or any summary and analysis of these negative structures (Knowles-Berry, 1984, 1987; Keller, 1997; Osorio May, 2005). Moreover, there appears to be no description of negative pronouns in any Mayan language whatsoever, a gap in the literature which this thesis will begin to fill. The data and analysis contained in this thesis and its accompanying data set can enable future theoretical work on the syntax and semantics of negation and related topics, such as aspect and ergativity. It can also stimulate micro-comparison among Chontal and other Mayan languages which have and will be better described.

The descriptive work contained in this thesis has broad utility beyond theoretical descriptions of negation. First, it can inform analyses in other subfields of linguistics. Comrie (2007) notes that more data from understudied languages can resolve historical

debates and shed light on genetic affiliations and contact between languages. This is uniquely true in the context of Mayan. Archaeologists are consistently working to reconstruct the language of Mayan hieroglyphs and resolve issues like the meaning or significance of particular signs. This language is believed to have been a Cholan language, either the ancestor of modern Chontal or its close relative. As such, in-depth modern descriptions of Cholan languages can aid in reconstructing this language and clarifying the meaning of particular signs or structures in the hieroglyphic language.

Additionally, the data in this thesis is a first step in documenting the Chontal of bilingual young speakers. Nearly all of the data for this thesis was collected in collaboration with young native speakers of Chontal, between 20 and 30 years of age, who have been educated in Spanish and are fluent bilinguals. These youth represent an entirely different generation than the work of Knowles-Berry, conducted in the early 1980s, or Keller, who worked with Chontal speakers for some decades beginning in the 1950s. As such, it could shed light on the processes of language change in the context of widespread bilingualism. Chontal is unique in this respect because it may be the Mayan language with the most widespread Spanish-Mayan bilingualism (Montgomery-Anderson 2006:30). Young bilingual speakers' Chontal can then be compared with the speech of older generations as well as the speech of heritage Chontal speakers as documented in Knowles-Berry (1987b) to draw conclusions about processes of language change.

Beyond the field of linguistics, formal descriptions and analyses of language can inform a variety of other disciplines. Himmelmann (2006) notes that works like the present thesis can be used by language planning organizations, language educators, sociologists, anthropologists, and the speech community itself. These works provide

some ethnographic and cultural information on the Chontal Maya that can be useful to academics and can also help educators develop pedagogical materials. Additionally, they signal to Mayan speech communities, which often view their language as inferior to the dominant language in the state, that their linguistic heritage is important and ought to be continued. Indeed, England (2003) notes that Maya cultural revitalization efforts have explicitly made use of linguistic knowledge and formal work on their language to support their activism and encourage use of the language.

As such, this thesis will serve a number of purposes. It will provide a thorough description of negation and negative pronouns in Chontal, combining descriptive and analytical work on negation in the language. This analysis can inform future theoretical work that attempts to account for the negation possibilities available in all human language, which is presently suffering from an overemphasis on available data, which is overwhelmingly from European languages. This is particularly important in the context of negation because negation can be incredibly informative about other areas of language, ranging from syntax to semantics to pragmatics and their interfaces. This thesis will also have applications in fields ranging from anthropology to pedagogy, as the information contained herein can be used for such purposes as historical reconstructions and language education planning.

1.3 Thesis Methodology and Data Collection

All of the examples in this thesis, unless otherwise noted, were collected during my fieldwork in Tabasco in the summer of 2012. I worked with native speakers of the Nacajuca dialect at the Universidad Intercultural del Estado de Tabasco in Oxolotán,

Tabasco, and in the Chontal-speaking towns of Tapotzingo and Guaytalpa. Many of these speakers were relatively young (between 20 and 30 years of age).

Much of the data was elicited from these speakers, guided by various negation questionnaires (Bond, 2006; Comrie & Smith, 1977; van den Berg & Kahrel, 1989). During elicitation sessions, I constructed sentences in Spanish and asked speakers to translate them into Chontal. I also frequently constructed Chontal sentences based on their replies and my knowledge of the language and asked speakers whether they were grammatical and, if not, how they could be. The remainder of the data comes from spontaneous, non-elicited speech. All of the data below have been confirmed with multiple speakers of Chontal. Where the speakers disagreed on the acceptability of a form, this has been noted.

All of the primary linguistic data collected for this thesis, including many more sentences than could be fit into the length of this paper, can be found on the Polinsky Lab Dataverse website: http://dvn.iq.harvard.edu/dvn/dv/polinsky.

1.4 Structure of the Thesis

This thesis contains four chapters in addition to this one. Chapter 2 provides an overview of Chontal grammar, explaining the important features that will be necessary to understand the examples throughout the rest of the thesis. Chapter 3 describes clausal negation in Chontal, first laying out and summarizing the facts of clausal negation and then providing an analysis of the syntactic structure of negation and discussing the problem of split ergativity. Chapter 4 details negative word formation in Chontal, focusing in particular on negative pronouns, and explores the apparent problem of

Negative Concord, focusing on how current syntactic theories fare in light of the Chontal data. Chapter 5 concludes and suggests some avenues for future research based on the work in this thesis.

Chapter 2: Chontal Grammar

This chapter provides an overview and introduction to the Chontal Mayan language to familiarize the reader with the language before discussing the particulars of Chontal negation. Section 2.1 describes the Mayan language family and Chontal's position within the family. Section 2.2 contains a note on the orthography used to transcribe the Mayan examples throughout this thesis. Section 2.3 outlines the grammar of Chontal, focusing on sentence structure and word order (2.3.1), different types of predicates and their inflection (2.3.2), and agreement (2.3.3). Section 2.4 discusses the methodology of the fieldwork that went into this thesis.

2.1 The Mayan Language Family and Chontal

The word *chontal* is a Nahuatl word meaning stranger, and the language was named Chontal by the Nahuatl people, who could not understand the strange language spoken by the Maya they encountered at Nacajuca (Scholes & Roys, 1996). It is not the Mayan name for the language, nor is it even unique (there are other languages called Chontal in Oaxaca and Nicaragua for the same reason). Speakers of Chontal call the language *yokot'an*, meaning 'true language'.

Chontal is spoken by about 38,000 people in the state of Tabasco, Mexico (Osorio May, 2005). Very few of these are monolingual Chontal speakers. The majority are bilingual in Spanish, although older generations, especially women, tend to be less fluent in Spanish than younger generations and older men. Three dialectal regions of Chontal have been recognized: Nacajuca, San Carlos, and Tamulté de las Sabanas. These dialects are mutually intelligible.

Chontal is a Mayan language. The Mayan language family includes 31 related languages spoken principally throughout southern Mexico and Guatemala (Campbell & Kaufman, 1985). Two of these languages, Ch'olti' and Chicomuceltec, are now extinct. The remaining 29 are still spoken by about six million, though this number varies greatly, ranging from about two million speakers of K'ichee' to only 12 speakers of Itza' (Lewis, 2009). Academics generally agree that there are five subgroups of the language family, although higher-level relationships between these subgroups are still being debated.

Chontal and its closest related language, Chol, together form the Western Cholan group, which, along with Ch'orti' and Ch'olti' (Eastern Cholan), makes up the Cholan subgroup (see Kaufman & Norman, 1984 for a more detailed overview). The Cholan subgroup is itself part of the Greater Tzeltalan subgroup, along with Tzeltal and Tzotzil. Greater Tzeltalan and Greater Q'anjob'alan together form the Western Mayan branch of the family (Kaufman, 1976). Greater Tzeltalan is a widely accepted subgroup of the Mayan language family (Campbell & Kaufman, 1985).

Below is a map of Tabasco. The shaded areas are *municipios* (into which Mexican states are divided, similar to counties in the US) where Chontal is spoken. The Nacajuca dialect is spoken in the *municipios* of Nacajuca and Centla, the San Carlos dialect is spoken in Macuspana, and the Tamulté de las Sabanas dialect is spoken in Centro. Very few speakers remain in Jonuta, such that it is not its own dialect region.

Figure 1 − Chontal-Speaking Areas of Tabasco (Osorio May, 2005)

Bilingualism is common in Chontal (Knowles-Berry 1984, 1987b). Nearly all speakers of the language are now bilingual in Spanish, which is considered the prestige language due to its socioeconomic utility and is the language of education and government even in predominantly Maya areas. As a result of bilingualism, children in many areas are no longer learning to speak Chontal fluently, leading some to argue that Chontal is a dying language (Knowles-Berry, 1987b) or that it is endangered (England, 1998).

2.2 A Note on Orthography

The phonology of Chontal includes many phonemes not found in English or Spanish. Many different orthographic systems have been used to represent these sounds.

This thesis adopts the standardized orthography of the Academia de Lenguas Mayas de

Guatemala (ALMG) (López Raquec, 1989). This orthography was originally proposed as

a standardized system for the Mayan languages of Guatemala, but its use has since

become widespread throughout Mexico as well (see Brody, 2004 for discussion). Below

is a list of IPA phonetic representations and their corresponding ALMG graphemes.

IPA	ALMG
ʃ	x
tʃ	ch
ts	tz
h	j
ʔ	'
ɨ	ä

Additionally, Chontal and other Mayan languages have many ejective consonants.

This is represented in both IPA and ALMG orthography as ' (an apostrophe) after a letter

to mark that that phoneme is ejective.

2.3 Chontal Grammar: An Overview

The grammar of Chontal has been described in some detail by Knowles-Berry (1984).

This section will not aim to summarize every aspect of Chontal grammar but will instead

provide a brief sketch of those points most salient for the purposes of this thesis.

2.3.1 Sentence Structure

Like other Mayan langages, Chontal is generally a head-initial language. Comrie (1989) outlines some characteristics of a language that reflect constituent order in that language. Examples 1-3 provide some evidence in favor of head-initiality under Comrie's principles. 1 demonstrates that Chontal has prepositions rather than postpositions. 2 shows that relative clauses follow the nouns they modify. 3 indicates that auxiliary verbs precede the lexical verbs in the sentence. All of these are strong indicators of head-initiality.

(1) *kä   xe tä   ch'uj*

   1ERG   go PREP   church

   'I'm going to church.'

(2) *ni chum-l-ip'   ka'an chum-u-ø   aj   mis a   xot-k-i-ø*

   the seat-ADJ-NMLZ   where seat-ADJ-3ABS CLF.M cat PRF   break-PASS-PRF-3ABS

   'The chair where the cat is seated was broken.' (Knowles-Berry, 1984:348)

(3) kä-xe   kä-päk'-e-ø   choj

   1ERG-go   1ERG-plant-IPFV-3ABS   cornfield

   'I am going to plant the cornfield.'

Additionally, Chontal will be shown to be verb-initial, which is another correlate of head-initial languages.

However, there are some exceptions to head-initiality in Chontal. Inflectional and derivational morphemes are typically suffixal rather than prefixal, as exemplified by the causative in 4, and 5 shows that noun phrases are noun-final.

(4) a. *hake*

   'to descend'

  b. *kä-hak-se-n-ø*

    1ERG-descend-CAUS-IPFV-3ABS

    'I lower it'

(5) *jin-ba   tzätz-äl   bu'u*

   DEM-FOC hard-ADJ   beans

   'these hard beans'

    While the language is still generally head-initial, many head-final features, especially suffixation, will be found throughout the examples in this thesis.

    Chontal does not require that the verbal arguments be overtly expressed, since the arguments are also marked on the verb (see section 2.3.3 for a discussion of argument marking in Chontal). Indeed, pro-drop is frequent and many sentences consist only of a verb. We have already seen an example of such a sentence in 4b, repeated here.

(4) b. *kä-hak-se-n-ø*

    1ERG-descend-CAUS-IPFV-3ABS

    'I lower it'

    Nearly all Mayan languages are verb-initial (England, 1991). The parent langage, Proto-Mayan, is similarly reconstructed as verb-initial (Campbell & Kaufman, 1985). Chontal poses no exception to this generalization. Sentences in Chontal are typically predicate-initial, as example 6 shows.

(6) *u-chän-i-ɸ*   *telom* *aj*   *betu*

    3ERG-see-PRF-3ABS   girl   CLF.M   Roberto

    'Roberto saw the girl.' (Osorio May, 2005:16)

       However, raising and topicalization make all word orders possible in Chontal. This is also true of sentences with only one argument expressed: the default word order is verb-subject or verb-object, but the subject or object can precede the verb, as demonstrated in 7. In all cases where a constituent precedes the verb, it may be marked with the focus marker *-ba*, but such marking is not obligatory.

(7) a. *wäy-i-ɸ*   *ixik*

      sleep-PRF-3ABS   woman

   b. *ni*   *ixik*   *wäy-i-ɸ*

      the   woman sleep-PRF-3ABS

      'The woman slept.'

Similarly, embedded clauses also tend to be verb-initial, although all other word orders are still possible.

       The only restriction on this apparently free word order arises when there is possible ambiguity, i.e. when there are two third-person arguments expressed and either argument could be the subject or object of the verb. In this environment, the subject must precede the object, meaning that only SVO (7a), SOV (7b), and VSO (7c) word orders are grammatical.

(8) a. *ni   wichu' u-k'ux-i- ∅*   *aj   mis*

     the dog   3ERG-eat-PRF-3ABS   CLF.M cat

     'The dog bit the cat.'

  b. *ni wichu' aj mis uk'uxi*

  c. *uk'uxi ni wichu' aj mis*

Word orders where the object precedes the subject are ungrammatical for this intended

reason. Rather, the first DP is always interpreted as the subject.

     Thus far, this overview has focused on the position of the verb relative to its

arguments in the sentence. However, predicates are not limited to verbs. Other

predicates include nouns and adjectives, as Chontal does not have an obligatory overt

copula; positionals; and existentials. These predicates will be discussed in more depth in

the next section, but the same word order variations are possible for all types of

predicates.

     All of these facts point to the predicate-initiality of Chontal, as do syntactic

analyses of both Chontal and other Mayan languages. However, subject-initial sentences

are becoming more common. Indeed, Knowles-Berry (1984) claims that SVO is the most

common word order[1]. As such, many of the examples contained in this thesis will have

this word order.

