

Space and Time in Mmen

A Central Ring Grassfields Bantu Language

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Abstract

This thesis provides an analysis of the linguistic expression of spatial and temporal relations in Mmen, a Niger–Congo language spoken in Bafumen, in the North West Region of Cameroon.

Linguistic means of expressing spatial relations are surveyed in usage and in grammatical structure, and categorized according to the patterns found. Locative prepositions and usages are compared with directional and temporal expressions, and the use of spatial motion words and constructions to express motion and relations in time is described and discussed. The data was elicited in the field, using both pictorial stimuli (Bowerman & Pederson 1992) and translation tasks.

Amongst the salient results was that tonal patterns can be the only distinction in realization of a preposition, and that the conceptualization of “front” and “back” can show the reverse pattern from that in English.

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Abbreviations

The tone marks which are used in this paper are:

´	or H	High tone
-	or M	Mid tone
`	or L	Low tone
^	or HM, ML or HL	Falling tone, either high–mid, mid–low or high–low

Other abbreviations:

1	First person
3	Third person
AGR	Agreement
CL1	Noun class 1
CL2	Noun class 2
CL3	Noun class 3 etc.
IMPF	Imperfective aspect
LOC	Locative marker
NEG	Negation
OBJ	Object
P01	Picture number 1
P02	Picture number 2 etc.
PL	Plural
PST3	Third Past Tense
PRF	Perfective aspect
REF	Referent
SG	Singular
SBJ	Subject marker

Example:

Meaning:

head.CL7	<i>head</i> which belong to noun class 7
this.CL7AGR	<i>this</i> in a form that agrees with noun class 7
3SG:OBJ	Third person singular object form

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1 Introduction

1.1 Theoretical framework

This theoretical frame will introduce the concepts of spatial semantics and motion events. Thereafter it will introduce terms that will be used such as 'moving ego' and 'moving time'.

1.1.1 Introduction to the language of space and time

This paper, which covers spatial semantics and temporal motion in Mmen, gives an introduction to the way native speakers of Mmen view space in static and directional terms, and describes views of temporal motion (will be explained in 3.2.4).

The way of investigating spatial meaning has been in research of locative particles such as adpositions (prepositions or postpositions) or adverbs. Brugman (1981) is for example a description of the semantic information of the English preposition "over". However, since then, research has moved forward and spatial semantics is no longer considered to be limited to locative elements only. Sinha and Kuteva (1995) argue in "Distributed Spatial Semantics" that spatial semantic is 'distributed' over the whole phrase. The Figure (the object of focus) is one important element that can differ the understanding of spatial location. An example that is given is that 'a fruit in a bowl' gives another meaning of location than 'a crack in a bowl', although the same preposition is used. The spatial meaning is understood because we "already know" that crack cannot lie in a bowl like a fruit can. Another example of distributed spatial semantics is word order, for example in Dutch where *Mieke loopt IN het bos* means 'Mieke walks in the woods', whereas *Mieke loopt het bos IN* means 'Mieke walks INTO the woods (used from Sinha and Kuteva 1995). By only changing the order of words the spatial meaning changes. Sinha and Kuteva conclude that spatial semantic analysis cannot be limited to locative particles.

This theory has since then been supported by many, among them Slobin (2004:248) and Lemmens (2002) by his article of posture verbs in Dutch, verbs containing locative information. To express water located in a bottle, the verb 'to sit' will be used; *Er zit water in de fles*. 'There sits water in the bottle'. Location on the floor, however, will be described as 'lying' or 'standing' depending on the depth ('the water lies on the floor', 'the water stands in the cellar').

So far, spatial relations and the semantic information of other sentence constituents have been introduced. This leads into Talmy (1985), who wrote a comparative analysis covering a wide variety of language types, and dividing them into different typologies. It is based on defining different semantic elements that single words contain, such as 'Motion', 'Manner', 'Path'. The verb 'enter' would be described containing the semantic information of 'Motion' + 'Path', and the word 'walk' contains 'Motion' + 'Manner'. The other part is the different "surface elements", which are word categories in which the semantic elements can be expressed; 'verb', 'adposition' and 'subordinate clause' for example. Languages have different tendencies of expressing certain semantic elements in certain lexical forms (surface

elements). This is what Talmy aimed to describe with his foundational and frequently cited analysis (Talmy 1985).

