Basic Clause Structure in Veracruz Huastec

Peter G. Constable

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BASIC CLAUSE STRUCTURE
IN VERACRUZ HUASTEC

by
Peter G. Constable

Bachelor of Mathematics, University of Waterloo, 1984

A Thesis
Submitted to the Graduate Faculty
of the
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for the degree of
Master of Arts

Grand Forks, North Dakota

May
1989
This thesis submitted by Peter G. Constable in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota has been read by the Faculty Advisory Committee under whom the work has been done, and is hereby approved.

[Signatures]

This thesis meets the standards for appearance and conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

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Dean of the Graduate School
Permission

Title  Basic Clause Structure in Veracruz Huastec

Department  Linguistics

Degree  Master of Arts

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Signature  Peter G. Constable

Date  April 20, 1989
# Table of Contents

List of Tables........................................................................................................................................................... vii
List of Abbreviations ................................................................................................................................................ viii
Preface ........................................................................................................................................................................ xi
Abstract ....................................................................................................................................................................... xiii
Chapter 1: Introduction.................................................................................................................................................... 1
  1.1 Huastec............................................................................................................................................................... 1
  1.2 Previous Studies ............................................................................................................................................... 1
  1.3 Overview........................................................................................................................................................... 3
  1.4 Notes on Representations .............................................................................................................................. 5
Notes to Chapter 1........................................................................................................................................................ 7
Chapter 2: Overview of Huastec in Relation to Other Mayan Languages................................................................. 8
  2.1 Phonology.......................................................................................................................................................... 8
    2.1.1 Phonemic Inventory.................................................................................................................................... 8
    2.1.2 Stress and Tone.......................................................................................................................................... 10
    2.1.3 Syllable Structure ................................................................................................................................... 11
    2.1.4 Phonology and Morphophonology ......................................................................................................... 11
  2.2 Morphology....................................................................................................................................................... 11
    2.2.1 Morphological Typology ......................................................................................................................... 11
    2.2.2 Morpheme Structure ............................................................................................................................... 15
    2.2.3 Lexical Classes.......................................................................................................................................... 16
    2.2.4 Agreement and Agreement Proclitics .................................................................................................... 16
    2.2.5 Tense and Aspect .................................................................................................................................... 25
    2.2.6 Interaction of Agreement Proclitics and Tense/Aspect ........................................................................ 33
6.1.3 Conditions on IOA.......................................................... 137
6.1.4 Subcategorization of Verbs With Respect to Initial 3s .......... 138
6.2 Benefactive Advancement..................................................... 146
6.3 Possessor Ascension ............................................................ 148
6.4 Conditions for Dative Voice.................................................... 153
Notes to Chapter 6........................................................................ 168
Chapter 7: Antipassive and Instrumental Advancement................. 173
  7.1 Antipassive Clauses in Huastec .......................................... 174
  7.2 Analysis of Huastec Antipassive Clauses.............................. 176
  7.3 Instrumental Advancement................................................... 182
  7.4 Interaction of Antipassive With Instrumental Advancement...... 187
Notes to Chapter 7........................................................................ 190
References.................................................................................... 192
List of Tables

TABLE I. Huastec consonants.......................................................................................10
TABLE II. Comparison: Huastec transitive agreement clitics for 3s DO vs. Proto-Mayan ergative prefixes............................................................................20
TABLE III. Comparison: Huastec intransitive agreement clitics vs. Proto-Mayan absolutive prefixes...................................................................................20
TABLE IV. Comparison: Huastec transitive agreement clitics vs. Proto-Mayan set A and B prefixes .............................................................................................21
TABLE V. Intransitive agreement clitics........................................................................33
TABLE VI. Huastec transitive agreement clitics, Ø-SET...........................................34
TABLE VII. Transitive agreement clitics, K-set..........................................................34
TABLE VIII. Possessive agreement clitics...................................................................38
TABLE IX. Mayan noun possession classes.................................................................39
List of Abbreviations

In glosses:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1, 2, 3</td>
<td>first, second, third person</td>
</tr>
<tr>
<td>1s, etc.</td>
<td>first (second, third) person singular</td>
</tr>
<tr>
<td>1p, etc.</td>
<td>first (second, third) person plural</td>
</tr>
<tr>
<td>1sPOSS, etc.</td>
<td>person and number agreement for the possessor in possessed noun phrases</td>
</tr>
<tr>
<td>1s/3, 2/1s, etc.</td>
<td>person and number agreement for subject and direct object in transitive clauses; for a gloss of the form a/b, a cross-references the subject and b cross-references the direct object</td>
</tr>
<tr>
<td>A1, B1, etc.</td>
<td>set A/set B, first person (etc.)—used for agreement affixes in Proto-Mayan and most Mayan languages</td>
</tr>
<tr>
<td>AP</td>
<td>antipassive</td>
</tr>
<tr>
<td>CAUS</td>
<td>causative</td>
</tr>
<tr>
<td>CL</td>
<td>clitic</td>
</tr>
<tr>
<td>CMP</td>
<td>completive</td>
</tr>
<tr>
<td>COLL</td>
<td>collective</td>
</tr>
<tr>
<td>COMP</td>
<td>complementizer</td>
</tr>
<tr>
<td>CONJ</td>
<td>conjunction</td>
</tr>
<tr>
<td>DAT</td>
<td>dative</td>
</tr>
<tr>
<td>DEF</td>
<td>definite</td>
</tr>
<tr>
<td>DEM</td>
<td>demonstrative</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>EMPH</td>
<td>emphatic</td>
</tr>
<tr>
<td>HON</td>
<td>honorific</td>
</tr>
<tr>
<td>IMP</td>
<td>imperfective</td>
</tr>
<tr>
<td>INC</td>
<td>incomplete</td>
</tr>
<tr>
<td>INCHO</td>
<td>inchoative</td>
</tr>
<tr>
<td>INDEF</td>
<td>indefinite</td>
</tr>
<tr>
<td>INST</td>
<td>instrumental</td>
</tr>
<tr>
<td>K1s, etc.</td>
<td>agreement clitic from the (transitive or intransitive) K-set (see tables V and VII)</td>
</tr>
<tr>
<td>LOC</td>
<td>locative</td>
</tr>
<tr>
<td>MID</td>
<td>middle</td>
</tr>
<tr>
<td>NEG</td>
<td>negative</td>
</tr>
<tr>
<td>NOM</td>
<td>nominalizer</td>
</tr>
<tr>
<td>NPOSS</td>
<td>non-possessed</td>
</tr>
<tr>
<td>PASS</td>
<td>passive</td>
</tr>
<tr>
<td>PFV</td>
<td>perfective</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>POSS</td>
<td>possessed</td>
</tr>
<tr>
<td>PRF</td>
<td>perfect</td>
</tr>
<tr>
<td>PTCPL</td>
<td>participle</td>
</tr>
<tr>
<td>QUOT</td>
<td>quotative (disclaimer)</td>
</tr>
<tr>
<td>RECI</td>
<td>reciprocal</td>
</tr>
<tr>
<td>REL</td>
<td>relativizer</td>
</tr>
<tr>
<td>SBJ</td>
<td>subjunctive</td>
</tr>
<tr>
<td>T1s, etc.</td>
<td>agreement clitic from the intransitive T-set (see table V)</td>
</tr>
<tr>
<td>U1s, etc.</td>
<td>agreement clitic from the intransitive U-set (see table V)</td>
</tr>
<tr>
<td>Other:</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>subject</td>
</tr>
<tr>
<td>2</td>
<td>direct object</td>
</tr>
<tr>
<td>3</td>
<td>indirect object</td>
</tr>
<tr>
<td>AG</td>
<td>arc grammar (refers to arc pair grammar and relational grammar collectively)</td>
</tr>
<tr>
<td>APG</td>
<td>arc pair grammar</td>
</tr>
<tr>
<td>B2A</td>
<td>benefactive advancement to 2</td>
</tr>
<tr>
<td>B3A</td>
<td>benefactive advancement to 3</td>
</tr>
<tr>
<td>BA</td>
<td>benefactive advancement</td>
</tr>
<tr>
<td>Ben</td>
<td>benefactive relation</td>
</tr>
<tr>
<td>Chô</td>
<td>chômeur relation</td>
</tr>
<tr>
<td>DO</td>
<td>direct object</td>
</tr>
<tr>
<td>Gen</td>
<td>genitive relation</td>
</tr>
<tr>
<td>iff</td>
<td>if and only if</td>
</tr>
<tr>
<td>Inst</td>
<td>instrumental relation</td>
</tr>
<tr>
<td>IOA</td>
<td>indirect object advancement</td>
</tr>
<tr>
<td>Loc</td>
<td>locative relation</td>
</tr>
<tr>
<td>P2A</td>
<td>possessor ascension to 2</td>
</tr>
<tr>
<td>P3A</td>
<td>possessor ascension to 3</td>
</tr>
<tr>
<td>PA</td>
<td>possessor ascension</td>
</tr>
<tr>
<td>RG</td>
<td>relational grammar</td>
</tr>
<tr>
<td>SIL</td>
<td>Summer Institute of Linguistics</td>
</tr>
<tr>
<td>SLP</td>
<td>San Luis Potosí</td>
</tr>
<tr>
<td>UN</td>
<td>unspecified</td>
</tr>
</tbody>
</table>
Preface

This thesis is based on field work done in Tantoyuca, Veracruz, Mexico in March and April, 1986, and again in October and November, 1986 under the direction of the Summer Institute of Linguistics (SIL). I was given the opportunity to live with and work alongside James and Mary Walker, who have been doing field work among the Huastecs, also under the direction of SIL, since 1977.

During my visits to Tantoyuca, my primary goal was to gain an understanding of the clause level syntax using Relational Grammar as a framework to direct my investigations. This was accomplished partially through elicitation and partially through the preparation of texts previously collected by the Walkers. The elicitation was made possible through the generous assistance of three competent language consultants. All three are native speakers of Huastec born in the vicinity of Tantoyuca and are capable speakers of Spanish as well, though with differing levels of proficiency. The one with whom I worked the most, Rufina del Angel Santana, is not only very capable in spoken and written Spanish but has also learned to read and write her own language and works with the Walkers as co-translator on the Huastec translation of the New Testament. I was also able to consult occasionally with some speakers of a slightly different dialect spoken a little further east.

In acknowledgement, my first thanks go to Jim and Mary Walker who were a great help to me while I was in Tantoyuca. They not only shared their insights into Huastec, but also helped me develop my abilities in Spanish, introduced me to their Huastec acquaintances, and provided me with a place to stay. I greatly appreciate
their patience, hospitality and friendship, and the time they took out from their own work to assist me in mine.

I wish to thank the Mexico Branch of SIL for allowing me the opportunity to work with the Walkers and for their assistance and encouragement in many ways; in particular, Doris Bartholomew and Charles Speck provided many valuable comments on various stages of this work for which I am grateful.

I am most grateful to the members of my committee, and in particular to my advisor, Stephen Marlett, for their help and their investment of time in developing my abilities in linguistics.

My wife, Lori, patiently provided love and encouragement during the last several months of my work on this project: indeed, "He who finds a wife finds what is good and receives favour from the Lord."

Special thanks go to my Huastec friends, especially Juan Martir Concepcion, Teodora del Angel de Martir, and Rufina del Angel Santana, for sharing with me something very special to them and very close to their hearts — their language.

My last and greatest thanks go to my Lord, Jesus Christ: the debt I owe to him is more than I could ever pay; yet he has removed all debt from me. Such is the grace of God! To him alone be the glory.
ABSTRACT

Huastec is a Mayan language spoken in east-central Mexico. It is considered important in Mayan studies since it alone represents a distinct branch within the Mayan family of languages; however, there is, in fact, relatively little published work on Huastec, especially on Huastec syntax. This thesis fills in some of this lacuna with a description of several aspects of Huastec clause structure.

A general overview of Huastec grammar is presented in chapter 2, followed by several chapters each of which focuses on a separate topic of Huastec clause structure. The analyses in these chapters are presented within the theoretical frameworks of relational grammar and arc pair grammar. This theoretical perspective allows for a lucid account of the various structures considered.

Huastec has clauses which involve several distinct types of structure found in other Mayan languages—passive, antipassive, indirect object advancement (dative shift), instrument advancement, possessor ascension (possessor dative), and others. Some of these have been identified in other descriptions of Huastec; however, this thesis provides a more detailed account of such structures in Huastec, some of which have remained unnoticed in other descriptions, and makes sharp distinctions between various ones which have previously been confused.

While providing a descriptive account of interest to Mayanists, certain issues of theoretical interest are also raised. Many European languages have been found to include morphosyntactic devices reflecting syntactic structures that involve, as a minimal characteristic, the presence of a nominal which is both a subject and a direct object; one well-documented example is the use of essere as an auxiliary in Italian.
(cf. Perlmutter 1978, Rosen 1981). The labels *middle voice* and *medio-passive* are often associated with such devices.) These devices and the exact constraints upon them vary greatly among these languages, yet the clauses in which they occur are generally limited to certain reflexive, passive, and unaccusative clauses. This thesis provides an account of similar clauses from a non-Indo-European language. In addition, the prediction is made that some language which has such a morphosyntactic device should also allow the same device in certain antipassive clauses; it is argued that this situation holds in Huastec. This, in turn, provides new and novel evidence in favour the universal characterization of antipassives proposed by Postal (1977).

A novel account of possessor ascension has been proposed by Rosen (1987); however, it is shown that this analysis is not viable for Huastec. Rather, it is argued that possessor ascension clauses in Huastec involve the raising of a possessor specifically to indirect object.
Chapter 1
Introduction

1.1 Huastec

Huastec is a member of the Mayan family of languages representing one distinct branch within the family. It is spoken in east-central Mexico in the state of San Luis Potosí (SLP) and in the northern part of the state of Veracruz. In relation to other Mayan languages, therefore, it is removed geographically as well as being somewhat different linguistically.

Huastec is spoken by an estimated 73,000 people in at least two dialects — that spoken in SLP, and that spoken in Veracruz (Grimes 1988:20-1).

1.2 Previous Studies

While there is extensive literature on Mayan languages generally, published work on Huastec is somewhat rare, especially work on Huastec syntax. Campbell 1978 provides comprehensive bibliographic information on Mayan languages including Huastec.

Huastec was among the many Mesoamerican Indian languages studied by Spanish missionaries as early as the sixteenth century. Works from before the twentieth century are limited to vocabularies and dictionaries, some comparative studies, and grammatical notes prepared for teaching Huastec to speakers of Spanish.

In this century, substantial amounts of research has been done by a few individuals, notably Manuel J. Andrade, Norman A. McQuown, Raymond and Kay Larsen, and Terrence Kaufman. Andrade’s field notes and texts which he transcribed have been collected on microfilm by the University of Chicago Library.
(Andrade 1946, 1971, 1975a, 1975b; see also Redd 1975). The University of Chicago Library collection also includes a dictionary morpheme list and grammar by McQuown (1976a, 1976b, 1976c); one text has been published by McQuown (1976d).


I know of no published results from Kaufman's research to date. Kaufman 1986 gives an overview of several aspects of the grammars of Mayan languages, including Huastec.

On-going fieldwork is currently being conducted by James and Mary Walker in the Veracruz dialect of Huastec. Publications resulting from their work to date include four translated portions from the New Testament (Walker 1986a, 1986b, 1986c, 1986d) and a descriptive article on noun phrases (Pablo E. et al 1984).

There is little in the way of analysis that is available: descriptions of Huastec phonology, morphology and/or morphology are provided by Larsen and Pike 1949, Ochoa Peralta 1984, and Pablo E. et al 1984; Pablo E. et al also cover some aspects of the syntax of noun phrases; Larsen 1953 describes verb agreement in the SLP dialect; and Dayley 1983 discusses some aspects of the clause structure of several Mayan languages including Huastec, though he admits that his data on Huastec is limited since "there are no good grammatical descriptions of Huastec" (p. 80).
1.3 Overview

The goal of this thesis is to present an overview of several aspects of Huastec clause structure. Focus is aimed primarily at the Veracruz dialect, though the syntax of the dialect in SLP is quite similar.

Most of the analysis presented is done within the framework of Relational Grammar (RG) with occasional use of its offshoot, Arc Pair Grammar (APG). The adoption of this theoretical stance for this research has allowed for a clear analysis of Huastec clause structure and has provided interesting insights into many aspects of the syntax of this language. As well, it has raised a number of interesting questions concerning this language and also questions of broader theoretical and cross-linguistic interest. It is hoped that this work will serve to provide support for various assumptions within RG as well as raising questions about other assumptions within the theory that may require modification.

A general overview of Huastec grammar is presented in chapter 2 in theoretical terms. This is intended to introduce the reader to basic facts, particularly about morphology and morphosyntax, that will aid in the reading of subsequent chapters as well as providing a source of information regarding several topics not covered in the remainder of the thesis.

Chapter 3 provides an introduction to the theoretical assumptions and notational devices of RG and APG. It is intended primarily for readers that have little or no familiarity with these frameworks and may be passed over without leaving any gaps in the actual analyses presented.

Chapters 4-7 form the heart of this research, with each chapter discussing some distinct aspect of clause structure. Plain passive clauses are covered in chapter 4; Huastec also has reflexive passives which are discussed in chapter 5.

The general topic of chapter 5 is reflexive clauses. This covers several types of clause: reflexive clauses with reflexive pronouns, reflexive clauses without reflex-
ive pronouns, reflexive passives, and reflexive unaccusatives. One important conclusion drawn is that the syntax of these various types of clause is distinct yet definitely related.

Clauses involving dative voice are discussed in chapter 6; this includes clauses in which notional recipients and addressees as well as benefactives and possessives function as a grammatical direct object. Comparison is made here with similar types of clause in Tzotzil and Sierra Popoluca, and these are applied to evaluating certain issues of theoretical concern. In particular, Rosen 1987 proposes a novel analysis of possessor ascension clauses which she applies to data from Tzotzil; however, it is shown that this analysis is simply not viable for either Huastec or Sierra Popoluca.

Finally, chapter 7 discusses antipassive clauses as well as clauses with instrumental voice which, in certain cases, appears to interact with antipassive. It has been claimed by some (e.g. Dayley 1983:82) that Huastec does not have an antipassive of any kind. More generally, antipassives appear to have been the focus of some debate among Mayanists (cf. Smith-Stark 1978). Chapter 7 makes clear that Huastec does indeed have an antipassive; in fact, it appears that it even distinguishes between a plain antipassive and a reflexive antipassive. The interaction of antipassive and instrumental voice is not clear, however, and this matter is left unresolved; however, this discussion does succeed, at least, in identifying it as a problematic area that demands further attention.

This thesis is based primarily on notes collected during two trips to Tantoyuca, Veracruz, Mexico during 1986. Other sources of data on the Veracruz dialect include several unpublished Huastec texts transcribed by James and Mary Walker, field notes collected by James and Mary Walker, various unpublished manuscripts written by James Walker in association with various other authors (Walker n.d., 1983, Pablo E. et al 1984, Santana et al n.d.), an unpublished manuscript by Terrence Kaufman (Kaufman 1986), and various published sources,
in particular, Dayley 1983 and Ochoa Peralta 1984. Also, given the large degree of similarity between the dialects in Veracruz and SLP, I also took advantage of published sources available to me from the SLP dialect including a vocabulary by Larsen (Larsen 1955) and also Larsen and Pike 1949.

A few of the examples that are used are translated textual materials taken from the New Testament in Huastec of SLP, prepared under the direction of Raymond and Kay Larsen and SIL (cited as Larsen 1971), or from portions from the New Testament in Huastec of Veracruz, prepared under the direction of James and Mary Walker and SIL (cited as Walker 1986a, b, c, d). Examples from the New Testament in Huastec of SLP can be identified by the reference to the specific book, chapter and verse following the example; examples from the portions of the New Testament in Huastec of Veracruz can be identified by the reference to the particular portion (Mk2 refers to Walker 1986b; Mk12, to Walker 1986; and Lk2, to Walker 1986d). Of course, translated materials are not the best choice of data on which to base analyses. It should be noted, however, that these translated materials, in accordance with general practice of language programs conducted under the direction of SIL, have been prepared with the assistance of mother-tongue speakers and have been tested for grammaticality and naturalness. Furthermore, examples taken from translated materials are never used here as the sole basis for any given analysis, but are generally used only to support other arguments or because they, of the data available to me, best illustrate the point being made (due to the limited extent to which there are independent facts affecting the example which could confuse the reader).

1.4 Notes on Representations

The phonemic and morphological analysis adopted in this thesis is assumed without discussion; a phonemic inventory is presented in §2.1.1. The representations
used here generally show underlying morphemes in a phonemic transcription except where noted otherwise; various phonological and morphophonological processes which would apply to result in surface forms are suppressed. There are only two exception to this generalization: certain clitic morphemes which contract are shown in contracted form (cf. §2.2.7); certain morphological processes involve the lengthening of stem vowels, and in such cases this is reflected in the representation (cf. §2.2.7).

In instances which involve morphemes that have fused (or, perhaps, in which I have failed to discern the morphological and morphophonological processes that are at work) or in which a morphological process involves a phonemic change (e.g. lengthening of stem vowels), glosses are separated by a period rather than a hyphen, which is otherwise used to indicate morpheme boundaries (e.g. k'apal 'eat.IMP'). As well, when there is no single word that represents the meaning of a lexical morpheme, the English words in the gloss line are separated by a period (e.g. kaxu ‘cut.hair’). Since words in Huastec can have at most one lexical morpheme, these two uses of the period can be readily distinguished.

Clitics are written as separate words without any special means of designating clitic boundaries.

The orthography adopted here conforms to conventions familiar to Mayanists; specifically, I follow Aissen 1987 in adopting the orthography of Laughlin 1977, 1980. The following conventions should be noted: 7 represents the glottal stop; tz, the voiceless alveolar affricate; ch, the alveopalatal affricate; th, the interdental fricative; x, the alveopalatal fricative; and j, the glottal fricative. The sounds represented by p, t, tz, ch, and k have glottalized counterparts represented by p', t', tz', ch', and k'. Other symbols have the usual values.
Notes

1I have not had the opportunity to review the grammar by McQuown (1976b) and, therefore, am not familiar with the topics which it covers.
Chapter 2
Overview of Huastec in Relation to Other Mayan Languages

The basic aim of this chapter is to introduce the reader to the general elements of Huastec grammar. This will assist in understanding the examples given later and will highlight details that may be of descriptive interest but which are not discussed later. At the same time, this overview will attempt to point out some of the similarities and differences between Huastec and other Mayan languages.

2.1 Phonology

2.1.1 Phonemic Inventory

Larsen and Pike 1949 lists a phonemic inventory for Huastec of San Luis Potosí which essentially coincides with that given by Santana et al n.d. (note 1) for Veracruz. The phonemic inventory of Huastec is typical of the inventories of many Mayan languages, though perhaps more limited.

Kaufman 1986 indicates that all Mayan languages have only voiced oral vowels; this is the case in Huastec. Like most Mayan languages, it has five vowels: *i, e, a, o, u*. (Some also have schwa.) Like many Mayan languages, it also has contrastive vowel length; this contrast is illustrated by pairs such as ich ‘chile’ and iich ‘moon’.

Like other Mayan languages, Huastec has plain/glottalized pairs of stops and affricates, /p/p', /t/t' tz/tz', /ch/ch', and /k/k', as illustrated by forms such as k'ut ‘mud’ and uut ‘opossum’; ich ‘chile’ and iich ‘moon’; kux ‘back’ and k'uthk'um ‘cloth’. It lacks a palatalized alveolar pair found in other Mayan languages as well as a back velar pair, although it does have a labialized velar pair kw/k'w. The glottalized bilabial p'
corresponds to the voiced counterpart \( b' \) found in other Mayan languages. Interestingly, this is realised in San Luis Potosí and around Tantoyuca as the plain voiced stop \( b \) though it is realised as \( p' \) in at least one dialect spoken further east. (Because the former is more prevalent, \( b \) is used orthographically in the examples given below.) This pair is illustrated by the nouns bakan ‘tortilla’ and paakax ‘cow’. Like most Mayan languages, Huastec also has the glottal stop \( ʔ \) as a full consonant.

Of the three voiceless fricatives typically found in Mayan languages (alveolar, alveopalatal, and velar) Huastec has only one: the alveopalatal \( h \). It also has the voiceless interdental fricative \( th \), and the glottal fricative \( j \). These fricatives are illustrated by the nouns xi7 ‘hair’, thi7 ‘firewood’, and ja7 ‘water’. Huastec has two nasal resonants, \( m \) and \( n \), while others also have a velar nasal; and it has only one nonnasal resonant, \( l \), while others also have \( r \). These resonants are illustrated by the nouns mim ‘aunt’, naana7 ‘mother’, and lanaax ‘orange’. Huastec has the two voiced semivowels common among Mayan languages, \( w \) and \( y \), as in the forms wawaa7 ‘we’ and yaba7 ‘not’. Finally, Huastec does not have any of the retroflexed obstruents found in other Mayan languages.

The phonemes in the San Luis Potosí dialect correspond to those in the Veracruz dialect except for one interesting alternation: \( ch \) in one dialect corresponds to \( tz \) in the other.

The consonants of Huastec are summarized in Table I:
2.1.2 Stress and Tone

Proto-Mayan is not believed to have been tonal (Kaufman 1986:17), although tonal phenomena have developed in some Mayan languages. Like those Mayan languages that do not have any tonal phenomena, Huastec has a stress system. Larsen and Pike (1949) propose the same rule for stress in Huastec of San Luis Potosí as that which Santana et al (n.d.) propose for the Tantoyuca dialect: Stress falls on the rightmost long vowel or, in the absence of a long vowel, on the leftmost vowel. This rule is illustrated by the following forms; the stressed syllable is italicized (these are approximate phonetic representations rather than underlying forms): el-tzi-n-ål 'find-DAT-MID-IMP', wala-x-talaab 'disobey-AP-NOM', jo7-tzi-n-nee-k-ich 'serve(food)-DAT-MID-PRF-CMP', taata7-tzik 'parent-PL', cheem-thaa-x-in 'die-CAUS-AP-PFV'.

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Interdental</th>
<th>Alveolar</th>
<th>Alveopalatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-less Stop</td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>k&lt;sup&gt;W&lt;/sup&gt;</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>V-d Stop</td>
<td>b</td>
<td>tz</td>
<td>ch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-less Affricate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glottalized</td>
<td></td>
<td></td>
<td>t&lt;sup&gt;’&lt;/sup&gt;</td>
<td>k&lt;sup&gt;’&lt;/sup&gt;</td>
<td>k&lt;sup&gt;W&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>V-less Stop</td>
<td>t&lt;sup&gt;’&lt;/sup&gt;</td>
<td>tz&lt;sup&gt;’&lt;/sup&gt;</td>
<td>ch&lt;sup&gt;’&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-less Affricate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td></td>
<td></td>
<td>th</td>
<td>x</td>
<td>j</td>
<td></td>
</tr>
<tr>
<td>V-less</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resonant</td>
<td></td>
<td></td>
<td>w</td>
<td>y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-vowel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid</td>
<td></td>
<td></td>
<td>m</td>
<td>l</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>n</td>
<td></td>
</tr>
</tbody>
</table>

TABLE I. Huastec consonants.
2.1.3 Syllable Structure

The syllable shapes occurring in Huastec are common among Mayan languages: both open and closed syllables occur. Huastec has neither vowel nor consonant clusters within syllables except for isolated instances which consist of a semivowel or n followed by a glottal stop. The canonical forms are V, CV, VC and CVC (where V may be long or short). These are illustrated in the following nouns; syllables are separated by a period: a.le 'field', i.t'ata 'banana', to.kow 'cloud', thut' 'bat', eem 'corn', ok.cha7 'wood', al.taa 'interior', thak'.tzok' 'egg'.

2.1.4 Phonology and Morphophonology

Like other Mayan languages, Huastec has rules that produce alternations between the various allophones of a phoneme as well as rules which change a phoneme into a different phoneme. These rules are generally conditioned by phonological environment, although some appear to be conditioned by morphological environment. Some apply optionally while others are obligatory. They include rules of vowel deletion and coalescence, glide insertion, affricate simplification, degemination, and dipthongization. These rules are discussed in greater detail by Santana et al (n.d.).

2.2 Morphology

2.2.1 Morphological Typology

Comrie (1981) proposes a categorization of morphological types based on two independent scales. One scale, the index of synthesis, measures the degree to which a language allows morphemes to be combined together into a single word. On this scale, languages vary between isolating at one extreme and polysynthetic at the other. The other scale, the index of fusion, measures the degree to which mor-
phemes merge into nonseparable forms. On this scale, languages vary between agglutinating and fusional.

Comrie notes an interesting characteristic of these two scales due to their definitions: there is no language which is ideally polysynthetic and ideally fusional. This is so because it is assumed that there would be an infinite number of sentences in such a language, yet each sentence would be a single word which is entirely distinct from any other sentence/word with no two having any analytic parts in common. Thus, it is predicted that, as the index of synthesis increases, the index of fusion will decrease (and vice versa).

Using these two scales, Mayan languages typically have a fairly high index of synthesis and a low index of fusion. In particular, verbs usually allow a high degree of affixation, both derivational and inflectional. This is generally true of Huastec. The synthetic nature of Huastec is illustrated in (1):4

(1) N-u DEF-IsPOSS pulek big taata7 father 3/3 die-CAUS-IMP
    i INDEF paakax cow an u ela-tzi-n-al and U3 find-DAT-MID-IMP
    ti t'u7-lek. CL flesh-NPOSS

My grandfather would kill some cows and the meat would be found.

It is common for several grammatical morphemes to be bound to a single lexical morpheme; however, I have seen no evidence of compounding or incorporation.

While Huastec is clearly synthetic, it does not appear to be as greatly so as other Mayan languages. This is seen in several ways. First, Mayan languages often have both verbal prefixes and suffixes indicating tense, aspect, or mood; in Huastec, however, these categories are indicated by suffixes only (cf. §2.2.5; see, however, the discussion in §2.2.6). Secondly, Mayan languages typically use various prefixes and
suffixes on the predicate to indicate person agreement; in Huastec, the evidence suggests that these are proclitics (cf. §2.2.2, §2.2.4).

In addition, it appears that Huastec may have had certain morphological processes operating on verbs which have become less productive: Huastec has many complex verb stems which consist of a monosyllabic root followed by one or more of a certain set of syllabic groups of segments. These syllables may be found in a number of such verb stems, yet do not appear to have any systematic syntactic or semantic correlate. Examples are given in (2)-(6); the root in each case is given in (a):

(2) a. joli ‘bury’  
    b. jolk’o ‘empty’

(3) a. witz ‘turn around’  
    b. witzk’o ‘repeat’

(4) a. utza ‘say’  
    b. utzbi ‘accuse’

(5) a. jal ‘make change (for s.o.)’  
    b. jalbi ‘pay’  
    c. jalk’u ‘change’

(6) a. thiman ‘shaman’  
    b. think’a ‘bewitch’

These facts suggest that the processes which produced these complex forms have ceased to be productive, and that the output of these processes have become lexicalized.

While Huastec is slightly less synthetic than other Mayan languages, it is also more fusional (as would be predicted). Mayan languages generally have separate sets of affixes to mark agreement with (superficial) subjects and direct objects (DOs) in (superficially) transitive clauses. In Huastec, these have become fused in transitive clauses (cf. §2.2.4):
(7) Tin chu7u-0 ba-an tioopan. 
2/1s see-PFV LOC-DEF church 
You saw me in the church.

(8) A chu7u-0 i bitzim. 
2s/3 see-PFV INDEF horse 
You saw a horse.

Furthermore, these clitics also indicate features pertaining to tense, aspect, and mood (cf. §2.2.6). As well, verbs in Huastec are suffixed to indicate one of three primary tense/aspects (cf. §2.2.5); in some passive clauses, the registration of passive voice is fused with these suffixes (for further discussion of passives, see chapter 4):

(9) a. N-u pulek taata7 in chem-tha-al 
DEF-1sPOSS big father 3/3 die-CAUS-IMP
i paakax... INDEF cow
My grandfather would kill cows...

b. ...ti ali-aab abal 
T3 seek-PASS.IMP CONJ
ne7ech ti chem-tha-aab. 
go T3 die-CAUS-PASS.IMP
...he was being sought, was going to be killed.