2.3.2 Predicates

     Chontal distinguishes between stative predicates and verbal predicates. While

both types of predicates share some common properties, such as their unmarked position

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[1] Osorio May (2005) disagrees that SVO is the most common word order in Chontal. However, he does not dispute that SVO is frequently used.

18

at the beginning of the sentence or the ability to be negated or made into a question, the inflectional morphology is quite different for each type of predicate. As such, they will be discussed separately here, beginning with stative predicates and moving on to verbal predicates.

2.3.2.1 Stative Predicates

The term "stative predicates" in the context of Chontal refers to nonverbal predicates that "express the temporary or permanent existence, identification, location or state of a person, animal, or thing" (Knowles-Berry, 1984: 294). In this sense, it is distinct from the more general linguistic use of "stative predicate," wherein this term can also refer to verbal predicates that reference states of being. In Chontal, stative predicates do not inflect for tense or aspect; consequently, their inflectional morphology is quite simple. Stative predicates include existentials and positionals as well as sentences with a null copula. Each will be discussed briefly in turn.

In Chontal, the copula is frequently omitted[2]. The subject of the sentence is expressed by an absolutive marker suffixed to the noun or adjective that constitutes the predicate, as in 9 & 10.

(9) *ixik-on*

    woman-1ABS

    'I am a woman.'

---

[2] It has been argued that the copula does not exist at all. However, Keller (1997) provides evidence that there is a copula, *jin*, in such sentences as the following:
    mach   jin   ni'untu ixik
    NEG   be   no one woman
    'No one is a woman.'

(10) *pok'om-et*

   fat-2ABS

   'You are fat.'

A second type of stative predicate in Chontal is the existential, used to convey existence and location. It is expressed by the existential *ya'an*, which takes the absolutive marker referencing the subject as a suffix. The subject, if expressed, typically appears after the existential and before the modifier describing where the subject is (if there is one).

(11) *ya'an-on*   *tan*   *otot*

   EXIST-1ABS   PREP   house

   'I am in the house.'

(12) *ya'an-ø*   *ix*   *Ana*   *tan*   *ch'uj*

   EXIST-3ABS   CLF.F   Ana   PREP   church

   'Ana is in the church.'

(13) *ya'an-ø*   *manzana*   *jäts'äkna*

   EXIST-3ABS   apple   delicious

   'There are delicious apples.'

The final type of stative predicate in Chontal is the positional predicate. Positionals in Chontal refer to the "physical states or positions that human beings, animals, and inanimate objects can assume," including shapes, positions, configurations, and much more (Knowles-Berry, 1984:74). All Chontal positionals have the phonological shape CVC. Positionals can be stative predicates, as in 14-15; they can also inflect as verbs with the verbal suffix *–wän* or *–te(l)*.

(14) *chum-ul-et*

seated-ADJ-2ABS

'You are seated.'

(15) *wa'al-on*

stop-1ABS

'I am stopped.'

2.3.2.2 Verbal Predicates

The verb is the center of the Chontal sentence (Keller, 1997). Chontal has a rich system of derivational and inflectional verbal morphology that distinguishes between several verb classes. The canonical root verb form is CVC, to which a variety of derivational suffixes and infixes can be added to produce a derived verb form. Derived and root verbs take different inflectional suffixes.

Aspect is the main semantic feature marked on verbs. Chontal makes a distinction between the perfective and imperfective aspects, the difference being that the perfective aspect marks a completed action where the imperfective does not (Comrie, 1976). This is expressed by a "status suffix" on the verb. In Mayan languages, these status suffixes mark tense, aspect, and/or mood of the verb, depending on the language (Kaufman, 1990). In Chontal, the status suffix differs depending on the transitivity of the verb and whether the verb is a root or contains derivational morphology (Kaufman & Norman, 1984). Chontal also has a set of independent aspect markers which precede the verbal complex. For perfective and imperfective verbs, these markers are optional and

frequently not used, but progressive and future verbs can only be expressed with preverbal markers.

Other verbal categories, including mood and voice, are marked by additional infixes or suffixes that precede the status suffix. Verbs in Chontal also agree with the subject and object of the sentence following an ergative-absolutive agreement pattern, which will be discussed further in section 2.3.3. The ergative marker precedes the verb and the absolutive marker follows the verb and all of its suffixes. This sets up the following verbal complex:

> **ERG-root-derivational suffixes-mood suffixes-status suffix-ABS**

The majority of these affixes are invariable for all verb forms. However, in Chontal many status suffixes crucially depend on the transitivity and morphological status of the verb. All perfective verbs take the same status suffixes: *-i* with a third-person subject and *-ϕ* with a first- or second-person subject. However, imperfective verbs take a variety of different status suffixes depending on the type of verb, summarized in the table below:

TRANSITIVE	Root	-e(l), -o(l)
	Derived	-Vn[3]
INTRANSITIVE	Root	-e(n)
	Derived	-an
	Positional	-e(l), -te(l)[4]

Table 1 – Chontal Status Suffixes

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[3] V here refers to any vowel. There is no consistent pattern as to which vowel appears with a derived transitive verb. It is frequently, but not always, identical to a vowel in the root.

[4] Verbs can be derived from positional adjectives with two suffixes: *-wän*, which takes the status suffix *-e(l)*, and *-te(l)*, which merges the derivational verb suffix and the status suffix into one portmanteau morpheme.

2.3.3 Agreement

2.3.3.1 Ergativity

Chontal displays an ergative agreement pattern, wherein the object of the

transitive verb (Patient) patterns with the subject of the intransitive verb (Subject), in

opposition to the subject of a transitive verb (Agent) (Dixon, 1994). The Agent is

referred to as ergative, and the Subject & Patient are referred to as absolutive[5]. Chontal is

a head-marking language (Nichols, 1986). As such, the ergative and absolutive

arguments are marked on the verbal head rather than on nouns. These agreement markers

on the verb are dependent or cliticized pronouns (Quizar & Knowles-Berry, 1988). The

ergative pronoun precedes the verbal complex, and the absolutive follows it. Table 2

outlines these pronouns in Chontal, and their use is demonstrated in example 16.

	Ergative	**Absolutive**
First person	*kä/k-*	*-on*
Second person	*a/aw-*	*-et*
Third person	*u/uy-*	*-ø*

Table 2 – Chontal Dependent Pronouns

(16) a. *wiy-**on***

   sleep-1ABS

   'I sleep.'

   b. *u-jäts'-**on***

   3ERG-hit-1ABS

   'He hit me.'

The ergative prefixes take different forms depending on whether they precede a

vowel or a consonant. The first form given in Table 2 is the form before a consonant; the

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[5] In Mayan linguistics, traditionally the ergative has been referred to as Set A and the absolutive as Set B.

second form is the form before a vowel. As in all Mayan lanuages, the third person absolutive pronoun is null.

All predicates are marked for subject and object agreement with these pronouns, including stative predicates, which are marked with absolutive pronouns that reference the subject. Additionally, like other Mayan languages, the genitive and ergative markers are homophonous in Chontal. An example of this is given in 17.

(17) **kä-***lot*   *ajn-i-ø*   *tä*   **kä-***k'in*

      1GEN-friend   go-PRF-3ABS   PREP   **1GEN**-day

      '**My** friend went to **my** birthday (party).'

2.3.3.2 Split Ergativity

It has been argued that no apparent ergative language is entirely ergative (Moravcsik, 1978). Some languages have entirely ergative-absolutive case marking but display accusative-type syntactic patterns; other languages have non-ergative morphological case and agreement marking in some environments. These alternative patterns in primarily-ergative languages are known as split ergativity.

Chontal is no exception to Moravcsik's generalization. It has split ergativity conditioned by aspect. Intransitive sentences in the perfective aspect mark their subject with an absolutive agreement marker, but these same sentences in non-perfective aspects mark their subject with the ergative agreement marker. Thus, in the imperfective aspect, all subjects are marked ergative and only transitive objects are marked absolutive, which is the alignment one would expect of an accusative system. This is exemplified in 18 with the intransitive verb 'sleep.' 18a is in the perfective aspect, and the subject is

indexed with an absolutive pronoun, as we would expect for an ergative language; 18b, however, is in the imperfective, and here the subject is indexed with an ergative pronoun, even though it is the subject of an intransitive.

(18) a. *kä-wäy-e*

      1ERG-sleep-IMPF

      'I sleep.'

   b. *a*   *wäy-on*

      AUX.PRF   sleep-1ABS

      'I slept.'

     This split occurs in all simple intransitive verbs in Chontal (verbs that appear together with light verbs pattern differently, as will be discussed momentarily). Therefore, although 'sleep' is an unergative verb, the same pattern holds for unaccusative verbs. This only holds true for verbal predicates, however; the subjects of stative predicates are always marked with the absolutive agreement marker, as there is no explicit aspect marking on these predicates to condition the alternation.

     Aspect-based splits are common throughout the Mayan family, found in Yucatecan and Q'anjob'alan languages as well as in Ixil and Poqomam (Larsen & Norman, 1979). These splits are also found in Chontal's closest relative, Chol (Vásquez, 2002; Gutiérrez & Zavala, 2005). Interestingly, however, this split is not found in any of the other languages in the Greater Tzeltalan branch (Kaufman & Norman, 1984; Law et al., 2006). Law et al. argue that the Western Cholan languages (Chontal and Chol) innovated split ergativity through language contact with the Yucatecan languages.

While split ergativity has been fairly well-documented in Chontal, my fieldwork indicates that some speakers may be losing it as a productive form. The speakers I worked with frequently produced imperfective forms with an accusative alignment, as expected, but it was not unusual for the same speakers to produce imperfective forms with an ergative alignment, i.e. producing forms that exhibited no split ergativity. 18 contains two examples of sentences that the speakers produced that had ergative alignment even with an intransitive imperfective verb.

(19) a. *wäy-en-ø*

      sleep-impf-3abs

      'He sleeps.'

  b. *och-on*

      enter-1abs[6]

      'I enter.'

All speakers I worked with produced forms of both alignments, sometimes with the same verbs, although speakers who had had some formal education in a Mayan language were more likely to speak with split ergativity. This is consistent with previous work on semi-speakers of Chontal, which has demonstrated that non-fluent speakers of the language tend to simplify syntactic structures (Knowles-Berry, 1987b). While my speakers were fluent, this simplification could be a result of bilingualism, just as Knowles-Berry argued for semi-speakers.

In addition to this aspect-based ergative split, Chontal also has a subset of verbal constructions that have an entirely nominative-accusative alignment. This subset

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[6] Underlyingly, this form is likely *och-e-on* with the imperfective suffix *–e*, but the sequence of two vowels is simplified to *ochon*. Context made it clear that this was an imperfective form despite the lack of surface imperfective marking.

includes some unergative verbs expressed with the light verb *che*, whose subjects are always marked with the ergative pronoun. This alignment pattern was first described by Gutiérrez & Zavala (2005), who give a detailed overview and a list of verbs considered "agentive," in their terminology, in Chontal (see Montgomery-Anderson, 2006 for further discussion). 20 demonsrates this alignment pattern with the unergative verb 'sing,' showing that the subject marking is always ergative regardless of the aspect.

(20) a. *a- che-n   k'ay*

    2ERG-do-IPFV   sing

    'You sing.'

   b. a-ch-i   k'ay

    2ERG-do-PRFV   sing

    'You sang.'

Some of these verbs can also appear without the light verb, in which case they pattern as any other intransitive verb would. Many can also be transitive verbs without any additional derivational morphology; here, again, they appear without the light verbs.

2.3.3.3 Summary of Agreement

    The below table presents a summary of ergative and split-ergative agreement patterns in Chontal. The areas where nominative-accusative alignment appears are shaded in gray.

	Aspect	Subject	Object
Intransitive	Completive	ABS	--
	Incompletive	ERG	--
Intransitive with light verb	Completive	ERG	--
	Incompletive	ERG	--
Transitive	Completive	ERG	ABS
	Incompletive	ERG	ABS

Table 3 – Chontal Alignment Patterns

2.3.4 Indefinites in Chontal

Thus far all of the verbal arguments described have been pronouns or noun phrases. However, indefinites can be subjects or objects of verbs and stative predicates as well. Given this fact, and considering that positive indefinites in Chontal have heretofore never been described and an understanding of positive indefinites is important to understand negative indefinites, this section will provide a brief description of positive indefinites in Chontal.

Chontal expresses indefinites with *kwa' tijini* 'something' or *ka tijini* 'someone.'

(21) *ya'an-ø   kwa'   tijini   tan   ch'uj*

EXIST-3ABS   what   INDET   PREP   church

'Something is in the church.'

(22) *aw-äl-i-ø   kwa' tijini*

2ERG-say-PRF-3ABS   what   INDET

'You said something.'

(23) *ka   tijini   ixik-ø*

people   INDET   woman-3ABS

'Someone is a woman.'

(24) *a-chän-i-ø*   *ka*   *tijini?*

2ERG-see-PRF-3ABS   people   INDET

'Did you see someone?'

Kwa' means 'what' and *ka* means 'people' (Keller, 1997). Depending on which is used, the indefinite is classified as a person or as an object (i.e. some**one** vs. some**thing**). *Tijini* is an indication that the speaker does not know what the object or person of reference is, and consequently it is only used when the speaker knows something exists but not what it is[7]. Neither Knowles-Berry (1984) nor Keller (1997) describe this word in their dictionaries. However, *jini* means 'that' and *ti* can mean 'who knows' or 'maybe,' so it is possible that *tijini* is derived from some compound of the two. It is unclear whether or not *tijini* can appear with other indefinites like 'somewhere' or 'sometime.' This data did not surface in my fieldwork, but it was also not explicitly noted to be ungrammatical. This would be a question for further research in determining the uses and distribution of *tijini*.

