The semantic domains of numeral classifiers in Kammu

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ABSTRACT

This thesis aims at presenting the semantic domains of the numeral classifiers in Kammu by analysing the group of nouns that each classifier can be used with. As some alternations are possible due to semantic or pragmatic reasons these must be considered as well. The work is thus descriptive, but some typological comparisons will be undertaken, mainly based on Aikhenvald's *Classifiers* (2000) and Adams and Conklin's work on Austro-Asiatic (1973) as well as later work by Adams (1986). The system turns out to be unexpectedly simple as regards the animate classifiers. As regards classifiers based on physical properties and function, there are problematic cases, comparable with the classifier system of any other language. The complex logic behind these semantic domains are obviously based on cognitive processes but intertwined with function, which is culture-specific.

1. INTRODUCTION

Classifiers are a linguistic reflection of categorization of the world by the human mind. In a language that uses classifiers, nouns and classifiers make up a whole semantic entity, where none of them can be excluded. Every noun is associated to one or more classifiers; where there is a choice of several, the choice will be dependent on which sense the speaker wants to convey. For example, the Kammu noun *sɁɔ́ɔŋ* means 'wooden stick, log' when counted with the classifier *lém*, but 'tree' when used with *túut*. The noun itself has an unspecified meaning of 'wood' and can only overtly refer more specifically by the use of a classifier. In Kammu, classifiers are obligatory in contexts of counting, and are thus called numeral classifiers.

Classifier systems are fully semantic, though conventional, and although there are common typological features involved, every language has a unique set of classifiers with semantic domains that are normally difficult to define. This is because culture has a major impact on what we regard as fundamental categories, but the cognitive processes involved make them typologically comparable. The way in which different languages choose to categorize nouns is dependent upon how humans categorize entities of the world.

The purpose of this thesis is to sketch out the semantic domains in the classifier system of the Austro-Asiatic language Kammu. In this endeavour I use the *Kammu Yùan – English dictionary* (Svantesson et al. (forthcoming)) which is based on the native Kammu Damrong Tayanin, who also assists as an informant.

The Kammu classifier system has not previously been thoroughly investigated; this thesis is a descriptive part of a basis for many interesting research areas. My aim here is thus not to explain *why* the Kammu classifier system is organized the way that it is, but to describe *how* it seems to be. Senft (2000: 24) writes: "This ethno-semantic descriptive and analytical research is rather complex and presupposes the linguist's thorough and deep delving into the language to be described." To fulfil these requirements, I rely on my informant and my supervisor.

1.1 Disposition

The introduction in chapter 1 was meant to motivate this thesis and to set the theoretical frame of it.

Chapters 2 and 3 will give brief information about relevant aspects of classifiers that should be born in mind when reading my analyses of them, and that I have found important in understanding a word category that is not used in my native language. In chapter 2, relevant literature on the topic will be presented, followed by background knowledge on classifiers. Chapter 3 will give a brief typological introduction to Kammu and the nature of its classifiers.

Chapter 4 contains the main part of the thesis: the classifiers of Kammu will be introduced and analysed in order to be defined according to semantic domains.

Chapter 5 contains a summary of the results and a final discussion based primarily on typology, as well as suggestions for further research.

References are given in chapter 6.

2. BACKGROUND

2.1 presents the most relevant literature on classifiers. 2.2 deals with categorization of entities in general; due to lack of space I am forced to restrict myself to giving references in many cases. In 2.3 I discuss different aspects of classifiers.

2.1 Literature

The literature on classifiers is not extensive and consensus has not been reached in every domain. Several different terms based on varying definitions are used by different authors. The basis of my typological discussions will mainly be Aikhenvald's *Classifiers* (2000) since she brings up most of the research on the topic up till then. (The title of the book, confusingly, includes both classifier systems and agreement systems (gender) and thus refers to all types of classification.) The typological work in Austro-Asiatic by Adams and Conklin (1973) and Adams (1986) is important for the analyses made in chapter 4 and will be presented in section 3.2.

Other literature that has been used will be referred to when relevant.

2.2 Classification

2.2.1 Cognition and culture

As language is connected to the mind and the world, linguistic classification will be affected by both. Human categorization is not categorical but based on graded membership. Boundaries are fuzzy and it is up to us humans to classify the world as we experience it. Classification as it surfaces in languages of the world mirrors how we actually associate entities with each other. (For a summary of the general principles of categorization, see Lakoff 1986: 17-18.)

The cognitive categorization is mainly based on our vision, and hardly at all on the other four senses. As regards numeral classifiers, Adams and Conklin (1973: 8) conclude: "One of the most fascinating facts of numeral classification is its dependence on the visual feature of form". Of course, vision enables us to classify entities without a deeper intimacy with them, but they also theoreticize that: "Counting requires some distance from the entities to be grouped because it requires that inclusion in the counted group be based on some obvious similarity or set of similarities among the items. Perhaps this fact makes the other senses less useful because the impressions gained from them are more time based and transitory."

As we interact with objects in the world physically, socially and functionally, however, the cultural impact becomes greater. As already said, the physical properties of an entity are mainly visualized, but its function depends on how we normally handle it. The functional aspects of categorization are therefore parallel with cultural (social) aspects. An entity may thus be categorized mainly visually, or functionally, or both at the same time.

The choices of classification are very often language-specific. In North Amazonian languages that are spoken by people who live along big rivers there is a specific classifier for canoes. We can clearly see the motivation for the existence of such a classifier, as Aikhenvald points out: "In quite a few cases we can explain what social, cultural, or even environmental parameter a classifier correlates with in a given society" (2000: 350). Aikhenvald continues to say that, on the other hand "... we will never be able to predict the ways in which non-linguistic parameters would be reflected in the grammar of a language." That is, although we can explain the existence of certain classifiers in a cultural context (a classifier for canoes *because of* environment of rivers), we cannot go the other way around and predict which classifiers will exist in a given culture (environment of rivers *not therefore* a classifier for canoes). She also argues that, as functional features must depend on the society where a language is spoken, physical properties have not convincingly been shown to be so readily affected (see Aikhenvald 2000: 345).

As Inoue (2000: 218, 220) points out, language is connotational, not denotational. Reference to an entity is always affected by culture and cognition, both in the speaker's and the hearer's understanding of what is communicated, because cultural assumptions are made in a pragmatic context.

2.2.2 Prototypes and extension

The semantic complexity of categories in classification systems may be explained using different approaches. One of them is to find a common feature. However, categories are not always homogeneous like the set of nouns used with the classifier *kòn* in Kammu, which all denote humans. In fact, it is very common for a classifier to be associated with entities that are heterogeneous and seem to lack any common feature. In these cases one must try to approach the category from a native's point of view: through association, having the cultural context in mind. For instance, the classifier *hon* in Japanese denotes e.g. sticks, pencils, hits in baseball, rolls of tape, letters, TV programmes and guitars. These entities actually have more and less central members, and the central members have come to include less central ones at some point in time, while these in turn have been associated with even less central members, and so on. The central members are *prototypical* for the category, while the process that includes peripheral members is called *semantic extension*. Prototypes in the Japanese *hon* category are sticks and pencils, which have a salient, 1-dimensional characteristic, while e.g. TV programmes are included for other reasons: it starts out with letters previously having the form of long, thin scrolls and being written with pencils. Both are classified by *hon* according to their shape. The function of letters is however one of communication, and just as telephone calls involve communication at a distance and also take *hon*, TV programmes are finally included via an extension (Lakoff 1986: 25-30). Apparently, various chaining extensions from the prototype have occurred. These extensions can be based on all sorts of associations, like belief, experience or metonymy (where the conceptual structure decides the association, see Lakoff 1986: 33). An example of the latter is

the process that has made plant parts prototypical for geometrical categories in Austro-Asiatic languages (see section 3.2). Extension can also be based on metaphor, where concrete words are given an abstract meaning (see discussion in Aikhenvald 2000: 311-16).

Prototype theory claims that categorizing an object is based on central members of the type, prototypes. If enough features of an object are the same as a certain prototype x, the object will be categorized as "alike x" and "a sort of Y", thus subordinate to the category Y. For instance a penguin, which is less evidently a bird, shares some features with the, prototypical, bird robin and is thus alike the robin (x) and a sort of bird (Y). Of course, few objects share all the basic features of the prototype and so when only some of them are shared, the boundaries become fuzzy. In Garo, a category is based on its central members being round, including fruits. This is perfectly understandable for e.g. oranges, but the category also includes the peripheral member banana. The explanation for this is that the category has become extended to include bananas because all other fruits are. Such an extension may be regarded as illogical for outsiders, but it is a common process. In Ponapean, a category that denotes long things includes 'song', because it is metaphorically regarded as long (Adams and Conklin 1973: 2).

2.2.3 Parameters for classification

The parameters involved in classification are not certain. Aikhenvald gives an outline of previous sketches, but it is very brief and unexplained. Below it is given with the help of other references, mainly to give an idea of universal tendencies. The relevant parameters for Kammu will be discussed in chapter 4. Other attempts of giving classification categories will first be mentioned.

Denny (1976) proposed that classification has to do with the way we interact with objects in the world, divided into: social interactions (human social properties such as status, age and sex); physical interactions (properties of objects such as material, shape etc.); functional interactions (the use of objects). Allan (1977) found seven categories of classification based on perception (not function), but never distinguished e.g. classifiers from noun classes. These are: material, shape, consistency, size, locus, arrangement in space and quantity. Senft (2000: 24) gives the following parameters for classification: "+/- Human; Human & Social Status; Human & Kinship relation; +/- Animate; Sex; Shape/Dimension; Size; Consistency; Function; Arrangement; Habitat; Number/Amount/Mass/Group; Measure; Weight; Time; Action; +/- Visible" without discussing them further. Some of his parameters are secondary (i.e. they must occur with primary ones) and others can be translated into Aikhenvald's description.

According to Aikhenvald then, the three basic classes of parameters are: animacy, physical properties and function. Animacy will throughout the thesis be regarded as involving the criterion life, but not necessarily both life and locomotion, in order to be able to include humans and animals as well as plants. The former two categories are of course distinguished by both criteria, while plants are distin-

guished by life but not by locomotion. These three categories may be subordinated separately. Moreover, supernatural beings may be classified as some sort of animate or otherwise. (One might argue that animates are also based on physical properties, such as *volitional motion*, but there is no space for that discussion here, and hardly any need.)

