

POSITIONAL ROOTS IN KANJOBAL (MAYAN)

By

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CONVENTIONS AND ABBREVIATIONS

KSE	Kanjobal of Santa Eulalia
*PM	Proto-Mayan
Sp	Spanish
[]	phonetic transcription
/ /	phonemic transcription (practical orthography)
.	divides morphemes in phonemic transcriptions
C	consonant
V	vowel
GNumC	general numeral classifier
N	noun
NC1	noun classifier
P	positional root
1,2,3	persons
comp	completive aspect
dem	demonstrative
dir	directional
form	stem formative
incom	incompletive aspect
inten	intensive
iv	intransitive verb stem
neg	negative

CONVENTIONS AND ABBREVIATIONS (CONTINUED)

part	particle
PIV	pseudointransitive suffix
pl	plural
poss	possessive
pot	potential aspect
prog	progressive aspect
sg	singular
subord	subordinator
topo	toponym

Hyphens before or after a morpheme indicate that it is bound.

Underlined morphemes in discursive passages are always in phonemic transcription.

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Kanjobal is a Mayan language spoken by several thousand people in northwestern Guatemala; it has been relatively little described. Like most Mayan languages, Kanjobal possesses a distinct root class, known as positionals. These roots have special phonological, syntactic, and semantic characteristics. This study presents a description of the properties of these roots within the context of the overall grammatical and semantic organization of the Santa Eulalia variety of Kanjobal (KSE). The description is the result of fifteen months of field work in Guatemala.

An introductory chapter provides linguistic and ethnographic background on the KSE language and its speakers, and a description of the nature of the data base. This is followed by a sketch of KSE phonology and grammar. The phonological description includes a phonemic analysis, a discussion of major phonological processes, and information on distributional patterns and nativization. The grammatical

description is organized into two parts: grammatical categories, in which the important underlying categories of person, number, categorization, transitivity, tense/aspect, and direction/location are defined and illustrated, and grammatical processes, in which derivational morphology, compounding, and sentence formation are treated.

The next three chapters are devoted to the detailed description of the nature of positional roots. First, they are considered phonologically in Chapter 2 and examined for special distribution patterns and phonological processes. The possibility of sound symbolism operating in the positional root class is also investigated.

The next chapter describes the morphological and syntactic processes affecting KSE positional roots. The roots show special relationships with directional/locationals verbs and clitics; furthermore, they are easily derived as transitive or intransitive verb stems. They occur as syntactically defined nouns in certain types of numeral phrases and have semantic ties with attributives. All these derivational and phrasal functions are described and illustrated in Chapter 3.

In Chapter 4, positional roots are examined for their semantic patterns. The class is defined in terms of features such as direction/location and conflation properties. Individual roots are specified for features such as humanness

size, distribution, shape, and position. Positional roots also have extremely productive semantic roles in metaphorical expressions in the language. Several types of semantic play are therefore described.

The final chapter returns to a larger view of the language and to those patterns found within the broad grammatical system and reinforced within a single area of the grammar, the positional class. These concluding remarks deal with the questions of linguistic and cultural overlap. Several general categories such as direction, time and space, humanity and duality which are important to KSE grammatical organization may also be reflected in non-grammatical cultural behavior. Ethnographic data are considered in order to determine to what degree such overlapping reflections may be present in KSE language and culture.

Appendices include an inventory of positional roots used in the study, data on phoneme frequencies, a list of common loanwords and a text taken from a monolingual KSE speaker. This text gives a morphemic analysis with a literal interlinear and a free translation.

0. INTRODUCTION

0.1 Purpose

The purpose of this study is to examine in detail the linguistic characteristics of a single root class in the Kanjobal language. The members of this class have traditionally been called positionals, and, in one form or another, are a common feature of most languages in the Mayan language family to which Kanjobal belongs. The term positional is somewhat misleading since only some members of the class refer to the position of bodies in space. The majority refer to the distribution, shape, size, and aspect of objects. The term is in very wide use, however inappropriately, and that designation is used here. The positionals are phonologically, syntactically, and semantically distinct within the Kanjobal language system and have an important role in metaphorical usage.

Positional roots occur in most, if not all, of the Mayan languages, sometimes as a subclass within another grammatical class and sometimes as a separate morphological class. In all cases they have distinct derivational

properties and syntactic patterns. References to them in larger grammatical studies are common, but as a class they have received relatively little linguistic attention. The following descriptive examples have been collected from some readily available sources.

Chuj

All positional roots are CVC and are distinguished by patterns of reduplication which occur with no other class. (Hopkins 1967:76) Positional roots in Chuj are not a class of verb roots, but a set of roots which are derivationally and inflectionally distinct from verb roots. Chuj positional roots may be derived to form verb stems (or derived to form adverbial or noun stems) . . . but positionals do not occur as verb stems without derivation. (Hopkins 1970:29)

Tenejapa Tzeltal

Positional verb roots are recognized in two ways:

- 1) they do not occur as simple CVC uninflected stems,
- 2) upon derivation with -an 'transitive stem formative' or -ah 'intransitive stem formative', they take an infix -h-. (Berlin 1968:21)

Jacatec

All positional roots are CV or CVC. (Day 1973a:15) Many positional roots are also transitive verb roots. (25) Adjectives and positionals occur only as stative verb complements and in compound nouns (27) '-an 'positional stem formative' occurs on positional stems (which are always roots) in all environments' (except when reduplicated). (29)

Aguacatenango Tzeltal

Positional roots are CV or CVC (Kaufman 1971: 35), and are derived in various ways as verbs, both transitive and intransitive (46-49, 51-53), as

adverbs (60-62), nouns (73-76), adjectives (84), and as specific numeral classifiers (88).

Ixtuacán Mam

Positional roots are bound forms which must be derived to form words, always with a change in class. Some of the particular derivational affixes which form words from positional roots are specific to this root class, and most commonly form verbs or adjectives. The adjective thus formed indicates that something has the position, form, or state described by the root, while the verb indicates that something is becoming like or is placed like that described by the root. Positional roots have a semantic element in common; they generally describe position, form or state of an object, and imply absence of movement. (England 1975:76)

Quiché

Positionals can be distinguished from other root classes by three characteristics: 1) All positionals have the shape CVC. 2) Positionals do not occur without derivational affixes as simple uninflected stems. 3) Positionals can be derived to form adjectives, intransitive verbs, or causatives by means of special suffixes occurring only with roots of this class. Positional roots also possess the rather peculiar semantic property of categorizing objects in highly specific ways. (Norman 1973:1)

As is obvious from these citations, positionals are defined phonologically (both by their shape and by the phonological processes which apply to them), syntactically (by morphology and by syntactic role), and semantically (both as a class and as individual items).

In this study, a substantial collection of Kanjobal positional roots are considered in precisely these three linguistic contexts. Their phonological characteristics

are surveyed for distribution patterns of various kinds. The morphological and syntactic characteristics of positional roots are analyzed in considerable detail, both as a class and as a set of elements within the larger grammatical system. Further, positional roots are examined semantically, and the semantic features which organize the class are given preliminary definition. It is believed that clues may be found in the internal semantics of the positional class which are relevant to the broader semantic categories of the larger language system. These language categories may in turn find parallel expression in cultural categories which are manifest in Kanjobal behavior which is other than linguistic. Some attention is, therefore, given to the questions of semantic parallels in language and culture.

The organization of the study is straightforward. First, a brief background of the Kanjobal language and people is given as Chapter 0 in order to place them in their proper space and time context and to provide enough ethnographic data to facilitate the understanding of certain semantic references made in later chapters. Also contained in the introductory chapter is a description of the data base used for this study. This is followed in Chapter 1 by a brief overall grammatical sketch of the Kanjobal language and a review of the relevant linguistic literature. The main body of this study is contained in Chapters 2,

3, and 4 which describe the phonological, syntactic, and semantic nature of positional roots. The last chapter considers the possibility of finding language and culture parallels in Kanjobal based on the semantic data presented in earlier chapters.

This work is unique in that it is the first full-length investigation of positional roots, a class which has an important place in the grammatical systems of Mayan languages. In fact, this investigation is one of the few attempts made in Mayan linguistics which goes beyond surface structural description. Hopkins (1970:19) remarked on the lack of such studies on Mayan languages and called for 'syntactic studies which illuminate the relationships between syntactic classes'. The present study attempts to begin to fill this gap, at the same time going even further by investigating the semantic relationships as well. While Hopkins notes the importance of such studies within Mayan linguistics for both historical and synchronic purposes, such a detailed analysis is important for general linguistics as well. Linguistic science is always in need of analyzed bodies of data against which current theory can be tested since the best test of a theory is in its account of new data not used in its original formulation. Further, this analysis of positional roots may be expected to contribute a great deal to ongoing cultural studies in

the Mayan area since it will provide at least a partial assessment of semantic categories which underlie the grammar. Used in conjunction with a cultural study that defines the cultural semantic categories, these data could provide an important testing ground for theories of language and culture correlations as well as for theories which are more purely linguistic in nature.

0.2 Cultural and Linguistic Background

Kanjobal¹ is one of the more than twenty-five extant Mayan languages spoken in southern Mexico and Guatemala. A number of classification schemes have been proposed for Mayan languages. The one adopted here is that of Kaufman as explicated in Kaufman 1974; it is the most recent and is based on far more data than that available to previous researchers.

According to this analysis (Kaufman 1974:85), the Mayan family has two great divisions, Eastern and Western. The Western division, to which Kanjobal belongs, has two branches, the Cholan and the Kanjobal, which have a time depth of some twenty centuries. The Cholan languages include Chol, Chontal, and Chorti in one group and Tzeltal-Tzotzil in another. The Kanjobal branch is divided into the Chuj-Tojolobal group; Motozintlec, about which little is known; and the Kanjobalan complex. There is still some

controversy over the exact genetic relationships among the three varieties in the Kanjobalan complex: Jacalteco, Acateco, and Kanjobal. The details of the controversy are not relevant here but the positional data can help resolve the question. The arguments for the separation as adopted here are found in Kaufman 1976. Information on the phonemic inventories of the three languages is given in Kaufman (1975: 76-84). These languages are mutually intelligible to some degree and probably have been separated no more than one thousand years (Kaufman, personal communication).

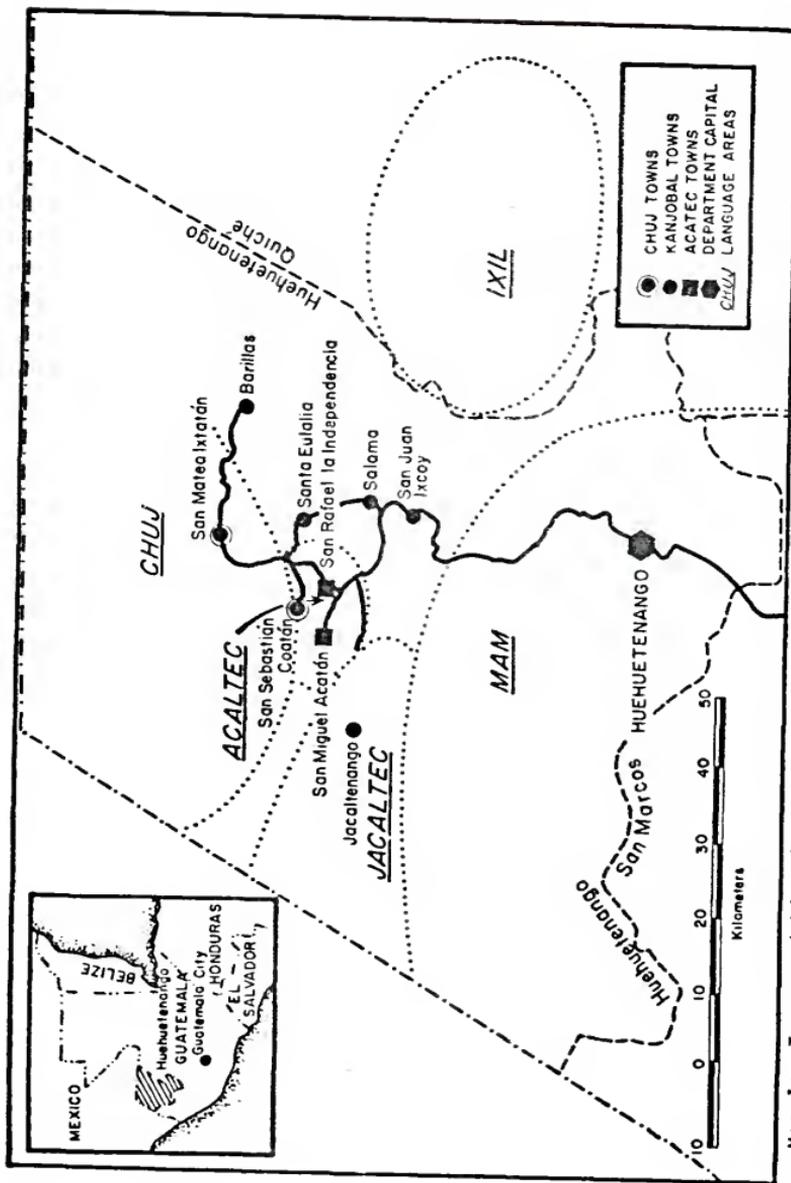
This study is based on the Kanjobal variety spoken in Santa Eulalia (henceforth abbreviated KSE). The terms 'Kanjobal' or 'Kanjobal proper' are used here to refer to the language of all four Kanjobal-speaking towns and the designation 'Kanjobalan' refers to the three-language complex which includes Jacalteco and Acateco as well. 'Greater Kanjobalan' refers to the languages of the Kanjobal group of western Mayan: Kanjobal, Acateco, Jacalteco, Chuj, and Tojolobal.

The speakers of Kanjobal number around forty thousand and reside in four towns high in the Chuchumatán mountains in the northwest Guatemalan department of Huehuetenango: San Juan Ixcoy, San Pedro Soloma, Santa Eulalia, and Santa Cruz Barillas. There are some minor dialect variations among these towns which are outside the

scope of this investigation. These variations are primarily phonological and some of them are summarized in Kaufman (1975:76).

Kanjobal speakers are primarily in contact with the Chuj speakers of San Mateo Ixtatán and San Sebastián Coatán to the northwest, with Acatec speakers in San Miguel Acatán and San Rafael la Independencia to the west, and with Jacaltec speakers from Jacaltenango and other towns to the far west. The Kanjobal region itself borders on the Mam area to the southwest and on Ixil country to the southeast (see Map I for location of towns and linguistic regions in Huehuetenango Department).

Current archeological, linguistic, and other evidence suggest that this very area was the home of the early proto-Mayan groups whose migrations ultimately took them to Yucatán and the Petén where they developed a very high level of civilization (McQuown 1964:69; Vogt 1964a:17; Vogt 1969:11; Kaufman 1976:82-86). Kanjobalan as well as Mamean speakers, therefore, probably live in much the same region their ancestors occupied as early as 3500 B.C. Contact between Northern Mam and some members of the Kanjobalan branch has been close, resulting in many similarities (primarily through phonological convergence and lexical borrowings) even though they belong to opposing branches of the primary Mayan split which may have occurred



Map I: Towns and Linguistic Regions in Huehuetenango Department (drawn by Howard Tupper)

around 2500 B.C. (Kaufman 1974:85). These phonological correspondences have been responsible for the occasional grouping of Kanjobal proper with Mamean. (See McQuown 1956 for review of early classifications. For details on early Mayan diversification, see McQuown 1964, Kaufman 1969 and 1976.)

The central portion of the region in question, which includes the Kanjobal-speaking towns, is among the most inaccessible in Guatemala. It has been little visited and little studied even in Conquest times. Steep slopes and ravines do not favor north-south travel, and the towns have been opened to motor travel from the department capital at Huehuetenango only within the last two or three decades. The Acatec towns are still without year-round transportation except on foot. Only scattered references to this area appear in early documents and there are no early linguistic materials known, such as those which exist in substantial quantities for other Mayan language groups.

According to Vogt 1964a, the region now occupied by speakers of languages of the Greater Kanjobalan group is the least culturally disturbed of Mayan areas. This no doubt results in part from the little attention the zone received in the years after the Conquest. The area was undoubtedly conquered by the mid-16th century (Virvez et al. 1968:7 quoting municipal records; LaFarge 1947:x-xi).

Records of the Spanish incursions into Guatemala reveal that Don Jacinto de Barrios, while chasing still unconverted Lacandonnes in 1695, was in the area and probably visited Santa Eulalia and other Kanjobal towns. Raids by the savage and cannibalistic Lacadones are an extremely common motif in Kanjobal folk tales and undoubtedly refer to real events about the time of Don Jacinto's expedition (Stone 1932).

Town records for Santa Eulalia also indicate how little attention was paid to the small central towns of the northwest. For Santa Eulalia, there is information on the founding of the town around 1550 and the arrival of Mercederian missionaries soon after. There are a few later documents relating to boundary disputes, tax records, and lists of town officials since 1873, but there is little else (LaFarge and Byers 1931:7; LaFarge 1947:x-xii; and Virvez et al. 1968:7-10).

The first serious studies made in the region were sponsored by the Middle American Research Institute at Tulane University. Their expedition to Jacaltenango and nearby towns is described in LaFarge and Byers 1931 wherein is documented the discovery in this area of the active use of the old Mayan calendar although in somewhat reduced form. Later, Oliver LaFarge, who had been in Santa Eulalia for a day or two on the earlier trip, returned there for a stay of several months. He made careful

observations of Santa Eulalia life, particularly the religious observances. His monograph, finally published in 1947, is a rare and valuable work which confirms the presence in these Kanjobalan towns of a religious system of Prayermakers which is in many ways very different from the cofradía system so often described for other Mayan towns. This ritual system may reflect, therefore, a less assimilated variety of Mayan religion. Nevertheless, like the religious system found in any Mayan town, it shows great evidence of syncretism of Christian elements into a complex organization which permeates most of daily life. While it is not within the scope of this study to detail the nature of Kanjobal religion, reference will be made later to the presence of certain elements within the semantic system which seem to underlie the ritual.

Ethnographic work in Central America has exploded in the last four decades and a great many studies have been produced for Yucatec, Quiché, and the Chiapas highland areas; but the Cuchumatán towns have still been somewhat neglected. The most recent works for Kanjobal-speaking towns include a land tenure study in Santa Eulalia (Davis 1970) and, under the direction of the anthropologist of that study, a community monograph (Virvez et al. 1968). This extremely useful monograph, written by the town leaders, summarizes the early documents found in Santa Eulalia, and describes

the old customs and traditions. It reviews the contemporary state of the community and, in their own words, gives the people's hopes for their future.

Cuchumatán people live today much as they must have done since pre-Colombian times (see Vogt 1964a and b for detailed discussion of pre-Colombian cultural patterns). Santa Eulalia is typical of Kanjobal-speaking towns. Of course, there are differences which affect the character of a town. For example, Protestantism has had greater success in Barillas than in Santa Eulalia; the non-Indian Guatemalan (ladino) population is larger in San Juan Ixcay; San Mateo Ixtatán has a valuable commercial resource in its salt exports. The Ixtatanecos have a terrible reputation throughout the area for fierceness and dishonesty (probably due in part to that very salt monopoly). Feuds between San Miguel and San Rafael have dated from the separation of the latter from its former municipal center early in this century. But, in spite of these differences, the area is, for the most part, relatively homogeneous. In fact, in terms of daily life and overall cultural concerns, life as lived in the Kanjobalan area is not unlike that described for Chiapas (see Vogt 1969 and sources cited there). This homogeneity of culture will be an important consideration in later chapters as we attempt to examine the linguistic reflections of these pervasive cultural interests.

The people of this area, as in most of Guatemala, live primarily in settlements which are grouped into hamlets called aldeas and attached to a town center (see Map II for aldeas of Santa Eulalia). These hamlets often have their own chapel and school. For the most part an Indian's life revolves around these small settlements, which are generally endogamous and may reflect early patrilineal clan centers such as those described by Vogt for Zinacantan and called by him the sna (Vogt 1964:23-30 and 1969:140). In Kanjobal, the root na is still a common general term for house or household as it is in Tzotzil. Santa Eulalia has nine such aldeas which vary in distance from twenty minutes to two days walk away from the town center. Since municipal lands spread over a considerable distance a town may, as Santa Eulalia does, have aldeas in several different climatic zones, from low (tierra caliente) to temperate (tierra templada) to highland or cold country (tierra fría). The Santa Eulalia municipal center itself and the nearby aldeas of Nancultac, Pett, and Temux² are in cold country at more than 8,000 feet in altitude. The more distant aldeas such as Chojzunil and Cocalá are in lower, hotter country. This variety allows the cultivation of crops year round and almost constant food supplies to the town center. Topographically, the region is one of slopes, ridges, and valleys which impede travel. The temperatures are mild to

cold and the climate is damp with heavy mists daily throughout the rainy season (June to late November) and not uncommonly during the rest of the year in the town center and high aldeas.

Aldeas, together with even smaller subdivisions called caseríos, are part of the larger municipal center headed by the township which bears its name.³ Even when new towns are formed from aldeas which grow to sufficient size, these new centers still retain their ceremonial dependence on the older township. This is the case, for example, with Barillas which separated from Santa Eulalia in 1889. Many independent towns in the area seem to look to Santa Eulalia, however, and there is fair evidence that Santa Eulalia exercised a general hegemony over the entire Kanjobal area until very recent times (LaFarge 1947:131f).

Adult status among the Kanjobal is achieved by marriage which usually takes place in the late teens. Children are heartily desired, but infant mortality is so high that it is not uncommon for fewer than half a woman's children to survive to adulthood. The activities of a typical day are strictly divided by sex, and by an early age children join their parent of the same sex for instruction in the duties of adulthood. Women are responsible for the care of the house and the very young children and for the daily preparation of food, especially the grinding of corn and the cooking of large quantities of tortillas, the dietary

staple. Women also sell in local markets; and, in towns where small item weaving is practiced, it is done by women. Other craft specialties are the province of men. These include the weaving of blankets in San Rafael, the making of pile rugs in San Sebastián Coatán (a Chuj-speaking town), the plaiting of hats in Jacaltenango, and the production of the heavy wool-felt jacket worn by all men of the region. These short jackets are known as capixays and are made in Santa Eulalia and San Pedro Soloma, which supply them for the whole region. A few men specialize in making marimbas (a wooden musical instrument much like a xylophone) and blow-guns for small game hunting. Most fabric, tools, and household utensils in Santa Eulalia today are machine-made imports; there is little market outside the area for the few craft items made here. This is in contrast to the situation in modern Cakchiquel towns, where craft items are part of a thriving Guatemalan tourist industry. Apparently, except for wool products, Santa Eulalia and surrounding towns have never, even in pre-Colombian times, engaged in much craft production for export. They are outside the main Guatemalan trade routes and their ancient trading patterns have probably been primarily with Mexico before the days of national boundaries and customs tariffs. Any marketing done between towns is usually handled by men, occasionally with their wives to accompany them. Women do not travel much, and never alone, remaining by custom and by preference in

the neighborhood of their families. They are, as a result, nearly universally monolingual.

The main occupation of most Indian men is subsistence farming. They are responsible for all the phases of food production, from the burning and cleaning of the fields to the sowing of corn and some wheat, caring for the fields with devotion until the harvest. This annual cycle is the basis for all life in the Cuchumatanes as it is throughout the Mayan area and has been for Mayan peasants since before the building of the great Mayan cities. Corn, the mainstay of civilization in this part of the world, is found in every meal. Together with the other members of the well-known Mesoamerican culinary triumvirate--beans and squash--corn is the primary food supply. Meat is scarce here although families raise some chickens and pigs in addition to the sheep which supply the wool. They sometimes eat meat products but most meat is sold to Ladinos. In Santa Eulalia, fresh fruits and vegetables are very limited in supply during part of the year and, in any case, are often too expensive for Indian families.

Life in Santa Eulalia is somewhat precarious. Dysentery, parasites, and other chronic ailments take their toll among both children and adults. Childhood diseases are still common although active immunization programs are bringing them under control. Many people

become ill from diseases contracted in the lowlands during periods of migrant labor on coastal plantations. Occasional epidemics of flu or other virus result in large numbers of deaths. There is no permanent medical care in the town and standards of sanitation are low. Nevertheless, Kanjobal people are progressive, eager to learn about ways to improve their lives, and give strong support to those who have opportunities for instruction in fields that seem to them to be relevant to their needs, insisting only that such information be shared with the community. Although they may appear to be shy or suspicious with strangers, they are, upon acquaintance, very conscientious and cheerful people, generous and hard-working.

While most Kanjobal-speakers live in the aldeas, the town center is important to them in a variety of ways. Probably as they did before the Conquest, they come to the municipal center to market, to court, to resolve disputes, to provide civil service, to perform religious duties, and to participate in ceremonies and festivals. The town center is the residence for some Indian families and for all the ladinos, or non-Indian Guatemalans, who live in Santa Eulalia. In the town center are all the municipal buildings, the main market, the church, a public school, a parochial school with its convent, and a number of commercial establishments owned mostly by Ladinos.

These include two large general stores, two public dining rooms (comedores) which cater to Ladinos and strangers, a new pensión which provides rooms for travelers and permanent housing for out-of-town residents such as school teachers. There are locally owned truck lines which transport Indians to the coast as migrant laborers. Ladino families also supply the wax candles used in great quantities by Indians in ritual observance. They own the only ovens in Santa Eulalia and produce several kinds of wheat breads, including the dark whole wheat bread known as xeka which is very nourishing and greatly prized by Indians. There is a Ladino tailor and several seamstresses.

Ladino immigration to Santa Eulalia began around the turn of the century and their dominance in political and commercial affairs was immediate and certainly out of proportion to their numbers. In 1964, there were about 350 Ladinos in Santa Eulalia while the Indian population was over ten thousand (Virvez et al. 1968:1). Because many young Ladinos are leaving home to attend school or find work in larger cities such as Huehuetenango and Quetzaltenango, and because adult men also tend to be away a great deal, the Ladino population is largely made up of women and children living in large extended families. Many of the middle-aged women have never been away from the town, but their identification as part of the larger Guatemalan

society gives them a very different world view from the Indians with whom they have almost daily contact. There is tension between Indian and Ladino elements within Santa Eulalia and Ladino economic dominance is being challenged, particularly by one Protestant Indian who owns a large general store, several trucks and a bus line; but to a large degree, the society is characterized by mutual tolerance and a profound sense of separateness. Many Ladinos are bilingual and have a superficial knowledge of Indian custom, but they do not pretend to share Indian beliefs about the world in spite of sharing their space within it.

This separation of the two groups is perhaps most obvious during the celebration of the annual titular festival, the most important celebration of the village. The period from the ninth to the twelfth of February, in the height of the dry season, is set aside to commemorate the patron saint of the town, Santa Eulalia of Barcelona. The town is the scene of tremendous activity and preparation in the weeks before and of great excitement throughout. Although many of the activities planned for the festival are the same for both Indians and Ladinos, the two groups do not participate in them at the same time or in the same place though they often observe each other. There are dances--for Indians, traditional dancing with a small local marimba in the parochial school and for Ladinos, modern

social dancing with a capital orchestra imported to the town hall for the occasion. There are sports--Indian school children against other Indian school children in the aldea of Pett and Ladino community leaders and teachers against other communities in the town center. There are new clothes--Indian women wear new white silk overblouses (huipils), and colorful new hair ribbons, bought locally in the general stores or from traveling salesmen. Ladinas buy modern dresses made privately by a seamstress from designs in a magazine, or bought in another town. There are processions--Indians carry sacred images on a ritual circuit and Ladinos convey the town queen to the big soccer game. There is a native queen as well, but she is crowned before a different audience and has little role in the festivities. There is market for everyone, with out-of-town hucksters drawing huge crowds. There are games of chance and fortune-telling birds. Ladino relatives from other towns come for a visit and Indians from outlying aldeas come too. It is a time for drinking, for gossiping, for watching costumed dancers, and for town renewal. The festival serves primarily to bind people to the community, while reinforcing their places within it. When it is over, Indians go about the task of planting in the high country, but there is a period of great depression for Ladinos before they settle back into their daily lives. Plans for the next festival begin at once.

While the festival has little religious significance for the Ladinos, it is a period of intense religious activity among the Indians. The prayer leaders pray constantly and make sacrifices in the sacred cave under the town (Yalan Na), foreseeing the fate of Santa Eulalia in the coming year. Worship at the great cross in front of the church increases dramatically and large numbers of wax candles are burnt there and at other shrines. But religious concerns are not limited to the period of the town festival. Religious and ritual elements are extremely important in Kanjobal life which, after all, is connected historically to a theocracy. Old religious ways have survived here although fewer and fewer learn what they mean. Increasingly, outside forces erode the old customs. Change has been accelerated since LaFarge described Santa Eulalia's religious life because Catholic reform movements as well as Protestant missionary efforts have combined to reduce the impact of the 'pagan' religion called costumbre. Until a new community study is done, the amount of change cannot be known but even if it is very great, many elements from the old cosmology still shape daily life and still mold Kanjobal world view. Among these elements are the preoccupation with the passing of time, a belief in animal companion spirits and hill deities, a strong sense of hierarchy, a special attention to the location and

direction of bodies in space, a subtle use of metaphor, and a rich folkloric tradition.

0.3 Data Base

Linguistic work for the Kanjobal area includes a basic description for most of the major dialects in the Kanjobal group except Kanjobal proper: San Mateo Ixtatán Chuj (Hopkins 1967); Jacaltenango Jacalteco (Day 1973a and Craig 1975); and Tojolobal (Furbee-Losee in press). Many of these works owe a great debt to one of the earliest descriptions of languages in this branch, a description of Aguacatenango Tzeltal contained in Kaufman 1971. Work continues in all the languages of the Greater Kanjobalan group especially at the Proyecto Lingüístico Francisco Marroquín (PLFM), a linguistic study center now under an Indian administration which is dedicated to the preparation of materials by Indians about and in indigenous languages.

In addition to the longer grammars noted above, several papers and other materials have become available in recent years on Jacalteco (Craig 1973 and 1976; Day 1973b), Kanjobal and Acateco (Dakin 1976), Chuj (Maxwell 1976a, Hopkins 1973) and Tojolobal (Furbee-Losee 1973 and 1976). An as yet unpublished computer-stored dictionary has been prepared for Jacalteco (Day 1971) and is described in Day 1976. A set of basic teaching materials is available for Kanjobal (Martin Barber et al. 1973).

As a result of this recent interest in Mayan linguistics generally, a good overall knowledge is now available about the phonological and morphological systems of languages of the Greater Kanjobalan group. The differences between the languages of the Kanjobalan complex appear to be relatively slight. Since some basic materials are already available it seems even more useful to take a different approach in newer studies like this one. Reference will be made to these other works as they are relevant to the grammatical description in this analysis.

The data for this analysis were gathered in Santa Eulalia during two field stays. During the first period, I was affiliated with the Proyecto Lingüístico Francisco Marroquín (PLFM), then in Antigua Guatemala. I was contracted to them from September, 1972, until August, 1973, to produce teaching materials in Kanjobal, train teachers, direct the production of literacy materials (see, for example, Martin Barber 1973a and 1973b), collect texts, and do general linguistic analysis. During the second period, from January to March, 1975, I lived in Santa Eulalia and collected data on positional roots.

In total this study is based on some ten hours of taped, transcribed, and translated narratives, several thousand items of vocabulary and elicited materials, a set of basic teaching materials, an inventory of over 270

positional roots with extensive information on their semantic characteristics and syntactic distribution, and additional miscellaneous materials such as examples of children's games which use positionals and notes on metaphoric extensions and joking contexts for positional roots. Some unpublished notes made by K. Dakin on Kanjobal and Acatec have also been available to me.

The primary informants for both periods were two exceptionally able Kanjobal speakers: Diego de Diego Antonio and Francisco Pascual F. Mr. Pascual was eighteen years of age at the time we first began working together. He was living then in the town center but has recently returned with his wife and child to his native aldea of Nancultac. He is functionally bilingual in Spanish, has completed a sixth grade education, and is literate in both Spanish and Kanjobal. His only living parent is his mother who is completely monolingual in Kanjobal. He has worked as a teacher at the PLFM from time to time since 1973. He has a great interest in old folk tales and was responsible for the collection of many very interesting and useful ones.

Mr. de Diego is in his early thirties and lives in the aldea of Pett with his parents and wife, all of whom are monolingual in Kanjobal. He himself is functionally bilingual and literate and has also completed six years of education. He is highly respected in his aldea and in the

community and has held political office as well as serving on the board of the credit cooperative. He has been an extremely dedicated student of linguistics and is devoted to the study of Kanjobal. Both he and Mr. Pascual are known in their communities for their work in language maintenance and in literacy training.

Although Mr. de Diego has been the primary informant for most of the data for positional roots, many other people have participated in the collection of data either during the first or the second field stay. Some have recorded texts for Mr. de Diego, Mr. Pascual, or for me. Some have checked data, especially the positional roots, or in other ways have rendered valuable assistance to this research. Together, these informants reflect several degrees of bilingualism and all adult age groups; the materials collected from them include extemporaneous anecdotes, accounts of daily life, religious stories, animal fables and histories. A list of these people follows with aldeas of residence, ages, and degree of bilingualism.

Jose Andrés	Pett	91	monolingual
Eulalia Bernabé	Conob	15	bilingual
Lorenzo Caño Juan	Temux	27	monolingual
Francisco Diego Ramírez	Temux	63	monolingual
Juana Francisco	Pett	32	monolingual
María Francisco	Conob	58	monolingual

Ramírez Francisco	Tziquina	60	monolingual
Eulalia García M.	Conob	26	monolingual
Juan García Miguel	Tziquina	38	bilingual
Mateo Lorenzo	Temux	84	monolingual
Juan Lorenzo Diego	Pett	31	very bilingual
Alfonso Nicolás A.	Conob	22	bilingual
Alejandro Pascual	Nancultac	38	bilingual
María Pascual	Conob	18	very bilingual
Diego Pedro Primero	Pett	52	monolingual

It is important to note here that Kanjobal speakers are very interested in the maintenance of their own linguistic and cultural identity. They encourage the study of their language especially when it can result in materials for their own use. Interest in literacy training in Kanjobal is very high despite the fact that there is little opportunity for it and that is only by volunteer efforts. It is intended that the results of this study and many of the materials which made it possible be returned to the people of Santa Eulalia in a form which will be useful to them.

NOTES

¹Kanjobal is the Hispanized version of the language name and is used here because it is the only form which is common in the literature. In the language itself, the language is called Q'anjob'al, derived from q'an 'word' by way of the intransitive verb q'anjab'i 'to speak' with the instrumental suffix -b'al. Literally therefore the term means 'for speaking' and does not, as LaFarge (1947:iv) asserts, mean 'four-way or straight language' deriving from kan 'four'.

²The standard national alphabet is used for place names of official units such as aldeas. The primary difference between the national alphabet and the alphabet used in this study and designed by Terrence Kaufman is the use of c and qu for the velar stop which is represented in the Kaufman alphabet by k. A detailed description of the Guatemalan alphabet controversy is given in Kaufman 1975.

Some aldea names have obvious etymologies. These are some examples: Nancultac from nan 'in the middle' and k'ultaq 'woods (Sp. monte)'; Paiconop from pay 'ancient' and konob 'town (center)'; Iziquiná from tz'ikin 'bird' and na 'house'. Hopkins 1973 presents a very complete analysis of place nomenclature for Chuj and many other Mayan languages including Kanjobal. He documents a large number of borrowings among the languages of the Kanjobal branch.

³In Kanjobal, the town center is usually not referred to by the Spanish name Santa Eulalia but rather by the native word konob (national orthography Conop) 'town center'.

1. GRAMMATICAL SKETCH

Chapter 1 is not intended to provide a complete description of the Kanjobal linguistic system, but rather to present in overview the outlines of the system, particularly those aspects of it which have bearing on the class of positional roots. These roots function within an interlocking system of sounds, meanings, and grammatical processes; they cannot be described adequately unless they are understood in that context. The grammatical sketch presented in this chapter provides the framework for understanding positional roots and their place in the larger grammatical system of Kanjobal; this system, in turn, is characteristic of most other Mayan languages in its group as well.

Chapter 1 is organized into two parts. In the first, the outlines of the phonology are given, including a phonemic inventory and a set of common phonological processes. Some remarks are made concerning phoneme frequencies, morpheme structure, and the processes of nativization which affect the large number of Spanish loanwords in Kanjobal. Phonological features and patterns which are especially relevant to the positional class are treated in Chapter 2.

The second part of Chapter 1 presents a sketch of the grammar proper. Rather than present a detailed list of morphemes or organize the sketch in terms of word classes, the material is given in terms of grammatical categories. This presentation offers a better opportunity for understanding the kinds of semantic categories which function in Kanjobal grammar. Such categories are basic to the semantic organization of Kanjobal and therefore to its grammatical organization as well. They underlie the organization of the positional root class as they do the rest of the grammar.

Categories such as person and agency are probably universally relevant in human language organization. Other categories, while still optionally present in any language, seem to be of special importance in Mayan Kanjobal. The most striking of these include matter classification and location/direction. The second part of Chapter 1 sketches the overall relevance of such categories to Kanjobal grammar while Chapters 3 and 4 will demonstrate in greater detail the ways in which these categories interact while focusing on a particular part of the grammar, the positional class.

1.1 Phonology

A practical orthography is used in this study as a phonemic transcription. Periods indicate morpheme boundaries in both the phonemic transcription and the morpheme-by-morpheme gloss. A free translation is

provided where necessary. In the phonology section the examples are first given in phonetic transcription. All phonological examples are taken from recorded text. A sample text is included as Appendix D.

1.1.1 Phonemic Inventory

The phonemic inventory of Santa Eulalia Kanjobal (KSE) consists of five vowels and twenty-five consonants as indicated in Chart I. An accurate account of the phonemes of this language was first given by Kaufman (personal communication) based on dialect surveys made during 1971 as part of a dialect identification program for all Mayan-speaking towns. This comprehensive survey was carried out by Kaufman and his assistants at the PLFM and is described in Kaufman 1976. Ultimately, Kaufman prepared an alphabet suitable for the efficient writing of Mayan and other Latin American indigenous languages. This alphabet and its underlying principles are described in Kaufman 1973. As applied to Kanjobal, the Kaufman alphabet uses the symbols given in Chart II to represent the phonemic units given in Chart I.

Since it has been widely adopted and is simple to write and reproduce, this alphabet will be used as the phonemic transcription for this study, with three changes. Kaufman's /h-/ , the glottal fricative, which he himself indicates as occurring only in certain prefixes and pronominal

Chart I. Phonemic inventory of Santa Eulalia Kanjobal

	palato						
	labial	alveolar	alveolar	retroflex	velar	uvular	glottal
Obstruents							
stops							
simple	p	t			k	q	ʔ
glottal	p'	t'			k'	q'	
affricates							
simple		tʃ	tʃ̣	tʃ̠			
glottal		tʃ'	tʃ̣'	tʃ̠'			
fricatives		s	ʃ̣	ʃ̠	j		
Sonorants							
nasals	m	n					
liquid		r					
glides		y			w		
lateral		l					
Vowels							
high		i	u				
mid		e	o				
low		a					
	front	back					

Chart II. Kaufman alphabet for Kanjopal

p	t			k	q	7
b'	t'			k'	q'	
	tz	ch	tx			
	tz'	ch'	tx'			
	x	xh	x	j		(h-)
m	n					
	r					
	l					
	y			w		
		i		u		
		e		o		
		a				

words, is not considered phonemic in this analysis and is not written (see 1.1.2.3 for an account of h-insertion). Secondly, where the two phonemes /t/ and /x/ occur in sequence, they are written t-x to distinguish the sequence from the phoneme /tx/. This notation was suggested by Kaufman and is used in Mam.¹ In Kanjobal the sequence only occurs across morpheme boundaries. In addition to these changes, there are several problems with the status of the glottal stop. These are discussed in some detail in section 1.1.1.1.

The phonemes of Kanjobal are treated below by sound class. Examples are given for each phonemic contrast. Positional roots are a rich source of minimal pairs and where positionals are used as examples (always with the positional stem formative suffix -an), they are indicated by (P). Where necessary in the discussion of Kanjobal phonology, phonetic transcriptions are given and standard phonetic symbols are used. Explanations are given in cases of unusual symbols. Such transcriptions are given in the conventional brackets, [].

1.1.1.1 Obstruent consonants

There are nineteen phonemic contrasts in Kanjobal which are produced by an obstruction of the air stream before its oral release. In addition to the glottal stop,

there are eight true stops, six affricates, and four fricatives. Both the stop and affricate sets are made up of paired sounds, identical except for the presence of glottalization on one item of the pair. The obstruent sounds will be discussed by subclass.

Stops. The true stops in Kanjobal occur at four points of articulation: bilabial, alveolar, velar, and uvular. At each point, there is a plain and a glottalized phoneme. The glottalization is usually simultaneous, but will be written after the symbol for the glottalized consonant, i.e. [Cʔ]. Except for /q/ which does not occur in initial position, all stops occur in all positions in the word. In final position, a simple stop is usually realized as heavily aspirated, [C^h]. There may be light aspiration in any other position. The glottalized stops are usually unreleased in final position, [C']. The surface phonetic contrast in final position is one of release and not of glottalization.

The bilabial stop, /b'/, is realized phonetically with both implosion and voice, [bʔ]. In a systematic phonemic analysis it is interpreted as underlying /p'/. Imploded consonants are frequently voiced as a natural consequence of their manner of production (see Chomsky and Halle 1968:323 for detailed discussion). Some other Mayan languages have imploded realizations of underlying

glottalized voiceless stops and in these cases as well the imploded stop is voiced (England 1975:18 for examples in Mam). This identification of voicing with glottalization probably accounts for the assimilation of Spanish loans with voiced stops as glottalized in monolingual Kanjobal speech. Examples include:

[lak'arto] from lagarto 'lizard'

[β^harku] from barco 'canoe'

The phenomenon of phonetic [β^h] or [b^h] for expected phonemic */p'/ is so pervasive in the Mayan family that Kaufman reconstructs /b'/ for proto-Mayan (Kaufman, personal communication).

Many Kanjobal speakers, especially young men with significant experience with Spanish, have a full series of nonimploded voiced stops used only in Spanish loans. These are not considered here to be an integrated part of the Kanjobal sound system. (See section 1.1.4 for further comments on loan phonology.)

The contrasts among the bilabial, alveolar, velar, and uvular stops may be illustrated by the following examples:

	/p/		/b'/
pay	'ancient; skunk'	b'ay	'at; in'
jopan	'bright (P)'	jab'an	'long, thin (P)'
q'ap	'cloth'	q'ab'	'hand'
	/t/		/t'/
tan	'lime'	t'anan	'staring (P)'
	/k/		/k'/
ka7	'molar'	k'a7	'bitter'
koj	'jaquar'	k'o7	'mask'
yekal	'tomorrow'	pak'il	'side'
ak	'turtle'	ak'	'new'
kan	'sky'	k'am	'no'
	/q/		/q'/
/q/ does not occur initially		q'o7	'trunk (of a tree)'
		q'an	'yellow'
		q'aq'	'fire'
yoqech	'hearth stone'	baq'ech	'fat'
xiqua7	'cut something'	maq'a7	'hit something'
b'aq	'bone'	b'aq'	'pit (of fruit)'
	/k/		/q/
yekal	'tomorrow'	yoqech	'hearth stone'
waykan	'sky'	waqan	'my foot'
ak	'turtle'	b'aq	'bone'

/k'/		/q'/	
k'olan	'small, round (P)'	q'ol	'sticky (P)'
lak'an	'stuck to (P)'	laq'an	'embraced (P)'

Affricates. The sounds produced by complete closure followed by a fricative release occur in three positions of articulation in Kanjoberal: alveolar, palatoalveolar, and retroflex. At each point the plain vs. glottalized contrast is found as in the stop series. The affricates are released in all positions and the secondary glottalization is quite strong. The palatal and palatoalveolar sounds have a strong fronting effect on preceding sounds. This palatalization process is described in 1.1.2.7. The contrasts in the affricate set are exemplified by the following items (for convenience, the usual phonetic equivalent of the orthographic symbol is given).

/tx/ ([tʃ])		/tz'/ ([tʃ'])	
tzib'	'palm'	tz'ib-'	'write'
tzub'	'salia'	tz'up	'feather'
tzuz'	'gourd dish'	tz'um	'skin'
witz	'hill'	witz'an	'close together (P)'
kutzan	'short, round (P)'	kutz'in	'man's daughter'
patz	'worm'	matz'	'dandruff'

	/ch/ ([č̣])		/ch'/ ([č̣'])
chi7	'flavor'	ch'im	'straw'
pech	'duck'	pech'	'cockroach'
ich	'chile'	ich'	'red lowland tick'
	/tx/ ([ç̣])		/tx'/ ([ç̣'])
txow	'blanket'	tx'ow	'rat'
txam	'nose'	tx'an	'string'
txutx	'mother'	tx'otx'	'land'
	/ch/ ([č̣])		/tz/ ([ʧ̣])
chi7	'flavor'	tze7	'laugh'
chipan	'like many little balls (P)'	tzib'	'palm'
	/tx/ ([ç̣])		/ch/ ([č̣])
txikin	'ear'	chikil	'blood'
	/tz'/ ([ʧ̣'])		/ch'/ ([č̣'])
tz'in	'yuca'	ch'im	'straw'
	/tx'/ ([ç̣'])		/ch'/ ([č̣'])
tx'i7	'dog'	ch'im	'straw'
tx'an	'string'	ch'en	'stone'

/tx/ ([ç])		/tz/ ([ʤ])	
txul	'urine'	tzolol	'butterfly'
patxan	'flat (P)'	patz	'worm'
txek'an	'having several long protrusions (P)'	tzek'an	'a little pile (P)'
/tx'/ ([ç'])		/tz'/ ([ʤ'])	
litx'an	'flat (P)'	litz'an	'full of liquid'
tx'onan	'having an over- large head (P)'	tz'inan	'empty, vacant (P)'

Contrast with occlusives in approximately the same point of articulation is demonstrated by the following items:

pichan	'wrapped up (P)'	pitan	'small, ball- like (P)'
chukan	'having a pointed end stuck into something (P)'	tukan	'staring (P)'
wech'an	'scattered (P)'	wet'an	'watery mass (P)'
ch'ojan	'knees drawn up (P)'	t'ujan	'shaped like a drop (P)'

Fricatives. The fricatives, /s, xh, x, j/ (phonetic [s, ʃ, ʂ, j]) occur in four points of articulation: alveolar, palatoalveolar, retroflex, and velar. Fricative and affricate clusters are the most susceptible to reduction (see 1.1.2.8 for details). The presence of the palatoalveolar and

retroflex fricatives (phonetic [ʃ̣] and [ʂ̣]) in Mayan and other Mesoamerican languages has left an effect on the Spanish spoken in that region by way of a large number of loans containing this sound. This has been documented in Scavnicky 1975 for Guatemalan urban Spanish and in Martin 1975 for Guatemalan rural Spanish.

The contrasts among the fricatives are demonstrated by the following items:

/s/		/xh/ ([ʃ̣])	
si7	'firewood'	xhi	'3rd person said (quotative)'
ostok	'buzzard'	-uxhtaq	'man's brother'
is	'potato'	yali7xh	'small'
tisan	'round, wide (P)'	tixhan	'scattered (P)'

/x/ ([ʂ̣])		/xh/ ([ʃ̣])	
joxan	'small pile (P)'	jexhan	'having one arm drooping (P)'

/x/ ([ʂ̣])		/s/	
xan	'adobe'	sam	'comal'
xaq	'leaf'	saq	'white'
pisan	'seated (P)'	pixan	'heart'
yax	'green'	yas	'wound'
ix	'woman'	is	'potato'

/x/ and /j/ as well as /ch/ are phonemes of extremely high frequency in Kanjobal connected discourse because they occur in important grammatical morphemes such as aspect markers. One result of this is the distinctive 'hushing' quality of spoken Kanjobal.

Glottal stop. The analysis of glottal stop in Kanjobal is somewhat complex and its phonemic status is uncertain. It undergoes deletion and movement according to rules which are imperfectly understood (1.1.2.5.1). Native intuition on this point is contradictory and variable. In teaching Indian students to write Kanjobal and other Mayan languages, the glottal stop is the least consistently written sound.

Kaufman has reconstructed phonemic /ʔ/ for proto-Mayan and it has been analyzed as having phonemic status in at least some positions in Jacalteco (Day 1973a:9), Tojolobal (Furbee-Losee 1976:171), and Chuj (Hopkins 1967:17). Proto-Mayan CV7C and CV7VC roots have reflexes in some Kanjobalan languages which still contain /ʔ/. Hopkins (1967:53) discusses in some detail the processes affecting proto-Mayan /ʔ/ roots in Chuj. However, in Kanjobal, all such proto roots are realized as simple CVC roots (Kaufman 1969:38f). Therefore, in Kanjobal, [ʔ] occurs in word-medial position only at morpheme boundaries where it is the result of the compounding or affixation of roots with final or initial glottal stop. In medial position as in

other positions it is subject to various deletion rules.

Glottal stops in medial position can also result from phonological substitution processes. For example, [ʔ] is a frequent realization of underlying /q'/ in morpheme-final position. The following apparent subminimal pair is attested in a single test:

[masyá _o ntoq ^h ʔiʃ]	'she put it'
[masyáʔonlowʔiʃ]	'she gave (them) food'
max	'comp'
y-	'3'
-on	'pseudointransitive (PIV)' ²
toq	'action away from speaker (dir)'
low-	'eat (iv)'
ix	'woman (NCl)'

In fact, both [yáon] and [yáʔon] are realizations of the root aq'.a 'to give or put'. (The final vowel is a transitive stem formative which is lost in phrasal constructions.)³ The underlying /q'/ is retrievable in careful speech; its loss is the result of widespread reduction processes present in KSE rapid and semi-rapid speech (1.1.2.5.2 and 1.1.2.8). A glottal stop produced by such a process is not to be considered phonemic. (The [ʔ] in ix is treated below.)

Additional data on the phonemic status of the glottal stop is available from a consideration of the apparently

vowel-initial stems in Kanjobal. All such items are regularly occur with a preceding glottal stop, especially after a pause, but may lose it in normal transition. When prefixed for person, these [ʔ]-initial stems also lose the glottal stop. The person marking prefixes for this class are different from those required by true consonant-initial stems. Those accompanying C-initial stems contain vowels of their own and form separate syllables, i.e. in-, ko-. But the markers for [ʔ]-initial stems differ in that they are single sounds which form natural syllables with the following vowel, i.e. w-, j- (see section 1.2.1.1 for further discussion of person marking in KSE). Other investigators have noted a class of apparent /ʔ/-initial stems which prefix like true consonant-initial stems (England 1975:31; Day 1973a:18). No such class has been found in KSE and all [ʔ]-initial stems, except the numerals o 'five' and uq 'seven', prefix in the same way, at least insofar as the data have been examined on this point. Obviously, the description of person marking is simplified if these stems can be considered to be vowel-initial and the glottal stop simply a phonetic insertion. Not one of the recent analyses of Kanjobalan languages has considered initial glottal stop to be phonemic. Kaufman himself has recently stopped writing initial glottal stop because of its predicability in these and other Mayan languages (1975:71).

Final glottal stops are usually manifested by the extreme shortness of the preceding vowel. However, the presence or absence of glottal stop in this position responds to stylistic pressures, at least to some degree. The same item may be produced, heard, and transcribed by native speakers both with or without the final glottal stop. Some of these cases of deletion may be explained by lexical identity (see 1.1.2.5.1); however, the data are very contradictory on this point.

The phonemic status of glottal stop in initial and final position has important consequences for the description of positional root phonology, especially reduplicative processes (2.2.1). If glottal stops are recognized as phonemic in final position, this will uncomplicate that part of the grammar and also account for rare minimal pairs such as

[bʔe]	b'e	'road'	[bʔeʔ]	b'eʔ	'to grind'
[laʔ]	laʔ	'submerged in liquid (P)'	[laqʔ]	laq'	'embraced (P)'

Application of rules such as glottal stop deletion (1.1.2.5.2) and /q/ → [ʔ] may result in the production of any of these forms either with or without the final glottal stop.

Although problems still remain in determining whether or not a final phonemic glottal stop is present in any individual item, the establishment of such an underlying

phoneme does allow for greater simplicity in the description. The problems presented by traveling and disappearing glottal stops in medial position can then be solved by late phonetic rules which will apply both to underlying and derived glottal stops (1.1.2.5.2).

Taking all these data into account, glottal stop is here considered phonemic in final position in some roots and is so indicated by written /ʔ/. It is not written in absolute initial position or as a variant of /q'/ where its presence is predictable. This analysis also does not admit root-medial phonemic glottal stop although compounding and other combinatory processes may produce stem-medial ones. The analysis adopted here is admittedly incomplete and not entirely satisfactory from a theoretical perspective. Further investigation into glottal stop and glottalization phenomena in KSE may reveal that many of these peculiarities are the result of sound change in process.

1.1.1.2 Sonorant consonants

Unobstructed resonating consonants are much fewer in number than the obstruents and include two nasals, two liquids, and two glides. They occur in all positions in the word.

Nasals. There are two nasals in KSE: bilabial and alveolar. They are subject to assimilation pressures

from following consonants (1.1.2). Their phonemic status is established with the following sets.

/m/		/n/	
mam	'father'	nam	'moth'
mu7	'wild herb'	nuq'	'neck'
man	'no'	nan	'middle'
jom	'gourd bowl'	jon	'our avocado'
miman	'big'	inat	'seed'

Liquids. The lateral, /l/, is of high frequency in KSE since it occurs in roots and in very common affixes such as -laq 'place of' and -Vl 'abstract nominalizer'. (Frequency data are found in 1.1.3.4.) It is rarely in contrast with the flap, /r/, which is of exceedingly low frequency. The flap is found in only a few native roots such as tur.u7 'to swallow' and t'iran 'bald, naked (P)'. The usual reflex of *PM */r/ is KSE /y/. (*PM forms taken from Kaufman 1974: 119, 121.)

PM	*wur-	KSE	way-	'sleep'
PM	*ru7x	KSE	yax	'green'

The flap occurs in medial position as a realization of Spanish d, e.g. asaron 'hoe', or of Spanish rr, e.g. wuru 'burro'. It occurs in an assimilated form in initial position in Spanish loans as in [ʔos] 'rosa'. (Section

1.1.4 provides further examples of nativization processes in the assimilation of Spanish loans in Kanjobal.)

Examples of /l/:

lem	'worm'
wala7	'I say'
chikil	'blood'

Glides. The glides /w/ and /y/ are phonemic in Kanjobal, occurring in all positions in the word and before all vowels. /y/ does not occur phonemically in the same morpheme following the high front vowel /i/ nor does /w/ occur following the high back vowel /u/. Both glides also occur in consonant clusters. They are high in frequency in polymorphemic stems since they are the prevocalic realizations of the first person singular (w-) and third person singular (y-) possessive prefixes as well as person markers on one class of verbs (1.2.1.1). These are some examples of phonemic glides:

/y/		/w/	
yet	'of him; of'	watx'	'good'
ya7	'pain'	wonit	'hat'
waykan	'star'	xiwil	'many'
b'eyi	'walk'	ewi	'yesterday'
pay	'ancient'	tx'ow	'rat'
txay	'fish'	xajaw	'month'
poy	'head strap for carrying loads'	pojow	'pus'

The sounds [w] and [y] also occur non-phonemically in KSE as transition sounds resulting from a glide formation process affecting vowel clusters. For example, /luin/ 'Pedro' is normally produced as [luwin]. Native intuition is of interest here: Indian students objected to writing luin with the glide (*luwin) but consistently write the intervocalic glide when it results from underlying /w/ or /y/ as in the independent pronouns such as ay.on.ti 'we' (see section 1.2.1.1.1 for discussion of formation of independent pronouns).