A verb framed language expresses the path and direction in the main verb. The manner can be added, but it is not obligatory. In Spanish, which is a verb framed language the translation of the English sentence 'He ran out of the house' would be '*El salió de la casa corriendo*'. Literally translated, it means 'He exited the house running'. *Salir* ('to exit') is a verb of path, and *correr* ('to run') is a verb of manner. A satellite framed language, on the other hand, uses a verb of manner as the main verb, and adds the path information with a particle. In the sentence '*He ran out of the house*' *run* is a verb of manner, and the direction, or path, is understood by the particle *out* added to the verb ('to run out').

This system has been argued by Slobin (2004) not to cover all languages. He takes examples from Mandarin and Thai which cannot be considered belonging to any of the categories above, as the Manner and the Path verb are equivalent in grammatical form. The event is expressed by two verbs one after another, manner and path, but none of them are stronger than the other verb. He calls this third category "equipollently-framed languages" which include languages with serial verb constructions. (Slobin 2004:228). In 3.2.1 it will be shown that Mmen belongs to this third category.

When it comes to the issue of connecting time and space, the reason for this that almost all languages take expressions from physical space in the use of temporal expressions.¹ Examples from English are:

- 1) a) 'The cup is **ON** the table' –Location in space
b) 'The fruit is **IN** the bowl' –Location in space

- 2) a) 'We will meet **ON** Monday' –Location in time
b) 'We are **IN** the month of February' –Location in time

1.1.2 Definitions of terms

Main terms in this paper are 'Figure' and 'Ground'. They are defined by Talmy in 'Figure and Ground in Complex sentences' (Talmy 1975) and is a tool to use in speaking of spatial relations. The Figure is the object of focus, which has the location described. The Ground is the object to which the Figure is related. Usually the Ground is bigger than the Figure, and less movable. In the sentence 'The pen lay on the table', 'the pen' is the Figure and 'the table' the Ground. Alternative names for these concepts are respectively Trajector and Landmark (Langacker 1990, Trask 2007).

¹ There is at least one example where temporal expressions not are taken from spatial location; in the Amazonian language Amondawa (Sinha, Da Silva Sinha, Zinken and Sampaio, 2011).

Fictive motion means a static relation being described in terms of motion. The sentence ‘The river goes from the mountain to the sea’ describes a non-moving location, in comparison to ‘*The boat goes to the sea*’, but is still expressed in terms of moving. The same goes for ‘The path goes into the forest’ or ‘The road climbs the hill’. This will be described in section 3.2.1.1.

Temporal events are discussed at the end of the paper, and the terms ‘Moving Time’ and ‘Moving Ego’ are also commonly used in discussions about temporal motion and space-time mappings, Moore (2006). ‘Moving Time’ gives a perspective of us standing still and time or an event in time moving towards or from us. Examples in English are ‘summer is coming’ and ‘the year 2012 has passed’. Christmas and the year 2012 are temporal events that move, and we are standing still in relation to them. ‘Moving Ego’ implies the reversed concept, a perspective of us moving *through* time, that we move towards and from temporal events, and they themselves stand still. Examples are ‘We are entering into the New Year’ and ‘I left my childhood’. English shows examples of both perspectives.

1.2 Aim and objectives

The aim of this thesis is to contribute to the on-going linguistic description of Mmen, specifically in relation to the language of space and time.

The specific objectives are:

- a) To survey the expressions of spatial location by categorizing their usage and grammatical structure.
- b) To survey the structure of directional expressions and which prepositions that are used.
- c) To survey the perspective of temporal motion.
- d) To survey the use or non-use of spatial expressions in temporal expressions.