Some animates, especially lower ones on the animacy scale, like plants, may instead be classified according to their physical properties, which inanimates normally are. These seem to be exclusively visualized; none of the other senses are known to play a role in classification. Cultural knowledge is, as previously discussed, added to the physical apprehension. This is important to remember as some parameters below are obviously questionable from a visualized point of view, like consistency and constitution, and should be connected to tactility. However, vision and knowledge of the world can probably render such parameters without tactile intimacy with objects. After all, we do not have to become wet from feeling water every time we want to talk about it to confirm that it is a liquid. In the same way, the roof of a Kammu house does not have to be touched in order to know that it is hard and inflexible.

The most common parameters according to Aikhenvald are listed below.

(a) EXTENDEDNESS has to do with an entity having extension in space. A non-extended entity does not, but is spoken of in an abstract, general manner. Of course, all other parameters based on visualization must also involve extension, but here the distinction is what *form* the extension takes. Three subcategories are very common: *dimensionality*, *shape* and *orientation*. There are, of course, three dimensions: one-dimensional, "long", two-dimensional, "flat" and three-dimensional, "spherical". Examples of shape can be round or irregular, but also pointed, linear etc. Orientation involves extension vertically or horizontally.

(b) INTERIORICITY divides the aspect of an entity into inner and outer, e.g. ring and hole.

(c) BOUNDEDNESS refers to an entity having a delimitation or not. A sheet of paper is bounded, but a field may not be.

(d) SIZE is binary: an entity is either big or small.

(e) CONSISTENCY has to do with the plasticity of an object, where the most common binary distinction is rigid/flexible.

(f) CONSTITUTION involves the physical state of an entity, such as liquid or solid.

(g) MATERIAL, out of which an entity is made, may be e.g. wood or metal.

These are often intimately connected to functional properties.

(h) FUNCTION is highly culture-specifically defined. Classifiers which are mainly functional may be e.g. tools or vehicles. *Value* may also be encoded in classifier systems, e.g. for valuable objects.

The above parameters involve time-stable properties, whereas the two properties below are temporary. They are often rendered by mensural classifiers.

      (i) ARRANGEMENT refers to the configuration of objects, e.g. objects in a row.
      (j) QUANTA involves quantity of entities, e.g. bunch.

Many of the above parameters are often fused together. Not only within the class of physical properties, but also between physical and functional properties. Culture always has a minor or major impact. The latter clearly holds for specific classifiers. Some of the above parameters are primary and some secondary. The former need to be present for secondary features to be involved in a category. Secondary features of Austro-Asiatic are discussed in section 3.2.

Hierarchical models have previously been attempted to render the semantic systems of classifiers. They are however not optimal since classifiers may well be defined by several different properties at the same time. (See Aikhenvald 2000: 316-17 and Inoue 2000 for discussion.)

2.3 Classifiers

2.3.1 Functions

A language consists of representations of entities and events. The grammatical surface typically has entities consist of nouns and events of verbs. According to Givóns (1979, 1984) theory on time stability, nouns are relatively atemporal, whereas verbs require temporal fixing. Moreover, abstract nouns are always derived, normally from verbs. Adjectives fall somewhere in between nouns and verbs on the scale, which is given in fig. 2.3.1a (after Givón 1984: 55). In languages where there is no separate word class of adjectives, the more temporally stable attributes are encoded as nouns and the less temporally stable ones as verbs. So in Kammu, where adjectival modifiers are considered by Svantesson (1983: 78) to make out a class of their own and are called 'expressives'. Syntactically, however, they are VP constituents and may be regarded as adverbs.

nouns	adjectives	verbs
Most time-stable		Least time-stable

Figure 2.3.1a: *Scale of temporal stability.*

I find this especially interesting because derivations from one word class to another may sometimes correlate with temporal stability (which I will get back to in section 4.2.9). That is, when a word in a certain word class is derived from a word class to the left of it on the scale, the meaning of it is more time-stable than a word in the same class which is derived from the right of it. Compare for example the less time-stable noun *motion* which is derived from the verb *move*.

In order to try to grasp the role of classifiers I will try to put them on this scale in figure 2.3.1b below. First, a few things on classifiers need to be said.

Adjectival modifiers may be compared with classifiers from the point of view that they both deal with properties of nouns. (But see Frawley 1992: 486-7 for a discussion on modifiers.) Adjectives may refer to the whole domain of the noun modified or to a single property only. Classifiers, however, must refer to the whole domain in a categorical manner.

Therefore, a parameter based on colour, which refers to a single property, has never been found in a classifier system. Shape is, on the other hand, common, since it categorizes an entity. Adjectival modifiers thus sometimes have the function of classifying the noun, but classifiers inevitably classify the noun.

Figure 2.3.1b shows a modified version of Givóns scale of temporal stability where classifiers are hypothetically included and adjectives excluded since they are not a class of their own in Kammu. Note how, syntactically, there is a dividing line between classifiers and verbs on this scale since nouns and classifiers belong to the NP in Kammu, whereas verbs belong to the VP. I will refer back to this scale in section 4.2.9.

nouns   classifiers   verbs
Most time-stable   Least time-stable

Figure 2.3.1b: *Modified scale of temporal stability.*

As Grinevald (2000: 61) points out then, classifiers are not lexical, nor grammatical. On the scale of systems of nominal classification, the lexical extreme would consist of class terms, generic nouns, and the grammatical extreme of gender systems – classifiers lie inbetween on this scale (see fig. 2.3.1c). They are used for marking categories of nouns beyond the lexical noun words, but are not as grammaticalized as gender since they lack agreement. (So-called noun classes also constitute agreement systems, which is why Corbett (1991) regards them as being gender, in opposition to classifier systems.)

Lexical   Grammatical
measure terms/class terms   *classifiers*   *gender*
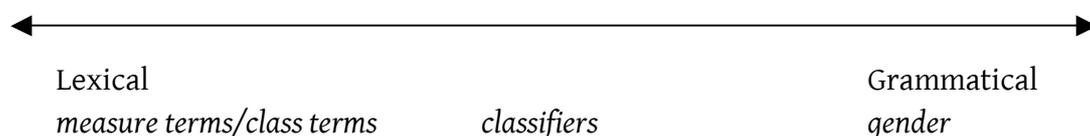
**Figure 2.3.1c:** *Systems of nominal classification – modified figure from Grinevald (2000: 61).*

Classifiers are obligatory (if only in a certain context), like gender, whereas adjectives are optional. But as gender tends to involve more than a single property and is therefore divided into only a few classes, individual classifiers tend to involve fewer properties and therefore normally consist of a larger number. For instance, the

Indo-European gender, roughly divided into two or three classes, involves so many properties that we cannot distinguish which they are. Classifiers tend to constitute an open class, whereas gender is normally a closed one. Classifiers do not necessarily classify all nouns, whereas gender always does. Classifiers are independent, but gender is often fused with other categories, such as definiteness, number and case. Formal and informal use may affect the use of classifiers, gender has no variation in register.

Classifiers are in some languages obligatory in every contextual environment, then called noun classifiers. Common in the languages of South-East Asia though, including Kammu, is the compulsory use of classifiers in counting contexts, then called numeral classifiers. (For all the different noun categorisation devices, with a universal perspective, see Bisang 2002.)

As can be expected from diachronic change, classifiers can develop into gender (although gender may also develop from anaphoric pronouns). Corbett (1991: 136-43, 310-318) discusses the matter and refers to Greenberg (1978) who found that classifiers spread to demonstratives, which turn into gender distinguishing articles. Classifiers themselves normally come from nouns that begin to fill the obligatory classifier slot, often losing their nominal use. In Kammu, most classifiers are direct loans from Tai (with similar semantic domains, even if developed) and have thus never been nouns in Kammu. Mithun (1986: 388) points out that classifier lexemes normally, when used as nouns, have a specific, basic-level meaning, but a superordinate, general meaning when used as classifiers.

The reason why noun classifiers are obligatory is that they are part of the phrase. The noun only has a general meaning while the classifier may decide which aspect of the noun is meant, and only together do they form a specific meaning. Moreover, classifiers must not be compared to Indo-European gender, as they are not inherent but can be altered according to context. One aspect of a certain noun may be chosen according to the intension of the speaker, either adding information or supplementing the meaning of the noun (see Aikhenvald 2000: 319-20).

As for numeral classifiers the function is probably similar to the above. The meaning of the classifiers in such phrases must be specifically important when counting entities (as already discussed in section 2.2). Adams (1986) focuses primarily on Austro-Asiatic numeral classifiers; she claims that variation in the usage of numeral classifiers is common and that this variation is due to, on the one hand, the properties that are relevant. Remember the example from Kammu where *sʔɔ́ɔŋ* means 'wooden stick, log' when counted with the classifier *lém*, but 'tree' when used with *túut* (chapter 1). On the other hand, the alternation may be due to reasons of discourse, poetry, emotional state, formal or informal speech and such (see Adams 1986: 241-6). We will see examples of these possible alternations (but not their contextual reasons) in chapter 4.

Denny (1976, 1986) argued that classifier phrases also serve the purpose of narrowing the frame of possible verbs that may be expected. Conversely, a classifier

together with a verb may give information about the noun, whereas the noun only helps to identify a referent.

Corbett points to the connection between language type and categorization strategy. Isolating languages, like those in East and South-East Asia, where Kammu is found, tend to have classifiers but not gender, whereas fusional languages tend to have gender systems. (But there are exceptions: see Corbett 1991: 137.) The reason is of course that classifiers normally are isolated words, while gender tends to surface as affixes.

Classifiers are also useful for discourse-pragmatic reasons. As I do not examine the Kammu classifiers in discourse here, I will only briefly point to these different uses. (For further discussions, see Aikhenvald 2000: 320-333 and Senft 2004.) Numeral classifiers are used to individuate entities and cannot be omitted from an anaphoric phrase. Nouns can however often be omitted since the important properties of it, when counted, are established through the classifier. All types of classifier are used as anaphoric pronouns and for referent tracking. Their use may also correlate with definiteness, specificity and topical continuity.