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[7] *Tijini* is only used when the speaker truly does not know what they are referring to. In contexts where the speaker does know, the indefinite pronoun is not used. For example, it is impossible to say 'I met someone,' because the speaker knows who they met; it is only possible to say 'I met a man' or 'I met a woman.'

Chapter 3: Predicate Negation in Chontal

The most basic definition of clausal negation defines negation of a clause as "an operator that reverses the truth value of a proposition" (Miestamo, 2007: 552). Simply put, if a proposition has a certain truth value, negating that proposition gives the resultant sentence the opposite truth value. However, clausal negation is not quite so simply defined. Dahl (1979) points out that this definition also includes sentences like 25 that are outside of the narrow sense intended by most linguists when they speak of negation but that still reverse the truth value of a proposition.

(25) It is false that it is raining.

To exclude sentences like this, Dahl refines his definition of negation to involve only sentences with a specific negative element, which rules out sentences like 20 because there is no dedicated negation element.

Following this definition of clausal negation, this chapter will describe and analyze clausal negation in Chontal. Knowles-Berry (1987a) describes many of the different strategies for simple clausal negation in the San Carlos dialect. I will provide the correlates of these strategies in the Nacajuca dialect and discuss any dialectal variation. Additionally, I will contribute new data on the negation of sentences with more than one clause, constituent negation, and the scope of negation. I will also provide a syntactic analysis of clausal negation in Chontal, including a novel proposal for the effect that negation has on split ergativity in Chontal, and situate the Chontal data in the context of recent work on the typology of negation systems.

3.1 Description of Clausal Negation

In this section I will describe clausal negation in Chontal. I will begin by detailing and exemplifying the negation of what we have termed stative predicates, including predicate nouns and adjectives, nonverbal positionals, and existential predicates (section 3.1.1). Then I will turn to verbal predicates and demonstrate the negation paradigms for transitive and intransitive perfective and imperfective verbs as well as discussing the prohibitive (section 3.1.2). The table in 3.1.3 will summarize clausal negation before demonstrating that subordinate clauses do not pattern differently than monoclausal sentences, in section 3.1.4.

3.1.1 Stative Negation

Predicate nouns and adjectives in Chontal are negated with *mach*, the negative particle, preceding the predicate, as in 26 and 27. This is also the strategy to negate nonverbal positional predicates, shown in 28 and 29.

(26) a. *ixik-on*

    woman-1ABS

    'I am a woman.'

  b. *mach   ixik-on*

    NEG   woman-1ABS

    'I am not a woman.'

(27) a. *pok'om-et*

    fat-2ABS

    'You are fat.'

31

b. *mach   pok'om-et*

    NEG   fat-2ABS

    'You are not fat.'

(28) a. *wa'al-on*

    stopped-1ABS

    'I am stopped.'

b. *mach   wa'al-on*

    NEG   stopped-1ABS

    'I am not stopped.

(29) a. *chum-ul-et*

    seated-ADJ-2ABS

    'You are seated.'

b. *mach   chum-ul-et*

    NEG   seated-ADJ-2ABS

    'You are not seated.'

The negation of predicate nouns & adjectives and nonverbal positionals in the Nacajuca dialect described here does not differ from the San Carlos dialect as described in Knowles-Berry (1987a). Negation induces no morphosyntactic changes in the predicate.

Existential predicates are negated by the compound *mach'an*, which is the negative particle *mach* compounded with the existential *ya'an*. This compound replaces the positive existential. Other than this, negation does not induce any changes in the existential. Examples are given in 30 and 31.

(30) a. *ya'an-ϕ*   *gente*   *tan*   *ch'uj*

      EXIST-3ABS   people PREP   church

      'People are in the church.'

    b. *mach'an-ϕ*   *gente*   *tan*   *ch'uj*

      NEG.EXIST-3ABS   people PREP   church

      'No people are in the church.'

(31) a. *ya'an-ϕ*   *bek'*

      EXIST-3ABS   seed

      'There are seeds.'

    b. *mach'an-ϕ*   *bek'*

      NEG.EXIST-3ABS   seed

      'There are no seeds, there aren't any seeds.'

Knowles-Berry (1987a:329) does not provide data on existential negation in the San Carlos dialect; instead, she incorrectly glosses *mach'an* as 'nothing' rather than recognizing it as the negative existential. This is the strategy used to express 'nothing' and can also be used to express 'nobody,' but the examples above clearly demonstrate that *mach'an* is used in other negative existential constructions, not just those that are meant to express 'nothing.' This is also the analysis adopted by Osorio May (2005:101).

3.1.2 Verbal Negation

Chontal verbs are also negated with the particle *mach*. Negation of verbs is more complicated than negation of stative predicates, because the presence of *mach* sometimes induces changes in the morphology and agreement of the verb, depending on the verb's

transitivity and aspect. The subsections below provide an explanation and examples for all types of verbs in Chontal.

3.1.2.1 Transitive Verbs

Transitive verbs are negated by *mach*, which precedes the verb. Perfective transitive verbs undergo no other morphosyntactic changes when negated, shown in 32 and 33: the verbal complex is identical in the positive and negative forms.

(32) a. *a-k'ux-i-ø*

   2ERG-eat-PRF-3ABS

   'You ate it.'

   b. *mach   a-k'ux-i- ø*

   NEG   2ERG-eat-PRF-3ABS

   'You didn't eat it.'

(33) a. *u-jäts'-on*

   3ERG-hit-1ABS

   'He hit me.'

   b. *mach   u-jäts'-on*

   NEG   3ERG-hit-1ABS

   'He didn't hit me.'

Imperfective transitive verbs undergo changes in their status marker under negation. Verbs that are marked with the *-Vn* status suffix in positive sentences lose the *n* of the status marker when negated, as demonstrated by the verb pair in 28a-b. In the

positive sentence in 34a, the verb takes the imperfective stuffix *-än*; when the verb is

negated in 34b, the status suffix becomes *-ä*.

(34) a. *kä-ts'on-än*   *ke*   *mach*   *u-ch-i*   *uk'e*   *ni'untu*

      1ERG-think-**IPFV**   thatNEG   3ERG-do-PRF   cry   nobody

      'I think that nobody will cry.'

    b. *mach*   *kä-ts'on-ä*   *ke*   *ka*   *tijini*   *u-x-e*   *tä*

      NEG   1ERG-think-**IPFV**   thatperson   INDET   3ERG-go-IPFV   SUB[8]

      jule

      come

      'I don't think anyone will come.'

      When other imperfective transitive verbs are negated, their status suffix changes

from *-e/-o* to *-V*, which represents the same vowel as in the root. In 35, the status suffix

of *k'ux* 'to eat' changes from *-e* to *-u* when the verb is negated.

(35) a. *kä-k'ux-e-ɸ*

      1ERG-eat-IPFV-3ABS

      'I eat it.'

    b. *mach*   *kä-k'ux-u-ɸ*

      NEG   1ERG-eat-IPFV-3ABS

      'I don't eat it.'

      Transitive verbs in Nacajuca Chontal behave the same as transitive verbs in San

Carlos Chontal as described by Knowles-Berry (1987a). In both dialects, perfective

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[8] *Tä* here is a subordinator, which marks the verbal complement of an auxiliary. When the auxiliary is preceded by *tä*, it does not inflect for agreement or aspect.

transitive verbs remain unchanged by negation, while imperfective transitive verbs undergo a change in their status suffix when negated.

3.1.2.2 Intransitive Verbs

Intransitive verbs, like all other predicates we have seen thus far, are also negated by *mach*, which precedes the verbal complex. Perfective intransitive verbs must appear with the perfective auxiliary *a* when they are negated. This auxiliary is optional when they are not negated. 36 and 37 demonstrate this pattern.

(36) a. *(a)*   *och-on*

    (AUX.PRFV)   enter-1ABS

    'I entered.'

   b. *mach   a*   *och-on*

    NEG   AUX.PRFV enter-1ABS

    'I didn't enter.'

   c. *mach och-on

     NEG   enter-1ABS

    (Intended reading: 'I didn't enter')

(37) a. *tä'b-i-ø*

    go.up-PRF-3ABS

    'He went up.' ('Subió')

   b. *mach   a*   *tä'b-i-ø*

    NEG   AUX.PRFV go.up-PRF-3ABS

    'He didn't go up.' ('No subió.')

This is different from the San Carlos dialect of Chontal, which does not require the perfective auxiliary before the negated perfective verb. This difference is likely due to the possibility of sentences like *mach ochon*, 36c, as grammatical imperfective constructions in Nacajuca Chontal. This is not possible in San Carlos Chontal, so no auxiliary would be required to mark that the sentence is perfective, since there would be no other grammatical possibility.

Imperfective intransitives display the most complicated variations of any verb class in Chontal. Recall that in positive sentences, imperfective intransitives have a pattern of split ergativity, such that the subject is marked with the ergative pronouns. This was demonstrated by the example in 18, repeated below.

(18) a. *kä-wäy-e*

       1ERG-sleep-IMPF

       'I sleep.'

  b. *a   wäy-on*

       AUX.PRF sleep-1ABS

       'I slept.'

Under negation, however, this split ergativity typically disappears: the subject is marked with the absolutive pronoun, as one would expect of an intransitive subject in an ergative language. The verb is also preceded by the imperfective auxiliary *u* and other status suffixes disappear. This alternation is demonstrated in 38-40. In both examples, the subject of the positive sentence is marked by the ergative pronoun and its aspect is marked by a status suffix, but under negation the subject is marked by the absolutive pronoun and aspect is marked by *u*, which precedes the verb.

(38) a. *kä-wan-e*

    1ERG-jump-IPFV

    'I jump.'

  b. *mach u   wan-on*

    NEG   AUX.IPFV jump-1ABS

    'I don't jump.'

(39) a. *kä-x-e   tä   oche*

    1ERG-go-IPFV SUB   enter

    'I'm going to enter.'

  b. *mach u   x-on   tä   oche*

    NEG   AUX.IPFV go-1ABS SUB   enter

    'I'm not going to enter.'

(40) a. *a-wäy-e*

    2ERG-sleep-IPFV

    'You sleep.'

  b. *mach u   wäy-et*

    NEG   AUX.IPFV sleep-2ABS

    'You don't sleep.'

Knowles-Berry (1987a) provided evidence that the same pattern exists in San Carlos Chontal.

    The story, however, is not quite so simple. While the majority of intransitive imperfective sentences in my fieldwork had the subject marked as ergative when positive

and absolutive when negative, I also saw patterns of speakers using absolutive in both polarity contexts and ergative in both contexts.

It was noted earlier that split ergativity may be in a state of transition in the language. Speakers do not always produce the forms that one would expect if the language had consistent aspect-based split ergativity; instead, some speakers sometimes use the absolutive with all intransitive subjects regardless of aspect. When speakers produced a positive form where the subject was marked with the absolutive pronoun, they also produced an identical negative form without the preceding *-u* imperfective aspect marker.

(41) a. *at-on*

    come-1ABS

    'I come.'

  b. *mach at-on*

    NEG   come-1ABS

    'I don't come.'

(42) a. *och-on*

    enter-1ABS

    'I enter.'

  b. *mach och-on*

    NEG   enter-1ABS

    'I don't enter.'[9]

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[9] The grammaticality of these forms explains why negative perfective sentences, as in examples 30 & 31, require the perfective auxiliary *a*: without *a*, they would be interpreted as imperfective because they would be identical to the forms here.

In both 41 and 42, the subject is marked in the absolutive in both forms, and negation is simply marked by preceding *mach*. Unlike forms where the subject was initially marked in the ergative, as in 38-40, the *-u* aspect marker is not obligatory. Like split ergativity, these patterns are not able to be neatly assigned to particular verbs or to particular speakers. All of the speakers I worked with produced these unexpected forms (41-42) at least some of the time, although those speakers who had studied a Mayan language formally seemed to more reliably construct split ergative structures (38-40). Section 3 will discuss this phenomenon in more detail and evaluate different theoretical explanations of ergative splits in light of this data.

In addition to these two patterns of partial split ergativity and no split ergativity, I also heard one example where split ergativity did not disappear under negation, in 43.

(43) a. *a-uk'-e*

2ERG-cry-IPFV

'You cry.'

b. *mach   a-uk'-e*

NEG   2ERG-cry-IPFV

'You don't cry.'

This pattern is also attested in Gutiérrez & Zavala (2005:22). However, in my data this was only produced once by a speaker who seemed to be losing split ergativity altogether, so I will consider it an anomaly among the speakers of Nacajuca Chontal.

3.1.2.3 Light Verbs

It was noted that Chontal has a class of unergative verbs that are expressed with the light verb *che*. These verbs are negated with *mach*, which precedes the light verb *che*. When the verb is perfective, negation induces no changes to the verbal complex, as in 28. When the verb is imperfective, it can optionally take the *-Vn* imperfective status suffix; if this is the case, it will lose the *n* when negated, as in 44.

(44) a. *a-ch-i   k'ay*

  2ERG-do-PRF sing

  'You sang.'

 b. *mach a-ch-i   k'ay*

  NEG 2ERG-do-PRF sing

  'You didn't sing.'

(45) a. *a-che-n   k'ay*

  2ERG-do-IPFV sing

  'You sing.'

 b. *mach a-che k'ay*

  NEG 2ERG-do sing

Knowles-Berry (1987) does not mention light verbs at all, so no comparison between dialects is possible.

3.1.2.4 Prohibitives

Negated imperatives, or prohibitives, differ depending on whether the verb is transitive or intransitive. Intransitive imperatives are marked with a vocalic imperative

suffix and subject is unmarked on the verb. When negated, the optative suffix *-ik* appears

in place of the imperative marker and the subject is marked with the absolutive pronoun.

(46) a. *wäy-e*

sleep-IMP

'Sleep!'

b. *mach   wäy-ik-et*

NEG   sleep-OPT-2ABS

'Don't sleep!'

(47) a. *chum-i*

sit-IMP

'Sit down!'

b. *mach   chum-lik-et*

NEG   sit-OPT-2ABS

'Don't sit down!'

