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SYSTEMS OF NOMINAL
CLASSIFICATION

EDITED BY

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Multiple classifier systems in Akatek (Mayan)

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INTRODUCTION

Mayan languages are well known, due to Berlin's (1968) study on ethnographic semantics, to be prototypical classifier languages. In his pioneering work on Tzeltal's classifier system, Berlin examined a very extensive set of stems (more than four hundred morphemes) that co-occur with nouns in the context of quantification. That is, Tzeltal, similar to Thai, Malay, Japanese and many other unrelated languages, requires classificatory morphemes when a nominal is modified by a quantifying morpheme or a numeral.

Akatek belongs to the Q'anjob'alan subgroup of Mayan languages. It is spoken by approximately 30,000 speakers in the Cuchumatán Mountains of Guatemala, and by approximately 10,000 more in diaspora in Mexico, the United States and Canada. Similarly to Tzeltal and most of the members of the Mayan family, Akatek requires numeral classifiers in the morphosyntactic context of quantification. But unlike Tzeltal, which only has an extensive set of sortal numeral classifiers, Akatek has four different paradigms of classificatory devices: classificatory suffixes, sortal numeral classifiers, plural for humans and noun classifiers.

Having more than one classificatory device in a language is by itself an intriguing fact. However, other languages have been reported with more than one classificatory set. The Amazonian language Yagua (Payne 1986; Derbyshire and Payne 1990) has two sets of classifiers. The first set cross-references the arguments on the predicates. The second set modifies nominals in quantifying and referential expressions. Mam (England 1983; Zavala 1992), another Mayan language, also has two different paradigms of classifiers. The first is a genitive classifier paradigm that intervenes in possessive constructions between the possessor and the alienable possessed noun. The second is a noun classifier paradigm that functions as third-person anaphoric pronouns. Furthermore Micronesian

languages such as Woleaian (Sohn 1975), Mokilese (Harrison 1976, 1989), Ponapean (Rehg 1981) and Kusaiean (Lee 1975), among others, exhibit two different paradigms of classifiers that grammaticalized from two unrelated sources. In these languages one of the paradigms functions as a prototypical numeral classifier set that individuates nouns in quantitative constructions. The other paradigm, which grammaticalized from verbal nominalizations, functions as genitive classifiers, that is, as relational morphemes with alienable nouns co-occurring with a pronominal or nominal possessor. I summarize this information below.

Yagua	a. Concordial class markers on verbs b. Noun/Numeral classifiers
Mam	a. Noun classifiers (as pronominals) b. Genitive classifiers
Micronesian languages	a. Numeral classifiers b. Genitive classifiers

On the other hand, some languages that only exhibit one paradigm of classifiers (generally numeral classifiers) have extended the morphosyntactic contexts in which the categorizing morpheme appears. In Thai and Vietnamese (Hundius and Kölver 1983; Seiler 1986) the numeral classifier morphemes not only occur in quantitative expressions but also in non-quantitative nominal phrases that are highly topical (specific or definite NPs). In Hmong, a Miao language (Bisang 1993), the numeral classifiers occur in quantitative expressions, in nominal phrases that are highly topical and in possessive phrases functioning as genitive classifiers. The various functions of numeral classifiers are summarized below.

Vietnamese and Thai NUMCLF	a. individuating device in Q expressions b. high topicality marker (DEF/SPEC NP)
Hmong NUMCLF	a. individuating device in Q expressions b. high topicality marker (DEF/SPEC NP) c. relational morpheme in GEN expressions

In sum, what we observe with this typological variation is the fact that languages with classifiers use these devices in common morphosyntactic environments. The variation appears in the way a particular language uses one or more than one set of classifiers to cover the specific function that calls for categorizing devices. Thus, while in some

languages with more than one classificatory paradigm, such as Yagua, Mam and the Micronesian languages, each paradigm specializes in a particular function, in other languages different functions are covered by the same classificatory device that originally had a more restricted purpose, namely the individuation of nouns. This has been the case in Vietnamese, Thai and Hmong.

This paper deals with the case of a language with multiple classifier paradigms. From a typological point of view Akatek is of special interest because it sheds light on several problematic aspects in the discussion of classifier systems. Why does a language require classifiers? What is the status of the nouns in a language that uses classifiers? Where do the classifier morphemes come from? What are the patterns of grammaticalization of the classifier morphemes? How do the different classifier sets interact? What is the morphosyntactic and semantic difference between numeral classifiers and mensuratives? How do classifiers interact with other devices that convey definiteness and specificity?

In this paper I will concentrate on three particular issues. First I will describe the morphosyntax of the four mechanisms of classification in Akatek. I will characterize the four sets paradigmatically and morphosyntactically. I will also present evidence that shows how three of the four paradigms have developed, i.e. I will schematize the process of grammaticalization of the two numeral classifier paradigms and the innovative noun classifier set. Second, I will suggest that Akatek nouns are non-individuated morphemes which require particular devices, namely classifiers, in the morphosyntactic contexts where an individuated and/or specific (topical, referential) noun is demanded. Third, I will argue for a semantic and morphosyntactic distinction between numeral classifiers and mensuratives.

I FOUR CLASSIFIER PARADIGMS

The four classificatory sets in Akatek are the classificatory suffixes (NUMCLF), the sortal numeral classifiers (SORT.NUMCLF), the plural for humans (HUM.PL), and the noun classifiers (NCLF). The four classificatory paradigms can be established on formal and semantic grounds.

More than one classifier can occur in the same nominal phrase. In (1) three classificatory morphemes co-occur within the same nominal phrase: the numeral classifier *-wan* for humans; the plural marker *eb'* for humans, and the noun classifier *naj* for male humans:¹

- (1) *'ey kan yuu kaa-wan eb' naj txonwom*
 EXIST DIR by two-NUMCLF HUM.PL NCLF merchant
 human human male
 'there were two merchants' (T)

In (2) two numeral classifiers from the two different sets (classificatory suffix and sortal classifier) interact in the same nominal phrase. The classifier immediately suffixed to the numeral *kaa* 'two', *-(e)b'*, is a general numeral classificatory suffix for inanimates. The morpheme *sulan* is a sortal numeral classifier (temporal classifier in Berlin's terminology) for smooth and flat objects that can slide on a surface.

- (2) *'ey kaa-(e)b' sulan aw-aan*
 here two-NUMCLF SORT.NUMCLF A2-corncob
 inanimate smooth
 'Here you have two corncobs.'

The fact that members of the different classifier sets combine in the same nominal phrase shows that each classifier belongs to a different paradigm. Classificatory suffixes and sortal numeral classifiers follow numerals and quantifiers and function as nominal individuating morphemes. The plural for humans and the set of noun classifiers are adnominal constituents: in contrast to the other two types of numeral classifiers, they can combine with nouns in nominal phrases that lack any other adnominal constituent (i.e. numerals, quantifiers, possessors, adjectives or deictic modifiers). The noun classifier set does not function as an attributive system but rather as an individuating device as well as a mechanism for encoding referential and highly topical nominals. All the four classificatory devices are also used as anaphoric pronouns. In what follows each of the four classificatory sets are discussed.

1.1 A reduced paradigm of numeral classifiers: the classificatory suffixes

The most widespread morphosyntactic context in which a classifier morpheme is required cross-linguistically is in cases in which a noun participates in quantifying constructions. Akatek is not an exception. Numerals and some quantifiers cannot appear directly modifying a noun. Instead, the numeral and the quantifier morpheme has to be suffixed with a classifier when preceding a noun. The following expressions illustrate this case. In (3) the possessive noun *skutzin* 'his daughters' is modified by *kaa* 'two' suffixed with the numeral classifier for humans.