1.1.1 Vowels

There are five vowels in Kanjobal, written and analyzed as /i, e, u, o, a/. Phonetically the cardinal vowel qualities are not those reflected by the standard usage of these symbols. The phonetic equivalences of the phonetic central tendencies for these phonemes are as follows:

- /i/ usually realized as [i]
- /u/ usually realized as [u]
- /e/ realized rather lower than [e], more like [ɛ]
- /o/ somewhat more open than [o] but not as open as [ɔ], here symbolized [o]
- /a/ somewhat higher, almost schwa, symbolized as [a[~]] or [ə[~]]

Various reduction processes affect vowels and produce other variants, but the tendencies mentioned here seem to be the basic ones. The factors causing variations in the production of vowels are discussed in 1.1.2.8.

These are examples of the vowel phonemes:

an	'plant (noun classifier form)'
in-	'1st person singular marker'
on	'avocado'
un	'paper'
-en	'popcorn'
janan	'uncovered (P)'
jin	'against us'
jon	'our avocado'
jun	'our piece of paper'
jen	'our toasted corn'
na	'house'
ne	'tail'
ni	'son-in-law'
no7	'animal'
mu7	'type of herb'

1.1.2 Phonological Processes

Several processes affect underlying phonemic forms in KSE and produce variations in the surface phonetic realizations. Some of these processes are described in

this section and where possible are expressed as phonological rules, using the common formalisms of modern generative phonology. This is made easier by the reformulation of the phonemic inventory in terms of binary distinctive features. This reformulation is presented in Table I.

The minimum number of features required for the description of the KSE sound system is ten. The features and formalisms are those given in Hyman 1974. Some features such as voice and delayed release may be specified by redundancy rules or marking conventions. Such rules can, for example, express the fact that, in KSE, delayed release is a property only of strident and continuant consonants.

The ordering relationships governing the applications of the phonological rules discussed below are not completely understood. Where possible, ordering sequence is noted with the rule.

1.1.2.1 Stress assignment

Stress assignment for individual lexical items is a simple matter in KSE. Setting aside Spanish loans, many of which must be specially marked, and a few clitics and particles which do not occur in isolation nor receive word stress, each KSE stem or root carries one primary stress on its final vowel. A word then may be partially defined

by its occurrence in isolation with final-syllable stress. (Further discussion of word-formation is found in section 1.2.2.1.) The KSE stress assignment rule may be formalized as follows:

$$V \rightarrow V \quad / \text{ ——— } (C)\#$$

[+stress]

Stress, therefore, need only be written on those exceptional words for which stress is unpredictable. In every case, these are Spanish loanwords which are stressed as they are in Spanish. Common examples include ánima 'people' and marimba 'marimba (musical instrument)'. Some early borrowings have been relexicalized to follow the native pattern: keneya, with final stress, from Spanish guineo 'banana' which has penultimate stress. Native forms which do not take word stress in isolation include items such as the tense-aspect marker chi 'incompletive', clitics such as toq 'action away from the speaker', and particles such as kax 'and' and ti7 'demonstrative (here)'. Some of these may occur in sentence or word final position, however, and in such cases may take stress.

[winaq^h] winaq 'man'

[winaqti?] winaq.ti7 'this man'

In the context of sentences stress placement is a complicated process. Kanjobal, like English, and unlike Spanish, has a stress-timed rather than a syllable-timed

rhythm pattern. This means that different numbers of syllables may intervene between the principal stresses which are distributed by phrase rather than by word. In general, a phrase is marked by two principal stresses. One occurs on the final syllable and is followed either by a sharp drop in pitch, marking the end of a sentence, or by a gentle, trailing rise in pitch, marking the end of a non-sentential sequence. Yes-no questions have a similar final-syllable stress, but there is a sharp rise in pitch. If the final word is an exceptional item which carries non-final word stress, the stress is not displaced to the end but the final vowel is considerably reduced.

The other phrasal stress occurs one to three syllables after the beginning of a phrase on a major lexical root. This stress is optional on short phrases. Longer phrases may carry one or more secondary stresses.

Because stress does not have a phonemic function in KSE, it is available to be utilized in paralinguistic ways which are stylistic and idiosyncratic. For example, stress may be displaced for emphasis; but the rules governing this aspect of stress placement are not yet well understood.

The following examples illustrate various stress patterns and phrasal intonation. (Note that stem formatives in KSE are deleted in non-phrase-final position.)

1. Single word

[wɪʔonɪ]

w.i7.on.ɪ

w- '1sg'
 i7- 'carry (tv)'
 -on 'PIV'
 -i 'iv formative'

'I carry (it)'

2. Sentence-final phrase

[ʔulwɪʔonwɪnát^h]

ul.w.i7.on w.inat

ul 'return' -in 'PIV'
 w- '1sg' w- '1sg poss'
 i7 'carry' inat 'seed'

'...I return carrying my seed'

3. Non-sentential phrase

[kaxmasnubon ʔis sqʔáʔ]

kax max.θ.nub'on ix s.q'aq'

kax 'and' ix 'woman (NCI)'
 max 'comp' s- '3 poss'
 θ '3' q'aq' 'fire'
 nub' 'alight with a little light (P)'
 -on 'PIV'

'and she lit her fire'

4. Non-final stress

[jósom:arɪmpə]

jos.om marɪmpa

jos- 'work wood (tv)'
 -om 'agentive'

'maker of marimbás'

5. Yes-no question sequence

[kʔamčóčej cʔentumfn kʔamčóčej unɔq hʔanóʔ

kʔamčóčéjácéj hʔawakásj

k'am chi.Ø.och.ej ch'en tumin k'am chi.Ø.och.ej
jun.oq a.noʔ

k'am chi.Ø.och.ej a.chej a.wakax-

k'am	'neg'	tumin	'money' (Sp)
chi	'incomp'	jun	'one'
Ø	'3'	-oq	'partitive'
och-	'want (tv)'	a-	'2sg poss'
-ej	'tv form'	noʔ	'animal'
ch'en	'stone (NCl)'	chej	'horse'
		wakax	'cow' (Sp)

'Don't you want some money? Don't you want an animal? Don't you want a horse for yourself?--
A cow?'

1.1.2.2 Vowel harmony

Several derivational processes in KSE require that the affix vowel be sensitive to the height or backness of the stem vowel. This harmony is probably a productive process in Kanjobal word formation. Patterns of vowel harmony or inverse harmony have been described for many Mayan languages (Day 1973a:28f, 47; Furbee-Losee 1976:174) and are likely to have been part of the repertoire of proto-Mayan (Kaufman, personal communication).

Vowel harmony by height is displayed by those suffixes with underlying /o/ which is raised to /u/ in the environment of the high back vowel. No suffix has an underlying /u/. An example is /-obt'anej/ which derives transitive verbs from positional roots (3.1.2.4).

patx	'flat thing at rest (P)'
patxobt'anej	'move a flat thing'

but

jutx	'long thing (P)'
jutx[u]bt'anej	'pull a long thing'

Rounding harmony occurs with one of the formatives for transitive verb stems. A large class of transitive stems take a /-V7/ stem formative. The vowel of this suffix is determined by the backness (roundness) of the stem vowel: back vowels take identical [o] and front vowels take [a]. When the suffix follows /u/ stems, the o-raising rule described above applies to produce [u]. Examples follow:

tek'.a7	'thresh wheat'
il.a7	'see something'
a1.a7	'say something'
txon.o7	'sell something'
muq.u7	'bury something'

The most common example of inverse vowel harmony involves the suffix(es) -il/-a1 which occurs in all Mayan

languages with several uses. Often suffixes of this shape serve as a generalizing or abstract noun formative or mark a type of possessed noun (1.2.2.1). The conditioning is based on stem vowel height: [i] for roots with stem vowel /a/ and [a] for all other roots. Examples include:

yax	'green'	yaxil	'greenness'
q'in	'festival; time'	q'inal	'life'
k'u	'sun; day'	k'ual	'day's journey'
te7	'tree'	te7al	'tree-full'
son	'marimba'	sonal	'marimba-like'

1.1.2.3 h-insertion

As indicated above (1.1.1) [h] is not considered to be phonemic in KSE since it occurs only before certain vowel-initial pronouns and related person markers. It is more common in the Soloma dialect than in KSE. This phenomenon is most common in KSE on the clitic eb' '3rd person, human, plural' which is realized as [ʔɛb7] [hɛb7] and [ʔɛb7]. The rule is a minor one which applies only to this and a few other lexical items.

Since it is often missing in normal transition or realized in voiced form ([ɦ]), it may be part of a progressive weakening chain affecting initial glottal stop; [h]

is an occasional realization of [ʔ] in other environments as well, for example, between vowels or after /j/. All attested examples occur across morpheme boundaries.

[čicʔəjfišsék^h]

chi.ø.tx'aj ix sek

chi	'income'	ix	'woman (NCl)'
ø	'3'	sek	'dish'
tx'aj-	'wash (tv)'		

'she washes dishes'

1.1.2.4 Reduplication

Several processes of reduplication are productive in KSE as they are in many Mayan languages (Day 1973a:45; Hopkins 1967:82f; Berlin 1963). Many of these reduplicative processes affect only or primarily positional roots and will be discussed in the section on positional phonology (2.2.1).

There is both complete and partial reduplication in KSE. The most common complete reduplication is of the numeral root jun 'one' which functions as an indefinite article and, in reduplicated form, specifies plural distributive meaning.

jun.jun k'al on ay jun.jun j.on

k'al	'together' (<k'al.an 'tied (P)')
on	'1pl'
ay	'existential particle'
j-	'1pl poss'
on	'avocado'

'Each of us has his own avocado.'

Complete reduplication also occurs with other roots, especially with onomatopoeic roots in which Mayan languages are especially rich:

tuk.tuk 'woodpecker'

Emphatic and distributive meanings are also accomplished by partial reduplication of $-VC_2$ in CVC nouns although now this may not be a productive process. There are only a few examples. The noun root is not always known.

poqoq	'dust' (<poq 'soft earth, sand')
k'oxox	'tosted tortilla' (<k'ox 'hard (P)' ?)
chulul	'red sapote'
matzatz	'pineapple' (Barillas form)

This type of reduplication is similar to that found in the productive derivation of emphatic adjectives from positional roots: jop.an 'bright, shiny (P)' > jop.opi 'very bright'. This process and its semantic implications are discussed in 2.2.1.

Reduplication of the initial C in CVC roots forms intransitive iterative aspect verbs (always further derived by -on 'repetitive') from a class of affect words which imitate sounds or motion.

tz'aq	'sound of making tortillas'
tz'aq.tz'.on.i	'making such a sound'
jach	'sound of papers rustling'
jach.j.on.i	'making such a sound'

Similar reduplicative processes derive positional roots (see 2.2.1).

1.1.2.5 Glottalization phenomena

In section 1.1.1.2, the analysis of the glottal stop was presented and processes of deletion, weakening, and movement affecting glottal stop were alluded to there. In this section, these rules are described insofar as possible. Also, processes affecting sounds in the environment of glottal stop and glottalized consonants are described. The insertion of [ʔ] before initial vowels has been described in section 1.1.1.1.

1.1.2.5.1 Vowel glottalization

Vowels occurring in the environment of [ʔ] or [Cʔ] may themselves be produced with a very slow vibration or glottal constriction ([v]), sometimes called vocal fry or 'creaky voice'. This process is optional and is variably applied: more often if the vowel is preceded by a glottal, most often if the vowel is both preceded and followed by glottalized sounds. Some examples are

1. vowel follows a glottal stop

[ʔəy^hmijúnoq kwatřokwěřda]

ay.mi jun.oq cuatro cuerda

ay	'existential particle'
mi	'dubitative particle'
jun	'one'
-oq	'partitive'
cuatro	'four' (Sp)
cuerda	'unit of measure' (Sp)

'it is some four cuerdas (in width)'

2. vowel between glottalized sounds

[ʂiwilʂ^hnoqʔóqʔ]

xiwil.xa noʔ q'uq'

xiwil	'many'
xa	'already'
noʔ	'animal (NCl)'
q'uq'	'quetzal'

'already many quetzals'

[kanɛβyukʔaʔ]

kan.eb' y.uk'aʔ

kan	'four'
-eb'	'inanimates (GNumC)'
y-	'3 poss'
-uk'aʔ	'horn'

'his four horns'

Note that vowels which precede [+lo] consonants are not usually glottalized: /u/ in uk'aʔ.

The effects of glottalized consonants in the environment may remain after [ʔ] deletion (1.1.2.5.2).

Compare these phrases:

[čičáloj ʔiʃ yétoq^h yet^hbí]

chi.Ø.tzaloj ix y.etoq y.etb'i

chi	'incom'
Ø	'3'
tzaloj-	'be happy (iv)'
ix	'woman (NCl)'
y-	'3 poss'
-etoq	'with'
-etb'i	'husband'

'She is happy with her husband.'

[maʃcʔajissát^h]

max.Ø.tx'aj ix sat

max	'comp'
Ø	'3'
tx'aj-	'wash (tv)'
ix	'woman (NCl)'
sat	'face'

'She washed her face.'

In the first sentence the obligatory initial [ʔ] before vowels remains on [ʔiʃ] 'woman (NCl)'. In the second sentence, the glottal stop has been deleted but after glottalizing the vowel. Note that in the second of the vowel glottalization examples above, the [ʔ] in noʔ 'animal (NCl)' has been deleted but has not glottalized the preceding vowel.

The rule of vowel glottalization may be formalized as a variable phonological rule of the type described by Labov (1971:465-474), which specifies, by angled brackets, < >, that the glottalization is optional following

glottalized consonants and occurs most often when the vowel also precedes such a consonant.

$$V \rightarrow <[+glottal\ friction]>/ \underset{[+lo]}{C} \text{ --- } <C > \underset{[+lo]}{\quad}$$

This rule must be ordered before glottal stop deletion.

1.1.2.5.2 Glottal stop deletion

Glottal stop may be deleted as an optional process in KSE rapid speech. This may affect either [ʔ] proper or [ʔ] deriving from underlying /q'/. This deletion especially affects noun class markers (NC1) and clitics which begin or end with a vowel. The following examples are part of a connected text sequence and demonstrate the highly variable and optional nature of this rule. (The NC1 noʔ 'animal' is identical to the generic noun 'animal' and precedes it or any specific animal or animal product name. See 1.2.1.3 for further details about NC1.)

k'am.xa jun.oq xim awal y.uj [noʔnóʔ]
 ...y.uj [noʔ nowax noʔ jótomawál] [nomapə[~]c̣]

k'am	'neg'	y-	'3 poss'
-xa	'already'	-uj	'by'
jun	'one'	wax	'mountain cat'
-oq	'partitive'	jot-	'dig up (tv)'
xim	'grain (NC1)'	-om	'agentive'
awal	'cornfield'	mapach	'raccoon' (Sp)

'Now there isn't any corn (in the field) because of the animals, because of the mountain cat, animals that dig up the fields, the racoon.'

Obviously, the deletion of glottal stop is governed by complicated minor rules, perhaps marked for class membership or syntactic function, since it appears that words of certain syntactic roles or classes are more often subject to them, e.g. clitics and noun class markers.

In the next example, the deleted glottal is part of a directional clitic ek' 'passing by' which is a reduced form of the intransitive motion verb ek'.i (/ -i/ is an intransitive stem formative which is lost in non-phrase-final position).

[ʔaint^himasinδʔɛtɪkʔ]...

ayinti max.in.b'et.ek'...

ayinti	'I'
max	'comp'
in	'1sg'
b'et-	'go (iv)'
ek'	'pass by (dir)'

'I went'

Compare with the following example in which ek' functions as a main verb:

[yɪčʔɪk.ʔɔʔ]

y.et chi.θ.ek' k'uʔ

y-	'3 poss'	θ	'3'
-et	'of'	ek'-	'pass by (iv)'
chi	'income'	k'uʔ	'sun'

'during the day'

In this instance the initial glottal stop is still present but has glottalized the preceding consonant after the reduction and loss of the intervening vowel (1.1.2.9). (The preceding underlying consonants have undergone palatalization (1.1.2.7) and consonant reduction (1.1.2.8).)

1.1.2.6 Nasal assimilation

The alveolar nasal, /n/, assimilates to the point of articulation of following /p, b', k, k', q and q'/. It may be realized as [m], [ñ] or [ŋ]. This rule may be formulated as

$$\begin{bmatrix} +nas \\ +cor \end{bmatrix} \rightarrow \begin{bmatrix} \alpha & cor \\ \beta & back \end{bmatrix} / \text{---} \begin{matrix} C \\ \begin{bmatrix} \alpha & cor \\ \beta & back \end{bmatrix} \end{matrix}$$

which says that /n/ assimilates to place of articulation before non-continuent obstruents. As written this rule will assimilate /n/ to following palatal affricates and therefore overlaps the palatalization rule, discussed in the next section. These are examples of nasal assimilation.

[ʔay jumpakʔ]

b'ay jun pak'

'at one side'

[čiwut^himǂá]

chi.w.ut.in.b'a

chi	'incom'	in-	'1sg poss'
w-	'1sg'	-b'a	'self'
ut-	'do (tv)'		

'I do (it) for myself'

[ʔamimanǂkʔulál]

a.miman - k'ul.a]

a	'2sg poss'
miman	'large'
k'ul	'belly'
-al	'abstract nominalizer'

'your patience'

[yíbaŋqʔínal]

y.ib'an q'in.a]

y-	'3 poss'
-ib'an	'over'
q'in	'life; festival'
-al	'abstract nominalizer'

'all over the world'

1.1.2.7 Palatalization

Palatalization occurs in KSE but it is very light.

The palatalization rule affects $\begin{bmatrix} -l_0 \\ -strid \end{bmatrix}$ consonants preceding the $\begin{bmatrix} +hi \\ +cor \end{bmatrix}$ consonants, /ch, ch', xh/, and the $\begin{bmatrix} +hi \\ -back \end{bmatrix}$ vowel /i/; it may be formulated as follows:

$$\begin{array}{c} \text{C} \\ \left[\begin{array}{l} -\text{lo} \\ -\text{strid} \end{array} \right] + [+hi] / \text{---} \left\{ \begin{array}{c} \text{C} \\ \left[\begin{array}{l} +hi \\ +cor \end{array} \right] \\ \text{V} \\ \left[\begin{array}{l} +hi \\ +bck \end{array} \right] \end{array} \right\}$$

{[ĩ]} is a palatalized lateral.)

Examples follow.

[paçaṅyáyj̃i]

patx.an yayji

patx	'flat (P)'
-an	'P formative'
yayji	'having shape'

'it is flat'

[toĩčĩnc̃eq^hlayt^hεq^h]

toł chi.in.cheq.lay.teq

toł	'that'	cheq-	'send (tv)'
chi	'incom'	-lay	'passivizer'
in	'1sg'	teq	'action toward speaker (dir)'

'that I was sent here'

1.1.2.8 Consonant reduction phenomena

1.1.2.8.1 Cluster reduction

Consonant reduction applies after nasal assimilation and palatalization and reduces geminate clusters to long consonants and, in rapid speech, long consonants to single

consonants. The following examples of such progressive cluster reduction are given with derivations since the phonological effects in each case are complex.

1. CC underlying:

/chi.θ.b'es.on.kan ix xij/

chi	'incom'	kan	'remain (dir)'
θ	'3'	ix	'woman (NCl)'
b'es	'in order (P)'	xij	'bowl(s)'
-on	'pseudointransitive'		

čibesonkanišij

Nasal Ass	g	
CC+C-	š	ʃ
Stress	é	í

[čibésonkanišij]

'she puts bowls in place'

2. CC resulting from nasal assimilation:

/b'ay in.mam/

b'ay 'at/with' mam 'father'

báymám

Nasal Ass	m	
CC+C-	m-	
C-+C	m	
Stress	á	á

[báyimám]

'with my father'

3. CC resulting from palatalization;

/tʒet χi.∅.χi7 tʒet χi.y.uk'.ej/

tʒet	'what (interrogative)'
χi	'incom'
∅y-	'3'
χi7	'eat (tv)'
uk'-	'drink (tv)'
-ej	'tv form'

[tʒetʃiçi? tʒetʃyukʔɛj]

Pal	ç	ç
CC→C	çç-	çç-
C→C	ç	ç
V devoice	j	
Stress	ı̇	ɛ̇

[tʒetʃiçi? tʒetʃyukʔɛj]

'What does (he) eat? What does (he) drink?'

1.1.2.8.2 Sibilant reduction

The sibilant consonants /xh/, phonetic [š], and, to a greater degree the more complex /x/, phonetic [ʂ], are subject to point-of-articulation assimilation before /ch/ and the non-back fricatives, /s, xh/. This probably also takes place before /tʒ/ although no example has been attested in the corpus. As a result of this process, /x/ may lose its retroflexion completely and merge phonetically with other phonemes, as in the following examples.

[kasčiyáʔonʔis]

kax chi.y.aq'.on ix

kax	'and'	aq'-	'give (tv)'
chi	'incom'	-on	'pseudointransitive'
y-	'3'	ix	'woman (NCl)'

'and she gives (it)'

[aʔiščilowíʃ]

a.ix chi.∅.low ix

a	'indefinite demonstrative'
low-	'eat (iv)'

'the woman, she eats'

Such a reduction process is even more pronounced in rapid speech where /xh/ and /x/ will reduce (become less complex) when not in clusters.

[sinaq^hayn]

xhi naq ayin

xhi	'3 quotative'
naq	'man (NCl)'
ayin	'I'

'he said to me'

The rules for sibilant reduction are not well understood. Day (1973a:16) describes a regressive assimilation and reduction process which applies cyclically to sibilant and affricate clusters in Jacaltec. Further analysis in KSE may

reveal that x-reduction and other consonant reduction phenomena are part of a similar process and may be collapsed into one rule.

1.1.2.9 Vowel reduction

Vowels in KSE are subject to many reduction processes, especially in rapid speech. They may be lowered, devoiced, or deleted. Their length may also be affected. They may be shorter than usual (especially before glottal stop) or they may be lengthened under stress or for paralinguistic emphasis. Length of vowels appears to be primarily conditioned by extra-linguistic factors and no further attempt will be made here to describe it accurately. However, three other rules affecting vowels will be given.

1.1.2.9.1 Vowel lowering

High vowels in KSE are relaxed and lowered (i.e. /i/ → [ɪ] and /u/ → [ʊ]) in the environments of following /l/ or uvular consonants. This lowering occurs even under stress and even when [+hi] consonants are elsewhere in the environment.

$$V \rightarrow [-tense] \ / \ \left. \begin{array}{c} C \\ [+lat] \\ C \\ [+back] \\ [-hi] \end{array} \right\}$$

Examples:

[y^hičam^hɪl]

y.icham.ɪl

y-	'3 poss'
icham	'old man'
-ɪl	'abstract nominalizer'

'(her) husband'

[yɪl^hɪ]

yili

'color'

[q^hʔq^hʔ]

q'uq'

'quetzal'

1.1.2.9.2 Vowel devoicing

Devoicing of vowels after a voiceless consonant is extremely frequent, especially when the consonant is fricative. This phenomenon is not obligatory and, like vowel gottalization (1.1.2.5.1), is variably applied. It is most common when voiceless consonants both precede and follow the vowel. (In these examples, note additional cases of consonant reduction.)

[kasčit^hój naq^h]

kax chi.β.toj naq

kax	'and'	toj	'go (iv)'
chi	'incom'	naq	'man (NCl)'
β	'3'		

'and he goes'

[sɔlsimɔwɔltɔʔ]

xol xim w.awal.tu7

xol	'among'	-awal	'cornfield'
xim	'grain (NCl)'	tu7	'dem (there)'
w-	'1sg poss'		

'among my cornfields'

[kasč^hekʔ sututuq^h]

kax chi.β.ek' sut.ut.oq

kax	'and'	sut	'flat, round (P)'
chi	'incom'	-ut	'Redup -VC ₂ intensive'
β	'3'	-oq	'subord'
ek'	'pass by (iv)'		

'and it goes round and round'

This rule is easily formulated.

$$V \rightarrow <[-\text{voice}]> / \begin{matrix} C \\ [-\text{voice}] \end{matrix} \text{ — } < \begin{matrix} C \\ [-\text{voice}] \end{matrix} >$$

Note that this process operates in precisely the same way and in the same environment as another case of phonetic 'spread' phenomena, namely vowel glottalization (1.1.2.5.1).

1.1.2.9.3 Vowel deletion

Vowels are optionally deleted in KSE, especially from unstressed clitics. This process is probably part of a larger tendency to avoid vowel clusters across morpheme boundaries, but also results from the stress pattern in KSE. Vowel clusters are not entirely absent from the grammar but are rare (1.1.3.3.1). Various patterns of vowel dropping may be illustrated by the single-syllable aspect markers, which regularly lose vowels even in careful speech.

chi 'incomplete'

[č̣æ̣ɛ̣toj <i]

chi.ach.toj.i

ach '2sg'
 toj- 'go (iv)'
 -i 'iv formative'

'you go'

oq 'future'

[ginqʔanaʔ]

oq.in.q'an.aʔ

in '1sg'
 q'an- 'help (tv)'
 -aʔ 'tv formative'

'(he) will help me'

max 'completive'

[ʃwəḅɛ̣j]

max.w.ab'.ej

w- '1sg'
 ab'- 'heat (tv)'
 -ej 'tv form'

'I heard (it)'

Max regularly loses the entire first syllable when the vowel is lost. The conditioning for this rule is complex and undoubtedly syntactic in large part.

In rapid speech, the vowel deletion phenomenon is particularly common and often produces consonant clusters which would be completely unacceptable in less casual speech.

[çtójx]

chi.θ.toj ix

'she goes'

[səlt^hnənʃin]

xal tinani xin

xal 'emphatic particle'

tinani 'now'

xin 'well, then, pues'⁴

'well, now'

1.1.3 Distributional Constraints

In this section the restrictions on occurrence of phonemes in KSE will be discussed. These restrictions include those on the combination of phonemes into clusters, those on the combination of phonemes in roots, and those on the general shape of roots themselves. Information on frequency phenomena pertaining to KSE phonemes is also briefly summarized in this section.

1.1.3.1 Morpheme structure

KSE roots of all classes are predominately CVC or CV in shape. This is the overwhelming pattern in all Mayan languages and is a hypothesized feature of proto-Mayan.

Nouns and attributive roots are CVC or CV. Some nouns have rarer shapes such as CVCVC: sanik 'ant', xajaw 'moon', and taqin 'dry'; CVCV: tzima 'gourd bowl'; and VC: ich 'chile', ix 'woman' and ak 'new'. A very small number of noun roots have the shape V7: a7 'water' and -e7 'tooth'.

All intransitive verb roots carry a stem formative, /-i/, in citation form which is lost in some derivations or in phrase formation. The roots themselves are primarily CVC: way- 'sleep', kam- 'die'. Intransitive directional verbs of motion which also function as verbal clitics are primarily VC in shape: aj- 'go up', ul- 'return'.

Intransitive verb roots are commonly CVC or CV(7). The former require one of several possible formative suffixes. Transitive verb roots include maq'- 'hit something', lo7 'eat', xu7 'blow on'. The irregular quotative verb root chi occurs without a final glottal stop and without a stem formative. Other transitive verbs are VC: iq- 'carry', och- 'want', ab'- 'feel, sense, hear'.

All but a tiny handful of positional roots are CVC as are all onomatopoeic roots such as tzin 'sound of a

bell' and sog 'sound of a large snake'. The distributional patterns observed in the positional class are discussed in detail in section 2.1.

Particles and clitics in KSE are also CV or CVC: ta 'if', xa 'already', k'am 'neg part', kax 'and'. All personal pronoun formatives are VC: in 'I'; on 'we'. Numerals include the shapes CVC: kan 'four'; VC: ox 'three'; CVCVC: waxaq 'eight'; and, in one case, V: o 'five'. (This morpheme is usually realized with a glide when followed by a V-initial suffix. Compare [oy]eb 'five inanimates' and [o]k'on 'five animals'. In the practical orthography these glides are written as if they were phonemic.)

Suffixes may be CV, VC, or CVC in shape: -b'i 'inchoative intransitivizer'; -an 'positional formative'; -b'al 'instrumental'. Prefixes may be C, CV, VC, or V in shape, all illustrated by possessive markers: w- '1sg, V-initial'; ko- '1pl, C-initial'; in- '1sg, C-initial'; and a- '2sg, C-initial'.

There is a large number of longer indivisible forms in every stem class but these can be assumed to be frozen compounds, frozen derivatives, or borrowings. In the case of frozen forms, morpheme cuts are impossible in a synchronic grammar although many can be identified historically.

Examples of these longer forms include meltz'oj- 'return (iv)', echb'an- 'wait for (tv)', wojb'atz' 'type of large monkey'. Many older Spanish loans as well as loans from other sources often have unusual canonical shapes although the item may be accepted by speakers as completely native. See section 1.1.4 for a discussion of loan phonology and Appendix B for a list of common loanwords.

1.1.3.2 Cooccurrence restrictions

All vowels occur in root-initial, medial, and final position. With two exceptions, all consonants occur in all positions as well: /q/ does not occur in morpheme-initial position and /r/ has not been found initially in any clearly native roots. C_1VC_2 roots in which the consonants differ only in glottalization are rare in KSE but do occur: ch'ich- 'scattered (P)', q'eq 'black', kok' 'small (of animals)'. Such roots are uncommon in all Mayan languages and absent entirely in some (Hopkins 1967:49).

Affricates do not occur in CVC roots when the other consonant is also an affricate unless they are both produced at the same point of articulation. For example, tz'utz' 'coatimundi' occurs but *tzuch does not. The [-strident] fricatives have a similar restriction: xixoj 'smell of fresh meat or blood' occurs but *saxh does not.

1.1.3.3 Clusters

1.1.3.3.1 Vowel clusters

Clusters of two vowels are permitted in KSE although they are not common. They often result from [ʔ]-deletion (1.1.2.5.2). Most potential clusters are reduced by the loss of one of the vowels (1.1.2.9.3). For example, the incompletive aspect marker chi loses its vowel when affixed to a vowel-initial stem. Compare

[čɔnɓeyí]

chi.on.b'ey.i

on	'1p1'
b'ey-	'walk (iv)'
-i	'iv formative'

'we walk'

and

[číkomaʔaʔ]

chi.ko.maq'.aʔ

ko	'1p1'
maq'-	'hit (tv)'
-aʔ	'tv formative'

'we hit (something)'

Vowel clusters are also broken up phonetically by the formation of transition glides. These have been discussed elsewhere (1.1.1.2). Identical contiguous vowels

are reduced in discourse to one vowel. If the vowel sequence results from segment loss the remaining vowel is more likely to remain long: mayal > [ma·l] 'already'.

1.1.3.3.2 Consonant clusters

Clusters of two consonants are common in KSE across morpheme boundaries. They result from compounding or affixation. In some cases it is not possible to separate the morphemes, and the resulting clusters must be considered root clusters: -uxhtaq 'man's brother'.

No restrictions have been found on what consonants can cluster. Fricatives as C₁ in clusters are very frequent because of the high frequency of max 'completive' and, for some speakers, s- '3 pl possessive'. Sibilant clusters however are especially prone to reduction processes (1.1.2.8).

Initial clusters in early Spanish loanwords were reduced by the insertion of some vowel (1.1.4) but many more modern loans do have initial consonant clusters. Initial CC sequences do not occur underlyingly in native KSE roots.

In natural speech, clusters of as many as three consonants may occur across morpheme boundaries. Examples taken from text include the following which do not result from any reduction processes. Examples of clusters which

do result from vowel reduction are given in section
1.1.2.9.3.

[ʔiʂsqʔaʔ]

ix s.q'aq'

ix	'woman (NC1)'
s-	'3 poss'
q'aq'	'fire'

'her fire'

[yɛtslobɛj]

y.et s.lob'.ej

y-ɛs-	'3 poss'
-et	'of'
lob'.ej	'food'

'food for him'

[jɔjunssub]

jun.jun s.xub'

jun	'one'
xub'	'thigh'

'each of his thighs'

[iʃaŋctit^hwɪn]

ij.an chi.ɸ.tit w.in

ij	'having the point against (P)'		
-an	'P form'	tit-	'come (iv)'
chi	'incom'	w-	'1sg poss'
ɸ	'3'	-in	'against, at'

'(it) comes against me'

1.1.3.4 Frequencies

Frequency counts have been taken on KSE phonemes in running text, based on underlying forms. Each morpheme was counted only once even if it occurred several times. Borrowed morphemes were eliminated in calculating absolute phoneme frequencies. Glottal stops were not counted. Additional frequency data on phonemic segments in the positional class are reported in section 2.1.2 and complete results of frequency counts are included as Appendix A.

In general, the results for running text show, not unexpectedly, that the most complex consonants are the least frequent. These include all glottalized consonants except /b'/. Even less common than these are /xh/ and /r/. Both are common in loanwords, however. The low occurrence of /xh/ is quite startling since the more complex retroflex fricative has an extremely high rate of occurrence. Of the five most frequent consonant phonemes three are sonorants: the two nasals and /l/. The others are /t/ and, interestingly, /x/. Unlike other /c'/s, /b'/ is rather common.

Among the vowels, /a/ occurs three times as often as any of the others; /o/ and /i/ occur an almost equal number of times. /e/ and /u/ also occur with equal frequency but a third less often than /o/ and /i/.

Frequency data are hard to interpret and are subject to a large number of variables. Nevertheless, frequency of sounds is undoubtedly related in some way to relative naturalness in phonology and other questions. The data for KSE are made available here in the hope they may be useful to investigators interested in such questions.

1.1.4 Nativization and Loan Phonology

Although Spanish is the source for the greatest number of borrowings into KSE and other Mayan languages, it has not been the only one. Before the Conquest Mayan speakers were in contact with speakers from language families such as Uto-Aztecan (Nahuatl), Zapotecan, and Mixe-Zoque. Kaufman (1964:131-135) discusses non-Spanish borrowings throughout the Mayan family. Several items that he mentions are present in modern KSE and include such forms as kakaw 'cocoa' from Nahuatl and asun 'cloud' and unin 'child' both from Mixe-Zoque. These together with a large number of early Spanish loans are not recognized by native speakers as other than native KSE words. None includes phonological segments which are non-Mayan and are only identifiable by their structure or by linguistic comparisons done with the source languages.

Words of Spanish origin are, of course, the most frequent loans into KSE as into other Mayan languages. The borrowing process has been a constant one for over four hundred years; and, consequently, there are degrees of assimilation or nativization (cf. Kaufman 1971:12f) as well as examples of reborrowing. Among the very early borrowings are a large set of Spanish proper names which have completely replaced indigenous names. These, together with the names of animals and products introduced by the Spaniards, illustrate a series of assimilation processes affecting the non-Mayan segments. Many of these processes continue to be observed today in the speech of monolingual and bilinguals. Even functional bilinguals have many of these assimilation processes both while speaking Spanish and on loanwords in KSE. The most common of such processes are described below.

1. Substitution of /p/ for Sp. [f]: KSE pínka 'plantation' < Sp finca; KSE opísyo 'work' < Sp oficio. This is probably the most common substitution heard in modern KSE and other Mayan languages. Its pervasiveness is probably not unrelated to the high frequency of [f̥] a voiceless bilabial-labiodental articulation of /f/ in Guatemalan Spanish (cf. Predmore 1945).

2. Substitution of the glottalized stop series /b't'k'/ for Sp. voiced stops [bdg]: KSE mink'a 'Dominga' (see section 1.1.1.1 for additional discussion and examples).⁵

This most often affects the velar stop although [bʔarku] 'boat' is attested. Spanish intervocalic stops, realized as fricatives, are often deleted when borrowed into KSE: soldao 'soldier' < Sp. soldado. This is not explainable as the borrowing of Spanish 'd-less' forms since Guatemalan Spanish not only does not delete intervocalic d but actually often retains it as a stop rather than as a fricative.

3. Substitution of /l/ for Sp. [r]: KSE kalnel 'sheep' < Sp. carnero; KSE malta 'Marta' (see below for counter examples).
4. Substitution of /w/ or /p/ for Sp. [b] and [β]: KSE wuro 'burro'; KSE xhepel 'Isabel'; KSE chiwo 'goat' < Sp. chivo.
5. Cluster simplification by two methods:
- a) C deletion: KSE matal 'Magdalena'; KSE kaxhlan 'chicken' < Sp. castellano 'Castillian'.

- b) V insertion: KSE palas 'Francisco'; KSE poratonixh 'banana' < Sp. plátano(s); KSE palata 'plate' < Sp. plato. Note that in the second example, Sp. l has become KSE r (cf. number 3 above).
6. Substitution of /š/ for 16th century Sp. /š/ and /ʃ/ (modern orthographic j and s): KSE kamixh 'shirt' < Sp. camisa; KSE xhapon 'soap' < Sp. jabón; KSE xhimen 'Jimenez'.
7. Elimination of post-stress syllables: KSE laps 'pencil' < Sp. lápiz; KSE pasil 'Basilio'; KSE eīnan 'Hernández'.

None of these processes are completely universal; there are counterexamples for each one. The last two are most characteristic of early borrowings: the first because sound shifts in Spanish have produced a fricative series which is more nearly parallel with that of KSE and therefore more easily assimilated; the second process tends to be less often applied today because KSE speakers accept non-native stress patterns more easily, although counterexamples among early borrowings are not difficult to find (Mínk'a, ánima). Even among the earliest borrowings, such as proper names, these 'substitution rules' are not completely regular and there are many aspects of KSE loan phonology

which escape explanation. One of the most interesting of these is the often unexpected realization of Spanish vowels as well as unexpected vowel insertions. These phenomena are illustrated by the following two items which are early borrowings now considered to be completely native and have been regularized to final-syllable stress.

KSE poratonixh 'banana' < Sp. plátano(s)

KSE texhelixh 'scissors' < Sp. tijeras

Campbell (1976:96) has recently reported on a study of native judgments regarding the sources of loanwords in Kekchi and concludes that such intuitions and other factors in loan phonology can be a valuable source of evidence in the validation of phonological descriptions. Comparative data on linguistic acculturation can also be of importance in historical description. While these interesting questions are outside the scope of the present description, a list of more than fifty proper names and forty other loanwords are included as Appendix B.

It is worth noting that most Spanish loans into KSE are nouns, or particles such as entons 'then' < Sp. entonces. The numbers above twenty are often borrowed. Borrowed verbs are very rare, and there are no loanwords among the positionals.

1.2 Grammar

The grammatical system of KSE will be discussed primarily in terms of the major grammatical categories which are reflected in its morphology and syntax. These categories crosscut the word classes which can be identified on the basis of a set of inflectional and derivational criteria as well as on functional grounds. These processes are also described here together with other processes of word and phrase formation. Like the phonological sketch just presented, this grammatical outline is neither exhaustive nor detailed. The intention here is merely to provide the overview necessary to the understanding of positional roots as they function within the larger KSE system.

1.2.1 Grammatical Categories

From the organizational categories which can be marked in a human language, each one has a set of categories which will be pervasively marked in one way or another throughout the grammar. The resulting language-specific system is an integrated one in which these semantic and grammatical categories crosscut and cross-reference each other to reinforce the overall grammatical themes. In broad outline, and perhaps even in some details, many of these categories are probably not the result of arbitrary

invention but are universally present in human language either because of cognitive apparatus or restrictions created by the human condition. However, the particular emphases or permutations affecting such categories are known to vary considerably from one language to another. The most pervasive and obligatory of these recurrent, language-specific categories have been called 'linguistic postulates' by Hardman (in press) and it has been suggested by Hardman and others (England 1975:230f) that they are reflected in speakers' perceptions and cultural behavior. This question will be addressed in greater detail in Chapter 5 of the present study. In this section the most important of these pervasive grammatical categories in KSE will be presented from a purely linguistic perspective. In general terms, the categories described here for KSE are common to all Mayan languages and are likely to have been part of *PM structure as well.

1.2.1.1 Person and possession

1.2.1.1.1 Person

The person system of KSE is simple; it crosscuts the number marking discussed in the following section. Three persons are marked morphologically and syntactically; number is relevant morphologically only for first and

second (see section 1.2.1.2). Person is marked in the independent pronouns, the verbs, and the possessive system. Person is obligatorily marked in all verb phrases.

There is a high degree of overlapping in the morphological marking of person. For example, the base morphemes in the independent pronouns are also the prefixed markers for subjects (agents) of intransitive verbs and the objects (patients) of transitive verbs. These markers have been known traditionally as Set B markers in Mayan studies. The prefixes which mark possession on nouns are also those which indicate transitive verb subjects. These have been called Set A markers. Such a distribution of markers within the verb system is not uncommon and is typical of the so-called ergative system. However, the duplication of markers such as is found in Mayan is somewhat rarer. (Many recent papers have appeared which deal with Mayan ergativity; see especially Pinkerton 1976, Craig 1976, Norman and Campbell 1976, and Smith-Stark 1976.)

There are no polite person forms nor is there a distinction between inclusive and exclusive in KSE although such categories are found in other Mayan languages such as Mam, Aquacatec and Quiché, primarily as innovations (England 1973; Larsen 1976).

The morphemes which mark person in KSE are given below.

Subjects of iv/objects of tv

in	'1sg'
ach	'2sg'
on	'1pl'
ex	'2pl'

Noun possessors/subjects of tv

With C-initial stems:

in	'1sg'
a	'2sg'
ko	'1pl'
e	'2pl'
ʔs- <i>nis-</i>	'3'

With V-initial stems:

w-
ʔ ⁶
j-
ey-
y-

Note that third person is the unmarked person throughout the system in terms of affix morphology. Third person is only consistently marked before vowel-initial nouns and transitive verb stems. The prefix for consonant-initial stems in third person is most often zero although careful speakers do produce an occasional /s-/; the full form, /is-/ is extremely rare. In spite of this morphological under-marking, third person is marked syntactically by the pronominal use of noun class markers of which the most common are naq 'male human' and ix 'female human'. They may be glossed 'he' and 'she' with no distortion. As a result of the syntactic pattern of full subject expression before the verb and pronominal expression following the verb, third person is in fact always marked and even redundantly so.

The extensive subcategorization of nouns by means of the noun class marker system actually reveals a striking semantic and syntactic premium on third person marking in KSE.

The emphatic independent pronouns are formed from the person marker bases according to the following pattern:

a 'existential' + person marker + $\frac{ti7}{tu7}$ 'demonstrative'

Independent pronouns (full form)

ay.in.ti	'I'
ach.ti	'you, sg'
ay.on.ti	'we'
ay.ex.ti	'you, pl'

All pronouns have been attested without the final demonstrative. The existential particle ay is absorbed into the second person singular marker in the full form but when the final demonstrative is deleted, the production of ayach confirms the underlying pattern.

While there is no unique person morpheme for third person, a third person independent pronoun can be constructed with the appropriate noun class marker used as a pronoun and followed by the definite demonstrative: naq.tu7 'he' ix.tu7 'she' - eb'.naq.tu7 'they, male'. The short plural form, a-eb' 'they', is common.

Independent pronouns are used for emphasis and to indicate indirect objects (in which case the final demonstrative

does not occur). The pronoun base itself is also used as the absolutive pronoun in equational or identification sentences (see also section 1.2.1.5). Examples of the use of these pronouns follow.

1. Pronoun for emphasis:

ayinti max.in.b'et.ek'

ayinti	'I'	b'et-	'go (iv)'
max	'comp'	ek'	'pass by (dir)'
in	'1sg'		

'I went by'

2. Pronoun as indirect object:

xhi naq ayin

xhi	'quotative (3)'
naq	'man (NCl)'
ayin	'I'

'he said to me'

chi.w.al ayach

chi	'incom'	al-	'say (tv)'
w-	'1sg'	ayach	'you, sg'

'I say to you'

3. Pronoun base in identification sentence:

ayexti maqtxel ex

'You (pl), who are you?'

mexhtol on

'we are teachers'

winaq in

'I am a man'

In verb constructions, the marking of subject and object is obligatory either through morphological or syntactic processes. Because the third person marker for objects on transitive verbs is β , the object is usually indicated by the absence of any mark. Third person subjects, however, are always identified by a pronoun referent. When both subject and object are morphologically marked within the verb, the object marker precedes.

max.ach.in.maq'.a7

max	'com'	maq'-	'hit (tv)'
ach	'2sg'	-a7	'tv formative'
in	'1sg'		

'I hit you'

chi.ex.j.och.ej

chi	'incom'	och-	'want, love (tv)'
ex	'2pl'	-ej	'tv formative'
j-	'1pl'		

'We love you all'

1.2.1.1.2 Possession

Possession is perhaps the most frequently marked grammatical category in the language since in addition to marking ordinary personal possession, the possessive grammatical construction is exploited to express a large number of other grammatical relations and participates in several word formation processes. It has been suggested that this important category in Mayan has, by its pervasive morphological marking, had an effect on the Spanish spoken in areas where there is close contact with Mayan (Martin, 1976).

The possessive construction is used in the formation of numerals.⁷ The number system is vigesimal and counts in sets of twenties. Numbers between the multiples of twenty are based on the next highest unit in a construction which is literally 'so many of the next twenty'.

jun s.k.a.winaq 'one of the second twenty, i.e. 27

ox.lajon.eb' s.ka.winaq 'thirteen of the second twenty,
i.e. 33'

jun	'one'	winaq	'twenty' (identical to noun root for 'man')
ka	'two'		
ox	'three'	s-	'3 poss'
lajon	'ten'	-eb'	'inanimate (GNumC)'

Ordinal numbers above 'first' are also formed by a possessive construction: the simple possession of the cardinal.

<u>s.kan</u>	3 poss.four	'fourth'
<u>s.lajon</u>	3 poss.ten	'tenth'

Both these patterns are posited for *PM by Smith 1976:55.

Possessive predication constructions are used to express certain sensations as well as normal object possession in KSE. The formula for predicating possession is the following:

existential particle + (article) + possessor.noun

ay (jun) in.chej

'I have a horse'

ay in.wajil

wajil 'hunger'

'I am hungry'

Many other grammatical relations such as location, agency, and accompaniment are also expressed in KSE (and other Mayan languages) by means of the so-called relational nouns which take an obligatory possessive marker which specifies the 'object' of the relationship. A partial list of members of this class and examples follow.

-ib'an	'on top of'	w.ib'an	'on top of me'
-alan	'below'	j.alan	'below us'
-in	'against, around'	y.in	'against 3rd person'
-intaq	'behind'	entaq	'behind you, sg'
-et	'of'	w.et	'mine'
-etoq	'with'	ey.etoq	'with you all'
-uj	'by'	y.uj	'by 3rd person'
-ul	'inside'	y.ul	'inside (it)' (only form)
-xol	'among'	ko.xol	'among us'
-sataq	'in front of'	in.sataq	'in front of me'
-tilaq	'at the edge'	is.tilaq	'at its edge'
-tz'eyil	'at the side'	in.tz'eyil	'by my side'
-b'a	'self (reflexive)'	in.b'a	'myself'

In some cases the relational noun is derived from a clearly identifiable common noun:

-sataq	'in front of'	<	sat	'face'
-tilaq	'at the edge'	<	ti	'mouth'

At least one relational noun is apparently related to a positional root:

-tz'eyil	'at the side'	tz'ey.an	'inclined or on a side (P)'
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The two relational nouns which appear to have the shape of positionals (-ib'an and -alan) are not positional roots nor

do they derive as positionals. Underived positionals are never possessed.

The possessive relationship and the behavior of noun roots and stems under possession is the basis for a morphologically reflected subdivision of KSE nouns. Similar subclasses are found in other Mayan languages, for example, Aguacatec (Larsen 1976:115-116) and Mam (England 1975:77-80). The subclasses in KSE include the following:

1. Never possessed nouns

Some nouns are never possessed primarily because they are not considered possessable semantically. These include personal and place names, syntactically defined nouns such as numeral classifiers (3.2.1) and certain natural phenomena nouns.

satkan	'sky'
asun	'cloud'
Lamil	'Ramírez'
kwerda	' <u>cuerta</u> (unit of measure)'
k'onan	'a stiff blow (numeral classifier)'

2. Nouns in -ej

These nouns are bound forms (usually roots which in the absolute, or unpossessed, form are suffixed

by -ej. This suffix drops under possession. Nouns in this class refer to objects usually possessed by humans including body parts, kin, clothing, and some food terms. Not all terms in these semantic classes are members of this noun class, however.

aqan.ej	'leg'
w.aqan	'my leg'
kol.ej	'blouse, <u>huipil</u> '
in.kil	'my blouse'
ikan.ej	'uncle, aunt'
j.ikan	'our uncle'
poy.ej	'head strap'
a.poy	'your head strap'
en.ej	'toasted corn'
y.en	'his toasted corn'

3. Nouns which add -Vl

Many nouns add a suffix of the shape -Vl when possessed. The morphophonemics of the suffix involve vowel harmony and are described in section 1.1.2.2. Many of these nouns refer to objects which are not really 'possessable' such as natural phenomena. Usually in such cases, the construction cannot refer to a real object but rather to a picture or representation of it.

ab'ix	'story'
y.ab'ix.a1	'his story' ('the story about...')
waykan	'star'
in.waykan.il	'my (cloth, drawing, etc.) with figures like stars on it'
najat.il	'distance' (derived from najat 'far' by the homophonous abstract nominalizer described in 1.2.2.1.2)
s.najat.il.a1	'his distance'
majan	'loan'
s.majan.il	'interest' (on a loan)

Apparently Kanjobal is unique in having the semantic interpretations of 'unreal' or 'illusion' for possessive constructions with -V1, or else the existence of similar semantic patterning in other Mayan languages has gone unnoticed. Repeated elicitation for constructions of this type produced the same semantic interpretations. Additional examples follow:

ay s.xumak.il an kol.ej

xumak	'flower'
an	'plant (NCl)'
-kol	'blouse, huipil'
-ej	'marker of obligatorily possessed noun'

'there are flowers (represented) on the blouse'

s.na.il te7 kaxha

na	'house'
te7	'tree (NC1)'
kaxha	'box'

'a box with (shapes like) houses on it'

It is hypothesized here that this illusionary possession is a reflection of an underlying KSE distinction between realized/unrealized which is also marked in verbal constructions. This putative semantic category is treated further in section 1.2.1.5. For other properties of possession plus noun plus -y] constructions, see below.

4. Nouns which undergo no change

Most nouns neither add nor lose suffixes under possession; they are free forms.

tx'i7	'dog'
e.tx'i7	'your (pl) dog'
xhila	'chair'
ko.xhila	'our chair'

Some nouns belong to two different classes. For example, some nouns which name parts of things require -ej if they are understood as potentially possessed by humans or are invariant if they refer to parts of animals or objects.

sat.ej	'face'
in.sat	'my face'

sat	'surface'
q'ab'.ej	'hand'
s.q'ab'	'his hand'
q'ab' te?	'branch'

Some never-possessed nouns such as waykan 'star' can be possessed as members of class three (+ -V1) with the understanding that only a representation of the object is meant. And some noun pairs exist which have approximately the same meaning but different forms in possessed and unpossessed constructions.

na	'house' (group 4)
-atut	'house' (group 2, always possessed)

Smith (1976:51) hypothesizes that at least some morphologically marked subclasses of nouns existed in proto-Mayan, also based on behavior under possession. Little work has been done on the reconstruction of the classes. The distribution of items among the classes in modern Mayan languages suggests that a semantic basis underlies the division. Although alienable/inalienable and intimate/casual possession distinctions have been suggested as the semantically relevant categories (cf. Kaufman 1974:63), there are some problems with such an analysis. The most important ones arise as a result of the observation that

class membership is not rigid and, as demonstrated above, nouns may seem to change class. Larsen 1976 has presented a detailed analysis of possession in Aguacatec, a Mameam language of Eastern Mayan. He finds similar freedom in the class membership of Aguacatec nouns and much of his data on the syntactic behavior of nouns under possession are very similar to the KSE data. For example, Larsen notes that most nouns can take -V:l (Aguacatec cognate to KSE -Vl) under some circumstances such as in possessed noun plus noun constructions. In Kanjobal constructions such as the following illustrate similar properties

ay s.chej.al no? wakax tu?

'There are horses mixed in with those cows'

(literally, 'those cows have some horses')

Larsen concludes on the basis of the morphological evidence that the distinction being marked on nouns by means of the suffixes may be analyzed primarily in terms of a set of assumptions about the ability of objects to be possessed by humans. Larsen demonstrates that the syntactic evidence from the possessive constructions in which nouns from several classes may appear reveals that the primary distinction relevant to the semantics of possession in modern Mayan is one of pertinence vs. accompaniment, that is, one which is more purely spatial in nature than the alienable/inalienable distinctions previously suggested. Such an

analysis is entirely consonant with the KSE data, and moreover, is particularly appealing since, although Larsen does not discuss this aspect, it can be viewed as additional support for the strength of another grammatical and semantic category, that of location and spatial reference. In section 1.2.1.2, direction and location is shown to be one of the strongest categories in all of KSE grammar and in Mayan grammar more generally and in section 4.1.1 is shown to be especially relevant to the positional root class. The syntactically marked distinctions described by Larsen for possessive constructions are but further evidence of the integration of a system in which spatial proximity and locational relationships are especially important semantic concepts.

The morphological distinctions in the noun class which are based on possession, on the other hand, reinforce a semantic division between human and non-human which seems to crosscut other categories in KSE grammar as well. Such a category operates to de-emphasize third person in the person marking system (1.2.1.1), to define a subclass of human nouns through the use of the general numeral categorial suffixes (GNumC) and further subdivide that class by the noun class markers (NC1) both of which are described in section 1.2.1.3. Moreover, the human/non-human distinction is also a critical factor in the semantics of positional roots.

In summarizing this section on the nature of person in KSE, we conclude that three persons are marked in the grammar and that person specification is a major part of the KSE morphological system of both nouns and verbs. On nouns, person marking is primarily an aspect of possessive constructions and it has been demonstrated that possession is one of the most important grammatical relationships in the language, exploited in a large number of constructions which do not involve literal possession. Furthermore, possession combines with a human/non-human distinction also present in the grammar to define morphologically marked subclasses of nouns, and, in many syntactic environments, reinforces another important grammatical category, location.

1.2.1.2 Number

Number is not a morphologically strong category in KSE, but a consideration of the entire grammatical system reveals that, far from being a minor attribute in KSE sentences, number is an important grammatical category and a constituent of every sentence in context although its significance is not revealed solely through morphology.

The distinction between singular and plural for first and second person is marked morphologically in every verb in KSE, including imperatives (1.2.1.4), and in every

possessive and absolutive construction (1.2.1.1). For purposes of review, the person markers are listed below.

Set A (poss and tv agent)			Set B (free bases and iv agent)	
	/_C-	/_V-		
1sg	in	w-		in
2sg	a	β		ach
1p1	ko	j-		on
2p1	e	ey-		ex
3	β	y-		β

Third person plurality for humans is indicated syntactically by the use of an additional formative, eb', which is commonly found in constructions with the third person pronominal clitics: eb'naq 'they, male' and eb'ix 'they, female'. Such a construction is not absolutely obligatory since it may be deleted (where the context is clear) by the same rules which delete other independent pronouns. Nevertheless, plurality of third verbal person is nearly always so marked even where context makes it redundant. For example, when the following fragment occurs in a text, the plurality of the subject/topic has been well established in the immediately preceding sentence.

plural max.β.ok way.an eb', plural max.β.way.aj eb'

plural	'delay'	way-	'sleep (iv)'
max	'comp'	-an	'nominalizer'
β	'3'	aj	'go up (dir)'
ok-	'enter (iv)'	eb'	'human pl'

'they delayed in going to sleep, they slept very late'

A few adjectives have distinct plural forms which probably reflect earlier productive derivational processes. The most common of these adjectives is miman 'large' with its plural mimeq '(many) large'. Note that the 'plural morpheme' in this case is identical to the productive plural for imperatives (1.2.1.4) and is no doubt a reflex of a more general system of number marking in early Mayan (cf. Smith 1976:54).