Transitive imperatives are marked with a *-Vn* or *-V* status suffix, and the subject is

not marked on the verb. Under negation, the subject is marked with the ergative pronoun.

No change is induced in the status suffix.

(48) a. *täs-en-ɸ*

bring-IMP-3ABS

'Bring it!'

b. *mach   a-täs-en-ɸ*

NEG   2ERG-bring-IMP-3ABS

'Don't bring it!'

(49) a. *täl-ä*   *a-ni'*

   touch-IMP   2GEN-nose

   'Touch your nose!'

   b. *mach*   *a-täl-ä*   *a-ni'*

   NEG   2ERG-touch-IMP   2GEN-nose

   'Don't touch your nose!'

Negative imperatives in the dialect of Nacajuca pattern identically to negative

imperatives in the San Carlos dialect as described by Knowles-Berry (1987).

3.1.3 Interim Summary of Chontal Predicate Negation

We have seen that most simple predicates are negated with *mach*, which precedes

the predicate, with the exception of the existential, which is negated with the compound

mach'an. The below table summarizes these facts.

Type of Predicate	Aspect/Mood	Negator	Negation-Conditioned Changes
Noun or adjective	all	*mach*	none
Positional (nonverbal)	all	*mach*	none
Existential	all	*mach'an*	none
Transitive	Perfective	*mach*	none
	Imperfective	*mach*	status suffix changes
	Imperative	*mach*	subject overtly marked
Intransitive	Perfective	*mach*	aspect marker *a*
	Imperfective	*mach*	aspect marker *u*, status suffix changes, split ergativity disappears
	Imperative	*mach*	optative marker *-ik*, status suffix disappears, subject overtly marked

Table 4 – Chontal Predicate Negation Strategies

In summary, negation does not induce any morphosyntactic changes in non-verbal predicates. This is not the case for verbal predicates. Negation induces changes in the status suffix for all imperfective forms and obligatory overt subject marking for all imperative forms. For all intransitive declarative sentences, negation requires that an aspect marker precede the verbal complex. Additionally, negation causes split ergative patterning to disappear with intransitive imperfective verbs and introduces the optative marker for intransitive imperative verbs.

With the conclusion of the preceding two sections on predicate negation, we have come to the end of the description of simple predicate negation in Chontal. However, there remain some types of negation as yet undescribed by any grammar or paper. The following sections attempt to remedy that by describing more complex forms of negation: negation in sentences with more than one clause, constituent negation, and the interaction of negation and quantifiers.

3.1.4 Negation and Compound Sentences

Sentences with more than one clause are negated in the same way as monoclausal sentences. Negation must occur in the clause that is being semantically negated, whether it is the matrix clause or the complement clause; negation of the embedded clause does not negate clauses that are higher in the structure.

(50) a. *mach kä-ts'on-ä-ø*   *ke   une   x-ik-ø*

    NEG   1ERG-think-IPFV-3ABS that she   go-OPT-3ABS

    'I don't think she goes.'

b. *kä-le'-ø*   *ke*   *une-ba*   *mach*   *u*   *x-ik-ø*

1ERG-think[10]-3ABS   thatshe-DEM   NEG   AUX.IPFV   go-OPT-3ABS

'I think she won't go.'

(51) a. *mach*   *kä-ts'on-ä-ø*   *ke*   *a-känejun-ø*

      NEG   1ERG-think-IPFV-3ABS that2ERG-study-3ABS

      'I don't think you study it.'

     b. *kä-le'-ø*   *ke*   *mach*   *a-känejun-ø*

      1ERG-think-3ABS   thatNEG   2ERG-study-3ABS

      'I think you don't study it.'

When both clauses are negated, *mach* must appear in each of them.

(52) *mach ko*   *no'on ke*   *ane-la*   *mach*   *x-ik-et-la*

    NEG   want.1SG.IPFV[11]   I   thatyou-2PL   NEG   go-OPT-2ABS-2PL

    'I don't want you all not to go.'

3.1.5 Constituent Negation

     Chontal does not have a special structure for constituent negation. Negation of specific noun phrases is accomplished by fronting the noun phrase, negating it with *mach*, and adding a demonstrative and optionally also a focus particle.

(53) *mach jim-ba*   *winik*   *u-tsim-ts-i-ø*   *ni*   *wichu'*

    NEG   DEM-FOC   man   3ERG-die-CAUS-PRF-3ABS   the dog

    'It was not the man who killed the dog.' (Lit. 'THAT MAN didn't kill the dog.')

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[10] Both *le'* 'say' and *ts'on* 'believe' are used for 'think.' Either of them can appear in positive or negative sentences.

[11] The verb *olin* to want is a rare irregular verb in Chontal. It has suppletive forms for all persons.

(54) *mach jin wichu' ke ni winik u-tsim-ts-i-ɸ*

    NEG DEM dog thatthe   man   3ERG-die-CAUS-PRF-3ABS

  'It was not the dog that the man killed.' (Lit. THAT DOG, the man didn't kill.')

Similarly, there is also no special structure for contrastive negation; speakers simply

negate the sentence, as in 55. Because some Spanish conjunctions have been borrowed

into Chontal (Knowles-Berry, 1984), the below sentence could also use the Spanish

conjunction *sino* 'but rather.' However, speakers preferred structures without

conjunctions.

(55) *mach ko ni manzana ko ni limón*

   neg want.1SG.IPFV   the apple   want.1SG.IPFV   the lemon

  'I don't want the apple, but rather the lemon.'

3.2 Discussion of Clausal Negation

This section will syntactically analyze clausal negation in Chontal. It will begin by

discussing the negative particle *mach*, where it is, and what type of particle it is. It will

then discuss the interaction between split ergativity and negation and provide some

explanations.

3.2.1 *Mach* in the Syntax

    We have seen that *mach* is the negative marker for all predicates in Chontal. It

typically appears independently. The exception to this generalization is the negative

existential, which is *mach'an*, a compound of *mach* and the existential *ya'an*. This

section will provide some evidence that *mach* appears above TP in the verbal complex and will discuss the more difficult question of whether *mach* is a head or a phrase.

3.2.1.1 Where is *mach*?

The location of the negative marker in a language sheds light on the syntactic structure of the verb phrase in that language. Two locations have been posited in the literature for different languages: above TP or above VP but below TP (Zanuttini, 2001). For Italian, for example, there is evidence that the negative marker is above TP, but for Bavarian German, it has been argued that the negative marker is below TP (Zanuttini, 1997; Weiss, 2002). The explanation for any individual language depends on language-specific facts about the distribution of the negative particle.

We have already seen that *mach* appears before the verb, whether lexical verb or light verb. Ouhalla (1990) argues that one strong piece of evidence as to the location of the negative marker is the relative linear order of negation and tense. This diagnostic suggests that *mach* appears above TP in the structure, because *mach* precedes all aspect-marking auxiliaries, whether they are simply aspect markers (such as *a* or *u*) or future or progressive auxiliaries

(56) *mach u   x-on   k-äl-ben-et   ke   a-che-n-ø*

    NEG   AUX.IPFV   go-1ABS   1ERG-say-APPL[12]-2ABS   that2ERG-do-IPFV-3ABS

    'I won't tell you to do it.'

Mach also precedes aspect-marking status suffixes, which are suffixed to the verb, as it precedes the verb. Because Chontal is a head-initial language, this data demonstrates that

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[12] In Cholan languages, the applicative is used to indicate that the following pronoun (in this case, *-et*) marks the indirect object.

the projection containing *mach* is higher in the structure than tense, suggesting that it

precedes TP.

Supporting evidence for this view comes from tenseless clauses in Chontal.

Certain unergatives that typically appear with the light verb *che* can appear after the

subordinator *tä* without overt tense or aspect marking.

(57) *aj*   *Juan*   *u-x-e*   *tä*   *te*   *tä*   *k'in*

    NCL.M   Juan   3ERG-go-IPFV SUB   come   PREP   day

    'Juan will come to my birthday'

The lack of overt tense or aspect marking, coupled with the lack of pronominal

agreement on the verb, suggests that participial clauses with *tä* are syntactically small and

do not include tense. These tenseless clauses can never be directly negated by *mach*;

instead, they must take the negative existential.

(58) *mach'an-ϕ*   *ni'untu*   *tä*   *t'an*

    NEG.EXIST-3ABS nobody   SUB   talk

    'Nobody is talking.'[13]

The impossibility of negating a tenseless clause with *mach* follows neatly if *mach* is

assumed to adjoin above the TP layer. Under this account, since these tenseless clauses

have no TP, there is no higher level for the negative projection to adjoin to.

If this account is correct, then it would be predicted that negation would also not

appear in other tenseless clauses or with nominalizations. Because neither of these

constructions have tense or aspect, there would be no TP, such that there should be

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[13] An alternative explanation might be that it is impossible to have indefinites in the subject position.
However, indefinites ARE allowed in the subject position in Chontal. Examples of positive indefinite
subjects are in section 2.4; examples of negative indefinite subjects without the existential will be in section
4.2.

nowhere for the negative projection to adjoin. My fieldwork did not yield data on these types of constructions, but future work might explore whether these predictions are borne out to confirm my analysis that *mach* is above TP in the syntactic structure.

Given this evidence, one might ask why we should not say that *mach* occupies an even higher position in the clause. This would be typologically odd, since negation in other languages has only been analyzed as immediately above TP or below TP; no analysis claims that negation is higher. However, setting aside purely typological objections, there exists evidence to suggest that *mach* and the verb are still close together in the structure. Importantly, despite the fairly free word order in Chontal, it is impossible for a subject or an object to intervene between *mach* and the verb.

(59) a. *mach   u   x-on   kä-tsik-e-ø   ni   jun*

     NEG   AUX.IPFV go-1ABS   1ERG-read-IPFV-3ABS the   book

     'I am not going to read the book.'

  b. **mach ni   jun   u   x-on   kä-tsik-e-ø*

      NEG   the   book   AUX.IPFV go-1ABS   1ERG-read-IPFV-3ABS

(60) a. *ni'untu   mach   u   ta-ø*

     nobody   NEG   AUX.IPFV come-3ABS

     'Nobody comes.'

  b. **mach ni'untu   u   ta-ø*

      NEG   nobody   AUX.IPFV come-3ABS

This fact suggests that negation and the tensed verbal complex are still close to one another in the tree such that there are not intermediate projections that a subject or object could move to.

3.2.1.2 What is *mach*?

Having established that the projection containing *mach* lies above TP in the syntactic structure, we now turn to the question of where *mach* stands within that projection. It is generally accepted that there is a phrase NegP that contains the negative marker (Pollock, 1989; Haegeman, 1995; Zanuttini, 1997; Zanuttini, 2001; a.o.). However, in some languages the negative marker is assumed to be a syntactic head within this maximal projection, while in other languages the negative marker is assumed to be phrasal.

It seems reasonably likely that *mach* in Chontal is a head. Negative particles and affixes are typically thought to be syntactic heads, while XP status is reserved for adverbial negative markers only (Zeijlstra, 2008). Moreover, Zeiljstra notes that negation is frequently a head in negative concord languages. Chontal is a negative concord language (which will be outlined in section 4.2), so this suggests that *mach* might be a head.

However, this hypothesis proves very difficult to test. Zanuttini (2001) & Zeijlstra (2008) give a variety of diagnostics to distinguish whether a negative marker is a phrase or a head, but most of these tests are nondiscriminating for Chontal because they rely on notions of movement that have yet to be parsed out in Chontal. The main diagnostic they point to is that negative heads block verb raising, while phrasal negative markers do not. This begs the question of whether or not Chontal has verb raising in the first place, which itself raises some issues that are beyond the scope of this paper to

resolve. The next few paragraphs will endeavor instead to outline the difficulty of this issue.

The linguistic work to date on Chontal has been mostly descriptive; as such, there is no syntactic analysis relating to verb raising in Chontal. An attempt to provide such an analysis would require a paper in its own right. Koeneman (2000) outlines the most robust diagnostics for verb movement in a language[14]. Again, many of these diagnostics are nondiscriminating for Chontal. A very common diagnostic used is the placement of adverbs relative to verbs. If adverbs follow the verb, as in French, the verb has undergone V-to-T raising; if adverbs precede the verb, as in English, it has not. Keller (1997) provides evidence that adverbs can appear either before or after the verb, which is corroborated by my own fieldwork.

(61) a. *ni'untu*   *mach*   *u*   *wan-e-ø*   *bada*

     nobody   NEG   AUX.IPFV   jump-IPFV-3ABS   now

  b. *ni'untu*   *bada*   *mach*   *u*   *wan-e-ø*

     nobody   now   NEG   AUX.IPFV   jump-IPFV-3ABS

     'Nobody jumps now.'

In these sentences, the adverb *bada* 'now' can appear either before or after the finite verb. Given this evidence, the adverb diagnostic does not tell us anything about Chontal, because both patterns are possible.

Two other diagnostics for V-to-T raising are no more helpful than the adverb diagnostic. Looking at word order in embedded clauses is cited as a second, albeit weaker, test of verb raising, but embedded clauses in Chontal seem to be able to take any

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[14] I will limit my discussion to diagnostics of V-to-T and V-to-C raising. Some other diagnostics, such as indirect object binding, have been described for V-to-v raising, but since negation always appears above vP, the question of whether Chontal has V-to-v raising is irrelevant for my analysis.

word order (Knowles-Berry, 1987). Koeneman also discusses verb-second (V2) word order as evidence of V-to-C raising in Germanic languages. Since Chontal does not display V2 word order, this is irrelevant.

One diagnostic provided by Koeneman that seems applicable to Chontal is the placement of negation: when the finite verb precedes negation, as in French, the verb has raised to T; when the finite verb follows negation, as in English, the verb has not raised. At first blush, this would suggeset that Chontal does not have verb raising, since the finite verb always follows negation, and this does indicate that Chontal does not have V-to-C raising. However, we have provided evidence in 3.2.1.1 that NegP in Chontal adjoins above the TP level. Thus, this leaves the question of whether Chontal has V-to-T movement unanswered.