- (3) a. 'ey kaa-wan skutzin patron tu'
 EXIST two-NUMCLF his.daughter boss DIST
 human
 'The boss had two daughters.' (T)
- b. *'ey kaa III skutzin patron tu'

In (4) *no' no'* 'the animals' is preceded by the quantifier *jay* 'how many' which always appears suffixed with a numeral classifier. Ill-formed structures, as in (3b) and (4b), result when the classifier is not suffixed to the numeral or the quantifier.

- (4) a. *jay-k'on-ne* no' no' yuul konob'
 how.many-NUMCLF-only NCLF animal in town
 animal
 'How many animals are there in town?' (T)
- b. **jay-III-ne* no' no' yuul konob'

Numeral classifiers suffixed to quantifiers and numerals form a paradigm with three members. Besides the classifier *-wan* for humans in (3), and *-k'on* for animals in (4), Akatek has a general numeral classifier for inanimates, the morpheme *-eb'*, as is shown in (5) and (6).

- (5) *maxyal 'ox-eb'* piocha
 he.said three-NUMCLF pick
 inanimate
 'He had said: three picks.' (T)
- (6) *maxeltej jun miman 'icham laab'a 'ox-eb'* solom
 it.went.out one big old.man serpent three-NUMCLF head
 'The giant serpent with three heads came forth.' (T)

All Akatek nouns belong to one of the three classes, i.e. all nouns have to combine with one of the three classificatory suffixes when appearing in a nominal construction preceded by the quantifier *jay* 'how many' and all numerals except *jun* 'one'. Unlike in other Mayan languages, the numeral 'one' in Akatek does not combine with classificatory suffixes.

In Akatek nouns are transnumeral (i.e. they do not refer to single or multiple entities). The semantic interpretation of a lexical noun as a singular entity or as a plural set of entities has to be specified by quantifiers, plural markers or the numeral *jun*. In Akatek the numeral *jun* functions as a *singulative* (a marker which restricts the reference to a single entity) and not as an indefinite marker. This is illustrated in (7) and (8). In (7) the noun *wakax* is modified by the possessive *a-* for second person and the proximal demonstrative *ti'*. In (8) the noun *kultaj* is

modified by the adjective *yaax* and the distal demonstrative *tu'*. In both cases the morpheme *jun* restricts the reference to a singular entity whereas the deictic morpheme expresses the definite status of the noun.

- (7) *tol chinchi jun a-wakax ti' an*
 that I.bite one A2-cow PROX CLIS
 'I am going to eat your bull.' (T)
- (8) *jaton b'ey jun yaax k'ultaj tu' xin*
 there at one green forest DIST then
 '... [so the boy went] through the mountain (lit. green-forest).' (T)

The morpheme *jun* also co-occurs with proper nouns and this has to be taken as a further piece of evidence which supports the interpretation of *jun* as a singulative and not as an indefinite marker. In (9) *Rimares*, the nominal combining with *jun*, is a proper name and refers to the main protagonist in the story from where the example was taken. Therefore, the nominal expression in (9) cannot be interpreted as indefinite for semantic, structural and discourse reasons. *Rimares* is a proper name, co-occurs in the same phrase with the deictic *tu'*, and had been introduced previously as the main protagonist.

- (9) *chijowi tol yuu maxvey jun rimares tu' yetoj*
 she.is.angry that because he.slept one Rimares DIST with
jun 'ixnam tu'
 one old.lady DIST
 'She was angry because Rimares slept with the old lady ...' (T)

The reduced paradigm of the classificatory suffixes in Akatek exhibits three major differences from the well-known classifier systems of Southeast Asian languages and Mayan languages of other subgroups, and makes it similar to gender and noun class systems. First, the Akatek classificatory suffixes form a closed set with only three exponents. Second, all nouns of the language have to be classified as is the case in gender and noun class systems. And third, the nouns are assigned to only one class, i.e. this subsystem of classification does not allow paradigmatic variability which carries derivative, stylistic or pragmatic connotations. Paradigmatic variability is common in languages that have a larger set of classificatory morphemes. A frequently quoted example is the case of the Burmese morpheme *myi'* 'river' which is semantically compatible with more than half a dozen classifiers resulting in different semantic readings of the noun (Becker 1975). In the Burmese case the classifiers carry semantic information which is not inherent in the semantics of the noun. Thus, in Burmese and in many other languages

with large sets of classifiers these morphemes have derivational functions. On the contrary, in Akatek the classificatory suffixes do not bear semantic information new to the noun they modify. The semantic information coded by these three classifiers is always inherent in the nouns with which they co-occur.

One feature of the Akatek classificatory suffix paradigm, which is shared by most of the languages with classifiers, is its capacity to be used as a reference tracking device. Numerals suffixed with numeral classifiers, without an accompanying noun, are one of the anaphoric devices in the language for maintaining constant reference in discourse. The example in (10) illustrates this use. It comes from a story about a cultural hero and trickster called Rimares, a mischievous figure who plays all kinds of tricks and usually deceives people. The extracted paragraph quoted in (10) refers to an episode in which Rimares, a day labourer, deceives an entire family. The boss, who is located at hearing distance from the scene described in the paragraph, sends Rimares to his house in order to look for some tools (picks) that the two of them need to get several pigs out of the mud. Instead, Rimares goes to his boss's house and tries to seduce his two daughters and his wife. He tells them that the boss has ordered him to have intercourse with the three of them. The wife does not believe that her husband ordered Rimares to do this. In order to convince them Rimares begins calling his boss. He poses the following question: 'The three of them?' The question is uttered elliptically and the boss believes that Rimares is talking about 'the three picks' he needs for extracting the pigs. Thus, the boss responds shouting 'yes!' In these tokens the numeral suffixed with the classifier for humans functions as a pronominal that has as referential antecedent the three women already introduced in the first paragraph.

(10) [Rimares came to where the boss's wife was. The boss had two daughters . . . – The boss said that I should sleep with you all . . .]

- a. *chimheyab'e ey-'ox-wan-il*
do.you.hear A2p-three-NUMCLF-VL
human
'Don't the three of you hear him?'
- b. *xhi rimares ti' teteb' ix ix*
said Rimares PROX to HUM.PLA NCL woman
tu' y-ox-wan-il
DIST A3-three-NUMCLF-VL
'Rimares asked the women, the three of them'

[But they didn't want to sleep with Rimares. Rimares shouted to the boss: – Patron! – said Rimares]

- c. *y-ox-wan-il*
A3-three-NUMCLF-VL
'The three of them? [Rimares said]'
- d. *jaa'*
yes
'Yes.'
[The boss answered] . . . (T)

The storyteller later suggests that the boss misinterpreted the pronominal use of the classifier for humans both when he listened to the question and when he responded to it. Later on, in the same narration, he adds the following paragraph:

- (11) [That's not what the boss had said]
- a. *maxyal 'ox-eb' piocha*
he.said three-NUMCLF pick
inanimate
'he had said three picks'
- b. *manaj 'ox-wan ix tu'*
not three-NUMCLF woman DIST
'It's not the three women [that the boss said].' (T)

The Akatek paradigm of numeral classificatory suffixes has the size of a typical gender system. It is always difficult to account for the origin of such systems, however, in the case of the Akatek classificatory suffixes we have the necessary internal and external evidence which allows us to reconstruct the path of grammaticalization from an open set of lexical morphemes to a reduced paradigm of grammaticalized suffixes. Two of the members of the paradigm developed from positionals.² Positionals are the common source from which numeral classifiers have been recruited in the rest of the Mayan languages – the use of positionals functioning as classifiers has been amply documented in two Mayan languages, Tzeltal (Berlin 1968) and Tzotzil (de León 1987). Positionals constitute a specific class of roots in Mayan languages. In Akatek the paradigm of approximately 270 members can be established because positionals are the only roots which combine with the positional formative suffix *-an*.³ Semantically positional roots constitute a coherent class. They describe the shape, position, arrangement and quality of a specific entity or group of entities. These roots are the source from which many adjectives, verbs, nouns, mensuratives and sortal numeral classifiers are derived. As an illustration of this consider the examples in (12):