As an illustration of the actual use of classifiers, Downing (1986: 348) reports from the use of classifiers in Japanese statistically, concluding surprisingly that only 5% of the 500 classifier usages studied had an "informative" value, and that 24% of the usages included the "totally uninformative" general classifier. Moreover, Erbaugh (1986) found that the general classifier in Chinese is hundreds of times more frequent than special classifiers (not to be confused with unique classifiers), and that classifier usage varies enormously both among speakers and within the same speaker, even when the context should render the same result. Special classifiers in Chinese come from a core set of 22 classifiers, more formal classifiers are hardly ever used. Most interesting of all is that Chinese speakers claim to have strict rules for when special classifiers should be used, but studying their speech reveals this completely different story.

2.3.2 Typologically common strategies for categorization

Classifier systems may be frozen in a language, so that newly introduced nouns are left unclassified, or they may be productive, making all nouns classified. Even so, if nouns are not classified these tend to be abstract ones. The reason may also be that the noun lacks a salient feature. Different strategies for categorizing unconventionally classified nouns are used within a language according to context.

There is often a *general* classifier which may be used (Aikhenvald 2000: 335): a) for *residue* nouns that fall out of the domain of any existing classifiers, b) as *default* classifier as there is no salient characteristic, or no such characteristic is regarded as contextually necessary to point out or c) for *unspecified referent function*, when an entity is unknown. (The general function is often taken up by Indo-European neuter gender.)

Instead of applying a general classifier for these types of noun, the language may repeat the noun and put it in the classifier slot, a type of classifier called *repeaters*. An example from Kammu:

cǐa	*mòoy*	*cǐa*
generation	one	CLF

'a generation'

The difference in use between repeaters and the general classifier in Kammu will be discussed in chapter 4.

Unique classifiers are used for a certain *kind* of noun that may include only e.g. umbrellas, cars or nets.

2.3.3 Acquisition

Although the acquisition of classifiers has only been studied in a few languages analysis seems to indicate that classifiers are acquired much later than gender. In general, semantics are very important when learning numeral classifiers, unlike for gender acquisition. Animate classifiers are thus acquired first. To simplify the system, overgeneralisation (use of the general classifier) and overspecialisation (use of repeaters) are made. Word order mistakes hardly ever occur, it is only when filling in an accurate classifier in the slot that mistakes are made. The difficulty lies in combining intralinguistic and extralinguistic categories. Classifier systems are conventional and tightly coupled to cultural knowledge, which is why the development of children's use of classifiers cannot be expected to be quick. In conclusion, the acquisition of classifiers resembles that of nouns rather than that of gender. Existing studies on language dissolution support the studies on children. (For references and discussion, see Aikhenvald 2000: 417-421.)

3. KAMMU

For the culture of the Kammu from an anthropological aspect I refer to Lundström and Svantesson (2005), Tayanin and Lindell (1991), Lindell et al. (1982) and http://www.ling.lu.se/persons/Damrong/kammu.html. Certain details that are relevant in understanding the meaning of the classifiers will be discussed in their respective sections in chapter 4.

3.1 The language of Kammu

Kammu is an Austro-Asiatic language of the Mon-Khmer branch. It has half a million speakers in northern Laos and parts of Thailand, Vietnam and China. The dialect that my data are based on is Yùan, which is spoken in the area of Namtha of Laos. Most speakers of Kammu in Laos are bilingual with Lao as a second language. Kammu has no writing.

Kammu is, like the other languages of South East Asia, an extremely isolating language in that it has no inflectional morphology. SVO is the basic word order. Syllables have an onset consisting of one or two consonants and a coda of a maximum of one consonant. Morphemes normally do not have two syllables. The dialect described here has two tones. As previously mentioned, adjectives surface as verbs.

For further information on the grammar of Kammu, see Svantesson (1983) and Holmer et al. (forthcoming).

3.2 Austro-Asiatic numeral classifiers

Most Austro-Asiatic languages have numeral classifiers; they are widespread across the languages of East and Southeast Asia and Oceania. (For a geographical outline, see Aikhenvald 2000: 121-2.)

Adams (1986) discusses the underlying metaphors for classifiers in the Asian area and considers many of them to be based on plants and plant parts (as earlier found in Adams and Conklin 1973), as will be presented below. Even if this is true, the items of the group that are combined with a certain classifier define the meaning of it, a group that changes over time according to its own logic, as discussed in section 2.2.2.

Some common classifications discussed by Adams and Conklin (1973) will be presented in order to set the background for the system of Kammu.

All classifier systems have a basic distinction of human/non-human or animate/inanimate. Humans are often distinguished subordinately on the basis of kinship, social status etc. Sex, perhaps unexpectedly, is never a primary feature in numeral classification systems.

Animals are often not distinguished as such, but divided into several categories, in many cases not including animals alone. More common instead, is a distinc-

tion based on inanimate categories such as physical properties, e.g. dimensionality and size.

Plants are claimed to never be differentiated as a single animate category, but as several, often based on other, inanimate properties. If at all classified by kind, these may be e.g. trees or flowers, or distinguished by plant parts, such as stalk, leaf and fruit. These three parts are the most common used for classification, and are often used to include other, inanimate items similar to them. In fact they represent the three dimensions (long, flat and round respectively) and must have been extended to include inanimate objects accordingly.

The three dimensions are primary physical parameters for classification. Secondary parameters include other features in Aikhenvald's table of categorization as given in section 2.2.3, discussed by Adams and Conklin (1973: 5-7; their terms within parentheses) as: Consistency (rigidity/flexibility); Size; Empty/Full; Shape (irregularity/regularity); Part/Whole; Arrangement (horizontal/vertical); and Boundedness (edgedness) (the latter two being applicable to 1-dimensional objects only). They cannot be present on their own but, if at all present, must be combined with a primary feature in any classifier. Material is not included, perhaps because it does not occur in their study.

3.3 Kammu classifiers

Numeral classifiers in Kammu are lexical; they are independent lexemes and can be considered an open class because of the wide use of repeaters (see section 2.3.2). The classifier system is fully semantic. As previously stated, most classifiers are loans from Tai that are hardly ever used as nouns. The Kammu classifier system is however not identical with the ones found in Tai languages, but has developed according to its own logic. (For a sketch of nominal classification in Lao, see Enfield 2004.) Adams and Conklin (1972: 1) found that the order of a classifier phrase has four possibilites because the numeral and the classifier have to be contiguous:

classifier – numeral – noun
noun – classifier – numeral
numeral – classifier – noun
noun – numeral - classifier

Kammu has the order: noun – numeral – classifier. For example:

scàaŋ   *mòoy*   *tóo*
elephant   one   CLF
'an elephant'

As usual in numeral classifier systems, many nouns can take varying classifiers depending on the intended meaning of them. Basically, only concrete nouns must take a classifier in quantifying constructions, but some abstract exceptions exist. The system is productive: newly introduced nouns can be classified. Kammu has the

general classifier *àn*, the use of which differs from repeaters in a way that will be discussed in section 4.2.1.

3.3.1 The mensural – sortal distinction

Aikhenvald (2000: 114-120) distinguishes two subgroups of numeral classifiers: sortal and mensural. Sortal classifiers refer to individuated entities, saying something about their inherent nature. Many classifiers do however deal with temporary states, for instance of arrangement, and these will be separated accordingly. The phrase *pràay mòoy tróoŋ* 'one row of deadfall traps' is temporary, but the classifier *tróoŋ* fills the obligatory classifier slot and can only be combined with the noun *pràay*. The arrangement classification is conventional, but does not say much about the nature of the entity, except that here for instance it has the physical possibility of being in a row. The boundary between sortal and mensural classifiers is however fuzzy, as usual with semantic categorization. I will however bring this question up again in section 4.2.9.

Grammatically, there are no differences between sortal and mensural classifiers. Any word that fills the classifier slot is a classifier. The difference between classifiers, whether sortal or mensural, and quantifiers seems somewhat clearer. A quantifier refers to the exact quantity of an entity, as in *five head of cattle*. Although the quantifier *head* is a noun, it is used here in a conventional manner, like a classifier. Grammatically, it could possibly fill a classifier slot in a classifier language. Semantically however, it is not a real classifier because it does not refer to a specific feature of the entity (such a claim would be pushing it a little bit too far), it does not *qualify* the noun. But since exact quantities are not used as classifiers in Kammu, this distinction is quite irrelevant here. (Cf Adams and Conklin 1973: 2 and Aikhenvald 2000: 114-120 and further references there).

I will concentrate on the separate analyses of sortal classifiers in Kammu because of their individuating categorization strategies. Mensural classifiers are discussed collectively since, individually, they are not as interesting to analyse. Each sortal classifier may normally be used by a large number of nouns, and is given in the lexicon together with the nouns (explained in section 4.1). However, each noun can vary in the use of sortal classifiers up to a certain limit, perhaps having the possibility of taking one or two different classifiers, the choice of which is dependent on the context. For instance, *lém*, the classifier for 1-dimensional entities, presupposes a 1-dimensional shape of entities rendered by a noun if it is to take *lém*; compare this with *tróoŋ* discussed above. Since mensural classifiers deal with temporary states, almost any noun can take them. These classifiers are not given in the lexicon (like sortal classifiers), because their use is not as conventionalized as the use of sortal classifiers, but rather entirely dependent on the context.

Lucy (2000: 333) questions the distinction between sortal and mensural and believes it to be a translation projection. In English, there is no need to classify *pencil* any further, saying for instance *1-dimensional pencil*, whereas the phrase *two packs of cigarettes* is a type of classifier construction. *1-dimensional* is a typical sortal classi-

fier and *pack* mensural. To claim that existent English equivalents of classifiers are distinct from other classifiers in classifier languages may however be regarded as an oversimplification of the situation. Such a two-way distinction can perhaps not be made on a cognitive basis that would fit the speakers of the language described. After all, there is no grammatical or syntactic difference in classifier languages.

Since the origin of classifiers are usually nouns (see section 2.3.1), these may give an indication of the meaning of classifiers, but normally there is some semantic change in the classifier function of a word. Some classifiers are however derived from verbs; these tend to be of the mensural kind (discussed in 4.2.9). Origins will therefore be brought up when necessary in the understanding of a classifier. All classifiers are loans unless they are explicitly stated to be Kammu words. If used as nouns, it is often in petrified contexts, such as traditional songs, but some classifiers are still used as nouns today.