Number is not marked directly on most nouns, but is regularly marked syntactically by various quantifiers and numerals: xiwil 'many', masanil 'all, everything, everyone', and puch 'many' among others. The particle tzan also indicates the plurality of nouns. It occurs frequently with the numeral jun 'one' to produce jun.tzan 'some'.

<u>jun te mansan</u>	'one tree-product (NCl) apple'
<u>jun.tzan te mansan</u>	'some tree-product (NCl) apples'
<u>tzan winaq</u>	'the men'

Once established by context, plurality specification of nouns is optional except as indicated above for human verbal persons.

In addition, to these morphological and syntactic means for marking number directly in KSE, other evidence also reflects the role of this category as a grammatically significant semantic principle. Reduplicative processes,

for example, are very common in KSE and carry plurality specification as their primary semantic meaning (see 1.1.2.4 and 2.2.1 for details on reduplication). Furthermore, for positional roots, which have been examined in some detail on this point, the category of number is a critical factor in the semantic definition of many roots and is a primary defining feature in the semantics of this class (4.2.4).

The explicit marking of number (except for personal number) is optional in all modern Mayan languages. The obligatory specification of number for verbal and nominal person is found even in proto-Mayan. Smith (1976:51f) has investigated plurality marking in Mayan languages both synchronically and historically. On the basis of comparative materials, he presents several interesting hypotheses about the spread of morphologically marked plurals from a very restricted base, probably human nouns. Although Kanjobal data were unavailable to Smith, his findings, presented in greater detail in Smith-Stark 1974, are entirely consonant with the situation in contemporary KSE in terms of the extent and type of morphological plurality. The noticeable spread of the surface marking of number which can be seen in the development of Mayan is no doubt a result of the strength of the category as an underlying constituent. Its comparative weakness in the surface morphology should not disguise the fact that number is a principle feature of underlying KSE semantic structure.

1.2.1.3 Categorization

The term categorization will be used here to refer to a pervasive grammatical and semantic category which is related to the strict classification of objects and actions in terms of perceptual criteria. Obviously all languages classify just as all languages mark person. What is described here are the grammatical reflections of a rather precise, structured attention to the fundamentals of such categorization processes. That attention is Mayan- and KSE-specific. Categorization is obligatorily marked morphologically on numerals by suffixes (called numeral categorizers) and syntactically on nouns by means of a set of preposed class-marking clitics (called noun class markers). The grammatical significance of categorization as an underlying principle in the language can also be seen in the syntactically defined use of positionals in numeral expressions (the so-called numeral classifiers described in section 3.2.1). Semantically, the concept of categorization serves to organize the entire positional root class through subcategories based on perceptual classification (4.1.1). The existence of such a class of roots is in itself strong evidence for the importance of this underlying constituent.

Noun class markers. The class of nouns in KSE may be subdivided on the basis of the noun class marker which

occurs with each subclass. Humans are classed by sex and degrees of respect while non-humans are classed by animacy, shape, and substance. Noun class markers (NCI) have two functions: as articles and as pronouns. When functioning as an article, the NCI precedes the noun it classifies. If the referent noun is deleted, the NCI remains as a pronoun. The inventory of KSE noun class markers is given below together with the related or identical common noun from which each is derived.

Human NCI:

naq	'male human'	winaq	'man'
ix	'female human'	ix	'woman'
cham	'male human, respected'	icham	'old man'
xal	'female human, respected'	ix	+ ?
ko.mam	'male deity'	ko.mam	'our.father'
ko.txutx	'female deity'	ko.txutx	'our.mother'
eb'	'plural humans' (cooccurs with the above)		

Non-human NCI:

no7	'animal or animal products'	no7	'animal'
te7	'woody-stemmed plant products'	te7	'tree'
xim	'grain products'	ixim	'corn'
an	'plant products'	ak'un (?)	'plant'

tx'an	'fiber products'	tx'an	'thread'
tx'otx'	'earth products'	tx'otx'	'land, earth'
a7	'liquids'	a7ej	'water'
q'a7	'fire'	q'aq'	'fire'
ch'en	'stone/metal products'	ch'en	'stone'

A null classifier \emptyset must also be identified to account for those few nouns which do not occur with one of the above because the substance or materials of their referents are unknown, i.e. waykan 'star', q'in 'festival; life'.

The semantic domains of the class markers are non-overlapping and include both the generic and specific nouns which refer to objects in the class as well as nouns which refer to items or substances made from members of the class. For example, the animal class marker occurs with the generic noun no7 'animal':

y.uj no7 no7 'by the animals'

with the specific name for any animal, including insects and birds (see 1.1.2.5.2 for additional examples):

y.ab'ix.al y.et no7 txitx y.etoq no7 koj

y-	'3 poss'	etoq	'with'
ab'ix	'story'	txitx	'rabbit'
-al	'abstract nominalizer'	koj	'lion'
-et	'of'		

'the story about the rabbit and the lion'

and with the names for parts of animals or products made from animals:

no7	jos	'the egg'
no7	sapato	'the shoe(s)' (<Sp <u>zapato</u>)
no7	ropilej	'the <u>capixay</u> (wool jacket)'
no7	kandela	'the wax candle' (<Sp <u>candela</u>)

Only languages of the Kanjobalan branch have noun class markers and the inventory in each language is somewhat different. Other languages (Tzeltal, Yucatec, etc.) show some evidence of a noun classifier system when counting (Smith 1976:54) but work on the syntax of noun class markers and their historical development has been very limited. Jacaltec noun class markers are described in general terms in Day (1973a:67-69) and those which refer specifically to humans are analyzed in Day 1973b. This set of clitics has also been identified in Chuj and called specifiers by Hopkins who has described them for that language (1973:167f and 1967:74f). The major differences among the systems are that Chuj and KSE do not seem to have the proliferation of human class markers found in Jacaltec. Furthermore, KSE lacks the 'salt product', 'illness', and 'rain' class markers found in Chuj and the 'dog' classifier of Jacaltec.⁸

After the first occurrence of a NCl noun phrase which includes both the class marker and the noun, subsequent references to the same noun may delete the noun.

In this case, the class marker remains as a pronoun. Craig 1973 describes several rules of pronominalization which affect NCl and other articles in Jacaltec; generally these rules of deletion on identity of reference are the same as in KSE. The following examples illustrate the pronominal use of the noun class markers. (The NCl's are underlined.)

<u>no7</u>	koj	max.Ø.kan	k'al.an	<u>no7</u>	y.in	<u>te7</u>	te7
	koj		'lion'		-an		'P form'
	max		'comp'		y-		'3 poss'
	Ø		'3'		-in		'against'
	kan-		'remain (iv)'		te7		'tree (NCl)'
	k'al		'tied (P)'		te7		'tree'

'the lion, he was tied up tight against the tree'

palta	<u>q'a7</u>	q'aq'	lanan.Ø.jay	<u>q'a7</u>
palta		'but'	lanan	'prog'
q'a7		'fire (NCl)'	Ø	'3'
q'aq'		'fire'	jay-	'come (iv)'

'but it is fire that comes'

cham winaq.ti7 max.Ø.say.on cham s.mulnaj.il

cham		'respected male (NCl)'
winaq		'man'
-ti7		'dem (here)'
max		'comp'
say-		'look for (tv)'
-on		'PIV'
s-		'3 poss'
mulnaj-		'work (iv)'
-il		'abstract nominalizer'

'the man looked for work'

ay kab' porma te7 kajon.tu7 t'an.t'on.b'a aj.teq

mimeq lab'aj y.ul te7--k'am chi.a.matz.ej no7

ay	'exist'	-t'	'Redup -C1'
kab'	'two'	-on	'PIV'
porma	'row(s)' (Sp)	-b'a	'self'
te7	'tree (NCl)'	aj	'go up (dir)'
kajon	'box(es)' (Sp)	teq	'action toward speaker'
t'an	'staring (P)'	-tu7	'dem (there)'
mimeq	'many large'	chi	'incom'
lab'aj	'snake(s)'	a-	'2sg'
y-	'3 poss'	matz-	'look at (tv)'
-ul	'inside'	-ej	'tv form'
k'am	'neg'	no7	'animal(s) (NCl)'

'There are two row of wooden boxes there; staring toward me (are) many large serpents inside them-- Don't look at them (quote)'

Note that in the last example, the animal class marker used as a pronoun in the embedded quotation does not appear with the first reference: mimeq lab'aj. Noun class markers are affected by quantifiers in ways which are still not well understood and, in addition, the effects of quotation in discourse have not been examined. Apparently, class markers are obligatorily deleted in some quantifier phrases (cf. Day 1973a:68).

Nouns which take the null class marker behave just as if they had a \emptyset class marker in those constructions where the marker is obligatory for other nouns (cf. Day 1973a:69). Compare, for example, the following (-a7 is the transitive stem formative which appears only in phrase-final position):

max.w.il <u>te7</u> taj	'I saw a pine tree'
max.w.il <u>te7</u>	'I saw it (tree-product)'
*max.w.il taj	*'I saw a pine tree'
max.w.il.a7	*'I saw it (referring to a tree)'
max.w.il <u>ɸ</u> waykan	'I saw a star'
max.w.il.a7	'I saw it (referring to a star)'

Humans and anthropomorphized animals or mythical beings take the appropriate NCl preceding reference by name or description, i.e. ix Matal 'Magdalena (female)' naq unin 'the boy child'. The use of these markers with personal names is not altogether predictable, however. Consider

y.et <u>cham</u> don Chewo	'about don Chewo'
<u>naq</u> Meke1 Tumaxh	'Miguel Tomas'

but note the following:

xh1 <u>Matiaxh</u> Xhunik.tu7	'said that Mateo Juan quotative)'
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General numeral categorial suffixes. Numerals in KSE as well as in Acatec and Jacaltec (Day 1973a:40) are also marked for the general class to which the objects they count belong. This marking, by means of suffixes here called general numeral categorial suffixes (GNumC), identifies three basic categories. It occurs with cardinal numbers from two to ten. The forms are

-wan	'human'	kan. <u>wan</u>	winaq	'four men'
-k'on	'animal'	b'alon.k'on	no7	'nine animals'
-eb'	'inanimates'	ox. <u>eb'</u>	laps	'three pencils'

Dakin, in unpublished notes (1974), reports a fourth classifier for Kanjobal and Acatec:

-mok'an	'bushes, plants'	ox. <u>mok'an</u>	kape	'three coffee trees'
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but this has not been attested in the KSE data used for this study.

Productive numeral suffixes of this kind are found only in the languages of the Kanjobalan complex today but are evidently the remnant of the much more extensive system of such categorization which may have been characteristic of earlier stages of Mayan. Smith (1976:53-54) has discussed the possibility of such a system and has taken special note of the identity of the Kanjobalan inanimate class suffix, -eb', with the plural marker for pronouns (1.2.1.2).

The KSE suffix -el 'time cycles' may be a member of this class of general numeral categorial suffixes as well. It occurs with jun 'one' and is in other ways unlike the other suffixes:

jun.el	'once'
o.el	'five times' ([oyel])

A similar time-counting suffix occurs in Chuj (Hopkins 1967:73) and in other Mayan languages which apparently do not have the numeral suffixes.

Specific numeral classifiers. The numeral suffixes ought properly be termed 'numeral classifiers' but this term has already become standardized in Mayan language studies to refer to syntactic constructions in which independent stems occur after numerals in noun phrases.⁹ These stems identify the characteristics of the objects enumerated in rather specific detail--especially with regard to size, shape, and position characteristics. These so-called specific numeral classifiers are a common feature of most Mayan languages and have received considerable attention from linguists (Kaufman 1971:91-101; Hopkins 1970; Berlin 1968). Such syntactic constructions are another reflection of the Mayan grammatical importance of the semantic category we have called categorization.

In most Mayan languages, specific numeral classifiers are recruited in large part from the positional class but have unique derivational morphology which distinguishes them (Hopkins 1970 reviews the formation of specific numeral classifiers in three languages: Tzeltal, Jacalteco and Chuj). In KSE, however, sound changes have taken place which have merged the specific numeral classifiers with positional stems in terms of morphology and have made them

indistinguishable as a class. In the analysis adopted in this study, such syntactic constructions are considered to be a special use of positional roots and a description of them is given in section 3.2.1. Two simple examples are given below:

jun b'ul.an	anima	'ore	bunch of people'
b'ul		'objects	in an unordered group (P)'
kan meq'.an	ko.si	'four	armfuls of (our) firewood'
meq'		'objects	held in the arms (P)'

In conclusion, it has been shown that an underlying semantic concept which has been called categorization operates in Kanjopal grammar to mark objects in terms of their perceptual characteristics. This categorization is reflected morphologically on numerals, and by syntactic devices on nouns. The positional root class is an important source of data on this grammatical category since both by the semantic nature and by the syntactic function of positional roots the category is reinforced (see also Chapter 4).

1.2.1.4 Transitivity and agency

A major semantic and grammatical category divides KSE verbs into two subclasses: transitive and intransitive, or those verbs requiring expression of both agents (subjects) and patients (objects) and those which require

expression of only one. The importance of transitivity in Mayan language verb systems is widely recognized and both transitivity distinctions and ergativity are, for the most part, accepted as proto-Mayan characteristics although the details of the *PM system have not yet been described (Smith 1976:47). Nearly every description of Mayan languages relies on the transitive/intransitive dichotomy in the description of verb systems.

In KSE verbs membership in one class or the other is marked by a verb class stem formative which is suffixed to the verb in citation forms and in clause-final position. With one exception, intransitive verbs take the stem formative -i; the exception is tit.a 'come'. Transitive stem formatives are of three kinds: a harmonic suffix -V7, described in section 1.1.2.2; -ej; and \emptyset , which marks only a few single-syllable verbs of the shape CV(7). The intransitive -i and the transitive -ej are retained in careful speech if the verb stem ends in a consonant cluster, but in rapid speech, -i is usually lost in any environment. Examples of KSE transitive and intransitive verbs with their formatives include:

q'an.a	'ask for (something) (tv)'
il.a	'see (something) (tv)'
txon.o7	'sell (something) (tv)'
k'ux.u7	'eat hard things (tv)'

lo7	'eat (something) (tv)'
xu7	'blow on (tv)'
cha7	'receive (tv)'
och.ej	'want (something) (tv)'
ab'.ej	'hear, sense, feel (something) (tv)'
b'il.i	'move (by oneself) (iv)'
ok.i	'enter (iv)'
kaꞤ.i	'die (iv)'
saqch.i	'play (iv)'

Some verb roots in KSE are bivalent; that is, they may be inflected directly in two major root classes without further derivation. Such roots are few in number and include the following:

q'in	'life, consciousness, festival (N)'
q'in.i	'awaken (iv)'
tz'ub'	'sharp-pointed (P)'
tz'ub'.u7	'suck; kiss (something) (tv)'

The existence of bivalent roots is a characteristic of Mayan languages and is an especially common feature of the positional class in many of the languages (Day 1973a:25f; Kaufman 1971:31; Norman 1973:5); they are discussed in 3.1.2.1.

Most verbs are easily derived to form verb stems of the other class. A large number of noun

roots may also be derived directly as verbs of one class or the other. Often stems which are clearly related and suspected as derived cannot be completely analyzed because the deriving suffixes are unique or are no longer productive. Several examples of derived stems appear below (see section 1.2.2.1.2 for further comments on verb derivation).

b'e	'road'
b'e.y.i	'walk'
tz'e	'laugh'
tz'e.w.i	'laugh (iv)'
tz'e.y.ej	'laugh at (tv)'
q'an	'word'
q'an.jab'.i	'speak (iv)'
q'an.l.ej	'ask a question'
b'it	'song'
b'it.n.i	'sing (iv)'
b'it.n.ej	'sing for (tv)'
loj	'food'
lo7	'eat (something)'
lo.w.i	'eat (iv)'
lo.tz.ej	'give someone something to eat'
son	'marimba'
son.l.i	'play'
son.t.ej	'play for someone'

The division between patients and agents appears to have major semantic force within the positional class as well as within the verb class. Many semantic distinctions among positional roots can be explained by the incorporation of underlying syntactic and semantic roles such as agent and patient (cf. case grammar model described in Fillmore 1968 and revised in Cook 1972). The patterns revealed by such an analysis are discussed in section 3.1.2.

In spite of the apparent appropriateness and simplicity of the transitive vs. intransitive analysis and its almost universal occurrence in the literature on Mayan languages, it is not without its difficulties. There are many facts about Mayan verb structures which are not easily accommodated by the simple transitive/intransitive analysis. The recognition of these problems is a common factor in the recently published discussions of Mayan verb patterns. For example, Norman 1973 suggests that Quiché syntactic classes might be more easily understood if thought of in terms other than transitive or intransitive. He notes that in the derivation of transitives in Quiché the notion of transitivity is easily compromised. He concludes that it may not be important at the deepest level of analysis but is rather a concept relevant only to surface morphology. Maxwell 1976a discusses data from Chuj in which intransitive verbs may take 'direct objects'. Her purpose in this

paper is to define the types of noun constructions which may occur in this syntactic role and also to examine the dialect differences observable on this point. Therefore, she does not discuss the problems such constructions raise for the analysis of Chuj verbs as simply transitive and intransitive. She adopts such an analysis without comment but obviously the very syntactic pattern she describes presents a serious weak point in the analysis. Dakin 1976 discusses similar constructions in the compounding of verb bases in Kanjobal and Acatec dialects but likewise does not address the question of the appropriateness of the transitivity analysis in the face of such data. A rather complete analysis of transitivity relations in Mam is reported in England 1976c. Again the nature of the underlying system is not entirely congruent with the analysis of two verb types based on surface morphology. England develops an analysis based on verb/topic relations which illuminates the non-morphological but important underlying syntactic and semantic structures. It seems likely that an examination of Mayan verb patterns within the framework proposed by a case grammar approach may be very productive in a more complete account of Mayan verbs. While not possible for the whole verb system within the context of this study, some application of that model has been made in the discussion of positional roots as derived transitive and intransitive verbs (3.1).

1.2.1.5 Aspect and tense

Kaufman (1964:62) has claimed that in Mayan and other Mesoamerican languages, aspect, that is the type or distribution of an action, is more highly developed than tense, or the time an action takes place. This analysis does not reflect in a completely accurate way the system of KSE. Apparently, it is not entirely appropriate for some other Mayan languages as well, although many linguists have adopted the position reflected in Kaufman (see England 1975: 204-209 and 1976a for an analysis of the Mam system which treats time as more salient than aspect). Most modern analyses treat tense and aspect together as one category thus indicating that the role of tense is at least as important as that of aspect (Day 1973a:31-39; Hopkins 1967: 116-122; England 1975:46-48).

In KSE the time of the verbal action is always made clear in one of three ways: (1) morphologically, through the use of tense-aspect markers, (2) syntactically, by means of temporal words and temporal clitics, or (3) from context provided by the explicit marking in a preceding or following sentence. There is therefore considerable evidence that time functions as an important organizing principle in Mayan grammar. The basic divisions are past-completive, future, and indefinite present. It is likely that a more basic division between realized/unrealized

exists in KSE which is not properly part of the time system but which crosscuts it resulting in a stronger emphasis on the division between future and non-future. (England [1975: 208] has drawn similar conclusions about the importance of the future/non-future division of Mam although based on different evidence.) Further discussion of this point is presented below. The reflections of tense-aspect in KSE are discussed first in terms of the simple verb phrase and the tense-aspect markers. Then more complex constructions are presented and sentences in which the tense-aspect markers are missing are described.

The tense-aspect markers in KSE are separable clitics which precede the verb and verbal person markers. In normal speech, they are often reduced by the deletion of vowels (1.1.2.9.3) and nearly any of them may be realized as a single phone forming a syllable with the following vowel. Such severe reduction usually occurs before a vowel or glide when tense-aspect markers are followed directly by the person markers without other intervening clitics. The basic set of KSE tense-aspect markers is given below. They are completely cognate with the Jacaltec markers as described by Day although the precise glosses and the analysis given here differ from his in some respects.

max (>[ɣ])	'past, completive (comp)'
chi (>[č̣] or [č̣'])	'non-past, incompletive (incom)'
oq (>[q])	'future, potential (fut)'
lanan	'progressive (prog)'

Note that the tense-aspect markers are basically time-oriented and that the aspectual connotations result directly from the time concepts; only lanan is completely tenseless. Chi is the unmarked tense and is used to describe habitual activities or to narrate events in sequence which are not in the historical past, e.g. to explain how to perform a task or to list daily activities. The basic tense pattern of past/present/future is paralleled by a set of negative particles which precede or replace the tense-aspects.

k'am	'absolute negative (present)'
maj (replaces max)	'negative, past'
man	'negative, potential and progressive'

Some tense-aspect markers require special adjustments elsewhere in the verb phrase. For instance, lanan 'progressive' requires that intransitive verbs take the transitive person markers and that transitive verbs be suffixed by -on, the extremely complex morpheme called the pseudointransitive by Day (1973a:41). Transitive stems suffixed by -on take the intransitive stem formative but the transitive person markers.¹⁰

Oq 'future' also requires some morphological adjustments in the verb phrase. The intransitive formative is replaced in the future by a suffix -oq 'potential' which is different from the tense-aspect marker but identical to the suffix found on negative identity sentences such as the following (the NCI determiner is deleted in negation):

man mix.oq 'It is not a cat'

(See 1.2.2.3 for additional examples of identity sentences.)

This same -oq occurs with intransitive verbs in the negative past as well. This combination of occurrences suggests that an important division exists in KSE between real actions, events, and objects and unrealized or potential ones. This division is not primarily a tense distinction but is a more general semantic one which crosscuts the tense-aspect system at the future/non-future line. This semantic distinction is probably at the base of an important feature in positional semantics which will be called illusion in this analysis and is discussed in section 4.3.1. The realized/unrealized distinction may also clarify the separation of a subclass of nouns based on illusionary possession (1.2.1.1).

The following examples illustrate the simple verbal constructions in which tense-aspect markers occur. Both transitive and intransitive verbs are presented. Verbs in phrase final position occur with stem formatives. Verb roots used are way- 'sleep (iv)', maq'- 'hit (tv)', b'ey- 'walk (iv)', il- 'see (tv)', achn- 'bathe (iv)', xew-

'rest (iv)', jay- 'come (iv)', and cha7 'accept (tv)'.

Tense-aspect markers are underlined.

<u>chi</u> .ach way.i	'you (sg) sleep'
k'am <u>chi</u> .ach.way.i	'you (sg) don't sleep'
chi.in.a.maq'.a7	'you hit me'
k'am <u>chi</u> .ach.in.maq'.a7	'I do not hit you'
<u>max</u> .on.b'ey.i	'we walked'
<u>maj</u> .in.achn.oq	'I did not bathe'
<u>max</u> .j.il.a7	'we saw (something)'
<u>maj</u> .Ø.ch7 eb'naq	'they did not accept (it)'
<u>oq</u> .ex.jay.oq	'you (pl) will come'
<u>man</u> .(oq).ex.jay.oq	'you (pl) will not come'
<u>oq</u> .ach.in.maq'.a7	'I will hit you (sg)'
<u>lanan</u> .ko.xew.i	'we are resting'
<u>lanan</u> .ko.maq'.on.i	'we are hitting (something)'

In more complex verbal constructions, tense-aspect markers may be separated from the verb and person markers by intervening clitics such as xa 'already', wal 'emphatic', and directionals such as ul 'coming back'. Intransitive verbs in the past may take an additional completive aspect marker -k- which also occurs in this position. Some clitics, including ta 'if', mi 'perhaps' (interrogative particle)' and combinations of them, may occur after the

person marker or between object and agent markers in transitive verb phrases. Clitics do not occur in both these positions within the same verbal construction. All the clitics which can occur in verb phrases also occur in other types of constructions and have considerable freedom of occurrence in those contexts as well. Examples of sentences with various intervening clitics and directionals are given below. Verb stems used include i7- 'take (tv)', toj- 'go (iv)', and pix- 'tie up (tv)' (<pix 'tied up (P)'). Clitics and directionals are underlined.

chi.ach.ul.w.i7 'I come to take you'

chi.ach.ek'.w.i7.aj.oq 'I go up to take you'

<u>ek'</u>	'pass by (dir)'
<u>aj</u>	'go up (dir)'
<u>-oq</u>	'subordinator'

oq.in.ta.mi.toj.oq (>[toq]) 'perhaps I will go'

oq.xa.in.pix.ok.in.b'a 'now I am going to tie myself up'

<u>ok</u>	'enter (dir)'
<u>in-</u>	'1sg' and '1sg poss'
<u>-b'a</u>	'self'

Additional examples of complex and simple verb phrases can be found in the text in Appendix D. In a complete verb phrase, many other elements may be found including independent pronouns (1.2.1.1), other directionals and demonstratives (1.2.1.5) and dependent verbs (1.2.2.3).

By way of summary, the simple verb phrase marked for tense-aspect and person is diagrammed below. The position of clitics and the structure of simple negative verb phrases is also indicated. (This analysis is confirmed by Dakin's unpublished materials dated 1974.)

Intransitive verb phrase.

Neg.	Tense-aspect	Clitics	Person	Clitics	Verb stem	Form
k'am	<u>Incompletive</u>	xa wal ul	in ach	on ex	ta mi	iv (-i)
	chi		Ø			
maj	<u>Completive</u>	(k)			iv	(-i)
	max					(-oq)
man	<u>Potential</u>				iv	(-oq)
man	<u>Progressive</u>		in/w- a/Ø	ko/j- e/ey-	iv	(i)
	lanan		Ø/y-			

mal) 'already', nani 'now/today', tinani 'now', atinani 'right now', entonse 'then', ewi 'yesterday', axa 'and then (sequential conjunction)', junejne 'all at once'; temporal clitics such as xa 'already' and its combinations such as june xa 'again', k'am xa 'not now', and to xa 'right away' (<to 'still'). Examples include the following:

mayal in.kam.i 'I already died'
 . . . kax Ø.meltzoj june xa b'ay Masatenango
 kax 'and'
 Ø '3'
 meltzoj- 'return (iv)'
 b'ay 'to/at'
 'and he returned to Masatenango again'

Once a time-aspect frame has been established in a narrative, reference to it may be omitted in subsequent verbs in the same frame. This is a case of deletion of the time specification which is clearly present in the underlying constituent structure of the sentence. Such deletion is most often found in past narratives and is always optional.

Three types of KSE sentences lack overt marks for time or aspect. These are sentences of identification, locational constructions, and imperatives. Identificational sentences have no verb at all and therefore cannot be morphologically marked by the tense-aspect clitics. Such sentences, also known as equational constructions, are formed by post-posing the free pronoun bases (Set B) to

the noun or adjective word to which the 'subject' is linked.

winaq	in	'I am a man'
ix	on	'we are women'
mexhto1	naq	'he is a teacher'
tx'i	no7	'it is a dog'
q'an	xa an	'the plant (NCl) is already yellow topic is a flower'

These sentences are always interpreted in the indefinite present tense unless there is clear context to the contrary. Such context is often provided by the temporal words and clitics mentioned above, but note that in the last example, even the presence of the clitic xa 'already' which frequently has past tense interpretation is not strong enough to override the present time interpretation which is reflected in the gloss.

Personal locative constructions are formed according to the following pattern (which, it will be recalled, is similar to the pattern for forming independent pronouns):

ay + free pronoun base (Set B) + ek 'pass by' + place

The paradigm is given below with the locative kayti 'here'.

ay	in.ek'	kayti	'I am here'
ay.ach.	ek'	kayti	'you (sg) are here'
ay.	ek	kayti	'third person is here'

ay.on.ek'	kayti	'we are here'
ay.ex.ek'	kayti	'you all are here'
ay.	ek' eb' kayti	'they are here'

If the ek' is analyzed as a verb, which is suggested by its position following the person markers, then these sentences are a case of verbal constructions which do not have tense-aspect markers. Nevertheless, such sentences are always interpreted in the unmarked tense, indefinite present. It is not clear, however, whether or not the ek' which appears in these sentences is a true verb or a clitic which is post-posed to an absolutive type construction formed off of the existential particle ay. Ay is not a verb and is never marked directly for tense although sentences with ay may include temporal words or clitics which specify a time frame.¹¹

Imperative sentences do have verbs but are outside the tense-aspect system. Imperatives are formed by suffixing -an to intransitive stems and \emptyset to transitive stems. The verbs then surface as uninflected stems. Consider these examples.

way.f	'sleep (iv)'	way.an	'sleep!'
b'ey.i	'walk (iv)'	b'ey.an	'walk!'
maq'.a7	'hit (tv)'	maq'. \emptyset .a7	'hit (it)!'
lo7	'eat (meat)'	lo7. \emptyset	'eat (it)!'
awt.ej	'call (something)'	awt. \emptyset .ej	'call (it)'

Imperatives are pluralized by -eq, which, in the case of the transitives, replaces the stem formative.

way.an.eq	'sleep (pl)!'
b'ey.an.eq	'walk (pl)!'
maq'.β.eq	'hit (it) (pl)!'
toʔ.β.eq	'eat (it) (pl)!'
awt.β.eq	'call (it) (pl)!'

Two intransitive verbs, tit.a 'come' and toj.i 'go', have suppletive imperatives.

as	'go (sg)!'	as.eq	'go (pl)!'
seb'ach	'come (sg)!'	sebax.eq	'come (pl)!' ¹²

Imperatives are negated by k'am and a chi 'indefinite present' verb phrase. This is another indication that imperative verbs are completely outside the normal tense-aspect system. (Second person transitive agent is a-.)

matz.β.ej	'look at it!'
k'am chi.a.matz.ej	'don't look at it!'

Although the emphasis of the discussion in this section has been on tense, it should not be assumed that aspect is unimportant. Aspect does function in the grammar, largely through derivational morphology. Aspect is extremely important in the derivation of positional roots and is discussed in section 3.1.3.

In this section it has been claimed that tense is a major grammatical category in KSE which overlaps aspect marking, and that it is a constituent of all but a few types of sentences. Further, it has been shown that, in context, tense may be understood rather than marked if a time frame is clearly established by context. Aspect, while drawing much of its force from the tense concepts in sentences, can be distinguished as a separate category in other areas of the grammar, especially in the syntax and semantics of positional roots.

1.2.1.6 Direction and location

Probably no other category is as consistently-- even insistently--marked in Kanjobal grammar as the category of direction/location. Although these seem to be separate categories, evidence suggests that in Kanjobal the concepts are merged in the underlying semantic structure and the apparent differences are the result of problems of translation into languages in which locational reference is not as strongly marked. Some of this evidence is provided by positional roots and is discussed in detail in Chapter 3.

The importance of directional/locational ideas to KSE and Mayan grammar in general cannot be overestimated. Relatively little work has been done, however, on the semantics of direction as a feature of Mayan grammar. One

such study, England 1976b, presents the results of an analysis of some 300 verbs and their patterns of distribution with directionals. This study indicates clearly the importance of these elements in the semantics of Mam verbs and there is reason to suppose that additional analyses would reveal similar patterns in other Mayan languages. Direction and location are also universally considered to be major cultural concerns for Mayan groups as well. The cultural reflections and the grammatical implications of this fact are discussed more thoroughly in Chapter 5.

There are several ways in which the position of bodies in space is specified in KSE, and many bits of evidence support the claim that location/direction is a major grammatical category. First of all, the presence of a grammatically separate class of roots in the language which exists specifically to describe the position and distribution of items in space is a major piece of support. Although many positional roots do not describe position in the strict sense, nearly all of them can be shown to refer to relative location of objects and in nearly every case they are very tightly tied to location/direction concepts as expressed by accompanying--often obligatory--directional verbs. The syntactic and semantic consequences of this fact are more fully demonstrated in Chapters 3 and 4.

Even apart from the positional root class, however, there are many other points in the grammar at which direction and/or location is marked. Relational nouns, for example, which treat various essentially locational notions as possessed nominal relationships, form a separate set of nouns in the grammar. This clearly reflects the important status accorded directional/locational concepts in the grammar. These nouns are discussed, with examples, in section 1.2.1.1.

The most important marking of direction and location is by means of a small set of directional/locational intransitive verbs. These may function either as main verbs with tense-aspect and person inflection or as directional/locational subordinate verbs and clitics. All Mayan languages have such verbs, but the inventory may vary. The inventories of Jacalteco (Day 1973:53f), Acateco (Dakin 1974, unpublished materials), and Kanjobal are very similar and are smaller than those reported for Mam (England 1976a) or Quiché (Norman, personal communication).

Three KSE intransitive verbs function as directional verbs but seldom occur as subordinated verbs or clitics. They are given below with the intransitive stem formative *-i*.

apn.i	'arrive'
pax.i	'return'
ul.i	'come'

The set of KSE intransitive verb roots which regularly function as directional verbs and as directional/locational clitics are listed below.

aj.i	'go up'
ay.i	'go down'
ok.i	'go in'
el.i	'go out'
ek.i	'go by'
kan.i	'remain'

Ul.i of the first group is much like those of the second set, although it is less common and has somewhat different distribution patterns. Kan.i of the second group is also slightly unusual especially because it combines easily with other verbs in the group when they function as clitics.

Two additional clitics exist which occur alone or in combination with the directional/locational verbs. In constructions where they cooccur, they follow the verbs.

teq	'motion toward the speaker'
toq	'motion away from the speaker'

These forms are probably derived by the subordinating suffix from the two motion verbs tit.a 'come' and toj.i 'go'. It is worth noting that when the directional/locational verbs occur in phrase final position, they take the subordinator suffix -oq. This same suffix has apparently merged in the teq and toq forms which commonly complete verb phrases. The following examples illustrate the use of teq and toq and the function of directional/locational roots as main verbs. (Tense-aspect and person markers are glossed the first time they appear only and directionals are underlined.)

chi.on.aj wa?.an.oq

chi	'incom'	wa?	'erect (P)'
on	'1pl'	-an	'P form'
aj	'go up (iv)'	-oq	'subordinator'

'we get up'

kan.an kay.ti.la

kan-	'stay (iv)'	ti	'demonstrative (here)'
-an	'2sg imp'	la	'demonstrative (here)'
kay-	'location'		

'stay right here!'

chi.Ø.ek' k'apax chej y.ul

Ø	'3'	chej	'horse'
ek'-	'pass by (iv)'	y-	'3 poss'
k'apax	'also'	-ul	'inside'

'horses also go by on it (a road)'

oq.ach.el.toq y.etoq eb'

oq	'future'	toq	'action away (dir)'
ach	'2sg'	-etoq	'with'
el-	'go out (iv)'	eb'	'plural humans'

'you will go out (away) with them'

max.Ø.ok yatz'.an y.in

max	'comp'	yatz'	'form of a fist (P)'
ok-	'enter (iv)'	-in	'against'

'third person hit (him) with a fist'

chi.in.cheq.lay.toq

in	'1sg'	-lay	'passive'
cheq-	'send (tv)'	toq	'action away (dir)'

'I was sent away'

max.Ø.kan k'al.an

k'al	'tied tightly (P)'	-an	'P form'
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'third person was left (remained) tied up'

max.j.awt.ej.teq

j-	'1pl'	-ej	'tv form'
awt-	'call (tv)'	teq	'action toward (dir)'

'we called (him) to us'

Most often the directional/locational meaning of these basically free intransitive roots is subordinated to the main verb phrase by means of the post-posing of the directional/locational root as a clitic. Here are a few examples of common constructions of this sort (conventions as before).

max.y.ut k'al.an.kan no7

y-	'3'	-an	'P form'
ut-	'do (tv)'	kan	'remaining (dir)'
k'al	'tied up (P)'	no7	'animal (NCl)'

'third person tied the animal up to stay'

max.β.apn.i.ok xin

apn-	'arrive (iv)'	ok	'go in (dir)'
-i	'iv form'	xin	'then'

'well, he arrived'

uk'.β.ay.toq

uk'-	'drink (tv)'	ay	'go down (dir)'
β	'2sg imp'	toq	'action away (dir)'

'drink (it) up!'

joy.β.aj.teq

joy-	'dig (tv)'	teq	'action toward (dir)'
aj	'go up (dir)'		

'dig (it) up!'

max.β.mal.aj.oq

mal-	'swell (iv)'
-oq	'subordinator'

'(it) swelled up'

chi.β.k'ub'.b'aj.e1.oq

k'ub'	'hidden (P)'
-b'aj	'P causative' (tv)
e1	'go out (dir)'

'third person hid (it) away'

Many actions and events which to Western eyes do not have a directional or locational aspect are part of the KSE pattern of semantic linkage with directional/locational verbs. For example, 'waking up' is chi.el wayan, literally, 'one's sleep goes out' while 'going to sleep' is chi.way.aj.oq 'sleep up'. 'Swim' and other body motion verbs have ek'.i 'pass by' at their base: chi.ek' yul a7ej, literally 'pass inside water'. Sweat goes out, chi.el y.al, and kissing goes in: chi.ok tz'ub'an yin. Nearly any verb can take one or more directionals, sometimes with purely directional meaning and sometimes with more metaphorical meanings. In text, most verbs do occur with such verbal adjuncts. Given below are two base verbs, i7 'to take or bring' and al 'say' in complete paradigms with directional/locational verbs as clitics in order to illustrate the kinds of meaning which may be conveyed by these expanded verb phrases. (Not all glosses for teq/toq are included.)

17.a	'to take or bring'
17.ok.oq	'send something by another person'
17.el.oq	'remove'
17.aj.oq	'lift toward the sky'
17.ay.oq	'lower'
17.ek'.oq	'carry something to show to someone'
17.ok.teq	'put/bring inside (speaker is already inside)'

i7.ok.toq	'take inside (speaker is outside)'
i7.e1.teq	'bring outside (speaker is outside)'
i7.e1.toq	'take outside (speaker is inside)'
i7.aj.teq	'lift up'
i7.aj.toq	'lift up'
i7.ay.teq	'lower something'
i7.ay.toq	'lower something'
i7.ek'.teq	'pass something from the other side'
i7.ek'.toq	'pass something to the other side'
al.a7	'to say'
chi.y.al.eloq	'publish, spread around'
chi.y.al.ok.oq	'call something'
chi.y.al.aj.oq	'reveal a secret or feeling'
chi.y.al.ay.oq	'confess; express everything one has inside'
chi.y.al.ek'.oq	'go from house to house or town to town telling something'
chi.y.al.kan.oq	'leave something said once and for all'
chi.y.al.teq	'someone sends a message'
chi.y.al.toq	'send a message or notice'

The directional/locational verb bases identify the four Mayan cardinal directions: up, down, east (e1), and west (ok) (cf. England 1976:206f).

yokti	'to the west'
yelti	'to the east'
yajti	'to the north (up)'
yayti	'to the south (down)'
aj.yelti in	'I am from the east' (aj- 'native')
aj.yayti ach	'you (sg) are from below (farther down the mountain)'

Other more linguistically typical ways of indicating direction or location in space are also found in KSE. The formation of personal locational constructions has been described in the preceding section. Another example is the set of demonstrative particles which occur in many types of KSE expressions. The forms are

la	'this, very close' (less common; may co-occur with ti7)
ti7	'this, here'
tu7	'that, there'

These are cognate to forms in Jacaltec (Day 1973a:72), Chuj (Hopkins 1967:152), and Acatec (Kaufman 1975:80).

ti7 and tu7 are part of several types of constructions and often behave as suffixes. For example, they attach to person markers to form the independent pronouns (1.2.1.1): ay.in.ti7 'I', naq.tu7 'he'. They also form the free stems 'here' and 'there' by suffixation to the

bound root kay- 'location': kay.ti, kay.tu (cf. kay.ti.la 'right here'). They are commonly found with the prepositional root b'ay 'at, in': b'ay.tu 'in there'. They function as free particles in expressions such as

tzet jun.tu/tu7 'What is this/that?'

A glance at the text in Appendix D will identify many such examples of the demonstratives as well as others in which ti7 and, more frequently, tu7, function in verb phrases to locate the action in space or in time. In such cases, the demonstrative particles are usually preposed to the verb phrase. A pair of example sentences is given below.

ti7 max.β.iq.ej tzet.al max.w.al.a7

ti7	'dem'	-al	'abstract nominalizer'
iq	'obey (tv)'	w-	'1sg'
-ej	'form'	al	'say (tv)'
tzet	'what?'	-a7	'form'

'you did as I told you to (here)'

chi.β.xew tu7 kax . . .

xew-	'rest (iv)'	kax	'and
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'(she) rests then/there and . . .'

1.2.2 Grammatical Processes

In this section the KSE word classes are defined and a brief sketch is given of the major KSE word-building

processes of compounding and derivation by affixation. Attention is also given to simple sentence types and to processes of phrase structure. This is not intended to be a complete analysis of KSE syntax but merely provides the background necessary for the discussion of positional root syntactic patterns which follows in Chapter 3.

1.2.2.1 Morphological processes

1.2.2.1.1 Morphological word classes

Morphemes in Kanjobal are either affixes, clitics, or roots. Affixes may be either prefixes or suffixes and are both inflectional and derivational. Many kinds of affixes are illustrated in section 1.2.1. Clitics may be either preposed or postposed (enclitics). In most cases, clitics are derived from or are identical to some root in the language, but they are phonologically and syntactically subordinated to other roots or stems in a phrase. Clitics do not receive stress and do not normally occur in isolation.

The basic lexical item in KSE is the root. There are several root classes: noun, adjective, transitive verb, intransitive verb, positional, affect, and particle. Each root class includes some items which are clearly

derived or compound forms but which must be analyzed as roots since their component parts cannot be identified. This is often the result of the freezing of a root with a now unproductive suffix. Root classes in KSE are matched in most cases by stem and word classes.

Stems may consist of a root with derivational or stem formative affixes or may be composed of a compound of roots or stems. Stems may take inflectional affixes and be accompanied by clitics. Verb and positional roots take obligatory stem formatives when underived. Roots of most classes may be derived as stems of other classes. Some roots may belong to several stem classes simultaneously (1.2.1.4).

Words are free forms. They may be stems carrying any required inflection or roots which require no inflection (e.g. particles or adjectives). Words are defined by phonology, by inflection, and by syntactic role. A word may be identified in isolation by the presence of a primary stress on its final syllable. Word classes often have several subclasses based on morphological, syntactic, or semantic criteria. Not all the subclasses have been completely defined for KSE. Each KSE word class is listed below, and the inflectional and syntactic characteristics which define it are given.

Nouns. Nouns are roots or stems which may be possessed directly (1.2.1.1.2) and take noun classifiers (1.2.1.3). They can be derived by -al/-il to form abstract nouns or in order to enter into certain possessive constructions (1.2.1.1.2). They may be pluralized with tzan (1.2.1.2). They serve as the head of a noun phrase and may be modified by adjectives. In addition to a large class of common nouns, other subclasses of nouns include: 1) relational nouns such as -alan 'below' (1.2.1.1.2); 2) proper names, both personal, such as Xhunik 'John' and Malta 'Martha', and place names, such as Saq Ch'en 'White Rock' and Yalan K'u 'Under the Sun'; 3) pronoun bases (1.2.1.1.1); and 4) specific numeral classifiers which are usually recruited from verb or positional roots classes and are defined by their syntactic function (3.2.1). Examples of nouns include winaq 'man', txitam 'pig', sam 'griddle (comal)', is 'potato' and tx'ak 'smallpox'.

Adjectives. Adjectives modify nouns and have no inflectional characteristics. They usually precede a modified noun. Adjectives are the least morphologically distinct class in KSE; they have many affinities with nouns. There are few derivational suffixes which apply only to adjectives (see below). There is at least one subclass, the numerals, which are morphologically distinct

by virtue of the set of general numeral classifier suffixes which occur with them (1.2.1.3). Numerals always precede nouns. The numeral jun functions as an indefinite article. Common adjectives include saq 'white', yob 'bad', yal 'small', and lajon 'ten'.

Verbs. Verb roots and stems are inflected for person (1.2.1.1.1) and tense-aspect or mode (1.2.1.5) to form verb words. Each of the two subclasses, transitive and intransitive (1.2.1.4), requires class-specific stem formatives, person markers, and imperative formation. Directional verbs are a special class within intransitive verbs because of their special syntactic properties as clitics (1.2.1.6). Examples of verbs include say.aʔ 'look for (tv)', meltzoi.i 'return (iv)' and ek 'pass by (dir)'.

Positionals. Positional roots, if underived into another stem class, must occur with the class-specific stem formative, -an. Such underived stems are not inflected directly but may be accompanied by clitics (4.1.1). Positionals have a wide range of morphological and syntactic characteristics which are more fully described in Chapter 3. Their closest ties are to the verbs. There are no borrowed positionals or frozen positional stems. Common positional roots are chot- 'seated', k'on- 'bent over, curved', and wet- 'watery or loose'.

Affect. Affect words describe actions, noises, or movements and are distinguished by their reduplicative processes (1.1.2.4) and by their derivation as intransitive verbs (2.2.1). While they have some affinities with positionals in terms of their derivational behavior, they do not have a class-marking formative suffix nor do they have the range of morphological derivations possible with positionals. These are examples of affect roots: jach 'sound and movement of papers rustling', pum 'sound of a heavy thing that falls', and nil 'noise of a storm approaching'.

Particles. KSE has a large number of particles, many of which are borrowed from Spanish. They are never inflected or derived but may be accompanied by clitics or be compounded. There are several subclasses of particles. The lists given below are not exhaustive.

1. interrogatives: which serve to introduce questions or their related response clauses:

tzet	'what?'
tzet yetoq	'with what?'
tzet yetal	'of what?'
tzetb'il	'how?'
jantaq	'how much?'

janwan	'how many (people)?'
jayeb'	'how many (things)?'
b'aytal	'where?'
b'aq'in	'where?'
maqtxel	'who?'
maqtet	'which?'

2. negatives:

k'am	'absolute negative'
k'amaq	'emphatic negative'
maj	'past negative'
man	'potential negative'
manchaq	'optative negative'

3. affirmatives:

ja7	'yes'
wéno	'well, okay, good' (Sp)
inye	'okay'

4. conjunctions:

péru	'but'	palta	'but' (Sp)
ke	'that' (subord)	tol	'that (subord)' (Sp)
i	'and'	kax	'and' (Sp)
porke	'then'	xin	'because' (Sp)
axa	'and then'		

5. temporals:

ewl	'yesterday'	entónse	'then' (Sp)
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other examples in section 1.2.1.5.

6. vocatives:

cha	'you, familiar to a man'
txo	'you, familiar to a woman'

Most other address forms are derived from genealogical terms, i.e. mamin 'you, respected older man' < mam 'father'

7. others:

tay xin	'good bye'
sabe-	'who knows?' (Sp)
ch'an	'only'
jodí(u)	'what a mess!' (Sp)
wali	'positive emphatic'
k'al	'positive emphatic' (? < P <u>k'al</u> 'tied')
ixh	exclamation of disgust (women)
uy	exclamation of surprise
tz'ã7ã	exclamation of anger

1.2.2.1.2 Derivational affixes

No attempt is made here to illustrate all derivational affixes in KSE. However, the most productive and frequently occurring processes affecting each stem class are presented below with examples. A complete treatment of the derivational processes operating on positional roots is found in Chapter 3.

Nominal and adjectival derivation.

1. The most common derivational suffix occurring with both nouns and adjectives is the harmonic -il/-a1 suffix already mentioned in section 1.1.2.2. This suffix (or a different, homophonous one) mark certain kinds of possessive relations as described in 1.2.1.1, but more frequently it derives abstract nouns from nouns, adjectives, and members of certain other root classes. The meaning of the derived form is not always predictable and the precise distribution and functions of this complex suffix are not yet well understood in KSE or in other Mayan languages (see Larsen 1976:117f or England 1975:110-112).

saq	'white'	'saq.i <u>l</u>	'whiteness, that which is white'
q'in	'festival'	-q'in.a <u>1</u>	'life'
sip	'tick'	sip.a <u>1</u>	'place with a lot of ticks; "tick-y"'
k'u	'sun'	k'u.a <u>1</u>	'day'

2. The suffix -laq derives nouns into locatives of abundance (cf. Day 1973a:47)

chej	'horse'	chej. <u>laq</u>	'place of many horses'
is	'potato'	is. <u>laq</u>	'place with many potatoes'

It is similar to the suffix -taq which derives adjectives from several types of roots, including positionals (cf. Day 1973a:48)

xach	'forked (P)'	xach. <u>taq</u>	'like a forked stick'
poqoq	'dust'	poqoq. <u>taq</u>	'dusty; full of dust'

3. A few examples of diminutive derivation have been found with the suffix -ixh.

ak'	'new'	ak'. <u>ixh</u>	unin	'a tiny baby (less than one month old)'
kok'	'small (animals)'	kik'. <u>ixh</u>		'very small'
yal	'small'	yal. <u>ixh</u>		'very small'
mam	'father'	mam. <u>ixh</u>		'little father (address form)'
meb'	'poor'	meb'. <u>ixh</u>		'very poor'

4. Agentive nouns are derived from both transitive and intransitive verbs by means of the suffix -(C)om. Often such agentive formations require a following noun object. Day describes similar constructions for Jacaltec (1973a:45f) and Dakin (1976:163) presents several examples of

this construction in another context for Kanjobal and Acatec. The (C) of the suffix is unpredictable and is probably related to similar C suffixes which derive intransitive verb stems from nouns and for which no conditioning has been discovered (see below for examples).

waj.a7	'gather (tv) (P waj 'united')	waj.om	'gatherer'
cf.	waj.om q'anej		'gossip ('one who gathers words')
mulnaj.i	'work (iv)'	mulnaj.wom	'worker'
iq.a7	'carry a load (tv)'	iq.om yiqatz	'load-carrier'
il.a7	'watch (tv)'	il.om no7	'shepherd (one who watches animals)'
an.l.ej	'care (tv)'	an.l.om	'doctor'
cf.	an		'plant (NCl)'
saq.ch.i	'play (iv)'	saqach.wom	'player'
cf.	saq.ach		'game'

5. Instrumental nouns (including some locatives) are formed from various classes by suffixation of -b'al. It may be suffixed to verbal compounds.

kis.a7	'sweep'	kis.b'al	'broom'
maq'.a7	'hit'	maq'.b'al	'club'
tek'.a7	'thresh wheat'	tek'.b'al	'threshing floor'

b'ey.i	'walk (iv)'	b'ey.b'al	'stilts'
il.a7	'see (tv)'	il.b'al	'binoculars'
way.i	'sleep'	way.b'al	'place to sleep'
cf. way-no7.b'al			'place for animals to sleep'
	il.b'al no7		'zoo (place to see animals)'

6. Completive adjectives (cf. Day's participles [1973a:48]) are formed from intransitive verbs by -naq and from transitive verbs by -b'il. Such forms are often followed by xa 'already'.

kam.i	'die (iv)'	kam.naq	'dead'
uq.i	'boil (iv)'	uq.naq	'boiled'
maq'.a7	'hit (tv)'	maq'.b'il	'beaten'
aq'.a7	'give (tv)'	aq'.b'il	'given'
cha7	'receive (tv)'	cha.b'il	'received'

Directional verbs frequently take teq 'action toward the speaker' or toq 'action away from the speaker' when derived in this way:

ek'.naq.toq 'passed by toward the other side'.

7. Cardinal numbers are derived to form ordinals by possession with third person prefixes s- or y- (1.2.1.1.2). The form for 'first' is suppletive.

b'ab'el	'first'	s.o7	'fifth'
<u>s</u> .kab'	'second'	s.waq	'sixth'
<u>y</u> .ox	'third'	s.uq	'seventh'
s.kan	'fourth'	s.waxaq	'eighth'
s.b'alon	'ninth'	s.lajon	'tenth'

Such forms do not take the general numeral classifier suffixes. Numerals which count time have irregular paradigms (cf. Day 1973a:49f).

Some examples follow:

days

oxej	'third day from now'
kanej	'fourth day from now'
ob'ix	'fifth day from now'
oxji	'day before yesterday'
kanji	'fourth day past'
ob'xi	'fifth day past'

weeks

uqb'ix	'a week from now (seventh day)'
kanlajonej	'two weeks from now (4+10)'
jun k'ej	'three weeks from now'
uqb'ixi	'a week ago'
kan lajoneji	'two weeks ago'
jun k'eji	'three weeks ago'

years

jun ab'	'first year'
ox ab'	'third year'
waq'ab'	'sixth year'
jun ab'i	'one year ago'
ox ab'i	'three years ago'
waq'ab'i	'six years ago'

8. The prefix aj 'native; owner; master' forms noun stems from noun and verb roots. It optionally co-occurs with -(C)om 'agentive', described above.

aj.Watemala.in	'I'm from Guatemala'
aj.Temux.ach	'you're from Temux (aldea)'
aj.kawil.on	'we're from nearby'
aj.tz'ib'(.om)	'secretary (<tz'ib'.a7 'write (tv)'
aj.7an	'curer ('master of plants)'
aj.na	'head of a house'
aj.k'u'l	'enemy (master of one's belly)'
aj.txaj	'shaman (owner of prayer)'
-aj.aw.il	'lord, master (<?)' ¹⁵

Compare xajaw 'moon', literally ix + ajaw 'female lord'. The cognate form in Ham is now considered a free root by England (personal communication).

9. -yin may be suffixed to color adjectives to produce animal color terms (cf. Day 1973a:48).

saq.yin 'white (of animals)'

q'an.yin 'yellow (of animals)'

Verbal derivation.

1. Intransitive verbs are readily formed from nouns by a -C suffix the form of which is not phonologically predictable. The following variants are attested: -n, -l, -j, -y, and -w. These derived stems take the intransitive verb formative -i. Several examples are given in section 1.2.1.4. Some other common ones follow:

tza7 'excrement' tza.j.i 'defecate'

aw 'cry (N)' aw.j.i 'shout'

tzub' 'saliva' tzub'.l.i 'spit'

uxh 'whistle (N)' uxh.l.i 'whistle'

txon 'merchandise' txon.j.i 'sell'

2. Inchoative intransitive (also called inceptives by Day [1973a:43] and *vertitives* a term coined by Kaufman) are formed in KSE by the suffixation of -b' to noun and adjective roots or stems. Such a derived stem takes the intransitive stem formative, -i.

kaq	'red'	max.Ø.kaq.b'.i	'it got red'
sik	'cold'	chi.Ø.sik.b'.i	'it is cooling off'
paj	'acid'	lanan.xa.Ø.paj.b'.i	'it's already getting acidic'
winaq	'man'	max.Ø.winaq.b'.i	'he became a man'

3. Passives may be formed from transitive verbs by suffixation of -lay. This suffix yields an intransitive verb which requires intransitive inflection, including the stem formative, -i. The grammatical subject of such verbs, marked by Set B person markers, is the logical patient. The agent is optionally expressed by the possessed relational noun -uj 'by (agent)'.

chi.ach.cheq.lay.toq

'you were sent' (< cheq.a7 'send someone (tv)')

max.Ø.aq'.lay y.opiso

aq'- 'give (tv)'
 y- '3 poss'
 opiso 'work' (<Sp. ofisio)

'third person was given a job'

tzet yetal max.Ø.a1.lay.i

tzet 'what?'
 y- '3 poss'
 -et 'of (relational noun)'
 -a1 'abstract nominalizer'
 a1- 'say (tv)'

'what was said'

chi.ach.maq'.lay w.uj

maq'- 'hit (tv)'

w- '1sg poss'

'you are hit by me'

Additional passives are formed by suffixation of -chaj(.i). The difference between this suffix and -lay(.i) is not clear. Examples with -chaj, which is less common than -lay, include

na 'think (tv)'

na.chaj.i 'understand, agree'

oq.β.na.chaj w.uj 'I will understand'

il.a7 'see (tv)'

il.chaj.i 'acquire'

max.β.il.chaj.i 'it was acquired'

4. The highly productive causative transitive suffix -nej, and its apparently less productive alternates -tej and -tzei, create transitive verbs from verb, noun, and adjective roots and stems. Often the meaning of such derived roots is not purely causative but benefactive or applicative.