- (12) a. *latz'-b'a* [VERB] 'to order things in lines' < *latz'* 'in ordered lines' + *b'a* TRANS
 b. *xoy-an* [ADJ] 'spherical' < *xoy* 'curved or twisted' + *an* POSIT
 c. *k'al-il* [NOUN] 'belt' < *k'al* 'fastened, tied' + *-il* NMZR
 d. *b'uj-an* [MENS] 'raceme' < *b'uj* 'stalk lying along an elongated stem' + *-an* POSIT
 e. *xen-an* [SORT.NUMCLF] 'two dimensional objects' < *xen* 'extended' + *-an* POSIT

The classificatory suffixes *-wan* and *-k'on* grammaticalized from positional lexemes that in a previous stage functioned as sortal numeral classifiers of the type that is common in Southeast Asian languages, but also in Tzeltal and Tzotzil (see below section 1.2). The classifier *-wan* derived from the root *wa'* 'erected on two feet' suffixed with the formative *-an*. The classifier for animals *-k'on* derived from the root *k'on* 'bent on four feet' suffixed with the formative *-an*. Synchronically the bisyllabic lexemes *wa'an* 'erected on two feet' and *k'onan* 'bent on four feet' function as predicates, as in (13) and (14).

- (13) *wa'-an-'ey* *te'* *te'*
 erected-POSIT-DIR:down NCLF wood
 'The forked stick is standing downwards.'
- (14) *'eyan* *k'on-an-oj* *xhi* *naj* *mekel* *tet* *'ix*
 descend.IMP bent-POSIT-IRR said NCLF Mike to PRO
 'Bend down!, said Mike to her.'

Both classificatory suffixes *-wan* and *-k'on* underwent phonological erosion. Originally bisyllabic and stressed lexical items, they became monosyllabic and unstressed suffixes. In correlation with the phonological erosion both morphemes have undergone semantic generalization. The source lexemes conveyed elaborated shape, dimensional and arrangement meaning distinctions, whereas the derived suffixes indicate only general animacy distinctions. The classifier *-wan* combines with nouns that refer to human beings in all positions and not only to those standing on two feet. This classifier combines with nouns that denote babies, dead human beings, and people sitting, bent or lying down.

- (15) a. *'ey* *kaa-wan* *eb'* *naj* *winaj* *chotaneyoj*
 EXIST two-NUMCLF HUM.PL NCLF man sitting.down
 'There are two men sitting down.'
- b. *'eyta'* *'ox-wan* *eb'* *'ix* *'ix*
 EXIST.PAST three-NUMCLF HUM.PL NCLF woman
telaneyoj
 lying.down
 'There were two women lying down.'

The morpheme *-k'on* classifies nouns that denote not only mammals 'standing on four feet' but all animals including serpents, worms, insects, birds, fishes, etc. Thus, what we observe in the change from lexical classifiers to classificatory suffixes is what we observe in all processes of grammaticalization (Lehmann 1995): the reduction of an open paradigm from several members to three, the change of grammatical status from lexical items to suffixes, the phonological erosion and semantic generalization of the lexical items as they become grammatical morphemes and, finally, the obligatoriness of the morphemes in particular morphosyntactic contexts, in this particular case, the context of quantification.

1.2 Sortal numeral classifiers

Akatek has a group of positional roots that occur in quantifying constructions following a numeral which is already suffixed with one of the three classificatory suffixes mentioned above. I will refer to these morphemes following the numerals as sortal numeral classifiers. As an illustration consider the cases in (16):

- (16) a. *'ox-eb'* *jilan* *'aan*
 three-NUMCLF SORT.NUMCLF corncob
 longitudinal_three_dimensional
 'three corncobs'
- b. *kaa-(e)b'* *b'ilan* *poon* *yalixh-taj*
 two-NUMCLF SORT.NUMCLF plum small-PL
 round_and_small
 'two small plums'
- c. *miman* *steel* *wan* *'ox-wan* *k'itan* *winaj*
 big A3.height PL three-NUMCLF SORT.NUMCLF man
 separate
 'The three men are tall.'

The inventory of sortal numeral classifiers varies from speaker to speaker, however, there is a core set shared by everyone. The members of this set are listed in (17). In contrast to the paradigm of the classificatory suffixes discussed above which divides all the nouns in three exclusive classes on the basis of animacy (human, animal, inanimate), the paradigm of sortal classifiers establishes non-exclusive classes for *some* of the Akatek nouns with respect to: inherent, prototypical or temporal position (17a,b), inherent, prototypical or temporal shape (17c,d), number of dimensions and size (17e,f), shape, number of dimensions and size (17g,k).

- (17) a. *wa'an* 'erect objects'
 b. *k'itan* 'objects separated one from another'
 c. *kupan* 'bent objects, half-a-circle-shaped objects'
 d. *xoyan* 'circle-shaped and coiled-up objects'
 e. *patxan* 'wide and flat shaped objects'
 f. *jenan* 'two-dimensional extended objects'
 g. *k'olan* 'spherical objects'
 h. *b'ilan* 'spherical small objects'
 i. *pilan* 'big spherical or oval objects'
 j. *xilan* 'two- or three-dimensional round objects'
 k. *jilan* 'three-dimensional objects with longitudinal shape'

Only nouns denoting concrete entities with a specific dimension and shape can combine with sortal numeral classifiers, thus abstract nouns, nominalizations as well as names referring to spirits, air and many others cannot combine with sortal classifiers. On the other hand, the sortal numeral classifiers are by no means obligatory even with concrete nouns. On the contrary, numeral phrases with sortal numeral classifiers are rare in everyday speech. I have not found any token of cases such as the ones illustrated in (16) within an extensive corpus of texts and conversations. All the data in which sortal classifiers appear come from elicitation sessions and informal interviews with speakers at the market. This is remarkable when we compare the use of sortal numeral classifiers in Akatek with their use and frequency in other Mayan languages such as Tzeltal and Tzotzil. Quantifying constructions in Tzotzil and Tzeltal require sortal numeral classifiers, whereas in Akatek only the classificatory suffixes (cf. section 1.1) are required. Thus, the most common quantifying expressions to render similar meanings to the examples in (16) are illustrated in (18).

- (18) a. *'ox-eb'* *'aan*
 three-NUMCLF corncob
 'three corncobs'
 b. *kaa-(e)b'* *poon* *yalixh-taj*
 two-NUMCLF plum small-PL
 'two small plums'
 c. *miman* *steel* *wan* *'ox-wan* *winqaj*
 big A3.height PL three-NUMCLF man
 'The three men are tall.'

I have already suggested that two of the classificatory suffixes grammaticalized from sortal numeral classifiers. The hypothetical path of grammaticalization is based on both internal and external evidence. The first piece of evidence is internal and refers to the fact that sortal numeral classifiers, such as the ones illustrated in (16), can occupy the

slot of the classificatory suffixes. The structures (19a,b) are semantically equivalent.

- (19) a. *kaa-(e)b'* *xoyan* *'ixim* *paat*
 two-NUMCLF SORT.NUMCLF NCLF tortilla
 round objects
 'two tortillas'
 b. *kaa-xoyan* *'ixim* *paat*
 two-SORT.NUMCLF NCLF tortilla
 'two tortillas'

In Akatek the configuration in (19b) is much less frequent than the configuration illustrated in (19a) both in elicited contexts and in informal interviews. The opposite is true in Tzeltalan languages from which I bring the external piece of evidence. In Tzotzil, for example (de León 1988: 64), sortal numeral classifiers also appear in two alternate constructions. In the first type of construction the sortal classifier headed by the particle *ta* follows a general classifier *-ib'* which is cognate with the Akatek morpheme *-eb'* 'classificatory suffix for inanimates', as in (20a). In the second type of construction the sortal numeral classifier appears directly suffixed to the quantifier, as in (20b). In Tzotzil the construction illustrated in (20b) is the most frequent.