3.3.2 The arrangement – measure distinction

Defining the difference between arrangement and measure can be difficult when analysing classifiers. When deciding whether, for instance, *a pack of cigarettes* refers to 1) the concrete pack, 2) the abstract measure or 3) the arrangement of cigarettes, the decision must be based on context. The first meaning is a concrete categorization of the pack, not of the cigarettes, only slightly different in meaning from the third meaning of arrangement of cigarettes in a pack. The second meaning is justified in a context such as *she smokes one pack a day*, referring to the amount of cigarettes, not her smoking of the pack itself. Here the first and the second meaning would be regarded as measures, the first of the pack itself, the second of the cigarettes that the pack contains, whereas the third one deals with arrangement of the cigarettes. This distinction is even more difficult to see for a bunch of bananas, where the size of the bunch makes no difference for the quantity of bananas: a bunch consisting of twenty bananas is one single bunch, just like a bunch of two bananas is still one bunch. A pack of cigarettes is one single pack no matter if it consists of ten cigarettes or twenty, although one may make a distinction between them by saying that the one is small while the other is normal (or large), because in our culture a normal pack consists of twenty cigarettes. In the example *she smokes one pack a day* the measure is surely exact, meaning twenty cigarettes as in the normal pack.

A measure of an entity is not an exact one, but semantically slightly different from arrangement of an entity. Moreover, one classifier may shift the meaning from one to the other depending on context. The distinction between arrangement and measure is thus a semantic one, but the intended meaning may be expressed by the whole context rather than by the use of a certain classifier. This will be exemplified in section 4.2.9.

4. ANALYSES

The analyses given below have to be seen as tentative. Classifiers are not discretely separated. Moreover, the semantics must always be considered to be of a mixed type; even if a certain property seems to be a clear semantic feature, one must remember that the surface structure of classifiers are language-specific and functional within the culture that the language is spoken. Function can thus never be excluded in the semantic analysis.

Furthermore, an extensive study of the actual use in discourse of classifiers has to be undertaken in order to get a correct understanding of them. This study is merely a first step in categorizing the numeral classifiers of Kammu; the analyses given are often uncertain but can probably become conclusive by a larger study. For some classifiers there is simply little material to work with.

The classifier system of Kammu is fully semantic. There are no exceptions to rules, we just have to find explanations for them. In doing so, the seemingly exceptional cases turn out to be the most important ones in understanding the semantics of each classifier.

4.1 Method

I started out by extracting the nouns from the *Kammu Yùan – English dictionary* (Svantesson et al. (forthcoming)), then sorted them by the classifier they took according to it; conventional classifiers are given within brackets after each noun in the lexicon. For example:

cmɔ̀ 1 *n* [*túut*] vine, liana **2** *n* [*lém, sén*] rope, string, wire, strap

For the first meaning then, the noun can only use the classifier *túut*. For the second, the noun can take the classifiers *lém* or *sén*. The difference in meaning between the two latter uses is complex enough not to be given, but is discussed in this thesis.

A classifier phrase with the noun *cmɔ̀* may thus be constituted in three different ways, with an even larger number of possible translations into English:

cmɔ̀　　*mòoy*　　*túut/lém/sén*
rope　　　one　　　CLF
'a vine... /rope...'

The analyses were initiated by looking first at all the nouns that were included under each classifier, then comparing with possible alternate classifiers to understand the dynamics of the system. The classifiers were then grouped according to their primary feature, such as animacy, dimensionality or function. Where possible, they were subgrouped further, for instance as having the feature 1-dimensionality. The classifiers that still had similar features were compared and analysed even further in order to find features that separated them. The resulting tables will be illustrated in section 4.2.

It was of course important to understand the form and function of each item that was referred to by a noun. Moreover, what was crucial in grasping the meanings, when used with different classifiers, was the visualization of them by the Kammu speakers. Thus, whenever such questions arose, I would turn to my informant and/or supervisor for help.

4.2 Semantic domains

In the beginning of each analysis of classifiers, a table is given with relevant examples of the nouns they take. Equalizer (=) means repeater (see section 2.3.2). An example of a table row may look like this:

lém

Noun	Translation	Alt clf	Comment
cmə̀	Rope, string, wire, strap	sén, túut	túut for 'vine, liana'

The noun which may use the classifier *lém* is given in the column with the name 'Noun'.

The column to the right gives the translation of the noun. This is only indicative of the meaning of the noun, since it must be understood together with a specific classifier.

To the right of the translation there is a column for alternate classifiers. Whenever a noun has a possibility of using a different classifier than the one discussed, it will be given here. Here our noun may use the classifier discussed, *lém*, but it may also take *sén* or *túut*.

The column to the far right, 'Comment' has space for additional comments that may be given about a specific row in the table. Here a comment is given for the alternate classifier *túut* to clarify that the noun has quite a different meaning when used with it.

The order of the nouns in each table is given according to a logic that suits my purposes in discussing them. The same goes for the order of the classifiers.

4.2.1 The general classifier and repeaters

This section includes the classifier *àn* as well as repeaters (=).

àn and repeaters

àn

Noun	Translation	Alt clf	Comment
klpàk	Bell		
píi	Flute		
péɛŋ	Brush		
sɔ́ɔm	Fork		
prnàay	Drill; whip, whisk, beater	lém	

smnà	Wedge	=, *lém*	
tpú	Horn	*láaŋ*	
wɨal	Wooden disc	*núay*	

=

Noun	Translation	Alt clf	Comment
bát	Document		
cmóom	Corner		
lìam	Side, edge		
páŋ	Hole, gap, opening; emptiness		
cɨa	Generation		Abstract
cɨ̌	Name		Abstract
káan	Step		Abstract
paasáa	Language		Abstract
pléeŋ	Song		Abstract
psɨam	Night, evening		Abstract
síi	Colour, paint		Abstract
rmcìim	Bit to taste		Abstract, derived
kryàp	Blinking of the eye		Abstract, derived
hrnɔ̀ɔm	Bundle	*tí*	Abstract, derived
rnlà	Hoof	*àn*	
hntràh	Tray	*núay*	

àn is the general classifier. It can be used with a wide variety of nouns, where another classifier is unthinkable or there is no salient characteristic that would make it suitable for one. (Compare with the functions given for general classifiers in 2.3.2.) As with all the following classifiers, the semantics involved in this group become clearer when comparing with the classifiers that may be chosen instead.

A common alternative is *lém*, a classifier that is associated with 1-dimensional referents with an endpoint. It turns out that the referent has to be long enough to be regarded as having this salient characteristic; if not, it takes *àn*. This seems to be because *àn* is associated with relative non-dimensionality.

Other alternatives in the study are *núay*, for 2-dimensional round, or 3-dimensional objects, and *láaŋ*, for traps and objects made of bamboo. The explanations for these are the usual ones: an object normally associated with *núay* because of it normally being e.g. round is not enough round to take *núay*; *láaŋ* will be brought up later. It could also be that the specific characteristic is not regarded as relevant in a certain context.

Another alternative for general classification is the use of repeaters (see section 2.3.2). This is especially interesting. The nouns that do take classifiers but are in fact abstract are all in the group that uses repeaters (normally abstract nouns do not use classifiers: see section 3.3). Not only are we dealing with nouns that cannot

be suitably categorized, which would normally take *àn*; if there is a common feature for all these nouns that take repeaters, it has to involve a non-extension of the referents, when talking about conceptual units in general. Extended referents would then take *àn*. Just looking at the list of nouns does not seem to make this conclusive, but it is a highly possible hypothesis, and it is a well-known phenomenon for classifier systems. Arguments for this are the many derived nouns, exemplified here by *rmcìim*, *kryàp* and *hrnɔ̀ɔm*, and the words with meanings that are difficult to visualize, like the abstract nouns, as well as the fact that alternative classifiers are found only with the very concrete nouns with meanings like 'hoof' and 'tray'. *hntràh* 'tray' is actually used with the repeater when its use is referred to, rather than its shape.

More examples of nouns that may take repeaters are given under several other classifiers. Of course, all nouns should be able to repeat themselves in a classifier phrase, since all objects may be spoken of in an unextended manner. However, some nouns do so more regularly and in a more conventional manner than others; therefore they include the repeater note (=) in the alternate classifier column in the tables.

Entities are sometimes rendered by more than one single noun. If it includes a word which is then repeated as a classifier it is still regarded as a repeater, as in:

tróɔŋ	*kné*	*mòoy*	*tróɔŋ*
track	rat	one	CLF

'a rat track'

In section 4.2.6 *tìi* and *bɔ́ɔn*, the discussion on repeaters will be continued.

4.2.2 Animacy

The classifiers below are all classifiers for animate referents.

kòn, tóo, mà, tlóh, túut, krɔ̀ɔŋ, dɔ́ɔk, tlŋɔ̀k, kryè and claŋ

The animate classifiers are rather unproblematic to define, quite unlike the examples given in section 3.2 by Adams and Conklin. The definition of animacy is the same as defined in section 2.2.3 (including humans, animals and plants, according to the criterion of living beings). Tables are not necessary when it is enough to mention groups of nouns rather than to give examples.

kòn is associated with humans, with no further distinctions made, as in: *yɔ̀ mòoy kòn* 'a friend'. *kòn* is sometimes used nominally with the meaning 'man, person'.

Examples of nouns that take *tóo* are given below:

tóo

Noun	Translation	Alt clf	Comment
sét	Animal		
róoy	Spirit		

náŋsɨ	Letter, consonant	*cbáp*	
slá	Vowel		
mɔ̀k	Tattoo		

tóo takes animals as referents but also, interestingly, spirits. Spirits are hardly regarded as alike animals, but rather as in opposition to *kòn*, which would not be suitable. However, spirits are still animate and the classifier must therefore have the meaning of animate non-human.

Moreover, the classifier may oddly enough be used for letters and tattoos. *náŋsɨ* 'letter, consonant' may take the classifier *cbáp* when a text is referred to, *slá* 'vowel' may not; *mɔ̀k* is supposedly included because a tattoo normally contains written characters. The complex logic lies in the fact that *tóo* has the nominal meaning 'animal; main part; letter, written character'. The noun *tóo* must have had a different meaning in the past, developing into the different specific meanings. The use of the word as a noun in petrified contexts implies a meaning of 'body', the evolution of which is not difficult to imagine. 'Main part' is easy to understand as the body in opposition to extremities, body parts; animals of course have bodies, not an uncommon word used as a classifier for humans (see Adams 1986: 248-9); letters may perhaps be understood as the bodies of a text.