Thus far we have demonstrated that the most prominent diagnostics for verb raising do not provide us with any useful information about whether Chontal has verb raising. Determining whether a verb-initial language has verb raising also raises some weighty theoretical questions. Work on Mayan has generally followed from the assumption that Mayan languages are underlyingly word-initial and that deviations from this order involve subject and object raising to topic and focus positions (Aissen, 1992). However, some syntacticians have sought to derive verb-initial word orders from other word orders, arguing that these languages are underlying SVO and undergo verb raising from V to I for verb initiality. One's theoretical assumptions then inform one's analysis of verb raising in verb-initial languages, and it is beyond the scope of this paper to take a stance on these broad theoretical debates.

In summary, then, we have seen that it is very difficult to say conclusively whether Chontal has verb raising. This makes it impossible to use blocked verb raising as a diagnostic for whether a negative marker is a head or is phrasal. Two other diagnostics for negative head versus negative phrase have been proposed that don't rely on verb movement, but unfortunately, neither of these is useful for distinguishing heads from phrases in Chontal. Merchant (2001) proposed the *why*-test, arguing that only phrasal negative markers can adjoin to 'why' to produce the question phrase 'why not?'. However, this is only helpful in languages where the verbal negator is different from the word for 'no,' since languages that do not have phrasal negative markers sometimes allow the word for 'no' to adjoin to 'why' in place of 'not.' In Chontal, the verbal negator *mach* is also the word for 'no,' so this test is nondiscriminating. Zanuttini and Zeijlstra also note that negative heads should block the movement of chains of clitics, whereas negative phrases should not, but Chontal does not have clitics that can undergo movement to make this a testable hypothesis[15]. Even if these tests were discriminating for Chontal, they would only provide relatively weak hints as to the correct analysis. The movement-based tests still provide the clearest diagnostic (Zanuttini, 2001).

The question of whether *mach* is a head or is phrasal ultimately must remain without a satisfactory resolution, in anticipation of the development of diagnostics that are more useful in Chontal. For parsimony, I will assume that *mach* is a head. This assumption is not entirely unfounded. A negative head would be typical of Chontal as a negative concord language, and it is generally assumed that the negative marker is a head

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[15] To my knowledge, there are no clitics in Chontal except for the cliticized pronouns that mark agreement, and these do not move.

until explicit evidence to the contrary is shown (Zanuttini, 2001). This assumption will be something to revisit when better diagnostics are developed.

3.2.2 Negation and Split Ergativity

Turning now to the interaction of negation with other syntactic systems, we saw in section 3.1.2.2 that negation interacts with ergative splits in sentences with imperfective intransitive verbs. In the positive polarity, these verbs display accusative alignment (i.e. the intransitive subject is marked as ergative). Under negation, this accusative alignment disappears and the intransitive subjects are marked as absolutive, as would be expected from an ergative language with no splits, and the imperfective auxiliary *u* appears before the lexical verb. This is shown in example 38, repeated here.

(38) a. *kä-wan-e*

      1ERG-jump-IPFV

      'I jump.'

   b. *mach   u   wan-on*

      NEG   AUX.IPFV jump-1ABS

      'I don't jump.'

The disappearance of split ergativity under negation is quite surprising, and it is not accounted for under any existing explanations of split ergativity. Semantic explanations generally hold that accusative systems are more likely to appear in contexts where the action described by the sentence has not occurred, i.e. in irrealis contexts (Tsunoda, 1981 a.o.). In fact, ergative splits are frequently conditioned by polarity in the opposite direction (Dixon 1994). These explanations would predict that split ergativity

would be more likely to appear under negation, because the sentence would then describe a situation that has not and will not happen, but this prediction is the exact opposite of what happens in Chontal.

Recent syntactic work on split ergativity in Mayan has sought to explain the split as the result of biclausality, arguing that apparent split structures actually involve a nominalized verb, which is subordinated to a preceding aspect marker, possessed by the "subject," and just appears to be ergative because the ergative and genitive markers are homophonous (Coon, 2010; see also Bricker, 1981; Mateo-Toledo, 2003; Laka, 2006). This is illustrated by the below example, which at first glance looks to be a split ergative structure in Chol.

(62) *choñkol   k-mel-e'*   *jiñ   waj*

    PROG   1ERG-make-DEP   DET   tortilla

    'I'm making the tortillas.' (Coon, 2010:113)

Under Coon's analysis, the progressive marker *choñkol* is actually a verb that means something like 'to be ongoing.' This verb takes as its complement the nominalized verb *mel*, which is possessed by the ergative/genitive prefix *k*. The sentence actually means something like 'My making of tortillas is ongoing.'

While the biclausal analysis seems to account for the facts of split ergativity in Chol and many other languages, it does not seem to be supported in Chontal. Split ergative sentences in Chontal never appear with a preceding aspect marker. For example, 38a, repeated above, does not have a preceding aspect marker (in fact, there is no imperfective positive aspect marker). Since there is no preceding aspect marker like *choñkol* that could be a predicate and take a nominalized verb as its complement, there is

nothing to which the verb would be subordinated and therefore no reason to nominalize the verb. One could posit a null aspect marker predicate, but there is no overt evidence for this. In fact, the only context in which Chontal has obligatory, overt, preverbal aspect markers is under negation, which is precisely when split ergativity disappears. When overt aspect markers do appear, there is never split ergativity. This suggests that aspect markers may not be predicates that trigger apparent ergative splits, since they appear to have exactly the opposite effect. Moreover, this theory still has no explanation for why the split ergative pattern disappears under negation. Even if there were a null aspect marker acting as a predicate and causing the verb to be nominalized in positive sentences, there is no explanation for why this should disappear in negative sentences.

Law et al. (2006) propose a historical explanation for the pattern of split ergativity disappearing under negation. They argue that Common Cholan, the ancestor language of modern Chol, Chontal, and Ch'orti', didn't have split ergativity at all. Instead, Western Cholan (i.e. Chol and Chontal) innovated split ergativity after it split off from the Eastern Cholan languages, possibly through contact with Yucatecan Mayan languages, which were also spoken in the Mexican lowlands (Kaufman & Justeson, 2002). Law et al. propose that Chontal simply innovated split ergativity in the positive aspect only. While this is a coherent historical explanation of HOW split ergativity developed, it still fails to explain WHY split ergativity should develop in this way. There is no justification for why ergative splits should appear only in positive sentences or why negative sentences should make the split disappear; instead, this explanation simply restates the facts.

A plausible alternative explanation is that the imperfective auxiliary *u*, which appears under negation when an intransitive imperfective sentence is negated, is a stative

embedding predicate that takes an obligatorily intransitive complement. Under this analysis, *u* is a predicate meaning something like 'it is not true' which takes a verbal complement. Its verbal complement must be intransitive, which means that the verb is marked with the absolutive pronoun, causing the apparent disappearance of split ergativity. This also explains why *u* only appears with intransitive verbs and never with transitive verbs under negation: it can only take an intransitive complement. This analysis is somewhat reminiscent of Coon (2010)'s analysis of aspect markers like *choñkol* as predicates, except that *u* takes an intransitive verb as a complement whereas *choñkol* takes a nominal.

Supporting evidence for this explanation comes from other embedding predicates. In many ergative languages, only intransitives can be embedded (Aldridge, 2008). Embedding restrictions of this sort have been observed in other Mayan languages. Preliminary evidence from Chontal suggests that certain types of embedding predicates in Chontal select only for intransitive verbs with absolutive marking. The embedded complements of the verbs 'begin' and 'finish' in Chontal always take only absolutive marking; the agent is never marked (Quizar & Knowles-Berry, 1988). There is some evidence that certain verbs take intransitivizing morphology when they are the complement of 'begin' (Knowles-Berry, 1984:372).

The hypothesis that *u* is a predicate that selects an intransitive verb complement seems to account for all of the facts of Chontal's unique ergative split pattern and also has some independent corroborating evidence in the form of other embedding predicates. That said, it would be stronger with some additional evidence. One might test other embedding predicates in Chontal to see their behavior. One could also explore the

similarities and differences between *u* and *a* (the perfective auxiliary) to determine if they pattern differently in ways that would suggest that *u* is an embedding predicate while *a* is simply an auxiliary.

3.2.3 Scope of Negation

This section will describe the scopal interaction between clausal negation and quantifiers. The data presented provides preliminary evidence that scope relations in Chontal rely on the surface scope only; there is no covert quantifier raising.

(63) a. *k'en   winik   a   jul-i-ø-jo'*

      many man   AUX.PRF   come-PRF-3ABS-3PL

      'Many people came.'

   b. *k'en   winik   mach   a   jul-i-ø-jo'*

      many man   NEG   AUX.PRF   come-PRF-3ABS-3PL

      'Many men didn't come.'

   c. *mach   k'en   winik   a   jul-i-ø-jo'*

      NEG   many man   AUX.PRF   come-PRF-3ABS-3PL

      'Not many men came.'

Only one interpretation is available for 63b and 63c. 63b unambiguously means that there were many men who did not come, such that 'many' scopes over 'not,' which is the surface scope. Similarly, 63c unambiguously means that there were not many men who came. 'Not' scopes over 'many,' which is the surface scope.

64 provides another example, this time with the quantifier 'all.'

(64) a. *upete aj känjun u-jul-e-jo'*

      all   NCL.M   student 3ERG-come-IPFV-3PL

      'All the students come.'

  b. *upete aj känjun mach u k'ot-ø-jo*

      all   NCL.M student NEG   AUX.IPFV come-3ABS-3PL

      'All the students don't come.'

  c. *mach upete aj känjun u k'ot-e-jo'*

      NEG   all   NCL.M student AUX.IPFV come-3ABS-3PL

      'Not all of the students come.'

This example demonstrates again that the surface scope determines the unambiguous interpretation of the sentence. Whichever of the quantifier and the negative marker is higher in the syntactic structure will determine the sentence's meaning.

These data provides some preliminary evidence that Chontal scopal relations are based on surface structure only and that there may not be covert quantifier raising.

3.3 Chontal Clausal Negation in Cross-Linguistic Perspective

The above sections provided a syntactic analysis of clausal negation in Chontal. We will now turn briefly to a typological analysis, situating the descriptive and syntactic facts that have been established in the context of negation strategies in other languages. Section 3.3.1 will compare Chontal clausal negation using *mach* to the clausal negation strategies found in other languages. Section 3.3.2 will discuss the morphosyntactic changes conditioned by negation in Chontal and compare them to similar changes across other languages.

3.3.1 Clausal Negation Strategies Cross-Linguistically

Following Dahl (1979), the tendency in typological studies of negation has been to create a division between morphological negation and syntactic negation. Morphological negation is found in those languages where negation is marked inflectionally on the verb. It most commonly appears as prefixation and suffixation. Syntactic negation involves non-inflectional strategies of negating a clause. These include negative particles that are not morphologically attached to the verb, negative auxiliary verbs, and negative verbs.

Clausal negation in Chontal has been shown to involve syntactic negation with the negative particle *mach*. It appears separate from the verb or predicate that it negates, with the exception of the negative existential *mach'an*, which has been analyzed as a compound and therefore does not problematize its categorization as syntactic negation. Dryer (2011) analyzes the available data for 1159 languages and finds that 396 use exclusively morphological negation and 622 use exclusively syntactic negation. 21 languages make use of both strategies. This data demonstrates that Chontal falls into the clear majority of languages in terms of the type of negation it has.

Negation of imperatives has been studied in some depth and merits a brief discussion here. Van der Auwera & Lejeune (2011) have found that a clear majority of the 495 languages they have data from display differences between declarative and imperative negation. This is in fact the case in Chontal, where negative imperatives obligatorily mark the subject and, for some verbs, requires the suffixation of the optative marker.

3.3.2 Asymmetric Negation Cross-Linguistically

It has long been recognized that negation sometimes conditions morphosyntactic changes in the structure of a negated sentence. Recently, this distinction has been formalized as symmetric versus asymmetric negation, based on whether or not a negative sentence is structurally distinct from an affirmative sentence in any way other than the presence of negation (Miestamo 2003). In a language that is classified as having symmetric negation, there is never any change to the clause under negation other than the addition of a negative marker. In a language that is classified as having asymmetric negation, the clause sometimes or always undergoes structural changes under negation. This asymmetry may be present either in the construction of the clause itself or in the inflectional paradigm of the clause.

Chontal is an asymmetric language, in that negation conditions changes in the inflectional morphology of many verb forms and can also implicate the verb's agreement marking or the auxiliary that appears with the verb. Which verb forms undergo these changes depends on aspect and on transitivity, which is cross-linguistically common (Miestamo, 2011a).

3.4 Summary of Clausal Negation

This chapter has demonstrated that Chontal predicates are all negated by *mach*, which is likely a syntactic head of a phrase NegP. I have provided evidence that NegP in Chontal is above TP in the syntactic structure. I have also proposed an analysis of split ergativity's disappearance under negation, which posits that the aspect marker *u* is a predicate that selects an absolutive-marked intransitive verb. Moreover, negation

conditions many different changes in verbal inflection, both in Chontal and in other languages.

While I have provided a fairly comprehensive overview of the syntax of Chontal negation, many issues might productively be explored in more depth. I have discussed the difficulty of determing whether there is verb raising in Chontal; future research might develop and apply other diagnostics for flexible word order languages. The predictions made by my discussion of split ergativity and my discussion of the scope of negation in Chontal deserve testing in other areas of the language to determine the robustness of my analysis. Additionally, no explanation has been yet proposed for the asymmetries in inflection under negation, found in Chontal and in many other languages. Future work might seek to explain why this alternation should obtain.

Chapter 4: Negative Words in Chontal

This chapter will describe negative words in Chontal and their interaction with predicate negation. I will begin with a brief overview of negative adverbial possibilities with *mach*. I will then turn to the more difficult topic of negative indefinites, demonstrating that there exist two classes of negative indefinites in Chontal: one class of negative pronouns and one class of NP negators. I will provide evidence that both of these classes are inherently negative but that they differ in whether or not they obligatorily appear with predicate negation. Finally, I will turn to the problem of Negative Concord that arises from this obligatory co-occurrence, presenting the currently accepted analysis and discussing how it fares in Chontal.