- (20) a. *ch-ib'* *ta* *kot* *buro*
 two-NUMCLF PREP SORT.NUMCLF donkey
 on four feet
 'two donkeys'
 b. *ch-kot* *buro*
 two-SORT.NUMCLF donkey
 on four feet
 'two donkeys'

I am suggesting that the structure in (19a) above was the former classifier construction in Akatek from which the classificatory suffixes *k'on* < *k'onan* and *wan* < *wa'an* grammaticalized. The second hypothetical step occurred when the sortal classifiers *k'onan* and *wa'an* were used in the type of construction illustrated in (19b). Within this later structure the two former sortal classifiers underwent phonological and semantic changes and entered into a paradigmatic relation with the general classificatory suffix *-eb'*. The classificatory suffixes set differentiated both in formal and semantic complexity from the larger sortal classifier set. No other sortal classifier has followed the path of formal and semantic change of *k'on* and *wan*. That is, in Akatek sortal numeral classifiers following the numeral still maintain their phonological integrity, i.e.

they are bisyllabic, and their semantics is organized on principles other than animacy.

From a semantic point of view the question can be raised whether the sortal classifier in Akatek supplies non-inherent information to the noun with which it combines. This is a relevant question because in the studies of languages with large sets of classifiers it is often argued that classifiers retain their semantic specificity and that one of the functions of classifiers is to create new lexical terms. Berlin (1968), for example, has argued that in Tzeltal classifiers are attributive modifiers. In his description of the Tzeltal classificatory system he calls them 'temporal classifiers'. The morphosyntactic and semantic pieces of evidence point out that the sortal classifiers in Akatek do not have derivative capacity and are not attributive modifiers. Sortal classifiers precede the head noun whereas attributive modifiers (adjectives and relative clauses) follow the nominal head. Thus, from a purely structural point of view, it cannot be said that classifiers are attributive modifiers to the head. To illustrate this, contrast the following pair of examples. In (21a) a postnominal positional functions as a restrictive modifier of the noun with which it combines. In contrast in (21b) the same positional preceding the head noun functions as a sortal classifier.

- (21) kup-an (POSITIONAL) 'lying down forming a middle circle shape [three dimensional objects]'
- | | | | | | |
|----|---|--------------|-------------|-------|--------------------|
| a. | | NUMERAL | NOUN | | ADJECTIVE |
| | 'ey | 'ox-k'on | no' | wakax | kupan-ey-uj |
| | EXIST | three-NUMCLF | NCLF | cow | lying-DIR:down-IRR |
| | 'There are three cows that are lying down.' | | | | |
| b. | | NUMERAL | CLF | | NOUN |
| | 'ey | 'ox-k'on | kupan | no' | wakax |
| | EXIST | three-NUMCLF | SORT.NUMCLF | NCLF | cow |
| | 'There are three cows.' | | | | |

In (21b) the positional *kupan* 'lying down' used as sortal classifier does not have an attributive function. This is self-evident considering that in this example the referent of the noun *wakax*, 'cow', is not necessarily in a lying position but can be standing up on four feet. The classifier *kupan* combines with nominals whose prototypical referents are three dimensional, long and are usually found lying down – cows, sheep, horses, dogs and other mammals.

The construction with the prenominal sortal classifier *kupan* can receive its own postnominal adjectives. This is illustrated in (22). In (22a)

kupan appears twice in the construction. The first token functions as a sortal classifier and the second token functions as a restrictive modifier. In (22b) the positional stem *kupan* appears in the classifier slot. The positional stem *linan* 'standing erect', functioning as a restrictive modifier, follows the noun. The semantic compatibility between the modifier, 'standing up', and the prenominal classifier, 'lying down', in (22b) shows clearly that the positional stem does not retain its semantic specificity when functioning as classifier.

- (22) a. 'ey 'ox-k'on kupan no' wakax
 EXIST three-NUMCLF SORT.NUMCLF NCLF cow
 kupan-ey-uj
 lying-DIR:down-IRR
 'There are three cows that are lying down.'
- b. 'ey 'ox-k'on kupan no' wakax
 EXIST three-NUMCLF SORT.NUMCLF NCLF cow
 linan-ok-uj
 standing-DIR:down-IRR
 'There are three cows that are standing up.'

However, there are some cases that seem to point in the opposite direction. That is, there are cases of nominal expressions in which the default semantic reading of the noun depends in part on the semantic specificity of the sortal classifier with which it combines. An example of this is shown in (23).

- (23) a. 'ox-eb' kupan 'ixim paat
 three-NUMCLF SORT.NUMCLF NCLF tortilla
 half_a_circle_shape
 'three (half-folded) tortillas'
- b. 'ox-eb' k'itan 'ixim paat
 separate
 'three (separate) tortillas'
- c. 'ox-eb' jenan 'ixim paat
 two_dimensions_and_extended
 'three (non-round) tortillas'
- d. 'ox-eb' xoyan 'ixim paat
 circle shape
 'three tortillas'

Sortal numeral classifiers differ in this respect from classificatory suffixes because with this last set there is no possibility of paradigmatic selection. Each noun is compatible with only one classificatory suffix but some nouns are compatible with more than one sortal classifier. However,

the classifier morphemes in the examples in (23) do not restrict the reference of the noun as an attributive modifier does. In all the cases in (23) the noun can have its own attributive modifier and the modifier would occur always in postnominal position. Furthermore, the postnominal modifier can echo the semantics of the sortal classifier or, on the contrary, it can restrict the reference in a way which clashes with the semantics of the positional roots from where sortal classifiers were recruited. To illustrate the first case contrast (23d) and (24) where the positional *xoyan* occurs twice in the same nominal expression. In the first token it functions as a sortal classifier whereas in the second token it functions as an attributive modifier which echoes the semantics of the sortal classifier.

- (24) 'ey 'ox-eb' xoyan 'ixim paat
 EXIST three-NUMCLF SORT.NUMCLF NCLF tortilla
xoyan-ok-oj
 round-DIR:in-IRR
 'There are three tortillas that are round.'

On the other hand, the semantics of the positional *xoyan* 'round' in (25), which provides the restrictive meaning of the nominal expression, dissects from the semantics of the positional root *kupan* from where the classifier *kupan* was derived. Thus, example (25), similar to (22b), shows that the sortal classifier does not discriminate possible semantic readings in the way attributive modifiers do. The specific semantic reading of the nominal expression in (23) is only a default reading which varies depending of the attributive modifier with which the noun combines.

- (25) 'ey 'ox-eb' kupan 'ixim paat
 EXIST three-NUMCLF SORT.NUMCLF NCLF tortilla
 half_a_circle_shape
xoyan-ok-oj
 round-DIR:in-IRR
 'There are three tortillas that are round.'

Similar to classificatory suffixes, sortal classifiers may be employed as anaphoric devices, tracking a previous referent, as in (26), or as anaphoric devices recovering referents that are negotiated by the communicative interaction, as in (27).

- (26) a. jay'-k'on kupan no' me' xatxon
 how.many-NUMCLF SORT.NUMCLF NCLF sheep sold
 'How many sheep did you sell?'
 b. 'ox-k'on kupan
 three-NUMCLF SORT.NUMCLF
 'Three of them.'

- (27) a. jantaj stool junun jilan
 how.much its.price each.one SORT.NUMCLF
 'How much is each one (corn cob)?'
 b. weinte sentawo junun jilan
 twenty cents each.one SORT.NUMCLF
 'Twenty cents each one.'