Although *tóo* is undefined as regards the gender of the referent, there are classifiers with the secondary feature of sex differentiation, when it is needed: *mà* takes female and *tlóh* male animals. No animals can occur with other classifiers than *tóo*, *mà* and *tlóh*, which is common in other classifier languages. These classifiers are Kammu words which are still used as nouns and then have the meaning 'mother' and 'male animal' respectively.

túut takes plants when the salient characteristic of these are regarded as being animate, as opposed to dead plants, and not being regarded as having a salient dimensionality (or their dimensionality is not regarded as relevant in context). Remember the example given in chapter 1, *sʔɔ́ɔŋ*, which means 'wooden stick, log' when counted with the classifier *lém*, but 'tree' when used with *túut*. All instances of alternating a classifier with *túut* refers to the animacy of the entity. Thus, *ŋɔ́ mòoy túut* 'cluster/plants of rice' refers to the plant, where the noun *ŋɔ́* means only 'rice'. Trees seem to be prototypical for the classifier, associating all plants primarily with the stalk. The use of *túut* refers to an individuated tree, and it is associated with the tree trunk, deriving from the fact that the nominal meaning of *túut* may metaphorically be 'beginning, origin; bottom'. Otherwise the noun means 'plant' or 'tree'.

krɔ̀ɔŋ, however, mixes dimensionality with animacy, including plants with stems. In fact, it is a Kammu word still being used as a noun with the meaning 'stem, stalk, straw'. The classifier meaning thus seems to be 1-dimensional. The noun *ràaŋ* takes this classifier when these features, 1-dimensional plant, are relevant in context, and *dɔ́ɔk* when the meaning of 'flower' is intended, possibly referring only to the actual flower, with petals etc., and the stem excluded. (The nominal meaning is also 'flower'.) Typically used with *ŋɔ́* 'rice', the classifier *tlŋòk* also has the intended

meaning of stem, and *kryè*, of panicle. The mentioned noun *ràaŋ* 'flower' may also be repeated, giving a non-extended meaning. When used with *túut*, the noun *ràaŋ* gets the sense 'plant, herb' instead of flower, as expected.

cǐaŋ classifies mushrooms. This Kammu noun actually means 'foot' and may have the metaphorical meaning 'base', thus referring to the foot of the mushroom. The noun is notably a word from the basic lexicon. Remember Mithun's (1986: 388) comment referred to in section 2.3.1, where classifier lexemes are said to usually have a basic-level meaning when used as nouns and a superordinate-level meaning when used as classifiers. For *cǐaŋ*, the opposite seems to be the case, since the meta-phorical meaning of the noun has been concretely specified to refer only to feet of mushrooms, whereas the noun can be general when the metaphorical meaning is intended.

Note also that mushrooms cannot take *túut* as they are not regarded as being plants, just like modern biology has it (mushrooms are a separate group, in between animals and plants, but closer to animals).

4.2.3 Dimensionality

The classifiers included under the dimensional parameter are *lém*, *sén*, *tɔ̀ər*, *phɨ̀in*, *wòŋ* and *núay*.

lém and sén

lém

Noun	Translation	Alt clf	Comment
múulìi	Cigar, cigarette		
ráaŋ	Tooth		
klə̀	Hair (on the head)	*Sén*	
khúul	Hair (on the body), feather		
crkùul	Finger, toe		
cntrĭŋ	Horn, antler; horn-like part	*Plàh, àn*	
cmə̀	Rope, string, wire, strap	*sén, túut*	*túut* for 'vine, liana'
trlɔ̀əŋ	Log	=	= for 'corpse'
pὲε	Raft	*Làm*	
plìas	Spear, bayonet	*Thían*	
tnéc	Spineless Indian bamboo	*Túut*	
pɨ̌im	Book		
pàp	Book, notebook		

sén

Noun	Translation	Alt clf	Comment
ŋɔ̀ər	Road, path, way		
crɔ́əy	Chain		

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sñéey	Release string		
sóo	Chain of big rings		

lém and *sén* take nouns that have a salient 1-dimensionality. The nominal meaning of *lém* is 'stem'. *sén* with the meaning 'string' is used only in petrified contexts.

In the study, *lém* is exemplified by a very large number of nouns. It typically takes nouns with meanings like pole, log, flute and cigar. Some interesting comparisons are appropriate here. The use of *àn* has been discussed already. *plìas* 'spear, bayonet' takes *thían* when only the blade is referred to, whereas *lém* is used for the whole tool. *túut* is used for plants when this categorization is considered relevant, as discussed above, and not the dimensionality, like *làm* is used for rafts when the function is relevant.

It is seemingly odd for the nouns *pàp* 'book, notebook' and *pɨ̈m* 'book' to take *lém*. Perhaps these are simply remnants from a time when books were scrolls and thus looked 1-dimensional. Books are not common in Kammu society and it could be that their classification has been directly borrowed from Lao. The otherwise improbable explanation of the item remaining in an odd category within a semantic system is made more probable because it is rarely seen or talked about. If used often enough it would perhaps be categorized in a more intuitive manner (but remember the Japanese classifier *hon* discussed in section 2.2.2).

sén has the specific meaning of unbounded 1-dimensionality. That is, the longness of the object is relevant, not the endings. Compare for instance *ŋòər* 'road, path, way', where the important feature is the 1-dimensional extension of the road, not the beginning or the end. Note that *khúul* 'hair (on the body)' cannot alternate the classifier with *sén*, whereas *klò* 'hair (on the head)' can. This must be because the latter is more probable to be long enough not to be considered on account of its boundedness.

tòər, phíɨn and wòŋ

tòər

Noun	Translation	Alt clf	Comment
lá	Leaf		
klhóɔk	Dry leaf on the ground		
ràap	Woven bamboo roofing		
péɛn	Board		
snlò	Dry bark		
plùu	Betel pepper	*túut*	Plant with leaves and nuts
mùun	Bamboo cover for a basket	*phíɨn*	

phíɨn

Noun	Translation	Alt clf	Comment
kón	Skirt		

mɨar	Loincloth		
pháa	Cloth		
sáat	Sleeping mat (of bamboo)		
phέɛn	Turban (consisting of a long strip of cotton cloth)		
klɨ́p	Rain hat	*núay*	

wòŋ

Noun	Translation	Alt clf	Comment
wέɛn	Ring (circle)		

tɔ̀ər, phɨ̀in and *wòŋ* are associated with 2-dimensionality. *tɔ̀ər* is a Kammu word and is still used as a noun with the meaning 'flat surface, sheet'. *phɨ̀in* and *wòŋ* are loans but the latter is also in use nominally and then means 'circle, ring, wheel'.

Items that take *tɔ̀ər* and *phɨ̀in* must be thin, indeed 2-dimensional, or they will use *àn* instead. The nouns in the *phɨ̀in*-group are all woven objects; the classifier is prototypically regarded as referring to clothes. However, *ràap* 'woven bamboo roofing' unexpectedly takes *tɔ̀ər*. To explain this one must consider the exact properties of the referred object. Unlike the nouns that may take *phɨ̀in*, *ràap* is a hard, inflexible 2-dimensional object. An additional property of *phɨ̀in* thus seems to be flexibility. A closer look at the nouns in *tɔ̀ər* reveals a possible plant metaphor of leaves (cf section 3.2). Included here are indeed *lá* 'leaf', *klhɔ́ɔk* 'dry leaf on the ground' as well as *plùu* 'betel pepper'. Regarding the latter, it is referred to as a plant having leaves rather than as being an animate plant, in which case the noun would take the classifier *túut*. The only noun that can take either classifier is *mùun* 'bamboo cover for a basket (used when it is raining)', probably depending on the hardness of the referred cover. *klɨ́p* 'rain hat' can take the classifier *núay*, probably referring primarily to its quite round shape.

wòŋ has the meaning of 2-dimensional interior hole. This includes finger-rings and other circles, but not e.g. necklaces, which are understandably not regarded as being holes.

núay

Noun	Translation	Alt clf	Comment
kíal	Melon, cucumber	*túut*	Fruit, round container
plé	Fruit		Fruit
plé tlɔ́ɔy	Banana fruit		Fruit
klɔ́ok	Bamboo bowl		Round container
któŋ	Egg		Round container
ŋɔ́	Rice corn		Round container
klɔ́ɔŋ	Seed, kernel, pip		Round container
ŋɔ́	Rice corn		Round container
túup	Hut	*láŋ*	Container

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sáalàa	Hut at a resting place	*láŋ*	Container
súm	Hunting hut		Container
k'lóok	Slit drum		Container
klàaŋ	Stone		Round
prlàaŋ	Planet, big star		Round
hntràh	Tray	=	Round
cáan	Plate		Round

núay is mainly used for 3-dimensional nouns. It is especially difficult to define, and its semantics seem to be based on three parameters derived from fruits. The group of nouns includes round things, containers, whether they are round or not (often cylindrical), and fruits.

According to the plant metaphor as discussed by Adams and Conklin (1973: 5; see section 3.2) fruits would have been the prototype for roundness, and in a sense they also contain something. It is a common metaphor, and it seems highly possible that the original meaning of the classifier had to do with fruit. The prototype must be a fruit like 'orange', which has three different parameters: roundness, container and fruit. These have each been extended to include entities of at least one of the features. The last parameter has been extended to include *plé tlɔ́ɔy* 'banana fruit' although it is not round. Here the noun *plé* 'fruit' itself is included in the NP, which makes the choice of classifier quite natural. The noun *tlɔ́ɔy* on its own would otherwise normally take the classifier *túut*, referring to the whole banana plant.

Certain nouns cannot be considered to be deep enough to actually contain, like *hntràh* 'tray' and *cáan* 'plate', but do take *núay*. *ŋɔ́* 'rice corn' also takes *núay*; it is round and looks like it contains something, as does *klàaŋ* 'stone' although it is probably mainly regarded as being round, rather than containg its own material. Interesting to note is the inclusion of stars in this group, supposedly based on their roundness. *klóok* 'bamboo bowl' does not take the classifier *láaŋ* for bamboo items, probably because it is not a salient feature. Drums are hollow and may contain things.

The huts in the *núay*-group will be discussed further in section 4.2.5 *láŋ*.