The fused nature of the agreement markers in Huastec points out another interesting fact regarding typological classification: Mayan languages in general are morphologically ergative; thus, they typically have one set of affixes to coreference features of a (superficially) transitive subject and another set to coreference features of a (superficially) intransitive subject or DO. Such a statement based on agreement morphology cannot be made for Huastec (see the discussion in §2.2.4).
2.2.2 Morpheme Structure

According to Kaufman (1986), most root morphemes in Mayan languages are monosyllabic, though some noun roots are disyllabic; monosyllabic roots in Proto-Mayan were all closed. One may readily imagine this to have previously been the case with verb roots in Huastec; currently, however, most appear to have two open syllables, as in the roots chaji ‘weave’, thiba ‘adorn’, and mu7u ‘cut into lengths’. These could possibly be viewed as monosyllabic by treating the second vowel as epenthetic; however, there appears to be no clear way to predict what vowel would be inserted. Compare, for example, ch'a7i ‘buy’ and cha7u ‘hit’. Other open syllable patterns also occur in verb roots, as in aji ‘read’, ela ‘find’, uch'a ‘drink’, and ejto ‘be able (to do something)’. The root le7 ‘want’ is a true closed, monosyllabic root though it is irregular in that it is not inflected for tense/aspect. Other closed, monosyllabic roots, such as bel ‘walk’ and kaw ‘speak’, are derived from noun roots without derivational morphology. Thus, these two examples are associated with the noun roots beel ‘road’ and kaw ‘word, language’. Huastec also has polysyllabic roots, some of which have closed syllables, such as jolk'o ‘empty’, utzbi ‘accuse’, and ch'ejwali ‘give as a gift’; as discussed in the previous section, some of these, at least, appear to have resulted from morphological processes that have ceased to be productive, making them lexicalized roots rather than stems.

Noun roots may be mono- or disyllabic with open or closed syllables, as in the roots eex ‘basket’, ich ‘chile’, te7 ‘tree’, toom ‘grass’, ztaa ‘house’, ch'a ‘vine’, ithith ‘corn’, kwitool ‘boy’, and thak'tzok ‘egg’. The same is true of adjective roots, as illustrated by we7 ‘small’, awil ‘strong’, chipil ‘little’, and ch'ontal ‘poor’.

The structure of affixes in Huastec is like ‘*’ at common to other Mayan languages: most affixes, if not all, are monosyllabic or vowelless; monosyllables may be either open or closed. This is illustrated in forms such as ela-tzi-n-al ‘find-DAT-MID-IMP’, inik-tzik ‘man-PL’, and jele-tha-aa ‘heal-CAUS-PASS.PFV’. 
Kaufman (1986) states that, in Mayan languages, most affixes are suffixes; prefixes, he claims, are limited to a particular subset of agreement markers. He claims specifically (p. 48) that these agreement markers are prefixes also in Huastec. The system of agreement markers in Huastec is somewhat atypical for Mayan languages, however, and it may be argued that they are more loosely attached and clitic-like (see the discussion in §2.2.4).

2.2.3 Lexical Classes

As is typical for Mayan languages, Huastec has three major lexical classes. These correspond roughly to verb, noun, and adjective. Any of these can function as predicates and can be inflected. All predicates are inflected for person/number agreement. Only verb stems inflect for tense/aspect or voice. Verbs typically function as predicates; nouns, as nominals.

There are derivational processes by which a member of one major lexical class may correspond to a stem of another class. These processes will not be discussed here in any detail, however.

2.2.4 Agreement and Agreement Proclitics

Agreement is an area in which Huastec is similar to other Mayan languages and yet quite different: agreement systems in all Mayan languages share the same syntactic function of encoding subject and direct object relations, but the morphological properties of the Huastec system are unlike those of agreement systems in other Mayan languages.

All predicates in Huastec inflect for person and number agreement. Verbs divide into two basic subcategories, transitive and intransitive, which are distinguished by their inherent valences; Huastec syntax includes certain valence-changing constructions, discussed in chapters 4-7. The transitive/intransitive distinction is significant for several aspects of inflectional verb morphology, including agreement.
Huastec follows the rule for person/number agreement common among Mayan languages: Predicates agree in person and number with superficial subjects and direct objects. Agreement in Huastec is indicated on predicates by means of agreement proclitics (a more thorough discussion of this point is presented later in this section).

Generally, Mayan languages are morphologically ergative, dividing the agreement morphemes into two sets: one, referred to in the literature as set A, which coreferences features of the (superficial) ergative (or the genitive in a possessed noun phrase—cf. §2.2.7), and another, set B, which coreferences features of absolutes. A predicate is always inflected with a set B morpheme, and also with a set A morpheme when the clause is (superficially) transitive. In Huastec, however, the two morphemes in transitive clauses are fused. Compare the example in (10) with the Tzotzil example in (11) (taken from Aissen 1987):

(10) (Huastec)

\[ \text{Ne7ech tin chem-tha-0.} \]
\[ \text{go 2/ls die-CAUS-PFV} \]

You're going to kill me.

(11) (Tzotzil)

\[ \text{Ch-a-mil-on.} \]
\[ \text{INC-A2-kill-Bls} \]

You're going to kill me.

Thus, in Huastec there is a two-way division in the agreement morphemes between those used in transitive clauses and those used in intransitive clauses.

Huastec verb agreement is illustrated in examples (12)-(19):

(12) Nana7 in way-al ba-an tat.
\[ \text{Is Ul sleep-IMP LOC-DEF mat} \]

sleep on the mat.
The contrast between (12) and (13) illustrates the coreferencing of the person of the subject in an intransitive clause while that between (12) and (14) illustrates the coreferencing of number.

The contrast between (15), (16) and (17) illustrates the coreferencing of features for the subject in a transitive clause while the contrast between (15), (18), and (19) illustrates the coreferencing of features for the direct object.
In many Mayan languages, suffixes distinct from set A or B affixes indicate plurality of a (superficial) ergative or absolutive. Huastec verbs may be inflected for number by means of the plural suffix -tzik. This suffix may also be attached to words of other lexical classes, especially nouns. I have not made any conclusions regarding constraints upon its occurrence on verb stems. The semantics of this use are discussed, however, in Pablo E. et al. 1984; the reader is referred to that work for greater detail.

In the typical Mayan language, set A affixes are all prefixes while set B affixes may be either prefixes or suffixes; set B prefixes are usually used when there is also a tense/aspect prefix. As a result, it is often the case that, in a transitive clause, set A and set B prefixes are juxtaposed with the set B prefix preceding the set A prefix, as in the following example from Tzotzil (taken from Aissen 1987):

\[(20) \quad \text{Ch-a-s-mil.} \]
\[\text{INC-B2-A3-kill} \]

He's going to kill you.

This suggests a possible origin for the fused proclitics in Huastec: they may result simply from the phonological fusion of juxtaposed set A and B prefixes. The additional fact that the Huastec clitics also bear features of tense/aspect (as discussed in §2.2.6) may suggest that there has been a fusion involving juxtaposed set A and B prefixes and tense/aspect prefixes. This possible origin for these clitics merits further discussion.

Kaufman (1986) reconstructs the set B morpheme for third person singular to be phonologically null. Thus, in a Proto-Mayan clause in which the direct object is third person singular, the only overt agreement prefix is from set A. If we assume that the transitive agreement clitics in Huastec result from the fusion of set A and B prefixes, then a conjecture could be made regarding those clitics for which the direct object is third person singular: they should be reflexes of Proto-Mayan set A pre-
fixes. These clitics and reconstructed set A prefixes (taken from Kaufman 1986) are compared in table II:

<table>
<thead>
<tr>
<th>person of subject</th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huastec clitics—3s direct object</td>
<td>u</td>
<td>a</td>
<td>i n</td>
<td>i</td>
<td>i</td>
<td>i n</td>
</tr>
<tr>
<td>Proto-Mayan set A: before V</td>
<td>*w-</td>
<td>*aaw-</td>
<td>*r-</td>
<td>*q-</td>
<td>*eer-</td>
<td>*k-</td>
</tr>
<tr>
<td>before C</td>
<td>*nu-</td>
<td>*aa-</td>
<td>*u-</td>
<td>*qa-</td>
<td>*ee-</td>
<td>*ki-</td>
</tr>
</tbody>
</table>

**TABLE II. Comparison: Huastec transitive agreement clitics for 3s DO vs. Proto-Mayan ergative prefixes.**

As can be seen, the clitics for 1s, 2s, and 2p subjects do appear to be reflexes of the proto-forms. Furthermore, it is interesting to note that these six clitics are used in Huastec to coreference agreement on a possessed noun with the possessor in the same way that set A prefixes are used in other Mayan languages (cf. §2.2.7).

Similar reasoning may be applied to the intransitive clitics: since in superficially intransitive clauses only set B prefixes would have been used in Proto-Mayan, we might expect that the intransitive clitics in Huastec are reflexes of set B proto-forms. These are compared in table III:

<table>
<thead>
<tr>
<th>person of absolutive</th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huastec clitics</td>
<td>in</td>
<td>it</td>
<td>Ø</td>
<td>u</td>
<td>ix</td>
<td>0</td>
</tr>
<tr>
<td>Proto-Mayan set B</td>
<td>*iin-</td>
<td>*at-</td>
<td>*Ø-</td>
<td>*0n-</td>
<td>*ix-</td>
<td>*eb'-</td>
</tr>
</tbody>
</table>

**TABLE III. Comparison: Huastec intransitive agreement clitics vs. Proto-Mayan absolutive prefixes.**

Here we find that the clitics for 1s, 2s, 3s, and 2p appear to be reflexes of the proto-forms. Thus, there are many reflexes of the set A and set B proto-forms in the sets of agreement clitics in Huastec.
Continuing with the assumed hypothesis, we might expect some similarity between other agreement clitics and the corresponding pairs of Proto-Mayan set A and B prefixes. This appears to be the case with some forms. For example, Huastec tixu '1/2p' corresponds to Proto-Mayan *ix-u-; Huastec tu '1/2s', to *at-u-. However, this is limited to only a small portion of the transitive proclitics. A complete set of transitive proclitics for Huastec is given in table IV along with the Proto-Mayan prefixes for comparison (n.b. set B prefixes precede set A prefixes):

<table>
<thead>
<tr>
<th>DIRECT OBJECT</th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
<th>P-Mayan set A</th>
</tr>
</thead>
<tbody>
<tr>
<td>S 1s</td>
<td>tu</td>
<td>u</td>
<td>tixu</td>
<td>u</td>
<td></td>
<td></td>
<td>*w-/*nu-</td>
</tr>
<tr>
<td>S 2s</td>
<td>tin</td>
<td>a</td>
<td>tu</td>
<td>a</td>
<td></td>
<td></td>
<td>*aaw-/*aa-</td>
</tr>
<tr>
<td>S 3s</td>
<td>tin</td>
<td>ti</td>
<td>in</td>
<td>tu</td>
<td>tix(i)</td>
<td>in</td>
<td>*r-/*u-</td>
</tr>
<tr>
<td>S 1p</td>
<td>tu</td>
<td>i</td>
<td>tixu</td>
<td>i</td>
<td></td>
<td></td>
<td>*q-/*qa-</td>
</tr>
<tr>
<td>S 2p</td>
<td>tin</td>
<td>i</td>
<td>tux</td>
<td>i</td>
<td></td>
<td></td>
<td>*ccr-/*ee-</td>
</tr>
<tr>
<td>S 3p</td>
<td>tin</td>
<td>ti</td>
<td>in</td>
<td>tu</td>
<td>tix(i)</td>
<td>in</td>
<td>*k-/*ki-</td>
</tr>
<tr>
<td>P-Mayan set B</td>
<td>*ii=</td>
<td>*at-</td>
<td>*0-</td>
<td>*o7n-</td>
<td>*ix-</td>
<td>*eb'</td>
<td></td>
</tr>
</tbody>
</table>

TABLE IV. Comparison: Huastec transitive agreement clitics vs. Proto-Mayan set A and B prefixes.

Examination of these forms reveals clitics that in no way reflect either of the set A or set B prefixes from Proto-Mayan; compare, for example, Huastec tu ‘2s/1p’ with *o7n-aaw-. It becomes evident at this point that these clitics must be treated as fused and cannot be analyzed in any regular way, even with reasonable allowance for morphophonology. For instance, the six clitics with a third person subject have no phonetic content in common that suggests the phonological form of a distinct morpheme meaning '3s subject' (or '3s ergative').
Thus, it appears that transitive agreement clitics in Huastec have evolved from Proto-Mayan set A and set B prefixes by a process of fusion of pairs of prefixes followed by the introduction of suppletive forms.

Kaufman (1986:48) claims specifically that the agreement markers in Huastec are prefixes. There is evidence, however, that they are more loosely attached and clitic-like. First, they do not receive stress, even in contexts where stress should fall on the leftmost syllable (i.e. whe- a word has no long vowels; cf. §2.1.2). This is illustrated in (21); the stressed syllable is in boldface:

(21) U cha7u-n-al.
     U3 hit-MID-IMP

He is being hit.

Zwicky and Pullum (1983) propose six criteria for distinguishing clitics from affixes:

A. Clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems.

B. Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.

C. Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.

D. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.

E. Syntactic rules can affect affixed words, but cannot affect clitic groups.

F. Clitics can attach to material already containing clitics, but affixes cannot.

In the case of Huastec agreement markers, criterion E makes no predictions since the proposed clitic-group is also a syntactic unit. Criterion F does not appear
to apply since there are no other clear clitics which could occur between an agreement marker and a stem/host. There are no arbitrary gaps in the combination of agreement markers with the stems/hosts to which they attach, nor are there any morphophonological or semantic idiosyncrasies; thus, criteria B-D do not disqualify these markers as clitics; in fact, they favour such an analysis.

By criterion A, a given morpheme is clitic-like if it shows a low degree of selection with respect to its host, i.e. if its host can belong to a number of lexical classes. On the other hand, if the morpheme in question is highly selective, then no evidence is provided in either direction. In the case under consideration, it does appear that the evidence points toward an analysis of the agreement markers as clitics.

Intransitive agreement markers can be attached to a predicate which may belong to one of three major lexical classes (cf. §2.2.3). Also, morphemes from a subset of the transitive agreement markers can be attached to the possessed noun in a possessed noun phrase. These facts merely parallel the situation in other Mayan languages in which the agreement markers are arguably prefixes. However, the more interesting fact about Huastec is that there are a number of adverbial modifiers which may occur between these agreement markers and the stem/host, as illustrated in (22):

(22) Yaba7 u lej cho7oob.
    NEG 1s/3 EMPH know

I don't really know.

Kaufman also observes this (1986:47) and accounts for it as adverbial incorporation; hence, in his analysis the agreement marker, adverbial modifier and verb stem form a single word. This analysis has certain difficulties, however.

First, Kaufman's analysis does not explain why adverbials differ in the degree of optionality with which they may occur in this position: in the translation of the
New Testament in Huastec of San Luis Potosi, teje7 'here' occurs 507 times, but never in this position; ech'ey 'always' is in this position in 82 out of 447 occurrences; tala7 'completely' is in this position in each of its 315 occurrences. In particular, it does not explain why modifiers such as tala7 must always occur in this position. Since, in Kaufman's terms, tala7 is an incorporated adverb, it should also occur as an independent word; otherwise, it would seem more fitting to consider it an aspectual prefix. My analysis of these facts is that the syntax of Huastec provides one position within a verb complex for adverbial modifiers (and one or more positions outside of the verb complex) and that an agreement morpheme cliticizes to the verb complex; hence, it attaches to the verb or to an element of the verb complex preceding the verb. The variation among the adverbials mentioned above could then be attributed to reasons such as whether the adverbial is a verb-level or a clause-level modifier.9 Thus, some, such as teje7 'here', might only be used to modify the entire predication, and could not be restricted to the verb only; therefore, these would not occur between the agreement morpheme and the verb. Some, such as tala7 'completely', might only modify the verb, and, therefore, would have to occur between the agreement marker and the verb. Others, such as ech'ey 'always', might be used to modify the verb specifically or to modify the entire predication; these would occur between the agreement marker and the verb only when they modify the verb specifically.

A second problem for Kaufman's analysis is that these adverbials have independent stress. Under an incorporation analysis, this would entail that words can have multiple stress, which is otherwise unmotivated. Furthermore, more than one adverbial may simultaneously occur in this position:

(23) Tam in thubat tala7 mapuy-Ø
then 3/3 quickly completely close-PFV

in wi7leb-il-tzik an tioopan. Acts 21:30
3POSS door-POSS-PL DEF temple

Then they quickly shut the temple gates tight.
Finally, these modifiers can occur between the agreement marker and the stem/host in both verb phrases and possessed noun phrases:

(24) Yab ne7ech kit k\textsuperscript{Wete7} kaw-in...

\begin{verbatim}
NEG go K2s self speak-PFV
\end{verbatim}

You yourself will not speak...

(25) ...i taata7-laab ne7ech kin biina-0

\begin{verbatim}
INDEF parent-NPOSS go K3/3 deliver-PFV
in k\textsuperscript{Wete7} chakaam-il-tzik
3POSS self child-POSS-Pl
abal ka chem-tha-aa.
CONJ K3 die-CAUS-PASS.PFV
\end{verbatim}

...parents will hand over their own children to be killed.

Under an incorporation analysis, this would require positing identical rules of incorporation for both verb phrases and noun phrases. Each of these facts constitute an argument against incorporation; considered together, they provide strong evidence that a non-incorporation analysis is preferable.

Thus, I claim that these adverbial modifiers are independent words and may occur within the verb complex if they modify the verb (as opposed to the entire clause/predication). Agreement morphemes attach to the first word of the verb complex, whether it is an adverbial modifier or the verb itself. Thus, this provides an argument based upon Zwicky and Pullum's criterion A in favour of a clitic analysis of Huastec agreement morphemes. In view of the way in which these agreement markers act in relation to the six characteristics set forth by Zwicky and Pullum, I conclude that they should be analyzed as clitics.

2.2.5 Tense and Aspect

While all predicates in Huastec inflect for person and number agreement, only verbs inflect for tense/aspect. The transitive/intransitive distinction among
verbs is significant for the marking of tense/aspect, as will become evident in the dis-
cussion that follows.

Huastec verbs are obligatorily inflected with suffixes (with isolated excep-
tions) indicating one of three primary tense/aspects: imperfective, perfective, and
perfect. There are several phonological and morphophonological processes
(discussed in detail in Santana et al. n.d.) which can affect the surface form of these
suffixes and/or the verb stem.

The pattern of suffixes in superficially transitive clauses is very regular: -al
‘imperfective’, -∅ ‘perfective’, and -aam(al) ‘perfect’. These are illustrated in
(26a-c):

(26) a. U nuju-al an bitzim.  
Is/3 sell-IMP DEF horse
   I am selling the horse.

b. U nuju-∅ an bitzim.  
Is/3 sell-PFV DEF horse
   I sold the horse.

c. U nuju-aam an bitzim.  
Is/3 sell-PRF DEF horse
   I have sold the horse.

In intransitive clauses, the marking of these categories follows one of various
patterns. Many intransitive verbs use a set of suffixes which is similar to those used
with transitive verbs: -al ‘imperfective’, -∅ ‘perfective’, and -nek ‘perfect’.:

(27) a. It chakni7-bee-al.  
U2s red-INCHO-IMP
   You blush.

b. It chakni7-bee-∅.  
2s red-INCHO-PFV
   You blushed.
c. It chakni7-bee-nek.
2s red-INCHO-PRF

You have blushed.

Another group of intransitive verbs uses the suffixes -Ø 'imperfective', -in 'perfective', and -neek 'perfect'. This includes, in particular, all antipassive forms that involve the suffix -x (discussed in chapter 7). Note that the perfect form must also have the perfective suffix -in:

(28) a. Jajaa7 u thaja-x-Ø.
3 U3 shout-AP-IMP
He shouts.

b. Jajaa7 Ø thaja-x-in.
3 3 shout-AP-PFV
He shouted.

c. Jajaa7 Ø thaja-x-in-neek.
3 3 shout-AP-PFV-PRF
He has shouted.

There is another pattern of antipassive forms (also discussed in chapter 7) which involve the suffixes -l and -(o)m; these forms use a distinct set of tense/aspect suffixes: -Ø 'imperfective', -aach 'perfective', and -aamath 'perfect':

(29) a. Jajaa7 u k'a7i-om-Ø.
3 U3 carry.water-AP-IMP
He hauls water.

b. Jajaa7 Ø k'a7i-om-aach.
3 3 carry.water-AP-PFV
He hauled water.

c. Jajaa7 Ø k'a7i-om-aamath.
3 3 carry.water-AP-PRF
He has hauled water.
Finally, a special set of suffixes applies only to plain passives; these are discussed in chapter 4.

The verb phrase in Huastec may include one of a few auxiliary verbs: ne7ech 'go' is used to form the future tense:

(31) Ne7ech ku k'apu-0
    go   K1s/3 eat-PFV

    i te7neel chanakW.
    INDEF meal beans

I will eat some beans.

In this use, ne7ech does not take an agreement proclitic. It may also be used independently as a main verb, however, in which case it does take an agreement proclitic:

(32) In ne7ech-ich.
    UIs go-CMP

I'm going now.

The auxiliary verb cxoin 'be' is used to indicate progressive aspect:

(33) Exom-0 ta k'apu-1-0.
    be-IMP T2 eat-AP-IMP

You are (in the process of) eating.

In this example, cxoin does not take an agreement proclitic. It does take an agree­
ment proclitic if used in imperative or subjunctive moods:
(34)  Ka exom-aach ti k'apu-l-0.
K3 be-PFV T3 eat-AP-IMP

Let him eat.

Exom may not be used independently as a main verb.

Like exom is the verb k'waji which also means 'be', but with a locative connotation:

(35)  In k'waji-0 tin k'apu-l-0.
Is be(LOC)-PFV TIs eat-AP-IMP

I was (there) eating.

(36)  Aniy jey taja7 ti k'waj in kono-y-al
also EMPH there T3 be(LOC) 3/3 ask-?-IMP
yan xata7. Lk2
many things

And there, he was also asking many questions.

In this use, it conveys the meaning 'to be there, in a given place, doing something'.

Unlike ne7ech and exom, k'waji always takes an agreement proclitic; hence, it may be more appropriate to speak of its use in examples like (35) and (36) in terms of serialization rather than as an auxiliary. Like ne7ech, k'waji may be used independently as a main verb:

(37)  In k'wajil
Uls be(LOC).IMP

ti-in kux an ch'en.
CL-3POSS back DEF mountain

I live behind the mountain.

Ne7ech does not inflect for the three primary tense/aspects; however, either the imperfective or the perfective form of the main verb may be used resulting in progressive/imperfective or non-progressive/perfective aspects respectively:
(38) a. Ne7ech ti k'apu-l-0.
   go T3 eat-AP-IMP
   He is going to be eating.

   b. Ne7ech ka k'apu-aach.
   go K3 eat-PFV
   He is going to eat.

When used with exom or k'waji, the main verb must be in the imperfective form; however, these auxiliaries do inflect for tense/aspect. So, for example, the imperfective form exom indicates progressive aspect in the present tense, the perfective form exomaach indicates progressive aspect in the past, and the perfect form exomaamath indicates progressive aspect over the duration of some period of time up to the present:

(39) a. Exom-0 tin k'apu-l-0.
    be-IMP T1s eat-AP-IMP
    I am eating.

   b. Exom-aach tin k'apu-l-0.
    be-PFV T1s eat-AP-IMP
    I was eating.

   c. Exom-aamath tin k'apu-l-0.
    be-PRF T1s eat-AP-IMP
    I have been eating.

The auxiliaries exom and ne7ech may not be used together; however, the auxiliary k'waji may be embedded under the auxiliary ne7ech:

(40)  Ne7ech kit k'waji-0 ta k'apu-l-0.
      go K2s be(LOC)-PFV T2s eat-AP-IMP
      You are going to be eating.

The appropriateness of the labels assigned to the three tense/aspect categories discussed thus far deserves consideration. Santana et al (n.d.) and Walker
(1983) refer to these as present, non-present, and perfect. However, the uses of the inflections corresponding to the first two of these categories (present and non-present in the system of Santana et al and Walker) suggests elements of aspect more than tense. In several of the examples shown above, the free translations suggest that these suffixes are serving to distinguish tense. However, this was not the case in all of them: in (38), the distinction is one of aspect rather than tense; in (34), the perfective suffix is used in a hortatory statement which clearly does not involve past tense. On the other hand, the imperfective can be used to relate events that are past. In the following textual examples, the speaker is relating information about her great-grandparents, as related to her by her grandparents; in these examples, the imperfective form of the verb is used to describe past events and conveys various aspects that fall within the range of imperfective. In the first two examples, imperfective aspect is used for habitual events:

(41) Tam kin baju-0-ich an k'ij, when K3/3 reach-PFV-CMP DEF time
    u wat'i-l-Ø an ti pakab kwa7.
    U3 squeeze-AP-IMP DEF CL sugar cane QUOT

When it reached the right time, they would squeeze the sugar cane.

(42) In eyna-Ø maas i t'ojo-n-al-tzik
    3/3 use-PFV more INDEF work-MID-IMF-PL
    tam u wat'i-l-Ø ti pakab
    when U3 squeeze-AP-IMP CL sugar cane
    ani tam in t'aja-al
    and when 3/3 make-IMP
    i ale-laab paktha7.
    INDEF field-NPOSS large

They generally used workers whenever they squeezed sugar cane and whenever they planted large fields.

In the following example, the imperfective is used for events that continued for the duration of some period of time:
In ko7o-y-al ch'a-juun inik k'al chee7
3/3 have-IMP just-one man with four
i tamub tam ti xe7ech-in
INDEF year when T3 walk-PFV
al an peejee-x-talaab in tolmi-al
to DEF fight.RECT-AP-NOM 3/3 help-IMP
an Carrancista.
DEF Carrancista

He had twenty-four years of age when he went off to the war helping the Carrancistas.

A similar use describes situations that extend over periods of time which are not
limited in any way:

(44) Ani komo in wit'a-al ti kowa-1-0...
And since 3/3 know.how-IMP T3 swim-AP-IMP...

And, since he knew how to swim...

The imperfective may also be used to convey continuous aspect of isolated events
that are part of a chronological sequence:

(45) Ø k'ale-Ø kwa7 ti pit'k'o-n-al.
3 go-PFV QUOT T3 flee-MID-IMP

He went off fleeing.

The category in question here is clearly one of aspect, rather than tense. In each of
these examples, this category serves to draw attention to some internal structure
within a given time frame; this conforms to the use of the term imperfective as

The tense/aspect/mood system in Huastec also includes other inflections that
may co-occur with the suffix for primary tense/aspect. For example, the suffix -ich
marks completive aspect and the enclitic wi7ik marks incompletive aspect while the
suffix -ak indicates subjunctive mood.13
(46) a. U k'apal-ich i te7neel chanak\textsuperscript{w}.
    1s/3 eat.IMP-CMP INDEF meal beans.
    I already eat beans.

b. U k'apal wi7ik i te7neel chanak\textsuperscript{w}.
    1s/3 eat.IMP INC INDEF meal beans.
    I used to eat beans.

(47) Max exom-ak ti k'apu-l-\textoverline{\textboardmath{z}} wi7ik...
    If be-SBJ T3 eat-AP-IMP INC
    If he had been eating...

2.2.6 Interaction of Agreement Proclitics and Tense/Aspect

In §2.2.4, sets of agreement clitics used in intransitive and transitive clauses were presented in tables III and IV; these represented a simplification of the complete facts, however. The transitive and intransitive sets of agreement clitics are, in fact, divided into subsets. Thus, there are four subsets of intransitive clitics — 0, U, T, and K — and two subsets of transitive clitics — 0, and K. The four intransitive sets are given in table V. Table VI represents the 0 transitive set; the K-set of transitive clitics is given in table VII.

<table>
<thead>
<tr>
<th>person/number</th>
<th>0-Set</th>
<th>U-Set</th>
<th>T-Set</th>
<th>K-Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s</td>
<td>in</td>
<td>in</td>
<td>tin</td>
<td>kin</td>
</tr>
<tr>
<td>2s</td>
<td>it</td>
<td>it</td>
<td>ta</td>
<td>kit</td>
</tr>
<tr>
<td>3s</td>
<td>u</td>
<td>ti</td>
<td>ka</td>
<td></td>
</tr>
<tr>
<td>1p</td>
<td>u</td>
<td>u</td>
<td>tu</td>
<td>ku</td>
</tr>
<tr>
<td>2p</td>
<td>ix</td>
<td>ix</td>
<td>tax</td>
<td>kix</td>
</tr>
<tr>
<td>3p</td>
<td>u</td>
<td>ti</td>
<td>ka</td>
<td></td>
</tr>
</tbody>
</table>

\textit{Table V.} Intransitive agreement clitics.
TABLE VI. Huastec transitive agreement clitics, θ-SET.

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s</td>
<td>tu</td>
<td>u</td>
<td></td>
<td>tixu</td>
<td>u</td>
<td></td>
</tr>
<tr>
<td>2s</td>
<td>tin</td>
<td>a</td>
<td>tu</td>
<td>a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3s</td>
<td>tin</td>
<td>ti</td>
<td>in</td>
<td>tu</td>
<td>tix(i)</td>
<td>in</td>
</tr>
<tr>
<td>1p</td>
<td>tu</td>
<td>i</td>
<td></td>
<td>tixu</td>
<td>i</td>
<td></td>
</tr>
<tr>
<td>2p</td>
<td>tin</td>
<td>i</td>
<td>tux</td>
<td>i</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3p</td>
<td>tin</td>
<td>ti</td>
<td>in</td>
<td>tu</td>
<td>tix(i)</td>
<td>in</td>
</tr>
</tbody>
</table>

TABLE VII. Transitive agreement clitics, K-set.

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1s</td>
<td>tu</td>
<td>ku</td>
<td></td>
<td>tixu</td>
<td>ku</td>
<td></td>
</tr>
<tr>
<td>2s</td>
<td>tikin</td>
<td>ka</td>
<td>tiku</td>
<td>ka</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3s</td>
<td>tikin</td>
<td>ti</td>
<td>kin</td>
<td>tiku</td>
<td>tixi</td>
<td>kin</td>
</tr>
<tr>
<td>1p</td>
<td>tu</td>
<td>ki</td>
<td></td>
<td>tixu</td>
<td>ki</td>
<td></td>
</tr>
<tr>
<td>2p</td>
<td>tikin</td>
<td>ki</td>
<td>tixu</td>
<td>ki</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3p</td>
<td>tikin</td>
<td>ti</td>
<td>kin</td>
<td>tiku</td>
<td>tixi</td>
<td>kin</td>
</tr>
</tbody>
</table>

Various factors, including tense, aspect and mood, interact with the agreement system determining which of the various subsets of agreement clitics is used. I have not ascertained exactly what conditions govern the use of each set, though certain generalizations seem evident: the K-sets for both transitives and intransitives are never used with imperfective aspect; the intransitive U-set is used only with imperfective aspect; the intransitive θ-set appears never to be used with imperfective aspect.
In transitive clauses, the 0-set is generally used if the clause is independent, when *exom* or *kʷaja* is used, or with the imperfective form of a main verb when the auxiliary *ne7ech* is used:

(48) a. U k'apal i te7neel chanak^w^.  
    1s/3 eat.IMP INDEF meal beans  
    I eat beans.

b. U k'apu-0 i te7neel chanak^w^.  
    1s/3 eat-PFV INDEF meal beans  
    I ate beans.

c. U k'apu-aam i te7neel chanak^w^.  
    1s/3 eat-PRF INDEF meal beans  
    I have eaten beans.

(49) Exom u k'apal i te7neel chanak^w^.  
    be 1s/3 eat.IMP INDEF meal beans  
    I am eating some beans.

(50) Ne7ech u k'apal i te7neel chanak^w^.  
    go 1s/3 eat.IMP INDEF meal beans  
    I will be eating some beans.

The K-set is used with the perfective form of a main verb when *ne7ech* is used, as illustrated in (51):

(51) Ne7ech ku k'apu-0  
    go K1s/3 eat-PFV  
    i te7neel chanak^w^.  
    INDEF meal beans  
    I will eat some beans.