4.1 Negative Adverbs

The negator *mach*, in addition to negating verbs, can also be added to or compounded with other words to give them a negative meaning. We have already seen one example of this with *mach'an*, the negative existential, in section 3.1. Many adverbs in Chontal use this strategy to create such words as 'never' or 'not yet'.

(65) *mach to   kä-ts'ib-ä-ø*

    neg   yet   1erg-write-ipfv-3abs

    'I haven't written it yet.'

(66) *mach bay   kä-chän-i-ø*

    neg   ever   1erg-see-prfv-3abs

    'I have never seen it.'

It seems that *mach* cannot negate other classes of words aside from adverbs and verbs. My fieldwork provided no examples to the contrary, and Knowles-Berry (1987:329) specifically restricts her description of compounds with *mach* to only adverbial particles. As will be seen, negation of nouns and adjectives is accomplished with the negative words *ni'untu* and *ni'ump'e* rather than with *mach*.

When it appears on its own, *mach* is also the one-word answer to a question.

(67) a. *a-känänta-ø*   *ump'e*   *jun*

     2ERG-have-3ABS   one-NCL   book

     'Do you have a book?'

   b.   *mach*

     NEG

     'No.'

4.2 Negative Indefinites

Negative indefinites are indefinites that connote a negative meaning. Haspelmath (2011) defines negative indefinites simply as "nominal or adverbial expressions that directly translate 'nobody', 'nothing', 'nowhere', 'never'". Under this definition, negative indefinites do not have to be "inherently" negative; words like *anybody*, which do not carry a negative meaning when they appear alone but can carry negative meaning in certain sentences, are still defined as negative indefinites. While this definition skirts discussion of the many difficulties inherent in defining such a broad and cross-linguistically diverse concept, I will nevertheless adopt it for now.

4.2.1 Positive Indefinites

Positive indefinites were described in section 2.4. Recall that positive indefinites are formed with *tijini*, which indicates indefiniteness. *Kwa' tijini* means 'something' and *ka tijini* means 'someone.' Both of these can be subjects or objects of both verbal and stative predicates.

To express the negative indefinite meaning, many languages simply negate the positive indefinite. However, examples 68 & 69 demonstrate that this strategy is ungrammatical in Chontal.

(68) a. *kwa'   tijini   chäk-ø*

      what   INDET   red-3ABS

      'Something is red.'

  b. **mach kwa'   tijini   chäk-ø*

      NEG   what   INDET   red-3ABS

      (Intended: 'Nothing is red.')

(69) a. *kwa'   tijini   a   nom-i-ø*

      what   INDET   AUX.PRF   happen-PRF-3ABS

      'Something happened.'

  b. **kwa' tijini   mach   a   nom-i-ø*

      what INDET   NEG   AUX.PRF   happen-PRF-3ABS

      (Intended: 'Nothing happened.')

Instead, negative indefinite meaning is expressed either with the negative existential or a dedicated negative word. Both of these strategies will be described in detail in the next section.

4.2.2 Negative Indefinites

Chontal is somewhat rare among languages with negative indefinites in that it has only two negative indefinite words: one for animates ('nobody') and one for inanimates ('nothing'). There are no single words for negative indefinites of time, place, or manner, for example (cf. English 'never,' 'nowhere,' 'nohow'); instead, these are expressed by negating their respective adverbs, as described in section 4.1. This is a very limited inventory (Bernini & Ramat, 1992). What's more, Chontal only has one true indefinite pronoun, the word for 'nobody.' The word for 'nothing' can only be used to negate noun phrases; otherwise, 'nothing' is expressed with the negative existential.

4.2.2.1 'Nobody'

The Chontal pronoun for 'nobody' is *ni'untu*. This word can be transparently broken down into its components, but it does not contain any negative morpheme, as shown in 70.

(70) *ni-un-tu*

the-one-NCL.ANIMATE (Knowles-Berry, 1984:233)

Ni is the definite article, *un* means 'one,' and *tu* is a noun classifier for animate nouns[16]. Because *tu* is for animate nouns only, this is only used to modify people and animals. *Untu* is also attested in positive sentences.

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[16] Numerals appear with noun classifiers to classify the noun being counted, such that *untu* is the grammatical way to express 'one' when the noun being counted is animate.

(71) *kä-chän-i-ø*   *un-tu*   *telom*

      1ERG-see-PRF-3ABS   one-NCL.ANIMATE   young woman

      'I saw the young woman.'

There is no visible negative morpheme in this word. Historical analysis does not shed any additional light on how *ni'untu* came to acquire a negative meaning. Kaufman & Justeson (2002) reconstruct **mi* as the Proto-Mayan word for 'nobody,' and most languages seem to combine *ma*, the general Mayan negator, with another word; neither of these resembles the Chontal *ni'untu*. A plausible hypothesis might be that **mi* became *ni* in Chontal, but Chontal retained the Proto-Mayan **m* phoneme in all contexts (Kaufman & Norman, 1984). However, despite our inability to reconstruct *ni'untu* back to a transparently negative form, such forms are not at all rare; indeed Laka (1990) and Weiss (2002) both note that in the negative pronouns of most languages, the morphological negation is not transparent, supported by Bernini & Ramat's (1992) study of European languages.

Ni'untu is used as 'nobody' in both the subject and the object position with all predicates, including nonverbal stative predicates. It obligatorily co-occurs with predicate negation, i.e. *mach*. It can also appear anywhere that the subject or object can appear in a positive sentence (as described in section 2.3.1). Negation does not restrict its surface appearance to a particular place in the sentence. This is true for all predicates, incuding predicate nouns and adjectives, existentials, intransitives, and transitives.

(72) a. *ni'untu*   *mach*   *pok'om*

      nobody   NEG   fat

b. *mach   pok'omni'untu*

   NEG   fat   nobody

   'Nobody is fat.'

(73) a. *mach'an-ø   ni'untu   tan   ch'uj*

   NEG.EXIST-3ABS nobody   PREP   church

   'Nobody is in the church.'

b. *ni'untu   mach'an   tan   ch'uj*

   nobody   NEG.EXIST PREP   church

c. *mach'an   tan   ch'uj   ni'untu*

   NEG.EXIST PREP   church nobody

(74) a. *ni'untu   mach   u   ta-ø*

   nobody   NEG   AUX.IPFV   come-3ABS

   'Nobody comes.'

b. *mach   u   ta   ni'untu*

   NEG   AUX.IPFV   come   nobody

(75) a. *mach   kä-chän-en-ø   ni'untu*

   NEG   1ERG-see-IPFV-3ABS   nobody

   'I don't see anyone.'

b. *ni'untu   mach   kächänen*

   nobody   NEG   see

   With sentences of the 'agentive' type, where an intransitive verb normally appears
with the light verb *che*, the negative indefinite subject *ni'untu* appears with the negative
existential. The lexical verb remains unmarked and follows the subordinator *tä.*

(76) a. *mach'an-ø*   *ni'untu*   *tä*   *t'an*

    NEG.EXIST-3ABS   nobody   SUB   talk

    'Nobody is talking.'

    b. *ni'untu*   *mach'an*   *tä*   *t'an*

    nobody   NEG.EXIST   SUB   talk

    c. *mach'an*   *tä*   *t'an*   *ni'untu*

    NEG.EXIST SUB   talknobody

(77) a. *ni'untu*   *mach'an-ø*   *tä*   *k'ay*

    nobody   NEG.EXIST-3ABS   SUB   sing

    'Nobody is singing.'

    b. *mach'an*   *tä*   *k'ay*   *ni'untu*

    NEG.EXIST SUB   sing   nobody

    c. *mach'an*   *ni'untu*   *tä*   *k'ay*

    NEG.EXIST nobody   SUB   sing

    Ni'untu can appear in dependent clauses with no syntactic change to the clause containing it. These subordinate clauses pattern exactly the same as monoclausal sentences.

(78) *mach* *ko*   *kä-chän-en-ø*   *ni'untu*

    NEG want.1SG.IPFV   1ERG-see-IPFV-3ABS   nobody

    'I don't want to see anyone.'

(79) *kä-ts'on-än*   *ke*   *mach* *u-ch-i*   *uk'e* *ni'untu*

    1ERG-think-IPFV thatNEG   3ERG-do-PRF cry   nobody

    'I think that nobody cried.'

While *ni'untu* appears most frequently as the subject or object of a sentence, it can also appear as an oblique argument, for example after a preposition.

(80) *mach x-ik-et   tok   ni'untu*

    NEG   go-OPT-2ABS   with   nobody

    'Don't go with anyone.'

In all of the above sentences, *ni'untu* is a pronominal indefinite. Consequently, it must co-occur with predicate negation, *mach*. These sentences are ungrammatical without *mach*.

(81) a. *mach   kä-chän-i-ϕ   ni'untu*

    NEG   1ERG-see-PRF-3ABS   nobody

    'I didn't see anybody.'

    b. * *kä-chän-i-ϕ   ni'untu*

     1ERG-see-PRF-3ABS   nobody

    (Intended: 'I didn't see anybody.')

We have seen, however, that *mach* does not necessarily need to negate the verb of which *ni'untu* is an argument. Example 78 above demonstrates that *mach* can appear on the matrix verb and license *ni'untu* as an argument of its complement verb. This fact will be discussed in section 4.5.2.

In summary, this section has described the Chontal word *ni'untu*, which means 'nothing.' It can appear as a subject, argument, or oblique argument in stative and verbal sentences in Chontal. It must always appear with predicate negation, although that negation does not have to be on the verb that takes *ni'untu* as an argument.

4.2.2.2 'Nothing'

     Chontal expresses 'nothing' in a very different way than it expresses 'nobody.' There is no dedicated word for 'nobody.' Instead, the pronoun *kwa'* 'what' is used, together with negation, such that 'nothing' is expressed by 'not what.' For stative predicates, where there is no verb, the negative existential is used to express negation.

(82) *mach'an-ø   kwa'   noj*

    NEG.EXIST-3ABS what   big

    'Nothing is big.'

(83) *mach'an-ø   kwa'   chäk*

    NEG.EXIST-3ABS what   red

    'Nothing is red.'

(84) *mach'an-ø   kwa'   wolo*

    NEG.EXIST-3ABS what   round

    'Nothing is round.'

(85) *mach'an-ø   kwa'   tan   ch'uj*

    NEG.EXIST-3ABS what   PREP   church

    'There's nothing in the church.'

     When 'nothing' occurs with verbs, the verb is negated. As the below examples demonstrate, the same construction is used whether *kwa'* appears the subject or the object.

(86) *mach a   num-i-ø   kwa'*

    NEG   AUX.PRF   happen-PRF-3ABS   what

    'Nothing happened.'

(87) *mach k-ul-ä-ø*   *kwa'*

    NEG   1ERG-say-PRF-3ABS   what

    'I didn't say anything.'

(88) *kä-le'-ø*   *ke*   *mach uts-ø*   *kwa'*

    1ERG-SAY-3ABS thatNEG   work-3ABS   what

    'I think that nothing works.'

    Like its animate counterpart *ni'untu*, the construction for 'nothing' requires that the predicate be negated. Without negation, sentences with *mach…kwa'* are ungrammatical.

(89) a. *mach   a*   *num-i-ø*   *kwa'*

      NEG   AUX.PRF   happen-PRF-3ABS   what

      'Nothing happened.'

    b. *kwa'   a*   *num-i-ø*

      what   AUX.PRF   happen-PRF-3ABS

4.2.2.3 Multiple Negative Indefinites

    Chontal allows multiple negative indefinites to appear in one sentence. No special construction is needed, and all negative indefinites still retain their negative meaning.

(90) *mach*   *k-äl-bi-ø*   *kwa'   ni'untu*

    NEG   1ERG-say-BEN[17]-3ABS   what   nobody

    'I didn't say anything to anybody.'

---

[17] The benefactive occurs here to mark the double object construction. It also occurs in this context in positive sentences.

(91) *ni'untu   mach   u-sij-b-on*   *kwa'*

  nobody   NEG   3ERG-give-BEN-1ABS what

  'Nobody gave me anything.'

Negative indefinites can also occur with negative adverbs of the type discussed in section

4.1.

(92) *mach bay   kä-mäta-ø*   *kwa'*

  NEG   ever   1ERG-receive-3ABS   what

  'I never get anything.'

4.2.2.4 Interim Summary of Negative Pronouns

     Chontal uses two distinct strategies to express negative pronouns depending on

whether the desired expression is animate or inanimate. For animate negative pronouns,

i.e. 'nobody,' Chontal uses the word *ni'untu*. For inanimate negative pronouns, i.e.

'nothing,' Chontal does not have a dedicated word; instead, it uses the wh-word *kwa'*

'what' and the negative existential or verbal negation. Both of these types of negative

pronouns must co-occur with predicate negation; attempts to formulate sentences using

ni'untu or *kwa'* without *mach* proved ungrammatical.

     We will now turn to negation of noun phrases, i.e. Chontal's strategy to express

meanings like 'no student' or 'no book,' which appears similar to negative pronouns but

differs in some important ways.

4.3 Noun Phrase Negation

Unlike negative pronouns, the same strategy is used in Chontal to negate animate and inanimate noun phrases. To negate animate noun phrases, the word for 'nobody,' *ni'untu*, is used. To negate inanimate noun phrases, a similar word, *ni'ump'e*, is used. *Ni'ump'e* is constructed in the same way as *ni'untu*, except that the final syllable, *p'e*, is a classifer for inanimate objects, whereas *tu* is a classifier for animates[18].

(93) *ni-um-p'e*

    the-one-NCL.INANIMATE

Like *untu*, *ump'e* is attested in positive sentences as well, without *ni*.