In sum, the set of sortal numeral classifiers shares several of the prototypical features of classifier systems such as those well known in Southeast Asian languages. The rather open set of sortal classifiers functions as an individuating device just like the classificatory suffixes do. The similarity in function between sortal classifiers and classificatory suffixes might explain why the use of the first set is uncommon, considering that the more grammaticalized system (the second set) is sufficient to convey that the noun has been individuated. The anaphoric use of sortal classifier is an additional function that usually correlates with classifier systems of all kinds. The principle of categorization exploited by Akatek sortal classifiers is based on shape and arrangement of the figure. All sortal classifiers are recruited from the class of positional roots. Unlike numeral classifiers of other languages, Akatek sortal numeral classifiers occur in quantifying nominal expressions in which the numeral or quantifier is already modified by a classifier belonging to another paradigm. In fact, I have proposed that sortal numeral classifiers were the source from which two classificatory suffixes were derived. I have shown that even though in the case of sortal numeral classifiers there is a wider possibility of paradigmatic selection among the members of the set, the categorizing morphemes do not express attributive meaning. In this system the criteria for assigning the noun to a particular semantic class can depend either on the prototypical permanent or on the temporal shape or arrangement that the referent of the noun exhibits. In this sense the semantic assignment to a particular class is much more complex than within the system of classificatory suffixes in which the categorizing morpheme reproduces animacy features of the modified noun and each noun only belongs to one class.

1.2.1 Mensuratives are not numeral classifiers

It is a well-known fact that in most numeral classifier languages, mensuratives and collective terms share morphosyntactic properties with classifiers (cf. Greenberg 1972, 1978). This fact has brought about confusion in the study of classificatory systems. First of all, it is a widespread assumption that the difference between languages such as English and languages that use numeral classifiers has to be related to

the fact that in the languages of the second group all nouns are mass terms. As a consequence of this supposition it has often been argued that measuring and collective words are also classificatory morphemes. The treatment of mensuratives within the same category as classifiers has misled the contrastive-typological study of languages. It has been claimed that in languages such as Tzeltal there are more than four hundred classificatory morphemes and that in languages of Southeast Asia the classificatory paradigms are formed by more than two hundred members (cf. Dixon 1982).

In Akatek, in addition to the semantic differences, there is morphosyntactic evidence that mensuratives and sortal classifiers are two distinct categories.

Mensuratives but not classifiers express properties that are extrinsic to the lexical meaning of the nouns with which they co-occur. Mensuratives denote the type of arrangement of the figure in units or containers that are necessary for mathematical operations. Even though there is always lexical selection between noun and mensurative, the type of lexical selection is not necessarily classificatory. Every language will have mensuratives because every language has mass nouns. In order to count liquids or extensions, containers and measuring units are required but this is not something particular to a specific type of language.

A morphosyntactic piece of evidence corroborates the semantic distinction between mensuratives and classifiers. We have already shown that in quantifying constructions the numeral triggers semantic agreement, by means of classificatory suffixes, with the head noun it modifies. The classificatory suffixes copy an inherent semantic property of the head noun. This is illustrated once more in (28).

- (28) a. 'ey kaa-k'on no' chee
 EXIST two-NUMCLF NCLF horse
 animal
 'There are two horses.'
- b. 'ey kaa-wan 'ix 'ix
 EXIST two-NUMCLF NCLF woman
 human
 'There are two women.'
- c. 'ey kaa-eb' 'an 'on
 EXIST two-NUMCLF NCLF avocado
 inanimate
 'There are two avocados.'

In section 1.2 it has been shown that classificatory suffixes can co-occur with sortal classifiers. They can also co-occur with mensuratives but the numeral and the classificatory suffixes exhibit two patterns of agreement depending on whether they co-occur with a following sortal numeral classifier or with a measuring term. Classificatory suffixes agree with the noun in cases of quantifying expressions with an intervening sortal numeral classifier. On the other hand, in quantifying constructions with mensuratives the classificatory suffix agrees with the mensurative and not with the mass noun. These facts suggest that mensuratives and sortal classifiers play a different morphosyntactic function in quantifying constructions. In expressions with sortal classifiers the head is the classified noun. However, in quantifying expressions with mensuratives, the head of the construction is the mensurative. To illustrate this, consider the following pair of examples. In (29a) a sortal numeral classifier occupies the slot following the numeral. The suffix *-k'on*, classifier for animals, is in semantic agreement with the head noun *wakax* 'cow'.

- (29) a. NUMERAL MODIF HEAD
 'ey 'ox-k'on kupan no' wakax
 EXIST three-NUMCLF SORT.NUMCLF NCLF cow
 animal lying animal
 'There are three cows.'
- b. *'ey 'ox-eb' kupan no' wakax

In contrast, in (30) the slot following the numeral is occupied by a mensurative. The inflectional morpheme *-eb'*, classifier for inanimates, is in semantic agreement with the mensurative *tinan* 'group, herd' and not with the noun *wakax* 'cow' which would require the classifier for animals (*-k'on*). The noun *wakax* in this case is a modifier of the mensurative.

- (30) a. NUMERAL HEAD MODIF
 'ey 'ox-eb' tinan no' wakax
 EXIST three-NUMCLF MENS NCLF cow
 animal group animal
 'There are three groups of cows.'
- b. *'ey 'ox-k'on tinan no' wakax

To sum up, both semantic and morphosyntactic criteria support the claim that sortal numeral classifiers and mensuratives are two separate categories. There is no doubt that both of these morphosyntactic lexical items share a common function. Both mensuratives and

sortal numeral classifiers individuate otherwise transnumeral or non-individuated nouns. However, Akatek provides crucial evidence that even in languages in which all nouns are non-individuated (languages with numeral classifiers) a distinction between mass vs. non-mass nouns is appropriate. Two additional pieces of evidence support this distinction. First, all numeral expressions obligatorily require a mensurative when combining with mass nouns; in contrast numeral expressions do not demand sortal numeral classifiers when combining with non-mass nouns. However, they do demand classificatory suffixes but these can be shown to be distinct from mensuratives by their different morphosyntactic slots and possibility of co-occurrence as demonstrated above. Second, mass nouns require mensuratives in combination with all numbers (including *jun* 'one'), in contrast, non-mass nouns do not combine with classificatory suffixes when occurring with the number *jun* 'one'.

1.3 Plural for humans

Above I suggested that Akatek nouns are neutral with respect to number. The reference of nouns is interpreted as singular when combining with *jun* 'one' or as a multiple set of entities when combining with other numbers, quantifiers or one of the two non-inflectional plural markers, the morphemes *wan* or *eb'*. None of these formal devices is obligatory in nominal expressions and thus the interpretation of a noun as singular or plural, where not explicitly marked, depends on discourse grounds.

The two plural morphemes precede nouns. The morpheme *wan* occurs with all non-mass nouns without distinguishing semantic classes, as in (31). In contrast, the plural *eb'* only occurs with the same set of nouns which also occur with the classificatory suffix for humans (*-wan*), as in (32).⁴ For this reason the plural *eb'* is also a categorizing morpheme.⁵

- (31) a. Humans
xhi wan 'ilomchee tu' tet rimares tu'
 said PL muleteer DIST to Rimares DIST
 'The muleteers told Rimares.' (T)
- b. Animals
'ey wan no' chee mula chistayne
 EXIST PL NCL horse mule take.care.of
 'He was taking care of the mules.' (T)

- c. Inanimates
xin qa'e' chisqoj'ey te' yib'an wan konob' tu'
 then wind throw tree on.top PL town DIST
 '... then the wind tossed trees on top of those towns.' (T)
- (32) a. Humans
asi' 'i' eb' naj qetb'i tu'
 go! carry HUM.PL NCLF our.companion DIST
 'Go and bring our companions!' (T)
- b. Animals
/// no' chee
 NCL horse
 'the horse/s'
- c. Inanimates
/// tx'an tx'an
 NCL rope
 'the rope/s'
- The plural marker *eb'* is also used as a reference-tracking device. However, in anaphoric contexts *eb'* is no longer classificatory since it replaces nominals of all categories and not only nominals with human reference. The pronoun *eb'* refers to humans in (33), to animals in (34) and to inanimates in (35).
- (33) Humans
 a. *maxtoo eb' b'eel*
 went PRO later
 '... they (the muleteers) went off.' (T)
- b. *max'apmi eb' b'ey sti' a' minan paam ja'*
 arrived PRO PREP its.shore NCL big lagoon water
 'They came to the bank of the lagoon.' (T)
- (34) Animals
ja' no' chee kuman b'ey tx'omb'al ja' eb'
 FOC NCL horse we.bought PREP market FOC PRO
xkameloj
 died
 'The horses we bought in the market were the ones who died.'
- (35) Inanimates
ja' 'ixim 'aan kuman b'ey tx'omb'al ja' eb'
 FOC NCL corn-cob we.bought PREP market FOC PRO
xsloeytoj no' tx'ow
 they.ate NCL rats
 'The corncobs we bought in the market were the ones that the rats ate.'