The K-set is used with the perfective form of a verb to give imperative mood:

(52) Tikin ch'ajtzi-0 juun i ubaat'-laab.  
    K2/lis buy-DAT-PFV one iINDEF play-NOM  
    Buy me a toy!
The K-set with the perfective form of a verb is also frequently used in subordinate clauses:

(53) Jajaa7 in le7 ku k’apu-Ø an it’ath.

3 3/3 want KIs/3 eat-PFV DEF banana

He wants me to eat the banana.

This may reflect a generalization: that the K-set is always used for the perfective form of transitive verbs in subordinate clauses.

In intransitive clauses, the U-set is used with the imperfective form of the verb:

(54) Jajaa7 u k’apu-1-Ø.

3 U3 eat-AP-IMP

He eats.

The 0-set is used with the perfective and perfect forms:

(55) a. Jajaa7 0 k’apu-aach.

3 3 eat-PFV

He ate.

b. Jajaa7 0 k’apu-aamath.

3 3 eat-PRF

He has eaten.

As with transitive verbs, the K-set can be used with the perfective form to give imperative mood:

(56) Kit kube-Ø.

K2s stand-PFV

Stand up!

If the auxiliary verbs exom or k’awi are used, the main verb is in the imperfective form and has a proclitic from the T-set:
If ne7ech is used, the main verb may be in the imperfective form and have a proclitic from the T-set, or it may be in the perfective form and have a proclitic from the K-set:

(58) a. Ne7ech ti k'apu-l-∅.
    go T3 eat-AP-IMP
    He is going to be eating.

b. Ne7ech ka k'apu-aach.
    go K3 eat-PFlS
    He is going to eat.

2.2.7 Noun Morphology

The noun and the noun phrase are discussed in Kaufman 1986 for Mayan languages in general, and for Huastec in particular in Pablo E. et al 1984. Thus, the present discussion will be brief.

Plurality of nouns in Huastec may be indicated by the suffix -tzik. As mentioned in the previous section, this morpheme may also be attached to verbs and to words of other lexical classes.

Definiteness may be marked by the presence of one of two proclitics: an 'definite', and i 'indefinite'. An honorific proclitic, a, is used with proper nouns and with certain concrete nouns such as oot 'star', iich' 'moon', and k'iitzaa 'sun'. Since these are typically definite, the definite and honorific proclitics may co-occur; the indefinite and honorific proclitics, however, may not co-occur. When juxtaposed, the definite and honorific proclitics contract:

(59) an + a => na

These proclitics are exemplified in (60)-(61):
John sold a horse.

The dogs killed a cow.

As mentioned in §2.2.4, a subset of the transitive agreement proclitics is used to indicate the person and number of a possessor on a head noun; this is related to the usual situation in Mayan languages in which ergative prefixes are used in possessed noun phrases to coreference features of the possessor on the head noun. As with the honorific proclitic, the agreement proclitics may co-occur with the definite proclitic but not with the indefinite proclitic. When juxtaposed, the definite and agreement proclitics contract in a manner similar to the contraction involving the honorific proclitic: the vowel of the definite proclitic is dropped. The agreement proclitics are given in table VIII along with the contractions formed with the definite proclitic an. Examples are given in (62)-(63) with the possessed noun phrases in boldface.

<table>
<thead>
<tr>
<th>possessor</th>
<th>1s</th>
<th>2s</th>
<th>3s</th>
<th>1p</th>
<th>2p</th>
<th>3p</th>
</tr>
</thead>
<tbody>
<tr>
<td>agreement proclitic contraction with an</td>
<td>u</td>
<td>a</td>
<td>in</td>
<td>i</td>
<td>i</td>
<td>in</td>
</tr>
<tr>
<td></td>
<td>nu</td>
<td>na</td>
<td>nin</td>
<td>ni</td>
<td>ni</td>
<td>nin</td>
</tr>
</tbody>
</table>

TABLE VIII. Possessive agreement clitics.

I see your finger (lit. your hand's finger).
Each year, Jesus' parents would go to the Jewish feast they call "Passover".

In Mayan languages, there is often a difference between the possessed form and the non-possessed form of concrete nouns. (The non-possessed form of a noun is usually referred to as the *absolutive* by Mayanists; the associated suffix is glossed here as 'NPOSS' (non-possessed).) Furthermore, in a given language, there are typically several patterns of variation between such forms; these generally involve a stem change or the presence or absence of a suffix. Thus, concrete nouns in Mayan languages typically divide into several classes based upon what differences there are, if any, between possessed and non-possessed forms. The usual classifications are listed in table IX (taken from Kaufman 1986); the class labels are those adopted widely among Mayanists.

<table>
<thead>
<tr>
<th>class</th>
<th>non-possessed</th>
<th>possessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>no affix</td>
<td>no affix</td>
</tr>
<tr>
<td>1a</td>
<td>no affix</td>
<td>lengthen last V</td>
</tr>
<tr>
<td>1b</td>
<td>no affix</td>
<td>lengthen last 2 Vs</td>
</tr>
<tr>
<td>2</td>
<td>no affix</td>
<td>-VVI suffix</td>
</tr>
<tr>
<td>3</td>
<td>suffix</td>
<td>no affix</td>
</tr>
</tbody>
</table>

**TABLE IX. Mayan noun possession classes.**

Huastec nouns are typical in this respect, although the classifications into which they break are slightly different from those in table IX.
Huastec has nouns from class 1 in which both forms are the same:

I have not encountered nouns that fall into classes 1a or 1b.

Class 2, in which the possessed forms take a suffix, is represented in Huastec, although the suffix usually has a short vowel; examples are given in (65)-(70). Note that, while there may be no nouns from classes 1a or 1b in Huastec, class 2 and 3 nouns are divided into two subclasses based upon whether or not the last stem vowel is lengthened in the possessed form.

(65) a. pik’o7 ‘dog’
    b. u pik’oojil ‘my dog’

(66) a. ch’akam ‘child’
    b. u ch’akaamil ‘my child’

(67) a. k’iitzaa ‘day’
    b. u k’iitzaaajil ‘my day’

(68) a. bitzim ‘horse’
    b. u bitziimal ‘my horse’

(69) a. inik ‘man, body’
    b. u iniktal ‘my body’

(70) a. xi7 ‘hair’
    b. u xi7iil ‘my hair’

The examples for class 2 demonstrate the different possible suffixes: -il, -jil, -al, -tal, and -iil; of these variants, only -jil can be predicted: it is used with vowel-final stems. (70) is the only example I have encountered with the suffix -iil. Observe the lengthening of the stem vowel in (65), (66) and (68) which is absent in (69) and (70).

Huastec also has nouns from class 3; examples (71) and (72) demonstrate the use of the suffix -lek on non-possessed forms of nouns in this class; note that the stem vowel is lengthened in (72) but not in (71).

(71) a. akanlek ‘foot, leg’
    b. u akan ‘my foot, my leg’
The morpheme -laab is also used on non-possessed forms of nouns in this class:

(73)  
(a) mimlaab 'lady'  
(b) u mim 'my (maternal) aunt'

This morpheme is discussed by Pablo E. et al (1984). Their claim is that this morpheme can be used on nouns with the result that the derived word has a more generic meaning; they make no mention of how productively this morpheme can be used. However, in the examples they give, the forms without -laab are always possessed. Thus, it appears that its use is a formal one to indicate the nonpossessed form of certain class 3 nouns. It is, of course, the case that a noun used in a possessed noun phrase is highly specified and, in turn, that the same noun, when not possessed, may carry a more generic meaning within a clause.

There appears to be a clear basis for choosing between -lek and -laab for a given class 3 noun: -lek is generally used on body parts, as in (71) and (72) above. One exception to this could be the noun xek 'leaf', which also takes -lek when nonpossessed, though even here an extension of this principle seems to apply. This distinction can be demonstrated with the noun akan which can mean 'foot, leg' or also 'stem, tree trunk'. With the former meaning, -lek is used on the non-possessed form, as seen in (71) above; with the latter meaning, -laab is used:

(74)  
(a) akanlaab 'trunk'  
(b) in akan 'its trunk'

An interesting fact about non-possessed forms with -lek is that they can be used to denote a body part which is, in some sense, dismembered; as such, it acts like a class 2 noun stem and can occur in a possessed form with the additional suffix -il:

(75)  
(a) akanlek 'footprint'  
(b) u akanlekil 'my footprint'
The morphemes -laab/-talaab are suffixed to either verb or adjective stems and functions as a nominalizer with the derived word having the morphosyntactic characteristics of a noun.\(^{15}\) Examples of such nominalizations are given in (76)-(78); (76) and (77) involve verb stems while (78) involves an adjective stem:

(76) \(\text{peejee-x-talaab} \quad \text{‘fight, war’} \quad \text{fight.RECIP-AP-NOM}\)

(77) \(\text{t’ip-laab} \quad \text{‘measurement’} \quad \text{measure-NOM}\)

(78) \(\text{alwa7-talaab} \quad \text{‘a good turn, a kindness’} \quad \text{good-NOM}\)

2.3 Syntax

Several aspects of Huastec syntax will be discussed in subsequent chapters. At this point, only general comments about the syntax will be made with respect to typology and to the flagging of grammatical relations.

2.3.1 Word Order Typology

Kaufman (1986) reports that all Mayan languages, with the single exception of Chorti, are predicate-initial. He also observes that various ones will allow some deviation from their basic VOS or VSO order under certain conditions. Aissen (1987) argues that in Tzotzil, which is basically VOS, any changes from predicate-initial order are restricted by explicit syntactic conditions. Berinstein (1984) argues likewise for K’ekchi.

Kaufman (1986) groups Huastec with Tzeltal as having VOS or VSO order, depending upon the relative animacy of S and O. Pablo E. et al (1984) classify Huastec as VO, although they note that other orders also occur. They point out that Huastec has other word order characteristics that commonly correlate with VO word
order, such as prepositions and head-genitive order. Grimes (1984) classifies Huastec as SVO.

Since pronouns are frequently omitted, it is common that a clause will lack one or another nuclear argument. In transitive sentences, an overt DO almost always follows the verb. An overt subject usually precedes the verb, especially when there is an overt DO as well. This is true in both main and subordinate clauses with the exception that in relative clauses the subject usually follows the verb (provided that it is not the subject that is relativized); in this way, relativized nouns take certain precedence over subjects. Sentences given in isolation are exclusively SVO; I have also found this order to be dominant in texts.

In intransitive sentences, both SV and VS order occur often, in sentences given in isolation as well as in texts. There appears to be no distinction between orders in main and subordinate clauses, with the exception, noted above, for relative clauses.

Huastec uses prepositions to flag many nominals other than subject and DO; this is illustrated here in (79):

(79) An inik exom ti belal k'al in tomtal.
DEF man be T3 walk.IMP with 3POSS wife

The man is walking with his wife.

The use of prepositions is discussed more fully in §2.3.3. There are no postpositions in Huastec; thus, it is consistently prepositional. This characteristic conforms with canonical VO word order.

Nominal modifiers in Huastec generally precede nouns; typically, quantitative modifiers precede a definite, indefinite or honorific proclitic while descriptive modifiers are between the proclitic and the head noun:
Many rich men put in a lot of money.

At least some nominal modifiers may also come after the head noun:

(81) a. An paktha7 bitzim in kina-∅-tzik an te7.
    DEF big horse 3/3 pull-PFV-PL DEF tree

    The big horses pulled the tree.

b. ...tam in t'aja-al
    CONJ 3/3 make-IMP

    i ale-laab paktha7.
    INDEF field-NPOSS big

    ...when they planted a big field.

There is some correlation between adjective/noun order and canonical OV order; this correlation is not a strong one, however. Thus, we may still classify Huastec as VO, though it is not a prototypical example of a VO language.

In possessed noun phrases, the genitive follows the possessed noun:

(82) n-in taata7-tzik n-a Juan
    DEF-3POSS parent-pl DEF-HON John

    John's parents

As is the general case with unemphatic pronouns, a pronominal genitive is dropped, leaving only the agreement proclitic; I do not count this as a deviation from canonical order, however:

(83) in t'ijax a k'ubak
    3POSS finger 2sPOSS hand

    your finger (lit. your hand's finger).

This relative order of genitive and possessed noun is consistent with canonical VO word order.
Relative clauses in Huastec consistently follow the head noun, in conformity to canonical VO word order:

(84) An inik xi-u chu7u-0
     DEF man REL-1/3 e-PFV
     in k'apal wi7ik i palach.
     3/C eat.IMP INC INDEF turkey

The man that I saw was eating turkey.

In comparisons, the order of morphemes is that associated with VO order:

adjective-marker-standard:

(85) Juun n-u okoob maas nakat
     one DEF-1sPOSS arm more long
     ke xi juun.
     than REL one

My one arm is longer than the other.

Auxiliaries precede main verbs, in conformity with canonical VO order:

(86) Aniiv jey taja7 ti k'waj in kono-y-al
     also EMPH there T3 be(LOC) 3/3 ask-?-IMP
     yan xata7. Lk2
     many things

And there, he was also asking many questions.

Question words used in content questions are always clause-initial:

(87) Jont'o a k'apu-0?
     what 2s/3 eat-PFV

What did you eat?

This position is consistent with VO order.

As discussed in §2.2.2, all affixes in Huastec are suffixes. This does not conform to canonical VO order; however this parameter does not correlate strongly with either VO or OV order. Thus, it is of little importance in classifying Huastec as VO.
Based on these various word order parameters, I classify Huastec as a VO language; at this point, however, I am not prepared to classify it as either VSO or SVO.

2.3.2 Head/Dependent Marking and Centricity

The encoding of grammatical relations in a given language can be marked either on the head of a constituent or on the dependents. Nichols (1986) discusses the significance of the distinction between head-marking and dependent-marking grammars for linguistic typology and claims that other binary parameters used in typology may even reduce to this dichotomy. Thus, she notes that head-marking morphology favours verb-initial word order while dependent-marking morphology disfavours it. Likewise, she hypothesizes that constituents which are headed by a valence-bearing word will be exocentric if dependent-marked, and may be either exocentric or endocentric if head-marked.

In assessing the marking patterns of various languages and language families, Nichols notes that Mayan languages are consistently strongly head-marking. By her measurements, Huastec is likewise strongly head-marking. In this regard, we have seen that clauses are head-marked as are possessed noun phrases, both when the arguments are pronominal and when they are full noun phrases. True prepositional phrases have no marking, though there is head-marking on relational nouns (discussed in §2.3.3). This tendency toward head-marking in Huastec gives further credence to the classification of Huastec as VO.

As predicted by Nichols, constituents in Huastec with valence-bearing heads are endocentric. Thus, in a clause, the predicate may occur without overt arguments; in noun phrases, a noun may occur alone without either modifiers or a possessor. Prepositional phrases, on the other hand, are exocentric; thus, a true
proposition (not a relational noun) must have an overt object. In this regard, Huastec is like other Mayan languages.

2.3.3 Flagging of Grammatical Relations

The term flagging is used here to refer to the use of morphosyntactic devices such as case or adpositions for dependent marking in ways that are, at least partly, grammatical rather than semantic.

Nuclear grammatical relations are not flagged in Huastec in any particular morphological way. Furthermore, there is no flagging of indirect objects since, as argued in chapter 6, Huastec has no superficial indirect objects.

Various morphosyntactic devices are used to indicate oblique relations; these include the use of prepositions and of a special set of concrete nouns. The latter device is quite common in Mayan languages; Mayanists typically refer to these nouns as relational nouns.

Various oblique relations are flagged by prepositions. The preposition k'al indicates instrumental and comitative relations:

(88) In wik'a-0 an bitzim
3/3 tie-PFV DEF horse
k'al an t'iliil wik'a-x-talaab.
with DEF thin tie-AP-NOM

He tied up the horse with the thin rope.

(89) An inik exom ti belal k'al in tomtal.
DEF man be T3 walk.IMP with 3POSS wife

The man is walking with his wife.

The preposition abal indicates benefactive and directional relations:
Several locative relationships are flagged by the use of various prepositions and relational nouns. Simple location is indicated by the preposition ba:

\[(92)\] An mixtu7 0 k'waj ba-an te7.
\[\text{DEF cat 3 be(LOC) LOC-DEF tree}\]

The cat is in the tree.

This same preposition may also indicate direction:

\[(93)\] In ne7ech ba-an tienda.
\[\text{Is go LOC-DEF store}\]

I am going to the store.

In some contexts, however, place names do not require any special marking (though, compare (57)):

\[(94)\] 0 tzubax in ne7ech n-a Tampico.
\[\text{3 true Uls go DEF-HON Tampico}\]

It's certain I will go to Tampico.

Simple location may also be indicated by the preposition al; it is not clear what distinction there is between this and the directional use of the prepositions ba and abal.

\[(95)\] Nanaa7 tux chu7u-0 al ale.
\[\text{Is 1/2p see-PFV at field}\]

I saw you (pl.) in the field.

Relative location is expressed by the use of various relational nouns. Many relational nouns also function as concrete nouns denoting various body parts; for
example, kux ‘back’, waal ‘face’, and eeb ‘body’. When used to flag a nominal for a particular locative relation, the relational noun is the head of a possessed noun phrase, the possessor of which is the nominal bearing the locative relation. As in other possessed noun phrases, the head noun agrees with the possessor in person and number (cf. §2.2.7). As well as having an agreement proclitic, these noun phrases always seem to have an adverbial proclitic ti. At this point I can offer no consistent gloss for this clitic; other uses are described later in this section and also in chapter 6.7 Examples of flagging by means of relational nouns is given in (96) and (97).

(96)  
\begin{align*}
\text{In } & k^wajil \\
\text{U1s } & \text{be(LOC).IMP} \\
\text{ti-in } & \text{kux an ch'en.} \\
\text{CL-3POSS } & \text{back DEF mountain} \\
\end{align*}

I live behind the mountain.

(97)  
\begin{align*}
\text{An } & \text{eskwel ataa } 0 \text{k^waj} \\
\text{DEF } & \text{school house 3 be(LOC)} \\
\text{ti-in } & \text{waal an bitzow.} \\
\text{CL-3POSS } & \text{face DEF town} \\
\end{align*}

The school is at the edge of town.

Other locations may be indicated by the use of certain nouns that denote a position: altaa ‘interior, inside’, and eelb ‘exterior, outside’. These may occur alone or as relational nouns in combination with the preposition ba:

(98) a.  
\begin{align*}
\text{An } & \text{inik } 0 \text{k^waj altaa.} \\
\text{DEF } & \text{man 3 be(LOC) inside} \\
\end{align*}

The man is inside (the house).
b. An inik 0 k'waj
\[DEF \text{ man 3 be(LOC)}\]
\[ba-in \text{ altaa-jil an tioopan.} \]
\[LOC-3POSS \text{ inside-POSS DEF church}\]
The man is in the church.

The adverbial proclitic ti, mentioned above, is also used with nouns denoting either temporal or locative relations:

(99) Jajaa7-tzik tu kani-0 ti we7eel.
\[3-\text{Pl} \quad 3/1p \text{ call-PFV CL yesterday}\]
They called us yesterday.

(100) In k'ale labtoom ti semana sanu.
\[Is \text{ go.PFV Mexico CL week holy}\]
I went to Mexico City during Holy Week.

(101) An max ka ela-n-0 al te7 o ti beel,
and if K3 find-MID-PFV at tree or CL road
\[u \text{ le7-na-aab} \quad k'waj\]
\[U3 \text{ want-INST-PASS.IMP QUOT}\]
\[ka \text{ chem-tha-aa.} \quad K3 \text{ die-CAUS-PASS.PFV}\]
And if she was found in the woods or on the road, they would want to kill her.

(102) 0 utza-n-0-ich tam k'waj
\[3 \text{ say-MID-PFV-CMP CONJ QUOT}\]
\[abal \text{ ka witziy-ich ejtal} \quad CONJ K3 \text{ return.PFV-CMP all}\]
\[ti-in \text{ k'imaa7.} \quad CL-3POSS home\]
Everyone was told to return home.
Notes

1. The alveolar fricative s also occurs, but apparently only in alternation with tz.

2. The velar nasal occurs in Huastec in alternation with the alveolar nasal n. Santana et al. n.d. reports the occurrence in Huastec of the resonant r as does Larsen 1955. However, it is not listed in the phonemic inventory provided in Larsen and Pike 1949, nor does it occur in my data.

3. Kaufman 1986 reports that Huastec has a plain/glottalized pair of voiceless retroflexed alveolar stops. However, I have not observed this.

4. The gloss 'U3' reflects the fact that Huastec has various sets of agreement clitics; the clitic in this example which is glossed as 'U3' is from the "U-set". Other sets include the "T-set" and the "K-set"; thus, glosses such as 'T3' or 'K3' will occur in the examples. The various sets of agreement clitics are described in §2.2.6.

5. I assume that, as with the majority of verb roots for which there is clear evidence, this root has the shape CVCV; there is no indication, however, from my data of what the second vowel in this case should be. I view this as a gap in the data and not as an instance of a CVC verb root. (Cf. §2.2.2.)

6. I find this claim surprising since many Mayan languages have verbal prefixes indicating tense/aspect.

7. There is some variation in the agreement proclitics among dialects. Those given in the text are for the Tantoyuca dialect unless otherwise noted.

8. A potential case could involve the morpheme oth. Consider the following example (the equals sign represents a possible clitic boundary):

   (i) \[ \text{in=oth=biji-al} \]
   \[ 3/3=\text{had=na} \text{me-IMP} \]
   he bad-mouths him

   If oth is a word, we certainly have a strong argument against viewing the agreement markers as affixes. If it can be considered a clitic, then criterion F applies suggesting
that the agreement markers are also clitics. If othbiji is treated as a compound stem, then criterion F does not apply. Now, if this were a compound stem, we might expect, depending upon how the rule of stress applies with respect to compounds, that the primary stress would regress to fall on [oth]. However, it falls on [bi]. This may suggest that this alternative is, in fact, not the correct one. Thus, we have a potential argument that the agreement markers are not affixes.

9 The important concern here is not to explain why individual modifiers occur in a given position, but to provide some account of the syntax which allows for such explanations to be stated in a viable manner. The analysis I suggest here does this, while that proposed by Kaufman does not.

10 The optional -al on the perfect suffix may be related to, and may even be an occurrence of, the imperfective suffix.

11 The morpheme glossed ‘INCHO’ (inchoative) in these examples is a derivational morpheme, though it does appear to carry the meaning indicated. This morpheme is attached to adjectives, which are not otherwise inflected with the obligatory tense/aspect markings found on verbs; the resulting form takes on all of the morphological and distributional properties of verbs, including the obligatory marking of tense/aspect.

The imperfective and perfective suffixes in this pattern typically have strong morphophonological interaction with the stem; hence, the representations given should be regarded as tentative.

12 It is unclear to me at this point what the exact relationship is between -nekk and -neek. At least in the Tantovaca dialect, however, these appear to be predictable with respect to a phonological condition: -nekk is suffixed to forms ending in [n]. In this group of verbs, -neek is always the form used since it is apparently the case that the perfect morpheme always is accompanied by the perfective suffix, as illustrated by the examples in the text. -neek may also be used with some verbs that
take the suffixes -al ‘imperfective’ and -0 ‘perfective’: specifically, all those verbs forms which take the middle voice suffix -n (cf. chapter 5).

It has been brought to my attention by Terry Kaufman (personal communication) that, in the dialect spoken in San Luis Potosí, the corresponding perfect form is -neenek and that it is often shortened to a single syllable. This is probably the common source from which the two forms under discussion are derived.

The label *completive* is also adopted by Ochoa Peralta (1984) for the category denoted by the suffix -ich. She uses the label *potential* for the category denoted by the suffix -ak.

Of their four examples (their (13)-(16)), I have no data regarding the fourth —itzich(laab), ‘seed’; however, the other three must be possessed when they lack -laab.

It is unclear at present what relationship may exist between -tal-laab and the suffixes -tal and -laab. It should be noted that -tal and -laab may occur together, as exemplified in (i); this results in a surface form identical to that of the suffix -talaab (given the application of a rule of degemination).

(i) a. way-tal-laab ‘bed’
   sleep-?-NPOSS

b. in way-tal ‘his bed’
   3POSS sleep-?

In this example, the suffix -tal may or may not be the same morpheme as that discussed in regard to the possessed forms of class 2 nouns.

Pablo E. et al actually say that Huastec has genitive-head order in the noun phrase, but it is clear from the point they are making, as well as from the observable facts of the language, that they really meant to say the opposite.

Ti also occurs with reflexive pronouns, which are also formally possessed noun phrases; cf. §5.2.
I have analyzed this morpheme as a clitic, though I have not provided evidence, nor am I aware of any, that it is a clitic rather than a preposition. An analysis of ti as a preposition would have no affect on the primary claims of this thesis.
Chapter 3

Theoretical Overview

The theoretical perspective adopted for the remainder of this paper is that of relational grammar (RG) and its more formal cousin, arc pair grammar (APG). Together, these will be referred to as arc grammar (AG). For the most part, the discussion will adopt the more informal style typical of RG with an occasional discussion into the formalities of APG.

AG grew out of work in transformational grammar in the early 1970s. Initial research focused on the study of many languages in search of universals and was not overly concerned with the formalization of representations. This research effort has continued under the rubric RG. APG was born in 1977 as the result of an attempt to construct a formal linguistic theory underlying the basic ideas of RG (Johnson and Postal 1980:18).

Although there is no single work intended as an introductory text on the AG frameworks, several useful, brief introductions have been provided in the literature. Overviews of the RG formalisms and of some of the developments in the theory are provided in Perlmutter 1982 and the papers in Perlmutter 1983 and Perlmutter and Rosen 1984, especially Perlmutter and Postal 1983c, 1984a. Within the Mayan literature, an outline of RG is given in Berinstein 1984. An extensive presentation of the APG formalism and theory is found in Johnson and Postal 1980. Postal 1982 provides a brief introduction to the theory and applies it to the description of some reportedly mysterious facts about French. Postal 1986 gives a more current outline of APG which avoids the lengthy details covered in Johnson and Postal 1980.
Within the Mayan literature, an excellent, up-to-date introduction is presented in Aissen 1987. Given the availability of these works, only brief summaries will be given here. Further details will be outlined as they become relevant at certain points in the paper. For other details, the reader should consult the references cited.

3.1 Relational Grammar

Two claims are central to AG: that grammatical relations are primitive elements of linguistic theory and that syntactic descriptions must represent them in multiple levels of syntactic structure. Accordingly, both grammatical relations and levels are key elements in the basic unit of representation, the arc.

Informally, an arc consists of (i) a ordered pair of nodes that represent linguistic elements and an immediate dominance relation between them, (ii) an R-sign which denotes some grammatical relation, and (iii) a set of contiguous coordinates indicating the levels at which the relation holds. Graphically, an arc may be represented as in (1):

\[
\begin{array}{c}
\text{b} \\
\text{GRx} \\
\text{ci} \\
\downarrow \\
a
\end{array}
\]

Conceptually, such an arc is intended to represent a linguistic state: that the element \(a\) (e.g. a nominal) is dominated by the element \(b\) (e.g. a clause) and bears the \(GR_X\) relation (e.g. subject) to \(b\) at the \(c_i\) level. The terms head and tail are used to refer to the nodes of an arc. For the arc in (1), the head refers to \(a\), and the tail, to \(b\).

Several primitive grammatical relations have been proposed. The relations that will be of most interest are those typically borne by nominals and clausal com-
implements. The most important of these are subject, direct object, and indirect object; these constitute a class referred to as term relations. This set is distinct from the oblique relations, which includes benefactive, instrumental, locative, and others. Another nominal relation is unique to RG: the chômeur relation; its significance will be seen shortly. Associated with each relation is an R-sign which denotes it. Thus, P denotes the predicate relation; I, subject; 2, direct object; 3, indirect object; Chô, chômeur; Ben, benefactive; Inst, instrumental; Loc, locative; and so on.

Syntactic structures consist of a set of arcs; in particular, it is claimed that a sentence consists of a set of arcs that conforms to certain formal properties; such a set is known as a relational network (RN). The sentence in (2) is associated with the RN in (3):

(2) In nju-Ø n-a Juan an olom.
3/3 sell-PFV DEF-HON John DEF pig

John sold the pig.

(3)

The RN in (3) is greatly simplified, omitting details such as tense, agreement and the internal structure of the nominal constituents. The three arcs represent the following: the clausal node, 200, has two nominal dependents, na Juan and an olom, that bear the 1 and 2 relations respectively at the c₁ level, and a verb dependent, nju, that bears the P relation at the c₁ level.
The coordinates associated with an arc indicate the levels of structure of which it is a part. A level of structure is referred to as a *stratum* and consists of the maximal set of arcs with a given coordinate; thus, for example, the $c_j$ stratum of a given RN is the set all those arcs in the RN whose coordinates include $c_j$. Two strata are of particular significance. The *initial* stratum is that with coordinate $c_1$; it is assumed to be connected, in some way, with the logical interpretation of the RN, and is the stratum most closely determined by the properties of lexical items, especially in relation to the subcategorization of verbs according to the arguments that they take. The *final* stratum is that with the highest coordinate and is in some way related to the surface form.

An example of a Huastec sentence with multiple levels of structure is given in (4). (This is claimed to be a passive clause; see the discussion below and also chapter 4.) The structure of this sentence is represented by the simplified RN in (5a); an equivalent but abbreviated representation, called a *stratal diagram*, may also be used, as in (5b).

(4) 0 nuju-at 3 an olom k'al n-a Juan.

The pig was sold by John.

(5) a. b.

Care should be taken in reading stratal diagrams since the arrows in a stratal diagram do not necessarily correspond to a single arc; rather, they represent a set of arcs with the same head and tail. So, for instance, in (5b) the arrow with *nuju-at* at
its head represents a single P arc while the arrow with an oloom at its head represents two arcs—a 2 arc and a 1 arc. The stratal diagram shows directly that the structure of (4) involves two levels: the R-signs above the upper horizontal curve indicate the relations that the elements at the heads of the corresponding arrows bear to the clause in the initial \( c_1 \) stratum; the R-signs above the lower horizontal curve indicate the relations borne in the final \( c_2 \) stratum.

The traditional notion of transitivity is such that the term transitive is associated with the presence of both a 1 (i.e. a nominal which heads a 1 arc) and a 2 while intransitive is associated with the presence of a 1 only. It is logically possible for an RN to have several strata, some of which have both a 1 and a 2, and some others of which lack either a 1 or a 2 or both (compare the two strata in (5)). As a result, it is not possible to characterize an entire clause as either transitive or intransitive; rather, it is necessary to speak of transitivity in a particular stratum. Thus, a transitive stratum is one that contains a 1 arc and a 2 arc (e.g. the initial stratum in (5a,b)). An intransitive stratum is one that is not transitive (e.g. the final stratum in (5a,b)).

Defined notions, such as term relation and transitive or intransitive stratum, play an important role within the theory since they are frequently found to capture significant generalizations in individual languages as well as in universal laws. Other such defined notions include nuclear terms—1 and 2—and objects—2 and 3.

Two defined notions that are important to the description of Mayan languages are ergative and absolutive. An arc is an ergative arc in stratum \( c_i \) if (i) it is a 1 arc, (ii) if it is in stratum \( c_i \), and (iii) if stratum \( c_i \) is transitive. An arc is an absolutive arc in stratum \( c_i \) if (i) it is a nuclear term arc, (ii) if it is in stratum \( c_i \), and (iii) if it is not an ergative arc in that stratum (Johnson and Postal 1980:231). (This latter condition is satisfied either if the stratum is intransitive or if the arc is a 2 arc). Referring back to (4), na Juan is an initial ergative (i.e. heads an ergative arc in the \( c_1 \) stratum) since it heads a 1 arc in the initial stratum and the initial stratum is transitive; an
olom is an initial and final absolutive since it heads a nuclear term arc in each stratum (a 2 arc in the initial stratum and a 1 arc in the final stratum) but is not an ergative in either stratum.

Given the formalism presented above for representing the structure of sentences, syntactic universals can be stated as constraints on possible RNs. As an example, one proposed universal, the *Stratal Uniqueness Law*, is stated informally in (6):

(6) **Stratal Uniqueness Law**

No two distinct arcs which have the same tail and which are both in any given stratum can have the same term relation.

Informally, this prevents two clausal constituents from bearing the same term relation (subject, direct or indirect object) at the same syntactic level. Several other putative universal laws have been proposed and debated in the literature. For further information see Perlmutter and Postal 1983c, 1984a, 1984b, Davies 1984, Gibson and Raposo 1986, and Davies and Rosen 1988.