4.2.4 Material

Classifiers that include the parameter material are *thían* and *láaŋ*.

thían

Noun	Translation	Alt clf	Comment
hnlà	Spade, hoe		
mìit	Knife		
mùy	Axe		
théey	Plough		
plìas	Spear, bayonet	*lém*	*lém* for whole tool

cntrèey	Scissors		

These classifiers seem to be based on material, but this is certainly not a clear-cut distinction. As previously stated in section 4.2.3, *lém* is used when whole tools are referred to, while *thían* refers to only the blade. All these blades are sharp and forged by a smith. Most of the items in the group are also used when working in the fields, which makes a functional explanation possible – remember that function is always an underlying basis for categorization. The forged material may be a justified parameter for *thían*, but so is a mixture of function and shape, regarding the objects of the group as sharp items that may be used to cut things. There can thus be several parameters constituting the whole basis for this classifier.

láaŋ

Noun	Translation	Alt clf	Comment
prnàam	Trap		
mὲεŋ	Spring-pole snare		
mɔ̀	Crossbow		
prkà	Dam for fishing		
crɔ́	Weir		
bét	Fishhook		
càaw	Comb		
cntrĭas	Comb	*àn*	
hrnìip	Spoon		
tpú	Horn	*àn*	
klɔ́əŋ	Water-driven idiophone, clepsydra	*lém*	
klɔ́k	Small wind-driven bamboo slit-drum	*núay*	
kɔ́əŋ	Tobacco pipe		

láaŋ is associated with traps. All types of traps can be combined with *láaŋ*, and apparently crossbows, dams, weirs and fishhooks are associated with them, since they have the same function of catching animals. (For details on hunting and fishing, see Tayanin and Lindell 1991.) It is thus a classifier for items that have something to do with hunting and fishing. The nouns at the bottom of the table are however much more difficult to explain on account of being traps. My informant tells me that spoons are associated to traps because you catch food with it, like you catch an animal. By the same logic, lice and such are cought in the hair using a comb. The horn is associated to traps since, when blown, it marks the return of a trap to the village (because an animal has been caught in it and is being brought into the village). *klɔ́əŋ* and *klɔ́k* are both used for making a sound out in the fields or woods. Their primary function is to scare off animals, not to catch them. It is however easy to understand the nature of the association that has been made in order for them to be included in the classifier group. One would have to push it really hard to explain tobacco pipe

on account of its function though, much more so a function of traps. There must be a more plausible explanation.

The common denotator for most of these referents are actually their material: traps (but not fishhooks) are made out of bamboo, and so are combs, spoons and pipes. However, my informant tells me that you would use *àn* if you referred to the material of a comb. Surely the specific material, bamboo, cannot be referred to though, since the *àn*-group is mixed by several different materials. The meaning of *àn* must rather be the extension in space of the object, as discussed in section 4.2.1, and not delineated by dimensional or functional parameters.

The boundary between function and material in this group thus seems fuzzy. Looking at other nouns that do not take *láŋ*, there are several which are made out of bamboo, see for example the nouns under *núay*. Perhaps their material is seldom a salient feature and one that is easily overridden by others. Moreover, there are many items that do not take this classifier although they are used in some way in hunting or fishing. A possible concluding explanation is the often encountered one based on the dynamics of categorization. Traps, mainly being made out of bamboo, may have been extended to include a few things also made out of bamboo, things that do not have another salient feature, such as tobacco pipes. (For information on hunting and fishing among the Kammu, see Tayanin and Lindell (1991).)

4.2.5 Function

The classifiers *láŋ*, *làm*, *kán* and *cbáp* include mainly the functional parameter.

láŋ

Noun	Translation	Alt clf	Comment
kàaŋ	House, family house	*núay*	
práam	Hut (in field or by road)	*núay*	
sáalàa	Hut at a resting place	*núay*	
bóot	Church	*bɔ́ɔn*	*bɔ́ɔn* for whole area
ròoŋ	Building hall, office	*bɔ́ɔn*	*bɔ́ɔn* for whole area
mùŋ	Mosquito net	*dáaŋ*	
clǐaŋ	Buffalo pen	*núay*	
lìap	Weir		
ré	(Dry) swidden field	*tìi*	

Perhaps the most difficult classifier to define is *láŋ*. The petrified meaning is 'backside'.

Possible alternations will first be mentioned. The alternation by *kàaŋ* 'house, family house' with *núay*, instead of *láŋ*, must be because houses can be regarded as being containers. Mosquito nets may take the unique classifier for nets, *dáaŋ*. As for

the nouns that may take *bɔ́ɔn*, the whole areas are referred to, whereas the use of *láŋ* refers to buildings in an area. *tìi* and *bɔ́ɔn* will be discussed further in section 4.2.6.

Starting out with *ré* 'swidden field', a few things need to be explained (see further Lindell et al. (1982)). In the beginning of each year a new field area on the mountain slopes around the village is chosen for cultivation. A village may have two sets of 10–12 field areas that are cultivated one after another in a cycle over 10–12 years. Cultivating one area from each set within the same year enhances the chances for a good harvest because they have different kinds of soil. Working the field means that, first, the field area is cleared and then burnt twice before the sowing can begin. The sowing starts from the bottom of the slope, where early rice is sown and takes up the main part of the lower half. The rest of the half is used mainly for cotton and only a small plot for spices. The upper half is reserved for late rice and millet. Black rice and vegetables are planted around the field house. The second year of a cultivated field area may be used for minor crops of vegetables, fruit and tobacco, but the third year it is already too overgrown to be used and will lay fallow until it is chosen to be cultivated again. The second and following years, however, the field is no longer called *ré*. Huts are built in the field during the season, for tools to be kept and for resting and spending the night. The field area, classified by *tìi*, is divided into as many allotments, classified by *láŋ*, as there are families in the village. Each family owns one *láŋ*, the size of which depends on the number of family members.

A complication of defining the meaning of *láŋ*, considering the discussions above, is the informant's visualisation of the classifier as referring to roofs, because it is regarded as a sort of backside, like the back of a hand or so. For a roof to be associated to *láŋ* it should however be the type of roof illustrated to the left in fig. 4.2.5 below, otherwise it will be associated to *núay*.

láŋ   *núay*
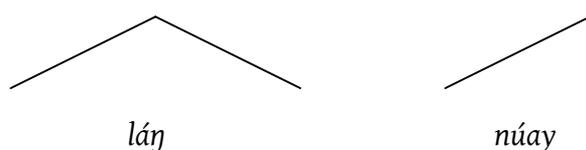
Figure 4.2.5: *Associated type of roof with the classifiers* láŋ *and* núay *respectively.*

Additionally, houses that are classified by *núay* actually include what they contain, like people and animals, whereas houses classified by *láŋ* do not. Thus *práam* 'hut (in the field or by the road)' and *sáalàa* 'hut at a resting place (for spending the night)' can take both *láŋ* and *núay* depending on the type of roof and if one refers to everyone and everything that is below the roof. *túup* 'hut' rather has a roof with the shape illustrated to the right in fig. 4.2.5, and is therefore rather classified by *núay* than by *láŋ*. *súm* 'hunting hut' has a round shape and looks rather like a tent. As it is regarded as quite unlike the roof illustrated above, *súm* is classified by *núay*.

Fields do however certainly not have roofs, and neither do some of the other items here, such as buffalo pens and weirs. Setting this aside for a moment, the

common denotator of the nouns in this group is that the locations are enclosed in some way (by roofs or some sort of walls) and that they are all associated to humans. Concerning the human aspect, these buildings – churches, houses, huts and others – are obviously for humans to spend time in. Mosquito nets likewise, unlike all other nets. Buffalo pens and weirs are for the domestically used buffaloes and fish, although here, the enclosing sense of *láŋ* is probably the main one. As little convincing as it may seem, comparison with the locations of *bɔ́ɔn* clarifies the matter. These are areas like sacred places, fields, prisons, urinals, scars and moles, balconies and sleeping-places of animals (see section 4.2.6), places that are more or less taboo for humans. As well as being enclosed, I believe that *láŋ* has the additional association to domestic use. Again, function has an underlying role to play.

Perhaps the meaning of enclosure by a roof has been extended to include enclosure by some sort of walls. A possible conclusion is that the shape referred to by *láŋ* is bounded, whether 2- or 3-dimensional. Then *láŋ* has apparently received an additional functional, domestic sense.

làm and kán

làm

Noun	Translation	Alt clf	Comment
clɔ̀ɔŋ	Boat		
pɛ̀ɛ	Raft	*lém*	
clɔ̀ɔŋ tɨ̈r	Airplane		

kán

Noun	Translation	Alt clf	Comment
lòt	Vehicle, car		
lòt kéŋ	Car		
lòt mèe	Bus		
lòt thíap	Bicycle		

làm is used for boats and airplanes, with the function of vehicles on water or in air, as opposed to land vehicles that take *kán*. The difference lies in the latter type of vehicles moving on wheels.

cbáp

Noun	Translation	Alt clf	Comment
cláaŋ	Letter, text, writing		
thóoralèek	Telegram		
náŋsɨ̈	Writing, text, letter; book	*tóo*	

cbáp is used for anything that is written – compare these with the words for books under *lém*. The latter is used for the material something is written on, not necessarily used yet, while *cbáp*, then, is used for what is actually written: text. Writing is typologically a common functional distinction, indeed pointed out by Adams and Conklin (1973: 8) as the most common primary functional category in their material.

4.2.6 Location
　　tìi and *bɔ́ɔn* are locational classifiers.

tìi and bɔ́ɔn

tìi

Noun	Translation	Alt clf	Comment
súan	Garden, plantation		
hrnàa	Wet rice field	=, *bɔ́ɔn*	
ré	(Dry) swidden field	*láŋ, bɔ́ɔn*	

bɔ́ɔn

Noun	Translation	Alt clf	Comment
kɨt	Old burial site (place in a field area where the high trees are not burnt down but are allowed to remain)		
yòom	Place in a field area where the high trees are not burnt down but are allowed to remain	=	
ríŋ	Altar, overhead shelf	=	
cntrì	Sacred place	=	
kíiw	Mountain pass	=	
kɔ̀ɔk	Pen, prison	=	
krlàŋ	Sleeping place of animals	=	
páan	Mole, birthmark	=	
pìn	Scar	=	
káat	Market		
trtàaŋ	Crossing		
síik	Urinal		
wìt	Toilet		
ròoŋ	Building hall, office	*láŋ*	*láŋ* for building
bɔ́ot	Church	*láŋ*	*láŋ* for building
ré	(Dry) swidden field	*láŋ, tìi*	

Both *tìi* and *bɔ́ɔn* are used nominally with the meaning 'place, area'. As classifiers they are also associated with areas and are thus locational. It is difficult from the groups of nouns to separate the definitions of the two.