In sum, nominal expressions can optionally be marked with one of the two plural markers to make explicit that the reference of a noun is plural. Of the two plural modifiers only *eb'* is a classificatory device for human nouns. None of the two plural markers is classificatory in anaphoric contexts since both *eb'* and *wan* may be pro-forms for non-mass nominals.

1.4 Noun classifiers

The fourth classificatory system I will discuss here is the noun classifier paradigm. Akatek noun classifiers are grammaticalized morphemes that derived from nouns. The Akatek set consists of fourteen classifiers. For eleven of them we can still recognize the sources from which they derived. This is shown in (36):

(36) NCLF	Source		Domain
<i>naj</i>	<i>winaj</i>	'man'	human
<i>'ix</i>	<i>ix</i>	'woman'	
<i>k'o</i>	?	'honorific'	
<i>yab'</i>	?	'familiar'	
<i>no'</i>	<i>noq'</i>	'animal'	animal
<i>te'</i>	<i>te'</i>	'tree'	inanimate
<i>ch'en</i>	<i>ch'een</i>	'rock'	
<i>(i)xim</i>	<i>'ixim</i>	'corn'	
<i>tx'an</i>	<i>tx'an</i>	'thread'	
<i>tx'otx'</i>	<i>tx'ootx'</i>	'soil/dirt'	
<i>a'</i>	<i>ja'</i>	'water'	
<i>ka'</i>	<i>kaq'</i>	'fire'	
<i>tz'am</i>	<i>'atz'am</i>	'salt'	
<i>an</i>	?	'vegetable'	

Noun classifiers occur in two different morphosyntactic environments. They appear in nominal expressions as unstressed adnominal elements, as in (37a), or as stressed pro-forms, as in (37b).

- (37) a. *tatol chinchax an yuu naj smam_konob'*
 because.if I.am.found CL1S by NCLF king
 '... because if I am found by the king.'
- b. *chinsma'_kam náj an*
 he.kill.me PRO CL1S
 'He is going to kill me.'

This type of nominal classifier system is not widespread in the Mayan languages and it is cross-linguistically much less frequent than numeral

classifier systems. Within the Mayan family only six languages of the Cuchumatanes area have noun classifiers. Four of these languages belong to the Q'anjob'alan branch (Akatek, Q'anjob'al, Jakaltek and Chuj) and two others belong to the Mamean group (Ixil and Northern Mam). Craig (1986b, 1990) has argued that this system is an innovative characteristic of the languages of the Cuchumatán area. Formally similar noun classifier systems have been reported in some dialects of Mixtec, an Otomanguean language spoken in Mexico (De León 1988), and in the Australian language Yidiny (Dixon 1982).

In Q'anjob'alan languages there are three characteristics of this system which corroborate its recent development. First, the principles for categorizing the nominals in this system are easily identified. Thus, the classification is semantically very transparent. Second, not all the nouns of the language can be categorized by noun classifiers. Third, the use of noun classifiers is facultative.

The first four members of the paradigm in (36) combine with nominals which refer to human beings, saints and mythological animals. The classifier *no'* derived from the noun *noq'* 'animal' classifies nominals referring to animals and animal products, fungi and plastic products. The other members of the set classify the nouns depending on the prominent material substance of their referents. There are other particular principles that operate for the classification but in all cases the assignment of a noun to a specific class is motivated in a predictable way. All the loan nouns are assigned to a particular class if the material of the referent of the noun is easily identified. The names for cars, planes and objects made with wire are assigned to the class for rock and metals. The names of new grains belong to the class that the classifier for corn and derived products categorizes.

The second piece of evidence which corroborates a recent development of this system is the fact that some subsets of nominals in the language cannot be classified: abstract nouns (prayer, song, story); nominalizations of verbs that do not have concrete reference (sleeping, dreaming, eating); time expressions (year, week); locative nouns (market, church, mountain); body parts and nouns of objects constituted by a mixture of several unidentified substances (garbage, food).

The third feature which differentiates this set of classifiers from more grammaticalized categorization systems refers to the fact that noun classifiers are facultative morphemes, i.e. no nominal construction or anaphoric context obligatorily requires noun classifiers. As an illustration, compare how the same referent is handled in two different paragraphs

within the same narrative. In (37) above, the noun classifier occurs as a nominal adjunct of *smam konob'* 'the king' in the first clause, and as an anaphoric pronoun in the second clause. On the other hand, in (38), under similar syntactic conditions the noun classifier does not appear either as a nominal adjunct in the first clause or as an anaphoric pronoun in the second clause – the absence of a noun classifier is signalled with ///. In (38b) the referent is recovered by anaphoric inference (zero anaphora).

- (38) a. *xhi* /// *smam_konob'* *tu'*
 said king DIST
 '... said the king'
- b. *maxjowi* ///
 he.was.angry
 'He was angry.'

The noun classifier can appear as the only element combining with the noun as in (39a) or it can combine with other prenominal and postnominal modifiers, (39b–g).

- (39) a. NCLF and noun:
NCLF N
naj me'
 NCLF sheep
 'the sheep'
- b. NCLF with possessive and adjective:
NCLF POSS N ADJ
yib'an jun no' naj in-mam 'icham an
 on.top one animal NCLF A1-father old CLIs
 '... on the horse of my grandfather' (T)
- c. NCLF with plural and numeral:
PL NCLF NUM
yetoj eb' naj kaa-wan 'ox-wan
 with HUM.PL NCLF two-NUMCLF three-NUMCLF
POSS-N
w-uxhtaj an
 A1-cousin CLIs
 '... with two or three cousins' (T)
- d. NCLF with nouns in apposition:
NCLF N N
tx'otx' konob' san migel
 NCLF town Saint Miguel
 'the town of San Miguel' (T)

- e. NCLF with demonstrative:
NCLF N DEMONSTR
no' txitam tu'
 NCLF pig DIST
 'these pigs' (T)
- f. NCLF with noun in apposition and demonstrative:
NCLF N(APPOSIT) N DEMONSTR
naj 'umin maltin tu'
 NCLF boy Martin DIST
 'that little Martin' (T)
- g. NCLF with 'one' and noun in apposition:
ONE NCLF N(APPOSIT) N
'ey jun naj 'icham me'
 EXIST one NCL old.man sheep
 'It was an old sheep.' (T)

Since there is no morphosyntactic environment which demands noun classifiers and since there is no adnominal element which triggers or prevents their use in nominal expressions the following question arises: what does motivate the use of noun classifiers? To respond to this question I will bring into the discussion the grammatical contexts that forbid the use of noun classifiers and then I will identify some of the pragmatic principles that call for their use.