As well as permitting the statement of syntactic universals, the theory allows the characterization of syntactic constructions which occur cross-linguistically. One construction which received much attention in the early RG literature, and more recently in Postal 1986, is the passive construction. Passive in Huastec is exemplified by the sentence in (4) above with the corresponding RN represented in (5).

Perlmutter and Postal (1983a) show that, while passives may vary from one language to another, they do have some universal characteristics which must be stated in terms of grammatical relations. Informally, their proposal is that in a passive clause, some nominal heads a 2 arc in a transitive stratum and a 1 arc in the following stratum. In (4), the nominal an olom heads a 2 arc in the initial stratum, which is transitive, and a 1 arc in the following (final) stratum. So, an RN represents a passive clause if it has the sub-structure given in (7):
Note that in (7), the 1 arc headed by b has $c_k$ as its last coordinate: the Stratal Uniqueness Law prohibits this arc from having the coordinate $c_{k+1}$ since, if it did, then the $c_{k+1}$ stratum would have two 1 arcs. The general view in the RG literature is that b heads a Chô arc in the $c_{k+1}$ stratum.6

This brings out the significance of the chômeur relation: languages have several constructions in which one nominal takes over, so to speak, the relation borne by another nominal; in this case, the one is said to overrun the other.7 This latter nominal continues to bear some relation to the clause, though it may not necessarily resemble any term relation; it is assumed not to bear an oblique relation, a possibility prohibited by the Oblique Law (cf. Perlmutter and Postal 1983c:88-92). The chômeur relation is proposed for these situations; in fact, the Motivated Chômage Law restricts a nominal from bearing the chômeur relation except in this situation (cf. Perlmutter and Postal 1983a:22-3, and Perlmutter and Postal 1983c:99-100). In such situations it is said that the nominal is placed en chômage. It is assumed that a nominal placed en chômage may not bear any other relation in a later stratum; this restriction is stated as the Chômeur Advancement Ban (cf. Perlmutter and Postal 1983c:117).

In many languages, chômeurs (i.e. nominals that bear the chômeur relation) may be distinguishable by differing properties; their distinction corresponds to different term relations which they bore in an earlier stratum. Thus, reference may be
made to a 1-chômeur—a chômeur which is a 1 in an earlier stratum—as opposed to, for example, a 2-chômeur—a chômeur which is a 2 in an earlier stratum.

Passive is one example of several constructions in which a nominal bears a given relation in a particular stratum but a different relation in a following stratum; such constructions are referred to as revaluations. Since the term and oblique relations are ranked hierarchically as 1 > 2 > 3 > oblique, revaluations can be classified into two types: advancements and retreats. An advancement is a revaluation in which the relation borne in the latter stratum by the nominal in question is higher on the hierarchy than that borne in the previous stratum; a retreat is a revaluation in which the relation borne in the latter stratum by the nominal in question is lower on the hierarchy than that borne in the previous stratum. Passive, therefore, involves an advancement from 2 to 1. Other advancements have been discussed in the literature. (See Aissen 1983 and chapter 7 of Aissen 1987 for descriptions of 3 to 2 advancement in Tzotzil.) Examples of retreats attested in languages include 2 to 3 retreat and antipassive. (See chapters 4 and 5 of Berinstein 1984 for a discussion of these retreats in K'ekchi. See also chapter 7 below for a discussion of antipassives in Huastec.)

3.2 Arc Pair Grammar

In distinguishing the APG framework from that of RG, one of the first differences that will be noted is the degree of formality. Statements in APG are expressed in the formal language of predicate calculus. Linguistic universals are represented as axioms from which theorems may be deduced; together, these axioms and theorems form a theory of (human) language. Language-particular rules are also expressed as statements in the formal language. A complete set of these statements represents the grammar of that language.
In developing a theory within a formal language, one must begin by identifying the symbols to be used in the formal language. In the case of APG, these include the usual symbols of predicate logic (denoting implication, negation, or, and, etc.) as well as symbols denoting the various primitive elements of APG. These primitive elements include nodes, grammatical relations, coordinates, and two primitive, binary relations between arcs: Sponsor, and Erase, discussed below.

As in RG, coordinates represent various levels of syntactic structure. The set of grammatical relations proposed in APG includes those recognized in RG as well as others which are unique to APG. As in RG, grammatical relations are symbolized by R-signs. Relations (and their corresponding R-signs) that are unique to APG include Label (L), Stem (St), Affix (Af), Clitic (Cl), and others.

Nodes are of two types: terminal and non-terminal nodes. Non-terminal nodes are intended to abstractly represent linguistic entities such as clauses or phrases and are symbolized by positive integers. (Note that these have no inherent substance and are distinguished only by the fact that they are symbolized by different integers.) Terminal nodes are of various types: logical nodes, phonological nodes, and grammatical category nodes. The set of logical nodes is intended to include those primitive elements needed for logical or semantic description. Phonological nodes are intended to represent the phonological form of morphemes. Grammatical category nodes denote purely grammatical categories such as clause, nominal, masculine (for languages with nonsemantic gender), 1st person (for languages with nonsemantic person — cf. the Spanish polite form usted), singular (for languages with nonsemantic number — cf. the French polite form vous), etc.

Having established the symbols for the formal language, statements (expressions in the formal language) can be made that characterize the constructs to be used in the representation of sentences. As in RG, the arc is the primary construct in APG and has the same formalization, interpretation and graphical repre-
sentation as in RG. Thus, an arc consists of an ordered pair of nodes, an R-sign, and a contiguous set of coordinates, and denotes that one linguistic element bears a particular relation to another element at certain consecutive levels of structure.11 (The graphical representation is exemplified in (1) above.)

Having characterized arcs, it is possible to characterize a set of arcs known as an *R-graph*, the equivalent of the RN in RG. Conceptually, the R-graph represents all sentence structure except that involving the Sponsor and Erase relations (see below). Formally, an R-graph is a set of arcs that conforms to certain properties; thus, there must be at least one arc and at most a finite number of arcs; no arc has the same head and tail; all termination arcs (arcs which have no other arcs branching off them) are L (label) arcs and are headed by terminal nodes; etc. (While some of these properties may seem trivial, they are necessary to precisely define what an R-graph is.)

To this extent, RG and APG are generally the same, though concepts in APG are formalized more rigourously. There is another distinction, however, that is more fundamental than the degree of formality: unlike RG, APG proposes two primitive binary relations between arcs—Sponsor and Erase. The graphical notation for Sponsor and Erase are given in (8):

(8) a. A Sponsors B
    b. A Erases B

Conceptually, to say that an arc A sponsors arc B means that the linguistic state denoted by B is (partially) justified by the state denoted by A, or that the state denoted by A is a necessary condition for the occurrence of the state denoted by B. Likewise, to say that arc A erases arc B conceptually means that the state denoted by
A is sufficient for the state denoted by B not to be represented in the phonological expression of the sentence. Consider the passive clause in (4) above, repeated here:

(9) 0 nuju-at 3 seu-PASS.PFV DEF pig 0 k'al 0 n-a Juan.

The pig was sold by John.

The (simplified) APG representation is given in (10):

(10)

In this structure, arc C sponsors and is erased by D; conceptually, this says that the state denoted by C (that an olom is a 2 in the c₁ level) justifies the state denoted by D (that an olom is a 1 in the c₂ level) and that the state denoted by D is sufficient for the state denoted by C to not be expressed in the superficial form of the sentence. Similar statements apply to arcs A and B. Looking at Sponsor and Erase another way, the Sponsor relation functions largely to allow each state in the logical structure of a sentence to be connected with some state in the phonologically relevant structure; Erase functions to pick out from all the states in the structure of a sentence only those that define the phonologically relevant structure (Johnson and Postal 1980:13).

We turn now to the APG representation of sentence structure. The APG construct used to represent sentence structure is the Pair Network (PN). Formally, a PN is an ordered pair, (Sponsor, Erase)—a pairing of a set of Sponsor relationships
between arcs with a set of Erase relationships. Furthermore, this ordered pair must satisfy several criteria. The full explanation is rather technical and not important for the purposes of this thesis. (See chapter 4 of Johnson and Postal 1980 for the complete formalization.) Let it suffice to say that the set of arcs involved in a PN forms an R-graph and that all the arcs in this set are sponsored by some arc also in the set; also, a PN must have associated with it two formally defined constructs, an L-graph and an S-graph, which are sub-graphs of the R-graph. An L-graph characterizes the logical structure of the sentence while an S-graph characterizes the phonologically relevant aspects of the sentence. A PN can be graphically represented using the same notational devices for R-graphs with the addition that all Sponsor and Erase relationships between arcs are also shown. Thus, (10) above represents (in a simplified manner) the PN associated with the sentence in (9).

At this point, a comment should be made regarding the Sponsor and Erase relations. Though the discussion above suggested (rightly) that these relations could hold between two distinct arcs, nothing logically prohibits an arc from sponsoring or erasing itself; the only restriction placed on self-sponsoring arcs is that all and only self-sponsoring arcs must occur in the first stratum. Also, independent laws within APG have the consequence that only final arcs may self-erase. (This is presented as the Self-Erasing Final Arc Theorem in Johnson and Postal 1980:182.) Both self-sponsorship and self-erasure, in fact, frequently occur. By definition, all of the arcs in an L-graph are self-sponsoring. There are also several instances in languages of self-erasure. One example is the so-called "pro-drop" phenomenon. Consider the sentence in (11):

(11) (Nanaa7) in ne7ech.
    (Is) Is go
    I go. / I'm going.
In Huastec, pronouns, such as nanaa7, are generally dropped, retained only when emphatic. The PN for the shorter form in (11) is given in (12):

(12)

Both arc A and arc B are self-sponsoring; arc A is also self-erasing, reflected in the fact that the pronoun does not occur in the phonological form.

As was mentioned above, an R-graph is equivalent to an RN in RG; it was also noted in the previous section that RNs can be represented by stratal diagrams. However, (10) represents both an R-graph and various Sponsor and Erase relationships; this information cannot be fully represented in a stratal diagram as there is no easy way in a stratal diagram to show Sponsor and Erase relationships. Since Sponsor and Erase and central notions in APG, stratal diagrams are generally not used in APG. Nevertheless, they do reflect a good deal of structure, and for this reason will be used frequently in this thesis.

As noted, (10) is a simplified representation of the PN associated with (9). The research emphasis in RG has focused on clause-level constructions and not on the details of how to represent the structure of sentences with respect to every single morpheme. In the development of APG, however, the formalization of representations played a more important role. Thus, though (10) is a simplification, it is the intent that there be, in principle, a way to represent every detail about the structure of sentences.
In practice, it remains to be established exactly how many sorts of details in the structure of sentences ought to be represented, though the formalism provided in APG is considered to be adequate for this. Moreover, many such details are frequently not relevant to the research one may be conducting. Accordingly, representations are often systematically simplified, as in (10); furthermore, non-terminal nodes are often systematically suppressed. Another simplification applies to self-sponsorship: since all and only those arcs in the initial stratum are self-sponsoring, self-sponsorship is frequently not shown overtly. These simplifications will occur in this thesis except where any such details become relevant. As an example of how such details might be represented, consider the constituent an olom in (9) above. A detailed representation of this constituent would be something akin to that in (13):

Note the distinction between non-terminal nodes, symbolized by integers (60, 32 and 43), and the various terminal nodes. The latter include logical nodes (symbolized here by upper case English spellings), phonological nodes (symbolized by lower case) and grammatical category nodes (symbolized by mixed case). Node 60 repre-
sents the entire nominal (note the grammatical category node Nom which it gov-
erns); node 32, the clitic an; and node 43, the noun olom.

Given the PN formalism for the representation of sentence structure, linguis-
tic universals are stated as PN laws—laws which put constraints on possible PNs.
Several of the laws proposed in RG have been transported directly into APG; many
new ones have also been proposed. Johnson and Postal 1980 presents 116 laws; for
further information on the PN laws, the reader should refer to this work.

In the previous section, several defined notions were introduced: term,
nuclear term, object, oblique, stratum, initial, final, transitive, intransitive, ergative,
and absolutive. All of these are formally defined in APG with definitions compara-
tible to those given in RG. Several others have been defined in APG and are impor-
tant in the statement of many laws, theorems and language-specific rules. Many of
these are statements about single arcs or relations between arcs. A number of these
follow.

A node a is said to govern a node b if and only if (hereafter, iff) there is some
arc A such that a is the tail of A and b is the head of A; conversely in this case, b is
said to be governed by a. Two arcs are said to be neighbors iff they have the same
tail; two arcs are said to overlap iff they have the same head. Iff two arcs both over-
ap and are neighbors (i.e. have the same head and tail), they are said to be parallel.
Thus, the arcs in (14a,b) are neighbors since they have the same tail d; the arcs in
(14b,c) overlap since they have the same head e. The arcs in (14b) are also parallel.
Also, in (14a), node d governs nodes e and f.
An arc $B$ is said to be a *branch* of an arc $A$ iff the head of $A$ is the tail of $B$; conversely in this case, $A$ is said to *support* $B$. In (15), $A$ supports $B$ and $B$ is a branch of $A$.

(15)

A pair of particularly significant relations between arcs are *successor* and *predecessor*. These relations link various relations borne by a given element, denoting the successive linguistic states of that element. An arc $B$ is the successor of an arc $A$ iff $A$ sponsors $B$, $A$ and $B$ overlap, and $A$ and $B$ are distinct. The predecessor relation is the inverse of this: $A$ is the predecessor of $B$ iff $B$ is the successor of $A$. As an example, consider the PN represented in (10), repeated here for convenience:
In this PN, B is the successor of A, and D is the successor of C.

The PN in (16) will also serve to exemplify another important relation, overrun. The idea behind the overrun relation is that one arc "takes over", so to speak, the relation borne by another. An arc A overrun an arc B iff they are neighbors, have the same R-sign, and A's first coordinate index is 1 greater than B's last coordinate index. In (16), arcs A and D are neighbors since they have the same tail; they also have the same R-sign (1). D's first coordinate index is 2 while A's last coordinate index is 1. Thus, D overruns A.

To conclude this discussion of the APG formalism, I will introduce another useful notion, ancestral. For any binary relation P between arcs, we can define the ancestral of P, denoted as R(emote)-P. The idea behind an ancestral relation is that, for a relation P, the ancestral of P holds between two arcs if they are linked by some sequence of P relations. So, for two arcs, A and B, A bears the ancestral relation R-P to B iff A is B, or A bears the relation P to B, or if A bears P to some arc C which bears P to B, etc. Ancestral relations are formally defined recursively as in (17):

(17) Def: For any binary relation P between arcs and any arcs A, B, and C,
(i) R-P(A,A)
(ii) If P(A,B) and R-P(B,C), then R-P(A,C).
The ancestral of a relation is exemplified in (18) with the ancestral of the successor relation, $R$-successor:

(18) \text{It ali-tzi-aab an ti bitzim.} \\
\text{U2s seek-DAT-PASS.IMP DEF CL horse}

The horse is being sought for you.

The structure proposed for this clause is given in (19):

(19)

This structure involves the advancement of a benefactive (the 2s pronoun) to 3, then to 2 (see chapter 6 on dative voice) placing the initial 2, bitzim 'horse', en chômage; finally, it advances to 1 making the clause passive. The unspecified initial 1/final Chô is not reflected on the surface since the Chô arc C self-erases. Likewise, the pronoun is dropped in the same manner (see (11)-(12) above). In this structure, we find the successor relation holding between several pairs of arcs: C and B, E and D, etc. There is a sequence of successor relations going from one arc to the next, beginning with I and ending with F: H is the successor of I, G is the successor of H, and F is the successor of G. The ancestral relation $R$-successor captures this
sequence. So, while arc I has only one successor, it has several R-successors: I itself, H, G, and F.

Notes

1 The use of this collective name originated with Paul Postal.

2 In this work, Johnson and Postal present an overview of the historical development of AG (cf. pp. 15-9). Also of particular historical interest is Perlmutter and Postal 1983b which represents some of the initial research which suggested the need for a relationally based theory of syntax.

3 The use here of terminology typically associated in many frameworks with a lexicon should not be interpreted too strongly: while in RG there is no clearly stated approach to lexical matters, it is the case that in APG, there is no lexicon distinct from the rest of the grammar. The same information, such as that pertaining to verb subcategorization, must be described, of course; such information is expressed by rules which simply belong to the overall grammar and which are of the same form as any other rule in the grammar.

4 It is standard practice in both RG and APG to refer to an arc with a given R-sign, GRX, as a GRX arc; hence, a I arc is an arc with the R-sign I, a P arc is an arc with the R-sign P, etc.

5 Note that this also constitutes an argument that grammatical relations must be primitive notions in any adequate syntactic theory since they argue that grammatical relations are necessary in order to characterize something of cross-linguistic significance, namely, passives. Perlmutter 1984 discusses passive clauses further and from them argues that any adequate syntactic theory must make reference to more than one level of syntactic representation since an adequate, cross-linguistic charac-
terization of passives must make reference to at least two levels of syntactic representation.

6 In fact, this is required by the Chômeur Condition proposed in Perlmutter and Postal 1983a. It should be noted, however, that this putative law has been greatly debated in the literature and is now considered to be too restrictive.

7 This term is borrowed from APG in which it is formally defined as a relation between arcs; this definition is given in the following section.

8 More specifically, APG is formulated as a mathematical object using a formal language, as is the practice in formulating theories in mathematical logic.

9 In formal logic, a theory is a set of axioms (statements) together with any and all theorems (statements) that are deducible from those axioms. The set of axioms and theorems formulated within APG as a theory of language will also accomplish that which is typically expected of "theories" in most scientific endeavor, namely, it will make interesting and empirically claims about the particular area of study, in this case, language.

10 Generally, the R-sign used to denote a given relation in RG is also used to denote that relation in APG. The only notable exception to this is that in APG the chômeur relation is generally denoted by 8.

11 In the discussion above, it was stated that an arc denotes, in part, that one element dominates another. In APG, as formulated in Johnson and Postal 1980, this is technically not the case. In fact, they propose a relation (the Linear Precedence relation) that could hold, in particular, between two nouns that are both clause constituents; in this situation, it would clearly not be the case that either nominal dominates the other. The authors speculate, however, that this relation can be dispensed with, and in Postal 1986 this appears to have occurred. If it is to be dispensed with, then it may be possible to incorporate the notion of dominance into the intended interpretation of arcs. This would require, however, further restrictions on
R-graphs (discussed in the text, below) since nothing in principle prohibits the occurrence in R-graphs of circuits, a sequence of arcs in which each arc supports the next with the last arc supporting the first, as in (i):

(i)

Clearly, the notion of dominance could not be consistently applied to the interpretation of this set of arcs. By definition, it is a property of L-graphs (that portion of the structure of a sentence which is relevant to logical/semantic interpretation) that they must not have any circuits. A discussion of whether circuits should be prohibited altogether is beyond the scope of this thesis.

12 As discussed in chapter 6, this structure may involve an advancement from Ben directly to 2, rather than the two steps suggested here. This issue is not important at this point; the advancement is presented here as involving two steps since this better serves to demonstrate the notion of ancestral relations.
Chapter 4
Passive

Descriptions of many languages have used the label passive in describing certain clauses. Comparing such clauses cross-linguistically, one finds a great deal of superficial variation. This variation raises the issue of whether there is any notion of passive that is valid cross-linguistically. Perlmutter and Postal 1983a and Perlmutter 1984 argue that there is indeed a valid, universal notion of passive and that this notion is a syntactic one. They classify as passive any clause involving the sub-structure represented in (1):

(1) a. 

This structure, they propose, constitutes a precise definition of the notion passive clause.\(^1\)

Perlmutter and Postal's characterization of passives recognizes four main subtypes of passive clauses, according to variation along two parameters; thus, passives may be plain or reflexive, and they may also be personal or impersonal. A single language may have more than one of these subtypes; indeed, a language can attest all four, as in the case of German (see Perlmutter and Postal 1984b).
In this chapter, I will describe a group of clauses in Huastec that have been described as passives and will show that they are consistent with the characterization proposed. In Huastec, there are both plain (personal) passives and reflexive (personal) passives. In this chapter, I consider only plain passives; reflexive passives will be discussed in chapter 5.

4.1 Huastec Passives

Before discussing the formal analysis of passives in Huastec, I will present the basic morphosyntactic facts.

For a given active, (finally) transitive clause in Huastec, such as (2a), there is a corresponding intransitive clause, exemplified by (2b):

(2) a. U ali-∅ an bitzim.
     1s/3 seek-PFV DEF horse
     I looked for the horse.

b. ∅ ali-at an bitzim.
    3 seek-PASS.PFV DEF horse
    The horse was looked for.

Clauses such as that in (2b) will be referred to as passive clauses. Note that, in (2b), the verb has a different perfective suffix, that it has an intransitive agreement proclitic, and that it agrees with the semantic patient, bitzim. Although the semantic agent is not expressed in this example, it may be; if it is, it occurs as the object of the preposition k'al, as in (3b):

(3) a. Taja7 jey ti-u tzi7i-tha-aab
     there EMPH CL-U3 come-CAUS-PASS.IMP
     juun i ya7ul ke
     one INDEF sick COMP
     yaba7 in ejto-al ti belal... Mk2
     NEG 3/3 be.able-IMP T3 walk.IMP

     A sick man was being brought who couldn't walk...
b. ...kita-aam-te  t-u  tzi7i-tha-aab  
carry-PRF-?  CL-U3  come-CAUS-PASS.IMP  
k'al  chee7  ti  eeb.  Mk2  
by  four  CL  person  
...being carried, he was brought by four people.

The agent may be expressed in this way whether it is a full noun phrase or pronominal, as seen in the following example (which involves a reflexive passive, discussed further in §5.3.2):

(4) In  t'aja-al  xowa7  u  utza-n-al  
3/3  do-IMP  what  U3  say-MID-IMP  
k'al  jajaa7-tzik.  
by  3-PL  
He did what they said to do.  (lit. what was said by them)

In Tzotzil passives, an agent which is overtly expressed must be third person (see Aissen 1987:116-117); no such restriction applies in Huastec, however:

(5) ...u  k'anitha-aab  an  belom-tzik  
U3  love-PASS.IMP  DEF  people-PL  
k'al  tataa7...  John 17:23  
by  2s  
...the people are loved by you...

In plain passives, distinct suffixes are used to inflect the verb for the three primary tense/aspects; thus, these morphemes express both voice and tense/aspect categories. The imperfective passive is indicated by the suffix -aab:

(6) Tayith  k'wa7  u  ch'aaju-y-aab.  
always  QUOT  U3  tie.up-?-PASS.IMP  
He was always being tied up.

The perfective passive is indicated by one of two suffixes, -aa, and -at:3
(7) \( \emptyset \) tomki-at k'al i chaap-laab.
3 marry-PASS.PFV with INDEF force-NPOSS
He was married by force.

(8) Yaba7 in le7-na-\( \emptyset \) ka chem-tha-aa...
NEG 3/3 want-INST-PFV K3 die-CAUS-PASS.PFV
He didn't want to be killed...

(9) It chem-tha-tzi-at t-a kwita-il.
2s die-CAUS-DAT-PASS.PFV CL-2sPOSS chicken-POSS
Your chicken was killed.

The stems in (7) and (8) differ; likewise, a different suffix is used. In (8) and (9), the same stem is used, yet again, a different suffix is used. I have no explanation at present of what, if anything, controls this variation. It does appear to be the case, however, that when this suffix follows the dative suffix -tzi (discussed in chapter 6) the form -at is used; more generally, within my data, -aa is used only following the causative suffix -tha or the instrumental suffix -na (discussed in chapter 7).

In Huastec of San Luis Potosi, the perfect passive is expressed with the suffix -aame on the verb; this suffix is not used in Huastec of Veracruz, however. Rather, a "participial" form is used, with the suffix -th or the suffix -tz:\(^4\)

(10) Yaba7 \( \emptyset \) chem-tha-tz yan i paakax
NEG 3 die-CAUS-PTCPL many INDEF cow
je7 i tamub.
DEM INDEF year
Not many cows have been killed this year.

(11) \( \emptyset \) tawna-th, por jamax yaba7
3 speak.to-PTCPL but apparent NEG
u och'o-x-\( \emptyset \).
U3 hear-AP-IMP
He has been spoken to, but apparently he isn't listening.
Passivization is quite productive in Huastec: I know of no instance in which a transitive clause does not have either a plain or reflexive passive counterpart. There will not always be a plain passive counterpart, however. This is discussed further in §5.3.2.

I have not had opportunity to fully analyze how passives are used in discourse, but they appear to be used in ways similar to passives in many better studied languages. It is certainly the case that a short passive (i.e. one without an overtly specified agent) may be used to suppress reference to the agent when the identity of the agent is unknown or unimportant. The former is the case in the sentence in (8), repeated here, which begins a discourse paragraph (the passive verb is in boldface):

(12) Yaba7 in le7-na-∅ ka chem-tha-aa...
    NEG 3/3 want-INST-PFV K3 die-CAUS-PASS.PFV

He didn't want to be killed...

The story from which this is taken recounts what the main characters did during the Mexican Revolution; there was no specific individual in mind by whom the character would have been killed. Consider also (13):

(13) Ejtal-tzik xi-in ach'a-al
    all-PL REL-3/3 listen-IMP
    u laba-n-al-tzik t'ajat
    U3 be.amazed-MID-IMP-PL much
    abal 0 chalpa-th n-a Jesuus
    COMP 3 think-PTCPL DEF-HON Jesus
    ani abal ir took'o-y-al alwa7
    and COMP 3/3 answer-?-IMP well
    xowa7 u kono-y-aab. Lk2
    what U3 ask-?-PASS.IMP

Everyone was very amazed because Jesus was bright and because he was answering well whatever questions were asked.

In this example, it is clear that the questions were being asked by individuals in the crowd, but it is unimportant to know specifically by whom.
As well, it is evident that passives may be used, even when the identity of the agent is clear, so that the topical character is the subject:

(14) tajal7 taaal ti ali-aab
    there T3 come T3 seek-PASS.IMP

abal ti chem-tha-aab.
    CONJ T3 die-CAUS-PASS.IMP

...they were coming seeking him in order to kill him. (lit. he was being sought... he would be killed)

Here, the ones who were coming are understood as the agents of 'sought' and 'killed', though they are not expressed within those clauses. The main character is the patient of 'sought' and 'killed', and, as the topic of the story, is expressed as the subject of these verbs using passive.

4.2 Analysis of Passive Clauses in Huastec

The claim being made here is that passive clauses in Huastec have a structure that includes the sub-structure represented above in (1); thus, the structure proposed for (15a) is given in (15b):

(15) a. 0 ali-at an bitzim.
    3 seek-PASS.PFV DEF horse

The horse was looked for.

b.

Note that no agent is overtly expressed; this example involves an unspecified agent, indicated in (15b) by the abstract element UN (unspecified).
It is important to distinguish between the representation of (15) and that for another situation in which there is no overt expression of an agent: while no agent may be overtly indicated in a clause, one may be understood within context. This is the case in (16) (cf. (14) above and the related discussion):

(16)  

\[
\begin{array}{llllll}
\emptyset & \text{utz}^-& \text{u} & k\text{w}a7 & \text{QUOT} \\
3 & \text{tell-MID-PFV} & n\text{-u} & \text{pulek} & \text{taata7} & \text{abal} \\
& & \text{DEF-1sPOSS} & \text{big} & \text{father} & \text{COMP} \\
& & \text{taja7} & \text{ti} & \text{taal} & \text{ti} & \text{ali-aab} & \text{abal} \\
& & \text{there} & \text{T3} & \text{come} & \text{T3} & \text{seek-PASS.IMP} & \text{COMP} \\
& & \text{ne7ech} & \text{ti} & \text{chem-tha-aab} \\
& & \text{go} & \text{T3} & \text{die-CAUS-PASS.IMP} \\
\end{array}
\]

My grandfather was told that they were coming seeking him in order that he be killed. (lit. he was being sought... he would be killed)

Consider, for simplification, the sub-string \(\text{ti\ ali-aab}\) ‘he was being sought’: the agent of this clause is understood in this context as ‘they’ (the subject of \(\text{ti\ taal}\) ‘they come’). Therefore, I assume \(\text{ti\ ali-aab}\) has the structure given in (17):

(17)

\[
\begin{array}{llllll}
1 & \text{Ch\ 9} & \text{P} & \text{1} \\
3\text{pl} & \text{ali-aab} & \text{seek-PASS.IMP} & \text{n-u} & \text{pulek} & \text{taata7} \\
& & \text{DEF-1sPOSS} & \text{big} & \text{father} \\
\end{array}
\]

The difference in representation between (17) and (15) in question here is that the agent nominal in (15) is the abstract element UN while the agent nominal in (17) is specified as ‘3p’. The agent nominal in (17) has no overt realization in this clause due to factors independent of passivization which are not of immediate concern.
An agent may be overtly expressed, however, as above in (3b), or as in (18a), the structure of which is given in (18b).\(^6\)

(18) a. In wa7u-th k'al an ik'.
   \(\text{Is blow-PTCPL by DEF wind}\)
   I have been blown by the wind.

b.

I now present evidence in support of the proposed analysis of such clauses. The example in (18) will be used as a model. In arguing in support of such an analysis, it is important to provide evidence in support of each of the relations posited for the various nominals in different strata. I present here specific evidence for the intransitivity of the final stratum, for the final relations of the two arguments, and for the initial 2-hood of the patient nominal.

I begin by presenting some general considerations about the initial stratum. It is generally assumed in AG that initial syntactic relations of arguments are determined by the predicate; more specifically, it is assumed (i) that the grammar of a language includes statements about the \textit{valence} of each verb,\(^7\) which specify for a given verb which relations are permissible in the initial stratum and which are obligatory, and (ii) that for a given verb a consistent mapping applies between initial grammatical relations and semantic roles. Hence, in the case of regular and productive passivization, it is simplest to assume that the relations in the initial stratum of a passive are the same as in the corresponding active.
In contrast, a monostratal analysis of passives which posits only those relations represented in the final stratum of the analysis proposed here would entail added complication in the statement of the valence of verbs and inconsistency in the mapping between roles and relations; overall, there would be significant loss of generality. For example, such a treatment of passives in Huastec would have to state that every transitive verb could occur in a clause in which the (initial) relations for the agent and patient arguments were 1 and 2 respectively, or in a clause in which the patient is an (initial) 1 and the optional agent took some oblique relation (or chômeur, or no syntactic relation at all). Furthermore, Huastec grammar allows for several different revaluations other than passive. If this approach were applied in all of these cases (and there is no reason, if it is taken for one case, why it should not be adopted in all), then the statement of verb valence would become especially complex, no mapping between roles and relations could be posited which would be remotely consistent (even if dealt with on a verb-by-verb basis); generalizations which do in fact exist would be completely obscured.

For this reason, the assumption that predicates determine the initial relations of arguments (via verb valence and consistent mappings between roles and relations) is adopted unless exceptions are noted.8

Several arguments for the final relations in (18) follow, some of which are based on facts presented in chapter 2 in an informal and atheoretical manner. In these cases, it will necessary to present the rules required to account for these facts in a more formal manner. To begin, recall the basic facts of predicate agreement, presented in §2.2.4. The predicate in a superficially intransitive clause agrees with the (superficial) 1, this agreement indicated by a clitic from one of the various sets of intransitive agreement clitics; the predicate in a superficially transitive clause agrees with the (superficial) 1 and 2, this agreement indicated by a clitic from one of the various sets of transitive agreement clitics. I now provide a more formal rule which
characterizes Huastec predicate agreement. For simplification, I will refer to the various sets of agreement clitics which are used in superficially transitive as T-Ag clitics, and to the various sets of agreement clitics used in superficially intransitive as I-Ag clitics.

(19) Predicate agreement rule
Predicates agree with final nuclear terms in person and number; this is marked in finally transitive clauses by a T-Ag clitic, and in finally intransitive clauses by an I-Ag clitic.