(94) *no'on kä-nänta-ø   um-p'e   jun*

    I   1ERG-have-3ABS one-NCL.INANIMATE   book

    'I have a book.'

For lack of a better English alternative, I have glossed *ni'ump'e* as 'no.' However, *ni'ump'e* is not the independent word for 'no' (as the opposite of 'yes'); that is *mach*.

To negate a noun phrase, *ni'untu* or *ni'ump'e* is simply placed before the noun phrase, which is the position where adjectives appear in Chontal. For stative predicates, the noun, adjective, or existential is simply negated.

(95) *ni'untu   winik   mach   pok'o-ø*

    nobody man   NEG   fat-3ABS

    'No man is fat.'

(96) *ni'ump'e   manzana   mach   takan-jo'*

    no   apple   NEG   ripe-3PL

    'No apples are ripe.'

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[18] /n/ becomes [m] in *ni'ump'e* (underlyingly /*ni-un-p'e*/) due to phonological processes of assimilation.

74

(97) *ni'untu   aj   känjun   mach'an-ϕ   chum-u*

  nobody NCL.M student   NEG.EXIST-3ABS   seated-ADJ

  'No student is seated.'

(98) *mach'an-ϕ   ni'untu   ixik*

  NEG.EXIST-3ABS   nobody   woman

  'Nobody is a woman.'

   When the negated noun phrase is the argument of a verb, the verb is negated. There is no restriction on negation of subject versus object noun phrases.

(99) *ni'untu   aj   känjun   mach   a   jul-i-ϕ*

  nobody NCL.M student   NEG   AUX.PRF   come-PRF-3ABS

  'No student came.'

(100) *niump'e manzana mach   a   yäl-i-ϕ   tu   te'e*

   no   apple   NEG   AUX.PRF   fall-PRF-3ABS PREP   tree

  'No apple fell from the tree.'

(101) *mach   kä-kwina'ta-ϕ   ni'untu   aj   ts'ak*

   NEG   1ERG-know-3ABS nobody   NCL.M doctor

  'I don't know any doctors.'

(102) *mach   kä-k'ux-e-ϕ   niump'e   manzana*

   NEG   1ERG-eat-IPFV-3ABS   no   apple

  'I don't eat any apples.'

   All of the examples above included the predicate negator *mach*. However, unlike negative pronouns, *ni'untu* and *ni'ump'e* do not always have to appear with negation when they negate noun phrases. When the noun phrase that they negate is in the subject

position, they can appear without *mach*. This includes subjects of stative predicates. The sentences below repeat some examples from above to demonstrate this fact. In the pairs of sentences below, the first sentence includes *mach*, but the second sentence does not. Both are grammatical for all pairs, demonstrating the possibility of *ni'untu* and *ni'ump'e* conveying negative meaning without *mach*.

(103) a.　*ni'untu*　*winik*　*mach*　*pok'o-ɸ*

　　　　nobody　　man　　NEG　　fat-3ABS

　　b.　*ni'untu*　*winik*　*pok'o-ɸ*

　　　　nobody　　man　　fat-3ABS

　　'No man is fat.'

(104) a.　*ni'untu*　*winik*　*mach*　*pitsi-ɸ*

　　　　nobody　　man　　NEG　　handsome-3ABS

　　b.　*ni'untu*　*winik*　*pitsi-ɸ*

　　　　nobody　　man　　handsome-3ABS

　　'No man is handsome.'

(105) a.　*ni'untu*　*aj*　*känjun*　*mach*　*a*　　*jul-i-ɸ*

　　　　nobody　　NCL.M　student　　NEG　　AUX.PRF　come-PRF-3ABS

　　b.　*ni'untu*　*aj*　*känjun*　*a*　　*jul-i-ɸ*

　　　　nobody　　NCL.M　student　　AUX.PRF　come-PRF-3ABS

　　'No student came.'

(106) a.   *niump'e*   *manzana*   *mach*   *a*   *yäl-i-ø*   *tu*   *te'e*

           no   apple   NEG   AUX.PRF   fall-PRF-3ABS   PREP   tree

     b. *niump'e*   *manzana*   *a*   *yäl-i-ø*   *tu*   *te'e*

           no   apple   AUX.PRF   fall-PRF-3ABS   PREP   tree

     'No apple fell from the tree.'

However, when the negated noun phrase is not in the subject position, *ni'untu* and *ni'ump'e* cannot appear without *mach*. This restriction necessarily only applies to verbal sentences, because stative predicates only have one argument position. The two sentences from above that contain *ni'untu* and *ni'ump'e* in object position are repeated below to demonstrate their ungrammaticality without *mach*.

(107)   a.   *mach*   *kä-k'ux-e-ø*   *niump'e*   *manzana*

          NEG   1ERG-eat-IPFV-3ABS   no   apple

        'I don't eat any apples.'

      b. * *kä-k'ux-e-ø*   *niump'e*   *manzana*

           1ERG-eat-IPFV-3ABS   no   apple

       (Intended: 'I don't eat any apples.')

(108) a.   *mach*   *kä-kwina'ta-ø*   *ni'untu*   *aj*   *ts'ak*

          NEG   1ERG-know-3ABS   nobody   NCL.M   doctor

        'I don't know any doctors.'

     b. * *kä-kwina'ta-ø*   *ni'untu*   *aj*   *ts'ak*

           1ERG-know-3ABS   nobody   NCL.M   doctor

       (Intended: 'I don't know any doctors.')

4.4 Interim Summary of Word Negation in Chontal

So far, this chapter has described the strategies for negating individual words in Chontal. 4.1 demonstrated that to create negative adverbs, *mach* is placed before the adverb. 4.2 and 4.3 discussed negative pronouns and noun phrase negation in Chontal. These two types of negation are summarized in the table below.

	Animate	**Inanimate**	**Clausemate Negation?**
Negative Pronoun	*ni'untu*	negation + *kwa'*	yes
NP Negation	*ni'untu*	*ni'ump'e*	sometimes

Table 5 – Pronoun and NP Negation

Chontal uses *ni'untu* for both animate negative pronouns and negation of negative NPs. There is a corresponding form for inanimates, *ni'ump'e*, that is only used to negate NPs. To express the meaning carried by the negative pronoun 'nothing' in English, Chontal must use the negated wh-word *kwa'* 'what.' There thus seems to be a lexical gap in that there is single no word for 'nothing' in Chontal.

Chontal seems to have two separate systems for forming negative words in this way, distinguished by the (non)obligatory nature of co-occurring clausal negation. There is one system for expressing negative pronominal meanings, which includes the word *ni'untu* and the negated construction with *kwa'*[19]. Both of these must always be negated. The second system includes words used to negate noun phrases. These words CAN

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[19] Bernini & Ramat (1992:137) note that "individual members of the paradigm may belong to different sub-types of the same macro-types or even to different macro-types" in reference to the types described by Haspelmath (1997) and summarized in 4.2, suggestingthat it is not unprecedented that 'nobody' is expressed with a dedicated negative word while 'nothing' is expressed with a wh-word.

appear without clausal negation so long as they are the subject of the predicate. *Ni'untu* is the animate marker in both systems, but since it patterns differently depending on whether it is a negative pronoun or it is negating an NP, I analyze these two *ni'untu*s as distinct. The two forms are clearly related, but they do not function in the same way.

There may be some effect of the animacy hierarchy in Chontal negative pronouns and NP negation. Dixon (1994) suggests that for ergative languages, animate > inanimate. The data above demonstrate that, where Chontal has a dedicated word to express negation of an inanimate noun phrase, it also has a corresponding word to negate an animate noun phrase. However, the reverse is not true, as predicted by Dixon's hierarchy: Chontal can have a dedicated animate negative pronoun without having a corresponding inanimate negative pronoun.

4.5 Discussion of Negative Words in Chontal

Having established the facts of negative word formation in Chontal, this section will provide a syntactic account of these facts, focusing specifically on negative pronouns and NP negation. First I will address the question of whether what I have been calling negative pronouns are n-words or Negative Polarity Items, before turning to the question of Negative Concord ("double negation") and exploring the different manifestations of this phenomenon in Chontal. Then I will briefly discuss apparent long-distance licensing of those negative pronouns that must obligatorily be negated. I will conclude with a typological discussion of negative word formation to situate the Chontal data in the context of negative words cross-linguistically.

4.5.1 The Nature of Negative Pronouns

Two distinct subclasses of negative pronouns have been identified: n-words and Negative Polarity Items (NPIs). NPIs are negative pronouns that are licensed only in the presence of negation, such that they obligatorily co-occur with negation or in a context that is in some sense negative, including in many downward entailing contexts (Penka & Zeijlstra, 2010). N-words are negative pronouns that can independently semantically negate a sentence or carry independent semantically negative force but may also co-occur with the verbal negation marker (Laka, 1990; Giannakidou, 2000).[20]

Many authors have proposed that the condition for NPI licensing when there is no overt negation is simply that the context be downward entailing (Fauconnier, 1975, and subsequent work; see Haspelmath, 1997 for an overview). Giannakidou (2002, 2006) argues that NPIs are licensed in non-veridical contexts. Whatever the theoretical explanation for NPI licensing, the contexts in which an NPI is licensed remain the same, so the tests for whether a word is an NPI or an n-word will not differ greatly on this basis. This section will focus on the Chontal negative pronoun *ni'untu* and the NP negators *ni'untu* and *ni'ump'e* and argue that these words are examples of n-words rather than NPIs.

Many authors suggest that the best test of whether or not a negative pronoun is an n-word or an NPI is whether or not it can be a one-word negative answer to a question (Bernini & Ramat, 1992; Haspelmath, 1992; Giannakidou, 2006; a.o.). If it can be, the word is an n-word, and if not, the word is an NPI. This test is designed to get at whether

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[20] Some do not think that the n-word versus NPI distinction is salient, arguing that n-words are actually a subtype of NPIs. This is an issue for empirical debate and is beyond the scope of this paper. In the interest of thoroughness, and in the hope of providing data to facilitate future work on these questions, I have still included an analysis of Chontal in this framework. Moreover, regardless of what one chooses to term it, the evidence in this section will indicate that both negative pronouns and NP negators in Chontal have independent negative force, which bears on issues of Negative Concord (developed in the next section).

or not the word can independently semantically negate a proposition and seems to hold for most of the languages that have clear n-words.

This test clearly indicates that the pronominal *ni'untu* has independent negative force. Although it typically appears with co-occuring clausal negation, it can also be used as a one-word answer to a question.

(109) Q: *kane   a-chän-i-ø*

    who   2ERG-see-PRF-3ABS

    'Who did you see?'

  A: *ni'untu*

    'Nobody.'

In this context, *ni'untu* independently conveys negative meaning without co-occuring *mach*. This suggests that *ni'untu* as a negative pronominal is an n-word.

Two pieces of supporting evidence exist for this interpretation of pronominal *ni'untu*, one theoretical and one empirical. Giannakidou (2006) argues that if a negative pronoun can be used in structures that also contain sentential negation with only one semantic negation (i.e. the combination of the two negatives does not result in a positive meaning, like so-called double negation in English does), the word is an n-word rather than an NPI. Since *ni'untu* can co-occur with *mach* and express only one instance of semantic negation, under Giannakidou's analysis, it should be an n-word. The second piece of evidence derives from the fact that *ni'untu* is not licensed under contexts where NPIs are typically licensed. For example, many NPIs are licensed in questions, but *ni'untu* is not.

(110) * *a-chän-i-ø*   *ni'untu?*

2ERG-see-PRF-3ABS nobody

(Intended: 'Did you see anybody?')

Ni'untu is also not licensed in the antecedent of conditionals, which is another context

where NPIs tend to be licensed. This is not perfect evidence, since languages do show

variation in NPI-licensing contexts, but it suggests that *ni'untu* is likely not an NPI.

It is clear that the NP negators *ni'untu* and *ni'ump'e* can also independently

semantically negate a proposition. This was demonstrated in section 4.3, which shows

that *mach* is not required in most contexts in which these NP negators appear. Instead,

negation can be expressed simply by *ni'untu* or *ni'ump'e*.

Thus, both negative pronominals and NP negators in Chontal seem to be n-words

rather than NPIs, since both types of negative words can independently express semantic

negation.

4.5.2 Negative Concord

The previous section has established that negative pronominals and NP negators

in Chontal both carry semantic force independent of clausal negation. This creates a new

issue: why should two semantically negative words, namely *mach* and *ni'untu* or *mach*

and *ni'ump'e*, obligatorily appear together, and why does this not result in a positive

meaning? This section aims to resolve this question, first discussing these structures –

termed Negative Concord (NC) – and the problems raised by them, and then providing a

syntactic solution for Chontal.

4.5.2.1 The Problem of Negative Concord

We talk about NC in situations where negation is interpreted just once although it seems to be expressed more than once in the clause (Giannakidou 2006). In NC languages, multiple elements in a clause all indicate that the clause should be interpreted as semantically negated (Ladusaw 2001). Even though each negative element may be able to express negation on its own, when more than one of these elements appears in a language, negation is still semantically expressed only once. Many Indo-European languages have this strategy; it is perhaps most well-known in the Romance languages, though it occurs other branches of the family as well.

NC poses a problem for most basic definitions of negation. In Chapter 3, we defined negation as "an operator that reverses the truth value of a proposition" (Miestamo, 2007: 552). However, NC languages contain two words with negative meaning, but the sentence has a positive meaning. Thus the problem of compositionality arises: if a sentence contains two words that reverse the truth value of the proposition, why does this not result in a positive meaning? Slightly more formally, in logic it is taken to hold that $\neg\neg P = P$, but this does not seem to hold for NC languages, where two instances of negation still result in semantic negation. The immediate solution might be to say that these words are not negative after all, but there then is no explanation of how they can give negative one-word answers to questions or connote negative meaning on their own (i.e. there is no explanation of the facts outlined in section 4.5.1). I will show, however, that current syntactic analyses based on agreement can explain this problem and account for most of the facts of NC in Chontal.