The distribution and productivity of these suffixes is not entirely clear. At least in the case of -nej, the suffix may be analyzed

as the -n intransitivizer (see #1 above) and the -ej intransitivizing suffix which appears as the stem formative on many transitive roots. Dakin (1976:166) suggests this analysis but points out that no other suffix can occur between the two parts. Such an analysis would clarify examples such as

b'it	'song'	b'it.n.i	'sing (iv)'
	<u>b'it.n.ej</u>		'sing a song for'

Further examples of this derivation include

ach.n.i	'bathe (iv)'	ach. <u>nej</u>	'bathe someone (tv)'
aw	'cry (N)'	aw. <u>tej</u>	'shout at (tv)'
txon.j.i	'sell (iv)'	txon. <u>tej</u>	'sell for (tv)'
	cf. txon.o7		'sell (tv)'
way.i	'sleep (iv)'	way. <u>tzej</u>	'put to sleep (tv)'
lo.w.i	'eat (iv)'	lo. <u>tzej</u>	'feed (tv)'
b'e.y.i	'walk (iv)'	b'e.y. <u>tzej</u>	'send on one's way (tv)'
watz'	'good'	watz'. <u>nej</u>	'make (tv)'

Dakin has noted examples of this suffix on compound verb bases such as maq'.tz'um.nej 'whip (tv)' from maq'- 'hit (tv)' + tz'um 'skin' + -nej.

1.2.2.2 Compounding

The compounding of roots and stems to form new words is an extremely important derivational process in all Mayan languages and is very productive in KSE. There has been some linguistic attention given to processes of compounding in the Kanjobalan languages. Hopkins (1967:101-115) has described Chuj compound stems in some detail and Maxwell's 1976 analysis of intransitive verb objects is concerned with a special kind of verb/noun compounding in Chuj. Day (1973a:97-103) discusses compound nouns in Jacaltepec according to a transformational model and defines several productive and non-productive subclasses among compound nouns. Dakin 1976 has analyzed the inflectional and derivational properties of verb-based compounds in Kanjobal and Acatec.

A KSE compound stem may be a noun or a verb and may be formed from noun plus noun, adjective plus noun, or verb plus noun combinations. The compounding process forms many personal names and most toponyms. Many of the most interesting compounds are those formed from body part nouns, especially those constructions with k'u'l 'belly'. These compounds support the Mayan concept of the stomach as the center of human emotion. The following list only suggests the range of possible compound formations.

Noun + noun

owa1-tx'i	'rabies' (<u>owa1</u> 'anger' + <u>tx'i</u> 'dog')
q'ua7-te7	'spruce' (<u>q'ua7</u> 'quetzal' + <u>te7</u> 'tree')
xil-na1	'corn silk' (<u>xil</u> 'hair' + <u>na1</u> 'con ear')
jolom-penek	'knee' (<u>jolom</u> 'head' + <u>penek</u> 'lower leg')
q'ab'-te7	'branch' (<u>q'ab'</u> 'hand' + <u>te7</u> 'tree')
q'ab'-son	'marimba sticks' (<u>q'ab'</u> 'hand' + <u>son</u> 'marimba')
tza-q'aq'	'charcoal' (<u>tza</u> 'excrement' + <u>q'aq'</u> 'fire')
tza-ch'en	'sand' (<u>tza</u> 'excrement' + <u>ch'en</u> 'stone')

Adjective + noun

kaq-is	'sweet potato' (<u>kaq</u> 'red' + <u>is</u> 'potato')
taqin-asun	'mist' (<u>taqin</u> 'dry' + <u>asun</u> 'cloud')
saq-jolom	'old man' (<u>saq</u> 'white' + <u>jolom</u> 'head')
yob'-k'u1a1	'hate' (<u>yob'</u> 'bad' + <u>k'u1</u> 'belly' + <u>-V1</u> 'abstract nominalizer')
jich-k'u1a1	'faith' (<u>jich</u> 'straight' + <u>k'u1</u> + <u>-V1</u>)
miman-k'u1a1	'patience' (<u>miman</u> 'large' + <u>k'u1</u> + <u>-V1</u>)
yax-pixan	'lucky person' (<u>yax</u> 'green' + <u>pixan</u> 'heart')

Verb + noun

kam-k'u1a1	'love' (<u>kam-</u> 'die (iv)' + <u>k'u1</u> + <u>-V1</u>)
ilwi-no7	'herd' (<u>il-</u> 'see (tv)' + <u>-w.i</u> 'intransitivizer' + <u>+ no7</u> 'animal')
al-k'u1	'want' (<u>al-</u> 'say (tv)' + <u>k'u1</u> 'belly')

chi.y.al in.k'u1 'I want' < 'my belly says'

Spanish loan verbs are incorporated into KSE by compounding with aq' 'give': aq' mandar 'send' and aq' pensar 'think'.

The following examples illustrate the process of compounding in the formation of individual proper names. The compounds are of the shape N + N and the first name is a given name of Spanish derivation (see Appendix B for list of such names).

Yakin Pett	'Diego from the Aldea Pett'
Kuin tx'uy	'Pascual bag' (because he always carries a cloth bag or <u>bolsa</u>)
Xhimon joy	'Simon armadillo shell' (because he uses one as a bag)
Luin wax	'Pedro mountain cat' (because he signals his girlfriend by imitating a mountain cat)

NOTES

¹This use of a hyphenated letter could be avoided by the use of a different symbol for the retroflex affricate, for example, cx, which is not made up symbols which also represent other, possibly co-occurring phonemes. The failure of the Kaufman alphabet to make this adjustment is the result of many complicated factors in the political, educational, and religious situation in Guatemala. Some of the difficulties are alluded to in Kaufman (1975:3-7).

²The verbal suffix -on has unusual properties which are not entirely understood. It is discussed in greater detail in sections 1.2.1.5 and 3.1.2.

³In Jacaltec, aʔa 'to give or put' and iʔa 'to carry or take' are the only VC transitive roots in which the final C is /ʔ/ and Day states that they both have 'peculiar functions and morphophonemics' (1973a:15). In Kanjobal the cognate verbs are aq'.a 'to give or put' and iq.a 'to carry as a load'. This latter may or may not be related to i7.a 'to take or carry'. No underlying q' is retrievable for i7.a and the /q/ in iq.a is not glottalized. It is possible that similar reduction processes formerly operative in Jacaltec would account for the unusual shape of the verbs cited by Day.

⁴xin is a very common sentence particle in KSE which is similar to the English then or the Spanish pues (cf. Day 1973a:96). It is always translated as pues, which is of extremely high frequency in Guatemalan Spanish, perhaps not entirely coincidentally.

⁵I am indebted to Nora C. England for pointing out that sik' 'cigarette' is not an example of this process. Although this form appears from Kanjobal data alone to be a likely loanword, the cognate form sich' occurs in Mam with the same gloss. There is no pattern in Mam which would predict such a change as q > ch' in Spanish loans and in fact no pattern of glottalization of Spanish sounds at all. There is also no evidence that the form has been

borrowed into Mam from Kanjobal since the change k' > ch' is also unattested in such cases. This item appears in many widely dispersed Mayan languages and is probably of proto-Mayan origin.

⁶The possessive marker for second person singular before vowel-initial stems is Ø but it has the phonological effect of lowering high vowels by one degree, i.e. /i/ → [e] and /u/ → [o]. Compare, for example, j.un 'our piece of paper': on 'your piece of paper'; j.on 'our avocado': on 'your avocado'; w.ich 'my chile': ech 'your chile'.

⁷The number system of Mayan has received considerable linguistic attention. The Jacalteco system described by Day (1973a:57-59) is almost identical to that found in KSE. Kaufman (1971:91-101) has described the very similar Tzeltal system in considerable detail. Smith (1976:55) has presented several hypotheses concerning proto-Mayan numeral formation. Kaufman (1974:63f) attributes the vigesimal system not only to Mayan but to most Mesoamerican language families. The KSE numerals from one to ten are as follows:

jun	'one'	waq	'six'
ka	'two'	uq	'seven'
ox	'three'	waxaq	'eight'
kan	'four'	b'alon	'nine'
o	'five'	lajon	'ten'

Even multiples of twenty are formed on -winaq and odd multiples of twenty are formed on -k'al, probably related to the identical positional root meaning 'bundled or tied (long things)'.

⁸Dakin in unpublished notes reports a salt classifier for Kanjobal and Acatec. The form she gives is tz'am, derived from atz'am 'salt', but it is unattested in my own corpus even after specific elicitation from informants. Since Dakin worked with several dialects of Kanjobal and Acatec while my own notes reflect only KSE, it is possible that this difference reflects dialect variation.

The noun class marking system is a productive one as can be seen by the existence of náyleh reported for Chuj by Hopkins (1967:74f) which is derived from Spanish naylon and is used to classify plastic products of recent introduction.

⁹Terminological problems are very common in Mayan linguistics. Many terms are used which do not accurately reflect the nature of the system. In the case of the numeral classifiers, apparently the term was adopted before anyone had noticed that the Kanjobalan languages have both

the syntactic specific classifiers and the more general, smaller class of categorizing suffixes. Kaufman (1971:91), when describing the specific numeral classifier construction in Tzeltal called them noun classifiers since they actually refer to the characteristics of the noun being counted and have little to do with the numeral except to occur with it. England (1975:57) uses the term measure words for similar items in Mam (apparently following a more recent practice by Kaufman). Unfortunately, this terminology cannot be used for Kanjobalan languages since these languages have a separate set of items which classify nouns in a different way, what I have called here noun class markers. Much of the confusion in this area results therefore from the late attention given to languages of the Kanjobal complex which are apparently the only ones in the Mayan to have all three types of categorizing constructions. It is not known at the present time which of these constructions are innovations and which may reflect a proto-Mayan categorization emphasis.

The terminological confusion and carelessness which are apparent in the treatment of numeral expressions in Mayan are in fact characteristic of much of descriptive Mayan linguistics, a point made by Fought (1973:65f) who puts it in the context of general linguistic theory and its associated pressures on the nature of linguistic description. Fortunately, a concerted effort by Mayanists has begun recently which is aimed at defining precisely the categories and processes of Mayan languages and standardizing terminology based on comparative data.

¹⁰The functions of the pseudointransitive -on in KSE are not at all well understood. It appears to have somewhat different distribution patterns and function from the cognate suffix described for Jacaltec by Day (1973a:41f) and Craig (1976). There is a homophonous suffix in most of these languages which carries aspect meaning in at least some contexts and derives affect stems and positional roots (3.1.2). It is not clear whether these two suffixes can be collapsed. Cognate suffixes of peculiar function occur in other Mayan languages and appear to be intimately tied to the notions of ergativity and transitivity in the language family, but no complete account of the suffix has yet been presented for any of the languages. Probably, the questions raised by this suffix can only be answered by extensive comparative work which has begun recently in earnest.

In KSE -on is realized as [en] on verbs which take the transitive stem formative -ej: w.ab'.[en].i 'I feel' < ab'.ej 'feel, hear (tv)'.
 .

¹¹ There are important differences in the distribution of the ay of locatives and that of pronouns. In negative sentences, for example, the ay of the locational phrase is replaced by k'am 'no', a substitution which is never made in the pronouns.

I am indebted to D. Gary Miller and Nora C. England for many helpful suggestions on the analysis of pronominal and locative constructions.

ay.ex.ek'	b'ay w.atut	'you all are in my house'
k'am ex.ek'	b'ay w.atut	'you all are not in my house'
chi.w.al	ay.ach	'I tell (it) to you'
chi.w.al	naq k'am ay.ach	'I tell (it) to him--not you'
*chi.w.al	k'am ay.ach	'I tell (it) to someone else--not you'

Furthermore, some of the pronouns may occur with or without the preceding ay, but the locative constructions demand the preceding ay (except where replaced by the negative): ach.ti ay.ach 'you (sg)' but *in.ek' kayti or *ach.ek' kayti. Similarly, when only third person objects are involved in locative phrases without ek', an ay which is clearly the existential is always present.

ay jun txitam b'ay na	'a pig is in the house'
-----------------------	-------------------------

¹² The ch:x alternation is not understood. Day discusses imperative formations in considerable detail for Jacalteco (1973:38f) and mentions suppletive forms for these same verbs (61). However, the forms for tit.a 'come' are very different in Jacalteco and do not shed any light on this unusual alternation in KSE.

¹³ In addition to the imperative constructions, a rare optative mode exists in KSE which expresses the desire for some action. Its forms are difficult to elicit and rare in context. Its formation is not entirely understood, but it seems to be related to imperatives. However, all optative verb forms carry the -oq suffix on the stems, indicating that they may be considered to be future verb forms. Some examples are given below.

jay.oq.ab'.in	'that I may come'
j.awt.ej.oq.ach.qab'f	'that we may call you'

¹⁴Note that the interrogatives which question numbers appear to take suffixes which are similar to the general numeral categorial suffixes treated in section 1.2.1.3.

jan.wan		'how many (people)?'
cf. kan.wan	'four people'	
jay.eb'		'how many things)?'
cf. ox.eb'	'three (inanimates)'	

In the case of jantaq 'how much?' there is a resemblance to the adjectival suffix -taq which often indicates quantity (1.2.2.1.2).

¹⁵Ajaw is actually glossed as 'hours', the Mayan time units counted by soothsayers in calculating the calendar and in foretelling the future. In Mayan cosmology, each day or 'hour' is conceived of as having a lord which bears the day. LaFarge and Byers 1931 describe this cosmology and its relationship to contemporary Kanjobalan religious practice. The aj- of ajaw seems likely to be the same prefix discussed in this section, but it may not be.

2. POSITIONAL ROOTS: PHONOLOGICAL PATTERNS

Positional roots exhibit most of the same phonological features as other roots in KSE. In this chapter the special phonological characteristics of the class are examined, including the distribution patterns of segments, the special phonological processes which affect these roots, and the possible existence of sound symbolism within the class. For purposes of phonological analysis, 270 positional roots have been examined. A complete list of them is included as Appendix C.

2.1 Segment Distribution

Except for a handful of items, positional roots (P) are CVC in shape. Of the 270 considered, thirteen apparent members of the class are CV7 and five are (?)VC. These glottal stop roots are unusual when compared to root shapes reported for positionals in other Mayan languages. Day (1973:15) reports that in Jacaltec all positionals are CVC or CV and that the second C is never glottal stop. Some KSE CV7 positionals cognate with Jacaltec CV positionals: Jacaltec wa.an 'upright (P)¹ and KSE waʔ.an 'erect'; Jacaltec

la 'moisten a little (tv)' and KSE la7 'submerged in a liquid'. Others have cognates in which the KSE /7/ corresponds to Jacaltec /h/: Jacaltec k'e(h) 'leaning on (P)' and KSE q'e7 'inclined; reclining against'; Jacaltec b'ih 'long, stretched' and KSE b'7 'flexible, stretched'. Hopkins' Chuj data (1967:76) apparently also includes only CVC positional roots. Mam positional root shapes are either CVC or CVnC (England 1975:82) and Quiche has only CVC positionals (Norman 1973) as does Tenejapa Tzeltal (Berlin 1968: 21). There is no discussion in these sources on the question of whether or not /7/ occurs as a segment in these roots.²

The positional roots with glottal stop in Kanjobal do not behave differently with respect to morphological and syntactic criteria and must be considered to be members of the class even though they are somewhat unusual. Their behavior under reduplication is particularly relevant to this question and further discussion of the status of these roots is included in the discussion of reduplicative processes in section 2.2.1.

It is important to note that the glottal stops in the KSE data are not derived from underlying /q'/ since no similar roots were collected which contain /q'/ and have similar meanings. In other cases of /q'/>[?], the underlying segment is always retrievable. In fact, except in the case of

la7 'submerged in liquid'

laq' 'embraced'

the glottal stop roots cannot be matched with any other set of roots which have a consonant which is in any way a possible variant of [ʔ].

2.1.1 Cooccurrence Patterns

Unlike roots of some other classes, P roots in KSE, with one exception, do not occur with identical Cs. Ja.j.an 'kneeling' is the single such case. However, nouns of this shape are common: txitx 'rabbit', mam 'father', tx'otx' 'earth'.

The general restrictions on cooccurrence of fricatives and affricates which are true of other KSE roots (and described in 1.1.3.2) are also true for P roots. In addition, bilabial and velar consonants are restricted from occurrence in the same root with another C of that class. For example, roots such as *b'up and *kaj do not occur as positionals although mub' 'smoke' and koj- 'scold (tv)' demonstrate that such combinations are permitted in other root classes. However, such phonological combinations are rare in any class.

2.1.2 Frequencies

An analysis of the frequency of each phoneme in positional roots was undertaken in order to discover whether or not such roots are unique in terms of the combinations of

sounds that make them up. Data on positional roots were considered in light of the phoneme frequencies found in running text (1.1.3.4) and also compared to frequency data for 168 CVC noun roots. Noun roots were chosen for this comparison because positional roots are seldom related to nouns or derived as nouns, but the positional class does have extensive connections with the verb class. Therefore, nouns seem likely to provide the most contrasting data if any contrast is present.

The frequency of a phoneme in positional roots varies with its position in the root. As C₁, the most frequent consonants are j, p, l, b', and k', but, except for l, these are of only medium frequency as C₂. In that position the most common consonants are l, n, q (which does not occur in root-initial position), t, and k. The least common Cs are, in first position, tz', tx', ʒ, y, and xh plus q and r which do not occur at all as C₁, and in second position r, m, tx', xh, and ch'. One unexpected result of this investigation is the low occurrence of m as C₂. The bilabial nasal is the third most frequent consonant in morphemes in running text (1.1.3.4) and is of average frequency as C₁ in positionals. In the sample of CVC noun roots, m had the same rate of occurrence as C₁ as in positional roots but was the second most frequent C₂. Most of the other low-frequency Cs are not surprising in view of the relatively more complex articulation.

Another interesting discrepancy is the high frequency of j as C₁ in positional roots and only medium frequency in second position. This can be compared to its occurrence in noun roots where j occurs with a very low frequency as C₁ and as the fourth most frequent sound as C₂.

With regard to vowels, noun roots have a vowel occurrence pattern which is nearly identical to that of running text (1.1.3.4): a, with a great majority of occurrences, then o, i, u, and e. Positional roots have less disparity in the frequencies for each vowel. A is still the most frequent vowel and u, the least, but the distribution of vowels is more even. This may be related to the vowel alternation phenomena discussed in 2.3.1.

The significance of these data and the co-occurrence restrictions discussed in 2.1.1 is not easy to assess. One possible factor is the degree of sound symbolism affecting the sounds in positional roots, a possibility which is considered in greater detail in section 2.3.

All frequency data are given in Appendix B, including the percentage of occurrence for each phoneme in running text, the noun root sample, and the complete sample of positional roots. These data are included here primarily for the benefit of those researchers who use frequency data in large comparative studies of many languages. These studies appear likely to offer great insight into universal processes

operating in sound systems and every additional source of data is welcome.

2.2 Phonological Process

The most important phonological process which affects P roots is reduplication. Some of the reduplicative patterns seen in positional root derivation may have been productive throughout KSE in earlier stages but are today restricted to members of the positional class. In this section, two kinds of reduplication are discussed. This section also considers the possibility of a productive pattern of metathesis in the positional class.

2.2.1 Reduplication

Reduplication processes in part define membership in the positional class. There are two kinds of reduplication: Redup -C₁, in which the first consonant of the root is suffixed to the entire root, and Redup -VC₂, in which the vowel and last consonant are suffixed to the root.

The first forms intransitive motion or noise verbs of iterative aspect from positional roots. This pattern also derives such verbs from the affect and onomatopoeic roots. All derived intransitive reduplicative stems of this sort must be further derived by -on 'repetitive'.

<u>mutz'</u>	'having the eyes open'
chi.Ø. <u>mutz'</u> .m.on.i	'third person repeatedly closes his eyes for a while and then opens them'
sut	'circular'
chi.ach. <u>sut</u> .s.on.i	'you (sg) go round and round in circles'

Compare the affect root k'otx 'sound of walking on stones' derived as chi.Ø.k'otx.k'.on.i 'third person walks around on stones making that noise'.

This same Redup -C₁ may occur in subordinated form as part of a directional verb phrase (3.1.2) and as a stative plural adjective (3.3.1).

lok	'hanging'
max.Ø.pax <u>lok</u> .l.on.oq	'third person came back hanging (metaphorically of a lame person because he walks with a bounce as if he were hanging)'
jop	'shiny'
<u>jop</u> .j.on.b'a	'very many bright ones'

This reduplication is cognate to the process identified as -Red (C₁) 'iterative' in Jacalteco (suffix number 517) by Day (1973a:45).

The second kind of reduplicative process, Redup -VC₂i, forms intensive adjectives from positionals and is apparently

restricted to that class. The meanings are not always predictable but involve notions of intensity, multiplicity, emphasis, or continuation.

maq	'enclosed'
maq.aqi	'completely closed'
latz'	'in a line'
latz'.atz'i	'a lot of things very close together in a line'
pitx	'on end (head down)'
pitx.itxi	'well-placed very much on end'

A further discussion of reduplicative adjectives with examples of various syntactic constructions in which they appear is given in section 3.3

Positional roots with glottal stops also undergo reduplication by these processes. Both (?)VC and CV7 roots are shown in the list below and types of reduplication that affect them are indicated.

Root	Gloss	Redup -C ₁	Redup -VC ₂ i
CV7 roots			
ch'e7	stick into	x	x
ja7	arms extended	x	x
le7	scattered	x	x
q'e7	inclined	x	x
wa7	erect	x	x
lu7	extended		x

Root	Gloss	Redup -C ₁	Redup -VC ₂ i
k'a7	staring		x
b'i7	stretched		x
tx'a7	held in the teeth	x	
pe7	standing liquid	x	
la7	submerged in liquid	x	
cha7	hanging	x	
chi7	held in the teeth	x	
(?)VC roots			
oy	circled	x	x
uch			x
ok	grasped		x
om	sunken	unknown	
ij	pointed		

Informants write and produce these roots both with and without the reduplicated glottal stop. The more common pattern is without it. The following have been attested in written form: ch'e7ei, ja7ai, q'e7eei, luui, b'iii, and oy7onoq (variant). For most of the apparent CV7 roots, informants prefer all forms to be written without 7 but will accept and produce both pronunciations. There seems to be no doubt that

the reduplication rule for Redup -VC₂i is best formalized as follows and applies only to positional roots:

$$\beta \longrightarrow \begin{matrix} V \\ [\alpha \text{ features}] \end{matrix} \begin{matrix} C \\ [\alpha \text{ features}] \end{matrix} \quad i \quad / \quad \begin{matrix} C \quad VC \\ [\alpha \text{ features}] \end{matrix} \text{ ———}$$

Later rules of glottal stop deletion (1.1.2.5.2) can account for the sporadic loss of /ʔ/. The (ʔ)VC roots are much less common and except for (ʔ)oy 'circled' do not reduplicate C₁, which fact is probably not coincidental. The best way to account for these data is to assume that the five (ʔ)VC positional roots are exceptional within the class, that is, marked for non-application of the Redup -C₁ rule. This rule can be formalized as follows and applies only to positional and affect roots:

$$\beta \longrightarrow \begin{matrix} C \\ [\alpha \text{ features}] \end{matrix} / \begin{matrix} C \\ [\alpha \text{ features}] \end{matrix} \quad VC \text{ ———}$$

Oy must then be entered as systematic phonemic 7VC and the other (ʔ)VC roots merely as VC or else a special rule must be devised to apply only to this form. Neither solution is entirely satisfactory (see section 1.1.1.1 for further discussion on glottal stop and its status within the KSE sound system). The first solution is preferable, however, since it introduces less complication into the grammar than would a poorly motivated, unique minor rule.

The reduplicative processes discussed above are productive in KSE. Even when the resulting stem is not semantically marked in the language, an informant accepts the derivation as one which 'can be understood' although it might never have occurred. Less than a dozen true positional roots do not undergo one or the other of these processes. This is not the result of phonological restrictions, because the possible combinations which would result if those roots underwent reduplication can be attested in other roots which do. There are, in fact, no restrictions at all on the possible phonological combinations produced by this process. If the restrictions are semantic, they are so far not clear. Probably, the majority of these failures to undergo the process are purely accidental gaps. That is, the form could well be a KSE word and may even have some likelihood of being added to the inventory but simply happens not to occur in the speech of some or all informants at this time.

Reduplication has probably always been a productive feature of all Mayan languages, affecting many more classes than simply positionals. Berlin 1963 describes several processes of reduplication in Tenejapa Tzeltal (Chiapas). These processes are found in all major stem classes and in general, as in KSE, the processes are used to convey semantic features of augmentation, intensity, and continuation.

Although the reduplicative stems in Tzeltal often include additional suffixes or intervening sounds, both the basic -C₁ and -VC₂- patterns occur and are of high frequency.

2.2.2 Metathesis

One pair of positional roots has been found which appears to exhibit metathesis of its two consonants: tzay and yatz both meaning 'twin-like round objects'. The other positional roots in the sample were therefore also examined for possible metathesis patterns. Eighteen potential metathesized pairs were found. Of these, only the pair cited above showed an identical meaning. The following four pairs had meanings which were somewhat similar. The first two pairs are much closer semantically than the others.

kox	'curved'	xok	'hooked'
lok	'hanging, curved'	kol	'twisted'
kew	'watery mass'	wek	'large mass'
k'al	'tied, bond'	lak'	'stuck to'

The remaining thirteen pairs do not demonstrate any obvious semantic similarity. Only additional field research can establish how much of this is the result of inadequate glosses. Since even the semantically similar roots do not display exactly identical syntactic patterning, it must be concluded at present that metathesis is not a common or productive characteristic of positional root phonology.

2.3 Sound Symbolism

The idea that sounds can have inherent semantic content is generally rejected by many modern linguists although widely accepted by classical scholars (Packard 1974 and references cited therein are good examples) and by less scientific students of language such as poets. Nevertheless, the concept has always been a provocative one and has never been completely disproved. An excellent and detailed critical review of the major literature on this topic and the principal objections voiced by linguistic scholars to such a theory are presented in Durbin 1973. Durbin makes a strong case for the theoretical existence of a connection between sound features and highly abstract deep semantic features. He discusses several misunderstandings which taint the most common arguments against the theory. The most important of these is the assumption that a claim of universal sound symbolism suggests that the correspondences between sound and meaning, if any, must be constant across languages. Such a view is unsupported in any strong way by experimental evidence, as Durbin makes clear (28), but the idea that some sound symbolism exists in every language, while the connections themselves are language-specific, is a much more limited claim, easier to test and with some support already in the literature. However the connections are most abstract

and, furthermore, it seems reasonable to suppose that any semantic effects which sounds have may be conditioned by environment or influenced by other sounds, thus making clear identification of the constants involved more difficult. In spite of these difficulties and the theoretical confusions which surround this idea, the possibility of sound symbolism continues to intrigue linguists, and an objective examination of the data suggests stronger support for it than may have been previously recognized.

Mayan linguists in particular have noticed the existence in their own data of possible cases of sound symbolism. Durbin is the most persistent such investigator but he cites work by Alvarez and others who have previously investigated this question in Mayan. Many Mayan linguists who do not choose to discuss their findings in print willingly acknowledge the likelihood of sound-meaning connections in their data. Occasional references to the phenomenon can be found in Mayan studies, sometimes under other names. For example, England (1975:65) refers to 'certain phonological conventions' which apply to affect words in Mam. She is careful to point out that these items are only minimally onomatopoeic. What she describes is language-specific sound symbolism.

There are, unfortunately, few careful investigations into this topic. Durbin's 1973 analysis is the most convincing to date. It is somewhat incomplete since in it he

established tentative semantic implications for only a few types of sounds. His most important innovation is to consider the problem in terms of distinctive features rather than in terms of phonemes as most previous work had done. His analysis of the consonant patterns in 3303 CV(V)C and CV7VC stems in Yucatec definitely supports the following conclusions:

- a) various phonological distinctive features seemed to carry meaning, although the nature of that meaning was elusive (33)
- b) meanings that adhere to features in Yucatec are positionally conditioned (34)
- c) stem-final consonants set the tone of the stem meaning and it is further modified by the stem-initial consonant and the vowel . . . in that order of importance (37)
- d) certain frequency of occurrence data and co-occurrence restrictions can be accounted for by this theory of sound and meaning congruence (47)
- e) glosses in translation with their attendant differences in focus may partially obscure meaning relationships among items (39)

There are some problems in Durbin's paper. The subjective nature of many of the interpretations, which he

freely admits and defends (32), the lack of supporting usage data to verify glosses, and the very abstract semantic notions he presents for some sound features are easily open to criticism. Nevertheless, this work and his earlier work, reported to the Chicago Linguistic Society in 1970, in which he describes morphophonemic processes of stem alternation in Yucatec which appear to be directly governed by a semantic feature, suggest that the connections between sound and meaning may be much stronger and more patterned than earlier theories of languages could describe. Just as the semantic component in language is more and more readily accepted as central by investigators of syntactic phenomena, so might it eventually be regarded by those whose interest is in the phonological component. In any case, Durbin's work presents very provocative data and a challenge for further work.

As it happens, during the collection of data for this study and prior to the availability of Durbin's 1973 work, certain phonological and semantic correspondences were noticed in the positional data. These included both consonant and vowel patterns. Because positional roots offer a stable canonical shape and have an especially rich and powerful semantic role in the grammar, it seems reasonable to expect that analysis should reveal evidence of symbolic patterning of sound in that class if it, in fact, exists in the language.

Positional roots offer a better testing ground for such patterning than, for instance, affect roots, since it is easier to discount these latter as imitative (although they do more often refer to textures, motions, and actions, than to natural sounds.) Since the sound symbolic nature of truly onomatopoeic words is seldom denied, an analysis of affect roots might shed less light on the larger question of sound-meaning connections operating throughout a grammar.

Because of the already tantalizing hints and the availability of what appeared to be an appropriate body of data, the roots analyzed in this study have therefore been examined for possible patterns of sound symbolism. As suspected, correspondences exist which do not seem to be coincidental, but conclusive evidence for a strong version of the sound symbolism theory is very elusive.

2.3.1 Vowel Alternations

Durbin mentions in passing that vowels have a role in the phonologically significant semantics of Mayan words (1973:37) but he does not pursue this aspect of the question in his paper. However, the most immediately obvious semantically controlled phonological alternations in KSE seemed to involve vowels. Consequently, the positional roots in the sample were examined for vowel alternations in identical

consonant environments. One hundred and thirty-two such items were isolated. Slightly over half (seventy-nine items) show clear or possible semantic relationships based on a very conservative, that is, literal, evaluation of all the glosses collected for each root. The fifty items with clear semantic connections are presented in the following list. Only the basic gloss is given. The designation 'rare' indicates that the form was not recognized by all informants or was said to be uncommon by one or more informants. (Items marked by † match a pair but do not have a related meaning.)

b'ak'	'covered with something that doesn't belong'	b'ok'	'covered with intangible things'
ch'aw	'(seated) with the legs apart'	ch'ew	'(seated) with the legs apart'
jab'	'long'	jib'	'long (snakes, ropes)'
jal	'long, thin objects, intertwined'	jol	'long, flexible objects (ropes, plastic tubes)'
jatx	'slippery'	jutx	'slippery'
jut'	'having little lines or stripes'	jit'	'lined up; in line'
	cf. jet'		'(erect) with legs very straight'

k'ab'	'large-mouthed (open)'	k'ob'	'having a deep depression or a wide mouth'
k'en	'wide objects with twisted edges sticking out a little'	k'on	'curved with part sticking out'
	cf. tk'an	'gulley-like'	
lek	'erect, straight'	lok	'hanging straight'
	cf. tlak	'large, fat'	
letz'	'bright'	litz'	'shiny (of full pots of liquid)'
	cf. tlatz'	'in ordered lines'	
latz	'united, close together'	lotz	'stuck tight to something'
lot'	'narrow'	lut'	'narrow (of places)'
nel	'slippery, smooth (dry)'	nul	'slippery (dry)'
	cf. tnil	'objects scattered in groups'	
patx	'wide, flat'	potx	'wide'
	cf. tpitx	'doubled over; head down'	

q'at	'cross-wise against something'	q'et	'leaning slightly back (against)'
		cf. tq'ut	'covered with clothes (rare)'
q'eb'	'thick liquid spread around'	q'ib'	'thick liquid spread around (greater amount)'
sap	'thick-trunked'	sop	'very thick, cylindrical'
set	'wheel-like'	sut	'cultivated circle'
soy	'curled up, nesting'	suy	'circular, wheel-like'
		cf. sey	'like a wheel'
tap	'fat, tall'	top	'very thick, cylindrical'
t'an	'staring'	t'in	'straight between two points'
		cf. t'un t'en	'hanging (straight)' 'with a part elevated (rare)'
wak	'large, semi-round mass'	wek	'large mass (rock or dirt clod)'

wen	'very tall, bumpy'	won	'like a tall mountain point'
xot	'covered with clothes'	xut	'covered with dust or clouds'

Twenty-nine items which seem to show semantic relationships which are less certain or obvious than those above are given in the following list.

b'al	'thick, fat, cylindrical'	b'e1	'cylindrical items in a line'
	cf. b'il (?) +b'ul		'small, round' 'unordered groups'
jach	'forked'	jich	'long, extended'
jan	'face to the sun'	jen	'large, stiff objects, toasted by the sun'
jas	'long, thin, straight objects'	jes	'long, moving objects'
k'et	'cylindrical objects, not completely straight'	k'it	'erect cylinders, alone and not moving'
kew	'soft, watery like mud'	kiw	'slippery (wet)'
law	'large, fat'	lew	'extended, spread open'

le7	'scattered'	lu7	'extended like a tree branch'
		cf. tla7	'submerged in liquid'
maq	'enclosed'	muq	'buried'
sek	'grain or water spread around (great quantity)'	sok	'disordered, scattered (hair, leaves)'
txal	'serrated, clawed'	txol	'distinct ob- jects in a line'
		cf. (?) †txil	'many little objects scattered'
tx'en	'very smooth, hairless'	tx'on	'smooth, large- headed'
witz'	'crowded, close together'	wotz'	'hands and knees drawn inside clothing'
wes	'furry'	wos	'foamy, spongy'

Fifty-three additional items (including those marked by † in the list above) do not have an immediately obvious semantic relationship. However, even some of these are suspicious: kun 'bunched' and kon 'arched up' or kox 'curved, twisted' and kix 'squatting with the rear elevated' which could be considered to refer to similar shapes.

Unfortunately, in spite of the large number of paired sets with semantic relationships, no pattern emerges in an examination of the particular vowel alternations which might indicate that some particular semantic dimension is correlated with vowel backness or height. The only widespread pattern is a more abstract one. The more highly specified the semantic content of the roots, the higher or more removed its vowel is from the neutral vowel /a/. That is, when the member of a paired set is more restricted in its application or includes more specific semantic information (for example, as to quantity), then its vowel is more often higher than the vowel of the less restricted item. Compare, for example, jab' 'long' and jib' 'long (restricted to snakes and ropes)'; lot' 'narrow' and lut' 'narrow (more often of places)'; q'eb' 'thick liquid spread out' and q'ib' 'thick liquid spread out in greater quantity'; ch'aw 'legs spread' and ch'ew 'legs spread' (has metaphorical extensions not possible with ch'aw.) In terms of features, this means that the minimally specifiable /a/ [+low] is more often associated with minimally specifiable semantic matrices. The relevant dimension may be then one of height. Only in three pairs, jit':jut', lek:lok and k'en:k'on do close semantic connections occur in roots with vowels at the same height.

This does not seem to be a discovery which sufficiently explains the semantic parallels observed. The failure to find a more definite semantic correlation for the vowel alternants may be accounted for by the following hypothesis:

- 1) The glosses do not focus on the proper semantic dimensions which distinguish the pairs and therefore disguise the role of the vowel alternations.
- 2) Information on actual usage is incomplete which would shed light on the cases of semantic extension.
- 3) Vowels are only minimally important in sound symbolism and operate on semantic parameters already established by the consonants. The similarities of meaning in these pairs are a product of the consonant combinations and the vowel effects are unpredictable.
- 4) There is no sound symbolism of any kind and the semantic regularities seen in these positional roots are coincidental.

The last hypothesis might be preferred by a majority of linguists but it denies the obvious semantic patterns displayed by more than half the roots examined. If it can be motivated, a systematic explanation of these facts would be preferable to no explanation at all.

Both the first and second hypothesis above are entirely possible as reasons for the failure although they do not speak at all to the question of sound symbolism itself. The problems with translated glosses are well known and, since Guatemalan Spanish was used as the contact language for this study but the glosses are now rendered in English, the problems are compounded. Because the question of possible sound symbolism did not arise until the end of the field stay, the kinds of data which might clarify the problem were not obtained. The gap and others already mentioned seriously prejudice the possibility of drawing more than the most tentative of conclusions at this stage.

The third hypothesis, that vowels are less important in sound symbolism patterns, is supported by Durbin's findings for Yucatec. The vowels may even be semantically empty in some of these pairs. For example, suy:sey and nul:nel among others, were given with identical glosses and claimed by informants to be the same in every respect. Sometimes, informants accepted only one item of a pair and said the other form did not exist or was from another (unspecified) dialect. This suggests that an extensive survey of many speakers would be needed in order to determine whether or not the paired items even co-occur in most speaker's lexicons. It would also be interesting to learn whether children acquire positionals in vowel-alternating groups since if

there is a semantic relationship of vowel-to-meaning (or of consonant-to-meaning for that matter) this has important implications for language acquisition.

Research strategies for filling these and other gaps are discussed in more detail for both vowel and consonant alternations at the end of the next section (2.3.2). In spite of these problems, however, further research into the questions raised by the vowel alternation patterns observed in these data is clearly required.

2.3.2 Consonant Patterns

In his 1973 Durbin discusses only palatality of consonants in any detail. He concludes that in Yucatec the semantic contributions of final consonant palatality are along the dimensions of 'lack of specification or relative plasticity of the physical properties of sense stimuli' (35). There is no suggestion, of course, that every item with a palatal consonant will carry such a meaning, only that many items will do so. Furthermore, it must be noted that other sounds in a root are expected to have ameliorating semantic effects making the determination of sound to meaning correspondences even more difficult. Even taking these caveats into consideration, however, KSE positional roots display some intriguing suggestions of semantic and phonological pairing, not only for palatality but for other features as well.

Examining final consonants, the KSE data appear to support Durbin's conclusions about palatality. A surprising number of roots with meanings such as 'curved', 'circular', 'boundless', and 'loose (in space)' have palatal final consonants. Examples follow.

b'ux	'short, round'
pux	'round, solid, inflated'
kox	'curved, twisted'
tixh	'objects scattered in space'
mich	'having various petals or bumps'
uch	'disordered'
wech'	'scattered remnants'
wotx	'shaped like a blister'
toy	'loose and shapeless'
xoy	'curved'
suy	'circular'
xuy	'loose, untied'
soy	'nesting'
oy	'circled'

Apparent counterexamples include the following roots.

pix	'tied up'
jexh	'having a drooping arm'
jich	'long, straight'

tz'ey	'inclined'
b'ay	'hanging'

Laterality is another feature which seems to be related to meanings of roundness, softness, pliability or flexibility, and smoothness. Of twenty-three positional roots which end in /l/, only three have meanings which are clearly not included in these areas. The counterexamples are

k'al	'tied or fastened'
txal	'clawed or serrated'
q'ol	'sticky (rare)'

Examples of other final -l roots include these:

txil	'scattered small round things'
tel	'cylindrical'
b'il	'very small and round'
k'ol	'round, spherical, small'
xil	'small, fat, round'
pil	'curved'
chul	'rolled'
b'e'l	'cylinders in a line'
jol	'soft, pliable'
q'u'l	'having a fatty neck'
kol	'spacious'

Glottality may also have semantic associations in KSE. Those roots which end in glottalized consonants refer by a large majority to objects with definite lines or straight-sided shapes, constriction, or crowding and to abruptness of action. The effects of glottality seem to be stronger with the coronal consonants. Consider the following examples.

litz'	'wide, extended, flat'
txek'	'having protruding elements like spines'
jit'	'lined up'
latz'	'in ordered lines'
jab'	'long'
toq'	'long and hanging'
tz'ub'	'sharp-pointed'
lot'	'narrow'
sut'	'tightened (around the neck)'
witz'	'crowded, close together'
b'ut'	'crowded, closed off'
letz'	'bright'
mutz'	'having eyes closed'
yatz'	'grabbed in the hand'

Several apparent counterexamples occur of which only the following three are given.

lob'	'sunken, especially if wet'
net'	'watery and loose'
puk'	'round, hollow'

Nasality, stridency, and labiality were considered from this perspective as well but no immediately obvious patterns have emerged from the data.³ The complex statistical testing required for the investigation of the potential cumulative affects by initial consonant features have been beyond the scope of the preliminary research attempted here. Such techniques are important, however, not only for that purpose but also in order to discover the marking heirarchy (if any) of features used for this purpose and to test the validity of the semantic hypotheses proposed for each feature. Durbin's work does include statistical support of this kind.

The value of research into the possibility of sound-meaning correlations is of several kinds. First of all, the convincing demonstration that such correlations exist in a language would have a significant impact on the nature of linguistic theory, particularly with regard to questions about the role of semantics in a grammar. A 1970 paper by Durbin has touched on this question. There he reports on an unusual case in Yucatec where the application of a morphophonemic alternation appears to be governed solely by an underlying purely semantic feature.

The existence of sound symbolism would also make predictions about the direction and nature of historical semantic change. It seems reasonable to expect that items which contain sounds which have meaning bearing functions but whose meanings do not have the predicted semantic features might shift through time in the direction of the semantic field implied by the sound features. Conversely, it should be possible to find historical evidence for loss of sound-meaning relationships or for changes in their nature. Again Durbin has been innovative in this type of research as well. Although he does not specifically address the question of sound symbolism in this context, he has described, in an unpublished 1971 paper, a set of phonologically similar pairs which display converging semantic shift through time. His data for this analysis come from both English and Yucatec.

In addition to implications for linguistic theory and for historical linguistics, the confirmed existence of sound symbolic properties operating in language systems would also be important to an understanding of language acquisition. It is well known that children play with rhyme and sound substitutions as part of their acquisition activities. Neither the Yucatec nor the XSE data can be explained as the simple result of such behavior, but children must surely be able to capitalize on constant sound and meaning associations.

if these in fact exist, even if they affect only portions of the lexicon.

Several research strategies immediately suggest themselves in an attempt to clarify the nature of the sound-meaning correspondences which appear to operate in Kanjobal. It must first be established that all the items in the sets which show vowel alternations actually exist together in the individual lexicons of speakers of KSE and that they are not distributed along social or geographic dialect lines (see preceding section for discussion of vowel alternations). Many more adult speakers must be interviewed in order to establish that the lexical meanings for all items are constant with regard to the apparently significant semantic features. Then acquisition data must be collected from a large sample in order to establish what effects sound symbolism may have on the order and ease with which members of these lexical sets are acquired by children. Information on lexical innovation, word play, and synchronic meaning shift must also be included in any convincing claim of widespread sound symbolism. And, finally, a great deal of comparative work on this point for Mayan languages would be welcome since it seems likely that a property as subtle as sound symbolism appears to be probably characterizes whole families of languages in similar ways.

The KSE data and analysis presented here are admittedly incomplete. However, they are extremely provocative and are not easily explained by the usual view of sound-meaning relationships in languages and further investigation is definitely needed especially along the lines indicated above.

NOTES

¹The latest 1976 revision of the computer-stored Jacaltec dictionary has been made available to me by Christopher Day. The cognates noted in the text were found by searching the positional section of the printout. A cursory search turned up some direct positional cognates, although more undoubtedly exist in other word classes. The dictionary is potentially a very valuable resource for investigators working on languages in the Kanjobal branch. It has been very useful in my own work, and Chris Day's courtesy in sharing it, and other materials, with me is hereby gratefully acknowledged.

²England (personal communication states that for Mam /ʃ/ does not occur as the C in positional roots.

³A review of the lists provided for vowel alternating roots does suggest that further analysis would reveal still further consonantal effects. Consider, for example, the similarities of meaning for those roots which are /j/-initial and /s/-initial. In the first case all the roots share a variant of the meaning 'long' while the other share a meaning 'circular'.

3. POSITIONAL ROOTS: SYNTACTIC PATTERNS

In section 0.1 it was claimed that positional roots form a class separate from other roots in KSE grammar and that their class identity is established on phonological, syntactic, and semantic grounds. In the preceding chapter, positional roots are defined in terms of their phonological characteristics. In the next chapter, positional roots are described on the basis of their semantic features. In this chapter, positional roots are examined for their unique morphological and syntactic behavior.¹

Positionals are first of all distinct from other items in the grammar by virtue of the fact that there are no borrowed positionals nor are there any frozen stems in this class. All positionals are roots which do not occur as underived words. Each root takes a stem formative, -an, which may be replaced by derivational suffixes which form verb, noun, and adjective stems from the root. Some of these suffixes are unique to the positional class, a second indication of the distinct syntactic nature of these roots. Furthermore, positionals enter into certain syntactic constructions open only to them. For example, they have

special relationships with locational/directional verbs and clitics.

Because positionals often occur as derived stems of other classes and because they are always part of phrases which function as noun, verb, or modifying phrases, they are treated in this chapter in terms of their relationships to these three primary syntactic classes. In the first section, positional roots are treated within the verbal system, including both their function in verb phrases and their derivation as verb stems. In the second section, positionals are considered as part of the nominal system. Their occurrence as derived nouns and their function in numeral classifier phrases are described. In the third section, positional roots are discussed as modifiers, whether morphologically derived or syntactically defined.

3.1 Positionals Within the Verbal System

Positional roots in KSE have many affinities with verbs. In other Mayan languages such as Tzeltal (Berlin 1968:21) they are in fact a subclass of verbs. It is not clear whether they have separated from the verb class as an innovation in the Kanjobalan languages or whether these languages maintain a proto-Mayan distinction which has been lost in other Mayan branches. Insofar as can be determined, no work has been done on the historical reconstruction of

this class and work on proto-Kanjobalan in general is extremely limited.

Positionals may be derived, by unique suffixes, as either transitive or intransitive verb stems. This is true in all Mayan languages. Nearly every positional root can occur with one or more of the directional verbs and often is specifically identified with one of them in citation. This close association of positional roots and directionals is one of the most interesting aspects of positional phrase formation and is apparently a feature only of languages of the Kanjobal complex since such an occurrence pattern is not mentioned by other investigators.

3.1.1 Positionals and Directional/Locational Verbs

In section 1.2.1.6 the semantic category of direction/location is assumed to be a major concept in the grammatical structure of KSE. One of the patterns which gives support to this hypothesis is the association of directional/locational verbs to roots of the positional class. As demonstrated in that section, the set of directional/verbs function as intransitive main verbs and as enclitics; both functions are relevant to the description of positionals. The set is quite small and includes the following members.

<u>ay.i</u>	'go down'
<u>aj.i</u>	'go up'

<u>ok.i</u>	'go in'
<u>el.i</u>	'go out'
<u>ek'.i</u>	'pass by'
<u>kan.i</u>	'remain'

Two additional forms, derived from motion verbs, function only as clitics and may co-occur with forms in the above set or may occur alone.

<u>teq</u>	'action toward the speaker'
<u>toq</u>	'action away from the speaker'

When teq and toq occur with other directionals, they are always postposed to them.

Nearly every positional root occurs with these directional/locational clitics and in citation form is regularly associated with one of them. Of two hundred and seventy positional roots in this sample, only eighteen do not regularly occur in citation with one of the directional/locational clitics. Of these eighteen, five occur with non-directional citation forms which will be discussed in section 3.3 below and six are defective in other ways as well. For the remaining seven, information on this point is incomplete.

The choice of a citation directional is governed by semantic features (described in section 4.1.1) and there is a high degree of informant agreement regarding the clitic associated with a particular root. All directionals, including toq, occur as citation directionals with at least some

roots but ay 'down' is by far the most common. Examples of some positional citation forms are given below. (The -an stem formative is always present in citation and the citation directional enclitics take -oq 'subordinator'.)

with ayoq 'down'

xoy.an ay.oq	'curved, twisted'
lob'	'sunken in, especially if wet'
le7	'scattered in a large space'
pan	'flat'
chot	'seated'

with aj.oq 'up'

kut.an aj.oq	'too short to reach'
tutz'	'slippery'
kon	'arched, usually with long legs'
pak'	'face up'
t'un	'hanging and straight'

with okoq 'in'

b'ok'.an ok.oq	'covered with a non-tangible substance'
tzok'	'stuck into something else by a cutting edge'
latz	'united or very close together'
t'an	'staring'
txal	'clawed or serrated'

<u>with eloq</u>	'out'	
b'i7.an	e1.oq	'flexible and stretched'
b'eq		'loose (of animals)'
jaq		'open'
tar		'tallish, a little fat, and naked'
<u>with ek'oq</u>	'by'	
t'in.an	ek'oq	'cross-wise between two points'
<u>with kanog</u>	'remain'	
tz'in.an	kan.oq	'vacant, empty, deserted'
kol		'spacious'
tzuy		'heavy, immobile'
<u>with toq</u>	'away'	
b'an.an	toq	'long and with a part sticking out'
sap		'thick-trunked' (also cited with <u>ok</u>)

Although the directional clitic given in citation is the one most frequently associated with a particular positional, even when derived, most roots can occur with many or all of the directionals in patterns which are syntactically quite regular and semantically quite predictable. A typical paradigm is presented below for chot 'seated', a positional which is cited with ayog 'down' but which readily occurs with other directional/locational clitics. (As before citation forms require both the positional stem formative -an and the verbal subordinator -oq.)

chotan	<u>ayoq</u>	'seated in a chair or on the ground (down)'
chotan	<u>ajoq</u>	'seated (said of a sick person just recovering) (up)'
chotan	<u>okoq</u>	'seated close to or touching some other object (in)'
chotan	<u>eloq</u>	'seated at a little distance from something else (out)'
chotan	<u>ek'oq</u>	'just seated, not doing anything (by)'
chotan	<u>kanoq</u>	'seated and not moving (remaining)'

In such constructions, the directional, that is, movement, force of the clitics is considerably attenuated, while the locational, or stative, meaning is quite strong. Consider the following examples in which a positional root and subordinated directional/locational verb occur in a context. (The subordinator -oq is lost in non-phrase final position.)

ay jun chej k'on.an ay.oq, chi.Ø.low.i

ay	'exists'	chi	'incom'
jun	'one'	Ø	'3'
chej	'horse'	low-	'eat (iv)'
k'on	'bent over (P)'	-i	'iv form'
ay	'go down (dir)'		

'there is a horse with his head down, he's eating'

t'an.an ok jun chej y.in jun yal tx'i7

t'an	'staring (P)'	-in	'in, against'
ok	'go in (dir)'	yal	'small'
y-	'3 poss'	tx'i7	'dog'

'a horse staring at a puppy'

ay jun mis txal.an ok y.in te7

ay	'exist'	ok	'go in (dir)'
jun	'one'	y-	'3 poss'
mis	'cat'	-in	'against'
txal	'having claws'	te7	'tree (NCL)'

'there is a cat stuck to a tree by his claws'

eb' naq waj.an ek' b'ay chi.Ø.ok jun q'in tu7

eb'	'plural humans'	chi	'incom'
naq	'man (NCL)'	ok-	'enter (iv)'
waj	'gathered together (P)'	q'in	'festival'
ek'	'go by (dir)'	tu7	'dem (there)'
b'ay	'at'		

'they were all gathered together where the festival was being celebrated'

a naq ánima paq.an aj.toq naq chon b'itz'ab'

a	'indefinite dem'	aj	'go up (dir)'
naq	'male (NCL)'	toq	'action away'
ánima	'person'	chon	'point, top'
paq	'face down (P)'	b'itz'ab'	'wall'

'that man was put (face down) on top of the wall'

chot.an ok.toq naq aj.txum b'ay y.ul na

chot	'seated (P)'	txum	'prayers'
ok	'go in (dir)'	b'ay	'at'
toq	'action away (dir)'	y-	'3 poss'
naq	'male (NCL)'	-ul	'inside'
aj-	'owner, master'	na	'house'

'the shaman is seated inside the house'

In the examples above, the stative, locational meaning predominates. In other types of constructions, the movement character of the association between positional root

and a directional/locational verb is more apparent. For example, in inflecting such an expression for tense/aspect and person, it is the directional verb root which takes these preposed markers and the positional root which is subordinated.

max.ach.ay chot.an.oq 'you (sq) sat down'
(literally, 'you went down, seated')

Note the clear implication of motion in the following examples in context:

chi.β.ay te1.an ix xol an ch'im

chi	'incom'	xol	'among'
β	'3'	an	'plant (NCl)'
te1	'cylindrical, object at rest (P)'	ch'im	'straw'
ix	'woman (NCl)'		

'she lay down in the straw'

oq.β.ok tuk.an ix y.in naq

oq	'future'	y-	'3 poss'
β	'3'	ix	'woman (NCl)'
ok-	'go in (iv)'	-in	'at, on, against'
tuk	'staring (P)'	naq	'man (NCl)'

'she pays attention to him'

chi.in.ok yatz'.an y.in nuq' jun kalnel

chi	'incom'	-in	'against'
in	'1sg'	nuq'	'neck'
ok	'go in (iv)'	jun	'one'
yatz'	'grabbed (P)'	kalnel	'sheep'
y-	'3 poss'		

'I grab tightly the neck of a sheep'

txon.an max. β.el.teq

txon	'overlarge head; large and round'	β	'3'
max	'comp'	e1- teq	'go out (iv)' 'action toward speaker (dir)'

'a pimple appeared (on someone's face, for example)'

max. β.aj.kan.toq paq.an naq ánima tu7

max	'comp'	paq	'face down (P)'
β	'3'	naq	'man (NCl)'
aj-	'go up (iv)'	ánima	'person'
kan	'stay (dir)'	tu7	'dem (there)'
toq	'action away (dir)'		

'that man climbed up (to stay) face down'

ix chi.β.ok lek.an ix chi.y.ab'.on ix

ix	'woman (NCl)'	lek	'erect (P)'
chi	'incom'	y-	'3'
β	'3'	ab'-	'hear (tr)'
ok	'go in (iv)'	-on	'PIV'

'she stops and listens

The association of motion meanings with inflected directional verbs in positional phrases is not invariable, however. In the following example, the verb is marked for person and tense/aspect but the meaning seems more stative than directional.

ay jun unin chi.β.ay b'et.an.oq

ay	'exist'	ay-	'go down (iv)'
jun	'one'	b'et	'smooth-textured and cylindrical (P)'
unin	'child'	-an	'P form'
chi	'incom'	-oq	'subordinator'
β	'3'		

'there is a child without clothes' (literally, 'who goes down smooth')

This lack of firm separation between locational and directional notions is a characteristic of KSE grammar generally (see section 1.2.1.6) and it is hypothesized that only one category exists in the deepest semantic structure of KSE and that in the category both notions are merged. To this point the category is given the dual reference direction/location. From this point on, it is regarded as a highly abstract deep semantic concept and is referred to by the abstract cover symbol L. Positional roots are very closely tied to this category as is indicated by their association with the L verbs and by the fact that they seldom occur without an L clitic even when derived. Therefore, it is assumed that each positional root includes an obligatory L specification as part of its meaning. The implications of this in positional semantics are discussed in the next chapter.