The requirements of this rule all follow directly from the basic agreement facts discussed in §2.2.4 with the exception that the nominals controlling agreement must be nuclear terms in the final stratum. Aissen (1987) has proposed that agreement rules cross-linguistically must be stated in terms of final relations; if this hypothesis is valid, then this requirement in a description of agreement in Huastec would not need to be stated explicitly in a language-particular rule but would be accounted for by some universal law. It has not been shown, however, that this requirement is required in Huastec. The validity of this assumption can be seen in the analyses that incorporate it. First, it is certainly consistent with the clear cases (which, in terms of the framework adopted here, involve monostratal structures). Several different syntactic structures in Huastec are considered in this chapter and those that follow; in each case, the assumption that the rule of verb agreement is stated in reference to final nuclear terms consistently permits rules to be stated in a simpler and more general fashion than would be otherwise possible. On this basis, I assume that the rule in (19) is valid.

Consider, now, the second and final stratum in (18). As there is a 1 but no 2 in this stratum, it is intransitive (by definition). Hence, the proposed analysis interacts with the predicate agreement rule to make an empirical prediction: that the verb in (18) will have an intransitive agreement proclitic. This prediction is borne out: the clitic in is an intransitive agreement clitic.
The predicate agreement rule makes an even more specific prediction: that the verb in (18) will agree with the final 1, i.e. the initial 2/patient ‘Is’, and not with the initial 1/agent, an ik’ ‘DEF wind’. This prediction is also borne out: the clitic in ‘Is’ indicates agreement with a first person, singular nominal. This provides evidence (i) that the initial 2 is the final 1, and (ii) that the initial 1 is not the final 1.

In §2.3.3, mention was made of the fact that (overt) nuclear terms are not flagged in any way. This fact requires the statement of some rule (or conjunction of rules) which has the effect of prohibiting such nominals from being flagged. A potential rule (which is sufficient, though not necessarily ideal or even required in a complete grammar of Huastec) is given in (20):

(20) Nuclear term no-flagging rule

Final nuclear terms are not flagged.

This rule, which constitutes an independent fact about Huastec, interacts with the proposed analysis of passives in Huastec, correctly predicting that the initial 2/final 1 will not be flagged. Furthermore, the rule provides evidence that the initial 1 is not the final 1. If we assume that the initial 1 is a final 1, this rule would predict that it would not be flagged. However, we see that, when the initial 1 is overtly expressed, it is flagged by the preposition k’al. Thus, the assumption is false, and the initial 1 cannot be a final 1.

In retrospect, the nuclear term no-flagging rule was described as an independent fact about the language. Strictly speaking, the independent fact is that (at least) some nominals that head nuclear term arcs are not flagged; it had not been independently shown that this applied specifically to final nuclear terms. If we accept as valid the analysis of passive clauses presented here, we see that this rule indeed applies to final nuclear terms. However, arguments just considered, which assumed specifically that final 1s are not flagged, were presented in support of the analysis of passives. Thus, this specific fact requires independent evidence.
In all cases not involving passive, final Is are not flagged; adopting the analysis of passives presented here allows this generalization to be maintained. If, on the other hand, we adopt an alternative view, then we face greater problems. If we assume that the rule applies to all nuclear terms, then the passive analysis cannot stand, an overtly expressed agent in a passive, which is flagged by k'al, cannot be a nuclear term (at any level), and we can make no generalizations about either the relationship between actives and passives or about the valence of verbs. If we assume that the same relations hold in passives as in actives, then we cannot capture the generalizations that can be made about the flagging of nominals (or about predicate agreement, for that matter). Considering these alternatives, the proposed statement of the nuclear term no-flagging rule, along with the proposed view of passives, is clearly preferable on the basis of simplicity and the ability to capture generalizations.

In view of evidence presented above that the initial 1 is not a final 1, the issue is raised as to what the final relation is of the initial 1. The claim made here is that the overrun nominal is a final chômeur. There are three obvious alternatives to this: (i) that the initial 1 is also a final 1 (as well as the initial 2), or (ii) that the initial 1 demotes to 2, (iii) to 3, (iv) or to some oblique relation. Each of these alternatives is problematic, however.

An analysis in which the agent and the patient are both final Is would violate a proposed universal—the Stratal Uniqueness Law (cf. §3.1 and the references cited there). As well, it would require ad hoc statements which specify that in passive clauses the patient nominal determines final 1 agreement but that the agent nominal does not determine any agreement, and that the final 1/agent nominal is flagged by k'al.

An analysis in which the initial 1 demotes to 2 would simply involve, in effect, an exchange of relations between the agent nominal and the patient nominal. This
analysis would wrongly predict that the clause is finally transitive and, therefore, that
the verb would have a transitive agreement proclitic and that the agent nominal
would determine final 2 agreement and would not be flagged. To compensate for
these problems, ad hoc rules would be required that would specify that, in passive
clauses, the intransitive agreement proclitics are used and that the final 2/agent is not
involved in determining agreement and is flagged by k'al.

As discussed in chapter 6, all 3s in Huastec must advance to 2. Hence, an
analysis in which the initial 1 demotes to 3 would also entail that it subsequently
advances to 2; therefore, the problems described in the preceding paragraph remain.

Demotion to oblique is systematically ruled out in AG by the Oblique Law.
Furthermore, oblique relations are assumed to be in one-to-one correspondence
with oblique semantic roles; yet, there is limited association between the semantics
of the initial 1/agent nominals in passive clauses and obliques, including those
flagged by k'al, which is used for nominals with the role of instrument (while agents
may be instruments of change, few instruments are volitional agents). If such a
nominal did retreat to some oblique relation, there would be no principled way to
decide just what oblique relation this might be. Rather than flagging the nominal
to show a certain oblique relation, along with the associated semantics, it appears in
this instances that the k'al serves a purely syntactic function. Thus, I propose that
here it flags 1-chômeurs. A rule accounting for the facts is given informally as
follows:

(21) 1-Chômeur flagging rule
An overt 1-chômeur is flagged by the preposition k'al.

This rule applies specifically to 1-chômeurs and not to chômeurs in general since
2-chômeurs are flagged differently (as described in §6.1.2).

Evidence that the final 1 in (18b) is an initial 2 is found in the interaction
between passives and advancements to 2, such as indirect object advancement
(IOA), discussed in §6.1. The analysis proposed for IOA clauses is that they involve the advancement of a nominal from 3 to 2. This is exemplified in (22) (evidence for the proposed analysis of such sentences is presented in §6.1):

(22) a. N-a Juan ti nuju-tzi-∅
    DEF-HON John 3/2s sell-DAT-PFV
    an ti olom.
    DEF CL pig

John sold you the pig.

b.  

The analyses presented for passive and IOA suggest that an initial 3, having advanced to 2, should be available for advancement to 1 by passivization. This is indeed the case, as illustrated by the following passive clauses, which corresponds to the (finally) transitive clause in (22):

(23) a. It nuju-tzi-at an ti olom
    2s sell-DAT-PASS.PFV DEF CL pig
    k'al n-a Juan.
    by DEF-HON John

You were sold the pig by John.
It is apparent in this example that the initial 3/recipient nominal is a final 1; this is evidenced by the agreement on the verb. The facts in this case are accounted for by the proposed analysis of passive without further stipulation. Crucially, this hinges upon the claim that the nominal which is a final 1 in passives has advanced from 2. In particular, it should be noted that an alternative analysis of sentences like (23) in which the 3 advances directly to 1 is ruled out since it wrongly claims that passives of IOA clauses are transitive, and it fails to account for the flagging of the initial 2 (discussed in chapter 6):

(24)

This provides evidence that, in passive clauses such as (18), the final 1 is an initial 2.

With regard to the initial relations, it should also be noted that syntactic evidence has been presented in the literature for these initial relations (and, more generally, for the bistratal analysis) in passive clauses of other languages (see Perlmutter 1984, Perlmutter and Postal 1984b, and Marlett 1984). As it is claimed that passive
is to be characterized universally, such evidence is also evidence for this characteriza-
tion universally. So, to the extent that we believe a particular language to be like
other languages, we are motivated to adopt this same analysis for passives in that
language.

In the case of Huastec, Perlmutter and Postal’s characterization of passives
provides an analysis of clauses such as that in (18a) in which the particular mor-
phosyntactic facts about these clauses are captured by generalizations established
independently for other clause types without further stipulation, and also in which
statements about the valence of each verb can be stated in a simple and direct way.

Thus, given the evidence presented here, I conclude that passive clauses in
Huastec conform to the universal characterization presented in (1).11

Notes

1Postal (1986) argues that this condition is necessary though not sufficient to
characterize impersonal passives since it cannot make a distinction that, on pretheo-
retical grounds, one would want to make between passives of impersonal construc-
tions and true impersonal passives. This is not important to the discussion here,
however, as I make no claim that Huastec has either impersonal passives or passives
of impersonal constructions.

2In this discussion, patient is used as a cover term which actually includes
various roles, including patient, stimulus, etc.; i.e. those roles which are typically
associated with initial 2s. Likewise, the term agent is meant to include various roles
such as agent, experiencer, cognizer, force, etc.; i.e. those roles typically associated
with initial 1s.
Dayley 1983 states that a past passive participle may be formed by adding to the stem the suffixes -b'il and -aab; I have not encountered such forms in my data, however.

The term *participial* is used here merely as a descriptive label. These suffixes also occur on forms which involve verb stems but which are clearly not passives and which have morphological and distributional properties similar to those of adjectives.

The omission of this agent may be treated either as an instance of pro-drop or as being due to the realization of the nominal in a preceding (and/or dominating) clause. Note that this third plural agent is realised in the clause containing ti taal by means of agreement, though not with an overt pronoun. As for the case of n-u pulek taata7 (the initial 2/patient of ti ali-aab), some syntactic or discourse conditions permit that it not have an overt, nominal representation in this clause, either as a full noun phrase or as an pronoun, since it has an overt, nominal representation in another (preceding and dominating) clause. Such conditions must eventually be stated explicitly, and appropriate rules constraining the grammar must be formalized.

The structure of the prepositional "by" phrase is not crucial here. For a demonstration of how these would be represented in APG, see Johnson and Postal 1980:611, Postal 1986:16 or Aissen 1987:68-73; also, an example of the representation of prepositional phrases in APG is illustrated in (5.27).

The idea of *valence* is essentially equivalent to those of subcategorization or argument structure.

This assumption is discussed in greater detail in Rosen 1981, 1984.

In earlier stages in the development of AG, oblique relations were referred to as *impure grammatical relations* since they, "unlike the pure relations, have independent semantic content" (Johnson 1977:153). It is for this reason that the Oblique
Law was proposed, requiring that oblique relations be assigned only in the initial stratum, which is connected, in some way, with logical interpretation.

This is reflected in the fact that, while the nominals which are chômeurs (in terms of typical AG analyses) in corresponding clauses from various languages will often appear like other obliques in the respective languages, there will be no consistent way in which the languages associate those nominals with any particular type of oblique. Thus, the agent nominal in passives of one language might be marked like instruments, in another, like certain locatives, etc. Likewise, the patient nominal in IOA clauses of one language might be marked like certain temporals in one language, like benefactives in another, etc.

I have no specific evidence from Huastec that the initial 1 of a passive clause is specifically a final chômeur rather than some other relation such as instrumental. The latter possibility is systematically excluded within AG by the Oblique Law; this universal requires that an oblique arc be an initial arc (see Perlmutter and Postal 1983c). This matter is discussed to a greater extent in §6.1.2.
Chapter 5
Reflexives

In this chapter, we will consider various clause types in Huastec which are, in some sense, reflexive; this includes ordinary reflexives, which involve coreference, as well as other clauses. Two mutually exclusive morphosyntactic devices are used for reflexives in Huastec: reflexive pronouns, and verbal morphology; in this way, Huastec is like various European languages, including Spanish, Italian, Albanian, and Russian. Clauses involving reflexive pronouns are considered in §5.2, while those involving reflexive verbal morphology are considered in §5.3. First, however, I will outline the manner in which reflexive clauses and coreference are treated within AG.

5.1 AG Analysis of Reflexives

The claim made in Perlmutter and Postal 1984b, Johnson and Postal 1980, and Postal 1982 is that ordinary reflexive clauses involve structures in which a single nominal heads two neighboring arcs (i.e. two arcs having the same tail) in the initial stratum. Thus, the initial structure of the clause in (1a) would be represented as in (1b):

\[(1)\ a.\ \text{Mary sees herself.}\]
The relevant assumption is further generalized in the multiattachment hypothesis, which claims that languages permit multiattachment (MA) structures — structures in which a single nominal heads two neighboring arcs in a single stratum, initial or otherwise. This proposal has permitted a uniform and enlightening account of a recurrent phenomenon: that languages use reflexive morphology both in ordinary reflexive clauses, which involve coreferential nominals, as well as in other types of clause which do not involve coreferential nominals (in particular, certain passive and unaccusative clauses) and which are otherwise apparently unrelated to ordinary reflexive clauses. (This situation in Huastec will be considered in §5.3.) The MA hypothesis has also permitted insightful accounts in several languages of facts seemingly unrelated to reflexive morphology, and has been argued for by Perlmutter (1978), Rosen (1981), and Berinstein (1984).

Another important notion that has accompanied the notion of MA is that of the pronominal replacer. It is assumed that MAs do not survive into the final stratum; all MAs must therefore be resolved. This can be achieved by a pronominal replacer (at least, this is one possible means): of the two multiattached arcs, the one with the lower relation (on the hierarchy $1 > 2 > 3 >$ oblique) is replaced by an arc with the same R-sign and which has some form of pronominal element as its head. Thus, a more complete structure for (1a) above is given in (2):
The original intent of the MA hypothesis was that MA could replace any syntactic notion of coreference. Yet this has been brought into question by Rosen (1981) using evidence from Italian: while arguing decisively in favour of the MA hypothesis, Rosen also presents several arguments against the view that all cases of coreference involve MA. Specifically, she argues that reflexive clitics in Italian are a concomitant feature of MA, but that reflexive pronouns do not arise from MA and, rather, must occur in initial strata. As shown by Hubbard (1980), similar arguments also apply to various data from Albanian. Some of Rosen's arguments apply equally cross-linguistically, and a potential conclusion is that (non-clitic) reflexive pronouns in all languages occur in initial strata and do not arise from MA. The practical consequence of this is that both MA and some other syntactic device, effectively equivalent to co-indexing, are required to indicate coreference. Under this view, the sentence in (1a) would have the initial (and final) structure represented in (3), while the French example in (4a) would have the initial structure represented in (4b):
An evaluation of Rosen's arguments is beyond the scope of this thesis. Within the AG literature, some have accepted her arguments while others held to the view that coreference always involves MA; in particular, this view has been maintained by those working within APG. In describing clauses in Huastec which involve reflexive pronouns, I have simply chosen to present an analysis within the APG formalism with the assumption that coreference always involves MA. An analysis of these clauses that adopts Rosen's views would certainly be viable, and an evaluation of the two alternate analyses (and any others) would certainly be in order. However, this decision relates only to clauses involving reflexive pronouns; therefore, it does not affect the major results of this chapter which relate to clauses involving reflexive verbal morphology.

5.2 Clauses Which Include Reflexive Pronouns

Ordinary reflexive clauses in Huastec, in which the 1 and 2 are coreferential, may contain a special anaphoric nominal:

(5) U kaxu-al t-u-baa7.  
  Is/3 cut.hair-IMP CL-IsPOSS-self  
  I cut my own hair.
This nominal is not, strictly speaking, a reflexive pronoun; rather, it is a possessed noun phrase whose head is baa7 'self'.

Examples (5)-(7) demonstrate key properties of reflexive clauses in Huastec which involve a reflexive pronominal element. First, they are finally transitive, as demonstrated by the use of a transitive agreement proclitic. Not only so, but the final 2 is consistently third person, again, as demonstrated by the agreement proclitic. The reflexive nominal is always possessed, and the possessor agrees in person and number with the 1.

The structure I propose for such clauses is represented in the following diagram, which corresponds to the clause in (5); for the moment, certain details will be suppressed.

(8)

This analysis accounts for the final transitivity. As well, assuming that the reflexive nominal baa7 has the category [third person] associated with it accounts for the fact that the final 2 agreement is always third person. I know of no principled way to account for the presence of the proclitic ti on the reflexive nominal.
Similar facts apply in ditransitive clauses in which the initial 1 and initial 3 are coreferential:

(9) Nanaa7 u t'ila-tzi-0 t-u-baa7
    Is    Is/3 tell-DAT-PFV CL-IsPOSS-self
    ti      kwento.
    CL story

I told myself a story.

As described in chapter 6, 3s advance obligatorily to 2; thus, the reflexive nominal is, again, the final 2 and determines third person final 2 agreement on the verb. The structure of (9) is represented by the following diagram:

(10)

Providing an explicit constraint describing clauses which include a reflexive nominal headed by baa7 will involve delimiting the possibilities for the occurrence of the reflexive nominal as well as delimiting its possible antecedent, both of these may be expressed in terms of grammatical relations. In all of the data I have encountered, the possible antecedents are limited to Is. The antecedent and the reflexive nominal must also occur within the same clause:

(11) U chalpa-y-al tin kwatha-0 (*t-u-baa7).
    Is/3 think-?-IMP 2/Is hit-PFV ( CL-IsPOSS-self)

I think you hit me.

The reflexive nominal may not replace an oblique nominal:
(12) a. Utat nanaa7 u k\textsuperscript{w}aji-ba-\textsl{a} an \textit{t\textsuperscript{\textsl{a}}ujub. near} \textsuperscript{Is} \textsuperscript{Is/3} be-\textsl{CAUS-PFV} DEF rock

I placed the rock near me.

b. *U k\textsuperscript{w}aji-ba-\textsl{a} an \textit{t\textsuperscript{\textsl{a}}ujub} \textsuperscript{Is/3} be-\textsl{CAUS-PFV} DEF rock

\begin{tabular}{ll}
  utat & \textit{t\textsuperscript{\textsl{a}}baa7.} \\
  near & \textit{CL-1sPOSS-self}
\end{tabular}

(same gloss)

(13) a. U k\textsuperscript{w}aji-ba-\textsl{a} an \textit{t\textsuperscript{\textsl{a}}ujub} \textsuperscript{Is/3} be-\textsl{CAUS-PFV} DEF rock \textit{CL-1sPOSS face}

I placed the rock beside me.

b. *U k\textsuperscript{w}aji-ba-\textsl{a} an \textit{t\textsuperscript{\textsl{a}}ujub} \textsuperscript{Is/3} be-\textsl{CAUS-PFV} DEF rock

\begin{tabular}{ll}
  \textit{t\textsuperscript{\textsl{a}}} & \textit{waal} \\
  CL-1sPOSS & \textit{face} \\
  \textit{t\textsuperscript{\textsl{a}}baa7.} & \textit{CL-1sPOSS-self}
\end{tabular}

(same gloss)

c. *U k\textsuperscript{w}aji-ba-\textsl{a} an \textit{t\textsuperscript{\textsl{a}}ujub} \textsuperscript{Is/3} be-\textsl{CAUS-PFV} DEF rock

\begin{tabular}{ll}
  \textit{t\textsuperscript{\textsl{a}}baa7} & \textit{t\textsuperscript{\textsl{a}}} \\
  CL-1sPOSS-self & \textit{waal.} \\
  CL-1sPOSS & \textit{face}
\end{tabular}

(same gloss)

(14) \textsuperscript{0} buxka-n-\textsl{a} t-in waal jajaa7. \textsuperscript{3 sit-MID-PFV CL-3POSS face 3}

He\textsubscript{i} sat at his\textsubscript{ij} side.

(15) U cha7i-\textsl{a} an lemoxx abal nanaa7. \textsuperscript{Is/3 buy-PFV DEF lemon for Is}

I bought the lemon \textit{for} myself.

However, the reflexive nominal may occur when advancement to 2 also occurs (see chapter 6 for details on benefactive advancement):\textsuperscript{5}
In order to formulate an explicit constraint that models these data, it will be necessary to appeal to notions within APG. It is the expressed intent of Johnson and Postal (1980; cf. §11.3) that the theory include universal constraints which have the effect of limiting the possible antecedents of anaphoric pronouns. Such constraints may preclude the need of any language particular rule with this purpose in Huastec (or, perhaps, in any language). However, such constraints have yet to be proposed within the theory. Thus, for the present, a fully explicit rule for Huastec is still required. This rule will make key use of the important APG notion, sponsor.

A main feature of replacers in APG, by the definition of replace assumed, is that the replacer has two sponsors: the arc which is replaced, and another cosponsor; this second sponsor is said to second the replacer. Thus, the relevant structure involved with replacers is as follows:6
In this structure, arc C replaces B, and A seconds C. It is important to note that nothing requires that the cosponsors of a replacer be neighbors, as suggested by the structure in (17). In particular, it is clear from examples like (18) that they need not be neighbors:

(18) a. John said he left already.

Here, the replacee, B, is in the complement clause, but the seconder, A, is in the matrix clause.

In the APG treatment of ordinary reflexive clauses in Huastec, the replacer arc is not headed by the reflexive nominal, but rather by an anaphoric pronoun; the relevant substructure is represented in the following diagram:
Since the cosponsors, A and B, overlap and are initial arcs, the replacer, C, is said to be a coreferential arc.\(^8\)

In many languages, arc C in (19) would be a final arc, and the pronoun which heads C would appear as a reflexive pronoun (in languages that have reflexive pronouns). In Huastec, however, the pronoun which heads C is not a final 2 but, rather, is the possessor of the final 2. Thus, C is also replaced by another arc which has Gen (genitive) and H (head) branches, where baa7 heads the H arc and the pronoun heads the Gen arc:

(20)

Arc D in (20) is referred to as a camouflage arc; this notion can be defined as follows (using (20) as a model): an arc D is a camouflage arc iff it replaces an arc C which has a successor, E, that is a branch of D, and E is a Gen arc.\(^9\)

With this framework in mind, a more complete representation of the clause in (5), repeated here, is given as follows (with sponsor and erase relations temporarily suppressed):
   Is/3 cut.hair-IMP CL-lsPOSS-self

   I cut my own hair.

b.

Given these formalisms, the rule describing the occurrence of the reflexive nominal may be expressed as a constraint on the occurrence of certain camouflage arcs:10

(22) Reflexive camouflage rule
    An arc A is replaced by a camouflage arc which supports an H arc headed by baa7 iff A is a 2 arc R-successor of a coreferential arc B which is seconded by a neighboring 1 arc.

    The restriction to camouflage arcs which support an H arc headed by baa7 is required to distinguish these camouflage arcs from others involved with relational nouns (see below).

    The requirement that A be a 2 arc entails that the camouflage arc must be a 2 arc (since, by definition, a replacer must have the same relation as the arc that it replaces); hence, this restriction reflects the fact that the reflexive nominal is always the final 2.

    The requirement that arc B be a coreferential arc restricts its cosponsors to overlapping initial arcs, reflecting, as intended, the notion of coreference. The requirement that B’s seconder be a neighboring 1 arc follows from the data, and, in particular, accounts for examples like (11) above, repeated here, in which a matrix
clause 1 is coreferential with a complement 2, yet the reflexive nominal may not occur:

\[(23)\ a. \ \text{chalpa-y-al} \tin \text{kWatha-0} \text{t-u-baa7} \]
\[1s/3 \ \text{think-?-IMP} \ 2/1s \ \text{hit-PFV} \ \text{CL-1sPOSS-self} \]

(I think you hit me.)

b.

![Diagram of the sentence structure](image)

In the structure represented in (23b), arc A replaces arc B and is seconded by arc C. Since C and B overlap, A is a coreferential arc. However, the seconder, C, is not a neighbor of A; therefore, the conditions required by the rule in (22) are not satisfied and A may not be replaced by the camouflage arc, D. Thus, (22) accounts for the fact that the antecedent of the reflexive nominal must be within the same clause.

Finally, the requirement in (22) that A be the R-successor of the coreferential arc B may best be explained by illustration: in cases which involve a multiattached initial 3 or Ben arc, such as (10) or (16), this arc is replaced by a coreferential arc, and then advancement to 2 follows. For example, consider the structure of (10), a more complete representation of which is given here:
The initial 3 arc, B, is replaced by the coreferential arc, C. In turn, C has a 2 arc successor, D. Since D is the successor of C, it is also (by definition) the R-successor of C. Hence, by (22), D must be replaced by the camouflage arc E. A comparable situation applies for (16), which involves benefactive advancement. Note that it is not necessary to specify in (22) that advancement to 2 must take place: in the case of a corefential 3 arc, an independently required rule (the IOA rule of §6.1.3) determines that this arc must have a 2 arc successor. In the case of a corefential Ben arc, advancement to 2 is not obligatory: thus, (15) above involves a corefential Ben arc but not advancement to 2; its structure does not satisfy the conditions in (22), and, accordingly, it does not involve the reflexive nominal. It is exactly those cases which also involve advancement to 2 in which the reflexive nominal is required: this is captured by the rule in (22).

In contrast to examples such as (10) and (16), consider the structure in (21b), repeated here:
The initial 2 arc, B, is replaced by the coreferential arc C. Now, by definition, any arc is its own R-successor (cf. (3.17)); so, C is a 2 arc R-successor of a coreferential arc (itself). Hence, in keeping with (22), C is replaced by the camouflage arc D.

There is one last detail about pronominal reflexives that remains to be accounted for: the fact that the anaphoric pronoun does not occur overtly. This can be taken as due to the fact that the head noun of the reflexive nominal is baa7. The following examples, which have similar structures, are given for contrast. The use of a relational noun (discussed in §2.3.3) to show a locative relation is illustrated in (26). Relational nouns involve a camouflage structure nearly identical to the structure associated with reflexive nominals; the key difference in this case is that the head of the possessed noun phrase is waal ‘face’, rather than baa7. As well, the anaphoric pronoun need not be erased:

(26) a. (= (14))11

\[
\begin{align*}
\emptyset & \text{ buxka-n-}0 & \text{ t-in} & \text{ waal jajaa7.} \\
3 & \text{ sit-MID-PFV CL-3POSS face} & 3
\end{align*}
\]

He sat at his side.
Prepositional phrases are assumed in APG to involve *closures*, a structure similar to that associated with camouflage arcs; whereas the arcs supported by a camouflage arc are Gen and H arcs, a prepositional phrase involves a *closure arc* which supports a Marq (marquee) arc and a F (flag) arc. This structure is illustrated by the following example:

(27) a. (= (15))

\[ U \text{ cha7i-0 an lemoox abal nanaa7.} \]

Is/3 buy-PFV DEF lemon for Is

I bought the lemon for myself.

b.  

In the structure in (27b), the preposition abal ‘for’ and the pronoun nanaa7 ‘Is’ correspond respectively to the head noun baa7 and the anaphoric pronoun in the reflexive camouflage structure. In this case, as in (26), the pronoun need not (in fact, may not) be erased.
Thus, some constraint is required to account for the mandatory erasure of the anaphoric pronoun in a reflexive camouflage structure; the appropriate constraint appears to be one requiring that if a Gen arc has a neighboring arc headed by baa7, then the Gen arc must self-erase.

(28) **Reflexive nominal erase rule**
If an arc A is headed by baa7, and B is a Gen arc neighbor of A, then B self-erases.

The erasure of the Gen arc accounts for the absence of the pronoun in the surface form, but does not prevent it from determining possessive agreement on the head noun. So, the more complete representation of (5) (= (21)) would be as follows:

(29)

![Diagram showing reflexive nominal erase rule](image)

5.3 Clauses Which Involve Reflexive Verbal Morphology

A second device, verbal morphology, may be used in certain clauses in Huastec that are, in some sense, reflexive. This applies to ordinary reflexives as well as other clause types: reflexive passive clauses, and reflexive unaccusative clauses; each of these will be discussed in the sections that follow.13

5.3.1 Ordinary Reflexives

Ordinary reflexive clauses in which the 1 and 2 are coreferential may involve the use of a reflexive nominal, as described above, or, in some instances, may involve only the use of the verb suffix -n, glossed ‘MID’ (middle) in the examples.14 (For
no convenience I will refer to ordinary reflexives of the former type as *pronominal reflexives* and to those of the latter type as *morphological reflexives.* This difference is exemplified by the following examples:

(30) a. U cha7u-0 t-u-baa7.
Is/3 hit-PFV CL-IsPOSS-self
I hit myself.

b. In cha7u-n-0.
Is hit-MID-PFV
(same gloss)

Certain features should be noted about the example in (30b): the verb is suffixed with -n, the reflexive nominal does not occur, and the clause is finally intransitive, as evidenced by the agreement proclitic. It is unclear to me at present what semantic or pragmatic distinction there is, if any, between pairs such as these. It is also unclear whether both types of reflexive clause may be freely formed with any transitive verb root, or whether some roots are restricted to occurrence in only one type or the other.

As with pronominal reflexives, morphological reflexives involve a structure in which there is a multiattachment in the initial stratum. In this case, however, MA is resolved by *cancellation* —the initial 1 arc persists into a second stratum, but the initial 2 arc does not;\(^{15}\) thus, the structure of (30b) is represented as follows:\(^{16}\)
This structure accounts for the reflexive meaning and the final intransitivity. Cancellation also provides an adequate condition to describe the occurrence of the suffix -n; the required rule may be stated informally as follows:

(32) **Middle voice rule**  
A verb is suffixed with -n iff there is a cancellation.

As with pronominal reflexives, morphological reflexives are not limited to clauses in which the multiattached arcs are initial 1 and 2 arcs, as demonstrated by the following example which involves advancement to 2 of an initial benefactive (cf. §6.2):

(33) \[ \text{Wawa7 u k'\textsc{a}7i-tzi-n-al abal} \]  
\[ \text{Ip Ip carry:water-DAT-MID-IMP because} \]  
\[ \text{ow-\textsc{i}ch wa\textsc{7} ti-i ach'\textsc{a}-al an mom.} \]  
\[ \text{far-CMP ? CL-1p/3 feel-IMP DEF pool} \]

We are carrying water for ourselves because we already feel like we're a long way from the pool.

Since the initial benefactive in (33) advances to 2, a more general condition is suggested: cancellation may be used to resolve only the multiattachment of a 2 arc and a 1 arc. This requires an additional constraint:

(34) **Cancellation rule**  
A cancellation may only cancel a 2 arc which is multiattached to a 1 arc.

5.3.2 Reflexive Passives

While the middle voice suffix -n may be used in ordinary reflexive clauses, in which there is coreference and reflexive semantics involved, it may also be used in various clauses which involve neither coreference or reflexive semantics. This is the case in the following passive clauses:
The seeds from the flower were spread by the wind.

The tree has been wrapped around by a vine.

As with plain passives, clauses such as (35) and (36) are finally intransitive, the verb agrees with the patient nominal, and the agent nominal (if expressed overtly) is flagged by k'āl. However, the verbs in these clauses do not have the special tense/aspect suffixes associated with plain passives; rather, the verb is suffixed by -n, and the tense/aspect suffixes are from a regular set used in other (non-passive) intransitive clauses.

The similarity that these clauses bear to plain passives is accounted for by the assumption that these clauses involve an advancement of a 2 to become the final 1, as in other passive clauses. To account for the occurrence of the suffix -n, the analysis proposed here involves a so-called retroherent advancement, in which an advancement occurs, but the nominal also maintains its "pre-advancement" relation; thus, the structure proposed for (36) is represented as follows:
This structure accounts for the final intransitivity of (36), it correctly predicts that te7 'tree' should determine final 1 agreement and that ch'a 'vine' should be flagged by k'al (following the 1-Chômeur flagging rule—cf. (4.21)), and it satisfies the condition proposed in the previous section for the occurrence of the suffix -n.

The 2 that advances to 1 in a reflexive passive need not be an initial 2, as indicated by the following examples:

(38) In nuju-tzi-n-∅ ti olom
    Is sell-DAT-MID-PFV CL pig

    k'al n-a Juan.
    by DEF-HON John

I was sold a pig by John.

(39) An chakam 0 chem-tzi-n-neek
    DEF child 3 die-DAT-MID-PRF

    k'al in taata7-tzik.
    by 3POSS parent-PL

The child has been orphaned (lit. The child has been died on by his parents.)

These examples involve an initial 3 which advances to 2, and a possessor which ascends to become a matrix clause 2 (cf. chapter 6).

As with other passives, the agent need not be overtly expressed, though an agent will always be understood:

(40) Chaab oox i tamub ti-u kotzi-n-∅.
    two three INDEF year CL-1p cut-MID-IMP

After two or three years, they are cut off.