There are several grammatical contexts which ban the use of noun classifiers. Nominals in vocative use cannot combine with noun classifiers. Consider the following examples:

- (40) *tinani' xin Maltin, chival each manajach 'ey amul*
 now then Martin I.say to.you was.not.you EXIST your.sin
 'Now Martin, I tell you that wasn't your fault.' (T)
- (41) *chachinkol an chikay*
 I.help.you CLIs mother
 'I am going to help you mother.' (T)

In non-vocative constructions *Maltin* may combine with the classifier *naj* (e.g. (43) below) whereas *chikay* may combine with the classifier 'ix. Thus, only nominal expressions with third-person referents may occur with noun classifiers.

The other contexts where nouns cannot combine with noun classifiers have the common feature of being syntactic environments which call for non-individuated and non-referential nouns. Examples of these contexts are shown in (42).

- (42) a. Object Incorporation
x-in-uk'-w-an-i *an*
 COM-B1-drink-AP-alcohol-ITV CL1S
 'I got drunk.'
- b. Nominalizations with Generic Noun
yik'tial jul-o no' ma ma'-o tz'ikin
 story hunt-NMZR animal or hit-NMZR bird
 'the animal-hunting or the bird-hitting story' (T)
- c. Indefinite Noun
kutzan ojelk'al ol junoj laab'a kin
 it.seems go.out DIR some snake to.us
 '... it seems that some kind of snake would appear in front of us.' (T)
- d. Generic Nouns
puch tzetal chitxoni 'eyla poon 'eyla wale'
 many things they.sell there.are plums there.are sugar.cane
'eyla 'is
 there.are potatoes
 '... they sell many things there. There are plums, sugar cane, potatoes ...' (T)
- e. Noun with Non-Verbal Predicate Function
malin-ø sb'i 'ix
 Mary-B3 her.name PRO/she
 'Her name was Mary.' (T)

In contrast, all nouns occurring in expressions with noun classifiers are interpreted as third-person referential and individuated nouns. But the question posed above has not been answered entirely since not all nominals are modified by noun classifiers in contexts in which the semantic reading of the noun is referential and individuated. Take, for instance, the case of proper nouns. Proper nouns always bring about a referential and individuated semantic reading; however, in discourse, this subset of nouns does not obligatorily combine with noun classifiers. Two paragraphs from the same narration illustrate this. In (43) the two tokens of the proper name *Maltin* combine with the noun classifier *naj* whereas in (44) the two tokens of the same proper name referring to the same participant do not co-occur with *naj*.

- (43) a. [... when it cleared up]
 b. *maxtoo 'ix 'ixnam xutx naj Maltin q'ano jek*
 went NCL old.lady his.mother NCL Martin ask credit
q'ap tu'
 cloth DIST
 'Martin's mother went to ask for clothes on credit.'

- c. [She arrived before the king]
 – Father, are you here?
 – Well here I am, madam.
 – Why have you come?
- d. *tol maxinxhejtej naj wune' Maltin each ti' mamim*
 that he.sent.me NCLF my.son Martin to.you PROX father
 'My son Martin sent me here, father.'
- (44) a. [... all together they will give me the money]
 b. *xhi /// Maltin tu' tet xutx tu'*
 said Martin DIST to his.mother DIST
 'said Martin to his mother'
- c. [I really hope you're right my son]
 d. *xhi xutx /// Maltin tu'*
 said his.mother Martin DIST
 'said Martin's mother'

The presence or absence of noun classifiers is due to discourse-pragmatic factors rather than syntactic ones. In narratives, most of the instances of a noun with a classifier coincides with a thematically important participant in discourse, i.e. a participant that will be subsequently mentioned in foregrounded episodes. Only nouns previously marked with a noun classifier can be recovered anaphorically by means of a noun classifier. In the foregrounded episode of (43) the noun *Maltin* appears with a classifier. The passage in (45) below is the continuation of (43). Notice that in the anaphoric mentions of the same referent the classifier *naj* is used.

- (45) a. *tolab' ojawa' yijatz naj*
 that you.will.give his.load PRO
 'He wants you to give him some merchandise.'
- b. [said the old lady
 – What kind of merchandise? Said the king]
- c. *tol chawa' nioj q'ap sek naj*
 that you.give little cloth his.credit PRO
 'He wants you to give him some clothes on credit.'
- d. *tol chiyoche naj chitxonwi*
 that he.wants PRO sell
 'that he wants to sell'
- e. [Oh, said the king]
- f. *tatol chiyoche naj chitxonwi xin*
 if.that he.wants PRO sell then
 'if he wants some to sell'

- g. *chiwa' tet naj*
I.give to PRO
'I will give them to him.'
- h. *chawal tet naj*
you.say to PRO
'You say to him'
- i. *chiya'pax stool naj*
he.give.back his.payment PRO
'He will pay back.'
- j. *man tuk'al chisq'aneltoj naj*
NEG just he.ask.for PRO
'That he doesn't just ask . . .'

On the other hand, if the participant plays a role in sections of the narrative that are backgrounded, the noun does not occur with the noun classifier. In (44) above the foregrounded section is the direct speech whereas the backgrounded section is the explicit evidential use of the verb 'say' where the untagged noun *Maltin* represents the source of the quotation.

In sum, noun classifiers are used to explicitly mark third-person nominals as individuated, referential and thematically important items in discourse. In contrast, non-individuated and non-referential nominals as well as nominals which refer to participants of backgrounded sections of discourse are not tagged with noun classifiers.

1.4.1 The grammaticalization of noun classifiers

I defined a noun classifier as a grammaticalized version of a noun that originally occurred in apposition with another noun. Other appositional nouns do not belong to the paradigm of noun classifiers for three reasons. First, appositional nouns retain their own lexical stress and have not undergone any phonological shift. Second, appositional nouns occupy a fixed position immediately previous to the noun, whereas noun classifiers can occur preceding other pronominal modifiers. And third, appositional nouns cannot function as anaphoric devices in subsequent discourse.

Comparative data from other Mayan languages with noun classifiers and internal evidence suggest that appositional nouns that became classifiers were first reanalysed as markers of referential nouns and thematically prominent participants. A further development occurs when they were reanalysed as pronominal devices to maintain referent continuity in discourse. From the fourteen members of the set in (36),

we can easily trace the nominal source of eleven classifiers. In the process of grammatical change the classifier morphemes have lost phonological substance. Three of the bisyllabic etymological sources became monosyllabic classifiers. The long vowels in two of the source nouns became short vowels. Two other members underwent segmental reduction. The different changes that the sources of classifiers have undergone are shown in (46).

(46) NCLF SOURCE-NOUN

- a. Loss of the first syllable
naj winaj 'man'
xim ixim 'corn'
tz'am atz'am 'salt'
- b. Vowel shortening
tx'otx' tx'ootx' 'soil/dirt'
ch'en ch'een 'rock'
- c. Segmental reduction
no' noq' 'animal'
a' ja' 'water'

The fact that noun classifiers do not carry stress when functioning as noun adjuncts is another symptom of their grammaticized status.

A further morphosyntactic characteristic that confirms the grammaticized status of noun classifiers is their distribution. Internal and external evidence suggest that noun classifiers were reanalysed from a former syntagmatic structure in which the etymological source of the classifier preceded the head noun. That is, the source item functioned as an appositional noun in pronominal position. The four Q'anjob'alan languages that developed noun classifiers vary with respect to the size of their paradigm. In terms of size the range of variation among the languages differ from nineteen morphemes in Jakaltek to twelve morphemes in San Sebastián Coatán Chuj. The four Q'anjob'alan languages share a core set of ten classificatory morphemes (man, woman, animal, wood, stone, corn, thread, dirt, salt and water). In addition to this core set of classifiers each particular language developed an independent subset. Thus, we are in a position to compare the use of a grammaticalized noun classifier in one language with its ungrammaticalized cognate in another language. One of the independent developments occurred in the sister language Q'anjob'al. In Q'anjob'al the complete or reduced version of the noun *'icham* 'old man' occurs in four different contexts. The complete form *'icham* occurs as an independent

noun (with its own modifiers) and as an apposition noun with a restrictive function. The reduced version, the form *cham*, belongs to the paradigm of grammaticalized noun classifiers. The morpheme *cham* exhibits both functions that define a classifier in these languages: the morpheme tags a following noun as referential and important participant in discourse and also substitutes a nominal previously introduced in discourse. In contrast, the cognate morpheme in Akatek, the form *'icham* 'old man', only occurs as an independent noun or as an appositional noun. In the following Akatek example the noun *'icham* occurs in an appositional slot.