This analysis of KSE positional roots in their relationship to L verbs provides independent support for a claim made by Fillmore (1968:25f). In his presentation of 'cases', a set of underlying deep structure syntactic-semantic roles associated with verbs and defining their relationship to accompanying noun phrases, Fillmore includes a locative case role but does not set up anything corresponding to a directional role. He claims that 'locational and directional elements do not contrast but are superficial differences determined either by the constituent structure or by the character of the associated verb' (which in the case of KSE would

be the character of the positional root). Fillmore does not deal very extensively with questions regarding the L case role and his evidence for such a conclusion is limited.² The Kanjober case provides some welcome justification for Fillmore's claim.

3.1.2 Transitive Derivation

Positional roots are very easily derived as transitive stems. Of 270 roots only a handful (16) have no attested derived transitive form at all; half of that number are defective in other ways or have incomplete data. There are four primary types of transitive derivation which occur with positional roots: direct transitivization, causative, self-causative, and indirect transitivization. All derivation of positional roots as transitive stems is accomplished by suffixes.

3.1.2.1 Direction transitivization

Slightly less than half the sample of 270 positional roots can be derived directly as transitive verbs by means of the suffixation of the appropriate harmonic form of the transitive stem formative -v7 (see section 1.1.2.2 for description of variants). Because positional roots take this suffix without other preliminary derivation and because the suffix is not unique to the class, it is probably best to

analyze these roots as bivalent (1.2.2.1.1), that is, belonging to two root classes simultaneously. The fact that such a large number of positional are bivalent transitive roots is further confirmation of the close affinities which exist between these classes. Norman 1973 has described a similar case in Quiché where a class of bivalent roots occurs.

Bivalent positional roots in KSE which occur as transitive stems in -V7 do not seem to have other syntactic properties which set them apart. They are neither obligatorily confined to or constrained from other types of constructions. A representative set of such root and transitive verb pairs follows. For some pairs an example of the root and/or derived stem in an attested context is also given. Directional clitics are a common feature of derived stems as well as of underived positionals and frequently occur with them in context.

nub' 'alight but giving off only a little light (P)'

nub'.u7 'just light a fire (tv)'

nub'.an.xa ok.oq

-an	'P form'	ok	'go in (dir)'
xa	'already'	-oq	'subordinator'

'it's already lit but not really burning yet'

max.β.nub'.on ix s.q'aq'

max	'comp'	ix	'woman (NC1)'
β	'3'	x-	'3 poss'
-on	'PIV'	q'aq'	'fire'

'she lit her fire'

- lotz 'stuck to or close to (P)'
 lotz.o7 'carry a child without a shawl (tv)'
 mutz' 'with the eyes closed (P)'
 mutz'.u7 'close the eyes (tv)'

mutz.an in.sat

in '1sg poss'
 sat 'eyes'

'I have my eyes closed'

mutz.β a.sat

β '2sg imp (tv)'
 a- '2sg poss'

'close your eyes!'

- kup 'rolled or in a roll (P)'
 kup.u7 'roll up (tv)'
 jol 'soft, pliable (P)'
 jol.o7 'eat soft things (tv)'
 q'at 'long and crosswise (P)'
 q'at.a7 'carry a long object (tv)'
 nel 'slippery (P)'
 nel.a7 'make smooth; iron (tv)'

chi.β.nel jun s.qab'

chi 'incom' q'ab' 'cloth'
 β '3' s- '3 poss'
 jun 'one'

'(she) irons a cloth'

t'un	'hanging (P)'
t'un.u7	'carry in one hand (tv)'
b'ak'	'having the body covered with something that doesn't belong (P)'
b'ak'.a7	'cover (tv)'
b'es	'separated or put away (P)'
b'es.a7	'put away (tv)'

masanił chi.Ø.b'es.on.kan.aj ix

masanił	'everything'	kan	'remaining (dir)'
chi	'incom'	aj	'go up (dir)'
Ø	'3'	ix	'woman (NCl)'
-on	'PIV'		

'she putseverything away to say

kał 'mixed together (P)'

kał.a7 'mix (tv)'

chi.ko.kal.a7

ko 'łpł'

'we mix (it)'

In general, direct transitivity by -V7 creates a verb which indicates an action which produces the state described (nub'/.nub'a7 or b'es/b'esa7 for example) or an action made by or with something in the state described by the positional (as in jol/jolo7 and q'at/q'ata7). Norman 1973 describes precisely the same type of derivation for bivalent roots in Quiché.

3.1.2.2 Causative

Most positional roots in the sample take causative derivation through the suffix -b'aj. It is the most common of the transitive derivations and has been attested for more than four-fifths of the roots in the sample. The fifty remaining roots fall into several semantically identifiable classes which suggests that the reason for the lack of causative derivation may be related to semantic features. That possibility is considered in greater detail in section 4.1.3. Derivation by -b'aj is unique to positionals. A root which may be so derived is therefore, by definition, a member of the positional root class.

Derived transitive stems in -b'aj usually describe an action which places an object in the position or state described by the positional root. Some examples of roots and their derived causative stems follow.

chot 'seated (P)'

chot.b'aj 'seat another (tv)'

pak' 'face up (P)'

pak'.b'aj 'put face up (tv)'

max.in.pak'.baj.aj.oq

max 'comp'
in '1sg'

aj 'go up (dir)'
-oq 'subordinator'

'I put it face up'

tzaq	'behind (P)'		
tzaq.b'aj	'send after another (tv)'		
jan	'uncovered (P)'		
jan.b'aj	'leave open (tv)'		
litx'	'extended wide things like fabric (P)'		
litx'.b'aj	'extend (tv)'		
as	<u>litx.b'aj</u> ay.oq jun q'ap b'ay amaq'		
as	'go (2sg imp)'	g'ap	'fabric, cloth'
ay	'go down (dir)'	b'ay	'in, at'
jun	'one'	amaq'	'patio'
	'go spread out this cloth in the patio' -- _		
txak	'on four legs (P)'		
txak.b'aj	'stand something on four legs (tv)'		
latz'	'grouped in ordered lines (P)'		
latz'.b'aj	'put into lines (tv)'		

The difference in meaning conveyed by transitive derivation in -V7 and causative derivation as indicated by glosses is often very slight.

b'eq	'loose (of animals) (P)'
b'eq.a7	'turn loose'
b'eq.b'aj	'unleash an animal'

However, the -V7 form often means 'to carry in X position' while -b'aj means 'to put in X position'. Consider these examples.

jexh	'with one arm (or other appendage) hanging down (P)'
jexh.a7	'drag a branch'
jexh.b'aj	'make something drag its arm'
tx'a7	'bitten or held by teeth (P)'
tx'a7.Ø	'bite'
tx.a7.b'aj	'make someone bite'
lotz	'sticking to (P)'
lotz.o7	'carry a child without a shawl'
lotz.b'aj	'stick something (to the wall)'

In other cases, the two types of derivation affect different concepts contained in the root. This phenomenon of conflation or the 'merger or fusion of distinct deep semantic concepts in a single surface morpheme' (Norman 1973:3) is an important characteristic of KSE positional roots and is treated in Chapter 4 as a class-specific semantic feature. The fact that distinct concepts are merged in positionals and can be separated through derivation is illustrated by the following examples.

tel	'cylindrical object at rest (P)'
tel.a7	'make cylindrical'
tel.b'aj	'put to bed or make lie down'

tz'ey	'inclined from an erect position (P)'
tz'ey.a7	'incline a standing object'
tz'ey.b'aj	'stand something up at an incline'
toq'	'long and hanging (P)'
toq'.a	'drag a long thing'
toq'.b'aj	'hand a long thing'
jaq	'open (P)'
jaq.a7	'open'
jaq.b'aj	'let loose something that was enclosed'
moj	'completely covered all around (P)'
moj.07	'hid in clothing'
moj.b'aj	'put hens to set'

There is a rare variant of the causative suffix -b'aj which is apparently in free variation with it. Its form is -b'ej and indicates no difference in meaning. It has been given as an alternative to -b'aj for the following roots.

paq	'face down (P)'
paq. <u>b'aj</u> ~ paq. <u>b'ej</u>	'put something face down, especially a chicken to hatch'
wotz	'like a blister (P)'
wotz. <u>b'aj</u> ~ wotz. <u>b'ej</u>	'warm tortillas (which may swell up when heated)'

tel 'cylinder at rest (P)'
 tel.b'aj ~ tel.b'ej 'put to bed or make recline'
 max.in.tel.b'aj.kan.oq
 max 'comp' kan 'remain (dir)'
 in 'lsg' -oq 'subordinator'
 'I left (it) lying down'

It has been given as the only form for the following two roots, the first of which is defective in other derivation.

*tz'ib' 'colors mixed together (P)'
 tz'ib'.b'ej 'write or paint on'
 latz 'united or very close together (P)'
 latz.b'ej 'put together'
 chi.Ø.latz.b'ej ix kab' pat.ej
 chi 'incom' kab' 'two inanimates'
 Ø '3' -pat 'tortilla'
 ix 'woman (NCl)' -ej 'poss noun'
 'she puts two tortillas together'

Paq 'face down' was given with an additional variant paq.b'a.nej with the same causative gloss as for paq.b'aj and paq.b'ej. This suggests that the variation between [a] and [e] is not accidental but results from the fact that -b'aj is actually two suffixes: -b'a +-nej. The occurrence of -nej as a common transitivizer of stems other than positionals is described in section 1.2.2.1.2. The full combination -b'anej has been found in the formation of a few other

transitive verbs such as -etb'anej 'to accompany (tv)' from -et the relational noun meaning 'of or with', and echb'anej 'wait for (tv)', derivation unknown. It is uncommon, however, and its meaning is unclear. No other suffixes can intervene between the parts.

The suffix -b'a in this combination may be related to the identical morpheme which derives many positional roots as self-causatives (3.1.2.3). (All examples are given in third person past completive.)

lok	'hanging'
max.Ø.lok. <u>b'a</u>	'it hung up by itself'
xoy	'curved'
max.Ø.xoy. <u>b'a</u>	'it got curved by itself'
b'ul	'bunch'
max.Ø.b'ul. <u>b'a</u>	'it bunched up on itself'

In the derivation of positional several suffixes occur with the shape -b'a or which seem to have -b'a as their base. It seems likely that all these forms are historically related although in ways which are not clear at the present time. They may also be related to the relational noun -b'a which is obligatorily possessed to mean 'self'. However, there is strong evidence against analyzing the self-causative -b'a or the transitive causative -b'aj ~ -b'ej as identical to

or containing that morpheme. This evidence is presented in the next section in the treatment of self-causatives.

3.1.2.3 Self-causative

The suffix -b'a derives transitive stems from positionals whose meaning includes agency or movement. The resulting verb describes an action performed by objects upon themselves. As is made clear in the discussion of the intransitive derivations (see especially section 3.1.3.4.1), agency in KSE does not always refer to animate causation. Many roots derived by -b'a, for example, produce verbs which describe changes in state undergone by objects; the semantic role of -b'a is to imply that the object itself has participated 'actively' in the process of change, creating the change itself. Here are a few examples of roots derived by -b'a.

k'al	'tied (P)'
k'al.b'a	'tied up oneself by oneself (tv)'
xach	'forked (P)'
xach.b'a	'produce horns (tv)'
som	'mixed together (P)'
som.b'a	'mix up all by oneself (tv)'
pix	'tied (P)'
pix.b'a	'knot by oneself (tv)'

pux 'round, short (P)'
 pux.b'a 'inflate by oneself (tv)'

It is assumed that this suffix is probably related to the relational noun -b'a 'self' but cannot be analyzed as identical to it. If it is treated as a case of that noun, which occurs in regular reflexive constructions (1.2.2.3.3), then on syntactic grounds positionals derived self-causatively by -b'a must be considered to be derived transitives in -V7 which have lost the transitivizing stem formative (see section 3.1.2.2). The constructions are then parallel for positionals and other transitive verbs. Compare, for example, the following reflexive transitive constructions based on verbs not derived from positionals with the putative positional-derived verbs above.

max.j.i1 ko.b'a

j- '1pl'
 i1- 'see (tv)'
 ko- '1pl poss'

'we saw ourselves'

chi.Ø.maq'.lej Ø.b'a eb'

chi	'incom'	-lej	'transitiviser'
Ø	'3 and 3 poss'	eb'	'plural humans'
maq'-	'hit (tv)'		

'they are fighting (by hitting) each other'

Such an analysis has several flaws, however. First of all it would require that every positional root taking -b'a must also have a derived transitive form in -V7. While many such roots do have a -V7 form, several do not.

wes	'hairy'
wes.b'a	'become hairy all alone'
*wes.a7	
lak'	'sticking to'
lak'.b'a	'stick to by itself'
*lak'.a7	

Furthermore, positionals which do have both -b'a and -V7 forms can be reflexivized in the -V7 form with a different meaning. Compare the following.

pix	'tied to (P)'		
pix.a7	'tie up (tv)'		
oq.xa.in.pix.ok	in.b'a		
oq	'fut'	ok	'go in (dir)'
xa	'already'	in	'1sg poss'
in	'1sg'	-b'a	'self'
'I will tie myself up now'			

max.Ø.pix.b'a 'it knotted by itself'

Another problem with the analysis of the self-causative positional derivational suffix -b'a as a case of the relational noun -b'a is that no examples of possessed -b'a have

been found for the positional derivation. One example of a reflexivized -b'a construction has been found which seems to demonstrate conclusively that the morpheme is a true derivational suffix.

lok 'hanging'
 ko.l**ok**.b'a.aj.ko.b'a
 ko(-) '1p1 and 1p1 poss'
 aj 'go up (dir)'
 'we hang ourselves up by ourselves'

It should also be noted that certain stative constructions with reduplicated positional roots take a suffix -b'a which is clearly not the reflexive noun (3.1.3.4), but may well be related to the -b'a of transitive causatives (3.1.2.3).

lok.l**on**.b'a on aj.oq
 -l 'Redup -C1'
 -on 'repetitive'
 on '1p1'
 aj 'go up (dir)'
 -oq 'subordinator'
 'we are hanging up'

On the basis of these data and the difficulties they present for the simple analysis of -b'a, it must be concluded that the -b'a of the transitive self-causative, the -b'a of the transitive suffix combination -b'anej (3.1.2.2), and the -b'a- of the causative transitive -b'aj ~ -b'ej,

while probably related to each other in some way, are not identical and are also clearly not the same as the obligatorily possessed root which occurs in reflexive verb phrases. The semantic resemblances among these, however, suggest that historical and comparative investigation in this part of the grammar would be particularly useful.

Slightly less than one-third of the positional roots in the sample have been attested in derivation with -b'a; however, the data are somewhat incomplete on this point so it is possible and even likely that the number of roots which can be derived in this way is much larger.

Although stems derived by -b'a share many of the semantic characteristics of the processual intransitive verbs formed from positional roots and described in the section 3.1.3, they are clearly transitive verbs as demonstrated by their occurrence with the set A person markers, those which identify agents of transitive verbs.

lok	'hanging (P)'		
max.ko.lok.b'a.aj.oq			
max	'comp'	aj	'go up (dir)'
ko	'1pl (set A)'	-oq	'subordinator'
'we hung (ourselves) up'			

The distinction between the active participation strongly implied in this type of derivation and the 'agentless' processes described by some of the intransitive

derivations (see discussion of -b' and -ay in sections 3.1.3.1 and 3.1.3.4) is consistently reflected in the Guatemalan Spanish glosses although difficult to render in English. The Spanish verb hacerse 'do/make oneself' translates the derivations with agent implication (using agent in the expanded sense described above). The 'agentless' verbs on the other hand are glossed with ponerse 'become'. When one form has a more specialized meaning, the glossing conventions are less strictly adhered to. The following examples illustrate this point by contrasting -b'a with the inchoative intransitive -b' (3.1.3.1).

kox	'twisted (P)'
kox.b'a	'twist itself (tv)' (Sp <u>hacerse torcido</u>)
kox.an.b'.i	'twist itself (iv)' (Sp <u>torcerse</u>)
pil	'oval (P)'
pil.b'a	'make itself oval (tv)' (Sp <u>hacerse óvalo</u>)
pil.an.b'.i	'get oval (iv)' (Sp <u>ponerse óvalo</u>)
ch'ak	'wet, bathed in liquid (P)'
ch'ak.b'a	'turn itself into mud (tv)' (Sp <u>ponerse lodo</u>)
ch'ak.an.b'.i	'get wet (iv)' (Sp <u>mojarse</u>)
nul	'slippery (P)'
nul.b'a	'make itself smooth (tv)' (Sp <u>ponerse liso de sí mismo</u>)
nul.an.b'.i	'get smooth (iv)' (Sp <u>ponerse liso</u>)

Many other examples of -b'a are given in later sections where it is contrasted with other types of derivation. At the conclusion of this chapter, a summarizing analysis is presented which distinguishes several types of verbal derivation of positional roots, including -b'a, on the basis of the addition of verbal semantic features to the root meaning. An adjectival derivation of reduplicated roots which uses a -b'a suffix possibly related to the transitivizing self-causative also occurs in KSE and is described in sections 3.1.3.3 and 3.3.1.

3.1.2.4 Indirect transitivization

Of those positionals which can be intransitively derived by -Coj.i (described below in section 3.1.3.4.2), some can be transitivized by -nej, a highly productive transitivizer discussed in section 1.2.2.1.2. The meaning is predictable from the meaning of the intransitive stem. The suffix serves merely to indicate an independent agent for the action. Discussion of the intransitive stems and their semantic properties is found in section 3.1.3.5. A few examples of -nej in this context are given below.

pitx	'on end (P)'
pitx.loj.i	'turn on end (iv)'
pitx.lo.nej	'turn something on end (tv)'

pix	'tied (P)'
pix.loj.i	'tie up by one's self (iv)'
pix.lo.nej	'tie something up (iv)'
k'otx'	'short (P)'
k'otx'.loj.i	'get short (iv)'
k'otx'.lolnej	'make short (tv)'
suy	'wheel-like (P)'
suy.loj.i	'turn (iv)'
suy.lo.nej	'turn something like a wheel (tv)'

Some roots undergo all three types of transitive derivation. The differences in meaning are illustrated by the following items.

t'in	'straight between two points (P)'
t'in.a7	'place a straight thing (tv)'
t'in.b'aj	'make a line straight between two points (tv)'
t'in.lo.nej	'make something straight (tv)' (from <u>t'in.loj.i</u> 'get straight')
patx	'wide and flat (P)'
patx.a7	'make flat (tv)'
patx.b'aj	'place a flat thing (tv)'
patx.lo.nej	'turn a flat thing over (tv)' (from <u>patx.loj.i</u> 'turn over')

t'un	'hanging (P)'
t'un.u7	'carry in one hand (tv)'
t'un.b'aj	'hang something up (tv)'
t'un.lo.nej	'test the weight of two loads (tv)' (from <u>t'un.loj.i</u> 'hang up by itself')
kox	'curved or twisted (P)'
kox.o7	'make in form of a curve (tv)'
kox.b'aj	'place a curved thing (tv)'
kox.lo.nej	'twist something (tv)' (from <u>kox.loj.i</u> 'twist by itself')

Well over half the inventory of positional roots are also indirectly derived as transitive verbs meaning 'to move an object of form X or in X position'. The suffix is -ob'tanej, an obviously combined form, but for which no further morphological analysis is possible. It has the phonological variant -[u]b'tanej after positional roots of the shape CuC (1.1.2.2). Apparently, this suffix has no cognate in Jacaltec; but, according to Dakin's 1974 unpublished notes a cognate form -otane7 occurs in Soloma Kanjobal. Positional roots which do not take this derivation are, in general, those which are derivationally least productive overall. Many of them have no intransitive derivation at all and only the -b'aj transitive derivation. Examples of roots which do not take -ob'tanej include

ja7	'arms extended'
t'ir	'bald, naked'
lek	'erect'

Roots which do take it include

jib'	'long'
jan	'uncovered'
wos	'spongy or foamy'
k'et	'cylindrical objects with twisted points'
jew	'legs extended and separated'
tixh	'objects spread out' (<u>tixh.ob'tanej</u> 'move objects in a container')

3.1.3 Intransitive Derivation

No positional can be directly derived as an intransitive verb simply by suffixation of the stem formative. In other words, no positional root is a bivalent intransitive root as well. All intransitive derivation of positionals is by means of suffixation.

There are several kinds of intransitive derivation, primarily distinguished by aspect (cf section 1.2.1.5). In this section, four kinds of intransitive derivation are described: inchoative, iterative, progressive, and completive (with two subcategories). Directionals as described in the preceding sections are less often associated with

derived intransitive stems based on positional roots but do occur, especially with the progressive. Each type of derivation is described separately and in a summary section is distinguished from similar derivations by means of semantic features. In addition to the common, and in most cases unique, intransitive derivations described here, positional roots already derived as transitives in -v7 (3.1.2.1) are readily derived as intransitives by the pseudointransitive suffix -on (1.2.1.5).

3.1.4.1 Inchoative

Positional roots may be derived as inchoative intransitives by means of a suffix which is not unique to the class. This derivational suffix, -b' is described for other root classes in section 1.2.2.1.2. This suffix is always followed by the intransitive stem formative -i. The inchoative intransitivizer -b' is attached to positionals which already carry the positional stem formative, -an, and is the only derivational suffix to do so. The meaning of the resulting form is not easily distinguishable from the completive forms discussed below but generally may be glossed 'to assume a shape or condition described by the root'. Only about one-third of the roots in the sample take -b'. No semantic or phonological explanation can be found for the failure of most roots to undergo derivation by -b'. It is suspected that many of these gaps are merely accidental and

not the result of an obligatory constraint against such derivation; however, this hypothesis has not been adequately tested.

The following list presents some roots which are readily derived by -b'.

q'e7	'steeply inclined'
q'e7.an.b'.i	'become inclined'
te1	'cylinder at rest'
te1.an.b'.i	'take on a cylindrical shape'
pos	'spongy, foamy'
pos.an.b'.i	'become spongy'
lob'	'sunken'
lob'.an.b'.i	'become sunken'
som	'mixed items of different categories'
som.an.b'.i	'become mixed together'
tutz'	'slippery'
tutz'.an.b'.i	'become smooth'
k'ab'	'with a very wide mouth'
k'ab'.an.b'.i	'come to have a wide mouth'
b'ut	'powdery (P)'
b'ut.an.b'.i	'become fine (iv)'

Roots which can be derived by the inchoative are usually those which describe shape or texture. Few roots which primarily describe a position are members of this class, and roots which describe states which imply action are rare in it. Typical roots not derived by -b' are listed below.

jop	'bright'
jut'	'striped'
pix	'tied up'
ch'oj	'squatting'
txak	'on four legs'

These categories are not rigidly separate, however, as illustrated by the following pairs. In each case the first root takes derivation by -b' while the second does not.

chit	'having various petals or bumps'
mich	'having various petals or bumps'
pil	'oval, curved, spherical'
k'ol	'round, spherical (larger than <u>pil</u>)'
patx	'wide, flat'
litz'	'wide, flat objects (extended)'
wet'	'watery mass'
net'	'watery, loose'

3.1.3.2 Iterative

Intransitive verbs of iterative aspect are formed from positional roots by suffixation of -x and the stem formative (cf Day 1973a:45). This suffix is restricted to positionals and affect words of the type described in section 1.2.2.1.1. It is somewhat less likely to occur on roots which refer to shape rather than position. When -x does derive roots of shape or distribution, it means 'something of X shape moves repeatedly'. Suffixation by -x requires further derivation by the intransitive stem formative -i.

b'u1	'unordered group'
b'u1.x.i	'a group moves repeatedly'
jen	'stiff, fairly large'
jen.x.i	'a stiff thing moves several times'
poq'	'sunken'
poq'.x.i	'a thing with that shape moves'

In these cases, a directional such as ek' 'pass by' is commonly added to the verb phrase to produce a form meaning 'an object in X shape moves around'. Other directionals may also occur.

kutz	'fat'
kutz.x.i ek'oq	'a fat person walks around'

b'us	'short (and more or less round)'
b'ux.x.i ek'oq	'a short object moves around'
kol	'long (especially of legs)'
kol.x.i el.teq	'long legs keep sticking out through holes in the clothing'
el	'go out (dir)'
teq	'action toward speaker'

The roots which most easily derive by means of -x are those which describe position or a condition which presupposes an action. In these cases the derived verb means 'assume a position over and over' or 'perform an action over and over'.

txak	'on four legs'
txak.x.i	'get down on four legs and stand up again over and over (for example, of children playing)'
chul	'rolled'
chul.x.i	'roll up and unroll several times'
mutz	'having eyes closed'
mutz.x.i	'close the eyes for a while, then open them, repeatedly'
kix	'having the rear elevated'
kix.x.i	'stooping and standing, over and over'

q'e7	'inclined, leaning against something'
q'e7.x.i	'gets up, falls down, repeatedly'

Consider the following examples where derivation by -x both reveals and obscures differences in the base meanings of roots which have similar glosses. Note also that the effects of -x on a root are not always predictable.

net'	'loose, watery mass (rippling)'
net'.x.i. ik'oq	'a fat person walking around'
kew	'soft mud-like lumps'
kew.x.i	'a fat person walking around'
xhaq'	'watery and sticky'
xhaq'.x.i	'makes a noise like the sucking of sticky mud'
kiw	'slippery like wet mud'
kiw.x.i	'remove clothing and put it back on over and over (revealing smooth skin)'
teb'	'somewhat wet or watery mass'
*teb'.x.i	

3.1.3.3 Progressive

In section 2.2.1, processes of reduplication which derive stems from positional roots are described. One such process, the reduplication of the initial consonant (Redup $-C_1$), derives intransitive stems of progressive aspect. In

order to function as verbs these stems must be further derived by -on 'repetitive' (cf Day 1973a:43) which is realized phonetically as [un] after stems with high back vowels (cf section 1.1.2.2). They may then take the intransitive formative -i or be subordinated. The same processes produce intransitive verbs from affect roots. Positional roots which are derived by Redup $-C_1$ and -on may also function as stative modifiers by taking a suffix -b'a (not identical to the self-causative transitivizer discussed in 3.1.2.3). The nature of this type of derivation is described in section 3.3.1.1. Stems formed in this way, whether ultimately functioning as verbs or modifiers, share the characteristic of intensity. For modifiers this is realized as plurality while for verbs it adds a sense of ongoing or progressive aspect.

Movement is always implied in progressive aspect verb stems but unlike other intransitive and transitive derivations it is not movement of the sort 'assume position X' but rather 'move around in X position'. There is no strong sense of agency as that concept has been defined here (3.1.2.3 and 3.1.3.4).

Derivation by Redup $-C_1$ is extremely productive in KSE. More than three-quarters of the roots in the sample undergo this process, although not all of those are attested as both verbs and modifiers. It is likely that any root could be derived by Redup $-C_1$ in the proper semantic context.

Progressive verbs formed from positionals may be inflected with tense aspect and Set B (intransitive agent) person markers (1.2.1.1.1) or they may be subordinated to another inflected verb. The main verb in such phrases is usually a motion verb. Several examples are given in the following list of derived positionals in both types of constructions. It should be noted that the two types are not always interchangeable semantically.

potx 'wide (of thin things) (P)'

chi.Ø.potx.p.on.i

chi 'incom'
Ø '3'

'its wings move (of a bird)'

tar 'naked (P)'

max.Ø.toj tar.t.on.oq

max 'comp'
toj- 'go (iv)'

'it went off without any clothes'

tzun 'behind (something else) (P)'

chi.Ø.ek' tzun.tz.on.oq (>txuntz[u]noq)

ek' 'pass by (iv)'

'one walks around with another always following'

chi.tzun.tz[u]n.ek'.oq

'one follows several others'

- sut 'circular (P)'
 chi.Ø.sut.s.on.ek'.oq
 'an animal or person goes round and round'
- mutz' 'eyes closed (P)'
 chi.ach.mutz'.m.on.i
 ach '2 sg'
 'you close your eyes for a while'
- tz'ey 'inclined (P)'
 chi.Ø.tz'ey.tz'.on.i
 'something turning around or inclining itself'
- chi.Ø.jay tz'ey.tz'.on.oq
 jay- 'come (iv)'
 'something comes inclining'
- t'an 'staring (P)'
 chi.in.t'an.t'.on.ek'.oq
 in '1sg'
 'I go along looking from side to side'
- jaj 'kneeling (P)'
 max.in.toj jaj.j.on.oq
 'I went along kneeling'³
- eb' áníma chi.Ø.jaj.j.on.ek' eb'
 eb' 'human, pl'
 áníma 'people'
 'the people kneeling move from side to side'

3.1.3.4 Completive

Intransitive verb stems in completive aspect are derived from KSE positional roots by two suffixes: -ay- and -Coj-. Each of these is unique to the positional class and requires the intransitive stem formative -i for word formation unless followed directly by another word in the same phrase. A consistent difference maintained in the glosses for stems with these derivations indicates that there is a semantic distinction between the two suffixes although it is somewhat elusive. It is hypothesized here that the distinction is based on the presence or absence of a sense of agency in the completion of the process described by the derived verb. The concept of agency required here is to be understood as somewhat expanded from the usual notion of agents as animate instigators of actions (cf Fillmore 1968:24). Agency as used for the intransitive verbs discussed here refers to an implication of active participation in the performance of the action or involvement in the completion of a process by some conflated noun present in the root. The suffixes -ay and -Coj are discussed separately below and followed by a comparison of their semantic characteristics.

3.1.3.4.1 Agentless completion with -ay

Approximately one-third of the positional roots considered here are reported by informants to take derivation by

-ay. This suffix may be cognate to the -y verbalizer reported by Day (1973a:45) for Jacalteco in which it is only productive with positionals. In KSE, -ay is normally given in past time, since it refers to a completed action, and has not been unambiguously attested in other than third person, supporting the analysis of it as a kind of deemphasis of agent. There is some possibility that it is related to the intransitive passive -lay (1.2.2.1.2) especially because two roots have been attested in text with derivation in -lay from transitives in -V7 (3.1.2.1) and with meanings similar to those given for -ay. Compare the following.

b'eq 'loose (of animals) (P)'

b'eq.a7 'unleash (tv)'

max.β.b'eq.lay.e1 cham

e1 'go out (dir)'

cham 'respected male (NC1)'

'they let him go'

max.β.b'eq.ay.i 'it's already loose'

b'atx 'sticking out a little; over hanging (P)'

b'atx.a7 'carry on a litter (tv)'

kax max.β.b'atx.lay ix

kax 'and' Ø '3'

max 'comp' ix 'woman (NC1)'

'and she was carried on a litter'

chi.Ø.b'atx.ay.i

'it gets into that position (without really doing anything)'

The following example occurs in a text. It may be a case of b'atx.a7 + ay 'go down (dir)' + kan 'stay (dir)' but the meaning of b'atx.ay.i seems more appropriate. This is the most likely example of -ay in text. No completely unquestionable cases of -ay occur in texts; all examples given are elicited.

kax chi.Ø.b'atx.ay.kan jun jun.tzan ak'atx

kax	'and'	jun	'one'
chi	'incom'	tzan	'noun pl'
Ø	'3'	ak'atx	'turkey'
kan	'remain (dir)'		

'and (there) they leave some turkeys'

The roots which undergo derivation by -ay represent a cross-section of roots in the sample; that is, they cannot be shown to share any semantic or syntactic characteristics which would separate them from roots which do not take such derivation. In general the meanings of derived verbs in -ay are predictable. The basic meaning of the root is verbalized as 'assume position or shape or quality X' and a completive aspect is included. These derived stems differ from those in -b' (3.1.3.1) because these focus on the completion of the process while those in -b' focus on the 'becoming'

aspect of the change. The following are examples of roots derived in -ay and in -b'; note the differences in the meanings of the various derived stems. (Verbs in -ay are nearly always glossed in Guatemalan Spanish by 'se puso'.

lab'	'thin (P)'
lab'.ay.i	'already be really thin (iv)'
lab'.an.b'.i	'getting thinner (iv)'
patz'	'humid, damp (P)'
patz'.ay.i	'already be damp (iv)'
patz'.an.b'.i	'getting damp (iv)'
k'ob'	'wide and deep depression (P)'
k'ob'.ay.i	'already be deep (iv)'
k'ob'.an.b'.i	'getting deep (iv)'
witz'	'tight or crowded (P)'
witz'.ay.i	'already be really crowded (iv)'
witz.an.b'.i	'getting crowded (iv)'
patz	'furry (P)'
patz.ay.i	'already be furry (iv)'
patz.an.b'.i	'getting furry (iv)'

Stems derived by -ay differ semantically from those derived as self-causatives in -b'a by the lack of the notion of active participation in the process which characterizes

-b'a as well as by the presence of a clear aspect. These are some examples of roots derived by both -b'a and ay.

tzeq	'bright (P)'
tzeq.ay.i	'be already lit (iv)'
tzeq.b'a	'light itself (tv)'
pich	'wrapped up (P)'
pich.ay.i	'be all wrapped up (iv)'
pich.b'a	'wrap itself up (tv)'
waj	'together for a while (P)'
waj.ay.i	'be all gathered together (iv)'
way.b'a	'gather themselves together (tv)'

These are some additional examples of positionals derived by -ay. Meanings are not always completely predictable but follow from the base meaning of 'completed action by unspecified agent'.

tz'in	'empty, vacant (P)'
tz'in.ay.i	'already be (made) silent (iv)'
litz'	'really full of (shiny) liquid (P)'
litz'ay.i	'get really full (iv)'
pe7	'standing liquid (P)'
pe7.ay.i	'be brought together in one place (iv)'

sok	'disordered (P)'
sok.ay.i	'get completely disordered (iv)'
txol	'in line (P)'
txol.ay.i	'lines form (iv)'
chuk	'blunt thing stuck into something (P)'
chuk.ay.i	'get tall (iv)'

3.1.3.4.2 Implied causation completion with -Coj

Many positional roots can be derived as intransitive verbs by a suffix which usually has the form -loj. About one-third of the roots in the sample accept derivation by this suffix. Here are several examples.

q'eb'	'spread out (thick liquids) (P)'
q'eb.loj.i	'a liquid spread out (iv)'
kut	'too short to reach (clothes or poles) (P)'
kut.loj.i	'shrink (iv)'
txak	'on four legs (P)'
txak.loj.i	'stand up on four legs'
q'e7	'inclined; leaning against (P)'
q'e7.loj.i	'something inclined raises itself up (iv)'

q'uł	'fat, especially a heavy neck (P)'
q'uł.loj.i	'get fat (iv)'
kiw	'slippery (P)'
kiw.loj.i	'slip (iv)'
puk'	'round and hollow (P)'
puk'.loj.i	'turn into a large package (iv)'
paq	'face down (P)'
paq.loj.i	'roll over that way (iv)'
chot	'seated (P)'
chot.loj.i	'sit down (by oneself) (iv)'
patx	'wide, flat (P)'
patx.loj.i	'a flat thing rolls over (iv)'
b'ak'	'covered all over (P)'
b'ak'.loj.i	'a covered thing rolls over (iv)'
b'an	'long pole on something else with a part hanging over (P)'
b'an.loj.i	'a pole gets on top of something that way (iv)'

Semantically, this suffix produces a verb meaning 'assume position X' or, in the case of roots which refer to shapes, 'an object of that shape turns over (moves)'. It carries a clear implication of movement, that is, true action,

thus differentiating it from -ay which does not imply movement in any strong way. It always describes a completed action, thus distinguishing it from -b' 'inchoative'. And, furthermore, -Coj conveys some sense of active involvement or participation in the action or process which is missing in both -b' and -ay. Such a concept is found with -b'a, the self-causative transitivizer, but that derivation differs from -Coj in both grammatical and semantic ways: -b'a and -Coj produce different types of verbs and in -b'a the agent is more strongly identified while in -Coj it is only implied. For roots which lack either -b'a or -Coj, however, the other seems to take over the meanings of the missing derivation; semantically, they seem very closely related. Consider the following sets which demonstrate the differences among these types of derivation.

jaq	'open (P)'
jaq.loj.i	'uncover itself (iv)' (Sp <u>descubrirse</u>)
jaq.ay.i	'already get open (iv)' (Sp <u>abrirse</u>)
jaq.an.b'.i	'become open (iv)' (Sp <u>abrirse</u>)
jaq.b'a	'open itself by itself (tv)' (Sp <u>abrirse solo</u>)
mich	'having many petals (P)'
mich.loj.i	'get petals by itself (iv)' (Sp <u>hacerse así</u>)
mich.ay.i	'get petals (iv)' (Sp <u>ponerse así</u>)
mich.b'a	'make itself have that form (tv)'

t'un	'hanging (P)'
t'un.loj.i	'hang up in one's place (iv)'
t'un.b'a	'hang oneself up by oneself (tv)'
sut	'tight around the neck or body (P)'
sut'.loj.i	'tightened (iv)'
sut.ay.i	'be already tight (iv)'
sut.an.b'.i	'become tight (iv)'
sut.b'a	'choke itself (tv)'
xuy	'untied, loose (P)'
xuy.loj.i	'get loosened (iv)'
xuy.ay.i	'be already loose (iv)'
xuy.an.b'.i	'get loose (iv)'
xuy.b'a	'get loose by oneself (tv)'

Although this intransitivizer usually has the phonological shape -loj, eight roots have been found which take -moj either in free variation with -loj or instead of it. Only one root shows a semantic difference between the two variants (see below).

There is no phonological or semantic conditioning factor which would predict the occurrence of -moj. In her unpublished notes on Kanjobal and Acatec, Dakin lists several other variants of this suffix including -k'oj, -poj, -tx'oj, and -tzoj. It is not known if these are dialectal variants or occur only in Acatec; none of them has been found in KSE.

The roots which take -moj are listed below.

lok	'hanging (P)'
lok.moj.i	'hang up by oneself (iv)' (rare)
toq'	'long and hanging (P)'
toq'.moj.i	'get long (iv)'
litx'	'wide, extended (P)'
litx'.moj.i	'extend by itself (iv)'
la7	'submerged in liquid (P)'
la7.moj.i	'fall into liquid; get submerged (iv)'
noj	'head down (P)'
noj.loj.i ~ noj.moj.i	(rare) 'capsize (iv)'
xoy	'curved (P)'
xoy.loj.i ~ xoy.moj.i	'get curved (iv)'
tutz'	'slippery (P)'
tutz'.loj.i ~ tutz'.moj.i	'slip and slide (iv)'
le7	'many objects scattered in a large space (P)'
le7.loj.i	'get nauseous (iv)'
le7.moj.i	'get scarce (by scattering) (iv)'

Stems derived by -Coj can be transitivized by -nej, a process which has the effect of adding a known agent to the

meaning of the verb stem. The fact that such regular transitive derivations with their strong implications of movement and agent are possible with -Coj but not with -ay is further support for the analysis presented here regarding the differences between these suffixes. Discussion and examples of the transitivity process affecting derived intransitive stems in -Coj are found in section 3.1.2.4.

In the preceding sections on the derivation of positional roots as verb stems, nine suffixes have been presented which produce transitive or intransitive verbs. These suffixes are reviewed below. (Direct transitivity by -y7 on bivalent roots is not considered; see section 3.1.2.1 for discussion.)

Transitivizers

- b'aj: 'someone causes an object to assume X position or uses an X-shaped object in an action' (3.1.2.2)
- b'a: 'an object causes itself to assume X position or shape' (3.1.2.3)
- ob'tanej: 'someone moves an object which is in X position or shape' (3.1.2.4)
- Co+nej: 'someone performs the action described by -Coj' (3.1.2.4)

Intransitivizers

- b': 'an object begins to assume X shape or condition' (3.1.3.1)
- x: 'an object of X shape moves repeatedly or assumes X position over and over' (3.1.3.2)

- Coj:** 'an object assumes X position completely or makes a complete movement in X shape, by itself' (e.1.3.4.2)
- ay:** 'an object completely assumes X position, shape, or condition' (3.1.3.4.1)
- Redup -C₁:** 'an object in X position or of X shape moves around continuously' (3.1.3.3)

The stems derived by these various suffixes differ in quite subtle ways semantically, and glosses may obscure the differences. It is hypothesized that the differences are definable and may be described in terms of four features: a) agency, or the implication of active participation in an action or process either by an external agent or by an internal agent as defined by the positional root itself; b) movement, or external change of place or position; c) metamorphosis, or the internal change of state; and d) completion of action or process. The distribution of these features by suffix is diagrammed by the following matrix. (Irrelevant features are marked by 0; in these cases the suffix does not obligatorily add information on that feature nor deny that such information may be provided elsewhere in the context.)

	-b'aj	-b'a	-ob'tanej	-Co+nej	-b'	-x	-Coj	-ay	Redup-C ₁
Agency	+	+	+	+	-	+	+	-	-
Movement	+	0	+	+	-	+	+	-	+
Metamorphosis	+	+	-	0	+	-	0	+	-
Completion	0	0	0	+	-	-	+	+	-

The type of agent, whether internal or external, is determined by the transitivity relations implied by the suffix. Thus, for example, -Co+nej and -Coj are distinguished by the external (transitive) agent in the first case and the internal (intransitive) agent in the second. In the case of -b'a, the agent is both internal and external since this suffix derives self-causative verbs.

This analysis explains several interesting facts about derived positional verbs. The definite non-movement character of -ay, for example, accounts for the fact that positional roots of true position are not derived by this suffix (cf section 3.1.3.4.1). If the suffix implies change (metamorphosis) but not by movement, then change in position cannot be conveyed by it. In another case, Redup -C_j is specified for non-completive aspect and that fact predicts that the progressive verbs formed in this way may be marked for tense by max '(past) comp' but the progressive nature of the action will still be strongly included in the verb word (see examples in section 3.1.3.3). This analysis also predicts that directional/locational clitics will be most frequently associated with [+ movement] derived stems and that indeed is the case.

The features used in this analysis are not ad hoc. Both agency and aspect have been shown to be important grammatical and semantic categories in the KSE language (1.2.1.4

and 1.2.1.5). Movement and position are closely tied to the category of direction/location which underlies much of KSE grammar (1.2.1.6) and has already been shown to be especially important in the semantic character of positional roots (3.1.1). Metamorphosis may be related to the minor category of potential vs. realized which has been posited to explain some peculiarities of verb inflection (1.2.1.5) and which also functions in the semantics of positional roots (4.3.1). Not all positional roots undergo all the types of verbal derivation described here. In many cases these gaps are surely accidental, but in others they must be the result of semantically imposed constraints. It is hypothesized that derivations will not apply when the features they obligatorily add to the root contradict features already implicit in the root itself. Investigation of this possibility and discussion of its implications are included in the analysis of root- and class-specified semantic features found in Chapter 4.

Some roots do undergo most or all of these types of derivation and provide interesting confirmation of the analysis presented here. By way of summary, a few such roots are given below with their complete sets of verbal derivations. Forms marked with * do not occur; those marked by ? are unattested.

	tz'ub'	'sharp-pointed (P)'
	tz'ub'.b'aj	'put a sharp-pointed object someplace'
	tz'ub'.b'a	'form itself with a sharp point'
	tz'ub'.ob'tanej	'a sharp-pointed object moves once'
	?tz'ub'.lo.nej	
	*tz'ub'.an.b'.i	(A point does not 'begin' to be sharp--it either is or is not by nature.)
	tz'ub'.x.i	'an object with a sharp point moves repeatedly (as if twitching)'
	tz'ub'.loj.i	'sit down with knees bent (making a sharp point)'
	tz'ub'.ay.i	'get a sharp point'
	max.β.toj tz'ub'.tz'.on.oq	'an object with a sharp point went off walking'
	cf tz'ub'.u7	'suck'
	pux	'round and short (P)'
	pux.b'aj	'put a round object someplace'
	pux.b'a	'inflate by itself'
	pux.ob'tanej	'bounce'
	?pux.lo.nej	
	pux.an.b'.i	'inflate'
	pux.x.i	'a round thing moves more than once'
	pux.loj.i	'roll over'
	pux.ay.i	'get short and fat'

t'in	'straight between two points'
t'in.b'aj	'make a line straight between two points'
t'in.b'a	'straighten itself out'
t'in.ob'tanej	'move a straight object'
t'in.lon.ej	'straighten something'
t'in.an.b'i	'become straight'
t'in.x.i	'a straight line vibrates'
t'in.loj.i	'get itself straight'
?t'in.ay.i	
t'in.t'.on.i	'a straight thing moves back and forth'
cf. t'in.a7	'place a straight thing'

b'eq	'loose (of animals)'
b'eq.b'aj	'unleash an animal'
b'eq.b'a	'let itself loose'
*b'eq.ob'tanej	
*b'eq.lo.nej	
b'eq.an.b'.i	'loosen'
*b'eq.x.i	
b'eq.loj.i	'got itself loose'
b'eq.ay.i	'be already loose'
*b'eq.b'.on.i	
cf. b'eq'.a7	'turn loose'

q'e7	'inclined, leaning against something (P)'
q'e7.b'aj	'rest something against another object'
q'e7.b'a	'make itself incline'
q'e7.ob'tanej	'move an inclined object'
?q'e7.lo.nej	
q'e7.an.b'.i	'become inclined'
q'e7.xi	'gets up, falls down, repeatedly (of a leaning object)'
q'e7.loj.i	'an inclined object raises itself up'
*q'e7.ay.i	
q'e7.q'.on.i	'leaning from side to side'

3.2 Positional Roots Within the Nominal System

Positional roots are syntactically most like verbs and semantically most like modifiers; they have few ties with the noun class. Consequently they have few morphological derivations as nouns and only one significant syntactic function which is primarily nominal. In this section, the very rare cases of nominal derivation are described and then the role of positionals as specific numeral classifiers is examined.

3.2.1 Nominal Derivation

Noun stems formed from positional roots are extremely rare; only twenty roots in a sample of 270 appear to have a

related derived noun. There is no regular process by which nouns may be formed morphologically from positionals. The derived stems in the corpus, with one set of possible exceptions, have unique derivational suffixes. All cases of morphologically derived noun stems are described in this section, except for the possessed relational nouns which may be related to positional roots and are discussed in section 1.2.1.1.2.

Three underived CVC nouns have been found which have meanings related to identical CVC positional roots.

	k'ob'	'well'
cf.	k'ob'	'deep or wide-mouthed (P)'
	pak'	'gourd spoon'
cf.	pak'	'face up (P)'
	k'ot	'type of short plant with round leaves'
cf.	k'ot	'small, round (P)'

It is not known whether positional roots might provide a productive source for new nominal coinages but the possibility is worth further investigation.

Six roots appear to have related nouns which are derived by some form of reduplication, either partial or complete. Such reduplication may have been productive in earlier stages of the language (cf. section 1.1.2.4); the

possibility that it still is has not been adequately examined in this research.

	t'int'in	'bow (for shooting arrows)'
cf.	t'in	'straight between two points (P)'
	pux.pux	'inflated ball'
cf.	pux	'round and short (P)'
	pospoy	'lung'
cf.	pos	'spongy (P)'
	t'unt'urich	'swings'
cf.	t'un	'hanging (P)'
	mutz'utz'	'type of small fish'
cf.	mutz'	'having eyes closed'
	and Jacaltec positional root	
	motz'	'small shape of the face of a person or animal'
	jutxutx	'skates' (?)
cf.	jutx	'slippery (P)'

Five roots take unique suffixes -ik and -kin.

	tutz'ik	'a weak or feeble person'
cf.	tutz'	'slippery (P)'

	<u>wesik</u>	'a furry thing'
cf.	wes	'having a lot of hair (P)'
	kotx' <u>kin</u>	'twisted person (insult)'
cf.	kotx'	'twisted (of poles)'
	xoy <u>kin</u>	'lame person'
cf.	xoy	'bent, curved, twisted (P)'

The following form may be related to the preceding set.

	lant <u>zin</u>	'a furry thing'
cf.	lan	'hairy or furry (P)'

Two nouns have completely unique forms.

	pat <u>xaq</u> '	'prickly-pear cactus'
cf.	patz	'wide, flat (P)'
	lok <u>xob</u> '	'hook'
cf.	lok	'hanging (P)'

Four forms suggest the existence of productive derivation by means of a harmonic vowel suffix in the shape -V1.

	pi <u>lil</u>	'a little ball'
cf.	pil	'small and round (P)'

	<u>pichil</u>	'clothing'
cf.	pich	'wrapped up (P)'
	chukul	'stirring stick'
cf.	chuk	'something with blunt point sticking into something (P)'
	chulu	'sapodilla (type of tree)' (?)
cf.	chul	'rolled (P)'

Two additional nouns have phonological similarity to positional roots but are probably not related.

	k'ew <u>x</u>	'custard apple'
cf.	k'ew	'ripped open (of dry things) (P)'
	tuk <u>tuk</u>	'woodpecker'
cf.	tuk	'staring (P)'

The possibility that regular patterns of nominal derivation affecting limited sets of positional roots was not considered until after further elicitation was impossible. The -V1 pattern seems the most likely and certainly merits additional investigation. However, at the present stage of research, it can only be reiterated that nominal derivation from positional roots is extremely uncommon in KSE.

3.2.2 Numeral Classifiers

Mayan specific numeral classifiers (1.2.1.3) are probably the best-studied syntactic feature in the language family. These are syntactic constructions in which certain stems occur after numerals and followed (optionally) by count nouns which the stem describes in specific detail in terms of shape, perceptual quality or position. They have also been called measure words. Similar classifier systems are characteristic of languages throughout the family and Smith (1976:54) proposes that a similar pattern existed in proto-Mayan although almost no work has been done on historical reconstruction of proto-Mayan syntax. Much of the synchronic descriptive work on these constructions has been done for languages on the Kanjabalan branch and the Western division. One of the earliest studies is Kaufman's (1971: 91-101) description of numeral phrase formation in Aguacatenango Tzeltal. There he makes the distinction between general numeral phrases (analogous to KSE expressions which require the general numeral categorial suffixes (GNumC) and described in section 1.2.1.3) and specific numeral phrases which involve the use of a classifier to specify the characteristics of the thing enumerated. True specific numeral classifiers occur only in the second type of phrase.

At about the same time as Kaufman's work, Berlin 1968 produced an ethnographic semantics study of numeral

classifiers in Tenejapa Tzeltal.⁴ In 1970, Hopkins prepared a summary of the syntactic characteristics of specific numeral classifiers in Tzeltal (based on Berlin and Kaufman), Jacaltec (based on the material later published as Day 1973a and Day's unpublished notes), and Chuj (based on Hopkins 1967 and other unpublished materials). In this paper he compares the shapes, sources, and functions of specific numeral classifiers in languages of the Western division, but is unable to make any strong claims about the nature of what is undoubtedly a common ancestral system. Unfortunately, even after all this work, there is a great deal still unexplained about numeral phrase formation in Mayan languages. The descriptions are incomplete in many ways and Hopkin's analysis of Jacaltec data differs in some ways from that in his published sources.

One point which is clear is the important relationship between positional roots (in the case of Tzeltal, positional verbs) and the syntactically defined numeral classifier set. In all the languages, a large number of specific numeral classifiers are recruited from the positional class. In Jacaltec (Hopkins 1970:30f) and in Kanjobal, specific numeral classifiers recruited from transitive verbs and from positionals are marked by the suffix -an, making them indistinguishable from regular positional stems with stem formatives. Day defines three classes of numeral classifiers based on derivational source, syntactic structure of the phrases in which they occur, and semantic criteria. These classes are

1. object numeral classifiers: from positionals, suffixed by -an, followed by an optional noun, and describing the shape or grouping of objects,
2. quantity numeral classifiers: from nouns (often loanwords), sometimes suffixed by -v] 'fulls', followed by an optional noun, and denoting containers or units of measure,
3. action numeral classifiers: from verb roots (primarily discrete action transitives), unsuffixed, never accompanied by other elements of the noun phrase, and denoting the number of times an action is performed.

The semantic classes serve to describe KSE numeral classifiers as well but can be applied to the set recruited only from positionals (see examples below).

No study has been made of specific numeral classifiers in KSE. In general, they appear to be recruited and derived as in Jacalteco. Hopkins has claimed that for Jacalteco, the 'presence or absence of the suffix /-e7/ after /hun/ 'one' constitutes a sufficient diagnostic for the distinction of general and specific numeral phrases' (1970:26) and therefore for the definition of specific numeral classifiers. The suffix referred to is one of the general numeral categorizing suffixes. This set of suffixes is common to both Jacalteco and Kanjobal but /-e7/ has been lost in KSE

(see section 1.2.1.3 for discussion of general numeral categorizers). Jun 'one' is never inflected by suffixes of this type in KSE and consequently the determination of whether or not a numeral phrase is general or specific is made more difficult.

The fact that some items marked by -an in KSE can occur after jun without a following noun makes it clear that the items function as syntactically defined nouns and the difficulty in distinguishing the constructions from simple positional phrases have led to their treatment in this study as a type of syntactic nominal derivation. Most of the 270 KSE positional roots in the sample have been examined for their occurrence with numerals. The data are far from complete, however, and it is not clear how the facts about numeral-plus-positional constructions may be related to the larger questions about specific numeral phrases and classifiers as these have been described by other investigators.

Somewhat over fifty percent of the KSE positional roots in the sample are reported to occur, suffixed by -an, in numeral expressions. Data are somewhat incomplete for many of the others and it is very likely that an even greater percentage of positionals may occur in such constructions. No immediately obvious semantic characteristic distinguishes those which definitely do not occur in these expressions from those which do. Some apparently synonymous pairs of roots differ on this point. Note that the homophony

of the positional stem formative and the specific numeral classifier formative together with the lack of any clear diagnostic frame for distinguishing one type of stem from the other does not allow for an easy classification of numeral classifiers as a separate syntactic class from positional stems with nominal syntactic function.

pux		'round, short (P)'
jun	puxan	'a pile of things stuffed in a bag which then looks like a ball'
b'ux		'round, short (animals, people) (P)'
*jun	b'uxan	
sap		'fat and straight, thick-trunked (P)'
jun	sapan	'one placing of a pole in the ground'
tap		'fat and straight, thick-trunked (P)'
*jun	tapan	
kew		'soft, wet mass (P)'
jun	kewan	tz'otz'ew 'a lump of clay or mud'
neq'		'watery, soft mass (P)'
*jun	neq'an	
lak'		'stuck to (with glue) (P)'
jun	lak'an	'one action of gluing'
lotz		'stuck to (P)'
*jun	lotzan	

As is obvious from these few examples, the meaning of a classifier is not always directly predictable from the meaning of the root from which it is derived. Some classifiers describe the shape of objects, others an action using an object or creating an object of some shape or in some position, and others describe the position or distribution of objects enumerated. Still others describe measures of objects. Here are several examples.

chip	'having a flattened point (P)'
jun chipan	'one blow of the fist'
la7	'submerged in water (P)'
jun la7an	'one soaking'
mutz'	'having the eyes closed (P)'
jun mutz'an	'one closing of the eyes'
k'ol	'spherical (P)'
jun k'olan	'a small ball-shaped object'
pos	'spongy (P)'
jun posan	'a person with a lot of clothes on'
pich	'wrapped (P)'
jun pichan	'one wrapped up object'
latz'	'in ordered lines (P)'
jun latz'an	'a row'

kun	'bunched (P)
jun kunan	'a large pile'
t'eb'	'watery mass (P)'
jun t'eb'an	'a ball of wet clay'
b'ay	'hanging (P)'
jun b'ayan	'a cluster'
wotz	'fistful (P)'
jun wotzan	'a fistful'
meq'	'armful (P)'
jun meq'an	'an armful'
yuch	'small armful (P)'
jun yuchan	'a handful or armful'

Although many numeral classifiers which describe actions are derived from positional roots which are bivalent transitive roots (see section 3.1.2.1), and may therefore correspond to the Jacaltec action numeral classifiers described above, a significant proportion of them do not. Most positional roots which describe positions have numeral classifier forms which count the number of times the action of taking the position occurs, but they are not bivalent and do not undergo the direct transitivization which characterizes such roots.

jaj	'kneeling (P)'
jun jajan	'one action of kneeling'
*jaj.a7	
wa7	'erect (P)'
jun wa7an	'one action of standing'
*wa7 (tv)	
jet'	'with legs or mouth very open (P)'
jun jet'an	'one action of opening'
*jet'.a7	

A similar situation is observed with other roots without action meanings such as jop 'alight'.

jun jopan	'a single lighting'
*jop.a7	

On the other hand, many roots do have both directly transitivized verbal forms as well as numeral classifier functions, but not all classifiers based on such roots describe a related action but rather the shape or other characteristics of the enumerated objects. Consider the following examples.

b'i7	'stretched (P)'
b'i7	'stretch (tv)'
jun b'i7an	'one stretched object'

xep	'lacking a part (P)'
xep.a7	'remove a part (tv)'
jun xepan	'one half of something'
t'uj	'drop-like (P)'
t'uj.u7	'shape like a drop (tv)'
jun t'ujan	'a drop'
k'al	'tied (P)'
k'al.a7	'tie (tv)'
jun k'alan	'one tied-up object'
jol	'soft, pliable (P)'
jol.o7	'eat soft food (like noodles) (tv)'
jun jolan	'one action of carrying a completely flexible object'

These facts about KSE action numeral classifiers demonstrate that the criteria which predict the relationship between positional roots and derived numeral classifiers in Jacaltec are not entirely adequate for Kanjobal. Much more work is needed on the nature of these constructions in Kanjobal in order to (1) clarify the role of positional roots in their formation, (2) establish predictive criteria for their semantic subclasses, and (3) illuminate the historical development of positionals, transitive verbs, and numeral classifier constructions in the languages of Western Mayan.