(41) 0 wat'i-n-neek an pakab.
    3 squeeze-MID-PRF DEF sugar, cane

The sugar cane has been pressed.

A complete grammar of Huastec must include lexical diacritics for each verb which indicate whether or not it may occur in plain passive clauses and in reflexive
Some verbs, such as k'apu ‘eat’, may occur in reflexive passives only:

(42) a. U k'apu-n-al jey an kalaam.
    Ulp eat-MID-IMP also DEF pumpkin

Pumpkins are also eaten.

b. *U k'apu-aab jey an kalaam.
    Ulp eat-PASS.IMP also DEF pumpkin

(same gloss)

Other verbs of this type include t'ila ‘say, tell’, t'aja ‘do, make’, ach'a ‘hear’, and thutza ‘write’.

Some verbs, such as utzbi ‘accuse’, think'a ‘bewitch’, and china ‘hide’, may only occur in plain passives:

(43) U china-aab an olom k'al an
    U3 hide-PASS.IMP DEF pig by DEF

k'we7 abal ne7ech xa nuju-at
thief because go K3 sell-PASS.PFV

al bitzow.
in town

The pig is being hidden by the thief because it is going to be sold in town.

Finally, some verbs, such as ulu ‘say’, and kaxu ‘cut hair’, may occur in either plain or reflexive passives:

(44) a. Exom ti kaxu-n-al an inik abal
    be T3 cut.hair-MID-IMP DEF man because

0 nakthaa-ich in xi7-ii.
3 long-PRF 3POSS hair-POSS

The man is getting a haircut because his hair is long.
It is unclear to me at present what semantic or pragmatic distinction there is, if any, between pairs such as these.

5.3.3 Reflexive Unaccusatives

Perlmutter 1978 presented evidence that intransitive clauses in natural languages divide into two classes: those that take initial Is, known as unergative predicates, and those that take initial 2s, known as unaccusative predicates; a stratum which contains a 1 but no 2 is known as an unergative stratum, and one which contains a 2 but no 1 is known as an unaccusative stratum. In unaccusative structures, the Final 1 Law (which requires that every basic clause have a final 1—cf. Perlmutter and Postal 1983c) is generally satisfied by the advancement of the unaccusative 2 to 1; this type of advancement is known as unaccusative advancement.

In some basically intransitive clauses in Huastec, the suffix -n occurs on the verb:

(45) Exom ti paxk'u-n-al an ja7.
    be T3 boil-MID-IMP DEF water

The water is boiling.

(46) Exom tin ooli-n-al.
    be TIs go.bald-MID-IMP

I'm going bald.

Some of these verbs, such as ooli ‘go bald’, only occur in intransitive predications; other verbs of this sort include xich'a ‘bleed’, jilk'o 'remain', xalk'a 'appear', timk'o 'disappear' te7e 'laugh', uk'i 'cry', t'iku 'jump', and pit'k'o 'flee'.
Other verbs which are suffixed by -n in basically intransitive clauses, such as paxk'u 'boil', may occur in transitive predications; with such verbs, the single argument in the intransitive predication corresponds to the patient in the transitive predication. Thus, compare (45) with (47):

\[(47) \quad \text{In paxk'u-al an ja7.} \]
\[3/3 \quad \text{boi.-IMP DEF water} \]

He boils the water.

Verbs of this type include junku 'gather', xuk'u 'mingle, mix', k'ipcho 'lose' \((\text{intr. 'get lost'})\), wilk'a 'unravel', wichi 'decorate with flowers' \((\text{intr. 'blossom'})\), buxka 'seat' \((\text{intr. 'sit'})\), kwajla 'knock over' \((\text{intr. 'fall'})\), and, undoubtedly, many others.\(^2\)

The most immediate way to account for these facts involves verb valences. Following the claims of Perlmutter 1978, I propose that all basically intransitive clauses in Huastec in which the verb is suffixed by -n have unaccusative initial strata, and that the valence of all such verbs requires that they occur in initial strata containing a 2. The difference between verbs like paxk'u 'boil' and verbs like ooli 'go bald' is also a matter of valence: verbs like paxk'u may optionally occur in initial strata which also contain a 1, but verbs like ooli must not occur in initial strata which contain a 1. Thus, paxk'u would be lexically marked as \([\pm 1, +2]\) (requiring an initial 2 and optionally occurring with an initial 1), and ooli would be marked lexically as \([-1, +2]\) (requiring an initial 2 but not allowing an initial 1). Given that the clauses in question have unaccusative initial strata, the occurrence of the suffix -n may then be accounted for in precisely the same manner as was proposed for reflexive passives: a 2 advances to 1 retroherently resulting in a multiattachment which is resolved by cancellation. Thus, the structure of (46) would be represented as in (48), while the structures of (45) and (47) would be represented as in (49a) and (49b) respectively:
In sharp contrast to verbs like paxk'u, Huastec has no verbs which may be suffixed by -n in basically intransitive clauses and which may occur in a transitive predication such that the single argument in the intransitive predication corresponds to the agent in the transitive predication, i.e. verbs with the valence marking [+1, ±2] (requiring an initial 1 and optionally allowing an initial 2). Such a verb would be exemplified by the following English examples:

(50) a. He knitted.
   b. He knitted a sweater.

This absence is predicted under the proposal being presented since such verbs would occur in initially unergative strata and there would be no opportunity for unaccusative advancement.

The reflexive unaccusative analysis of clauses like (45) and (46) presented here has several points in its favour. First, it maintains a simple and general account of the occurrence of the suffix -n. Secondly, it allows for consistent statements of
verb valence; the only obvious alternative would require that if \textit{paxk’u} occurs in an intransitive initial stratum, then the single argument must be a 1, but that if it occurs in a transitive initial stratum, then the argument with the corresponding functional role must be a 2. Clearly, the proposal being presented permits greater generality and simplicity in the statement of verb valence. Finally, this proposal also accounts for the otherwise unexplained absence in Huastec of verbs with the valence \([+1, \pm 2]\) which may be suffixed by -n in basically intransitive clauses.

Not all basically intransitive clauses in Huastec involve reflexive unaccusative structures; in fact, not even all initially unaccusative clauses involve reflexive unaccusative structure. Verbs like \textit{kwe7} ‘steal’, \textit{ubaat} ‘play’, and \textit{puna} ‘ride’ have a valence of \([+1, \pm 2]\):

\begin{equation}
(51) \begin{aligned}
a. \quad & \text{In } \text{puna-al an bitzim.} \\
& 3/3 \text{ride-IMP DEF horse}
\end{aligned}
\end{equation}

He rides the horse.

b. \quad & \text{Upuneel.} \\
& U3 \text{ride.IMP}

He rides.

These occur in unergative (or transitive) initial strata and therefore clearly cannot occur in reflexive unaccusative structures. Of more direct interest are verbs like \textit{tz’utzi} ‘fill’, and \textit{lo7o} ‘save’ (\textit{intr.} ‘survive’) which have a valence of \([\pm 1, +2]\):

\begin{equation}
(52) \begin{aligned}
a. \quad & \text{In } \text{lo7o-al kwa7 in kithtal.} \\
& 3/3 \text{save-IMP QUOT 3POSS companion}
\end{aligned}
\end{equation}

He was saving his companions.

b. \quad & \text{When } \text{ti ok’o-n-Ø an peejee-x-talaab} \\
& \text{when } T3 \text{finish-MID-PFV DEF fight.RECI-AP-NOM}
\end{aligned}
\end{equation}

\[ \begin{array}{cccc}
\text{Ø jilk’o-n-Ø} & \text{chaab oox xi Ø} & \text{lo7ey.} \\
3 \text{remain-MID-PFV two three REL 3} & \text{save.PFV}
\end{array} \]

When the war was over, only a few remained who survived.
The obligatory argument with these verbs is the patient. Since it is assumed that the patient is the initial 2 in both the transitive and intransitive uses, the intransitive use must involve unaccusative initial strata; yet even so, these verbs are not suffixed with \(-n\). Huastec also has verbs, such as \(\text{bel} \) ‘walk’, \(\text{cheke} \) ‘become tired’, \(\text{pube} \) ‘grow’, \(\text{ch'aki} \) ‘rise’, \(\text{k'a7i} \) ‘become hungry’, \(\text{tuthe} \) ‘kneel’, and \(\text{wayne} \) ‘become dry’, which may not occur in transitive initial strata and have valences of \([+1, -2]\) or \([-1, +2]\), yet which never take the suffix \(-n\).22

Since some initially unaccusative structures involve retroherent unaccusative advancement while other initially unaccusative structures do not, a lexical diacritic, \([\pm \text{retro}]\), is required for every verb which may occur in unaccusative initial strata which indicates whether or not the verb may occur in structures involving retroherent unaccusative advancement. It is unknown to me at present whether or not Huastec has any verbs which may occur in both reflexive unaccusative structures and plain unaccusative structures.

5.3.4 Conditions on the Occurrence of \(-n\)

Assuming the validity of the unaccusative hypothesis of Perlmutter 1978 and of the proposed valences of verbs considered in the previous section, then clauses in which the verb is suffixed by \(-n\) either (i) have structures which involve the advancement of a 2 to 1, or (ii) are reflexive clauses involving coreference, which, in terms of the theoretical framework assumed here, is represented by multiattached 1 and 2 arcs in the initial stratum.

This raises two obvious questions: What feature(s), if any, do all of these clauses share in common which may provide a sufficient (and, perhaps, necessary) condition for the occurrence of \(-n\)? Why is it specifically these types of clause which share this morphosyntactic feature?
Interestingly, these very questions arise, with variation in language-specific details only, in numerous languages, such as Italian, Albanian, Russian, and others. Two proposals arising from research in AG, the multiattachment hypothesis and the unaccusative hypothesis, have played a significant role in providing answers to these questions which offer elegantly simple and general accounts of the data in question, in some cases capturing generalizations that had previously gone unnoticed, and which reveal significant cross-linguistic similarity. This similarity arises since, interestingly, the answers to the questions is consistent: all of the structures which share the particular (language-specific) morphosyntactic feature have some nominal which heads both a 1 arc and a 2 arc. This answer is embodied in the two rules of Huastec grammar proposed above:

(53) **Middle voice rule**
A verb is suffixed with -n iff there is a cancellation.

(54) **Cancellation rule**
A cancellation may only cancel a 2 arc which is multiattached to a 1 arc.

The condition that some nominal head both a 1 arc and a 2 arc may be satisfied in a general way by any nominal which heads a 1 arc and a 2 arc, without regard to syntactic levels, or in a more restricted way in which it is required, in addition, that the 1 arc and 2 arc both be in some stratum, i.e. that they are multiattached. It is clear that the more general condition is not sufficient for determining the occurrence of -n in Huastec since plain passives have a nominal which heads both a 1 arc and a 2 arc (the initial 2/final 1), yet the verb in such clauses is not suffixed by -n. Thus, multiattachment of a 1 arc and a 2 arc appears to be a necessary condition for the occurrence of -n. It alone is not a sufficient condition, however, since pronominal reflexives, as analyzed in §5.2, may have multiattached 1 arcs and 2 arcs, yet the verb in these clauses is never suffixed by -n. Thus, cancellation is a further necessary
condition for the occurrence of -n. By limiting cancellation to multiattaches of 1 arcs and 2 arcs only, it becomes both a necessary and sufficient condition.

Aside from the features assumed by the rules in (54) and (55), (ordinary) reflexives, reflexive passives and reflexive unaccusatives share little in common: reflexive passives and unaccusatives involve a revaluation, while reflexives do not; reflexives and reflexive passives have transitive initial strata while reflexive unaccusatives have intransitive initial strata. Furthermore, there is a fourth clause type, reflexive antipassives (discussed in chapter 7), in which the verb is suffixed by -n and which, I claim, satisfy the conditions required by the rules in (53) and (54) but which are otherwise distinct from these three clause types: like reflexives and reflexive passives, but unlike reflexive unaccusatives, reflexive antipassives are initially transitive; like reflexive passives and reflexive unaccusatives, and unlike reflexives, reflexive antipassives involve a revaluation; and like reflexives, but unlike reflexive passives and reflexive unaccusatives, the initial 1 in a reflexive antipassive is also the final 1.

The occurrence of -n cannot be attributed to semantics: this is ruled out at the lexical level since individual verbs may occur in both plain and reflexive passives or in both morphological and pronominal reflexive clauses; this is ruled out at the predication level since many verbs have lexical diacritics indicating that they must or must not occur in reflexive unaccusative structures, or that passive structures in which they occur must or must not be reflexive passives. Factors such as agentivity or control do not help: the arguments of reflexive unaccusative verbs like xich'a 'bleed' and ooli 'go bald' do not differ in agentivity or control from intransitive verbs like pube 'grow', that'e 'evaporate', waye 'become dry' which are not suffixed by -n. On the other hand, xich'a and ooli do differ in agentivity and control from verbs such as jilk'o 'remain' and t'iko 'jump', yet all occur in reflexive unaccusative structures.
These facts provide strong evidence in favour of the rules in (53) and (54) and the structures proposed here; there appears to be no other potential account of the occurrence of -n which has the same simplicity and generality. Furthermore, the similarity between this account and accounts of comparable data which recur with significant regularity cross-linguistically adds additional support to this analysis.

Notes

1 An alternate statement would be that no MA may occur in the surface level of representation. Any possible distinction between these two points of view is not relevant here.

2 As observed by Postal and Pullum (1978, note 10), the representation of coreference by means of multiattachment is neither unique nor original to AG.

3 One possible account would involve the introduction of a silent dummy nominal as a 2 "after" the introduction of the pronominal replacer. The dummy 2 would place the reflexive nominal en chômage with the resulting effect that this nominal would be flagged by ti, like other 2-chômeurs (cf. §6.1.2). As final 2, the dummy would determine third person final 2 agreement on the verb. I know of no independent evidence for the occurrence of a silent dummy nominal in such clauses, however.

Ti also occurs with relations nouns used in possessed noun phrases to express a locative relation; cf. §2.3.3.

4 There is an alternate analysis, equivalent to this one with regard to the surface facts, in which the initial 3 advances to 2 and then is replaced by the reflexive nominal. I know of no empirical evidence from Huastec to distinguish these two analyses; the alternate is systematically ruled out in APG, however, by a proposed universal: the Coreferential Arc Law (Johnson and Postal 1980:487). The choice
between these two analyses would have bearing on the formulation of the rule describing the occurrence of the reflexive nominal, the Reflexive Camouflage rule (given in (22)). (See note 10.) It also has minimal consequences on the exact formulation of a rule relevant to ditransitive clauses (the IOA rule, given in (6.22)).

As is the case with ditransitive clauses (see note 4), there is an alternate analysis to the structure proposed in (16b) in which the initial Ben advances to 2 and then is replaced by the reflexive nominal. Again, there is no clear evidence in Huastec to distinguish the two analyses, but the alternate is systematically ruled out in APG by the Coreferential Arc Law (Johnson and Postal 1980:487). Of course, this choice will also have bearing on the formulation of the Reflexive Camouflage rule (given in (22)). (See note 10.)

Readers familiar with the RG literature will observe that the analysis proposed in (16b) violates the Oblique Law (cf. Perlmutter and Postal 1983c:99-100) whereas the alternate suggested here does not. In APG, however, the Oblique Law is considered to be too strong a constraint, for reasons independent of analyses such as these, and is replace by the No Oblique Successor Law (cf. Johnson and Postal 1980:249) which permits structures such as that in (16b) while upholding the original intent of the Oblique Law: prohibiting demotions to obliques.

For formal definitions of replace and cosponsor, see Aissen 1987:29 or Johnson and Postal 1980:110. For a formal definition of seconds, see Aissen 1987:29 or Johnson and Postal 1980:458.

Furthermore, there is nothing in the theory that requires that the cosponsors overlap, as also suggested by the structure in (17). However, we are interested here in cases of coreference, and therefore only in cases where the cosponsors do overlap (per the assumption made at the end of §5.1).

Certain other features of the structure in (17) are not required by the definition of replace, but are required by proposed universal constraints, namely the
Replacer Erase Law (Johnson and Postal 1980:112), and the Replacer Coordinate Law (Johnson and Postal 1980:165).

8 For a formal definition of coreferential arc, see Johnson and Postal 1980:484. The conditions cited in the text are not those required by the definition; however, that they are sufficient can be demonstrated by theorem.

9 This differs from the definition of camouflage arc provided by Aissen 1987:83. These are effectively equivalent, however: camouflage arcs represent a specific variant of the more general notion closure arc (discussed below in the text); the definition given here makes use of this fact.

10 As mentioned in notes 4 and 5, there is an alternate analysis of pronominal reflexives with a multiattached 3 or Ben arc in which advancement precedes replacement. However, such an analysis demands the rejection of an assumption within APG, embodied in the Coreferential Arc Law (Johnson and Postal 1980:487): that a coreferential arc may only replace an initial arc. This, in turn, entails that another conjunct must be added to the rule in (22) which requires that the R-predecessor of the arc which is replaced by the coreferential arc must be an initial arc.

11 Aspects of structure related to the occurrence of the "middle voice" suffix, -n (glossed ‘MID’) are suppressed; this has no bearing, however, on the features of this example which are relevant to the point at hand.

The structure in (26b) corresponds to the coreferential reading of the clause in (26a). The non-coreferential reading would have the same structure with the exception that the initial 1 and Loc arcs would not overlap.

12 For a formal definition of closure, see Johnson and Postal 1980:611; see also Aissen 1987:68-72. The similarity between closures and structures associated with camouflage arcs follows from the definitions since camouflage arc is a special case of the more general notion closure arc.
There is another clause type, reflexive antipassives, which also involves this verbal morphology. These will be discussed in chapter 7.

The term *middle* is used due to the similarity between the morphosyntax of this morpheme in Huastec and so-called *middle voice* and *medio-passives* in other languages, such as Albanian, Spanish, Welsh, Turkish, Russian, Classical Greek, Icelandic, etc.

The term *cancellation* is due to Carol Rosen.

Certain proposals within APG rule out cancellation as a possible means of resolving MAs. In line with this, Postal 1982 presents an analysis of comparable clauses in French in which MA is resolved by replacement. However, this alone would make these clauses finally transitive. To account for final intransitivity in the French cases, Postal's analysis also involves a demotion to 3 of the replacement 2 arc. Such a proposal, in particular, would not work in Huastec since Huastec has no final 3s (cf. §6.1.3). Furthermore, Rosen 1981 considers a replacement analysis for comparable clauses in Italian and provides evidence that a cancellation analysis is comparable. Clearly, there are issues at stake here which are beyond the scope of this thesis. Thus, I simply assume a cancellation analysis.

If these examples do involve replacement rather than cancellation (see note 16), then this rule may not be required since, under the analyses proposed in §5.2, only multiattached 2 arcs could be replaced.

The facts that follow are taken from Walker n.d.

The *unaccusative hypothesis* appears to have originated with Paul Postal, though the terms *unergative* and *unaccusative* are due to Geoffrey Pullum (cf. Pullum 1988).

Dayley 1983 refers to intransitive predications of such stems as *medio-passives*. However, in terms of the definition of *passive* assumed here (as discussed in chapter 4), I claim that such clauses are not passives of any sort.
A biclausal analysis of transitive clauses with verbs like *paxk'u* which posits an abstract, phonologically null, causative verb as the predicate of the matrix clause would be able to maintain consistent, simple statements of verb valence. However, there is no evidence for such a predicate, nor for biclausality. Furthermore, such an analysis involves a structure that is substantially more complex. For these reasons, such an analysis is rejected.

I presently know of no tests to determine which of these verbs are unaccusative and which are unergative.
Huastec verbs may, on occasion, have the suffix -tzi, glossed as ‘DAT’ (dative); I will refer to verb forms that have this suffix as being in the dative voice. I claim that the occurrence of this suffix is syntactically conditioned, and that these conditions are met by three distinct syntactic constructions: indirect object advancement, benefactive advancement, and possessor ascension. These are discussed separately in §§6.1-3; the rules determining the occurrence of -tzi are discussed in §6.4.

6.1 Indirect Object Advancement

6.1.1 Ditransitive Clauses

Some predications in Huastec involve a nominal which is a notional recipient or addressee. In AG, such nominals are systematically treated as initial 3s (indirect objects); this assumption is consistent with the facts in Huastec.

Some verbs require that there be an initial 3 in the clauses in which they occur; this is the case with the verb ok' ‘teach':

(1) a. U ok'-tzi-al an ti matemaatikas
    Is/3 teach-DAT-IMP DEF CL mathematics
    an chakam-tzik.
    DEF child-PL

I teach the children mathematics.
b. Tu ok'-tzi-0 an ti kwento.
   3/Ip teach-DAT-PFV DEF CL story
   He taught us the story.

c. Tu ok'-tzi-0.
   3/Ip teach-DAT-PFV
   He taught us.

For other verbs, the presence of an initial 3 is optional:

(2) a. U nuju-0 an olom.
   Is/3 sell-PFV DEF pig
   I sold the pig.

   b. Tu nuju-tzi-0 an ti olom.
   1/2s sell-DAT-PFV DEF CL pig.
   I sold you the pig.

In these examples, we find certain facts recurring: when there is an argument which is a recipient or addressee, the suffix -tzi occurs on the verb; the verb agrees with the agent and also with this argument; if a patient nominal is also expressed, it is flagged by the proclitic ti, and is not involved in verb agreement. This is always the case: whenever there is a recipient or addressee, these facts apply; no alternate paraphrase exists (in the sense in which the English sentences I gave the book to him and I gave him the book represent alternating paraphrases).

The distribution of the proclitic ti is slightly more complicated than is suggested by these examples. A definite nominal is (typically) preceded by the proclitic an:

(3) N-a Juan in nuju-0 an paakax.
   DEF-HON John 3/3 sell-PFV DEF cow
   John sold the cow.

An indefinite nominal may occur with only the proclitic i:
(4) N-a Juan in nuju-∅ i paakax.
DEF-HON John 3/3 sell-PFV INDEF cow

John sold a cow / cows.

An indefinite nominal may also be preceded by a numeral, such as juun ‘one’, chaab ‘two’, or oox ‘three’, followed by the indefinite proclitic i:

(5) N-a Juan in nuju-∅ juun i paakax.
DEF-HON John 3/3 sell-PFV one INDEF cow

John sold a cow.

Generally, a nominal must follow one of these strategies; in particular, the following are not acceptable:

(6) a. *N-a Juan in nuju-∅ juun paakax.
DEF-HON John 3/3 sell-PFV one cow

John sold a/one cow.

b. *N-a Juan in nuju-∅ paakax.
DEF-HON John 3/3 sell-PFV cow

John sold a/one/the cow.

In clauses with dative voice, the flagging of a patient depends upon which of these three constructions is involved. A definite patient nominal is flagged with ti:

(7) a. N-a Juan in nuju-tzi-∅
DEF-HON John 3/3 sell-DAT-PFV

an ti paakax.
DEF CL cow

John sold him the cow.

b. *N-a Juan in nuju-tzi-∅ an paakax.
(same gloss)

The patient is also flagged if it is in the simple indefinite form with only the indefinite proclitic i:
(8) a. N-a Juan in nuju-tzi-∅
DEF-HON John 3/3 sell-DAT-PFV

t-i paakax.
CL-INDEF cow

John sold him a cow / cows.

b. *N-a Juan ir nuju-tzi-∅ i paakax.
(same gloss)

c. *N-a Juan in nuju-tzi-∅ paakax.
(same gloss)

However, the patient is not flagged if it is preceded by a numeral:

(9) a. N-a Juan in nuju-tzi-∅
DEF-HON John 3/3 sell-DAT-PFV

juur. i paakax.
one INDEF cow

John sold a cow.

b. *N-a Juan in nuju-tzi-∅ juun ti paakax.
(same gloss)

c. *N-a Juan in nuju-tzi-∅ ti juun i paakax.
(same gloss)

(10) a. N-a Juan in nuju-tzi-∅
DEF-HON John 3/3 sell-DAT-PFV

chaab i paakax.
two INDEF cow

John sold two cows.

b. *N-a Juan in nuju-tzi-∅ chaab ti paakax.
(same gloss)

6.1.2 Analysis of Ditransitives

Consider again (2b), repeated as (11a); the structure I posit for this is given in (11b):
(11) a. Tu nuju-tzi-0
   l/2s sell-DAT-PFV DEF CL pig.

   I sold you the pig.

b. 

The structure in (11b) serves as a model for all clauses that have recipient/addressee arguments, which involve indirect object advancement (IOA) to 2.

Several pieces of evidence are available for the final relations in (11b). First, the final stratum is transitive; thus, the predicate agreement rule, given in (4.19), interacts with this analysis predicting that the verb will have a transitive agreement proclitic, as is the case. Second, the initial 1 is also the final 1; the predicate agreement rule thus predicts that this nominal should determine final 1 agreement. This is indeed the case: the initial 1, 'I', determines first person final 1 agreement on the verb.

The same rule correctly predicts that the initial 2, olom, should not control the verb agreement since is not a final nuclear term; rather, it is the initial 3/final 2, 'you', which determines agreement, as also predicted.

The nuclear term no-flagging rule, given in (4.20), interacts with this analysis predicting that the initial 3/final 2 should not be flagged; this is the case, as seen in (1c), repeated here:
I teach the children mathematics.

This, of course, is valid as evidence only if final 3s are distinct from final nuclear terms with respect to flagging. This matter will be discussed further in the next section; for the moment, I wish only to point out that this analysis is consistent with the nuclear term no-flagging rule.

This rule also provides evidence that the initial 1 is a final 1. It correctly predicts that the final 1 should not be flagged, as seen in (13):

(13) N-a Juan ti nuju-tzi-Ø
    DEF-HON John 3/2s sell-DAT-PFV
    an ti olom.
    DEF CL pig

John sold you the pig.

The more important point to be made from this rule is that it provides evidence that the initial 2 is not a final 2: if we suppose that the initial 2 is also a final 2, then the rule predicts that the initial 2 should not be flagged; however, we see that it must be flagged (except, of course, when it is in the indefinite construction with a numeral such as juun ‘one’).

This raises the issue of what the final relation is of the initial 2. As with the initial 1 in passives, the claim made here is that the overrun nominal is a final chômeur. There are three obvious alternatives to this: (i) that the initial 2 is also a final 2 (as well as the initial 3), or (ii) that the initial 2 demotes to 3 or (iii) to some oblique relation. Each of these alternatives is problematic, however.

An analysis in which the patient and the recipient are both final 2s would violate a proposed universal — the Stratal Uniqueness Law (cf. §3.1 and the refer-
ences cited there). As well, it would require ad hoc statements which specify that in IOA clauses the recipient nominal determines final 2 agreement, and not the patient nominal, and that the final 2/patient nominal is flagged by ti.

As discussed in the following section, all 3s in Huastec must advance to 2; as a result, demotion of the 2 to 3 is not a viable solution (a 2 would retreat to 3 and subsequently advance to 2, causing a 2 to retreat to 3 and subsequently advance to 2, ad infinitum).

As mentioned in the discussion of passives, an analysis involving demotion to oblique is systematically ruled out in AG by the Oblique Law. This analysis creates more problems than it solves (see the discussion in §4.2); for this reason, it is not considered as a viable option. Rather than flagging the nominal to indicate some oblique relation, it appears that the proclitic ti serves a purely syntactic function in these instances. Thus, I propose that here it flags 2-chômeurs. A rule accounting for the facts is given informally as follows:

(14) 2-Chômeur flagging rule
A nominal that heads a 2 arc and a Chô arc is flagged by ti, unless it is preceded by a numeral and the indefinite proclitic i.

Further considerations about 2-chômeurs will be addressed at the end of this section.

Other evidence for the final relations proposed for IOA clauses is seen in the interaction of IOA with passive, as discussed in §4.2. The IOA analysis predicts that an initial 3, having advanced to 2, should be available for advancement to 1 by passivization. In Huastec, it is generally true that IOA clauses have corresponding passives. Thus, compare (13), above, with the corresponding passive:

(15) a. It *nuju-tzi-at* an ti olom 2s sell-DAT-PASS.PFV DEF CL pig
    k'ál n-a Juan.
    by DEF-HON John

You were sold the pig by John.
Note that, in (15), it is the initial 3 that determines final 1 agreement on the verb. Thus, it is the initial 3, and not the initial 2, that advances to 1 by passivization. What is significant here is that these facts are accounted for in the proposed analysis by independent generalizations without any further stipulation. Furthermore, as was noted in §4.2, an alternative analysis of (15) in which the initial 3 advances directly to 1 would fail to account for the final intransitivity (evidenced by the use of an intransitive agreement proclitic) and for the flagging of the initial 2 with ti. This provides further evidence that, in IOA clauses such as (11) above, the initial 3 is a final 2.

Note also in (15) that the initial 1 is finally a 1-chômeur as the result of passive; this provides further evidence that, in IOA clauses like (11), the initial 1 is a final 1.

With regard to the initial relations proposed in this analysis of IOA clauses, there is no clear syntactic evidence to offer from Huastec. The same general comments that were made with regard to initial relations in §4.2 also apply here. Thus, it is assumed that statements of verb valence specify for each verb which relations are permissible in the initial stratum and which are obligatory, and that for a given verb a consistent mapping applies between grammatical relations and semantic roles. So, in an initial stratum with a verb like nuju 'sell', the agent nominal always is a 1 and the patient, a 2, whether or not there is a third argument for the recipient; whenever there is a recipient, it is an initial 3.
The only obvious counter-proposal against the initial relations assumed here would be one which involves only one level of structure and in which the recipient nominal is an initial/final 2. However, such an analysis would require more complicated statements of verb valence and an inconsistent mapping between roles and relations. Furthermore, it presents no clearly motivated way of dealing with the patient nominal. Treating the patient as an (initial) chômeur violates a proposed universal—the Motivated Chômage Law (cf. §3.1 and the references cited there; further problems with this proposal are discussed below in this section). Treating the patient as an (initial) oblique presents problems which have been mentioned above: there is no obvious choice of which oblique relation to choose, and there is no apparent association between the semantics of these nominals and obliques flagged by ti; indeed, nominals flagged by ti involve the semantics of a patient only in situations such as this where an AG analysis would treat them as initial 2s which have been placed en chômeage. Treating the patient nominal as an (initial) 2, as well as the recipient nominal, would violate the Stratal Uniqueness Law and would require ad hoc statements which specify that the recipient nominal determines (final) 2 agreement, and not the patient nominal, and that the patient nominal is flagged by ti. The only real option that remains is to treat the patient as, in effect, not having any relation at all; however, this still requires an ad hoc statement specifying that the patient is flagged by ti. Such a statement may not seem at this point to be any more ad hoc than the proposed 2-chômeur flagging rule; however, as is yet to be shown, Huastec has several constructions in which a patient nominal is flagged by ti: IOA, benefactive advancement (cf. §6.2), possessor ascension (cf. §6.3), antipassive (cf. §§7.1-2) and instrumental advancement (cf. §§7.3-4). For all of these situations, the 2-chômeur flagging rule provides a sufficient generalization. The ad hoc statement being considered here as an alternative would have to specify each of these different situations in which the patient is to be flagged by ti, thus losing generality. There-
fore, I conclude that the initial relations are precisely those assumed in the proposed analysis.

On the basis of the evidence that has been presented here, I conclude that the correct analysis of IOA involves an advancement of 3 to 2, as represented in (11).

At present, I do not know what restrictions, if any, apply to the nominal en chômeage. In Tzotzil, for example, the nominal en chômeage (in passive clauses as well as in IOA clauses) must be third person (Aissen 1987:116-7). It was shown in chapter 4 that passive chômeurs are not restricted to third person. If such a restriction does apply to IOA clauses in Huastec, the following rule would be required:

(16) **2-Chômeur head rule**
A nominal that heads a 2-chômeur arc must be third person.

A rule in Huastec like that in (16) would entail that different types of chômeurs are to be distinguished in Huastec. Comparison of passives and IOA clauses in Huastec reveals one definite way in which (overt) chômeurs are distinguished from one another: passive chômeurs are flagged by k'al, while IOA chômeurs are flagged by ti (given the other conditions discussed above). This distinction is accounted for in a general way within the proposed analyses of passive and IOA since the nominals that head chômeur arcs also head a nuclear term arc. In contrast, it cannot be accounted for in any general way in monostratal analyses of either of these clause types which treat these nominals as initial chômeurs or as having no initial relation at all:

(17) a. passive:

![Diagram of passive structure]

b. IOA:

![Diagram of IOA structure]
These analyses provide no syntactic basis to distinguish between these nominals, and functional/semantic criteria would require disjunctive rules, referring to agent, experiencer, cognizer, etc. on the one hand, and patient, stimulus, etc. on the other. This provides further evidence for multistratal analyses of both of these groups of clauses.