4.5.2.2 Negative Concord in Chontal

Two main types of NC languages have been recognized. Strict NC languages are those where all negative indefinites are obligatorily accompanied by a clausal negative marker, and any negative pronoun that occurs without an accompanying marker of clausal negation is ungrammatical. In non-strict NC languages, negative indefinites are not always obligatorily accompanied by a negative marker on the predicate (Giannakidou, 2006). In nearly all non-strict NC languages, the negative marker is obligatory only when the negative indefinite occurs postverbally (Haspelmath, 1997: 211).

Chontal seems to show both patterns with different classes of negative words. The negative pronoun *ni'untu* must always co-occur with the clausal negative marker, regardless of its structural position. Negative pronouns in Chontal therefore seem to be an example of strict NC. The NP negators *ni'untu* and *ni'ump'e*, however, only co-occur with the clausal negative marker in certain contexts (namely, when they modify an object NP). NP negators in Chontal then seem to be an example of non-strict NC. This non-strict NC follows Haspelmath's generalization: when the indefinite NP negators occur postverbally, i.e. in the object position, the negative marker is obligatory.

It is not unprecedented for a language to show both types of behavior with different classes of negative indefinites. We see this, for example, in Standard English, which has two different series of negative pronouns. Predicate negation can only co-occur with the 'any'-series; the 'no'-series prohibits this co-occurrence:

(111) a. I found nothing.

  b. *I didn't find nothing.

  c. I didn't find anything.

Other languages pattern similarly to English in this regard.

  This distinction in Chontal is accounted for under current syntactic theories of

NC. Most accounts argue that the apparent double negation is just the expression of

agreement, involving a syntactic relation between a negative phrase or negative head and

the NPI or n-word (Zanuttini, 1991; Haegeman, 1995; Weiss, 2002; Zeijlstra, 2008; a.o.)

Under this account, NC is an instance of syntactic agreement between an uninterpretable

NEG feature on an n-word and an interpretable NEG feature on the verb, which spells out

the semantic negation. There is then only one negative operator in the sentence, and

while negation is morpho-syntactically double-marked, it is not semantically double-

marked.

  The distinction between strict NC with Chontal negative pronouns and non-strict

NC with Chontal NP negators can thereby be explained by the Chomskyan distinction

between strong and weak uninterpretable NEG features (Chomsky, 1995). The negative

pronoun *ni'untu* would have a strong uninterpretable NEG feature, which must be checked

by an overt negative marker. This would explain why it must always co-occur with

negation in sentences. However, the NP negators *ni'untu* and *ni'ump'e* have a weak

uninterpretable NEG feature, which does not have to be checked before LF in most

contexts (Weiss, 2002). [21]

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[21] An alternative explanation, based on Serbo-Croatian negation, holds that n-word licensing derives from the binding theory (Progovac, 1994; Blaszczak, 1998). This explanation has many theory-internal problems (Haspelmath, 1997). Binding is also difficult to analyze in Chontal given the lack of a comprehensive analysis or data on binding. As such, I have not explored this explanation in this paper.

This explanation is not perfect. It still does not explain why, if a negative pronoun like *ni'untu* has an uninterpretable NEG feature, it can stand alone as a one-word negative answer. It also has not explained why, when there is a weak uninterpretable feature, it must always be checked in object position only. This is still a matter of much debate in the literature on the syntax of negation. By providing the data on Chontal and a preliminary analysis, I hope to facilitate future work on this question that incorporates Chontal data.

4.5.3 Long-Distance Licensing

Finally, I will turn briefly to the question of apparent long-distance licensing with pronominal *ni'untu*. We have seen in 78, repeated here, that *ni'untu* as the object of a complement verb can be licensed by negation on the higher lexical verb.

(78) *mach ko   kä-chän-en-ø   ni'untu*

   NEG   want.1SG.IPFV   1ERG-see-IPFV-3ABS   nobody

   'I don't want to see anyone.'

This suggests that, although *ni'untu* always must co-occur with clausal negation, this negation does not have to negate the verb of which *ni'untu* is an argument; in other words, *mach* on a higher verb can license *ni'untu* lower in the clause. This also holds when *ni'untu* is the subject.

(112) *mach ko   t-ik-ø   ni'untu*

   NEG want.1SG.IPFV   come-OPT-3ABS   nobody

   'I don't want anyone to come.'

At this point, two analyses are possible. The verb 'want' could take a CP complement, in which case *mach* would license *ni'untu* in the lower clause, an instance of long-distance agreement. Alternatively, 'want' might take a nominalized DP complement that is possessed by the pronoun *ni'untu*, such that 78 and 112 would literally mean, respectively, 'I do not want my seeing anybody' and 'I do not want anybody's coming.'

Two pieces of evidence suggest that the first explanation is correct and that this is a true instance of long-distance licensing. First, the mood and aspect marking on the verb *chän* in 78 and the verb *ute* (simplified here to *t*) in 112 indicate that these verbs are not nominalized. In Chontal, nominalized verbs do not inflect for aspect or mood; instead, aspect or mood information is given by separate aspect markers or marking on the matrix verb. This means that these verbs are likely true verbs and not nominalized verbs. Second, evidence from similar structures with other verbs indicate that *mach* in a higher clause can license *ni'untu* in a lower CP.

(113) *mach   kä-ts'on-ä-ø   ke   ni'untu   u-x-e*

    NEG   1ERG-think-IPFV-3ABS   thatnobody   3ERG-go-IPFV

    tä   jule

    SUB come

    'I don't think that nobody will come.'

The presence of the complementizer *ke* here indicates that *ts'on* 'think' takes a CP complement, suggesting that the complement verb is not nominalized. The fact that *mach* in the higher clause still licenses *ni'untu* even with the CP indicates that this may be a true instance of long-distance licensing or negative raising in the language. More

work would be needed to determine the precise mechanism at work here, but this evidence suggests that some sort of long-distance dependency is at play.

Interestingly, the indefinite *ka tijini*, which is normally ungrammatical under negation, can appear in the subordinate clause in this same CP construction.

(114) *mach   kä-ts'on-ä-ø   ke   ka   tijini   u-x-e*

    NEG   1ERG-think-IPFV-3ABS   thatperson INDET 3ERG-go-IPFV

    tä   jule

    SUB come

    'I don't think that somebody will come.'

This suggests that *mach* may not always project into the CP layer, since structures that are ungrammatical under negation are grammatical here. This could be evidence that some sort of raising is at work: rather than *mach* probing down into the CP layer, *ni'untu* may be raising covertly in structures like 113.

4.6 Negative Pronouns Cross-Linguistically

4.6.1 Negative Pronoun Formation Strategies

When a language has dedicated negative indefinite pronouns, these pronouns tend to be formed in one of three ways. First, they may be formed from interrogative pronouns, typically by affixing a negative marker to the interrogative pronouns in a language. Georgian is an example of such a language: *vin* 'who' and *ara-vin* 'nobody' are self-evidently closely related to one another (Hewitt, 1995; referenced in Haspelmath, 2011). The second common strategy to form negative pronouns is to form them from generic pronouns like 'thing' or 'person.' In Modern Standard Arabic, for example, *la*

aħad 'nobody' is derived from the word *aħad* 'one (person)' plus the negative particle *la*. The third category of languages contains those languages that do not have a predictable strategy for forming negative pronouns. In these languages, negative pronouns are not transparently derived from other words or categories of words. Other languages express the same meaning by using generic indefinite pronouns with the negative existential. .

Chontal employs many of these strategies to form and express negative indefinites in various contexts. To express 'nobody' as a pronoun, Chontal uses a word, *ni'untu*, that is not transparently derived from other words or negative elements, employing the third strategy above. To express 'nothing' as a pronoun, Chontal uses a negated verb or the negative existential with the generic pronoun *kwa'* 'what,' combining the second and fourth strategies enumerated above. To negate noun phrases, Chontal uses *ni'untu* and *ni'ump'e*, words that are not transparently derived from other words, again making use of the third strategy.

None of these individual strategies is unique cross-linguistically; they are all shared by many other languages and have been described extensively in the past. In the variety of different strategies that it employs to express negative pronominal meanings, though, Chontal is unique cross-linguistically. Most languages make use of only one or two of the strategies described above.

4.6.2 Negative Indefinites and Predicate Negation

All negative indefinites in Chontal can co-occur with predicate negation, although in the instance of certain negative indefinites (*ni'untu* and *ni'ump'e* when negating subject NPs), this co-occurrence is not obligatory. This is a fairly common strategy

across the languages of the world; in fact, Haspelmath (2011) says that this strategy is used in the vast majority of the world's languages. However, the languages that allow this structure differ in whether or not NC is obligatory. Chontal appears to have two classes of negative indefinites, one of which always co-occurs with NC and one of which does not always obligatorily co-occur with NC. We have seen evidence in 4.5.2.2 that this strategy is not unique in the world's languages; in fact, it occurs in English.

4.7 Summary of Negative Words

This discussion section has provided evidence that negative indefinites in Chontal, whether they be negative pronouns or NP negators, are inherently negative n-words. They appear with clausal negation in an instance of Negative Concord, which can be explained, albeit not perfectly, by syntactic agreement and the difference between interpretable and uninterpretable features. Similar strategies have been described for many other languages. As such, going forward, a productive area of inquiry might compare the Chontal structures to their counterparts in other languages.

While this section has outlined a thorough preliminary analysis of negative indefinites in Chontal, some questions still remain. Syntactic analyses of NC, while they appear to account for the facts in Chontal, still lack a satisfactory explanation for the distribution of obligatory versus non-obligatory negation in weak-NC patterns. Certain structures seem to involve some form of long-distance licensing of negative pronouns, but more work is needed to identify the precise mechanism at work.

Chapter 5: Conclusion and Future Directions

This thesis has described and analyzed negation in Chontal Mayan. It began by detailing clausal negation in Chontal, explaining the different negative forms and their distribution. It summarized the changes that negation conditions in the verbal complex and provided a typological account of these changes. It also provided evidence that the negative marker *mach* in Chontal is the head of a negative phrase that is situated above TP in the syntactic structure. Finally, it turned to the problem of the apparent disappearance of split ergativity under negation in Chontal, proposing that the negative imperfective marker *u* is an embedding predicate that takes as its complement an intransitive verb marked with the absolutive, such that the subject is no longer able to be marked as ergative.

The second part of this thesis discussed negative indefinites in Chontal. After describing the formation of negative adverbs, this chapter provided evidence that there are two classes of negative indefinites in Chontal: the negative pronoun *ni'untu* 'nobody' and the animate and inanimate NP negators *ni'untu* and *ni'ump'e*. These can be distinguished, even though the animate negative indefinite is homophonous for both, on the basis of their different behavior with regard to co-occuring predicate negation. While both are inherently negative, they differ as to how they pattern in the context of Negative Concord. My thesis proposed a syntactic analysis of this problem and discussed the drawbacks to this approach in Chontal, suggesting some questions that could be answered with further work.

This thesis sets a precedent for comparative descriptive work in a particular area grammar in an endangered language. With this work, I hope to set a precedent for future

researchers on Mayan and on other understudied languages regarding the importance of work that combines description and syntactic analysis. Future research can use the analysis that I have presented to inform broader theoretical descriptions of negation in language, helping to improve theoretical explanations and correct biases that currently exist in the available data. Moreover, this work will enable studies of microvariation within the Mayan language family; such studies can be very useful in determining the possibilities that exist in language.

The data contained in this thesis also sheds light on phenomena beyond the syntax of negation. One interesting issue in the study of understudied endangered languages today is the changes that languages undergo as their speakers become fluent bilinguals and eventually begin to lose the language altogether. This thesis has provided evidence that bilingual speakers, especially those who use Spanish frequently, seem to be losing split ergativity, based on conflicting data produced by the same speakers with no apparent contextual patterns. This seems to not be as common in speakers who have had some formal education in Chontal or in other Mayan languages. Future work might explore these apparent patterns both in Chontal and in other endangered languages to see if these conclusions hold cross-linguistically and to see what their correlates in other areas of the grammar may be.

This thesis has presented some puzzles of negation in Chontal that have not been entirely resolved, such as apparent long-distance licensing or Negative Concord. Future work might endeavor to explain these phenomena by investigating them in more depth. Moreover, this thesis focused primarily on a syntactic analysis of negation in Chontal. This analysis could be supplemented by a very detailed semantic analysis to determine

the semantic properties of negation, especially negative indefinites, in Chontal. Specific negative indefinites might be carefully lexicographically described in order to determine their distinctions and distribution. I hypothesized that there might be an effect of the animacy hierarchy present in the negative indefinite paradigm in Chontal. This bears further invesetigating to determine whether this animacy effect is present, whether it extends to other domains in Chontal, and how it should be analyzed semantically.

In conclusion, the current work provides a detailed analysis of negation in Chontal. While there are many areas that still merit further exploration, as an initial syntactic explanation of negative structures in Mayan languages, this thesis can serve as a basis for future researchers. Whether future work explores Chontal negation in more depth, describes negation in other Mayan languages, or theorizes more broadly about the syntax of negation, this thesis will provide a wealth of new data about a fundamental property of human language, expanding the understanding of current theories.

List of Glosses

The morphemes in this thesis have been glossed in accordance with the Leipzig Glossing

Rules (Comrie et al., 2008). Below is a list of the glosses used and their corresponding

linguistic terms.

1	first person
2	second person
3	third person
ABS	absolutive
ADJ	adjective
APPL	applicative
AUX	auxiliary
CAUS	causative
CLF	classifier
DEM	demonstrative
DEP	dependent
ERG	ergative
EXIST	existential
F	feminine
FOC	focus
FUT	future
IMP	imperative
INDET	indeterminate
INTR	intransitive
IPFV	imperfective
LOC	locative
M	masculine
NEG	negative
NMLZ	nominalizer
OPT	optative
PASS	passive
PL	plural
PREP	preposition
PRF	perfective
PROG	progressive
PST	past
SBJV	subjunctive
SG	singular
SUB	subordinator

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