3.3 Positionals Within the Attributive System

By the nature of their semantic content underived positionals have a modifying function in phrases. Unlike adjectives they have great freedom of occurrence in syntactic constructions and are usually accompanied by one or more directional clitics. They always carry the stem formative -an in such constructions. In addition, however, positional roots have several distinct derivational forms in which they have attributive function. Some of these are unique to the class and some resemble derivational affixes which occur on members of the KSE adjective class. In this section, the attributive characteristics of positional roots are described in terms of the morphological and syntactic processes which emphasize them. The first part analyzes morphological derivation, including two types of reduplication and several minor suffixes, which produce adjectives. The second part contains a discussion of the modificational role of underived positional stems in various types of phrasal constructions.

3.3.1 Adjectival Derivation

Two highly productive types of suffixed reduplication form adjectives from positional roots in KSE. In addition, at least half a dozen other suffixes have a role in the derivation of adjectives. The reduplicated forms are discussed separately.

3.3.1.1 Redup -VC₂i intensives

The process of reduplication of the vowel and second consonant of a CVC positional roots is described in section 2.2.1 and referred to as Redup -VC₂i. This process is extremely productive in KSE, deriving more than seventy-five percent of all positionals in the sample and nearly one hundred percent of those which are not derivationally defective in other ways and for which data are available. Adjectives formed in this way have several kinds of meanings but in every case these involve the intensification of the root meaning, either by increasing or emphasizing some aspect of it. Like the other form of reduplication, -C₁, this process augments the meaning of the root either in terms of size or number of objects involved or degree of qualities involved or by extension of actions which are inherent in the root. The following examples illustrate the formation of intensive adjectives by reduplication.

wet'	'watery mass (P)'
wet'.et'i	'really muddy' (Sp <u>puro lodo</u>)
jas	'long, thin, straight (P)'
jas.asi	'very straight (Sp <u>bien recto</u>)
jop	'alight (P)'
jop.opi	'really bright'

latz'	'in ordered lines (P)'
latz'.atz'i	'well-arranged in lines'
noj	'head down (P)'
noj.oji	'well-placed in that position'
jaq	'open (P)'
jaq.aqi	'really open'
suy	'wheel-like (P)'
suy.uy'	'well-formed in a circle'
tz'in	'deserted, vacant (P)'
tz'in.ini	'really empty--not even the sound of bird songs'
sek	'spread out in large amounts (water, grain) (P)'
sek.eki	'like a stream of water'
ten	'bunched (P)'
ten.eni	'really bunched up, like a big pile or too much to fit in the space'
som	'mixed together (P)'
som.omi	'really well-mixed, all stirred together'
tutz'	'slippery (P)'
tutz'.utz'i	'very smooth'
litx'	'wide, extended (P)'
litx'.itx'i	'very widely, extended, to the limit.'

b'et	'smooth-textured, not too big (especially of animal young) (P)'
b'et.eti	'really pretty (of an animal)'
mej	'limp (P)'
mej.eji	'very soft and without strength'

Reduplicated intensive adjectives of this kind are rather common in text and discourse. They nearly always occupy first position in the phrase. The following examples are all taken from texts or from volunteered elicitations.

noj.oji max.y.un q'ab' te7 xhila

no	'head down (P)'	un-	'make, happen (tv)'
-VC2i	'Redup (intensive)'	q'ab'	'hand'
max	'comp'	te7	'tree (NCl)'
y-	'3'	xhila	'chair' (Sp <u>silla</u>)

'the arm of the chair is really nicely curved down'

to.xa nul.uli jun sek'

to	'still'	-VC2i	'Redup (intensive)'
xa	'already'	jun	'one'
nul	'slippery (P)'	sek'	'cup'

'a really fine smooth cup (has no place to get hold of it)'

nul.uli.xa y.alan jun in.xanab'

nul	'slippery (P)'	-alan	'beneath'
-VC2i	'Redup (intensive)'	jun	'one'
xa	'already'	in-	'1sg poss'
y-	'3 poss'	xanab'	'sandal'

'it's really slippery under my feet'

b'es.esi chi.Ø.ut.ej

b'es	'separated or put away (P)'
-VC _{2i}	'Redup (intensive)'
chi	'incom'
Ø	'2sg'
ut-	'do (tv)'
-ej	'tv form'

'you put everything away really well'

tz'uq.uqi max.y.un.ej

tz'uq	'conical (P)'	y-	'3'
-VC _{2i}	'Redup (intensive)'	un-	'make, happen (tv)'
max	'comp'	-ej	'tv form'

'it has formed a cone and more (when pouring something like sand which reaches a peak and then runs down the sides)'
(Sp ya pasó más de la medida)

au jun in.mok litz'.itz'i

ay	'exist'	mok	'water jar'
jun	'one'	litz'	'really full of liquid (P)'
in-	'1sg poss'	-VC _{2i}	'Redup (intensive)'

'I have a water jar which is full to the brim'

There are some peculiarities in the behavior of these reduplicated intensive adjectives when they occur in verb phrases with directional verbs.⁵ In many ways they resemble intransitive verbs, especially in terms of the changes they undergo or require when functioning in directional verb phrases. Consider the following sets of examples taken from texts or conversation. In the first group, the adjective appears to be subordinated to a directional verb; in the second group the change affects the verb itself.

chi.Ø.ek' lek.ek.oq

chi	'incom'	lek	'erect (P)'
Ø	'3'	-VC ₂	'Redup (intensive)'
ek'-	'go by (iv)'	-oq	'subordinator' (?)

'third person goes back and forth, erect'

*lekeki

kax chi.Ø.ek' sut.ut.oq y.alan eb'

kax	'and	-VC ₂	'Redup (intensive)'
chi	'incom'	-oq	'subordinator' (?)
Ø	'3'	y-	'3 poss'
ek'-	'go by (iv)'	-alan	'beneath'
sut	'circular (P)'	eb'	'human, pl'

'and it goes round and round below them'

i to.k'al chi.Ø.ek' k'al tek.ek.oq eb' naq b'ay.tu7

i	'and' (Sp y)	-VC ₂	'Redup (intensive)'
to	'still'	-oq	'subordinator' (?)
k'al	'together (emph)' (<k'al	'tied (P)' (?)	
chi	'incom'	eb'	'human, pl'
Ø	'3'	naq	'man (NC1)'
ek'r	'go by (iv)'	b'ay	'at, in'
tek	'standing (P)'	tu7	'dem (there)

'and they're just walking around over there'

chi.Ø.eI lew.w.oq

chi	'incom'	lew	'legs spread (P)'
Ø	'3'	-VC ₂	'Redup (intensive)'
eI-	'go out (iv)'	-oq	'subordinator' (?)

'legs are opening little by little'

lanan.xa.y.ok nub'.ub'.oq sat

lanan	'prog'	nub'	'a little broken (P)'
xa	'already'	-VC ₂	'Redup (intensive)'
y-	'3'	-oq	'subordinator' (?)
ok-	'go in (iv)'	sat	'face'

'it's already drying (said of a healing wound)'

The fact that the -oq suffix replaces a final -i which is identical to the intransitive stem formative is very suggestive although the Redup -VC₂i intensive adjectives do not otherwise occur as verbs. They do not take person nor tense/aspect markers nor may they be further derived as verb stems.

In this second group of examples, note that accompanying directional verbs are required by the preceding intensive adjectives to take transitive (Set A) person markers where intransitive (Set B) markers would be expected.

b'us.usi xal y.aj mub' b'ay jun na

b'us	'short, fat (P)'	mub'	'smoke'
-VC ₂	'Redup (intensive)'	b'ay	'at, in'
xal	'emphatic'	jun	'one'
y-	'3'	na	'house'
aj-	'go up (iv)'		

'how the smoke is going out of the house in puffs!'

a jun ix laq'.aqi y.ek' y.etoq jun winaq

a	'indef dem'	y-	'3' and 3 poss'
jun	'one'	ek'-	'go by (iv)'
ix	'woman'	-etoq	'with'
laq'	'embraced (P)'	winaq	'man'
-VC ₂	'Redup (intensive)'		

'a woman goes around embracing a man (walks around with her arm around him)'

tuk.uki w.ek'.i chi.in.ek' t'an.an.oq kaq.ti

tuk	'staring (P)'	in-	'1sg'
-VC ₂ i	'Redup (intensive)'	t'an	'staring (P)'
w-	'1sg'	-an	'P form'
ek'-	'go by (iv)'	-oq	'subordinator' (?)
-i	'iv form'	kaq	'like'
chi	'incom'	ti	'dem (here)'

'looking around, I am glancing all around like this (gesture)'

ch'ar.ari xal y.ay jun.tzan a7.ej

char	'very fat (P)'	jun	'one'
-VC ₂ i	'Redup (intensive)'	tzan	'pl'
xal	'emphatic'	a7	'water'
y-	'3'	-ej	'absolute noun'
ay-	'go down (iv)'		

'the waters fall (from the faucet) in a thick stream'

Neither of these peculiarities in the syntactic effects of intensive adjectives can be completely explained on the basis of the available data since they were discovered very late in the analysis and little additional data on these points could be gathered. However, a number of relevant facts can be examined and somewhat convincing explanations can be offered for both cases.

In the first case, the occurrence of the verbal subordinator -oq with intensive adjectives, when they are part of some directional verb phrases, suggests that the reduplication and the final -i are separate suffixes. This is supported by the existence of nonproductive reduplication of a similar type and meaning elsewhere in the grammar, especially in noun formation (1.1.2.4 and 3.2.1). Furthermore,

-oq also occurs on nonreduplicated positional stems in certain similar verb phrases as in the third example in group two above where t'an.an 'staring' is suffixed by -oq after the inflected verb ek'- 'go by (iv)'. Many similar examples exist and some are illustrated in section 3.1.1. One attested variant of this construction illustrates that the unsuffixed positional is apparently not possible in such a syntactic position; little can be made of this example since it has an extremely restricted distribution: the first form is used only with small children.

ay.an pis ~ ay.an pis.an.oq

ay	'go down (iv)'	-an	'P form'
-an	'2sg imp (iv)'	-oq	'subordinator'
pis	'seated (P)'		

'sit down!'

*ay.an pis.an

The suffix -oq also occurs with positionals derived by attributive -naj (3.3.1.3).

One possible account of these data would be to simply expand the environment of the subordinator -oq from verb stems to include positionals as well and consider all examples of -oq as cases of the same suffix. This seems to call into question the non-verb status of stems derived by Redup -VC₂ since the suffix appears to indicate some kind of verbal subordination, but the evidence is strong that these stems are not verbs. They do not take person or

tense/aspect. They cannot take further derivation as verbs. The final -i, while its function and meaning remain uncertain, does not behave as an intransitive stem formative in any other context and is lost only through suffixation by -oq, a process which could be rather simply explained as the result of a phonological process of vowel cluster reduction.

Another solution is to set up a new suffix -oq which applies only to positional stems when they occur with directional verb phrases. This produces a fourth homophonous suffix (since the potential suffix discussed in section 1.2.1.5 and the partitive suffix have the same shape) and the new one does not seem to have a clearly different function from the subordinator. In the interest of simplicity, the first solution is preferable, especially since the forms in question have only been observed with directional/locationals verbs. It is rather strongly claimed in section 3.1.1 that all positional roots include an underlying directional/locationals idea. If this is true, then it might be expected that their behavior with directional/locationals verbs would be somewhat peculiar and their relationship to them might be one which is expressed syntactically on the surface as grammatical subordination. In this context it is also useful to recall that when positionals occur with uninflected directionals, these clitics also take -oq as in the citation

pis.an ay.oq 'seated'. In fact, roots which refer to true position, thereby strongly implying both a motion and a location, demonstrate an especially interesting restriction related to this analysis. Such roots, when intensified by Redup -VC₂ do not occur as free adjectives with final -i but only as 'subordinated' reduplicated forms in -oq; consequently, they always require an active verb of direction/location in constructions in which they occur as reduplicatives.

wa7 'standing(P)'

chi.Ø.ek' wa7.a7.oq

chi 'incom'

Ø '3'

ek'- 'go by (iv)'

'it goes by over and over standing up'

*wa7.a7.i

This suggests again that the -oq suffixation is related to the underlying semi-verbal features of the positional root which are intensified by reduplication in -VC₂.

These conclusions must remain only tentative until data become available which can clarify the extent of the environments for -oq as well as define its grammatical or syntactic function more precisely.

With regard to the other syntactic irregularity associated with Redup -VC₂i intensitive adjectives and

directional/locational verb phrases, similar uncertainty exists in the analysis. In these constructions the presence of a reduplicated adjective appears to alter the person marking system of the accompanying intransitive verb by requiring transitive person markers. Such an alternation is not unique in KSE grammar, however; an identical change is required on all intransitive verbs when they are marked for tense/aspect by lanan 'progressive (1.2.1.5). An example of this occurs in the last sentence given with the first set of examples above. Although this process has been observed only with directionals when accompanied by reduplicated positionals, this is no doubt a gap in the data and not a definite indication that other intransitives would not be affected just as they are with lanan. No explanation is immediately obvious to account for why such changes take place at all but there is considerable reason to believe that the two cases are not unrelated and that what motivates one may also operate on the other.

Recall first of all that reduplication in KSE serves a primarily augmentative semantic function, a frequent result of which is a progressive aspect interpretation (cf. section 3.1.3.3). Note, furthermore, that Redup -VC₂ and Redup -C₁ 'progressive' are not unrelated and in fact often convey similar meanings. Compare the following.

wa7 'standing (P)'

chi.Ø.ek' wa7.a7.oq

chi	'incom'	-VC ₂	'Redup (intensive)'
Ø	'3'	-oq	'subordinator'
ek'-	'go by (iv)'		

'it goes by over and over standing up'

chi.Ø.jay wa7.w.on.oq

jay-	'come (iv)'
-C ₁	'Redup (progressive (iv))'
-on	'repetitive'
-oq	'subordinator'

'it is coming standing up (not of humans)'

Now with regard to the example sentences presented above, note that in every case where a reduplicated positional root causes the change in question it precedes the verb directly and is separated from it only by the sort of clitic which may intervene between verb stem and tense/aspect markers (cf. section 1.2.1.5). Finally, observe that in every case, as in all other attested occurrences of similar constrictions, the meaning suggests a progressive verbal action. On the basis of these facts, it can be hypothesized that intensive reduplicated positionals in Redup -VC₂, when occurring in directional/locationals verb phrases of the sort described here, actually function much like the tense/aspect marker lanan 'progressive' both in semantic and syntactic ways, requiring just the verbal alternation also found with that

form. Obviously, a great deal more data must be gathered in order to fully support such a claim. However, the numerous parallels observed suggest that further research in this direction will probably be rewarded since it is unlikely that they are mere coincidence.

3.3.1.2 Redup -C₁ statives

In this section a type of stem formed by Redup -C₁ will be discussed. It should be recalled that this same suffixation of the reduplicated first consonant of a positional root also serves to derive what are ultimately intransitive verbs of progressive aspect (cf. section 3.1.3.3). Such verbs are obligatorily further derived by -on 'repetitive' and defined as verb stems by the intransitive formative -i. An almost identical process produces stative attributive stems which describe a position, quality, or state resulting from the action of the verb and which, furthermore, are always plural. Both the plurality and the sense of action can be accounted for within the context of features already ascribed to reduplicative processes in general. The attributive formed in this way is suffixed by -b'a instead of by a verbal stem formative and is obviously not a verb, since it cannot be inflected for person or tense/aspect as are verb stems. Several examples of this extremely productive derivation are given below. (The suffix -on is realized

phonetically as $-[u]n$ after roots with root vowel /u/ and as $-o[m]$ in all forms since it precedes a bilabial.)

ch'ak	'bathed in liquid or mud (P)'
ch'ak.ch'on.b'a	'many muddy things'
txak	'on four legs (P)'
txak.tx.on.b'a	'several four-legged things'
pe7	'standing liquid (P)'
pe7.p.on.b'a	'several containers of liquid'
puk'	'round, like a carrying load (P)'
puk'.p.on.b'a	'many loads in one place'

This derivation affects more than three-quarters of the positional roots in the sample and is one of the most regular and productive of positional root derivations. Stems derived in this way commonly cooccur with directional/locational clitics as in this example from a text.

t'an.t'on.b'a aj.teq mineq lab'aj

t'an	'staring (P)'	aj	'go up (dir)'
-C ₁	'Redup (prog)'	teq	'action toward'
-on	'repetitive'	mineq	'many large'
-b'a	'stative'	lab'aj	'snakes'

'many large snakes staring up toward (the speaker)'

When referring to persons these statives behave syntactically just as any other modifier in an identificational sentence

does: the person marker is postposed to the reduplicated form and followed by directional clitics if any.

lok 'hanging (P)'
lok.l.on.b'a on aj.oq

on 'lpl'
 aj 'go up (dir)'
 -oq 'subordinator'

'we are hanging up'

chot 'seated (P)'
chot.ch.on.b'a ay eb'

ay 'go down (dir)'
 eb 'human pl'

'several (people) are seated'

ch'oj 'knees drawn up (P)'
ch'oj.ch'.on.b'a on ay.oq

on 'lpl'
 ay 'go down (dir)'
 -oq 'subordinator'

'many of us are seated with our knees drawn up'

In section 3.3.1.1, the close ties between the two types of reduplication affecting positional roots are alluded to. The discussion presented here has shown that, like Redup -VC₂i, Redup -C₁ shares augmenting and intensifying semantic functions. Furthermore, each derivational process of reduplication appears to attach both verbal and attributive characteristics to the stems produced by their application.

3.3.1.3 Stative attributives in -naj

More than two-thirds of the positional roots in the sample of 270 are attested with derivation by the suffix -naj, the meaning of which is not certain. It is uniquely found with positionals. It appears to produce stative attributives which are always subordinated to inflected directional/locational verbs or verbs of motion especially toj.i 'go (iv)' and tit.a 'come (iv)'. Like other subordinated verbal and positional forms, stems derived by -naj require the subordinating suffix -oq unless followed by another word in the same phrase (see above, section 3.3.1.1 for discussion of -oq). This derivation produces a stative which undergoes some movement as indicated by the obligatory verb.

Examples of positional roots derived by -naj are extremely common in text and conversation. The range of roots which may be derived in this way as well as the meaning of the derivation are illustrated in the following set of sentences chosen from an exceptionally large inventory of examples.

chip 'having the point flattened against something (P)'

oq.ach.ok chip.naj y.in jun.oq ch'en

oq	'fut'	-in	'against, on'
ach	'2sg'	jun	'one'
ok-	'go in (iv)'	-oq	'partitive'
y-	'3 poss'	ch'en	'stone (NC1)'

'you (sg) trip over (against) some rock'

b'i7 'stretched (P)'

chi.Ø.el b'i7.naj.oq

chi	'incom'
Ø	'3'
el-	'go out (iv)'

'it stretches'

sop 'very thick and cylindrical (P)'

max.Ø.toj sop.naj jun chej xol tz'otz'.ew

max	'comp'	chej	'horse'
Ø	'3'	xol	'among, in'
toj-	'go (iv)'	tz'otz'	'earth'
jun	'one'	-ew	'despective'

'a horse (of that shape) fell into the mud'

nub' 'alight, but giving off a little light (P)'

mayal Ø.ok nub'.naj.oq

mayal	'already
Ø	'3'
ok-	'go in (iv)'

'(the fire) has already caught hold (and is burning)'

yub' 'shrunken (of clothes) (P)'

max.w.ay.toq in.kol y.ul a7 pero

max.Ø.ok yub'.naj.oq

max	'comp'	y-	'3 poss'
w-	'lsg'	-ul	'inside, into'
ay-	'put down (tv)'	a7	'water (NCl)'
toq	'action away (dir)'	pero	'but' (Sp <u>pero</u>)
in-	'lsg poss'	Ø	'3'
kol	'blouse'	ok-	'go in (iv)'

'I put my blouse into the water but it shrank'

pitx 'head down (P)'

maj.in.toj.oq.kan pitx.naj y.ul olan

maj	'neg, past'	kan	'remain (dir)'
in	'1sg'	y-	'3 poss'
toj-	'go (iv)'	-ul	'inside'
-oq	'pot' ([toq])	olan	'hole'

'I didn't fall head first into the hole but I almost did.'
(Sp 'por poco no me fui a caer de cabeza adentro del hoyo')

sek 'spread out (P)'

max.Ø.ay sek.naj jun miman xij chib'ej

max	'comp'	miman	'large'
Ø	'3'	xij	'pot'
ay-	'go down (iv)'	chib'ej	'meat'
jun	'one'		

'a large pot of meat spilled (on the ground)'

nil 'dispersed group (P)'

max.Ø.el.teq nil.naj jantaq masanil

no7 no7 maq.an y.ul ch'en.tu7

max	'comp'	no7	'animal'
Ø	'3'	maq	'enclosed (P)'
el-	'go out (iv)'	-an	'P form'
teq	'action toward (dir)'	y-	'3 poss'
jantaq	'how many?'	-ul	'inside'
masanil	'all'	ch'en	'stone (NC1)'
no7	'animal (NC1)'	tu7	'dem (there)'

'all the animals that were closed inside the rock came out in a group'

3.3.1.4 Miscellaneous adjectival derivation

In addition to the three types of derivation previously described there are a few other suffixes which can

derive positional roots as attributives. Stems derived in these ways are of quite predictable meaning. They are not very common in texts although the derivational suffixes in question are extremely productive with roots in elicitation. Unlike the other types of adjectival derivation which are all unique to the positional class, many of these minor suffixes are identical or clearly related to adjectivizing suffixes elsewhere in the grammar (cf. section 1.2.2.1.2). Four types of minor adjectivizing suffixes attested with a large number of positional roots are discussed briefly below.

3.3.1.4.1 Plural derivation with -kixhtaq

Most positional roots may be derived by the addition of the suffix -kixhtaq to form a stem meaning 'many things of X shape or position or quality'. Examples of this construction are attested only by elicitation and not in texts. The suffix is undoubtedly a compound of some sort, and possibly related to -taq 'full of', discussed below, but its parts cannot be definitely analyzed. It is probably not unique to the positional class (cf. Dakin in unpublished notes). A few examples follow.

wes	'hairy (P)'
wes.kixhtaq	'many hairy things'

kotz'	'twisted (P)'
kotx'.kixhtaq	'many twisted things'
xach	'forked (P)'
xach.kixhtaq	'several with two horns'
chul	'rolled (P)'
chul.kixhtaq	'many rolled things'
wotz	'fistful (P)'
wotz.kixhtaq	'several fistfuls'
txak	'on four legs (P)'
txak.kixhtaq	'many on four legs'

3.3.1.4.2 Emphatic derivation with -taq

Roots derived by -taq are glossed by 'very much of shape or quality X'. It is probably identical to the adjectival suffix -taq 'full of' described in section 1.2.2.1.2. It has not been attested on many positional roots and only on roots of physical quality or shape, not on those referring to true position. It is cognate to the Jacaltec suffix -taj with the same meaning and distribution (Day 1973a:48). Here are some examples.

lan	'furry or hairy (P)'
lan.taq	'very furry'

patx	'flat (P)'
patx.taq	'rather flat'
chak'	'flattened point supporting something (P)'
chak'.taq	'dull person' (metaphorical)
t'ir	'bald, naked (P)'
t'ir.taq	'really bald'
q'al	'sticky (rare) (P)'
q'ol.taq	'really sticky (like a melting candle)'
 xep	'lacking a part (P)'
xep.taq	'having a lot of the edge fallen off (as of a road or of a half-eaten tortilla)'

3.3.1.4.3 Diminutive with -ich or -ix

Diminutives may be formed from positional roots by suffixation of -ich or -ix. Only some thirty roots have been attested with this derivation. The variants appear to be interchangeable but most roots are given only with -ich. Some roots are given with both forms and two occur only with -ix. There is no obvious phonological conditioning and in all cases the resulting form means 'a small object of X shape'. The suffixes are probably related to the diminutive suffix -ixh described in section 1.2.2.1.2 and also of limited distribution. Day 1973a does not mention any possible cognate forms.

k'ab'	'having a large mouth (P)'
k'ab'.ich	'a small thing with a large mouth'
lok	'hanging (P)'
lok.ich	'a small hanging object (rare)'
t'is	'fat and short (P)'
t'is.ich	'a little fat thing, very short'
tz'ub'	'sharp-pointed (P)'
tz'ub'.ich	'a small thing with a sharp point'
kut	'too short to reach (P)'
kut.ix	'short (of an animal's tail)'
nil	'scattered (P)'
nil.ich - nil.ix	'many small things scattered'

3.3.1.4.4 Resultant derivation with -inaq

A few positional roots have been attested in phrases with adjectives and suffixed by -inaq. In most cases the phrase produced in this way means 'a thing of X shape or quality is now in a state described by the adjective and before it was not'. This resultant meaning suggests that the suffix might be related to the intransitive resultant adjectivizer -naq described in section 1.2.2.1.2. In elicitation, the adjective in the phrase in each case was kaw 'hard'. A few examples of this derivation are given below.

	lok	'hanging (P)'
kaw	lok.inaq	'a stiff thing hanging'
	patx	'flat, wide (P)'
kaw	patx.inaq	'a flat thing is stiff now'
	sut'	'tight around the neck (P)'
kaw	sut'.ing	'really tight and hard around the neck'
	b'i7	'stretched (P)'
kaw	b'i7.inaq	'a flexible thing is now too stiff to stretch'
	wen	'bumpy (of land)'
kaw	wen.inaq	'land that is too hard'
	nel	'smooth (P)'
kaw	nel.inaq	'very hard, like grains that have not been cooked'

Three examples of this derivation have been found in longer sequences and with other adjectives.

	txek'	'having several protruding elements like hair, spines, or branches (P)'
	q'an <u>txek'.inaq</u> a.xil	
	q'an	'yellow'
	a-	'2sg poss'
	xil	'hair'
	'your yellow hair'	

patz' 'humid, damp (P)'

sik patz'.inaq to jun.tzan ixim

sik	'cold'	tzan	'pl'
to	'still'	ixim	'corn'
jun	'one'		

'some corn is not really dry yet'

met 'limp, weak (P)'

k'un mej.inaq no7

k'un	'soft'
no7	'animal (NCl)'

'the animal has no strength (fast asleep, for example)'

3.3.2 Attributive Phrases

In the preceding sections, positional roots have been treated as items which are available for derivation into other grammatical classes. And, indeed, they show a wide variety of derivational morphology. However, positionals belong to a separate grammatical and semantic class themselves and are not necessarily always derived. In fact, they occur most frequently in KSE discourse as simple underived stems. In such phrases they have a modifying or descriptive function and, thus, semantically, can be thought of as most like attributives. Common syntactic pattern for underived positional stems is to occur in phrases with yayji 'having the form'. More than half the roots in the sample occur in such phrases. The occurrence or nonoccurrence of positionals

with yayji and the meaning of the resulting phrase are conditioned in part by the type of directional/locational clitic each takes. (The implications of this are further discussed in section 4.1.3.) Here are a few examples of this construction.

wa7	'erect (P)'	wa7.an	yayji	'can stand erect'
b'uj	'elevated (P)'	b'uj.an	yayji	'in the shape of a little hill'
pe7	'standing liquid (P)'	pe7.an	yayji	'in the form of a little pond'
jaj	'kneeling (P)'	jaj.an	yayji	'always in a kneeling position'
xon	'big-headed (P)'	xon.an	yayji	'having a big head'

A large number of representative longer examples of attributive positional phrases is presented below. All of these have been selected from text material and primarily from the speech of monolinguals. It is hoped that these examples will indicate something of the power and range of positionals in KSE grammar, illustrate the misleading nature of glosses, and serve as a bridge to Chapter 4 in which the semantics of positional roots will be more fully explored. (In the examples the positional is underlined; in all cases the positional occurs with the stem formative -an.)

kax max.β.toj.kan b'atx.an ch'en ch'en y.ib'an
no7 jun.e1.xa

kax	'and'	ch'en	'rock'
max	'comp'	y-	'3 poss'
Ø	'3'	-ib'an	'on top of'
toj-	'go (iv)'	no7	'animal (NCl)'
kan	'remain (dir)'	jun.el.xa	'again'
<u>b'atx</u>	'on top of but overhanging (P)'		
ch'en	'stone (NCl)'		

'and the stone stayed (was put) over it (a snake) once more'

kax chi.Ø.ay-k'ay q'axan.il ch'en jib'.an

kax	'and'	q'axan	'warm (P?)'
chi	'incom'	-il	'abstr nom'
Ø	'3'	ch'en	'stone (NCl)'
ay-k'ay-	'fall (iv)'	<u>jib'</u>	'long, thin, flexible (P)'

'and the heated vapors of the rocks come down (inside a steam-bath)'

ch'en lak.an

ch'en	'rock'
<u>lak</u>	'very large and heavy (P)'

'Big Rock (toponym)'

k'ab'.an yayji y.ul ti jun mok.ej

<u>k'ab'</u>	'big-mouthed (P)'	ti	'mouth'
yayji	'in that shape'	jun	'one'
y-	'3 poss'	mok	'water jar'
-ul	'inside'	-ej	'absolute noun'

'the mouth of the water jar is really big'

b'ay jun.tzan k'isis.laq b'ay lot'.an ch'en.laq

b'ay	'at'	-laq	'place of abundance'
jun	'one'	<u>lot'</u>	'narrow, especially of a passage (P)'
tzan	'pl'		
k'isis	'cypress'	ch'en	'rock'

'where there are some cypresses, where there are many broken rocks (and the passage is difficult)'

oq.in.aj.toq paq.an jolom a.xik'

oq	'fut'	<u>paq</u>	'face down (P)'
in	'1sg'	jolom	'head'
aj-	'go up (iv)'	a-	'2sg poss'
toq	'action away (dir)'	xik'	'shoulder'

'I will go up on your shoulder (and put myself) head down'

chi.Ø.cheq.lay ay chot.an naq b'ay y.u1 ti

puerta y.atut eb' y.uxhtaq.tu7

chi	'incom'	y-	'3 poss'
Ø	'3'	-u1	'inside'
cheq-	'send (tv)'	ti	'mouth'
-lay	'passive'	puerta	'door (Sp)'
ay-	'go down (iv)'	-atut	'house'
<u>chot</u>	'seated (P)'	eb'	'human pl'
naq	'male (NC1)'	-uxhtaq	'man's brother'
b'ay	'at'	tu7	'dem (there)'

'he was sent to sit in the doorway of his brothers' house'

k'am.xa no7 chej.tuy tzun.an y.intaq

k'am	'neg'	tu7	'dem (there)'
xa	'already'	tzun	'behind (P)'
no7	'animal (NC1)'	y-	'3 poss'
chej	'horse'	-intaq	'in back of'

'that horse wasn't following him now'

ay.an xoy.an kay.ti7

ay-	'go down (iv)'	kay-	'location'
-an	'2sg imp (iv)'	ti7	'dem (here)'
<u>xoy</u>	'curved, rolled (P)'		

'roll yourself up here!'

k'am maqtxel tz'in.an

k'am 'neg'
 maqtxel 'who?'
tz'in 'vacant, empty (P)'

'there is no one--everything is silent'

tixti txol.an oq.ey.un ti7 b'e.ti7

tixti	'exclamation--look here!'	un-	'do, make (tv)'
<u>txol</u>	'in a line (P)'	ti7	'mouth, edge'
oq	'fut	b'e	'road'
ey-	'2pl'	ti7	'dem (there)'

'look--you all will form a line here by the edge of this road'

teqan lu7.an.e1 q'a q'aq' b'ay.tu7

teqan	'perhaps'	q'a	'fire (NC1)'
lu7	'scattered in large area (P)'	q'aq'	'fire'
e1	'go out (dir)'	b'ay	'at'
		tu7	'dem (there)'

'maybe there is a lot of fire around there'

Many other examples of positional roots both as derived and as underived stems can be found in the text in Appendix D.

NOTES

¹The data for this chapter were gathered in several ways. The inventory of positionals was elicited from one informant and then checked with others and new roots were added along the way. The entire list was checked twice for meaning and for directional/locational citation verbs with two informants and parts were checked with four other KSE speakers. All texts were examined for occurrences of positionals in context. A paradigmatic questionnaire was constructed and completed for all but a handful of roots in the inventory; this questionnaire elicited information about the behavior of positional roots in all the syntactic roles discussed in Chapter 3.

Some roots which were added to the list after the field stay or which were considered rare forms do not have complete syntactic information; the number of these are noted for each section. A special effort was made to establish the range of application for each root and a large number of example sentences were collected for most roots from a variety of informants.

²In spite of the extensive revisions which have been made, by Fillmore and others, in the theory of case grammar, the L case is present in nearly every inventory to date. Several versions (Fillmore 1971 and sources cited there) include Source and Goal case roles which include directional specification and combine to define location. Since this proposal is motivated largely by considerations of internal consistency in the theory, its merits are not discussed here. The KSE positional root data, at least as so far analyzed, do not provide convincing argument for or against such a proposal.

³Note that this sentence indicates clearly that max serves primarily to mark past time and not completive aspect. Aspect is a relevant category within the sentence but the aspect is progressive and is carried by the reduplicative process (cf. section 1.2.1.5).

⁴Kaufman's 1971 work is a basically unrevised version of his 1963 Ph.D. dissertation at Berkeley. Berlin's study,

although with an earlier publication date, is a slightly revised version of his Stanford Ph.D. dissertation of 1964. Day 1973a is largely unchanged from the version in his 1967 Chicago dissertation.

⁵ A small set of roots in KSE have an adjectival form of the shape $C_1VC_2VC_2i$ but do not have certain other productive derivational forms which are diagnostic for positional roots. Nevertheless, they are considered to be syntactically defective positionals in this analysis. They are listed below.

mix 'bumpy (of skin, especially (P))'

citation: mixan okoq (ok 'go in (dir)')

mix.ixi 'having a lot of really tiny bumps'

k'otz' 'mixed colors (P)'

no citation: *k'otz'an

k'otz'.otz'i 'really speckled with a lot of different colors'

jotz' 'colored (P)'

no citation: *jotz'an

jotz'.otz'i 'colored'

q'ol 'sticky (P)' (rare)

no citation: *q'olan

q'ol.oli 'really sticky'

4. POSITIONAL ROOTS: SEMANTIC PATTERNS

In Chapter 2 positional roots in KSE are considered solely in terms of the phonological structure and processes which they exhibit. In Chapter 3 the role of positional roots in KSE grammar is explored and their morphological and syntactic properties are described. In this chapter positionals are examined from still another perspective, a semantic one. Here these roots are surveyed for the semantic features which define them individually and as a class. It can be shown that some of these features are unique to the positional root class or receive special elaboration there while other features integrate this grammatical class into the larger semantic organization which characterizes Kanjober and other Mayan languages.

Semantic patterns within the positional class can be approached in three ways. First, the features of meaning which are part of every root in the class form patterns which serve to distinguish positionals, as a class, from other grammatical classes. Such features include L, the abstract concept of direction and location which is alluded to in Section 3.1 and the property of

conflation, or the incorporation of several semantic notions into one surface form. In addition to this class-specific approach, positional roots can also be defined in terms of the set of features which define them individually including humanity, animacy, quantity, and size. And, finally, positionals can be viewed as part of the non-grammatical meaning system, that is, as they function in metaphor and language play contexts.

Although few previous works have attempted the semantic analysis of an entire Mayan grammatical class, the study of meaning has not been neglected by investigators of Mayan languages. Many of the best papers on semantic topics appear in Edmonson 1973b. This chapter does not claim to be an exhaustive account of KSE semantics but does represent the first major attempt to go beyond the work on lexical semantics which characterizes many of these earlier papers. The focus here is on grammatically relevant semantic features operating on a deep level with observable effects on the syntactic behavior of positional roots. The semantic patterns which operate in the non-grammatical and even non-linguistic meaning systems of a cultural group are often closely tied to these linguistically important ones. The possibilities of such connections in the KSE case are treated in Section 4.3 and in Chapter 5.

4.1 Class-specific Semantic Features

Some semantic properties are characteristic of every member of the positional root class and may be said to define semantic membership in the class. These properties can be used to predict certain patterns of occurrence for individual positional roots. These class-specific properties, which can sometimes be identified as single semantic features, govern many syntactic constructions and may be discovered by comparing groups of roots in terms of their freedom to occur in sets of such constructions. In this section two class-specific semantic of positional roots are described and demonstration is presented of the effects of these properties on the syntactic behavior of semantic subsets of members of the positional class.

4.1.1 Conflation

One of the most interesting semantic properties which characterizes positional roots as a class is their ability to merge distinct concepts in one root. Norman in his 1973 paper on Quiché positionals was one of the first to identify the importance of this aspect of the semantic structure of a Mayan language and he suggested that it was central to the analysis of underlying grammatical classes in Quiché. In his discussion Norman adopted the term conflation (after

Leonard Talmy) to refer to this phenomenon of merger or semantic fusion. Examples of conflation in English might include such items as kick which conflates the nominal concept foot or enter which conflates the adverbial concept into. Cook 1973 has treated these items and similar ones as having covert case roles. That is, the single surface morpheme incorporates one or more deep case relations. Common examples given by Cook include bottle as a verb which incorporates or lexicalizes a locative case role into the verbal notion put and bribe which incorporates an object case role into the verbal notion give. All these separate notions can be easily expressed by separate morphemes and in fact in many languages must be so expressed. Conflated concepts are retrievable in English under modification in some cases. Consider the following example:

John bribed the official.

John gave the official a large bribe.

The ability to conflate certain concepts or to conflate them in certain parts of the grammar is therefore an important fact about the semantic structure of a language. The types of concepts which can be conflated are probably not randomly selected and consequently the identification of the nature of conflation in a particular language may well lead to significant generalizations about particular as well as universal semantic organization.¹

In Kanjobal, as in Quiché, conflation is an especially conspicuous characteristic of positional roots. Norman analyzes Quiché positionals as being capable of conflating two types of concepts: physical quality or state and relative spatial orientation. He finds that the great majority of positional roots in Quiché conflate one or the other of these or both. In KSE, positionals also regularly conflate both types. As has been proposed in Section 3.1.1, positional roots can be analyzed as including an underlying notion of spatial orientation which has been designated L. Some roots actually incorporate or conflate this concept with interesting consequences for their syntactic freedom. This special case of conflation has been analyzed in some detail and the results are discussed below in Section 4.1.2.

Positional roots in KSE generally conflate physical qualities of the following types: size, shape, texture, angle, flexibility, and quantity. With regard to the conflation of physical qualities or states in Quiché Norman mentions at least sixteen positional roots which have the general meaning of 'round' but which always merge the concept with perceptually distinct ones such as 'rigid', 'thick', 'flat', 'horizontal' and the like. To use his example, consider the following KSE roots. (The list is not exhaustive.)

<u>Root</u>	<u>Meaning</u>	<u>Example</u>
b'et	cylindrical, smooth-textured, of medium width	barkless pole; animal young
sop	cylindrical, very thick	swollen thigh
kutz	cylindrical, short	pig
puk'	round, more or less hollow	carried load; pig
b'iq	cylindrical, limp	sleeping animal or person; rope
b'ux	very short but somewhat round (flat)	a slight hill
pux	round and short, as if inflated	water jar; ball
k'et	cylindrical and long with twisted point	wooden pole; tile
sut	circular (land only)	cultivated patch
sap	thick-trunked, cylindrical	person
tis	round, very wide	Coban woman's skirt; ruffled feathers of angry bird
txil	many small round objects scattered	fruit on a tree
b'al	cylindrical, very thick	cow or mule
tel	cylindrical (at rest)	people; corn cob
b'il	round, very small	grape; seed
k'ol	spherical	ball of dough; egg
xil	small, fat, somewhat round	baby pig

<u>Root</u>	<u>Meaning</u>	<u>Example</u>
pil	oval or nearly spherical	rock
jol	cylindrical, long, soft pliable	snake; noodles
k'ot	round, small	dirt clod
7oy	circular, enclosed	patch of ground with a fence
set	circular, flat, non- rigid	tortilla
pit	round (at rest)	marble
b'e'l	cylindrical and in line	trees
sar	thick-trunked, naked	person's leg
suy	circular, flat, rigid	wheel; gridde ²

The inadequacy of the term 'positional' to describe a root class which possesses such semantic richness and specificity is by now completely obvious. What is also clear is the enormous importance of perceptual criteria in the semantic organization of Kanjobal grammar. That is, observable characteristics are more important than imputed or implied properties in the classification of Kanjobal experience (cf. Mathiot 1962). The ability, and in fact the characteristic tendency, of positional roots to incorporate perceptual concepts of the kind illustrated above is further strong support for the claim made in Section 1.2.1.3 about the existence of a pervasive grammatical category called categorization. It is now clear that categorization not only has surface

syntactic and morphological reflexes (e.g., noun class markers and general numeral categorizing suffixes) but also has profound effects on the underlying semantic form of positional roots as well. The role of categorization in the extra-linguistic meaning system is considered again in Sections 4.3 and 5.4.

In addition to conflating perceptually observable traits, KSE positionals also conflate nominal concepts such as body parts. This is not nearly as characteristic of the class, however, since fewer than fifty roots can be identified as incorporating a distinct body part concept in at least one of their meanings. The incorporated noun can be forced to the surface, as in English, by introducing modifiers (Cook 1973:64). Compare, for example, the following.

John kicked the ball.

John kicked the ball with his sore foot.

q'ox 'having something on the head (P)'

q'ax.an.tog q'ap y.ib'an

-an	'P form'	y-	'3 poss'
toq	'away (dir)'	-ib'an	'on top of'
q'ap	'cloth'		

'(she) has a cloth on her head'

q'ox.o7 'put something on the head (tv)'

q'ox.β jun.oq a.q'ap y.in a.jolom

β	'tv imp'	q'ap	'cloth'
jun	'one'	y-	'3 poss'
-oq	'partitive'	-in	'on; against'
a-	'1sg poss'	jolom	'head'

'cover your head with a cloth'

Note that q'ox also conflates an object nominal which surfaces in both these examples as q'ap 'cloth'. Part of the semantic information provided by q'ox is that the object noun is something which does not occur naturally on the head. Therefore, q'ox can be applied to raindrops, to a stick used to hit someone on the head, cloths wrapped around the head of an animal that has played in the laundry, and by extension to the clouds on a mountain top. Further examples of object incorporation are presented below.

The most commonly conflated body part in KSE positionals is the head as is the case with q'ox. Other examples which incorporate the head or parts of it include

noj	'head bowed'
t'an	'staring'
k'ab'	'having a large, open mouth'
pak'	'face up'

Many positional roots incorporate the hand or arm. Such roots often refer to measures but do not always do so. The following items are examples.

ja ⁷	'arms extended'
wotz	'fistful'
laq'	'embraced'
meq'	'armful'

A few positionals incorporate other body parts.

jaj	'kneeling'
kix	'having the rear elevated'
sut'	'tight around the neck (or body)'

Some roots which appear to conflate a body part concept actually refer basically to a position or shape. For example, tz'uq, originally glossed as 'having the knees drawn up', can be best analyzed as meaning 'pointed, shaped like a cone'. Consider also wotz' 'hands and knees inside clothing' which apparently refers only to animate objects seated in a compact position.

wotz'.an.ay jun mis

-an	'P form'	jun	'one'
ay	'go down (dir)'	mis	'cat'

'a cat resting (with paws and tail curled around)'

A small group of positional roots also exists which conflates or lexicalizes other nominal concepts such as objects used in covering, liquids, light, and so forth. This set is even smaller than the preceding one suggesting that

noun incorporation is not particularly common while location and physical characteristics are easily lexicalized in KSE roots. Several roots which incorporate nominal concepts of liquids are presented in Section 3.1.3.2 in another context. The following are among the dozen or so roots which conflate object nouns referring to covering.

xot	'completely covered in cloth'
q'ut	'well-covered with clothes'
b'ak'	'completely covered with a somewhat tangible object which is out of place (as of dogs entangled in ropes)'
q'ox	'having the head covered'
xut	'completely covered but substance is less tangible (e.g., clouds, dust)'
b'oy	'covered with small clouds of smoke or incense'
moj	'well-covered all around by clothes, wings, or the body (as of a mother dog with her pups)'

A very small set of positionals lexicalize the object noun 'light'.

letz'	'bright (mirror, lake, tin roof)'
tzeq	'bright (fire, sun)'
jop	'shiny (lantern, sun)'
nub'	'alight but with little light (a newly lit fire)'

In this section conflation has been treated as a general property of the members of the positional root class. Examples have been given of several types of deep semantic concept incorporation and it has been claimed that the most characteristic type of conflation is that which involves physical qualities or states. The special case of location/direction is treated below in Section 4.1.2 and the use of particular concepts, conflated or not, in the semantic definition of individual positional roots is discussed in Section 4.2.

4.1.2 Direction/Location

The importance of the category of direction/location throughout the grammatical system of Kanjobal, and by implication in other Mayan languages, has been established in Section 1.2.1.6. The special relevance of this category to the positional class is discussed in Section 3.1.1 where it is claimed that every root in the class includes an underlying semantic concept termed L in which directional and locational notions are collapsed. This claim is supported there by the fact that most positional roots occur in most contexts with directional/locational verbs or verbal clitics. However, mere frequency does not justify the sweeping generalization inherent in such a claim. In this section, additional support is presented which further substantiates

the hypotheses regarding the role of direction/location in positional root class semantics. (The arguments for collapsing directional and locational concepts are not repeated here; see Section 3.1.1 for discussion.)

Recall that in citation, in many derived forms, and in underived positional stem modifying phrases positionals are consistently associated with a directional/locational clitic. The distribution of roots among the clitics is extremely uneven with ay '(go) down' occurring as the citation directional of preference for a large majority of roots, but each directional is associated with some roots even though the set in some cases is quite small. In decreasing order of frequency the directional/locational clitics are ok '(go) in', aj '(go) up', el '(go) in', kan 'remain', ek '(go) by'. Examples of several roots in each class are found in Section 3.1.1. Careful examination of the roots and their directionals suggests first that the choice of citation clitic is predictable on semantic grounds and second that the large group of ay roots is really made up of two quite separate subclasses.

Consider first the non-ay roots. Those roots which occur with ok '(go) in' refer to semantic concepts of closeness, tightness, closure, and penetration. Examples include the following:

lotz	'stuck to'
txol	'lined up close together'
tzag	'behind (another)'
maq	'closed'
k'a ⁷	'staring'
letz'	'bright' ³

The roots which occur with aj 'up' in citation are less easily classifiable but usually refer to objects in erect or hanging positions and to aspects of objects with tops or with vertical dimensions. Examples include these items:

lek	'erect'
t'un	'hanging'
b'an	'long poles on top of something and sticking out over the edge'
tx'ij	'hatless or hairless'
k'otx	'short'

The few roots which take el in citation include all those which refer to separation of parts. Among these are

jaq	'open'
b'eq	'unleashed' or loose (of animals)'

The distinction between el and aj, for example, can be illustrated by the root b'es which can mean merely 'separated' or in the case of objects means 'put away or stored'. When

roots can be distinguished on syntactic evidence presented below. First, there is a substantial group which include in their meanings concepts which involve the notion 'down' in some way. Such roots are illustrated by the following examples.

om	'sunken'
q'ew	'something soft in the shape of a bundle which sinks down (such as flour in a bag)'
tzuy	'heavy object that falls or is placed somewhere'
noj	'head bowed'

This group also appears to include many roots which refer to extremely large size such as ch'ar 'very fat' and sop 'very thick'. The semantic association here is probably language-specific.

The other subclass of ay associated roots are those which take ay as the unmarked directional. That is, a directional clitic is obligatory but the particular choice is not dictated by semantic information inherent in the root itself but rather by context. These roots include many which refer to shape and position such as those presented below.

lan	'hairy, furry'
suy	'circular'
petz	'knees bent'
tel	'cylindrical'
txak	'on four legs'

The difference between the subclasses of ay-roots then is that in the first set the underlying L is uniquely specified and lexicalized in every surface manifestation of the root, being redundantly indicated by the clitic. In the second set L is expressed on the surface by a clitic but the lexical meaning of the root does not specify which particular clitic will be most closely associated with it, i.e., given in citation. This can be demonstrated by observing what happens in non-citation contexts where roots of each set occur with other directional clitics. Consider, for example, *lob'* 'sunken in', a member of the lexicalized- or inherent-ay subclass, and *k'ot* 'soft, roundish object tossed (someplace)', one of the roots in the non-redundant-ay subclass. In the following paradigms, these two typical roots are given with each directional/locational clitic; the glosses are those originally provided by native speakers to indicate context of each phrase.

<i>kot'an</i>	'tossed (of soft, roundish things like people, animals, and small objects)'
<i>kot'an ayoq</i>	'lying down'
<i>kot'an ajoq</i>	'lying down in bed (same as with <u>ayoq</u>)'
<i>kot'an okoq</i>	'tossed close to another (as two people in bed)'
<i>kot'an eloq</i>	'tossed a little distance away from another object'

kot'an ek'oq	'tossed around and not used-- just lying there'
kot'an kanoq	'remains where it was tossed'
lob'an	'sunken'
lob'an ayoq	'is sunken'
lob'an ajoq	'something which is sunken on its top'
lob'an okoq	'something hanging which has sunken one part of itself into something else'
lob'an eloq	'a cloth which is hanging and has come undone in one part and looks as if it is sunken'
lob'an ek'oq	'just sunken--not moving or being used'
lob'an kanoq	'remains sunken'

Notice that for positionals like lob', the relationship between positional and directional clitic is not always clear or predictable, while for items such as kot' the non-directional stative meanings of the clitics are directly based on the central directional meaning of the verb root from which each is derived, for example, 'at a little distance' from 'move away or out from'. The claim is made here that this difference reflects a difference in the fate of an underlying obligatory L. For items such as lob', L is covertly contained in the root itself and its semantic force is always present, allowing the directional/location clitics

to add less predictable meanings. For the group which includes kot', however, the precise specification of the underlying L is not lexically present in the root itself and consequently must be expressed on the surface by means of a clitic. Since ay is the most neutral of the directionals, it therefore occurs with great frequency as the citation form for these roots (that is, where there is no context.) Many of these roots describe actual positions, most of which are commonly held by objects at ground level, and since ground level is associated with ay, this further accounts for its high frequency of occurrence.

Not all positionals occur with all directionals. Most roots with inherently specified L have some limitations on the range of clitics with which they may co-occur. Nevertheless, nearly every root does occur with more than one clitic in context and for those which take most of the paradigm the situation as illustrated by k'ot and lob' is typical.

The validity of this analysis and its relevance to the class-defining semantics of the positional root class become clear upon consideration of the behavior of roots in constructions with yayji 'having the form'. Phrases made up of a positional root plus yayji are extremely common; they are described and illustrated in Section 3.3.5 where it is seen that yayji replaces the directional clitic which normally accompanies positional stems in -an. The morphology

of yayji is not completely clear. It can be shown to be separable into y- 'third person' and a stem because it has been attested in context with other person markers. It is suspected that -ayji is derived in some way from ay- 'go down' although the derivation is not obvious. The patterns discovered in the course of the analysis of positional root-plus-yayji constructions do lend some support to this hypothesis.

What is remarkable about yayji is its inability to occur with a large number of roots although at first glance no explanation is immediately obvious to account for this fact. Slightly more than half the roots in the sample are restricted from occurring in yayji phrases. Careful examination of the types of roots which do not occur with yayji reveals the fact that they may be divided into two classes and a group of residue roots. The first set of non-yayji roots are those which have an inherent L which is other than ay 'go down'. Examples of this set are

b'eq	'loose (of animals)' (<u>el</u>)
jaq	'open' (<u>el</u>)
jop	'bright' (<u>ok</u>)'
lak'	'stuck to' (<u>ok</u>)
lok	'hanging' (<u>aj</u>)
b'es	'put away' (<u>aj</u>)
t'in	'straight from point to point' (<u>ek</u>)'

The other set of roots includes most of those which were identified above as requiring the explicit specification on the surface of a directional/locational clitic. Examples include

q'eb'	'spread around (thick liquids)'
xut	'all covered'
pis	'seated'
k'ot	'small and somewhat round'
b'el	'cylinders in lines'
ten	'grouped, somewhat in order'

In other words the analysis of the semantic role of the underlying locational/directional concept L which was established on the basis of citation clitics has now received additional support from the distribution data on positionals in yayji phrases.⁴ It is hypothesized that the inherent meaning of yayji includes a stative component and a locational component (the ay base). For roots in the first set above, the locational component of yayji is in contradiction to the underlying lexicalized L of the root, hence the combination is ungrammatical. For the other group of roots, which require that their non-specific L be expressed on the surface, then it is possible that it is the stativity and non-directionality of yayji which creates semantic conflict. If this is true, then the stativity of yayji should be salient

in other constructions as well, producing discoverable semantic effects. And in fact this is the case.

Consider for example the following sets of items which are glossed identically with directional clitics.

- | | | |
|-----|-------------|--|
| 1a. | chotan ayoq | 'seated' |
| 1b. | pisan ayoq | 'seated' |
| 2a. | telan ayoq | 'lying down (of people, animals and logs)' |
| 2b. | k'otan ayoq | 'lying down' |
| 3a. | wa7an ajoq | 'standing (people, animals, trees, pencils, etc.)' |
| 3b. | lekan ajoq | 'standing (on end)' |

Only the first item of each pair occurs with yayji. Note the glosses:

- | | | |
|----|--------------|------------------------------------|
| 1. | chotan yayji | 'in the form of being able to sit' |
| 2. | telan yayji | 'in the form of a cylinder' |
| 3. | wa7an yayji | 'in that form--standing on end' |

Apparently in the b constructions the underlying L is expressed obligatorily with every occurrence of the root while those roots which take yayji express their underlying L optionally. It is not realized at all in the stative yayji constructions. This is the final piece of evidence for the analysis of positional roots as including not only underlying L but one which is subject to different constraints depending

on the root. Thus the significance of location/direction as a class-specific semantic feature of positional roots is made clear.