6.1.3 Conditions on IOA

As alluded to in §6.1.1, IOA in Huastec is obligatory: all 3s must advance to 2; there are no final or surface 3s. In this respect, Huastec is like Tzotzil (Aissen 1987) as well as other languages, such as Sierra Popoluca (Marlett 1986) and Ojibwa (Rhodes 1976). Notice that this restriction is not conditioned by pragmatic factors or by discourse context; it is purely a syntactic constraint upon the grammar of Huastec.

The nuclear term no-flagging rule, repeated here for convenience, makes reference to final nuclear terms:

(18) **Nuclear term no-flagging rule**
Final nuclear terms are not flagged.

Since there are no final 3s in Huastec, this rule could be stated more generally to apply to all terms:

(19) **Final term no-flagging rule**
Final terms are not flagged.

The revised rule is vacuously true with regard to 3s since there are no final 3s. Within an optimal grammar, the simpler, more general rule would be preferable.

Aissen (1987) observes that, in Tzotzil, only transitive verbs may be predicted with an initial 3; no initially intransitive clause has an initial 3. She proposes a single rule for the grammar of Tzotzil to capture this fact and the fact that 3s obligatorily advance to 2: (roughly) a 3 must advance to 2 and place some other 2 en chômage. In Huastec, however, it appears that initial 3s may occur in initially intransitive as well as initially transitive clauses:
(20) a. Jajaa7 u kaw-∅ jelat max a Dios.
3 U3 speak-IMP like if HON God

He speaks as if he were God.

b. Exom ti kaw-tzi-al.
be 3/2 speak-DAT-IMP

He is cursing you.

Note, however, that if the clause is initially transitive, the 2 must go en chōmage. This rules out so-called "tertiary passive" structures such as the following:4

(21)

Thus, Huastec has the following rule, which is only slightly different than the corresponding rule for Tzotzil:5

(22) IOA rule
A 3 must advance to 2; if it overruns another 2, that 2 must go en chōmage.

6.1.4 Subcategorization of Verbs With Respect to Initial 3s

The discussion so far has suggested that in every case of IOA the suffix -tzi occurs on the verb. However, certain verbs are not suffixed with -tzi:

(23) N-a Juan in pitha-∅
DEF-HON John 3/3 give-PFV

an ti paakax n-a Mariia.
DEF CL cow DEF-HON Mary

John gave Mary the cow.
It can be seen that these do involve IOA by the facts about agreement and flagging: in (23), for example, the verb agrees with the initial 3 and not the initial 2; also, the initial 2 is flagged by ti. To account for these facts, a lexical diacritic must be provided for each verb that may occur with an initial 3 indicating whether or not the suffix -tzi is used when the verb occurs in an IOA clause.

Like kono ‘ask, request’ are other verbs of speaking which are not suffixed by -tzi; these include took’o ‘answer’ and utza ‘say, tell’. These verbs are similar to others that do take the suffix tzi in IOA clauses, such as nuju ‘sell’, in that the presence of an initial 3 is optional. That kono need not occur with an initial 3 is demonstrated in the following example:

(26) Ch’a-laju chaab kwa7 i tamub in ko7ol
    just-ten two QUOT INDEF year 3/3 have.IMP
    tam ti kono-y-at.
    when T3 ask-?-PASS.PFV

She was just twelve years old when she was asked for.

The structure of the adverbial clause tam ti kono-y-at is given in y(27):
Note that a structure with an (unspecified) initial 3 is ruled out:

In such an analysis, the initial 3 must advance and the initial 2 must be placed en chômage; but, it is the initial 2, and not the initial 3, which advances to 1 by passive. This structure violates a proposed universal, the Chômeur Advancement Ban (discussed in §3.1; see also Perlmutter and Postal 1983c:117). Also, the final stratum in this analysis is transitive; (26), however, is finally intransitive, as evidenced by the use of an intransitive agreement proclitic. Even a "tertiary" passive analysis, in which a 3 advances to 2 but the initial 2 advances to 1 rather than going en chômage, fails to account for these facts:

In such an analysis, the initial 3 must advance and the initial 2 must be placed en chômage; but, it is the initial 2, and not the initial 3, which advances to 1 by passive. This structure violates a proposed universal, the Chômeur Advancement Ban (discussed in §3.1; see also Perlmutter and Postal 1983c:117). Also, the final stratum in this analysis is transitive; (26), however, is finally intransitive, as evidenced by the use of an intransitive agreement proclitic. Even a "tertiary" passive analysis, in which a 3 advances to 2 but the initial 2 advances to 1 rather than going en chômage, fails to account for these facts:
The structure in (29) also fails to account for the final intransitivity of ti kono-y-at. Neither of the structures in (28) and (29), nor any other structure in which there is an initial 3 and also an initial 2 which becomes a final 1 (by passive or any other means), is well-formed in Huastec.

Huastec also has verbs for which an initial 3 appears to be obligatory. Among these are pitha ‘give’, ch’ejwa ‘give away’, and ok ‘teach’. As seen in (23) and (24) above, pitha does not take the suffix -tzi; this is also true of the verb ch’ejwa:

\[(30) \quad Tu \ ch’ejwa-li-y-\dot{\text{0}} \ an \ ti \ olom.\]
\[
1/2s \ give.away-?-?-PFV \ DEF \ CL \ pig
\]

I gave you the pig.

As seen in (23), pitha may occur in clauses in which the initial 2 and the initial 3 are both overtly specified by a full noun phrase. In (24) and in (30), pitha and ch’ejwa occur in clauses in which there is no overt nominal representation of an initial 3; however, there is an initial 3 present whose referent is specified, as evidenced by the agreement proclitic. To this extent, these verbs are similar to verbs such as kono ‘ask’. However, pitha and ch’ejwa have their own peculiarity: it appears that the initial stratum can have a specified initial 2 only if an initial 3 is specified. If the speaker wishes to form a clause with these verbs that makes reference to a specific patient but not to a specific recipient, a different form of the verb must be used:

\[(31) \quad N-a \ Juan \ in \ pitha-na-\dot{\text{0}} \ an \ olom.\]
\[
DEF-HON \ John \ 3/3 \ give-INST-PFV \ DEF \ pig
\]

John gave the pig.

\[(32) \quad N-a \ Juan \ in \ ch’ejwa-x-na-\dot{\text{0}} \ an \ olom.\]
\[
DEF-HON \ John \ 3/3 \ give.away-AP-INST-PFV \ DEF \ pig
\]

John gave away the pig.
The verb morphology in such cases is identical to that in certain clauses involving advancement of instruments to 2 (discussed in §§7.3-4).

This restriction also applies to at least one verb which does take the dative suffix: ok', ‘teach’. This root always occurs with the dative suffix; therefore, it appears that this verb must always occur with an initial 3, whether the referent is specified or not. As with pitha and ch'ejwa, if the initial 3 is specified, ok' is inflected in the expected way, as seen in (33) (= (1)):

\[
\begin{align*}
(33) \ a. \ & U \ ok'-tzi-al \ an \ ti \ matemaatikas \\
& \text{Is/3 teach-DAT-IMP DEF CL mathematics} \\
& \text{an chakam-tzik.} \\
& \text{DEF child-PL}
\end{align*}
\]

I teach the children mathematics.

b. Tu ok'-tzi-∅ an ti k'tento.
\[
\begin{align*}
& \text{3/IP teach-DAT-PFV DEF CL story} \\
& \text{He taught us the story.}
\end{align*}
\]

c. Tu ok'-tzi-∅.
\[
\begin{align*}
& \text{3/IP teach-DAT-PFV} \\
& \text{He taught us.}
\end{align*}
\]

In all three examples, the initial 3 is specified. In (33c), it is not clear whether there is an initial 2 which is unspecified or whether there is no initial 2 at all. These two possibilities are represented by the two structures in (34):

\[
\begin{align*}
(34) \ a. \ & \text{3sg UN} \ \text{1pl} \\
& \text{ok'-tzi-∅} \ \text{teach-DAT-PFV} \\
\end{align*}
\]

\[
\begin{align*}
(34) \ b. \ & \text{3sg UN} \ \text{1pl} \\
& \text{ok'-tzi-∅} \ \text{teach-DAT-PFV} \\
\end{align*}
\]
If the initial 3 is unspecified and there is a specified patient, the clause is ungrammatical:

((35) a. *U ok'-tzi-∅
    1s/3 teach-DAT-PFV t-in CL-3POSS kaw thaktzaam.

    I taught Aztec.

b. *

To express this meaning requires a clause that has the characteristics of certain clauses involving instrument advancement to 2:

((36) In ok'-tzi-x-na-al an matemaatikas.
    3/3 teach-DAT-AP-INST-IMP DEF mathematics

    He teaches math.

Notice that, if neither the patient nor the recipient/addressee are specified, this different form of the clause is not used:

((37) Jajaa7 u ok'-tzi-x-∅.
    3 U3 teach-DAT-AP-IMP

    He teaches.

In this example, there is no specified recipient or addressee. However, the dative suffix indicates that the structure of this clause must include an initial 3. Therefore, the following structure, involving antipassive (discussed in chapter 7) is proposed for (37):
We see that the verb ok' differs from pitha and ch'ejwa with respect to inflec­
tion of the suffix -tz:i, but that these verbs are similar in that the occurrence of an ini­
tial 3 is obligatory, and in that the form of the verb associated with instrument
advancement is used whenever the initial 3 is unspecified but a patient nominal is
specified. Thus, it appears that the latter condition may apply to all verbs for which
an initial 3 is obligatory. This suggests the statement of a generalization: for all
verbs which obligatorily take an initial 3, if the initial 3 is unspecified, then an initial 2
must also be unspecified (or, equivalently, if there is a specified initial 2, then the ini­
tial 3 is also specified).

This generalization is consistent with the facts. Observe, however, that the
usual IOA analysis applied to the clause in (36) does not account for the facts:

(39)

The structure in (39) fails to account for the morphology on the verb associated with
instrument advancement (-x-na ‘-AP-INST’), and it fails to account for fact that the
initial 2 is not flagged as a 2-chômeur.
The problem remains, however, of how to account for such clauses. Given that they do bear superficial similarity to clauses involving instrument advancement, one possible analysis of these clauses would be to propose that the "patient" nominal is an initial instrument which advances to 2; thus, (36) would have the following structure:

(40)

In particular, three facts should be noted about (36): (i) it appears to have an initial 3 which advances to 2, since the verb has the dative suffix; (ii) it is finally transitive, as indicated by the transitive agreement proclitic; (iii) the "patient" is flagged like a final 2, and not like a chômeur. The analysis in (40) accounts for these facts. Or, the other hand, it has an obvious lack of appeal since it proposes that the argument structure for the verbs in question requires that a semantic patient be an initial 2 under certain conditions but an initial instrument under others. Furthermore, oblique grammatical relations are generally considered to be associated with basically constant semantic roles. Yet, I know of no other solution which maintains the same generality.

In summary, we see that verbs which may be predicated with an initial 3 are subcategorized along two independent parameters: (i) whether or not an initial 3 is obligatory, and (ii) whether or not they can be suffixed with -tzi. Thus, there are four types of verbs in Huastec that allow initial 3s: (a) verbs for which initial 3s are optional and which are suffixed by -tzi, such as nuju 'sell', buk'u 'spread, distribute',
jot'i 'serve food', and others (this is the largest subcategory); (b) verbs for which initial 3s are optional and which are not suffixed by -tzi, such as kono 'ask, request', took'o 'answer', and utza 'say, tell'; (c) verbs for which initial 3s are mandatory and which are suffixed by -tzi, such as ok' 'teach' (this is the only verb of this type that I know of); and (d) verbs for which initial 3s are mandatory and which are not suffixed by -tzi, such as pitha 'give' and ch'ejwa 'give away'. Verbs for which initial 3s are mandatory (types (c) and (d)) require that the initial 2 be specified whenever the initial 3 is specified.

6.2 Benefactive Advancement

Clauses in Huastec may freely include an optional benefactive referent, expressed as a nominal which is flagged by the preposition abal:

\[(41) \quad N-a \quad Juan \quad in \quad niju-\emptyset \quad an \quad olom-tzik \]
\[\quad abal \quad n-a \quad Danieel. \]
\[\text{John sold the pigs for Daniel.}\]

\[(42) \quad U \quad ela-\emptyset \quad an \quad bitzim \quad abal \quad tataa7. \]
\[\text{I found the horse for you.}\]

Such nominals are treated in AG as involving the oblique grammatical relation benefactive and are represented as the heads of arcs with the R-sign Ben, as demonstrated in (43), which corresponds to the clause in (42):\(^8\)

\[(43) \]

\[\text{ela-\emptyset} \quad \text{find-PFV} \quad 1sg \quad 2sg \quad an \quad bitzim \quad \text{DEF horse}\]
Huastec also allows benefactives to be expressed in clauses in which, as in IOA clauses, the verb is suffixed by the dative suffix -tzi:

(44)  Tu  ela-tzi-∅  an  ti  bitzim.
       1/2s find-DAT-PFV  DEF  CL  horse

I found you the horse.

I claim (tentatively—cf. §6.4) that such clauses involve the advancement of an (initial) benefactive to 2; thus, the structure proposed for (44) is given in (45):

(45)

Several pieces of evidence are available for the analysis proposed in (45). The arguments presented above in favour of the initial relations in the proposed analysis of IOA clauses apply equally here. Several arguments for the final relations in (45) follow.

The predicate agreement rule interacts with this analysis correctly predicting that the verb will have a transitive agreement proclitic, that the initial 1 will determine final 1 agreement, and that the initial benefactive will determine final 2 agreement, but that the initial 2 will not; this provides evidence for each of the final relations and for the final transitivity. The final term no-flagging rule interacts with this analysis correctly predicting that the initial 1 and the initial benefactive should not be flagged; this provides further evidence for these final relations. The 2-chômeur flagging rule interacts with this analysis correctly predicting that the initial 2 should be flagged by ti; this provides further evidence that the initial 2 is a final chômeur.
This analysis interacts with the proposed analysis of passives predicting that an initial benefactive, having advanced to 2, should be available for advancement to 1 by passive. This prediction is borne out by the fact that benefactive advancement (BA) clauses in Huastec generally have a corresponding passive, as demonstrated by the following passive clause which corresponds to the (transitive) BA clause in (44):

(46) a. \[\text{It ela-tzi-at an ti bitzim.} \]
\[2s \text{find-DAT-PASS.PFV DEF CL horse} \]

The horse was found for you. (lit. You were found the horse.)

b. 

\[
\begin{array}{c}
\text{ela-tzi-at} \\
\text{find-DAT-PASS.PFV} \\
\text{UN 2sg an ti bitzim} \\
\text{DEF CL horse}
\end{array}
\]

The relevant facts about the clause in (46a) are all accounted for under the proposed analysis by independent generalizations without further stipulation. In contrast, an analysis of (46a) in which the initial benefactive advances directly to 1 would fail to account for the final intransitivity (evidenced by the use of an intransitive agreement proclitic) and for the flagging of the initial 2 with ti. This provides further evidence that BA clauses involve the advancement of a benefactive to 2 and, more specifically, that in (44) the initial benefactive is a final 2, as proposed by the analysis in (45).

On the basis of the evidence presented here, I conclude that the correct analysis of BA clauses involves the advancement of a benefactive to 2, as represented in (45).
6.3 Possessor Ascension

Huastec has a third distinct construction in which verbs are suffixed by -tzi: possessor ascension (PA) clauses involve a nominal which demonstrates syntactic characteristics of a clause dependent but which bears no thematic relation within its clause; rather, it is (semantically) the possessor of some nominal within the clause. Such a PA clause is exemplified by (47b), which corresponds to (47a):\(^9\)

(47) a. U ela-∅ n-a bitziim-al.
   1s/3 find-PFV DEF-2sPOSS horse-POSS
   I found your horse.

   b. Tu ela-tzi-∅ an ti bitzim.
   1/2s find-DAT-PFV DEF CL horse
   (same gloss)

The analysis proposed for PA clauses involves ascension (or raising): the nominal has no relation in the clause in the initial stratum but rather is a dependent of some other element which bears some relation to the clause (in this case, a nominal which is a 2), and the nominal bears some relation to the clause beginning with some non-initial stratum. Specifically, the analysis proposed here (tentatively—cf. §6.4) is exemplified in (48) which represents the structure of (47b):

(48)
Several pieces of evidence are available for the proposed analysis. In AG, the
initial stratum is considered to be that level of structure which most closely reflects
the semantic relationships between linguistic elements; on this basis, I assume that
the second person singular nominal in (47b) does not have any initial relation in the
clause but that it bears the Gen relation within a possessed noun phrase which is
headed by bitzim ‘horse’. This assumption also permits simplicity and generality to
be maintained in statements of verb subcategorization. As for the other initial rela­tions, comments that have been made in previous sections apply analogously here.
Thus, I consider the initial relations proposed here to be correct. Several arguments
for the final relations follow.

The predicate agreement rule interacts with the proposed analysis correctly
predicting that the verb will have a transitive agreement proclitic, that the initial 1
will determine final 1 agreement, and that the possessor nominal will determine final 2 agreement, but that the initial 2 will not; this provides evidence for each of the final relations and for the final transitivity. The final term no-flagging rule interacts with
this analysis correctly predicting that the initial 1 and the possessor should not be
flagged; this provides further evidence for these final relations. The 2-chômeur flag­
ging rule interacts with this analysis correctly predicting that the initial 2 should be
flagged by tì; this provides further evidence that the initial 2 is a final chômeur.

This analysis interacts with the proposed analysis of passives predicting that
the possessor, having ascended to 2, should be available for advancement to 1 by
passive. This prediction is borne out by the fact that PA clauses in Huastec generally
have a corresponding passive, as demonstrated by the following passive clause which
corresponds to the (transitive) PA clause in (47b):

(49) a. It ela-tzi-at an ti bitzim.
    2s find-DAT-PASS.PFV DEF CL horse

Your horse was found.
Crucially, it is the possessor nominal that determines final 1 agreement on the verb; thus, it is the possessor (ascended to 2), and not the initial 2, that advances. The relevant facts about the clause in (49a) are all accounted for under the proposed analysis by independent generalizations without further stipulation. In contrast, an analysis of (49a) in which the possessor ascends directly to 1 would fail to account for the final intransitivity (evidenced by the use of an intransitive agreement proclitic) and for the flagging of the initial 2 with ti. Furthermore, it would propose a structure which is otherwise unattested cross-linguistically. This provides further evidence that PA clauses involve ascension of a possessor to 2 and, more specifically, that in (47b) the possessor nominal is a final 2, as proposed by the analysis in (47).

On the basis of the evidence presented here, I conclude that the correct analysis of PA clauses involves ascension of a possessor to 2, as represented in (48).

The PA structures presented thus far have resolved the multiattachment of the possessor nominal by erasure of the embedded Gen arc; this reflects the fact that, in the PA clauses considered above, there is no superficial realization of the genitive relation within the possessed noun phrase. However, Huastec employs a second strategy for PA clauses in which this Genitive relation is realized; this corresponds (roughly) to a structure in which the Gen arc is not erased. This strategy is
demonstrated by the clause in (50a), with the corresponding structure partially represented in (50b):

(50) a. Tu ela-tzi-Ø t-a bitziim-al.
    1/2s find-DAT-PFV CL-2sPOSS horse-POSS

    I found your horse.

b.

It is assumed in AG that all cases of multiattachment must be resolved by some means; thus, in (50b) some strategy must be used to resolve the multiattachment of the 2 and Gen arcs headed by the second person singular nominal. Within APG, only one option is available: the Successor Erase Law (Johnson and Postal 1980:113) requires either that the 2 arc erase the Gen arc or that the Gen arc have a replacer. Thus, I assume that the structure of (50a) is more completely represented by (51):
It remains to be stated what restrictions there may be on PA in Huastec. In Huastec PA may occur in clauses containing initial 3s (cf. §6.4); in this respect, Huastec is unlike Tzotzil but similar to Sierra Popoluca (cf. Marlett 1986). Huastec is like Sierra Popoluca, and also Tzotzil, in another way: the possessor in a PA clause may not be coreferential with the initial 1:

(52) *U nuju-tzi-0 t-u-baa7
1s/3 sell-DAT-PFV CL-1sPOSS-self

t-u bitziim-al.
CL-1sPOSS horse-POSS

I sold my horse.12

One other question in this regard is what restriction, if any, there is on possible hosts of PA: for example, in Tzotzil, a possessor must ascend out of a host which is a (transitive) 2 (Aissen 1987); I have not yet determined whether this restriction is also valid in Huastec, although it is true of all the examples I have encountered.

6.4 Conditions for Dative Voice

We have seen that a single morpheme, -tzi 'DAT', is associated with three distinct constructions: indirect object advancement, benefactive advancement, and
possessor ascension. A grammar of Huastec will require some statement indicating necessary and sufficient conditions that describe the occurrence of this morpheme.

The most direct way to formulate such a rule involves simply listing the three constructions in which the morpheme occurs:

(53) Dative voice rule (version 1a)
If a verb in a clause is suffixed by -tzi, then there is some nominal N in the clause which is a 2 and which is also either (i) an initial 3, (ii) an initial Ben, or (iii) an initial Gen.

This formulation provides only a necessary condition for the occurrence of -tzi. A complete, necessary and sufficient condition must be sensitive to the lexical diacritic indicating whether or not a particular verb takes the dative morpheme, as discussed for IOA clauses in §6.1.4. For convenience, I will refer to verbs which do accept the dative suffix as +DM (dative-marked). Thus, the rule is extended as follows:

(54) Dative voice rule (version 1b)
A verb in a clause is suffixed by -tzi iff the verb is +DM and there is some nominal N in the clause which is a 2 and which is also either (i) an initial 3, (ii) an initial Ben, or (iii) an initial Gen.

At this point, we must consider a potential complication: the need for a dative-marking diacritic was discussed only with respect to IOA, and the condition in (54) assumes that all and only those verbs which are suffixed by -tzi in IOA clauses are suffixed by -tzi in BA and PA clauses. I have not thus far established this as fact. If there prove to be some verbs which are not suffixed by -tzi in IOA clauses but which are suffixed by -tzi in either BA or PA clauses, then the rule will have to distinguish which of the three constructions is involved. This situation occurs in Sierra Popoluca (cf. Marlett 1986): initial 3s and BENs (as well as certain other initially oblique nominals) must advance to 2; the suffix -a7y occurs on the verb in all these cases except with the verbs 'give' and 'sell'. However, -a7y also occurs on the verb in all clauses involving possessor ascension, regardless of the verb. It is entirely possible that an analogous situation also occurs in Huastec. Indeed, the situation could be even more complex if there is some set of verbs which are suffixed by -tzi in IOA
clauses but not in either BA or PA clauses; in this case, multiple diacritics would be required, and the dative voice rule would have to be sensitive to each diacritic as well as distinguishing between the three constructions. Clearly, a thorough investigation of Huastec verbs with respect to the use of the suffix -tzi in each of IOA, BA, and PA clauses is required before an exact formulation of the dative voice rule can be determined. For the moment, I continue with the assumption in (54): that the occurrence of -tzi is sensitive to the verb stem involved but not to the syntax.

The statement in (54) accurately describes the data (within the limitations just considered), yet it completely fails to capture any insightful generalization. A simpler and more general formulation could appeal to the fact that, in IOA, BA and PA clauses, there is some nominal which is a 2 but which is not an initial 2. There is a complicating factor, however, in that Huastec also has antipassive and instrumental advancement constructions (discussed in the following chapter) in which, I claim, there is a nominal which is a non-initial 2; yet these constructions do not involve the use of the suffix -tzi. Thus, this alternative to the rule in (54) is in fact neither simpler nor more general:

(55) **Dative voice rule (version 2)**

A verb in a clause is suffixed by -tzi iff the verb is +DM and there is some nominal N in the clause which is a 2 but not an initial 2 and which is not an initial Inst or 1.

This statement could be formulated in a slightly more general fashion given cross-linguistic evidence that subjects and instruments represent a natural class; without such evidence, however, this formulation and the formulation in (54) are equally viable.

There are alternate analyses of BA and PA clauses which are consistent with the arguments presented in §§6.2-3 and which also permit more general formulations of the dative voice rule. In these analyses, an extra, intermediate level of structure is added in which the nominal under consideration is a 3; as with initial 3s, these
3s obligatorily advance to 2. Thus, indirect object advancement would always co-occur with benefactive advancement or possessor ascension. These analyses of BA and PA are presented in (56a) and (57a) with the originally proposed analyses given in (56b) and (57b) for comparison. (The means of resolving multiattachments is not important to the present discussion and is therefore ignored.)

For convenience and clarity, I will refer to these proposals of benefactive advancement and possessor ascension as B3A and P3A respectively, and to the original proposals as B2A and P2A.

Assuming the correctness of the analyses in (56a) and (57a), the dative voice rule may be formulated as follows:

(58) **Dative voice rule (version 3)**
A verb in a clause is suffixed by -tzi iff the verb is +DM and there is some nominal N in the clause which is a 3.

The B3A and P3A analyses are consistent with the arguments presented in support of B2A and P2A; to this extent, the competing analyses are equally viable. Both possible analyses of PA are attested cross-linguistically; it is noteworthy, how-
ever, that Aissen 1987 argues in favour of P3A for the related language Tzotzil. B3A and P3A have in their favour that they permit the formulation of the dative voice rule in (58), which is far simpler than the formulation in (54) and which does link the facts to a significant generalization. On the other hand, the structures are themselves slightly more complex than those originally proposed.

There is one other interesting possibility which combines some of the options already considered: the analysis used for benefactive advancement is B2A, but possessor ascension involves P3A. In this proposal, the dative voice rule would be formulated as follows:

\[(59) \text{Dative voice rule (version 4)}\]

A verb in a clause is suffixed by -tzi iff the verb is +DM and there is some nominal N in the clause which is a 2 and which is also a 3 or Ben.

This formulation would have added support given cross-linguistic evidence that 3s and BENs represent a natural class. Without such evidence, this formulation still represents a simplification of the formulation in (54) and suggests a generalization at work in possessor ascension clauses with only a slightly more complex structure proposed.\(^{13}\)

In evaluating these alternative proposals, we see that version 4 of the dative voice rule is simpler and more general than version 1, and that version 3 is even more simple and general; this increased simplicity and generality is achieved, however, by adding to the complexity of the syntactic structures involved. Nonetheless, the degree of simplicity and generality afforded by the proposal which incorporates B3A and P3A and version 3 of the dative voice rule appears to provide a significant argument in favour of that proposal. Evaluating these three proposals is not merely a matter of simplicity and generality, however; there are empirical issues involved as well. In the remainder of this section, I consider two types of data which provide further means of evaluation.
The first type of data relates to the question raised above as to whether the dative voice rule is more sensitive to the syntactic structure than has been assumed as well as to a lexical diacritic associated with the verb stem. As mentioned previously, I have not yet encountered the relevant data. However, it is important to note here that the degree of simplicity and generality achieved in versions 4 and 3 was due in part to the assumption that verbs which are suffixed by -tzi in IOA clauses are also suffixed by -tzi in BA and PA clauses. If it proves to be the case in Huastec that some verbs are not suffixed by -tzi in IOA or BA clauses but that all verbs are suffixed by -tzi in PA clauses, comparable to the situation in Sierra Popoluca, then some of the generality is lost: even if possessor ascension involves P3A, the dative voice rule will have to distinguish structures with initial 3s from possessor ascensions. In this case, the generality and simplicity which version 4 achieves over version 1 disappears, and a proposal involving B2A (and either P2A or P3A) would require the following rule:

(60) **Dative voice rule (version 5)**
A verb in a clause is suffixed by -tzi iff there is some nominal N in the clause which is a 2 and (i) N is also a Gen or (ii) N is also a 3 or Ben and the verb is +DM.

A proposal involving B3A and P3A still provides added simplicity and generality, however:

(61) **Dative voice rule (version 6)**
A verb in a clause is suffixed by -tzi iff there is some nominal N in the clause which is a 3 and (i) N is also a Gen or (ii) the verb is +DM.

Clearly, if there are added complications to the facts about the occurrence of -tzi other than the sort that apply to Sierra Popoluca (e.g. if multiple diacritics are necessary), then different changes to versions 1, 4, and 3 of the dative voice rule would be required. In any such case, the variation in simplicity and generality of the various formulations of the rule will be reduced; a proposal involving B3A and P3A will still allow a slightly simpler and/or more general rule, however. Once again, a thorough
investigation of verbs with respect to the use of the suffix -tzi in each of IOA, BA, and PA clauses is required to permit an exact formulation of the dative voice rule.

The second type of data relates to the viability of a P2A analysis for Huastez. The fact that IOA, BA, and PA independently provide necessary conditions for the occurrence of -tzi has two interesting consequences, one of which provides evidence against a P2A analysis and in favour of a P3A analysis. I will introduce the other consequence first, however, to provide a more complete discussion of the facts, and because it is a factor in the data associated with the second consequence.

First, the fact that IOA, BA, and PA each provide appropriate conditions for the occurrence of -tzi predicts that a clause in which the verb is suffixed by -tzi is, potentially, structurally ambiguous and can have readings which involve either IOA, BA, or PA (depending upon the subcategorization of the verb). This is borne out by the following examples:

(62) Ne7ech tu cha7bi-tzi-0 t-a taata7.
    go 1/2s visit-DAT-PFV CL-2sPOSS father
    I'm going to visit your father. or I'm going to visit your father.

(63) Tu nuju-tzi-0 an ti bitzim.
    1/2s sell-DAT-PFV DEF CL horse
    I sold you the horse. or I sold the horse for you. or I sold your horse.

The two readings in (62) correspond to structures which involve BA and PA respectively. In (63), the verb allows there to be an initial 3; therefore, IOA is a third possible structure, as indicated by the first reading. It should be noted that, for a given verb, there may be a preferred reading. Thus, the first reading for (63) will usually be chosen when the sentence is considered in isolation. The other readings are also possible, however, provided the sentence is used in an appropriate context.
Secondly, that -tzi is independently associated with IOA, BA, and PA has the consequence of predicting that, if any two of these three constructions independently co-occur within a single clause, then -tzi should be suffixed on the verb twice. This is indeed the case:

(64) Tu nuju-tzi-tzi-∅ t-a bitziim-al.
1/2s sell-DAT-DAT-PFV CL-2sPOSS horse-POSS

I sold your horse for you/for him. or
I sold you/him your horse.

Each of the readings in (64) has a different structure. Due to the facts just described in the previous paragraph, this sentence allows two pairs of readings: the first (‘I sold your horse for you/for him’), corresponding to structures which involve BA and PA; and the second (‘I sold you/him your horse’), corresponding to structures which involve IOA and PA. At present, it is unclear to me how productively the three constructions may be combined. I have not encountered in my data examples which combine IOA and BA or which combine all three. As well, it must be determined whether or not any verbs prohibit any such combinations.

The structures I propose for the various readings in (64) are represented in the following stratal diagrams. Those in (65a,b) correspond to the first pair of readings; those in (66a,b), to the second pair.
(65) a.  

nuju-tzi-tzi-0  
sell-DAT-DAT-PFV  

T-a  
biziim-al  
(CL-2sPOSS horse-POSS)  

b.  

nuju-tzi-tzi-0  
sell-DAT-DAT-PFV  

T-a  
biziim-al  
(CL-2sPOSS horse-POSS)
These structures involve P3A rather than P2A. In the discussion that follows, I present arguments favouring an analysis involving P3A over one which involves P2A. The arguments would be equally valid were it assumed that BA involves B2A rather than B3A; in that case, the structures in (65) would more closely resemble those in (66). Also, the structure in (66a) differs from that in (66b) most notably in the need for a pronoun replacer (associated with the rightmost arc in (66)). Thus, the discussion will focus on the structure in (66b) as representative of all the structures involved.
In this discussion, certain facts about (64) play a critical role: in each of the readings, the final 2 is second person singular, as indicated by the verb agreement. Because of this, we see that, in the first pair of readings, the initial Ben is not involved in verb agreement since it is underspecified by the surface form; likewise, in the second pair of readings the initial 3 is not involved in verb agreement. Rather, in each case it is the possessor nominal which determines final 2 agreement on the verb.