The change to *tìi* with the noun *ré* 'swidden field' was analysed as being a complete change in meaning from referring to a portion of one family, *láŋ*, to referring to a whole field area worked over a year, *tìi*. The noun *ré* may also take *bɔ́ɔn*, referring then to a small plot within a *láŋ*. *kɨ́t* and *yòom* are, I think, interesting examples of nouns that may take *bɔ́ɔn* but not *tìi*. The nouns that take *tìi* are places that are cultivated by man. The nouns *kɨ́t* and *yòom* are, however, places that are not cultivated but within the field area. These are places where humans have not been at work. It thus seems as if there is an association to domesticity for *tìi*, as for *láŋ*, discussed in section 4.2.5. (*hrnàa* 'wet rice field' can apparently be regarded as both a place without further detail, taking *bɔ́ɔn*, and a cultivated area, when used with *tìi*.) Moreover, *tìi* is associated with bigger areas than *bɔ́ɔn*, although size is perhaps not the main parameter involved. Connected to size is also the fact that *tìi* is considered to refer to imperspicuous and *bɔ́ɔn* to perspicuous areas.

Concerning the alternations of classifiers with the other nouns, it was previously stated (in section 4.2.5 *láŋ*) that *bɔ́ɔn* invokes a whole area, whereas *láŋ* invokes only a building in that area.

Most nouns in the *bɔ́ɔn*-group can be exchanged by a repeater, where an object in the place is referred to, rather than the place itself. Let us say, for instance, that an object is located in a *cntrì* 'sacred place'. There is in such a case a bounded space that normally includes an object which is typical for that space. The object will be repeated in a classifier phrase, whereas the place would take the classifier *bɔ́ɔn*. Both the object and the space are however referred to by the noun *cntrì*.

cntrì   *mòoy*   *cntrì*
sacred   one   CLF
'One sacred object.'

cntrì   *mòoy*   *bɔ́ɔn*
sacred   one   CLF
'One sacred place.'

Note also the nouns *páan* 'mole, birthmark' and *pìn* 'scar' that can apperently be thought of both as places, when taking the classifier *bɔ́ɔn*, and as objects, when repeated. Whether the repeated *cntrì* is considered a concept (which was discussed in section 4.2.1) rather than as extended in space is hard to tell. Perhaps this is a different use of repeaters, one that specifies an object in space rather than conceptualises it, in opposition with the bounded space itself. The examples of *páan* and *pìn* are however easier to imagine in terms of concepts.

4.2.7 Unique classifiers
The classifiers in the heading below are all examples of unique classifiers.

krɨaŋ, lìan, tɿlɔ̀ɔŋ, káan, dáaŋ, sɔ́p and bɔ́ɔk

krɨaŋ

Noun	Translation	Alt clf	Comment
thóorasáp	Telephone		
thóorathát	Television		

lìan

Noun	Translation	Alt clf	Comment
mɔ̀ɔŋ	Clock		

trlɔ̀ɔŋ

Noun	Translation	Alt clf	Comment
pràay	Deadfall trap		Individual trap

káan

Noun	Translation	Alt clf	Comment
cɔ́ɔŋ	umbrella		

dáaŋ

Noun	Translation	Alt clf	Comment
sút	Mosquito net	*láŋ*	
mɔ̀ɔŋ	Fish net		
twáar	Net for catching birds		

sɔ́p

Noun	Translation	Alt clf	Comment
trsáap	River mouth	=	

bɔ́ɔk

Noun	Translation	Alt clf	Comment
knòŋ	Cannon		
lammetreey	Machine gun		
snáat	Gun		

These are examples of unique classifiers for certain *kinds* of nouns.

krɨaŋ (the nominal meaning being 'machine; equipment; object') is the classifier used for telephones and televisions, both modern inventions.

Clocks take the classifier *lìan.*

trlɔ̀ɔŋ is used with words for deadfall traps. It is a Kammu word with the nominal meaning 'corpse' or 'log'.

káan is also a Kammu word with the meaning 'step' when used as a noun. It certainly does not seem to be related to the classifier lexeme, since when so used, it is together with nouns that have the meaning of umbrellas.

Words with the meaning of nets take *dáaŋ*, focusing on any function. Note that only mosquito nets can alternate with the classifier *láŋ*.

sóp is used for rivermouths.

Even though weapons are commonly, from a typological perspective (Adams & Conklin 1973: 8), categorized separately due to their function, *bɔ́ɔk* seems to be a unique classifier that includes guns, no other weapons or shooting utilities (such as a bow and arrow).

4.2.8 Others

Classifiers that cannot be defined according to the above parameters are *plàh*, *pɔ́ɔy*, *kùu* and *kmpɔ́ŋ*.

plàh, pɔ́ɔy and kùu

plàh

Noun	Translation	Alt clf	Comment
pháak	Breast		
pnɨɨr	Wing		
rŋpùŋ	Wooden door		One out of two doors
màt	Eye	*núay*	
hrmɔ̀ɔy	Ear	*àn*	*àn* for metaphorical ear
cntrɨ̌ŋ	Horn, antler; horn-like part	*àn, lém*	

pɔ́ɔy

Noun	Translation	Alt clf	Comment
kɔ́ɔp	Shoe	*kùu, plàh*	With *plàh*: 'foot'
sntí	Bracelet, wrist chain	*kùu*	

kùu

Noun	Translation	Alt clf	Comment
thúu	Chop sticks		
crɛ́ɛŋ	Cymbal		
kltɔ̀ɔŋ	Bamboo beater, concussion tube	*lém*	

plàh and *pɔ́ɔy* are classifiers for one of a pair. They are both Kammu words with the nominal meaning 'side, part' and 'odd' respectively. *plàh* is used for natural pairs, while *pɔ́ɔy* is used for things that normally occur in pairs, artificially. *màt* 'eye' is used with *plàh* when the whole eye is referred to, while *núay* is used for only the eyeball. *hrmɔ̀ɔy* 'ear; handle' takes *plàh* when the natural ear is referred to, and *àn* for handles, which of course do not occur frequently in pairs. *cntrɨ̌ŋ* 'horn, antler'

likewise takes *plàh* when they come in pairs, *àn* for extended items with the metaphorical sense of horn-like part, and *lém* when dimensionality is relevant in context.

póɔy may be alternated by *kùu* when a full pair is counted, not just one of a pair. Typical entities included in the *póɔy*-group as well as in the *kùu*-group are shoes. The pairs under *kùu* are obviously motivated. The nominal meaning of *kùu* is also 'pair'.

An illustrative example of the difference between these three is the noun *kɔ́ɔp* 'shoe', which, when used with *plàh*, is associated with the foot, referring to one of a natural pair. When used with *póɔy*, the speaker talks about one shoe, and when *kùu* is chosen to be the classifier in the phrase, both shoes are thought of.

kmpóŋ

Noun	Translation	Alt clf	Comment
kʔáañ	Wasp's nest		
trháay	Honey comb		
kwáay	Tuber		
ré	Field	*láŋ*	

kmpóŋ means 'head' as a noun and is used both for items that look like heads, e.g. roundish like tubers, and for items that may be regarded as the head according to the metaphor of humans. Thus, both location and shape are involved depending on the intended meaning. As discussed in section 4.2.5 *láŋ*, fields in the valleys are divided by the Kammu in such a manner so that each family cultivates a portion, *láŋ*, that runs from a lower part to an upper. Thus, as a mountain can be regarded as having a foot and a top, a "head", so a field section at the top may be regarded as such. Field sections at what is considered to be the upper part of the hill are then called *kmpóŋ ré*. However, *kmpóŋ* as a classifier in the construction *ré mòoy kmpóŋ* 'one field' does *not* have this locational meaning. It might rather refer to the location of the field in comparison with the village. The classifier *kmpóŋ* is in fact regarded as having the same meaning as *láŋ*, but perhaps the construction with *kmpóŋ* does not refer as explicitly to the family ownership of the field allotment.

4.2.9 Arrangement and measures

As previously discussed (in section 3.3.1 and 3.3.2) the group of classifiers dealing with arrangement and measures, so-called mensural classifiers, semantically behave in a way different from the classifiers above. They may be used with any entity that has the physical ability to temporarily conform with the meaning of the classifier. Thus, the nouns that take them are not conventionally tied to these classifiers, and the classifiers themselves are not in principal associated with a conventional set of nouns (although there are normally typical cases). Almost anything may be used as a measure and put in the classifier slot, thus making the possible number of classifiers unlimited. For example:

múulìi   mòoy   két
cigarette   one   CLF
'One box of cigarettes.'

Note how this translation in English must be different from the translation of a sortal classifier phrase, e.g. *múulìi mòoy lém* 'one 1-dimensional cigarette'. The same goes for the following mensural classifier phrase:

màh   mòoy   krɛ̀ɛŋ
cooked rice   one   CLF
'One basket of cooked rice.'

It is often difficult to separate an arrangement meaning from a measure, and such differences must normally be understood in a given context. Several subgroups of mensural classifiers may be distinguished.

One group of classifiers includes typical arrangements. For instance, *lòor* and *póom* are used for things growing on the ground or on a stem respectively. *tróoŋ* signifies rows of things, typically used with traps and animals' tracks. Other arranging classifiers are *kláak*, which refers to a cluster of an object, a cluster of trees, rice plants or bamboo for instance, and *cntrĭas* which refers to a bunch (of bananas).

The following classifiers are typically used for cigarettes and can probably be translated by both measure and arrangement phrases: *két* refers to a box, *tút* to a carton and *sóɔŋ* to a pack. (See discussion in section 3.3.2.)

ráap is a measure for loads, which equals two baskets, and thus seems to be a somewhat exact measure. What is meant is however the amount that may be carried by one person.