To summarize, three types of positional root can be identified based on the kind of underlying L which is included in its semantic representation. These subsets have been established by a comparison of occurrence patterns of roots in directional/locational and stative phrases. Using the formalisms of case grammar which seem to capture especially well the type of semantic organization reflected here, the three subsets can be graphically expressed. (Case frames as given are incomplete; notational conventions taken from Cook 1972.)

Type I: Obligatory L, lexicalized into the root
(exemplified by jop 'shiny' and lob 'sunken')

[+_____OL*] *L/lex

Type II: Obligatory L, not lexicalized and expressed on the surface by a clitic (exemplified by pis 'seated' and b'u1 'unordered group bunched together someplace')

[+_____OL]

Type III: Optional L (exemplified by tel 'cylindrical' and patx 'flat')

[+_____O(L)]

4.2 Root-specific Semantic Features

It has been shown that, in spite of the name used for them, positional roots in KSE as in other Mayan languages do not refer only or even primarily to position. Although a few roots do describe the position of bodies in space, most members of the class refer to the physical shape, texture, size, quantity or distribution of objects and a few others describe measures and orientation. These semantic categories make up the set of possible meanings for members of the class and define individual roots. They are termed root-specific features and this section explores several important ones. The goal of this presentation is to reflect the variety and range of positional roots. At the same time this analysis attempts to discover what generalizations can be made about positional root semantics based on a consideration of the roots as individual items in a set. The features which are described are primarily examples of conflation.

An important characteristic of positional roots is their role in metaphor and the ease with which the primary semantic meanings can be extended. These aspects of positional root semantics are considered in greater detail in Section 4.3 but they are relevant here because the root-specific features discussed in this section are those which are primary in each root. In other words a root may be primarily specified for use with animals in most of its

normal contexts. Nevertheless, it may easily be used with humans for metaphorical, joking, or insulting effect. The effect is created precisely because the semantic specification is inappropriate, making the primary root-specific feature even more salient.

4.2.1 Humanness and Animateness

A very small set of positional roots are specified for use only with humans. They are the true 'human position' roots and number fewer than ten. They include

jaɟ	'kneeling'
ch'oɟ	'squatting'
petz	'kneeling'
ch'ew	'legs spread open'
wix	'seated (like a person)'
pis	'seated (like a person)'

They do not undergo semantic extension except to apply to objects shaped like humans which can take the indicated position (such as dolls or puppets). In such a case they are usually accompanied by yayji, additional support for the purely stative nature of that form.

Some positionals are applied both to humans and to animals but not to inanimate objects. The animate positionals describe some positions such as 'bent over with the

head and the rear elevated'. They also refer to qualities attributed to both humans and animals including hairiness and obesity. The set of roots may be illustrated by the following items.

kix	'rear elevated'
lew	'legs spread (people and chickens)'
tzun	'behind; following something'
tar	'tall and somewhat fat; naked (people and half-grown chickens)'
wes	'hairy, furry or heavily feathered'

Two roots in this class, ch'ar 'very fat' and q'u'l 'heavy, especially around the neck', are applied only to large animals such as full-grown hogs (q'u'l) and mules (ch'ar). In addition, they are regularly applied to human females. Although not an insulting use, this latter application may represent a semantic extension and not an underlying feature of humanness.

There is apparently some dialect variation in the semantic behavior of many roots. An example from this class is paq 'face down' which for one informant applies only to human and animal positions but for another informant is easily applied to flexible objects which can be folded. There is no indication that this is a case of special semantic extension for this second informant.

On the basis of the possible referents for all positionals it can be hypothesized that several subclasses of animates are present. Humans are definitely a separate class, a fact which follows from the surface emphasis on distinguishing human from non-human which is reflected throughout KSE grammar in both morphology and syntax (1.2.1.3). Humanness and proper human qualities and conduct are also important categories in cultural behavior and are part of the semantic organization which is revealed by the context-specific use of positionals (see Section 4.3.1).

Non-human animates are also a clear class of referents for positionals and they form several subgroups. Most references to animals by positionals are to domestic animals. Among these, the 'large' ones such as mules, horses, and cows are distinct because of their great size and cylindrical shapes. In these regards they resemble humans and share with them many positionals of size and shape. Similarly, domestic birds belong to a separate semantic class but are somewhat similar to humans by virtue of their two-legged stance and therefore may be referred to by positionals such as lew 'legs spread' which describe primarily human positions. The separateness of these two classes is indicated by the fact that some positionals which refer to humans may also refer to them, while other positional roots normally associated only with objects also apply to members of these

subclasses and such possible reference is always clearly indicated by informants. For non-human positionals which apply to these specially marked classes, note the following:

law	'large and fat (birds and spreading trees only)'
kutz	'short, cylindrical (pigs and tree trunks only)'

Smaller domestic animals are also singled out by informants, again on the basis of general shape and behavior.

wotz'	'crouched or huddled--hands and knees inside clothing (of people and little rabbits and the like)'
-------	--

Compare

b'et	'smooth-textured, not too large (of barkless trees and small animals only)'
------	---

The cultural importance of domestic animals plays a large part in their specification as a class of semantic referents.

The familiarity and association with humans which characterizes these animals no doubt accounts in large part for the frequency with which they are given as examples in semantic elicitation with positionals.

Another subclass of animates, snakes, also consistently receives special attention from informants. Again the reasons are primarily perceptual but also reflect

cultural concerns. Snakes are never referred to by positionals which also refer primarily to humans. They are generally classed by shape with long, flexible objects such as ropes or vines. Informants always specify whether a positional can refer to a snake and in general attach great importance to that semantic class. Examples of a few of the many positional roots which can refer to snakes are given below.

jib'	'long (specifically does not refer to humans)'
jab'	'long (of humans only in certain circumstances, for example, a drunk stretched out along the side of the road)'
b'iq	'limp'
kum	'curved (along a single plane)'

It seems doubtful that the snake is isolated from other animals in this way solely on the basis of shape in view of the enormous cultural significance of the creature both in pre-conquest art and theology (see J. Thompson 1954:102f, for details) and in modern mythology.

4.2.2 Size and Shape

As suggested previously (4.1.1), perceptual qualities, particularly size and shape, are important and perhaps primary bases on which semantic organization and classification

are built in KSE grammar. In the positional roots, emphasis (in terms of number of items, range of reference, and degree of specificity) is given to large size, cylindrical or curved shapes, smooth textures, and flexibility. These categories are not easily arranged in terms of binary features, however, because the dimensions are graded rather than discrete. Consider the following gloss for b'et translated literally from original statement by the informant:

refers to animals which are not too fat but also not really skinny, which have smoothish skin or hair--they should be somewhat small (examples are cats or dogs like greyhounds); can also refer to a pole which is not too big around from which the bark has been removed.⁵

The large set of examples presented in Section 4.1.1 which refer to round or cylindrical shapes provides many similar examples of the gradient nature of semantic specification of this kind. Consider also the following set of items which refer to length of objects.

<u>Root</u>	<u>Meaning</u>	<u>Example</u>
jib'	long (somewhat thin)	snake, rope
jas	long, thin, straight	tree, young person, certain clouds
kon	arch (with longer sides and greater size than other roots such as <u>xoy</u>)	arched wall
jol	long and pliable	rope
toq'	long and hanging	tail, clothing

<u>Root</u>	<u>Meaning</u>	<u>Example</u>
txeq'	long-legged (objects only)	table
jich	long, straight (somewhat stiff)	flower of the maguey, bed, whip
jab'	long (stiffer than <u>jib'</u>)	young tree, rope
joq	long	hair, road, strap of a carrying bag
q'at	long, inclined	beam
jal	long, thin and inter-twined loosely	vines
tz'ey	somewhat long cylindrical object half laying down--inclined	person, log

Many of the relative differences in size or shape became clear in elicitation sessions by means of drawings made or classified by informants. A large number of these sketches are included with the list of KSE positional roots which appears as Appendix C. Specification for size and shape constitute the primary semantic basis for very nearly half the roots in the sample of 270. This category outnumbers others such as position, quantity and texture by almost two to one.

4.2.3 Position

About fifty roots in the positional class actually describe relative body position. Some are very general such

as wix, pix and chot each of which means 'seated, as in a chair' and applies only to humans. Many, however, are quite specific.

jexh	'having one arm broken or drooping (of a bird with a broken wing, a person with a broken arm, a tree with a broken branch, or a corn plant with drooping leaves)'
------	---

This class includes many apparently synonymous or nearly synonymous items such as lok, b'ay, cha⁷, t'un and tzay. Each of these may be glossed as 'hanging' but the specific referents common to each indicate their slight differences of meaning.

<u>Root</u>	<u>Example</u>
cha ⁷	corn cobs tied together to dry (only referent)
b'ay	fruit in bunches (such as grapes) or meat drying in strips
tzay	round twin objects close together: testicles, cherries
lok	any person, animal, or object which is long and hanging: butchered hog; dance masks on a wall; a towel; hanged man
t'un	any person, animal, or object which hangs: a suitcase carried in one hand, a bag carried on the shoulder

The category of position can also be extended to include roots such as muq 'buried', maq 'enclosed', chul 'rolled up' and the 'covered' roots. These latter form an important though minor subclass which have in common the conflation of a noun object 'covering'. Several of them are presented in Section 4.1.1. Other properties of roots describing position include their conflation of body parts and their generally human specification; both these are discussed elsewhere.

4.2.4 Quantity and Distribution

In Section 1.2.1.2 it is suggested that number is a significant semantic category which has grammatical reflexes throughout the KSE system. Quantity of objects appears to be an important perceptual feature with semantic implications in the definition of many positional roots as well. A closely related feature is here called distribution and refers to various types of spacing described for multiple objects by positional roots. About thirty roots in the sample make clear reference to the quantity and/or distribution of objects described. Some items from this class are listed below.

<u>txol</u>	'many people, animals, or objects in a line'
<u>latz'</u>	'people, animals or objects in lines (but with more space between that with <u>txol</u>)'

ten	'groups of objects, more or less in order'
uch	'objects which are completely disordered or mixed together'
jox	'pile of things like corn cobs or crumpled papers or stones'
txek'	'having several straight thin protrusions: spines, horns'
tx'ap	'many objects crowded together in very narrow spaces'
tus	'very crowded with objects of same category (such as plants or animals)'
waj	'several items brought together in a group for a short time'
som	'mixed together (of objects of different categories such as pebbles among grains of corn)'
txij	'something small scattered over great space (restricted mostly to lights)'
wech'	'scattered remnants or leftovers, as of wood chips after stacking fire wood'
mich	'having many petals or small bumps, as of a chrysanthemum'
k'it	'erect and alone (person, tree, animal)'

The existence of such a large group of roots which primarily serve to specify number is strong support for the analysis of that category as one of importance in both lexical and grammatical semantics in KSE.

4.2.5 Texture

The final category of semantic importance in the definition of positional roots is texture which is interpreted to include flexibility as well. Roots of this class describe smoothness (in several degrees), stickiness, dampness, and furriness. Again it is a graded category rather than a discrete one and is perceptually based. Common examples include

jatx	'slippery but dry (of land)'
xhaq'	'watery but sticky'
wen	'bumpy (of floors or roads)'
wos	'spongy'
tx'en	'hairless or very, very smooth'
mej	'limp'
noq	'mucous-like'
lan	'very furry'
sok	'having something like hair which is very disordered'

Only a handful of positional roots cannot be classified in terms of the few major perceptual categories discussed above: size and shape, position, quantity and distribution, and texture. Most of the remainder is made up of the positional roots of light and sight, including tzeq 'bright', jop 'shiny', k'a⁷ 'staring' and tuk 'staring'. These roots

too form a culturally significant class based on the culturally defined primacy of light. This fact is discussed in greater detail in Section 5.1.

In this section, it has been shown that the individual members of the positional root class can be subdivided in terms of a small number of semantic categories. There is tremendous elaboration within each category and, moreover, several categories may be reflected in a single root, making its unambiguous assignment to a subclass more difficult. Nevertheless, it is clear that the overall organization of the class is rather simple. Many of the categories previously found to have morphological or syntactic relevance to the description of KSE grammar are now seen to have a major role in the semantic organization of this root class. It is as an illustration of the integration of various components of a language system that the root-specific semantic features of positionals are most striking.

4.3 Context-specific Semantic Features

Beyond lexical or grammatical meaning, linguistic forms have semantic roles which are determined by the particular context, linguistic and non-linguistic, in which they occur and which are not always predictable from lexical identity or purely grammatical information. Metaphor often provides excellent examples of such semantic shift or

extension. Language play contexts such as joking and insult behavior also commonly produce these semantic alternations. Positional roots in KSE are a particularly rich source for lexical items used in metaphor and in joking behavior. Their semantic specificity and perceptual basis together with their syntactic role as modifiers no doubt contribute to the frequency with which they occur in language play or metaphorical usage. Their ability to fill these roles is one of their most important semantic characteristics and one of the most obvious aspects of their occurrence in text and conversation. In this section, positionals in KSE are treated as a semantic class especially susceptible to semantic extensions. The first part of the section describes KSE positionals in terms of their use in metaphor and the second part discusses their appearance in various language play contexts. Unfortunately, a full analysis of metaphor and language play is not yet possible for KSE although many more or less complete descriptions of the types of language use referred to here are available for other Mayan languages. Such studies include Bricker's 1973b analysis of insult in Zinacantan Tzotzil which is part of her longer study of Tzotzil humor published as 1973a. Gossen 1968 presents an extensive taxonomy of Chamula Tzotzil oral tradition which includes descriptions of many of the speech styles which involve both metaphor and joking. Edmonson 1973b examines

Quiché semantic associations or poetic equations for their cultural particularity or universality and Durbin 1971 examines cases of Yucatec semantic extensions from the same point of view. Many other investigators have referred to the importance of metaphor in Mayan ritual and daily language. So far little comparative work has been published in this area and little attention has been given to the possibility that different grammatical classes have different roles in metaphorical usage. The material presented here, while not definitive, does contribute to both these important fields of study. Moreover, since metaphor and the like involve both linguistic and cultural categories, an examination of the role of positionals in such constructions provides an introduction to the questions raised in Chapter 5 about the possible overlap between pervasive KSE grammatical categories and pervasive Mayan cultural themes.

4.3.1 Metaphor and Semantic Extension

While most positional roots in KSE refer to the physical characteristics of objects, and in most cases, to restricted set of objects, they are the source of an extraordinary amount of metaphorical reference and are easily extended in semantic domain for purposes of style. Positionals are often extended to apply to a new object which shares some

characteristic with the normal referents of the item but which is not one of them. Many of these extensions are predictable. Consider, for example, this extended application of b'eq 'loose' which normally applies only to animals. It might be said by a mother of a child lost in a crowd and is definitely felt to be a clever kind of expression which is somewhat humorous.

b'eq.an.toq xol áníma low.oq

-an	'P form'	ánima	'people (Sp)'
toq	'action away (dir)'	low-	'eat (iv)'
xol	'among'	-oq	'subordinator'

'he is loose among people to eat (like a small animal)'

A similar extension of a more abstract but still tangible type is the following use of b'el 'cylindrical items in a line' which usually refers to logs or firewood.

tz'ib'.ej.Ø.ay b'el.an.oq q'an.ej b'ay.tu7

tz'ib'	'many colored (P?)'	-oq	'subordinator'
-ej	'tv form'	q'an	'word'
tz'ib'.ej	'write (tv)'	-ej	'N absolutive'
Ø	'2sg imp (tv)'	b'ay	'in, at'
ay	'go down (dir)'	tu7	'dem (there)'
-an	'P form'		

'write a few words down there'

Other semantic extensions of KSE positional roots appear to be somewhat more idiosyncratic. For example, many positionals describing spatial orientation are extended to temporal reference. Several common examples

appear below. (Many of these examples include
-an, the positional stem formative.)

txol 'cylinders in line; metaphorically, a moment
 in time'

axa y.et.tu7 jun wal txolan y.apn.i naq.tu7...

axa	'discourse conj'	'wal	'emphatic particle'
y-	'3 poss'	y-	'3 (subordinated iv)'
-et	'of'	apn-	'arrive (iv)'
tu7	'dem (there)'	-i	'iv form'
jun	'one'	naq	'man (NC1)'

'and then, it was just a moment when he arrived...'

jich 'long and straight; metaphorically, directly,
 in time'

jichan wal chi.β.jay tinani

wal	'emphatic particle'	jay-	'come (iv)'
chi	'incom'	tinani	'now'
β	'3'		

'surely he'll arrive right away'

t'in 'straight between two points'

max.β.t'in.b'an eb' naq b'ay q'in

max	'comp'	naq	'man (NC1)'
β	'3'	b'ay	'at, in'
-b'an-	'transitivizer'	q'in	'festival'
eb'	'human pl'		

'they went directly to the celebration'

kol 'empty; metaphorically, free time'

kolan in

in 'lsg'

'I'm free--I have nothing to do' (Guatemalan Spanish:
tengo lugar)

laq' 'embraced; metaphorically, busy ('work
embraces us')

max.in.kaw laq' el.oq

max	'comp'	el	'go out (dir)'
in-	'1sg'	-oq	'subordinator'
kaw-	'become (iv)(?)'		

'I got really busy'

Many interesting extensions are health-related. Of numerous examples the following have been selected as representative of this kind of metaphorical use of positionals. Some of the extensions are more obvious than others.

jutx 'slippery; metaphorically, pregnant'

jutxan yayji k'ul jun ix

yayji	'having the form'	jun	'one'
k'ul	'belly'	ix	'woman (NCl)'

'a pregnant woman'

b'ek' 'completely covered with intangible substances
clouds and the like); metaphorically, hungover
or feverish'

b'ok'an.toq y.u1 jolom

toq	'action away (dir)'	-u1	'inside'
y-	'3 poss'	jolom	'head'

'his head is cloudy (of a drunk)'

tx'ij 'uncovered or hairless; metaphorically, in good
health'

xan tx'ijan jun unin.tu7

xan	'therefore'	unin	'child'
jun	'one'	tu7	'dem (there)'

'therefore, the child is very healthy'

wa7 'erect; metaphorically, pregnant'

chi.Ø.ok.kan wa7an y.alan y.une7

chi	'incom'	y-	'3 poss'
Ø	'3'	-alan	'beneath'
ok-	'go in (iv)'	-une7	'woman's son'
kan	'remain (dir)'		

'she is pregnant with her son'

b'oy 'like small clouds of incense; metaphorically,
of a very ill person'

b'oyan.ok y.in

ok	'go in (dir)'
y-	'3 poss'
-in	'in; against'

'an illness begins'

pitz' 'grasped tightly; metaphorically, of a sharp pain'

Several positionals can be extended to refer to intangible personal human characteristics such as intelligence.

tx'ij 'hatless or hairless; metaphorically, clever'

a.wal jun ix.tu7 kawal tx'ijan

a-	'ind. dem'	ix	'woman (NC1)'
wal	'emphatic particle'	tu7	'dem (there)'
jun	'one'	kawal	'very'

'that woman is really bright'

jich 'straight and long; metaphorically, faithful
or reliable'

jichan k'u)

k'u) 'belly'

'trustworthy'

chak' 'dull-pointed; metaphorically, mentally dull'

chak'.taq 'really dumb'

latz 'very close together, united; metaphorically,
of good friends'

loq 'having or shaped like a beak (of birds);
metaphorically, haughty'

loqan.xa yayji sat jun icham

xa	'already'	jun	'one'
yayji	'having the form'	icham	'old man'
sat	'face'		

'an old man is looking down his nose'

t'an 'staring; metaphorically, attentive'

k'am chi.ach.ok t'anan y.in naq

k'am	'neg'	y-	'3 poss'
chi	'incom'	-in	'in, against'
ach	'2sg'	naq	'man (NCl)'
ok-	'go in (iv)'		

'don't pay any attention to him'

A special case of semantic extension to human is illustrated by pil 'small and round' which regularly applies to people and means 'everyone'.

pilan max.β.toj eb' naq masanil

max	'comp'	eb'	'human pl'
β	'3'	naq	'man (NCl)'
toj-	'go (iv)'	masanil	'all'

'every one of them all went away'

Another possible case of this sort of extension is moj 'well-covered all around by tangible objects like clothing'. It is identical in shape to the form mojan meaning 'married'. Informants deny any synchronic relationship but the similarity may reflect the lexical reanalysis of what was historically a case of metaphorical extension.

A special kind of semantic extension is observed in two roots. It is related to the category of illusion which has been referred to in other sections as a property of some importance in KSE grammar. Consider the following glosses, translated literally from the Spanish originals.

jer	'looking like a person moving, of objects like scarecrows or curtains) which move like clothing at a distance'
jes	'something which, when seen from a distance, seems to move and looks like a person-- moves less than <u>jer</u> '

The first can be applied to children seen at a distance with their clothes waving or to rags hanging out to dry. A piece of fabric caught on a bush could also be jer and the

root can also be used to describe spirits which materialize. Jes could describe the form of a cloud shaped like a person or to the other referents of jer. These glosses were the only ones given by the informant who had both forms; one young bilingual woman recognized both jer and jes but only as derived stems. That these two roots are related is certainly likely but the point at issue here is the distinct character of the glosses. A clear semantic category of 'potential or apparent nature' must exist in order to produce such striking meanings. These provide the clearest case of the lexical effects of the category here called illusion, but these are not the only cases where some forms of a positional are described by informants as referring to imaginary objects or qualities or to the misleading appearance of something. It is part of the distinctive character of tus 'crowded (of objects of the same category)' that it is used only when the crowding is so close that the crowd appears to be just one large mass but is known to be really composed of many small items, for example, 'plants so close together you can't tell them apart'.

Unfortunately, the proper lexical elicitation with many informants which is needed to clarify this situation has not been carried out. But since independent grammatical evidence suggests that the analysis of KSE include some

category which encompasses the ideas of illusion, potentiality, and misleading appearance, the fact that similar semantic ideas are part of the positional class is not surprising. Some suggestions are made in Chapter 5 about the relationship of such a linguistic category to cultural organization and while these are certainly provocative, though not definitive, further data on the semantic reflexes of a category of this type could be quite important.

Obviously, the role of positionals in metaphor and of metaphor in the KSE meaning system generally requires much more attention. The data currently available only tantalizes and is not rich enough to allow many defensible conclusions to be drawn. Furthermore, the investigation of these interesting questions must not be restricted only to linguistic data or only to one language. Work presented in Gossen 1973 and Edmonson 1973b shows that cultural information can frequently make meaning associations less idiosyncratic and more predictable. Comparative Mayan data must be used in order to clarify historical processes of semantic change and to support typological claims about the nature of meaning associations throughout the family. And finally, Durbin's 1971 work suggests that cross-linguistic evidence will reveal universal cognitive processes at work to produce certain semantic shifts which may seem language-specific unless considered in the light of substantial amounts of other data.

4.3.2 Joking, Insults, and Language Play

Bricker has written extensively on the joking, insulting, and ridiculing behavior of Tzotzil speakers of Zinacantan (1973a) and on the role these verbal activities have in social control (1973b). Gossen, describing the verbal genres of Chamula Tzotzil speakers, defines a named category which includes 'frivolous talk' such as punning or joking (1973:208-210). These types of verbal behavior appear to be extremely common and well-developed in most Mayan languages. Although no particular effort was made to do so, a large number of examples of jokes, puns, and insults was collected as part of the corpus of data on KSE positionals. The importance of this category of speech behavior was immediately obvious from the examples given by informants in elicitation and there is every evidence that further analysis of this aspect of Kanjobal would produce results similar to those presented for other languages.

Positionals as a lexical class seem to be especially productive in 'frivolous speech' and many of the examples are simply special cases of the kind of metaphor and semantic extensions described in the preceding section. The extralinguistic conditions in which these joking remarks are made, however, give them particular humor or social force. Most examples collected so far refer to the negative physical

or personal qualities of humans and range from merely funny through mildly insulting to strongly so. Positionals are often referred to by informants as 'funny words'.

The potentially humorous nature of positionals is apparently clear to Kanjobal speakers at an early age. Pre-adolescent children in Santa Eulalia may be observed to play a type of follow-the-leader game in which they chant phrases containing descriptive positionals while assuming the shape, position, or aspect referred to. The chant is of the following form.

to1 chi.in.toj CVC.x.oq

to1	'that'	CVC	'P root'
chi	'incom'	-x	'iterative' (3.1.3.2)
in-	'1sg'	-oq	'subordinator'
toj-	'go (iv)'		

'I'm going along like this'

The game is felt to be very funny and entertaining both by participants and spectators. It also indicates a clear identification of positional roots as a grammatical class and suggests that observation of children's use of them might be very revealing.

Among Kanjobal speakers as among other Mayan groups, proper human behavior is strictly defined as in part regulated by use of pointed remarks which call attention to and discourage deviance. Bricker (1973a:147-148) notes that in

Chiapas, rules of personal appearance and cleanliness are specifically related to two types of behavior: the cleanliness and proper fit of clothing and the use of proper walking and sitting postures. She also points out that unusual traits such as physical deformity are subject to especially heavy ridicule. Many examples of KSE insults involving positional roots are directly addressed to these issues. Consider the following common examples.

ch'aw 'with legs spread'

ch'awan.ay jun ix

ay	'go down (dir)'
jun	'one'
ix	'woman'

'a woman lying down with legs spread (strong insult)'

Ch'aw is often applied to women who sit improperly.

kiw 'slippery'

kiwan.ay.toq a.kamixh

ay	'go down (dir)'	a-	'2sg poss'
toq	'action away (dir)'	kamixh	'shirt (Sp)'

'your shirt doesn't fit--it is too loose in the back (mild ridicule)'

joq 'long'

joqan q'ab'

q'ab'	'hand'
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'long-armed (mild insult)'

The following examples refer to physical appearance.

chul 'rolled'

chul.ay a.sat

ay 'go down (dir)'
a- '2sg poss'
ti 'mouth'

'your face is wrinkled (of old people) (mild insult)'

jexh 'having one arm drooping'

jexh.ay a.ti

ay 'go down (dir)'
a- '2sg poss'
sat 'face'

'your mouth is crooked (mild insult); also said of children about to cry'

tzek' 'like a little pile of twigs'

tzek'an Ø.ayji ach.ti txo unin

Ø.ayji 'having the form (2 sg)'
ach.ti 'you (sg)'
txo 'vocative (female)'
unin 'child'

'you, kid!--you are unkempt'

The next set of examples refer to undesirable social behaviors.

tzuy 'heavy, object just left someplace'

tzuyan.kan.aj.oq

kan 'remain (dir)'
aj 'go up (dir)'
-oq 'subordinator'

'he doesn't think about the proper position--he just throws himself down (of a drunk in the street)'

neq' 'watery and soft'

neq'an yayji

yayji 'having the form'

'fat and lazy (strong insult)'

jol 'soft and flexible'

jol.toq \emptyset .itaj

toq 'action away (dir)'

\emptyset '2sg poss'

itaj 'vegetable'

'you eat your vegetables as if they were that shape--just swallowing without chewing (joke)'

ch'ew 'legs spread; metaphorically, gossipy'

tzet y.uj xan chi.in.a.ch'ew.b'aj.el.oq

tzet 'what?'

in- '1sg'

y- '3 poss'

a- '2sg'

-uj 'by'

-b'aj 'causative (tv)'

xan 'therefore'

el 'go out (dir)'

chi 'incom'

-oq 'subordinator'

'why are you talking about (or criticizing) me to people?'

san 'bulging (especially of body parts)'

sanan yayji a.sat

yayji 'having the form'

a- '2sg poss'

sat 'face'

'your forehead bulges (very strong insult, used for example, by a woman to a very persistent man who asks for sexual favors which she has refused)'

Norman (personal communication) reports that Quiché positionals are especially productive in sexual metaphor and Gossen 1973 describes many sexual puns and insults as part of the active repertoire of Chamulas. The KSE corpus includes almost no examples of this kind, and use of positionals in sexual contexts was explicitly denied by informants. There is no doubt that this is a result of the field situation (sex of investigator, for example) and does not reflect the actual facts about Kanjobal usage. There is considerable evidence in fact that many examples already in the corpus are of the kind mentioned by Gossen and Norman, but collecting more realistic glosses proved difficult.

It is important to mention that, in addition to their occurrence in generally negative joking contexts, positionals are also a popular means of giving compliments. Here are just two such examples (meaning may be unpredictable).

patx 'flat and extended'

to.k'a1 patxan ach kan.ay.oq

to	'still'	kan	'remain (dir)'
k'a1	'emphatic'	ay	'go down (dir)'
ach	'you'	-oq	'subordinator'

'you're really good-looking--just sitting there (to a pretty girl)'

sap 'thick and straight'

sapan xal yayji a.xub'

xal	'emphatic'	a-	'2sg poss'
yayji	'having the form'	xub'	'thigh'

'what pretty legs! (to attractive young women with nicely rounded legs)'

In this section some of the uses of positionals in contexts of special semantic force have been explored. Even though the data are somewhat incomplete on this aspect of positional usage, what material is available offers striking support for analyses of metaphor done by other investigators of Mayan languages. Certainly what has been presented here indicates the relevance of such investigation to the understanding of (meaning in Mayan) and of semantic processes generally.

As is made clear throughout this chapter the analysis of semantic organization in Kanjobal is only beginning. It cannot be complete if restricted to single grammatical classes but the study of positional root semantics which has been attempted here does support the claim that these roots are semantically distinct within KSE grammar. There are strong connections with semantic categories, such as number, which operate elsewhere in the grammatical system and these receive special elaboration within the positional class.

Positionals have unique semantic characteristics and a unique role in the meaning system. Many of the questions and ambiguities raised by this treatment will no doubt be resolved when comparative, historical, and cross-linguistic data are brought to bear. It is hoped that the material presented here will facilitate such further study.

NOTES

¹It is not suggested here that concepts which are merged in some language are necessarily conflated. Conflation is a useful explanatory concept which deserves considerable further attention by linguists but does not account for all cases of apparent merger of semantic concepts. The problem of defining concepts without imposing the linguist's own system still exists.

²The rationale for considering these roots to have an underlying concept 'round' or 'cylindrical' which is separable from other concepts such as 'flat,' 'small,' etc. is provided by the existence of a few roots, such as pit and tel which contain those concepts alone and unconfliated.

³See Chapter 5 for cultural explanation of the classification of 'light' positionals with the penetration directional ok.

⁴The residue remaining after this analysis is made up primarily of roots with extremely restricted syntactic properties generally or for which data on occurrence with directionals and yayji are unreliable or incomplete. They amount to about thirty roots from the sample of two hundred and seventy.

⁵Gloss in Guatemalan Spanish: Se dice de los animalitos ni muy gordos ni muy flacos--algo regulares--que tienen el pelo más o menos suave (como los gatos).

5. KANJOBAL LANGUAGE AND CULTURE

The relationship between language and culture has excited students of both for many decades, but in spite of a great deal of investigation, many aspects of that relationship remain unclear. Among the most controversial and complex of these unanswered questions is o what degree do cultural and linguistic categories overlap and mutually reinforce each other to define and perhaps control the world view of a people. Hypotheses about the strength of such an overlap have received considerable attention from investigators of languages and cultures around the world. Perhaps the fullest expression of this interest can be found in the work of Whorf (whose papers on this topic were edited by Carroll in 1956). An additional question, of increasing importance in recent years, is In what ways are these overlapping and reinforcing categories part of human cognitive organization (i.e. universal) and in what ways are they a product of specific languages and specific cultures (i.e. particular). The idea that they are primarily language-specific is so much a part of Whorf's own work that his name is now synonymous with the hypothesis of linguistic relativity.

One recurrent problem in the attempts to address the questions raised here has been to define what constitutes linguistic evidence and what constitutes cultural evidence. So much of cultural behavior is language-expressed and controlled that a clear distinction between the two is difficult to make. It is possible to separate purely grammatical aspects of language from the extralinguistic context-specific, and therefore culturally modified, ones. An analysis of the grammar of a language should reveal a set of grammatical themes or pervasive grammatical and semantic categories, discoverable solely by linguistic means and possessing reflexes at many points throughout the grammatical system. The effects may be overt, that is, producing morphological or surface syntactic changes. They may also be covert; that is, they may lack surface marking but operate in other less obvious ways as, for example, in lexical semantic organization. These themes or categories may produce their effects in the grammar both obligatorily and optionally; normally, both kinds are manifested.¹ The concept of direction and location as described in this study of Kanjobal grammar is a good example of what is meant by a grammatical theme. Direction and location is important in the semantic organization of lexical classes; it is a concept with both surface manifestations and covert effects. While almost never obligatory in a strict sense, directional/

locational specification is included with nearly every verb and nearly all positionals. It is a pervasive semantic category with profound grammatical force. One of the aims of this examination of Kanjobal grammar has been to discover and document the identity of the principle grammatical themes of the language.

It is assumed here that similar meaningful structural themes can be discovered in cultural as well as in linguistic organization. These themes are not community-specific but part of the history and behavior of whole cultural groups. The cosmology, ritual, and mythology of a people may be especially rich sources of evidence for cultural themes. Ethnographic descriptions of daily life often contain information relevant to the analysis of cultural themes but it is frequently anecdotal and difficult to interpret. In the case of Mayan ethnographies, information related to the integration of cultural themes is not easy to extrapolate from the mass of descriptive and anecdotal detail.

After grammatical and cultural themes are discovered they can be compared to see whether and in what ways they correspond to or mirror each other. Only then can the possibility of mutual reinforcement, perceptual influence, and causal relationships be explored. Careful analyses of this type for many language and culture areas should eventually

provide the data necessary to deal with the questions of universality vs. particularity which must also be resolved by a comprehensive theory of language.

Recent emphases in linguistic theory have shown the importance of underlying structures in the organization of language and have revealed striking similarities in that organization cross-linguistically. These discoveries do not conflict with the evidence for linguistic relativity, however. Presumably basic human cognitive processes are much the same whatever the cultural matrix in which they apply. These cognitive structures and the sameness of basic human experience must account for the fundamental similarities we observe both in language and in social organization. But the particular elaboration of universal concepts or the particular associations established between them are quite likely to be language family-specific (of Hardman in press). The diversity of linguistic structures can hardly be denied and the variety found in human language is certainly as striking and as significant as the similarity. To observe, for example, that both English and Kanjobal have mechanisms for describing location and direction is support for a claim that such a category or categories may be universally present in the underlying structures of all human languages. Such a claim is part of larger theoretical and practical questions of great importance to linguistics and must continue

to be tested and refined. However, we must not neglect to observe also that the role and content of directional and locational concepts are rather different within the two systems, that in one system this category has quite extensive elaboration and seems much more salient and pervasive. Surely the importance of such a difference to the proper understanding of linguistic organization is obvious.

There is no a priori reason to suppose that grammatical themes discovered by linguistic analysis should inevitably overlap with cultural themes. Historical accident, cultural diffusion, processes of change, and social stresses may all result in disjunctions in the two kinds of organization. Where they do coincide, we should expect even more powerful evidence of mutual reinforcement. Such integration must no doubt have an impact on a people's adaptations to change, for example, and certainly play a strong role in the formulation of a world view. The precise ways in which the reinforcement operates are still mysterious. Without a more detailed understanding of cognitive processes and the role of universal principles than is available at present, and in the absence of a more thorough account of cultural factors than anthropological investigation has so far provided, we are as far from being able to defend claims of causal relationships or diagnostic correlations between linguistic and cultural patterns as Whorf was (Carroll 1956:159).²

In the remainder of this chapter, the possibility of coinciding categories in Mayan language (represented by Kanjobal) and Mayan culture is explored. Only a few categories are considered and the evidence presented is not exhaustive nor are the conclusions definitive. The emphasis is on the types of evidence available and required. Even if strongly reinforcing categories can be found in Mayan linguistic and cultural organization, the ultimate test of relativity theories will come when other languages and cultures with similar categories are examined for the degree of overlap which they possess. Such a test is far beyond the scope of the presentation made here but it is anticipated that the material provided here will offer a beginning for such cross-linguistic and cross-cultural comparisons. Much of what is discussed here is quite tentative, resulting in part from the attempt to deal with broad underlying categories rather than with superficial ones. It is no surprise that cultural information helps explain data which, from a purely grammatical perspective, seem arbitrary. One example from the Kanjobal data will suffice to illustrate this. In section 4.1.2 the semantic role of locational/directional concepts in the identity of roots in the positional class is established on linguistic grounds. The association of particular roots with particular directional clitics is for the most part determined by the semantic reference of the

root; for instance, those which refer to separation of objects take e] 'go out' as their associated clitic. A small set of roots, those which refer to brightness, present some difficulties in this analysis, however. They are constantly associated with ok 'go in' in all their forms but a purely linguistic analysis can only consider this an arbitrary association. Cultural information clarifies the situation. Gossen (1974:38) in analyzing the primacy relations evident in Chamula Tzotzil cosmology mentions the importance of light as a principle aspect in the Chamula world view. In discussing the culturally ascribed properties of light, he mentions its penetrating qualities. Gossen, using only cultural data, has defined a Mayan-specific relationship which is reflected, albeit in a more or less superficial way, in the Mayan linguistic system as well. What is attempted in this chapter is the discovery of similar reflections but of a broader and more subtle type.

This is not the first consideration of parallel categories in Mayan language and culture. Gossen, by analyzing the patterns observed in mythology and verbal genres of various kinds, arrives at a set of fundamental components of Chamula world view. These interrelated categories may be expressed as primacy relations such as the primacy of up or the primacy of heat. They are part of what he calls the 'space-time principle', a 'single structural

primordial reality' which is defined by the unitary concept of space and time in Mayan thought. This principle has at its base the cohesion of the values of space and time and is what gives order to Chamula associational thinking, symbolism, and cosmology (Gossen 1974:30). The sorts of concepts which Gossen describes are perfectly congruent with the idea of cultural theme presented here. Although he uses only Chamula materials, the principles and relations of Gossen's analysis may be expected to be characteristic of other Mayan groups as well. This hypothesis and others which derive from Gossen's work should be subjected to immediate test by comparative data. Especially important and fruitful investigation will involve the search for parallel categories in Mayan grammar.

Questions of language and culture categories and their mutual effects are also addressed by Edmonson (1973b) in a paper which explores semantic universality and particularity in Quiché. The data are a set of metaphors taken from the Popol Vuh. These metaphors, characteristic of both classical and contemporary Mayan texts, are developed through a couplet arrangement in which syntactic and lexical repetitions and near repetitions establish a set of associations or poetic equations such as word:name, book:write, and majesty:quetzal. Edmonson examines forty-two pairs of associative linkages and distinguishes three types of semantic

synonyms based on degrees of cultural specificity. Some linkages are universal with a common basis in human experience such as language (word:name) or procreation. A second set includes pairs which are common to both English and Quiché and result from widespread though not universal experiences or cultural traits such as literacy (book:write) or agriculture. Finally, some pairs reflect genuinely specific cultural traits or institutions (majesty:quetzal). Among these Edmonson identifies the centrality of corn cultivation in Quiché moral life, the importance of hunting and animal metaphors in cosmology, and the role of the priesthood in religion. Although some details of Edmonson's analysis are open to debate, his attention to the distinction between the particular and the universal in semantic organization is well-founded and clearly relevant to the questions raised here about the nature of evidence in language and culture study.

A recent paper by England addresses these questions directly (1976a). She examines the language-specific ways in which Mam grammar organizes space, time, and actors and seeks parallel organization in cultural behavior. By comparing materials in several ethnographic sources she is able to suggest ways in which Mam cultural and linguistic categories overlap. While still tentative, many of her hypotheses do offer an interesting scheme for investigating such

connections. Most significantly, much of her data confirms Gossen's analyses, particularly with regard to the existence of a cultural concept of a fusion of space and time and the linking of humanity and location. The Mam linguistic evidence strongly suggests that time is non-cyclical, that people and places are equated, and that position and direction are tied to all verbal action. The evidence for parallel categories in cultural behavior is of varying quality and significance. Evidence regarding time, for example, is contradictory. England cites several sources for the analysis of cultural time as cyclical but notes that personal time seems to be more linear. This, of course, raises extremely interesting questions for any analysis of the linguistic and cultural parallelism in the treatment of time. What would constitute evidence for cyclical linguistic time, for example. Is it possible for cultural time to be completely non-linear and, if so, what sort of data would be needed to demonstrate it. Obviously, what is required here is much more comparative data since it seems likely that universal factors of human experience must shape this category in substantive ways.

With regard to England's analysis of the linkage of person and place in Mam grammar, here again the question of universality and particularity must be answered. The cultural data in this case are the more striking. Mam

mythological and ritual treatment of place seems to lend support to the suggested equation between people and places as actors and sources of power. Using noun inflection, verbal derivation, pronoun structure and metaphor, England demonstrates that a similar linkage between location and humanity exists in Mam grammar and that location and existence are treated alike. It is not clear, however, that the grammatical elaborations she describes are sufficiently unique to be used to support analysis of a language-specific category. For example, she notes that verbal derivation can produce several different actors among which she lists agent, patient, instrument, and locative. She also notes that many instruments are in fact locatives. This type of derivation is common throughout Mayan (for examples, in Kanjobal, see section 1.2.2.1.2) but is also common in many other languages. In order to make a strong case for cultural and linguistic particularity in the linkage of person and place it must be shown, for example, that in other languages with similar grammatical operations the pervasiveness of the construction is not as apparent as in Mam or that the links in other parts of the system are not present.³ It is possible for some process to be universal and still function in unique ways within an integrated particular language system. To demonstrate convincingly that such is the case, the categories require, as England herself notes, much more

subtle investigation than has usually been attempted, investigation which considers complex covert data such as are found in metaphor. Furthermore, the investigator must analyze in terms of the predictions made by the hypotheses being tested. The hypothesis of a powerful grammatical and cultural theme in Mayan which fuses person and location in unique ways must make predictions about cultural adaptations in situations of stress or change and these predictions are surely testable. The difficulty with evaluation of causal relationships between linguistic and cultural categories may lead us to the position that coincidences of structure may be random at some stage in history; even if this is so, we should expect that the parallels will begin to exert influences on the world view and ultimately on the behavior of cultural groups once the integration between linguistic and cultural themes is well established. If in fact Mayan world view includes a powerful person-place theme of the sort discussed here, then both history and contemporary evidence must be available to illustrate its effects. This evidence must be of a more convincing nature than the observations that most powerful Mayan deities are associated with locations or that images are identified with personal power. Such observations are no doubt relevant to the question but surely do not exhaust the evidence which might be collected if the category is really

profoundly Mayan.⁴ For example, we might look to comparative data on the reactions and responses of Mayans to the place-altering devastation of earthquakes. Many other cultural groups which share the Spanish cultural matrix of the Mayans are also subject to these natural disasters. Suppose that it could be shown that speakers who belong to such a group do not possess an overlapping cultural and linguistic theme of person-place identity. We may expect differential behavior by them and by Mayans who suffer the stress of such an event. The study of such phenomena would, of course, be complex since factors external to the world view of the people would have some effect on responses to this situation. However, if these could be isolated then any striking differences in adaptations to the changed situation might be attributable to the differences in categories.

Obviously, the demands of such a cross-cultural, comparative research design are far beyond the possibility of satisfaction in a study such as this one and in fact can probably not be met without intensive reanalysis and compilation of existing linguistic and cultural information and collection of new materials within a more comprehensive theoretical framework. What is presented in the remainder of this chapter is only a beginning. Four areas of potential congruence between Mayan cultural and linguistic organization

are examined. The linguistic data are drawn primarily from the Kanjobal grammar as analyzed in the preceding chapters and the cultural data are drawn from a number of sources representative of general Mayan. The categories considered are direction and location, time and space, perceptual categorization, and duality and illusion. The strength of supporting data is variable and conclusions are extremely tentative in some cases. Where possible, suggestions are made about the sorts of additional research which might prove fruitful.

5.1 Direction and Location

The case for parallel themes of emphasis on direction and location in the grammar and culture of Mayans is quite strong. The categories are tied to other more specific ones such as person, possession, and agency in many and varied ways. There can be no doubt about the importance of directional and locational reference in Kanjobal grammar which in this regard is typical of Mayan languages. Both morphologically and syntactically these closely related categories are manifested throughout the grammatical organization. The concepts are allied to verbal concepts of action to such an extent that it becomes virtually impossible to use Kanjobal structures without specifying the location

or direction of actions and objects. Although England (1976a:14) includes direction with position and separates location from these others, it also seems possible to analyze all three aspects of spatial dimension as part of the same primary category. The ties between location and direction and between position and location in KSE grammar seem to support such a grouping. The cultural linking of person and place which England proposes as a Mayan theme may then be seen as a special aspect of the relationship between actors and possessors (ie, people) and directional and locational specification (ie, place). This relationship is demonstrated linguistically by the personal possession of relational nouns and the role of locational/directional clitics in the patterning of positionals. The existence of the positional class itself is evidence for the strength of the attention to location and position (rather broadly defined) in Kanjobal grammar. In other languages, positionals are not as elaborated as they are in Kanjobal but the directional verbs are more developed and take on roles, such as the determination of aspect, which they do not perform in Kanjobal; Mam is such a case. In no Mayan language are positionals absent or directionals unimportant. The categories expressed remain the same; they are simply adapted in various ways.

Direction and location, including position, are important concepts in cultural organization as well. While

largely anecdotal in nature, all of England's ethnographic details about anthromorphization of locations is relevant here. The suggestions she makes about the role of this cultural theme in the well-known Mayan sense of town identity and community personality are particularly interesting since they can lead to testable hypotheses of the sort suggested earlier. The Mayan cosmological organization is rich in directional and locational reference. Gossen's analysis of the critical primacy relations in Chamula cosmology includes a discussion of directional and locational elements which are associated with important divisions in the natural and ritual world. Up is primary and is associated with goodness, virtue, and lack of threat (1974:35). The Chamula universe as described to Gossen by his informants duplicates in many ways the pre-Conquest image of the universe with its four-fold divisions parting from a central point. The multiple levels, the directional progression of the gods, and the associations of directions with deities, colors, rituals, and destinies which he finds among the Chamula (32ff) are typical not only of most contemporary Mayan groups but of pre-Conquest cosmology as well (Villa Rojas 1973:122-140; León Portilla 1973:81f; J. Thompson 1954:224-233). The importance of position and placement in ritual is documented in many sources together with the careful attention to direction of movement in ritual and daily

activity (Gossen 1974:43; England 1976a:16 citing several sources; Vogt 1969:599-604; Rosaldo 1968). This mass of data is certainly strong support for a claim of parallelism in the Mayan linguistic and cultural categories which concern spatial orientation. What is needed now is the sort of comparative, historical, and ecological documentation referred in previous discussion.

5.2 Time and Space

Ample cultural evidence is now available to demonstrate that the sort of space and time fusion which Gossen describes for Tzotzil speakers is characteristic of Mayan groups generally, both now and in the past (Gossen 1974:30; England 1976a:3f; León Portilla 1973:56-90 on pre-Conquest evidence). Distance in either time or space is correlated with removal from the norms of human conduct. This correlation may be seen both in the expectations of modern Maya about behavior in other places or in earlier times and in the increasingly antisocial behavior which characterizes the earlier creations described by mythology. The passage of time, a principle concern throughout Mayan civilization, is conceived of primarily along spatial dimensions and as a physical movement (see LaFarge and Byers 1931 for extended treatment of the Mayan concepts of time and the calendar). Time was a load born by the gods, was limitless but

measurable, and could repeat itself although with some alteration (J. Thompson 1954:137-144). Most treatments of Mayan time have concentrated on the cyclical nature of time within calendrical and ritual organization. The possibility of non-cyclical cultural or personal time has been little considered. Regardless of the exact relationship between these two aspects of time, it cannot be doubted that a pre-occupation with time has constituted a profound and pervasive cultural theme throughout Mayan history. The fusion of time and space seems to be an aspect of this theme and another indication of the importance of spatial orientation in Mayan world view.

The evidence for a parallel linguistic or grammatical theme is rather weak by comparison. Many of the problems result from the complexities in distinguishing cyclical from linear time in a grammar and have been alluded to previously. England (1976a:8) has suggested that cyclical linguistic time would be marked by an emphasis on processive aspects and analyzes Mam time as primarily linear with a basic division of future and non-future and further divisions into past, near past, and present. The analysis of KSE tense presented in section 1.2.1.5 contains similar patterns. Aspectual concepts are not missing and in fact are shown to have an important role in the derivation of positional roots (3.1.3). England states that aspects such as incipient, repetitive, and completive are also regularly

marked with Mam verbs but only by means of the secondary associations of directional clitics. She takes this to mean that aspects are therefore not part of the linguistic time system. It could be claimed, however, that the exigencies of human experience contrive to produce a basically linear organization into tense periods while the culturally-specific view of time as primarily aspectual is being marked through linguistic mechanisms which fuse time and space, precisely as we would expect on the basis of cultural evidence.

Other linguistic support for time-space fusion is weaker. Kanjobal demonstratives refer to both location in space as well as in time but this is certainly not unique and may even be universal. One might also consider the weak evidence offered by the positional root Ko1 which means 'empty' and applies to spatial vacancy. It is also used, however, in reference to time as in 'Do you have time now (to do this)?' This same question is rendered in Guatemalan Spanish as 'Tiene lugar?' ('do you have (a) place?'), a fact which may merely reflect interference, may suggest cultural convergence, or may be counter evidence for the entire claim. In any event, the data from grammatical organization does not provide unequivocal evidence of linguistic themes parallel to the cultural ones related to time. It is suggestive, however, and the question deserves considerable

further attention not only to resolve questions of Mayan particularity but also to shed light on the possibility that cognitive universals may play a role in the linguistic treatment of time.

5.3 Perceptual Categorization

It is claimed at several points in the discussion of Kanjobal grammar that a linguistic theme of categorization of the universe by overt perceptual criteria is characteristic of the language. The linguistic evidence in this case is quite compelling while the cultural evidence is weak primarily because it is difficult to know what would constitute cultural support for a theme of this kind. In purely linguistic terms a pervading concern with perceptual categorization is easy to document. The extensive obligatory classification of nouns with both morphological and syntactic roles, the marking of numbers for more general categories (1.2.1.3), and the development of specific numeral classifiers (3.2.2) are all examples of the effects of this theme. Moreover, the positional root class itself is a source of good evidence for it since that class alone represents an uncommon elaboration of semantic features which are largely perceptual in nature. The discussion of conflation in Chapter 4 offers many examples of the role of such features in the lexical specification of these roots.

Other evidence from the grammar would be welcome. For example, more analysis needs to be done on the precise perceptual categories involved and the search for links between positionals and their referents as marked by categorization morphology must be pursued. Moreover, comparative grammatical work is needed in order to show that this category is widespread in other Mayan languages which do not seem to share the morphological specificity of Kanjobal. As with the theme of direction and location we expect to find that patterns in other languages, while not conforming to the surface patterns of KSE, will nonetheless reflect the same underlying theme though perhaps by different structures.

Mathiot 1962 claims that a deeply-rooted orientation to perceptual classification characterizes linguistic and cultural organization among the Papago. Her linguistic evidence is quite different from that presented for Kanjobal though no less extensive. Her cultural evidence is primarily impressionistic but quite strong. She notes that Papago speakers rely very little on second-hand reports about the behavior of strangers preferring to judge them on the basis of their observed behavior within the community; she presents both observational support and explicit testimony from informants on this point. In addition she refers to the difficulty Papago speakers have in performing successfully at jobs which require sorting objects into broad

conceptual categories such as good and bad; in these situations, they seem unable to disregard smaller perceptually relevant divisions based on observed physical criteria. Comparable evidence from Mayan cultural behavior is unavailable, not because it has not been found but because it has not been sought. Some ethnographic attention should be given to this problem and also to the question of whether or not this sort of evidence might be subject to other, contradictory interpretations.

A few comments are in order on the Mayan characteristics which do come to mind in this context. First of all, we might consider the well-documented use of perceptual criteria in metaphor and joking (Bricker 1973a:147-148, 175 citing Edmonson on Quiché obesity terminology; see section 4.3 for Kanjobal examples). England (personal communication) notes the widespread phenomenon of personal nicknames in Mayan and states that in Mam (as in KSE) these are assigned primarily on the basis of physical traits, a fact which may be related to the existence of a cultural theme of the type sketched here.⁵ LaFarge's suggestions regarding Kanjobal speakers' concerns with appearance and other perceived physical characteristics in the performance of ritual dances may also be relevant here (1947:85).

Finally, we might consider evidence from the ethical system of pre-Conquest and contemporary Maya as

described by Madsen (1957:123, 126, 131). In contrast to Christianity which emphasizes moral abstracts and 'right belief', Mayan ethics are based on a rigid code of ritual observance and proper behavior.

5.4 Duality and Illusion

We have considered so far a clear case of language and culture overlap in the themes of spatial orientation. We have also considered two possible cases where the existence of the theme can be documented in one realm or the other but parallel evidence is either weak or unavailable. In this last section we will consider the case of a potential theme for which both linguistic and cultural evidence are intriguing but inconclusive. In the treatment of Kanjobal grammar the possibility of a linguistic category which specifies the difference between potential or unrealized objects and events and actual or realized ones. The effects of this specification have been observed in the verbal tense system and in the patterns of negation (1.2.1.5). Some evidence for the role of this category in the lexical and metaphorical use of positional roots is presented in section 4.3.1. Certain syntactic patterns exhibited by nouns under possession have also been attributed to this theme (1.2.1.1.2). Smith-Stark 1976, using large amounts of comparative data, proposes a proto-Mayan verbal category of

this same sort to which he applies the term 'irrealis'. This lends considerable additional support to the idea that such a category has many of the characteristics of a grammatical theme. However, the linguistic evidence for this proposal is not of the same quality as that presented for other themes. Hardman in press has claimed that linguistic postulates or themes of this kind are of varying power and heirarchically structured. This may account for the relative weakness of the linguistic support for a theme of potentiality or, as it has been referred to previously, illusion.

The existence of a parallel cultural theme is only tentatively suggested here. The evidence comes principally from cosmology and ritual and, if relevant, requires a slight redefinition and expansion of the theme as proposed. Much of the Mayan universe can be described as having a dual nature subject to abrupt change in both appearance and behavior. The duality of gods in the Mayan pantheon is particularly characteristic and well-documented (D. Thompson 1954:7; J. Thompson 1954:227f). Both the classical and the lay religion include a large number of shape-changing beings (Madsen 1957:122, 129) and the belief in the dual nature of the soul as manifested by the associations with companion spirits (naguales) is still strong throughout Mayan groups today (England 1976a:13 citing Wagley; LaFarge 1947; Vogt 1969:599-604). Considerable additional ethnographic material must be collected before it could be claimed that the

lack of stability in the identity of beings in the universe which seems to be reflected in cultural organization is a parallel to the apparent grammatical specification of actual vs. potential identity with regard to both actions and objects. The possibility is extremely interesting though and might be amenable to further investigation of both a linguistic and ethnographic nature. Another provocative aspect of this question is the extent of the connections between this category and the important role of perceptual criteria in the assignment of real-world objects to groups. In fact, the strong integration of the various themes discussed so far is a particularly important feature of Mayan linguistic and cultural organization. This remarkable overlap and cohesion of structures must account in part for the extraordinary stability of Mayan cultural patterns through many centuries. It may also contribute to the ability of the society to incorporate and syncretize new elements, a process characteristic of Mayans in both pre- and post-Conquest times (D. Thompson 1954). Ultimately, the avenues of inquiry which have been discussed in this chapter may lead to an all-encompassing meaning-based view of language and culture which will bring together the now substantial ethnographic material and the growing body of linguistic material for Mayan groups.