The discussion will also take into consideration four principles of universal grammar: the Chômeur Condition (cf. §3.1 and note 6 of chapter 3, and Perlmutter and Postal 1983a), a putative universal which is no longer considered tenable within AG; the Stratal Uniqueness Law (cf. §3.1 and Perlmutter and Postal 1983c); the Host Limitation Law (HLL—cf. Perlmutter and Postal 1983b and Perlmutter 1983), a proposed universal which requires that an ascension host, the nominal out of which ascension takes place, must be a term; and the Relational Succession Law (cf. Perlmutter and Postal 1983b and Perlmutter 1983), which requires that a raised nominal assumes the relation of its host. The Relational Succession Law (RSL) requires further comment here: many languages allow possessor ascensions in which the host is a 2 but the possessor ascends to 3, in violation of the RSL. This has been proposed for Albanian (Hubbard 1980) and Choctaw (Davies 1986) as well as for Tzotzil (Aissen 1987) and, in this thesis, for Huastec. Davies also presents examples in Choctaw in which the ascension host is a 1 and the possessor ascends to 3. Overall, however, the only attested cases of possessor ascension which do not conform to the RSL involve a possessor ascending to 3 out of a host which is a 1 or a 2.

We turn now to consider the structures associated with the various readings in (64). To account for the agreement fact, mentioned above, an analysis involving P2A must have the initial 3 (or Ben) advance to 2 before PA takes place (using derivational terminology for ease of discussion): if PA precedes advancement to 2,
then the initial 3 would advance to become the final 2, and the possessor would become a 2-chômeur, predicting that the initial 3, and not the possessor, would determine final 2 agreement:

(67) *

The Stratal Uniqueness Law also prohibits the simultaneous occurrence of P2A and an advancement to 2:

(68) *

The structure in (68) has the additional fault that it still fails to predict that the possessor should determine final 2 agreement but that the initial 3 should not; an extra, ad hoc rule would be required to deal with this. Thus, an analysis involving P2A would have to posit the following structure:
This is the same structure which is proposed in Marlett 1986 for clauses in Sierra Popoluca which parallel the ones under consideration in Huastec (thus, these arguments apply equally to that language).

Two facts must be noted about the structure in (69). First, while the RSL has been shown to be too strict for possessor ascensions, this structure represents a novel violation of the RSL which is otherwise unattested: ascension to 2 out of a host which is a chômeur. Secondly, while the ascension host is an initial 2, it is placed en chômage before the ascension occurs. Strictly speaking, the HLL, as described above, does not make any reference to any particular level at which the host must be a term; thus, this structure does not violate the law as it has been given. However, the interpretation of this law which is assumed within the literature has consistently been a strict one in which the host is a term in the stratum immediately before the ascension. Indeed, a loose interpretation was not possible in the initial conception of the HLL, due to the derivational approach to syntactic structures that was still maintained during the early period in the development of AG. The fact that this reading can be taken from its apparently informal statement is in fact an accident of history; a more currently published statement of the HLL, adopting the formal devices which have been introduced into the theory since its inception, would surely not permit this
Furthermore, ascension out of a host which is a chevauteur is otherwise unattested cross-linguistically. Thus, from a theory-internal and cross-linguistic perspective, the structure in (69), required by an analysis involving P2A, is undesirable, given the availability of an alternate proposal which conforms to universal principles and is attested in other languages.

In contrast to the proposal just considered, a treatment of possessor ascension in Huastec which involves P3A permits the structure in (66b) which does not represent a novel violation of the RSL, which does not require a loose interpretation of the HLL, and which does not propose a type of possessor ascension which is otherwise unattested cross-linguistically. One may contest that the structure in (66b) violates the Chômeur Condition, while that in (69) does not; however, this is of little significance since the Chômeur Condition has been found to be too strong to be maintained as a universal law. On this basis, the structure in (66b) is to be preferred over the structure in (69), and a P3A analysis of possessor ascension in Huastec is to be preferred over a P2A analysis. (In turn, a P3A analysis of possessor ascensions in Sierra Popoluca, as proposed in Elson and Marlett 1983, is preferable to one involving P2A.16)

Clauses like (64), and comparable ones in Sierra Popoluca, also provide evidence against a rather different though interesting analysis of "possessor ascensions" proposed by Rosen (1987). Her analysis was designed specifically with PA clauses in which the possessor "ascends" to 3 in mind, such as is found in Huastec, Sierra Popoluca, and Tzotzil; indeed, her presentation is based on data from Tzotzil. Her proposal does not involve ascension, however; rather, she adopts an analysis for these clauses akin to the structures proposed in Davies and Rosen 1988 for clause unions. Thus, for the PA clause in (70a), the structure in (70b) is proposed:
Space does not permit a full explanation of this analysis here; the main point to note is that the first stratum corresponds to the internal structure of the possessed nominal in the traditional analysis with the possessor heading a 1 arc in that stratum (rather than a Gen arc), and that the following stratum basically corresponds to the initial structure of the clause in the traditional analysis.

This analysis nicely avoids the violation of the RSL entailed by the ascension analysis since it is a union and not an ascension. It also concisely accounts for several other details about PA clauses in Tzotzil, some of which remained anomalous under an ascension analysis. However, it is also dependent upon one fact which is true of Tzotzil but not of Huastec or Sierra Popoluca: in Tzotzil, a PA clause may not have an initial 3. The clause in (64) is precisely of this sort. Under Rosen’s proposal, the 1, 2, and 3 relations in the second stratum are determined by the valence of the verb; thus, the possessor may not persist as a term in the second stratum without a violation of stratal uniqueness:
As a result, while it provides a nice account of PA clauses in Tzotzil, this proposal fails entirely for Huastec and Sierra Popoluca.

In light of the preceding discussion, I conclude that the correct analysis of PA clauses involves ascension to 3. Given the increase in simplicity and generality afforded to the dative voice rule by a B3A analysis of BA clauses, I conclude that benefactives advance to 3, and not directly to 2. The formulation of the dative voice rule which I propose is that in version 3 in (58) above, repeated below for convenience, or some variation thereof (as may be required if this rule must be more sensitive to the syntactic structure in accordance with factors discussed earlier in this section).

(72) Dative voice rule (version 3)
A verb in a clause is suffixed by -tzi iff the verb is +DM and there is some nominal N in the clause which is a 3.

Notes

1 This root is derived from the noun root meaning 'skull'.

2 As in chapter 4, agent is used to refer to various roles which include agent as well as experiencer, cognizer, force, etc. Also, patient is used to refer to various roles which include patient as well as stimulus, etc.

3 Dryer (1986) proposes a novel extension of RG within which he presents an analysis of IOA clauses which is a variation of the monostratal analysis just consid-
er. His analysis is intended specifically for languages in which IOA is obligatory, such as Huastec, Tzotzil, or Sierra Popoluca. His proposal offers interesting possibilities. However, it is inadequate for clauses found in both Huastec (cf. §6.4) and Sierra Popoluca (cf. Marlett 1986) which involve, by traditional RG analyses, both IOA and benefactive advancement or possessor ascension. A detailed explanation of this problem is beyond the scope of this thesis.

4Postal (1986) proposes such structures for English. However, the Nuclear Novice Law, proposed by Bickford (1987), rules out several structures including these.

5This rule may require minor modifications, depending upon the correct analysis of reflexive ditransitive clauses (cf. §5.2 and note 4 of chapter 5).

6In (25), the initial 2 is the clausal complement; yet it is not flagged by ti. In general, clausal complements will not be flagged by ti; the rule in (14) must eventually be modified, then, to account for this.

7This analysis is only tentative; cf. §§7.3-4.

8More correctly, prepositional phrases are assumed in APG to involve (marquee) closures (cf. §5.2). In these structures, the initial oblique heads a marquee arc in the final stratum and is part of an embedded linguistic element, the prepositional phrase, which heads the final oblique arc. (See (5.27) for an illustrative example; for further discussion, see Johnson and Postal 1980:611, Postal 1986:16, or Aissen 1987:68-72.)

9The clause in (47b) is the same as that in (44), which was presented as an example of BA, though the free translation is different, reflecting the PA analysis proposed. This could suggest that the analysis of (47b) is the same as that for (44), even though the free translations allow for some variation; this would be the case in an ethical dative analysis, as discussed by Tuggy (1980). However, I maintain that the structures of (44) and (47b) are distinct. Evidence is presented by Aissen (1987) for
the related language Tzotzil, and by Marlett (1986) for Sierra Popoluca, that clauses in those languages which are analogous to Huastec clauses such as (47b) do involve PA and that an ethical dative analysis of those clauses is impossible. While it remains to be determined, I am confident that similar arguments can be reproduced for Huastec.

The fact that a single clause in which the verb is suffixed by -tzi can allow more than one reading is discussed in §6.4.

10 For a formal definition of the notion replace, see Johnson and Postal 1980:110.

11 The (initial) Gen arc is, in fact, erased; however, the arc that erases it is the replacer Gen arc rather than the overlapping 2 arc (as in (48)).

12 This clause is acceptable, though with a different meaning which requires a structure with an initial 3 that is coreferential to the initial 1, and IOA: ‘I sold my horse to myself’.

13 Indeed, this is most reminiscent of the analyses adopted by Aissen (1987) for IOA, BA and PA clauses in Tzotzil, which are, in many respects, quite similar to the corresponding clauses in Huastec. In her analysis, Aissen achieves greater generality by treating those nominals in BA clauses (using my terminology, but not Aissen’s) which are semantic benefactees as initial 3s. This approach deviates from mainstream views about oblique relations within AG. However, it does achieve optimal generality with respect to the dative voice rule for Tzotzil. It is also supported by the fact that, in Tzotzil, a BA clause (again, using terminology) may not have a nominal which is a semantic recipient or addressee as well which is a semantic benefactee; at this point, I have not yet established whether or not the same is true in Huastec.

14 The fact that IOA and BA clauses in Sierra Popoluca are identical with respect to whether or not a given verb takes the dative suffix could be used to argue
in favour of an analysis of BA clauses in that language like that proposed in Aissen 1987 for Tzotzil (see note 13) in which the nominal which is a semantic benefactee is an initial 3, provided that Sierra Popoluca prohibits such clauses from also having a nominal which is a semantic recipient or addressee; the same would apply to Huastec if the facts about the occurrence of dative suffix resemble those in Sierra Popoluca. The adoption of this analysis for Sierra Popoluca would require the equivalent of version 6 of the dative voice rule.

15 This would certainly be true in a version of the law codified within APG. In fact, Johnson and Postal give an APG version of the HLL (1980:706), though in a modified form which does not apply to cases of possessor ascension. They restrict the HLL in this way to allow for apparent cases of possessor ascension in which the host is not a term. However, they clearly would not permit the host to be a chômeur; the structure in (69) is prohibited as consequence of the Immigrant Term Arc Local Sponsor Law (1980:709).

16 In their treatment of clauses in Sierra Popoluca analogous to the Huastec clause in (64), Elson and Marlett do assume that possessors ascend to 3; yet, they still propose a structure like that in (69) which violates the RSL in a novel way and requires a loose interpretation of the HLL, though while conforming to the Chômeur Condition:
(i) (cp. Elson and Marlett's (43))

'Give the giant's hone to her brother.'

However, an analysis comparable to that in (66b) is entirely adequate for these cases in Sierra Popoluca. In (i), this is achieved by eliminating the second stratum:

(ii)
Research within Mayan linguistics has frequently employed the label \textit{antipassive} in reference to certain types of clause found in many Mayan languages. Antipassives have been a focus of debate among Mayanists; in particular, some have claimed (e.g. Dayley 1983:82) that Huastec does not have an antipassive of any kind. However, Huastec does have a class of clauses which which I claim are indeed antipassives; these are the general topic of this chapter.

There has been much debate surrounding the analysis of antipassives in the literature to date; certainly, there is some amount of superficial variation to be found among so-called antipassive clauses cross-linguistically. As with passives, the question is raised as to whether there is any notion of \textit{antipassive} which has cross-linguistic validity. Postal (1977) has argued for a universal characterization of antipassive clauses expressed in syntactic terms. He classifies as antipassive any clause which involves the sub-structure represented in (1):

(1) a. 

\begin{center}
\begin{tikzpicture}
\node (c) at (0,0) {$c_{k+1...l}$};
\node (s) at (-1,1) {$c_{l...k}$};
\draw (c) to (s);
\end{tikzpicture}
\end{center}

This retreat from 1 to 2 will, in all cases, result in an unaccusative stratum; therefore, in keeping with the Final i law (cf. §5.3.3, Perlmutter and Postal 1983c), an antipas-
sive structure must also involve a subsequent advancement to 1, usually, unac-
cusative advancement. In general, antipassive clauses are thought to involve the
following sub-structure:

\[(2) \quad a. \quad \text{Diagram} \quad b. \quad \text{Diagram}\]

Additional evidence for this characterization has been provided from Choctaw by
Davies (1984, 1986); in particular, Choctaw provides evidence against an alternate
analysis which involves spontaneous demotion of an initial 2:

\[(3) \quad \text{Diagram}\]

In this chapter, I will describe so-called antipassive clauses in Huastec and
will present evidence that these clauses conform to the universal characterization
proposed by Postal. I will also describe clauses in Huastec which involve
"instrumental voice" marking on the verb, which appear, in certain cases, to interact
with antipassive.

7.1 Antipassive Clauses in Huastec

Before considering the formal analysis of antipassive clauses in Huastec, I will
present the basic facts; the formal analysis is discussed in the following section.

Huastec has a class of clauses which involve transitive verbs yet which are
superficially intransitive; thus, compare the following pairs of examples:
(4) a. Exom u tzuku-y-al i thak xeket-laab. 
be 1s/3 sew-?-IMP INDEF white garment-NPOSS

I am sewing a white dress.

b. In tzuku-x-∅.
Ul1s sew-AP-IMP

I sew (things).

(5) a. Jajaa7 in bilk’a-al an koko.
3 3/3 drop-IMP DEF coconut

He drops the coconuts.

b. Jajaa7 u bilk’a-x-∅.
3 Ul3 drop-AP-IMP

He drops things.

Clauses such as those in (4b) and (5b) will be referred to as antipassive clauses.

Three things are to be noted about the pairs in (4) and (5): the subjects in the (b) examples correspond to the subjects in the (a) examples; the (b) examples are superficially intransitive, as evidenced by the use of intransitive agreement proclitics; and the patient in the (b) examples is unspecified. The patient in antipassive clauses may be specified; if it is, however, it is flagged by ti (unless it is preceded by a numeral and the indefinite proclitic i; see the discussion in §6.1.1):

(6) In tzuku-x-∅ ti xeket-laab.
Is sew-AP-IMP CL garment-NPOSS

I sew clothes.

(7) Jajaa7 u bilk’a-x-∅ ti koko.
3 Ul3 drop-AP-IMP CL coconut.

He drops coconuts.

The antipassive clauses in (4)-(7) all involve the verbal suffix -x; other suffixes are also associated with antipassives in Huastec.1
(8) a. U pak'u-al an k'uthk'um.
1s/3 launder-IMP DEF clothing
I wash the clothes.

b. In pak'u-m-Ø.
U1s launder-AP-IMP
I wash clothes.

(9) a. In uch'a-al an 3/3 drink-IMP DEF liquor.
He drinks liquor.

b. U uch'a-l-Ø.
U3 drink-AP-IMP
He drinks (liquor). / He's drunk.

It is unclear to me at present what differences in use there are between the three antipassive suffixes -x, -m, and -l, or whether the various suffixes are interchangeable for any given verb. It is possible for a verb to be suffixed by the dative suffix -tzi as well as an antipassive suffix, but this appears to be limited to the suffix -x in particular:

(10) a. In pak'u-tzi-al n-in kwitool-il.
3/3 launder-DAT-IMP DEF-3POSS son-POSS
She washes clothes for her son.

b. Jajaa7 u pak'u-tzi-x-Ø.
3 U3 launder-DAT-AP-IMP
She washes clothes for people.

7.2 Analysis of Huastec Antipassive Clauses

The claim being made here is that antipassive clauses in Huastec conform to the universal characterization of antipassives proposed by Postal (1977); thus, the proposed analysis of (4b), repeated here as (11a), is represented in (11b):
(11) a. In tzuku-x-∅.
   *Uls* **sew-AP-IMP**
   I sew (things).

b.

Clauses such as that in (6), repeated below, in which the patient is expressed overtly, have essentially the same structure as those in which the patient is unspecified:

(12) a. In tzuku-x-∅ **ti** xeket-laab.
   *Uls* **sew-AP-IMP CL garment-NPOSS**
   I sew clothes.

b.

There are several pieces of evidence in support of the proposed analysis. In presenting the evidence, I will make reference to the structure in (12b) as representative of antipassive clauses in general.

As done in previous chapters, I assume the initial relations in (12b) to be correct in order to maintain simpler and more general statements of verb valence and
semantic roles. In general, verbs that may occur in antipassive clauses have a valence of \([+1, +2]\).\(^2\)

Consider, now, the final stratum of (12b). As there is a 1 but no 2 in this stratum, this structure interacts with the predicate agreement rule, given in (4.19), predicting correctly that an intransitive agreement clitic should be used. As well, this structure in conjunction with the predicate agreement rule predicts correctly that the verb should agree with the initial/final 1. Also, since the initial 2 is not a final 2, it is predicted that the verb should not agree with the initial 2; this prediction, too, is borne out.

Further evidence for the final relations is provided by interaction between the structure in (12b) and the final term no-flagging rule, given in (6.19), and the 2-chômeur flagging rule, given in (6.14). Since the initial 1 is also the final 1, it is correctly predicted that this nominal should not be flagged. In contrast, the initial 2 is not a final 2 but rather a final chômeur; hence, as predicted, the initial 2 is flagged by the clitic ti.

Davies 1984 presents data from Choctaw which provides evidence for the "middle" stratum in antipassive clauses in that language; this in turn provides some evidence in favour of the proposed universal characterization of antipassives. Yet, there has been little evidence from other languages for the "middle" stratum in antipassive clauses. Huastec, however, provides novel evidence for this stratum, based on a particular class of clauses which I will refer to as reflexive antipassives.

In chapter 5, it was shown that the occurrence of the middle voice suffix -n is directly linked to the multiattachment of a 1 arc and a 2 arc. The relevant rules are repeated here:

\[
(13) \quad \textbf{Middle voice rule}
\]

A verb is suffixed with -n iff there is a cancellation.
(14) **Cancellation rule**

A cancellation may only cancel a 2 arc which is multiattached to a 1 arc.

The multiattachment of the 1 and 2 arcs can arise in two ways: the structure may have multiattached arcs in the initial stratum, indicating coreference, or the multiattachment may arise due to a retroherent 2 to 1 advancement. The latter structure was posited for reflexive passives and reflexive unaccusatives.

If the proposed universal characterization of antipassive is correct, then these too involve a 2 to 1 advancement. Thus, it would be expected that some language should allow antipassive structures in which the 2 to 1 advancement is retroherent; this appears to be the case in Huastec.

Certain transitive verbs in Huastec may occur in clauses which resemble antipassive clauses in many ways, yet in which the verb is not suffixed by an antipassive suffix but rather by the middle voice suffix -\(n\); thus, consider the following sentences, involving the transitive root \(\text{wa7u} \) 'fan, blow air on':

(15) Jajaa7 in wa7u-y-al an inik.
    3 3/3 blow?-IMP DEF man

He fans the man.

(16) In wa7u-th k'al an ik'.
    Is blow-PASS.PRF by DEF wind

I have been blown by the wind.

(17) 0 wa7u-n-neek an ik'.
    3 blow-MID-PRF DEF wind

The wind has blown.
Consider also the following examples involving the roots thaja ‘yell’, and t’aja ‘do, make’:.

(19) Jajaa7 0 thaja-n-0.  
He yelled.

(20) Jajaa7 u t’ojjo-n-al.  
He works.

Three things are to be noted about the clauses in (17)-(20): the subjects correspond to the subjects that would be found in the corresponding transitive clauses; they are all finally intransitive, as indicated by the use of intransitive agreement proclitics; and the patients in each case are unspecified. These are precisely those features noted about the antipassive clauses in (4b) and (5b) above; thus, it seems reasonable to expect that the clauses in (17)-(20) are structurally similar to the clauses in (4b) and (5b), and to classify them together with the clauses in (4b) and (5b) as antipassive.

I claim that the structure of reflexive antipassive clauses, such as those in (17)-(20), includes the basic structure proposed for plain antipassives; thus, the structure proposed for the clause in (20) includes the following sub-structure:
The arguments presented above for the initial and final relations in (12b) are equally valid for the structure in (21).

The key issue with clauses such as (20) is to provide some account for the occurrence of the middle voice suffix -n. As mentioned above, the independently motivated middle voice and cancellation rules restrict the clauses in which -n may occur to ones in which there is an initial multiattachment (signifying coreference), or one in which there is a retroherent 2 to 1 advancement. Clearly, none of the clauses in (17)-(20) involve coreference; therefore, the occurrence of the suffix -n must be due to the multiattachment of a 1 arc and a 2 arc which arises from a retroherent 2 to 1 advancement. This condition can be readily incorporated into the analysis in (21); thus, the more complete structure of (20) is as represented in the following diagram:

\[(22)\]

a. 

\[
\begin{align*}
1 & \quad c_1 \\
2 & \quad c_{2,3} \\
1 & \quad c_{3,4} \\
2 & \quad c_1 \\
3sg & \quad UN & \text{t'ajo-n-al} & \quad 3sg \\
do-MID\text{-IMP} & & do-MID\text{-IMP} & \\
\end{align*}
\]

b. 

\[
\begin{align*}
1 & \quad c_{1,2,3,4} \\
2 & \quad c_{2,3,4} \\
1 & \quad c_{3,4} \\
2 & \quad c_1 \\
3sg & \quad UN & \text{t'ajo-n-al} & \quad 3sg \\
do-MID\text{-IMP} & & do-MID\text{-IMP} & \\
\end{align*}
\]
Critically, this analysis depends on the assumption that the clause in (20) involves a 2 to 1 advancement and, therefore, that the second and third strata in (22) are valid. The only clear alternative to (22) is a structure which involves spontaneous demotion of the initial 2:

(23)

Yet the analysis in (23) fails to account for the occurrence of -n, and the only apparent way of accomplishing this is by some ad hoc rule. Hence, the analysis in (23) is in sharp contrast to that in (22) which requires no new rules, but accounts for the occurrence of -n based upon the independently motivated middle voice and cancellation rules. Thus, I conclude that (22) is a valid representation of the structure of the clause in (20).

We have seen evidence for the "middle strata" in reflexive antipassive clauses, such as (17)-(20). Yet these clauses appear to represent a special case of the general notion of antipassive. Therefore, I conclude that the clause in (12a) has the structure represented in (12b), and, more generally, that antipassive clauses in Huastec have a structure that includes a "middle" stratum (strata) in which the initial/final 1 is a 2. This, in turn, provides support for a universal characterization of antipassive, as proposed by Postal (1977).

7.3 Instrumental Advancement

Clauses in Huastec may include an optional nominal with the role of instrument; this nominal is flagged by the preposition k'āl:
He is hitting the cow with a thick vine.

These nominals are analyzed in AG as heading an initial/final Inst (instrumental) arc; thus, the structure of (24) is represented as follows:\(^4\)

(26) a. In way-al ba/k'al an taat.
    I sleep on/with the mat.

b. U way-na-al (*ba/*k'al) an taat.
    I use the mat to sleep on.

(27) a. U k'apal an te/neel t'ak'tzil
    I eat "pascal" with the metal dish.

        ku'atha-al an paakaax 3sg k'al jun i k'otzol ch'a
    hit-IMP DEF cow with one INDEF thick vine

Huastec also has clauses which include a nominal with the role of instrument but which is not flagged by k'al. Consider the following pairs of examples.\(^5\)
Comparing (26a) and (26b), we find that the example in (a) is finally intransitive while that in (b) is transitive, as indicated by the agreement proclitics used; that the nominal flagged by k'al in (a) is not flagged in (b); and that the verb in (b) has the suffix -na, glossed 'INST' (instrumental). In (27) as well, the nominal flagged by k'al in (a) is not flagged in (b), and the verb in (b) has the suffix -na; both (a) and (b) are finally transitive.

The analysis which I propose for the clauses in (26b) and (27b) involve the advancement of the initial Inst to 2; the corresponding structures are represented in (28) and (29) respectively.

(28)

```
wav-na-al Isg an taat
sleep-INST-IMP
```

(29)

```
k'apu-na-al lsg an pat'aal platu an ti te7neel t'ak'tzil
eat-INST-IMP DEF metal dish DEF CL thick "pascal"
```

Several pieces of evidence support the structures in (28) and (29). The initial relations are assumed on the basis that such an assumption simplifies statements of
verb valence. Consider, then, the final relations. In both (28) and (29), the initial 1 is the final 1; in conjunction with the predicate agreement rule (cf. (4.19)), it is correctly predicted that this nominal should determine final 1 agreement. The final strata of both (28) and (29) are transitive, accounting for the use of transitive agreement proclitics. This fact is of more immediate interest in relation to (26b)/(28): since the initial 1 is a final 1, the only nominal available as a final 2 is the initial Inst. Since the initial Inst in both (28) and (29) is the final 2, it is predicted that the initial Inst's should determine final 2 agreement on the verb; this prediction is consistent with the agreement facts in (26b) and (27b). In (29), the initial 2 is a final chômeur; this structure, in conjunction with the 2-chômeur flagging rule (cf. (6.14)), correctly predicts that the initial 2 should be flagged by ti.

Other evidence is found in the interaction of instrumental advancement with passive: the structures in (28) and (29), along with the proposed analysis of passives (discussed in chapter 4), predict that the initial Inst's, having advanced to 2, should be available for advancement to 1 by passivization. This prediction is borne out by examples like the following, which correspond to the active instrumental advancement clauses in (26b) and (27b):

(30) a. U way-na-aab an taat.
   U3 sleep-INST-PASS.IMP DEF mat
   The mat is used to sleep on.

b.
The metal dish is used to eat "pascal" on.

Crucially in these examples, it is the initial Inst that advances to 1 by passivization; thus, in the active counterparts, this nominal is the final 2. In particular, it should be noted that an analysis in which the Inst advances directly to 1 is ruled out for sentences like (31) since it wrongly predicts that passives of instrumental advancement clauses are transitive, and it fails to account for the flagging of the initial 2 as a chômeur:

On the basis of the evidence reviewed here, I conclude that the structures of the clauses in (26b) and (27b) are as represented in (28) and (29), and, more generally, that instrumental advancement clauses such as these involve the advancement of an initial Inst to 2.
7.4 Interaction of Antipassive With Instrumental Advancement

In many instrumental advancement clauses with transitive verbs, the verb has an antipassive suffix as well as -na:

(33) a. U aj-a-al an bitzim
     1s/3 scare-IMP DEF horse
     k'al i ch'a.
      with INDEF vine
I scare the horse with a vine.

b. U aj-a-x-na-al i ch'a
     1s/3 scare-AP-INST-IMP INDEF vine
     an ti bitzim.
      DEF CL horse
I use a vine to scare the horse.

In many cases, the antipassive suffix is -x, but other suffixes may also be used:

(34) a. U uch'a-al an ja7
     1s/3 drink-IMP DEF water
     k'al i tu7.
      with INDEF gourd
I drink the water with a gourd.

b. U uch'a-m-na-al i tu7
     1s/3 drink-AP-INST-IMP INDEF gourd
     an ti ja7.
      DEF CL water
I use a gourd to drink the water with.

The most immediately obvious assumption about such clauses is that they involve both antipassive and instrumental advancement to 2; thus, the structure of (34b) would be represented as follows:
This structure accounts for the antipassive suffix -x and the instrumental advancement suffix -na. for the final transitivity, for the fact that the initial 1 determines final 1 agreement on the verb while the initial Inst determines final 2 agreement, for the fact that the initial 1 and the initial instrument are not flagged, and for the fact that the initial 2 is flagged as a 2 chômeur.

A proposed universal, the 1-Advancement Exclusiveness Law (1AEX — cf. Perlmutter and Postal 1984a), presents certain difficulties for the analysis in (35). The 1AEX requires that a clause have at most one advancement to 1. The structure in (35) does have an advancement to 1, making an interesting empirical prediction: clauses such as (33b) and (34b) should not have passive counterparts since this would require a second advancement to 1; such a structure is represented by the following diagram:

The structure in (36) also violates another tentative universal, the Nuclear Novice Law (Bickford 1987). However, clauses such as (33b) and (34b) do have passive counterparts:
Thus, it must be concluded either that the 1AEX and the Nuclear Novice Law are wrong, that the proposed analysis of passives is wrong, or that the analysis proposed in (35) is wrong. Given cross-linguistic evidence in support of the 1AEX and the universal characterization of passives, I assume that it is the analysis proposed in (35) which must be rejected.

One alternative analysis is to suggest that what the "antipassive" suffixes -x, -l, and -m register is not antipassive but rather the presence of a non-initial 2 arc; under this proposal, (33b) and (34b) involve instrumental advancement only and not antipassive. Such a rule would be consistent with simple plain antipassive clauses as well as (33b) and (34b). However, formulating such a rule involves certain complications. First, not all instrumental advancement clauses have a verb with an "antipassive" suffix; thus, a lexical diacritic would be required to distinguish those verbs which are suffixed by an "antipassive" suffix in instrumental advancement clauses, and the rule would have to be sensitive to this diacritic. Second, the use of this diacritic would fail to capture the generalization that intransitive verbs never have an "antipassive" suffix in instrumental advancement clauses. Third, clauses involving IOA, benefactive advancement, and possessor ascension all have non-initial 2s, yet this does not entail that the verb will have an "antipassive" suffix; thus, the rule would have to distinguish non-initial 2s that are initial Inst's or initial Is from other advancement 2s. Finally, as discussed in chapter 5, pronominal reflexive clauses have a multiattached 2 arc which is replaced by another 2 arc. This replacer arc is a non-initial 2 arc, yet the verb is these clauses never has an "antipassive" suffix;
hence, the rule would have to distinguish replacement 2 arcs from other non-initial 2 arcs. Given these considerations, the rule required by this analysis would not be a simple one.

A simpler analysis would be to propose that clauses like (33b) and (34b) involve instrumental advancement only and not antipassive, and that instrumental advancement is registered on certain verbs with the suffix -na only while other verbs also require an "antipassive" suffix as well. This analysis has some of the same complications, however: it requires the use of an additional diacritic and fails to account for the fact that the value of this diacritic for intransitive verbs is predictable, and it fails to offer any explanation as to why the added morphology in clauses like (33b) and (34b) is the same as that used in plain antipassive clauses.

Clauses such as (33b) and (34b) remain problematic, and I know of no motivated analysis.

Notes

1. There are certain morphological/morphophonological processes which appear to be associated with the suffixes -m and -l. The suffix -m appears to have an allomorph, -om; in some instances, the /o/ in this allomorph coalesces with a final stem vowel resulting in a different vowel (e.g. with the root ch'a7i 'buy', /ch'a7i-om/ becomes [ch'a7um]). With either suffix, there can be a lengthening of the first stem vowel (e.g. with the root nuju 'buy', /nuju-l/ may become [nujujul]); it is unclear to me what controls the occurrence of this lengthening. These matters will not be discussed further within this thesis.

2. I know of no clear exceptions to this.
3Some rule applies to the root t'aja in certain circumstances causing the /a/ in
both syllables to change to [o]; thus, the following forms are attested: t'ojo-n
‘do-MID’, and t'ojo-m ‘do-AP’.

4More correctly, prepositional phrases are assumed in APG to involve
(marquee) closures (cf. §5.2). In these structures, the initial oblique heads a marquee
arc in the final stratum and is part of an embedded linguistic element, the preposi-
tional phrase, which heads the final oblique arc. (See (5.27) for an illustrative
example; for further discussion, see Johnson and Postal 1980:611, Postal 1986:16, or
Aissen 1987:68-72.)

5The free translations in the (b) examples and in subsequent examples which
involve instrument advancement are intended to highlight the difference in syntactic
structure and not any real semantic difference.
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