- (47) a. *maxeyol* *naj* *xool* *eb'* *naj* *'icham* *b'alam*
 he.come.down PRO among HUM.PL NCLF old.man tiger
 'He came down among the male tigers.'
- b. *maxxi'caa* *eb'* *naj* *'icham* *b'alam*
 got.scared HUM.PL NCLF old.man tiger
 'The male tigers got scared.'
- c. *maxtoo* *eb'* *naj*
 left HUM.PL PRO
 'they (the male tigers) left'
- d. ... *xhi* *naj* *'icham* *b'alam* *axka* ...
 said NCLF old.man tiger thus
 '... said the male tiger' (T)

The morpheme *'icham* 'old man' in Akatek still maintains its formal and semantic integrity. Unlike the grammaticalized classifiers, the appositional morpheme *'icham* does affect the semantic reading of the nominal expression because it restricts the range of reference to a reduced type of tigers, i.e. the male ones. The classifier *cham* in Q'anjob'al, on the other hand, reproduces the inherent lexical information encoded in the noun with which it combines. Another difference between Akatek *'icham* and the Q'anjob'al classifier *cham* is their distribution. The Akatek appositional noun *'icham* cannot be separated from the nominal head. The classifier *cham*, on the other hand, can be separated from the head by other modifiers.

To sum up, the fact that other modifiers can intervene between the classifier and the head noun, but not between the unreduced appositional noun and the head noun, illustrates their different syntactic status. The scope of the classifiers is the entire nominal expression; on the other hand, the scope of non-grammaticalized appositions is just the nominal head.

2 SUMMARY AND DISCUSSION

The goal of this chapter was to bring into discussion within the studies of classifier languages data from Akatek, a multiple classifier language. From the evidence discussed, the questions posed in the introduction can be answered as follows. Akatek requires classifiers because nouns in this language are non-individuated. The existence of different patterns of quantifying constructions and the difference between mensuratives and classifiers support the often ignored distinction in classifier languages between mass and non-mass nouns.

The four Akatek sets of noun classification have several features in common. All of them have a double role. They can function as adnominal elements or as pro-forms that maintain the referent continuity in the discourse. The members of three sets (classificatory suffixes, sortal numeral classifiers and noun classifiers) grammaticalized from lexical morphemes, and between each particular set the degree of grammaticalization varies. The sources of the two numeral classificatory sets were the positional stems. The sources of the noun classifier set were nouns. The use of classificatory suffixes depends completely on morphosyntactic factors whereas the use of the other three classificatory devices is less conventionalized and depends more on discourse-pragmatic factors.

The four classifier paradigms that were discussed here use three different semantic principles for the categorization of nouns. The classificatory suffix paradigm and the plural are based on animacy, the sortal numeral classifier paradigm is based on prototypical shape and arrangement of the nominal referent, and the noun classifier paradigm is based on the inherent nature or the material substance of the nominal referent.

None of the classificatory items from the four sets are attributive morphemes since none of the classifiers add new semantic information to the noun with which it combines. The phonological changes of the current classifiers together with their morphosyntactic behaviour is evidence that the originally lexical items are being used as pure grammatical devices. The two Akatek numeral classifier paradigms individuate inherently transnumeral nouns in contexts in which individuation is necessary, namely quantitative operations. Noun classifiers, on the other hand, mark the otherwise neutral nominal as individuated and referential but also tag thematically important participants in foregrounded discourse.

The use of classificatory devices in Akatek is not restricted only to spoken language. In fact, Akatek speakers have a fifth, non-linguistic, classificatory system which makes use of manual gestures. The semiotics of this fifth subsystem is based on the inherent nature of the object and is used when the members of the community measure some particular objects in *absentia*. For example, when someone wants to refer to the size of a plant she raises her hand with its back oriented towards the ground and its palm facing the sky. The shape and orientation of the hand vary if the referent is a bird, an adult human being, a child, a mammal, a serpent etc. The classes are even more specific than those found in the four other grammatical subsystems of the language. This suggests that classification is deeply embedded not only in grammatical but also in cultural routines. A further step in the study of categorization in this language would be to consider the interdependence between the linguistic and non-linguistic facts.

NOTES

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- 1 The examples are glossed exhaustively only when the glosses are necessary for the discussion. The letter (T) after the translation of the example indicates that the data come from narrative texts or conversations. The grammatical abbreviations used in the examples are: A – set A (possessive and ergative marker); ADJ – adjective; AP – antipassive; B – set B (absolutive marker); CL1S – clitic for first person singular; COM – completive aspect; DIR – directional; DIST – distal; EXIST – existential; FOC – focus; HUM.PL – plural for humans; IMP – imperative; IRR – irrealis; ITV – intransitive thematic ending; MENS – mensurative; N – noun; NCLF – noun classifier; NMZR – nominalizer; NUMCLF – numeral classificatory suffix; PAST – past; PL – plural; POSIT – positional formative; PREP – preposition; PRO – pronoun; PROX – proximal; SORT.NUMCLF – sortal numeral classifier; TRANS – transitivizer; VL – possessive suffix; 1,2,3s/p – first, second, third person singular or plural.
- 2 The etymology of the third member of the paradigm, the suffix *-eb'*, is not transparent. This morpheme appears in many other Mayan languages as a plural morpheme or as a general numeral classifier.
- 3 For a detailed study of this group of roots in Q'anjob'al see Martin (1977).

- 4 In Akatek folk tales it is common to portray animal participants with human properties. Thus in folk tales both human and animal nouns combine with the classificatory suffix *-wan* and the plural marker *eb'*.
- 5 Jakalteek (Craig 1986b, 1986c), also a Q'anjob'al language, has two plural markers. The morpheme *heb'* occurs with nouns referring to humans and the morpheme *hej* occurs with nouns referring to animals. Inanimate nouns do not take any plural markers.

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Ants, ancestors and medicine: a semantic and pragmatic account of classifier constructions in Arrernte (Central Australia)

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I INTRODUCTION

At first glance, Mparntwe Arrernte (Pama-Nyungan, Australian) appears to possess lexical noun classifiers in the mode of Yidiny (Pama-Nyungan, Australian) and Jakalte (Kanjobalan, Mayan). In fact, this is how I myself have previously described the language (Wilkins 1989, 1993). However, first appearances can be misleading, and the purpose of this chapter is to present an alternative account of the Mparntwe Arrernte facts which argues for what may initially seem like an anomalous position – namely, that a language can have classifier constructions without having classifiers.

The prior description faltered because it did not do the semantic and discourse work that was needed to justify the position it took. Given the fact that *all* of the would-be noun classifiers in Mparntwe Arrernte also have an independent existence as generic nouns,¹ an unaddressed implication of the prior account is that such forms are therefore regularly polysemous (or heterosemous). But no semantic description, beyond mere glossing, was given for the relevant forms, nor was any attempt made to investigate the discourse function of these forms and the constructions they enter into. In fact, while there is a considerable literature exploring the discourse properties of numeral classifiers, relatively little has been said about the discourse properties of lexical noun classifiers of the Australian type which have no quantifying function. The current study attempts to make up for these deficiencies. In particular, it attempts to elaborate a brief statement made by Goddard (1985: 47) with respect to similar phenomena in Yankunytjatjara. He notes: 'a living kangaroo is referred to as *kuka malu* ["game/meat kangaroo" – DPW] only when it is being thought of as game (in which case it may indeed