NOTES

¹The properties of grammatical themes make them similar in many ways to the 'linguistic postulates' described by Hardman (in press). The definition of a postulate depends to a somewhat greater degree, however, on morphological realization of strictly obligatory categories. England 1976a has used the term 'linguistic category' to refer to what is essentially the concept referred to here as 'grammatical theme.'

²The debt owed to Whorf by any investigator into these questions is difficult to overestimate. In spite of his over-reliance on surface morphology and even though some of his analysis may be called into question, his insight into the nature of language and culture integration continues to inspire and challenge even today. His attention to context and the holistic approach to structures and his concern with meaning as the fundamental purpose of language reflect a perspective too often missing in contemporary language analysis. His definition of the goal of linguistics is as refreshing as it is challenging.

But the simple fact is that its real concern is to light up the thick darkness of the language, and thereby much of the thought, the culture and the outlook upon life of a given community, with the light of . . . this transmuting principle of meaning. [The ideal of linguistics is] that of a heuristic approach . . . a glass through which, when correctly focused, will appear the true shapes of many of the forces which hitherto have been . . . but the inscrutable blank of invisible and bodiless thought. (Carroll 1956:73)

³No suggestion is implied here that the discovery of similar linguistic organization will be diagnostic for similar cultural organization. For a claim of language-specific themes (on which claims of linguistic and cultural

relativity must be based) to have convincing validity, language universal factors must be identified and isolated.

⁴In a forthcoming monograph based on her recent work among Cakchiquel speakers, Kay Warren will document the existence of an ecological basis for all symbolic organization within the community (personal communication). Her data are precisely the sort to resolve this question.

⁵The relationship between Mayan and Spanish nick-naming patterns must, of course, be clarified before this evidence can be fully evaluated.

APPENDICES

APPENDIX A
FREQUENCY DATA

I. Frequencies of KSE phonemes in running text

Phonemic frequencies calculated both for total occurrences (T) and for net number of occurrences (N) which disregard loanwords and personal names. Frequencies are given as percentages of total (T total = 847 and N total = 681).

<u>Phoneme</u>	<u>T</u>	<u>%</u>	<u>N</u>	<u>%</u>
a	156	18.4	128	18.8
n	70	8.3	57	8.4
o	61	7.2	43	6.3
i	55	6.5	49	7.2
l	47	5.5	44	6.5
e	43	5.1	28	4.1
t	44	5.2	34	5.0
m	38	4.5	26	3.8
u	31	3.7	28	4.1
k	29	3.4	22	3.2
x	29	3.4	28	4.1
j	28	3.3	26	3.8
s	24	2.8	14	2.1
p	24	2.8	13	1.9
b'	24	2.8	22	3.2
q'	23	2.7	22	3.2
y	22	2.6	19	2.8
w	22	2.6	19	2.8
ch	14	1.7	14	2.1
r	14	1.7	1	0.1
q'	11	1.3	10	1.5
k'	10	1.2	10	1.5
xh	5	0.6	2	0.3
tz	4	0.5	4	0.6
tx'	4	0.5	4	0.6
ʔ	4	0.5	4	0.6
ch'	3	0.5	2	0.3
tx	3	0.4	3	0.4
tz'	3	0.4	3	0.4
t'	2	0.2	2	0.3

II. Frequencies of KSE phonemes in positional roots

Total number of roots considered = 275

Phoneme	C ₁		Phoneme	C ₂	
	T	%		T	%
j	29	10.5	l	24	8.7
p	24	8.7	n	23	8.4
l	23	8.4	q	21	7.6
b'	22	8.0	t	71	6.2
k'	17	6.2	k	16	5.8
w	16	5.8	ʔ	13	4.7
t	15	5.5	b'	12	4.4
k	13	4.7	tx	12	4.4
s	12	4.4	s	12	4.4
t'	12	4.4	x	12	4.4
q'	11	4.0	j	12	4.4
m	10	4.0	y	12	4.4
x	9	3.6	tz'	11	4.0
tx	9	3.3	p	10	3.6
ch	8	3.3	t'	10	3.6
n	7	2.9	ch	9	3.3
tx	6	2.5	k'	9	3.3
ch'	6	2.2	w	9	3.3
tz'	5	2.2	q'	8	2.9
tx'	5	1.8	tz	7	2.5
ʔ	4	1.8	r	6	2.2
y	1	1.5	m	4	1.5
xh	0	0.4	tx'	3	1.1
q	0	0.0	xh	2	0.7
r		0.0	ch'	1	0.4

Phoneme	V	
	T	%
a	67	24.4
o	57	20.7
e	56	20.4
u	49	17.8
i	46	16.7

III. Frequencies of KSE phonemes in noun roots

Total roots considered = 168

7 treated as phonemic in initial position

Phoneme	C ₁		Phoneme	C ₂	
	T	%		T	%
x	14	8.3	7	21	12.5
p	12	7.1	n	16	9.5
q'	11	6.5	l	16	9.5
ʔ	10	6.0	m	15	8.9
k'	10	6.0	b'	14	9.3
b'	10	6.9	j	13	7.7
tx'	10	6.0	q	12	7.1
n	9	5.4	x	8	4.8
ch	9	5.4	k	7	4.2
s	8	4.8	s	6	3.6
k	8	4.8	y	6	3.6
t	7	4.2	t	5	3.0
tz	7	4.2	tx	4	2.4
tz'	7	4.2	p	4	2.4
tx	7	4.2	tz	3	1.8
m	7	4.2	tz'	3	1.8
ch'	6	3.6	ch	3	1.8
j	5	3.0	k'	3	1.8
l	5	3.0	q'	3	1.8
w	4	2.4	w	3	1.8
y	2	1.2	tx'	2	1.2
t'	0	0	ch'	1	.6
q	0	0	t'	0	0
xh	0	0	xh	0	0
r	0	0	r	0	0

Phoneme	V	
	T	%
a	57	33.9
o	33	19.6
u	28	16.7
i	28	16.7
e	22	13.1

APPENDIX B

LOANWORDS

Proper names are given with their Spanish equivalents as provided by informants. Forms marked by + have phonetic forms which are sufficiently different from the Spanish that it is difficult to reconstruct their historical connection and development. Where parts of the Spanish do seem to be related to the KSE form in such cases, the relevant sequence is underlined. Note that many names (mostly masculine) which are obviously of Spanish derivation include an apparent final suffix -in which cannot be accounted for on the basis of the Spanish source. The origin or phonological explanation of this fact is unknown. It can be hypothesized that the suffix reflects some non-Spanish, pre-Conquest naming pattern, but this hypothesis is without substantial support.

Proper Names

<u>KSE</u>	<u>Sp</u>	<u>KSE</u>	<u>Sp</u>
aluxh	Alonso	axhul	Angelina
anixh	Ana	b'elixh	Vírvez
antil	Andrés	tchayo	Efraín
antun	Antonio	chus	Jesús

APPENDIX B (continued)

<u>KSE</u>	<u>Sp</u>	<u>Proper Names</u>	<u>Sp</u>
eIen	Elena	tpalas	Francisco
eInan	Hernández	tpalin	Bernabé
ewul	Eulalia	paplu	Pablo
exhtep	Esteban	pasil	Basilio
jeron	Gerónimo	pawul	Paulina
kantel	Candelaria	petlon	Petrona
kanyu	Caño	pilin	Felipe
katal	Catarina	rap	Rafael
kaxhin	Gaspar	ros	Rosa
tkuxhin	Marcos	senta	Vicente
tkuín	Pascual	telexh	Teresa
lamil	Ramirez	tina	Cristina
fluín	Pedro	tulum	Bartólo
lukaxh	Lucas	tumaxh	Tomás
iup	Guadalupe	tumin	Domingo
lusín	Lucía	wel	Manuel
walta	Marta	txhapfn	Sebastián
waltin	Martín	xhemen	Jiménez
waltixh	Baltasar	xhepel	Isabel
watal	Magdalena	xhimon	Simón
watiaxh	Matías	xhuník	Juan
watin	Mateo	xhuwin	Juana
wikin	Micaela	xhuxhep	Josefa
wink'a	Dominga	xhwaris	Juárez
		yakín	Diego (Joaquín)

APPENDIX B (continued)

Common Loans

alkal	'mayor, prayerleader' (<u>alcalde</u>)
ánima	'person, people' (<u>ánima</u> 'spirit')
aros	'rice' (<u>arroz</u>)
asaron	'hoe' (<u>azadón</u>)
bénte	'twenty' (<u>veinte</u>)
chfna	'orange' (<u>china</u>)
chiwo	'goat' (<u>chivo</u>)
kalnel	'sheep' (<u>carnero</u>)
kamixh	'shirt' (<u>camisa</u>)
kaxhlan	'chicken' (<u>castellano</u>)
keneya	'banana' (<u>guineo</u>)
kostúbre	'old religion' (<u>costumbre</u>)
kwelda	' <u> cuerda</u> ' (length measure)
kurus	'cross' (<u>cruz</u>)
laps	'pencil' (<u>lápiz</u>)
mandar	'send' (<u>mandar</u>)
mansan	'apple' (<u>manzana</u>)
mexha	'table' (<u>mesa</u>)
mexhtol	'teacher' (<u>maestro</u>)
méya	'half' (<u>media</u> , used in time especially)
mula	'mule' (<u>mula</u>)
noche	'night' (<u>noche</u>)
pan	'wheat bread' (<u>pan</u>)

APPENDIX B (continued)

Common Loans

péru	'but'	(<u>pero</u>)
pilalixh	'pillar'	(<u>pilar(es)</u>)
poratonixh	'banana'	(<u>plátano</u> 'plantain')
premo	'brake'	(<u>freno</u>)
puro	'all, really'	(<u>puro</u>)
sapato	'shoe'	(<u>zapato</u>)
tawak	'tabaco'	
texhelixh	'scissors'	(<u>tijeras</u>)
trenta	'thirty'	(<u>treinta</u>)
tumin	'money'	(<u>tomin</u> Old Spanish coin)
turusna	'peach'	(<u>durazno</u>)
tyempo	'time'	(<u>tiempo</u>)
wakax	'cow'	(<u>vaca</u> +s)
wuro	'burro'	
xhalu	'botella'	(<u>jarro</u>)
xhapon	'soap'	(<u>jabón</u>)

APPENDIX C

INVENTORY OF POSITIONAL ROOTS

The following list is an alphabetical inventory of all KSE positional roots which have been analyzed for this study. Each root is given with a rather complete gloss and with sample referents if necessary. Defective and doubtful roots are indicated by †. A set of illustrative drawings which were made by informants to help clarify some roots is included after the list.

- b'ak: having the body completely covered with something tangible that doesn't belong
- b'al: thick or fat
- b'an: long poles on top of something and hanging over
- b'atx: overhanging
- b'ay: hanging
- b'e1: cylindrical items in line
- b'es: separated or put away empty
- b'eq: loose (animals)
- b'et: smooth-textured cylindrical objects of medium width (animals with short, smooth hair or bark-less poles)
- b'11: very small and round
- b'iq: limp, soft--as if it had no bones or strength (animals and people asleep)

- b'i7:** stretched--of any flexible thing
- b'ak':** completely covered with intangible substances such as dust or clouds
- tb'on:** smeared, painted
- b'ok':** covered with small clouds like incense
- b'uy:** elevated a little (only of land)
- b'ul:** grouped, but unordered
- b'us:** short and fat
- tb'ut:** powdery (ashes)
- b'ut':** mended (e.g. by putting mud over a hole)
- b'ux:** very short and somewhat fat
- chak':** point of a pole supporting something
- cha7:** hanging (of corn cobs)
- chip:** dull pointed
- chit:** having various petals or little bumps
- chi7:** held in the teeth
- chot:** seated
- chuk:** blunt-pointed object inserted into something
- chul:** rolled
- ch'ak:** wet, bathed in a liquid
- ch'ar:** very fat
- ch'aw:** seated with legs spread
- ch'ew:** having the legs open or spread
- ch'e7:** having a sharp point stuck into something soft
- ch'ich:** many objects scattered

- ch'oj: knees drawn up; squatting
 jab': long
 jach: forked and supporting something
 jaj: kneeling with body erect
 jal: thin, long things intertwined but a little apart (vines, ropes)
 jan: uncovered or face to the sun
 jaq: open
 jas: long, thin, straight
 jatx: slippery, but dry
 ja7: arms extended
 jen: large, hard things, extended
 jer: something moving which at a distance gives the illusion of being a person
 jes: something moving in the distance giving the illusion of being a person
 jet': erect with legs very extended
 jexh: having one arm drooping or broken
 jew: legs extended and apart (only humans)
 jib': long (of snakes and ropes)
 jich: long and straight
 jit': lined up
 jol: soft, pliable
 jop: alight (lantern, sun)
 joq: long
 †jos: a cut(numeral classifier only)

- jox: pile of small objects
- tjuk: rubbing against
- jut': having little lines or stripes
- jutx: slippery; long and dragging
- kal: mixed
- kew: somewhat soft; watery, mud-like lumps
- kix: having the rear elevated
- kiw: slippery
- kol: empty or spacious
- kon: arch or curve
- kotz': twisted (of poles)
- kox: curved or twisted
- kum: curves or turns (on one plane)
- kun: bunched up
- kup: rolled
- kut: something that doesn't reach--only of poles or clothes that are too short
- kutz: short, cylindrical
- k'ab': having a large or open mouth
- k'ach: looking fixedly or being quiet
- k'al: fastened, tied
- tk'an: steep incline
- k'a7: staring
- k'en: wide objects or twisted edges
- k'et: cylindrical objects with twisted or toasted points

- tk'ex: unlike
 k'ew: ripped--only of dry things
 k'it: erect and alone
 k'ob': having a deep depression or a wide mouth
 k'ol: small, spherical
 k'on: bent, curved; with shoulders out
 k'ot: small, round things at rest
 k'otx: short
 tk'otz': mixed colors
 tk'ox: hard
 k'ub': hidden
 lab': thin
 lak: big and fat
 lak': stuck to
 lan: hairy
 laq': embraced
 latz: untied or very close together
 latz': in ordered lines
 law: large and fat (birds or trees)
 la7: submerged in liquid
 lek: standing erect
 letx: liquid measured in a container
 letz': bright (mirror, lake, tin roof)
 lew: extended or spread legs

- le7: many objects scattered in a large space
- litx': wide things, extended
- litz': really full of liquid
- lob': sunken, especially if wet
- lok: hanging
- loq: flexible things shaped like a beak
- lot': narrow
- lotz: stuck to
- lut': narrow (places)
- +lu7: extended
- maq: enclosed; covered
- mej: limp--fast asleep, for instance; weak--without force or strength
- mel: thin or wasted
- meq' measured by armfuls
- metx: lacking something on an edge
- mich: having various petals or bumps
- mitx': united, grasped
- tmix: bumpy
- moj: well-covered all around
- muq: buried
- mutz': with eyes closed
- nel: slippery
- neq': watery, soft substance that moves
- net': watery or loose

nil:	scattered
noj:	head bowed or head down
noq:	mucous-like
nub':	alight, but giving off only a little light
nul:	slippery
pak':	face up
pan:	flat
paq:	face down
tpaq':	flat
patx:	wide, flat things at rest
patz:	hairy, furry, disordered
tpatz':	humid, damp
petz:	legs crossed, kneeling, squatting
pe7:	standing liquid
pich:	wrapped up
pil:	curbed or oval
pis:	seated as in a chair
pit:	like a ball at rest alone
pitx:	on end (head down)
tpitz':	tightly grasped
pix:	tied up
poj:	divided
poq':	sunken
pos:	spongy

- potx: wide
- puk': round, hollow
- puq: scattered
- pux: round, short, inflated
- q'at: cross-wise
- tq'ax: lukewarm
- q'eb': thick liquid spread out
- q'et: upright with a slight inclination toward the rear
- q'ew: bundle
- q'e7: leaning against; inclined steeply
- q'ib': thick liquid spread out in great quantity
- q'o1: sticky
- q'ox: having the head covered
- q'u1: having a heavy, fatty area around the neck or being fat
- q'ut: completely covered with clothes
- san: having a part bulging
- sap: thick-trunked
- sar: thick-trunked; naked
- sek: large amounts of water or grains spread out; animals scattered in groups
- set: wheel-like but without a hole in center
- sey: like a wheel
- sok: having something like hair all turned over and disordered
- som: mixed, of items of different categories
- sop: very thick and cylindrical

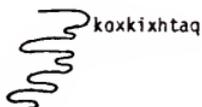
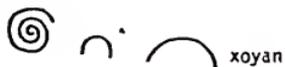
soy:	nesting
sut:	circular
sut':	tightened around the neck or body
suy:	circular, wheel-like
tap:	fat and straight--of things with a thick trunk
tar:	tall and somewhat fat; naked
tek:	standing
tel:	at rest, reclining (cylindrical)
ten:	grouped, somewhat in order
tis:	having the feathers ruffled (in anger); round and very wide
tixh:	objects spread out
toq':	long and hanging
top:	very cylindrical
toy:	loose
tuk:	staring
tup:	short thing that doesn't reach something else
tuq:	grabbed with a single hand or the fingers
tus:	very crowded with objects of same category
tutz':	slippery
t'an:	staring
t'eb':	somewhat wet or watery mass
t'en:	having a part elevated
t'in:	crosswise, between two points
t'iq:	wet; watery

- t'ir: bald, naked
- t'is: fat and short
- tt'ok: one action of cutting (numeral classifier only)
- t'uj: drop-like
- t'un: hanging
- tt'uq: a hop (numeral classifier only)
- txak: on four legs
- txal: clawed or serrated
- txek': having several protruding elements (spines, horns)
- txeq': having long legs
- txij: many small scattered objects
- txil: scattered--many little things, probably round
- txol: in line
- tx'ap: things in narrow spaces or very crowded places; something among other things
- tx'a7: held in the teeth
- tx'en: hairless or very, very smooth
- tx'ij: hatless or hairless
- tx'on: something with an overlarge head; large and round
- tzaq: behind
- tzay: two round objects hanging together
- tzek': like a little pile of branches
- tzeq: bright (fire, sun)
- tzik: short, spreading (tree)
- tzok': stuck into something by a cutting edge

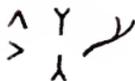
- tzun: behind
- †tzuq: one action of cutting (numeral classifier only)
- tzuy: heavy thing that falls or is placed
- tz'ey: inclined or on a side
- †tz'ib': mixed colors
- tz'in: empty, deserted, vacant, lonely
- tz'it: having a part bulging
- tz'ub': sharp-pointed
- tz'uq: knees drawn up
- waj: together for a while
- wak: a very large object on the ground seen from a distance (more-or-less round mass)
- waʔ: standing erect
- wech': scattered remnants or leftovers
- wek: a large mass
- wen: bumpy, like a knot
- weq: something with parts coming off (old clothes, a rotten trunk)
- wes: hairy with long or very curly hair or feathers
- wet': watery mass
- witz': crowded, close together
- wix: seated
- won: like a tall mountain point
- wos: spongy or foamy
- wotx: like a blister
- wotz: fistful

- wotz'**: hands and knees inside clothing, crouched
xach: forked
xep: lacking a part
xil: small, fat, sort of round things
+xiq: one action of cutting (numeral classifier only)
xok: hooked
xon: having a large head
xot: covered with clothes
xoy: curved or twisted
xut: covered with an intangible substance
xuy: untied; loose
xhaq': watery but sticky
yam: straight and crossed legs
yatz: testicular, when seen
yatz': form of a fist
yub': shrunken (clothes)
yuch: measured in small armfuls
7ij: having a point against
7ok: grasped with a single fist
7om: sunken
7oy: curcled, fenced in
7uch: mixed up or disordered

Drawings collected from Juan Lorenzo Diego, Diego de Diego Antonio, and María Pascual



xachan



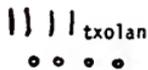
jachan



pilan



k'ob'an



APPENDIX D

TEXT

This text was recorded in 1973 by Mateo Lorenzo who is 84 years old and monolingual in Kanjobal. Other texts in Kanjobal will appear in two Mayan volumes to be published in the Native American Text Series by the International Journal of American Linguistics in late 1976 and 1977.

The text which appears in phonemic transcription is given with interlinear morpheme-by-morpheme and word glosses and is followed by a free English translation. Spanish loan words are underlined; sequences of more than one word in Spanish are in brackets.

y.et	Yaxkalante7
3poss.of	Yaxkalante7 (toponym)
about	Yaxkalante7 mountain

1. a	y.et	jun	<u>tiempo</u> .al	ayinti
	indefinite dem	3poss.of	one	time.abstract nom I
Once				I

max.in.b'et.ek'	y.etoq	in.mam
comp/1sg.go(iv).pass by (dir)	3poss.with	1sg poss.father
I went	with	my father

Barillas	txon.j.oq		2. <u>entónse</u>
Barillas	sell (tv).iv verb.subord		then
(to) Barillas	to sell		then
max.k.on.b'et.ek'		Barillas	y.etoq
comp.past.lpl.go (iv).pass by (dir)		Barillas	3poss.with
we went		(to) Barillas	with
in.mam	y.et	max.k.on.meltzoj.i	
1sg poss. father	3 poss.of	comp.past.lpl.return (iv).form	
my father	when	we returned	
max.k.on.jay	b.ay	Nuq'.a7	b'ay
comp.past.lpl.come (iv)	at/to	neck.water (topo)	at/to
we came	to	Nuq'a7	to
jun cham	winaq	chi.Ø.iq.on	
one respected man (NC1)	man	incom.3.carry (tv).PIV	
one man		he carries ('is named')	
Matiaxh Xhunik	jos.om		<u>marfmpa</u>
Mathias John	work wood (tv).agent		marimba
Matiaxh Xhunik	wood-worker		(of) marimbas
3. max.y.al.on	cham —		max.ko.q'an.on
comp.3.say (tv).PIV	respected man (NC1)		comp.lpl.ask for (tv).PIV
he said			we asked for
ko.posa:	b'ay	Cham —	way.an.eq
lpl poss.lodging	at	respected man (NC1)	sleep (iv).2 imp.pl
our lodging	(from) him		"Sleep

w.uxhtaq	kol.an	j.atut
1sg poss. man's brother	empty (P).form	1pl poss.house
my brothers	empty (is)	our house

ok.an.eq	b'ay	y.ul	na
go in (iv).2 imp.pl	at	3 poss.inside	house
come		inside	(the) house"

4. max.Ø.aq'.lay	ko.posa:	péru
comp.3.give (tv).passive	1pl poss.lodging	but
was given	our lodging	but

max.Ø.e1.teq	s.q'anjab'	eb'
comp.3.go out (iv).action away (dir)	3.speak (iv)	3pl human
went out	to speak	they

xin	y.et.mi	[a las siete a las ocho la noche]
then	3 poss.of.dubitative	
then	about	at seven or eight o'clock at night

max.Ø.k'ol	q'anjab'	in.mam	y.etoq
comp.3.begin (iv)	speak (iv)	1sg poss.father	3 poss.with
began	to speak	my father	with him

tutontol	chi.Ø.aj	aq'b'al	s.way
emph particle	incom.3.go up (iv)	night	3.sleep (iv)
really	go late		to sleep

eb'	xin	5. xan	pural	max.Ø.ok
3pl human	then	therefore	delay	comp.3.go in (iv)
they	then	therefore	late	entered

way.an	eb'	pural	max.Ø.way.aj
sleep (iv).nom	3pl human	delay	comp.3.sleep (iv).go up (dir)
sleep	they	late	went to sleep

eb'	6.	a.ti.nani	mam.in
3pl human		indef dem.dem.today	father.vocative
they		"Right now	father

w.uхтаq		mam.in	w.ikan	ti.nani
1sg poss.man's brother		father.vocative	1sg poss.uncle	dem.today
my brother		father	my uncle	now

ay	wal	jun	w.ab'ix	7.	kay
exist	intensive part	one	1sg poss.story		location
there is		a	my story		where

wal	jun	max.Ø.tx'ox.lay	w.il.a7
intensive	one	comp.3.show (tv).passive	1sg.see (tv).form
really	one	was shown	I saw

tol	max.k.in.b'et	max.w.ak	jab'
that	comp.past.1sg.go (iv)	comp.1sg.plant (tv)	little
(when) I went		I planted	(a) little (of)

w.awal	b'ay	Saq.Ch'en	8.	i
1sg poss.corn	at	white.rock (topo)		and
my corn	at	SaqCh'en		and

max.w.ay.toq		xim
comp.1sg.put down (tv).action away (dir)		grain (NCl)
I planted		that corn

w.awal.tu7	9. ay	waxaq.eb'
1sg poss.corn.dem (there)	exist	eight.inanimates (GNumC)
of mine	there are	eight

tx'an.il	w.awal.tu7
cord.abstract nom	1sg poss.corn.dem (there)
rows	that corn of mine

max.w.ay.toq
 comp.1sg.put down (tv).action away (dir)
 I planted

max.w.ay.toq	xim	awal.tu7
comp.1sg.put down (tv).action away (dir)	grain (NCl)	corn.dem (there)
I planted	that	corn

w.uj	kax	max.in.ul.ek'
1sg poss.by	and	comp.1sg.return (iv).pass by (dir)
by me	and	I went back

way	ka.eb'	aq'b'al	b'ay	w.atut
sleep (iv)	two.inanimates (GNumC)	night	at	1sg poss.house
to sleep	two	nights	at	my house

10. axa	max.k.in.apni.ok
discourse conj	comp.past.1sg.arrive (iv).go in (dir)
and then	I returned

w.il	xim	w.awal	11. k'am.xa
1sg.see (tv)	grain (NCl)	1sg poss.corn	neg.already
I saw	my corn		there isn't

jun.oq	xim	awal	y.uj
one.partitive	grain (NCl)	corn	3 poss.by
(even) one	grain (of)	corn	because (of)

no7	no7	12.	pil.an
animal (NCl)	animal		round (P).form
the animals			everything

max.Ø.aj.toq		y.uj	no7
comp.3.go up (iv).action	away (dir)	3 poss.by	animal (NCl)
went up (was pulled up)		by	the mountain

wax	no7	jot.om	awal
mountain cat	animal (NCl)	dig (tv).agent	corn
cat	the (animal)	diggers (of)	corn

no7	<u>mapach</u>	13.	k'am.xa	xim	awal
animal (NCl)	raccoon		neg.already	grain (NCl)	corn
the racoon			there isn't	(any) corn	

14.	<u>entõnse</u>	kax	max.Ø.chi7.ch.on.aj
	then	and	comp.3.bitten (P).Redup-C ₁ .PIV.go up (dir)
	then		(anger) bit

in.k'u1	_____	tzet	wal	mo:	chi.w.ut.in.b'a
1sg poss.belly		what?	intensive	way	incom.1sg.do (tv).1sg poss.self
my belly		what	really		do I do (for) myself?

15.	k'am.xa	pax	xim	w.inat
	neg.already	also	grain (NCl)	1sg poss.seed
	there isn't	also	(any of) my	seed

ka.eb'	pax	ch'an	xim
two.inanimates (GNumC)	also	only	grain (NCl)
two	also	only	my seed

w.awen	i7.b'i1	16.	ti.nani
1sg poss.resowing seed	carry (tv).resultant		dem.today
for resowing	carried (by me)		now

mayal	wal	Ø.lajw.i.e1
already	intensive	3.finish (iv).form.go out (dir)
already	really	it (is) finished off

xim	w.awal	17.	chi.w.aq'.on	<u>pensar</u>
grain (NCl)	1sg poss.corn		incom.1sg.give (tv).PIV	to think
my corn			I begin to think	

tzet	<u>mo:</u>	18.	yay.xa	pax	k'u
what?	way		thus.already	also	sun/day
what (to do)			It is also	already	late

k'am.xa	<u>rason</u>	—	tzet	chi.w.ut
neg.already	way		what?	incom.1sg.do
there is no	way		(that)	I do

meltzoj.in.b'a	ul.w.i7.on	w.inat
return (iv).1sg poss.self	return (dir).1sg.carry (iv).PIV	1sg poss.seed
return myself	bringing	my seed

19.	axa	max.k.in.ul.ay	xin
	discourse conj	comp.past.1sg.return (iv).go down (dir)	then
	and then	I went back	well

max.k.in.ay		pit.an
comp.past.lsg.go down (iv)		cylinder at rest (P).form
I went do		lying

in.way.i	xol	jun.tzan	an
lsg.sleep (iv).form	among	one.pl	plant (NCl)
(to) sleep	among	some	banana trees

<u>keneya</u> ———	ay	<u>keneya</u>	b'ay	xol
banana trees	exist	banana	at	among
	there are	banana trees	in	among

xim	w.awal.tu7 ———	max.in.way
grain (NCl)	lsg poss.corn.dem (there)	comp.lsg.sleep (iv)
that corn	of mine	I slept

max.Ø.ok	in.way.ich	20. axa
comp.3.go in (iv)	lsg poss.sleep (iv).nom	discourse conj
I dreamed"		and then

max.y.al.on.i	tzet	wal	y.et.al
comp.3.say (tv).PIV.iv form	what?	intensive	3 poss.of.abstr nom
it (the dream) said	"what	really	

oq.w.ut.in.b'a	ti.nani	21. k'am.xa
fut.lsg.do.lsg poss.self	dem.today	neg.already
will I do (for) myself	now?	there is no

xim	w.inat	22. a.ti.nani	xin
grain (NCl)	lsg poss.seed	indef dem.dem.today	then
seed of mine		right now	then

tzet	wal	<u>mo:</u>	23. lanan.w.aq'.on	<u>pensar</u>
what?	intensive	way	prog.1sg.give (tv).PIV	think
in what	way (emphatic)?		I was thinking	

y.et.mi	[a las once la noche]	kax
3 poss.of.dubitative		and
about	eleven o'clock at night	and

max.Ø.jay	jun	cham	winaq	ayin :
comp.3.come (iv)	one	respected male (NCl)		I
came	a	man		(to) me

moso	patx.an	yayji	wonit
ladino	flat (P).form	having shape	hat
(a) ladino	with a flat-	shaped	hat

ib'atx	wonit	y.aqan	<u>trigo</u>
armadillo	hat	3 poss.feet	wheat
(like) an armadillo	hat	(a) stalks of	wheat

wonit	24. atinani	Matiaxh	tol	chi.ach.toj.i
hat	now	Mathias	that	incom.2sg.go (iv).form
hat"	"right now	Matiaxh		you go

tol	chi.in.cheq.lay.teq	y.uj
that	incom.1sg.send (tv).passive.action toward (dir)	3 poss.by
	I was sent	by

in.patron	tol	chi.ach.toj.i	tol
1sg poss.master	that	incom.2sg.go (iv).form	that
my master	(so) that	you go	(so) that

k'a1.mi jun.oq kwerda
 together (P).dubitative one.partitive cuerda (measure)
 about one cuerda all together

max.k.in.b'ey.toq b'ay
 comp.past.lsg.walk (iv).action away at
 I walked (where)

max.w.il w.ok tzun.an y.intaq
 comp.lst.see (tv) lsg.go in (iv) behind (P).form 3 poss.behind
 I was (that) I was close behind

naq winaq.tu7 31. max.y.al.on ayin :
 man (NCl) man.dem (there) comp.3.say (tv).PIV I
 that man , he said to me

mutz'.β a.sat xhi naq ayin
 close (tv).2sg imp 2sg.poss.eye 3 quotative man (NCl) I
 "close your eyes" said he to me

kax max.in.mutz'.on in.sat 32. axa
 and comp.lsg.close (tv).PIV lsg poss.eye discourse conj
 and I closed my eyes and then

max.w.il.on.i 33. ayin xa.ek'
 comp.lsg.see (tv).PIV.iv form I already.pass by (iv)
 I saw I already am

y.u1 naq Yaxkalamte7
 3 poss.inside man (NCl) Yaxkalamte7
 inside Yaxkalamte7 hill

34. naq Yaxkalamte7.tu7 xin
 man (NCl) Yaxkalamte7.dem (there) then
 that Yaxkalamte7 well

b'eyom winaq.tu7 naq
 rich man.dem (there) man (NCl)
 he is a rich man

35. max.k.on.apni.ok.oq
 comp.past.lpl.arrive (iv).go in (dir).subordinator
 we arrived inside

mutz'.Ø a.sat k'am chi.a.meltz'oj
 close (tv).2sg imp 2sg poss. eye neg incom.2sg.return
 "Close your eyes don't turn

a.sat Ø.intag 36. k'am
 2sg poss. eye 2sg.poss.behind neg
 your eyes behind you don't

chi.a.matz'.ej b'ay jun pak'
 incom.2sg.look at (tv).tv form at one side (P)
 look on this side

kay.ti7 k'am k'apax jun pak'.xa
 location.dem (here) neg also one side (P).already
 don't either (on that) side

porke tol xiwil no7 tx'i7
 because that many animal (NCl) dog
 because of many dogs"

37. a.ti.nani	ay	ka.eb'
indef dem.dem (here).today	exist	two.inanimates (GNumC)
right now	there are	two

<u>porma</u>	te7	<u>kajon.tu7</u>
line	tree (NC1)	box.dem (there)
rows	wooden boxes	there

t'an.t'on.b'a.aj.teq
 staring (P).Redup-C₁.PIV.self comp.go up (dir).action toward
 staring up out toward me (are)

mim.eq	lab'aj	y.u1	te7	38. k'am
large.pl	serpents	3 poss.inside	tree (NC1)	neg
many large	snakes	inside	them	"don't

chi.a.matz'.ej	no7	39. chi.Ø.tit
incom.2sg.look at (tv).form	animal (NC1)	incom.3.com (iv)
look at	them"	they come

no7	y.in	naq	chi.Ø.tit
animal (NC1)	3 poss.against	man (NC1)	incom.3.come
	toward	him	"they come

w.in	xhi	Matiaxh	Xhunik.tu7
1sg poss.against	3 quotative	Mathias	John
toward me"	said	Matiaxh	Xhunik.dem (there)

b'ay	in.map	40. axa
at/to	1sg.poss.father	discourse conj
to	my father	and then

max.Ø.apn.i.ok		xin	ti7		
comp.3.arrive (iv).go in (dir)		then			
he arrived		then			
ti7.max.k.ach.jay.i			Matiaxh	ti7.maya1	
dem (here).comp.past.2sg.come.iv form			Mathias	dem (here).already	
"here you came			Matiaxh	now	
k.ach.jay.i	Matiaxh	Xhunik	ach		
past.2sg.come (iv).form	Mathias	John	you,sg		
you came	Matiaxh	Xhunik	you		
ton.ti7	chi.ach.w.awt.ej			41. ti.nani	
emph.dem (here)	incom.2sg.1sg.call (tv).form			dem (he)	
are here	I call you			now	
xin	chi.w.a1	ayach	tol	ach	
then	incom.1sg.say (tv)	you,sg	that	you,sg	
then		to you	that	you	
chi.ach.ul	matz'.1.oq		tol	ay	
incom.2sg.come (iv)	look at (tv).iv verb.subord		that	exist	
you come	to enjoy/be amazed		that	there is	
q'in	oq.Ø.ok.oq	42. ti7.max.Ø.iq.ej			
festival	fut.3.go in (iv).pot	dem (here).comp.2sg.obey (tv).form			
a party	will begin	you obeyed			
tzet	chi.w.a1.a7	man	ax.kax.oq		
what?	incom.1sg.say (tv).form	neg	?.pot		
what	I say	not	like		

<u>Ø.mulna.nej</u>	naq	<u>Meke1</u>	<u>Tumaxh</u>	_____
3.work (iv).tv causative	man (NCl)	Michael	Thomas	
did		<u>Meke1</u>	Tumaxh	

naq	<u>Meke1</u>	<u>Tumaxh</u>	_____	xiwil	eb'	naq
man (NCl)	Michael	Thomas		many	3 pl	man (NCl)
	<u>Meke1</u>	Tumaxh		many	poor	people

<u>powre</u>	chi.Ø.ek'	q'an	<u>posa:</u>	b'ay
poor	incom.3.pass by (iv)	ask for (tv)	lodging	at
	go by	to ask for	lodging	from

naq	43. k'am	chi.y.aq'	naq	<u>posa:</u>
man (NCl)	neg	incom.3.give (tv)	man (NCl)	lodging
him	he didn't give (them)			lodging

44. ay	eb'	naq	chi.Ø.ek'
exist	3 pl	man (NCl)	incom.3.pass by (iv)
there are	those (who)		go by

q'an	way.b'al	b'ay	naq	_____
ask for (tv)	sleep (iv).instrumental	at	man (NCl)	
to ask for	place to sleep	from	him	

ay	eb'naq	chi.y.och.ej	chi.Ø.man
exist	3pl man (NCl)	incom.3.want (tv).form	incom.3.buy (tv)
there are	those (who)	want	to buy

s.lob'ej	_____	k'am	chi.y.aq'	naq
3poss.meals		neg	incom.3.give (tv)	man (NCl)
food for themselves		he doesn't give		

loj	45. ti.nani	xin
food	dem (here).today	then
food	now	then

oq.ton.a.b'a.Ø.il.a7		tzet.a1
fut.emph.2sg poss.self.2sg.see (tv).form		what?.abstr nom
you will really see for yourself		what

oq.y.un	naq	46. y.et	jun.xa	ab'il
fut.3.happen	man (NCl)	3poss.of	one.already	year
will happen	to him	by	one	year

k'am.xa	Ø.ek'	naq	47. a.ti.nani
neg.already	3.pass by	man (NCl)	indef dem.dem (here).today
already he won't be			right now

xin	man.chaq	a.mulna.nej	kaq.tu7
then	neg.optative	2sg.work (iv).tv causative	like.dem (there)
then	may not	you do	like that

man.chaq	Ø.ut.a.b'a	kaq.tu7
neg.optative	2sg.do (tv).2sg poss.self	like.dem (there)
may not	you do (behave) yourself	like that

48. ti.nani	xin	chi.w.al	ayach
dem (here).today	then	incom.lsg.say (tv)	you,sg
now	then	I say	to you

puch	kus	a.k'u1	y.uj	xim
very	sad	2sg poss.belly	3 poss.of	grain (NCl)
very	sad (fs)	your belly	because of	

xim	Ø.awal.tu7	49. xa.Ø.aq'	ta
grain (NCl)	2sg poss.corn.dem (there)	already.2sg.give	if
that	cornfield of yours	now	if you act

kaq	naq	winaq.tu7	————	b'eyom	naq
like	man (NCl)	man.dem (there)		rich	man (NCl)
like	that man			he's rich	

winaq	naq	y.al.on.i		palta	nani	xin
man	man (NCl)	3.say (tv).PIV.iv form		but	today	then
he's a	man	he says		but	today	well

y.et	jun.xa	ab'il	k'am.xa	Ø.ek'
3 poss.of	one.already	year	neq.already	3.pass by (iv)
by	next	year	he won't be	

naq	50. ti.nani	xin	a.ton.b'ay.tu7
man (NCl)	dem (here).today	then	indef dem.emph
	now	then	

a.ton.b'ay.tu7	tol	<u>potréru</u>
indef dem.emph.at.dem (there)	that	corral
that very place (is)		a corral

no7	in.no7.ti7	b'ay	max.Ø.ak
animal (NCl)	1sg poss.animal.dem (here)	at	comp.2sg.plant (tv)
these animals	of mine	where	you planted

jab'	Ø.awal.tu7	51. ti.nani
little	2sg poss.corn.dem (there)	dem (here).today
a little (of)	that corn of yours	now

xin	a.miman-k'ul.al	asan	xin
then	2sg poss.large-belly.abstronom	only	then
then	just (have) your patience		then

chi.w.aq'	ch'an	ka.eb'
incom.1sg.give (tv)	few	two.inanimates (GNumC)
I give	a few	two (or)

ox.eb'	sat	Ø.ixim.ti7
three.inanimates (GNumC)	face/seed	2sg poss.corn.dem (here)
three	seeds	(of) your corn

ka.eb'	ox.eb'
two.inanimates (GNumC)	three.inanimates (GNumC)
two (or)	three

a.semiya.ti7	a.ton	oq.Ø.ay.toq
2sg poss.seed.dem (here)	indef dem.emph	fut.2sg.plant (tv).action away
(of) these your seeds	that's what	you will plant

52. k'am	chi.ach.kus.i	a.ti.nani
neg	incom.2sg.be sad.iv form	indef dem.dem (here).today
don't you be sad		right now

tol	oq.ach.matz'.l.oq	seb'ach
that	fut.2sg.look at (tv).iv verb.pot	come,2sg imp
(because)	you will enjoy/be amazed	come!"

53. max.Ø.apni.ok	naq	b'ay
comp.3.arrive (iv).go in (dir)	man (NC1)	at
he arrived (inside)		in

naq	witz.ak'al.tu7	Yaxkalamte7
man (NC1)	hill.hill(?) .dem (there)	Yaxkalamte7
that hill Yaxkalamte7		

54. xan ay.ton pixan
 therefore exist.emph heart/spirit
 "they really do have spirits"

eb' naq	witz.ak'al.ti7	— man.toq	k'am
3pl man (NC1)	hill.hill.dem (here)	neg	neg
these hills		it's not that they don't	

— man	to.k'al.oq	chi.Ø.al.lay.i
neg	still.emph.pot (?)	incom.3.say (tv).passive.iv form
it is just said (that they do)		

— ay	pixan	eb' naq	xhi	ton
exist	heart/spirit	3pl man (NC1)	3 quotative	emph
they do have spirits"			he said	"really

jun	w.ab'ix	max.y.al	(naq)
one	1sg poss.story	comp.3.say (tv)	man (NC1)
a story of mine" said			

cham	winaq.ti7	b'ay	in.mam
respected man (NC1)	man.dem (here)	at	1sg poss.father
this man		to	my father

55. chi.Ø.q'anjab'	eb'	palta	ayinti
incom.3.speak (iv)	3pl	but	I
they are talking		but	I

max.w.ab'.ej
comp.1sg.hear (tv).form
I heard

56. kax max.Ø.ok jun
and comp.3.go in (iv) one
and it began a

q'in.tu7
festival.dem (there)
festival

xin manxa q'in.oq to.xa
then much festival.? still.already
then a big festival and

lok.l.on.b'a
hanging (P).Redup-C₁.PIV.self comp
many hanging

an q'ap
plant (NCl) cloth
clothes

y.et kanal
3 poss.of dance
for the dance

xiwil.xa no7 q'uq'
many.already animal (NCl) quetzals
and many quetzals

57. axa jun
discourse conj one
and then a

miman sam ch'en
large griddle stone
large stone griddle

— ay.mi
exist.dubitative
it was about

jun.oq kwatro
one.partive four
four

kwerda
cuerda (unit of measure)
cuerdas (across)

jun miman sam ch'en.tu7
one large griddle stone (NCl).dem (there)
that big stone griddle

a.tu7
indef dem.dem (there)
there

chi.Ø.aj.toq
incom.3.go up (iv).action away (dir)
go up

b'u1.an	ánima.tu7	58. kax	chi.Ø.ek'
bunch (P).form	people.dem (there)	and	incom.3.pass by (iv)
a bunch of	those people	and	it goes
sut.ut.oq	y.alan	eb' kax	chi.Ø.ok
round.Redup -VC ₂ .subord	3 poss.under	3pl and	incom.3.go in (iv)
round and round	under	them and	begins
kanal	chi.Ø.ok	son	axka.k'al yili
dance	incom.3.go in (iv)	marimba	thus.emph color
a dance	begins	music	it seems
xiwil.xa	ánima	ay.ok.toq	
many.already	people	exist.go in (dir).action away (dir)	
many	people	there are	
y.u1	naq	witz.tu7	59. ay
3 poss.inside	man (NC1)	hill.dem (there)	exist
inside	that hill		"there is
masanil	Soloma	ay	San Juan
all		exist	
everyone	(from) Soloma	there are	(from) San Juan"
xhi	ay	j.et	konob' i
3 quotative	exist	1pl poss.of	town and
he said	"there are	from our	town and
ay	San Mateo	xhi	
exist		3 quotative	
there are	(from) San Mateo"	he said	

ay.ok.toq		b'ay	witz.tu7
exist.go in (dir).action away (dir)		at	hill.dem (there)
"there are (inside)		in	that hill"

60. kay.ton.tu7	tzet	chi.y.al
location.emph.dem (there)	what?	incom.3.say (tv)
right there (is)	what	said

jun cham	winaq.tu7	ayin	b'ay
one respected man (NC1)	man.dem (there)	I	at
that man		to me	to

in.mam	61. max.w.ab'	k'apax	ayinti
1sg poss.father	comp.1sg.hear (tv)	also	I
my father	I heard	too	I

tzet	max.y.al	cham	winaq.tu7
what?	comp.3.say (tv)	respected man (NC1)	man.dem (there)
what	said	that man	

—— chot.an.ok.toq
 seated (P).form.go in (dir).
 (I was) seated

chot.an.ok.toq	62. axa
seated (P).form.go in (dir).action away (dir)	discourse conj
(I was) seated close by	and then

y.et.tu7	xin	kan	max.y.al.on
3 poss.of.dem (there)	then	and	comp.3.say (tv).PIV
then	well		said

naq	witz.ak'al.tu7	a.ti.nani
man (NC1)	hill.hill(?).dem (there)	indef dem.dem (there).today
that hill		"now

xin	ti7.max.Ø.iq.ej	tzet.al
then	dem (here).comp.2sg.obey (tv).form	what?.abstr nom
then	you obeyed	what

max.w.al.a7	63. ti.nani	xin
comp.1sg.say (tv).form	dem (here).today	then
I said	now	then

k'am	tzet	chi.Ø.och.ej	a.k'u1
neg	what	incom.2sg.want (tv).form	2sg poss.belly
isn't there	something you want		(in) your belly

64. k'am	chi.Ø.och.ej	ch'en	<u>tumin</u>
neg	incom.2sg.want (tv).form	stone (NC1)	money
don't	you want	money?	

65. k'am	chi.Ø.och.ej	jun.oq
neg	incom.2sg.want (tv).form	one.partitive
don't	you want	some

a.no7	66. k'am	chi.Ø.och.ej
2sg poss.animal	neg	incom.2sg.want (tv).form
animal for yourself?	don't	you want

a.chej	a.wakax	67. k'am.aq
2sg poss.horse	2sg poss.cow	neg.absolutive
a horse for yourself	a cow for yourself?"	"no

k'am.aq	mam.in	k'am	chi.w.och.ej
neg.absolutive	father.vocative	neg	incom.1sg.want (tv).form
no	father	I don't	want (anything)

asan	tol	max.w.iq.ej	tzet
only	that	comp.1sg.obey (tv).form	what?
just	that	I obeyed	what

max.Ø.a1.a7	68. ti.nani	xin
comp.2sg.say (tv).form	dem (here).today	then
you said"	"now	then

a.jun	<u>opfsyo</u>	jun	a.mulnaj.il
indef dem.one	job	one	2sg poss.work (tv).abstr nom
that	job	your	work

chi.a.jatn.ej	——	ay	jun	te7
incom.2sg.do (tv).form		exist	one	tree (NC1)
you do		there is	a	

Ø.te7.a1	<u>marfmpa.tu7</u>	b'ay	Nonal	——
3 poss.tree.abstr nom	marimba.dem (there)	at		
tree (for)	marimbas	in	Nonal	

a.tu7	ay	jun	te7
indef dem.dem (there)	exist	one	tree (NC1)
	there is	a	

Ø.te7.a1	<u>marfmpa.tu7</u>
3 poss.tree.abstr nom	marimba.dem (there)
tree (for)	marimbas

toq.a.say.el				te7
action away (dir).2sg.look for (tv).go out (dir)				tree (NCl)
you go out to look for				it

69. a.tu7	xin	jab'.oq.xa		
indef dem.dem (there)	then	little.partitive.already		
there	then	a little		

a.tumin	70. xa1	in	xin	tol
2sg poss.money	conj	I	then	that
money of yours (you will have)	so	I	then	

chi.in.toj	b'ay	naq	w.uxhtaq	_____
incomp.lsg.go (iv)	at	man (NCl)	lsg poss.man's brother	
	to	my	brother	

naq	w.uxhtaq	Quetzaltenango	witz.al
man (NCl)	lsg poss.man's brother		hill.abstr nom
my brother		the hill of Quetzaltenango	

ata.tu7	chi.in.toj	71. tuk.an	in
until.dem (there)	incom.lsg.go (iv)	staring (P).form I	
there	I go"	"I was really staring	

wal	xin	max.Ø.aj	wan	naq	witz.tu7
emph	then	comp.3.go up (iv)	erect (P)	man (NCl)	hill.dem (there)
	well	he stood up		that hill	

_____	kawal	max.Ø.saq.b'.i		y.ib'an
	almost	comp.3.white.inchoative verb.iv form		3 poss.over
	almost	became white		all over

q'in.a1	y.uj	s.q'aq'.a1	naq
life.abstr nom	3 poss.by	3 poss.fire.abstr nom	man (NC1)
the world	because of	his fire	that hill
witz.tu7	72. kay.tu7	jun.jun	
hill.dem (there)	location.dem (there)	one.Redup	
	there	each (of)	
s.sub'	jolom	kan.eb'	y.uk'a7
3 poss.thigh	head	four.inanimates (GNUMC)	3 poss.horn
his thighs	(his) head	four	horns of his"
73. kay.tu7	max.y.a1		
location.dem (there)	comp.3.say (tv)		
there	said		
jun cham		ayinti	y.etoq
one respected man (NC1)	man.dem (there)	I	3 poss.with
that man		to me	with
in.mam	74. y.uj.tu7	xan	
lsg poss.father	3 poss.by.dem (there)	therefore	
my father	therefore		
chi.w.a1.kan		jab'	w.ab'ix.tu
incom.lsg.say (tv).remain (dir)		little	lsg poss.story.dem (there)
I leave said (finish)		that little	story of mine
75. kay.ton	ch'an	jab'	
location.emph	only	little	
there really	just	a little	
y.ab'ix.a1.tu7			
3 poss.story.abstr nom.dem (there)			
story about that			

About Yaxkalante7

One time I went with my father to Barillas to sell. Well, we went to Barillas, I and my father, and when we came back we arrived over there in Nuq'a at the house of a man named Matiaxh Xhunik who was a marimba-maker. He said-- we asked for lodging from him--"Sleep, my brothers, our house is empty, come inside the house." He gave us lodging and, well, about seven or eight o'clock in the evening, they went out and began to walk. They go to sleep very late so they wait to go to bed.

Now, my brother, my uncle, now I have a story, something that happened when I went to plant corn over in Saq Ch'en. Well, I planted a little corn--about eight cuerdas I planted. I sowed it all and left it very well done. And I came back to sleep for two nights at home. And when I went back to look at my corn, there wasn't even one plant left because of the animals. The plants were all dug up by the mountain cat--the animals that dig in the ground--the racoon. There wasn't any corn left. Well, then I got mad because what am I going to do? I don't have any seed--just a little resowing seed that I'm carrying. And now all my corn is finished. I have to think, what can I do? And it's already late. There's no way I can go back to get seed. And I fell asleep. I lay down to sleep among some banana trees--there are banana trees in my cornfield--and I slept and I dreamt and in sleep I asked, what am I going to do, I have no seed, now what next? I was thinking about it around eleven o'clock at night and a man came to me. A Ladino with a flat hat shaped like an armadillo and made out of wheat stalks.

"Now, Matiaxh, you must go. My master sent me to bring you, you have to go."

"Well, maybe I will--who will I go to? Where will you take me?"

"Just go with me. I was sent by my lord."

And so I went. I did what I was told. Well, I walked only about one cuerta behind that man. He said to me: "Close your eyes" he told me. And I closed my eyes. And when I looked, I was already inside Yaxkalamte7. That Yaxkalamte7, he's a rich man. We arrived. "Close your eyes; don't look back and don't look either to this side or the other because there are many dogs."

Now there are two rows of wooden boxes and staring up out of them are a lot of big snakes.

"Don't look at them."

They came close and went toward him. "They come toward me," said that Matiaxh Xhunik to my father. And when he arrived, well,

"So you came, Matiaxh, now you've arrived. You are the one I've called. Now I tell you that you come to have a good time and be astonished. There's a big festival. Already you did what I told you--not like Mekel Tumaxh. Many poor people passed by to ask him for lodging and he wouldn't give it. There are those who go by and ask for a place to sleep. There are those who want to buy meals; he won't give them food. Now you'll see what will happen to him. By next year, he won't be around. Now don't do as he has; don't be like him. Now I tell you, you're very sad because of your cornfield, but you will not do as that man. He is rich and says he's a man, but, well, by next year he will not be here. Now, that place where you planted your corn is the corral for my animals. You be patient. I'll just give you two or three grains of corn, two or three of your seeds and those are the ones you'll plant. Don't be sad. Come and enjoy yourself."

Then he arrived at the hill of Yaxkalamte7. Those hills do have spirits; it's not just something they say. They do

have them. That's what the story says that that man told my father. They talked but I heard. And then a festival began, a big festival. Many dance costumes were hanging up and many wooden dance masks were hanging, and many quetzals. And there a large round stone like a griddle, maybe four cuerdas across--a big stone and that's where the people are in a group. And the stone turns round and round below them and there's dancing and marimba just like in the real world. A lot of people are inside that mountain--"There's everybody from Soloma and from San Juan," he said, "from our town and there are some from San Mateo," he said, there all inside the mountain. And that's what that man is telling my father--I heard too what he said. I was sitting inside. And after that the hill deity said,

"Now then, you obeyed what I told you. Now, then, don't you want anything? Don't you want money? Don't you want an animal--a horse, a cow for yourself?"

"No, no, father, I don't want anything; I only did what you said."

"Well now, your job you do. There's a tree for a marimba in Nonal. There is where that marimba tree is. You'll go look for it. That way you can earn a little money. Now I'm going to my brother, my brother the mountain of Quetzaltenango. That's where I'm going."

I'm staring and the mountain stood up. He almost lit up the whole world with his brightness. There's each of his legs, his head, four horns. (gestures)

That's what the man told me and my father. That's why I tell this story, just this little story about all this.

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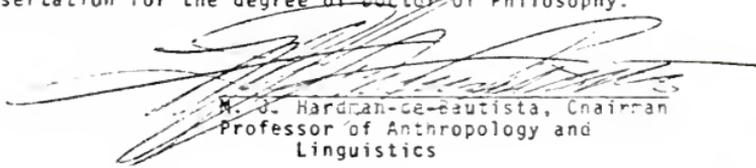
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BIOGRAPHICAL SKETCH

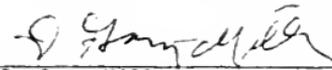
Laura Ellen Martin was born in Ohio on August 6, 1947. She was raised in Florida and graduated from Cocoa High School in 1965. She attended the University of Florida where she received a bachelor's degree in 1968 with a major in Spanish and a master's degree in 1970 as the first graduate student in the University of Florida program in linguistics. From 1970 to the present she has been employed at the Cleveland State University teaching for the Departments of Modern Languages and Anthropology. In 1972-73 and again in 1975, she took leave to pursue linguistic investigation of Kanjobal in Guatemala and during the year 1975-76 she attended the University of Florida completing the requirements for the Ph.D. degree in linguistics with minors in Spanish and anthropology, after which she will return to her position at Cleveland State. She is a member of several professional organizations and honor societies.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



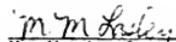
M. J. Hardman-Ge-Bautista, Chairman
Professor of Anthropology and
Linguistics

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D. Gary Miller
Associate Professor of Linguistics
and Classics

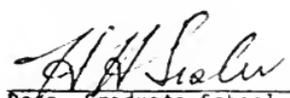
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This dissertation was submitted to the Graduate Faculty of the Program in Linguistics in the College of Arts and Sciences and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

March 1977



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