Many classifiers deal with pieces of things, typically wood or bamboo. The use of *tóɔn* signifies a piece, section or part of an entity. *cmlɛ̀ɛs* is derived from the verb *cɛ́ɛs* 'make splinters', with the nominal and classifier meaning of a chip or splinter. *kmlò* signifies a lump or piece, and with wood: log. *wàh* is derived from the same verb, meaning split into two pieces, so that the classifier meaning is 'one out of two pieces'. *cɛ̀ɛr* refers to a segment or slice of an entity and may also be used with pomelos, for instance.

Some phrases include classifiers but no nouns. The classifier *pàt* signifies instances of time, as in:

kɔ̀ə pɔ̀ màh mɨ̈ là   sáam   pàt
he   eat rice day each three CLF
'He eats rice three times a day.'

The classifier *knám* signifies a shot, or a round of shots, but is construed with a verb:

kɔ̀ə píñ   snáat mòoy   knám
he   shoot gun   one   CLF
'He shoots a round (with a gun).'

Several mensural classifiers are derived from word classes other than nouns, namely verbs, for instance *rmpùh* from the verb *pùh* and *krlàm* from the verb *klàm*. *pùh* means 'carry in a strap around one's head'. The nominal means 'burden carried in a strap' and may thus be used as a classifier for bundles. *klàm* means 'carry across one's shoulder' and has the nominal meaning 'burden carried on one's shoulder'. As a classifier, *krlàm* also signifies bundles, but the difference between *rmpùh* and *krlàm* becomes obvious when looking at the original meanings. The classifier *trnìap* means 'package, parcel' and is derived from the verb *tíap*, which means 'wrap up, fold into a small package', which explains the exact meaning when used as a classifier for packs of things, for instance packs of cooked rice, tea and tobacco.

Sortal classifiers are normally only derived from nouns – compare this with figure 2.3.1b, where classifiers are semantically analysed to be in between nouns and verbs on a scale of temporal stability. The conclusion has to be that, within the classifier distinction, sortal classifiers are semantically closer to the nouns on the left of the scale, whereas mensural classifiers are closer to the verbs on the right.

4.3 System of Kammu sortal classifiers

Below, a table is given with a summary of the conclusions for sortal classifiers reached in section 4.2. Relevant parameters are given subsequently as suitable for each classifier.

Classifier			
=	Non-extended		
àn	Extended		
kòn	Animacy	Human	
tóo	Animacy	Animal + spirit	
mà	Animacy	Animal	Sex: Female
tlóh	Animacy	Animal	Sex: Male
túut	Animacy	Plant	
krɔ̀ɔŋ	Animacy	Plant	Stem
dɔ́ɔk	Animacy	Plant	Flower
cɬaŋ	Animacy	Mushrooms	
lém	Dimensionality	1-dimensional	Bounded
sén	Dimensionality	1-dimensional	Unbounded
tɔ̀ər	Dimensionality	2-dimensional	Rigid
phíɨn	Dimensionality	2-dimensional	Flexible
wòŋ	Dimensionality	2-dimensional	Interior hole
núay	Dimensionality	2-dim/3-dim	Round/–
thían	Material/function/shape	Forged/cutting/sharp	
láaŋ	Material/function	Bamboo/traps	
láŋ	Function/dimensionality	Domestic/2-dim, 3-dim	Bounded
làm	Function	Vehicles	No wheels
kán	Function	Vehicles	Wheels
cbáp	Function	Writing	
tìi	Location	Cultivated	
bɔ́ɔn	Location	Uncultivated	
krɬaŋ	Unique	Telephones, televisions	
lìan	Unique	Clocks	
trlɔ̀ɔŋ	Unique	Deadfall traps	
káan	Unique	Umbrellas	
dáaŋ	Unique	Nets	
sóp	Unique	Rivermouths	
bɔ́ɔk	Unique	Guns	
plàh	Part of whole	One of natural pair	
pɔ́ɔy	Part of whole	One of artificial pair	
kùu	Pair		
kmpóŋ	Location/shape	Top/roundish	

5. SUMMARY

Although a few speculations have been made so far, this chapter will deal exclusively with the main topic: the Kammu classifier system and its typological considerations.

5.1 Summary

Prototype theory seems to work for the more complex semantic domains, where extensions must have taken place. There are also some metaphoric extensions, for instance the use of *kmpóŋ* for both a head-like entity and something that is on top, as a head is on top of a body in a metaphor using the concrete body and transferring it into an abstract meaning. There are indeed many examples of variability in the use of classifiers, which point to the semantic dynamics of the system.

The theory by Adams and Conklin (1973) of the plant metaphor has some possible evidence in Kammu: *tə̀ər* could be based on a metaphor of leaves, referring to 2-dimensionality, and *núay* may be based on fruit, either 2-dimensional and round or 3-dimensional. The 1-dimensional stalk cannot be found as evidently. Trees would normally be a prototypical member of such a category, but they are only included in Kammu if considered inanimate.

The general classifier has all the uses given in 2.3.2: for residue nouns, as default classifier and for unknown entities. Repeaters are used for non-extended entities, conceptual units. This use by repeaters is not mentioned by Aikhenvald, and perhaps it is not typologically common. For instance, Burmese has a special classifier to render the same meaning (Corbett 1991: 136) and Japanese does not seem to have any classifier that would refer to a non-extended entity (see Downing 1986: 347). Whenever abstract nouns use a classifier, it is normally in the form of a repeater. There are several unique classifiers.

In opposition to many Austro-Asiatic languages (discussed in 3.2) animacy is not blurred by physical properties. Humans are humans, animals animals, and plants plants, without any further distinctions, except that plants have several more specific classifiers to choose from.

For the few classifiers that are mainly based on physical properties, primary parameters (dimensionality) are involved as well as secondary features. The secondary features given by Adams and Conklin (1973; see section 3.2) are however only exemplified by the distinctions rigidity/flexibility and boundedness. There are exceptions to dimensionality being a primary parameter: for *kmpóŋ* the primary parameter is in fact shape (when not being location). Material and location, which are not included by Adams and Conklin, are also found as primary parameters.

5.2 Discussion

One of the most striking things about the Kammu classifier system is its dependency on visualization without any complex counterexamples. When that sense is not used, function takes over. Several classifiers, most notably the unique ones, are defined by their function in a culture-specific manner.

The classifier system of Kammu is a mirror of a folk taxonomy, a categorizing strategy which is normally quite different from what outsiders might expect. Especially so for the animate categories in relation to biological taxonomy. Adams and Conklin (1973) found that, in Austro-Asiatic, animals rarely make out a single animate category and plants never do (see section 3.2). Since in Kammu both actually do, it is only in relation to this information that the Kammu classifier system strikes us as odd. Whereas physical properties are overruling factors in many other languages, animacy is regarded as more important in Kammu.

In the other type of languages then, animals are primarily seen as having a form, which may be exemplified by the 1-dimensional (and bounded, flexible etc.) snake. In Kammu, the fact that an animal is a living creature is regarded as more fundamental when referring to it through counting, although distinct from humans as well as plants.

Many languages make further subcategorizations of animals. According to Adams and Conklin (1973) the important secondary parameters – after the primary parameter dimensionality – for animals are habitat (air, land, water), size, status and function. The functional view may be exemplified by a comparison with the associations that come with the English words 'cattle' or 'beef' (compared to the individuating 'cows'), where cattle serves a function as a group of cows and beef serves a function of food. It is tempting to compare these English mass nouns with the non-animate classifiers of animals in Austro-Asiatic languages. However, since classifiers seek to individuate entities, they can after all not be very similar.

Some of these non-animate alternations, where an animate classifier is replaced by a dimensional one, may however be made in the Kammu classifier system. Trees may for example take the animate plant classifier *túut*, or the 1-dimensional classifier *lém* when they are no longer living. Humans may be expressed by the same type of operation, normally taking the animate human classifier *kòn*, but *lém* when referring to dead bodies.

Another classifier in Kammu which follows biological taxonomy is *cǐaŋ*, including mushrooms, since these cannot take *túut* and are thus distinct from plants (just like according to biology), perhaps contradicting folk taxonomical associations in general. The only entities that are not fully biologically based are those using e.g. *krɔ̀ɔŋ* and *dɔ́ɔk*, since they include physical properties, but they are still animate, referring only to plants with the relevant form.

The tertiary parameter for animate categories – after the primary animacy and secondary animal – sex, is only used for animals when the neutral classifier *tóo* is not enough. However functional this parameter may seem for humans, probably

adequately expressed through nouns, it is apparently regarded as, sometimes, important when counting male or female animals. As an interesting comparison, Corbett and Fraser (2000: 62) remark for Russian gender: "Nouns which are sex-differentiable are those denoting beings whose sex matters to humans (that is, other humans and domesticated animals) and where the difference is striking (as in the case of lions)."

Whether non-animate parameters such as material, function or dimensionality overrule one another in a certain manner is another question. (Arrangement and measure is always an alternative parameter for any noun.)

We can see how entities with the material bamboo cannot always use the classifier *láaŋ* although it seems to include certain objects based on this material; speakers prefer instead the dimensional classifier *núay*. Thus, material is apparently a weak property for classification. Dimensionality and function are on the other hand primarily dependent on context. Since material is not brought up by Adams and Conklin one might conclude that it is an uncommon parameter in Austro-Asiatic, and the two classifiers, *thían* and *láaŋ*, that involve the parameter in Kammu are uncertain and blurred with other properties (i.e. function). Considering visualization of entities is so important for numeral classifier systems, it is no wonder material is so weak as it includes some physical intimacy with, or cultural knowledge of, entities. Material may thus be culturally somewhat important, but it is not necessarily a very functionally important category, therefore losing its status among the parameters in linguistic classification.

The cognitive categorization of entities mirrored in the Kammu numeral classifier system is indeed interesting as it gives us all a view of how our minds work: In order to categorize an item we need to choose a few interesting pieces of information, pick one that makes it alike another item in a given context and, at the same time, disregard properties that we do not think are categorical. However, since language is a social means for functional use, it is very much affected by culture. Cognition and culture intertwine as is surfaced in language, and a fascinating part of it are classifier systems.

5.3 Further research

A study of how classifiers are actually used would not only secure and, where necessary, modify the semantic domains as they are analysed here; one would also find reasons to alternations in classifier use from a discourse-pragmatic point of view.

The semantic domains of Kammu are of course of interest for any typological work on the numeral classifiers of South-East Asia and on their general semantics. Moreover, a possible line of research would be to compare adjectival modifiers and classifiers, considering both adjectives and classifiers deal with properties of nouns.

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