1.3 The Mmen language in context

1.3.1 Language Classification

Mmen is a Bantu Language belonging to the Center Ring cluster, together with Babanki, Bum, Kom, Kuk, Kung and Oku. It is classified on Ethnologue as follows: Niger-Congo language family, Atlantic-Congo, Volta-Congo, Benue-Congo, Banthoid, Southern, Wide Grassfields, Narrow Grassfields, Ring, Center (Lewis 2005).

The name of the village where the largest number of speakers lives is called Bafumen, and is situated in Cameroon, North West province and northwest of Fundong, along the Fundong road, Menchum Division and belongs to Wum Subdivision. Alternative names of the village are Bafumeng, Bafoumeng, Bafmen and Bafmeng (Troyer, Huey and Mbongue 1995:3).

“Mmen” is used to refer both to the language and the area where it is spoken (grey marking in Figure 1), but the language is also spoken in Cha’, Yemgeh, Nyos and Ipalim, and in places to which Bafumen inhabitants have moved, such as Bamenda, Douala and Yaoundé. Ethnologue describes the number of speakers to be 35 000, with reference to SIL from 2001 (Lewis 2009).

The closely related neighbouring language “Kom” (spoken in Fundong), is more understood by Mmen speakers than Kom speakers understand Mmen, probably because of Kom being a larger and more widely used language (being written and taught in schools since the 1980’s). For further comparative description of Mmen dialects and neighbouring languages see Troyer, Huey and Mbongue (1995).

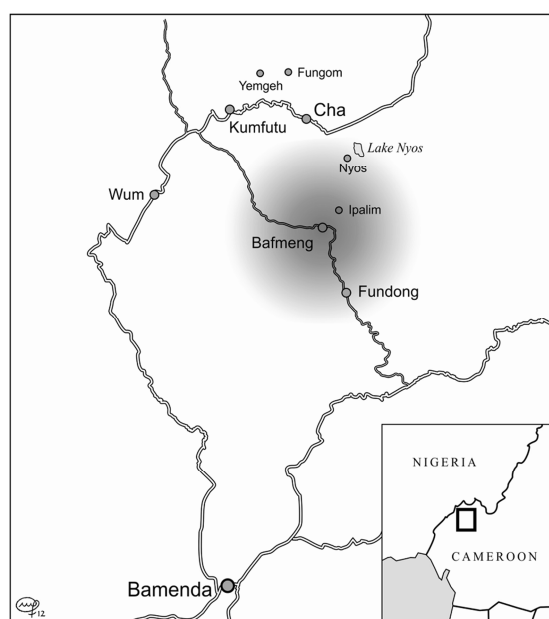


Figure 1. The Mmen-speaking area.© – 2012 Cartography by Monika Feinen

1.3.2 Language situation in Cameroon

Cameroon is a country where fewer than 20 million people speak close to 250 languages (Kouega 2007). The country became a German colony but was lost after the First World War to the French and the British. France took over the largest part, about three fourths including the largest towns Yaoundé (capital) and Douala, and the British got the Northwest region in which Bafumen is situated. The lingua franca in this region is therefore English and Pidgin English. Educated and town’s people usually also know French in addition to their mother tongue (tribal language), Pidgin English and English.

1.3.3 Language situation in Bafumen

Björkestedt writes with reference from census 2005 that Bafumen has 45,000 inhabitants (Björkestedt 2011a). Approximately less than 10 % of the inhabitants speak other native languages. The minority tribes are Fulani and Hausa, and they speak their own native

languages. The minority tribes understand Mmen in various extents depending on age, place of living and life situation, but the common language is Pidgin English or English. The language of education in all schools is English, and often French is taught as a subject.

Since 2008 there has been a movement of developing a writing system for Mmen. Björkestedt started 2009 to make a phonological sketch with an alphabet and orthography suggestion, see Björkestedt 2011b. This work has been continued by Möller, who analysed noun and verb phrases (2012). Since 2008, a local language committee has been formed, containing people who have a vision to see the language being written, read and taught in the local schools. Their aim is to raise the literacy level of the people in the Bafumen to be able to read and write their own language.

The literacy rate in English (L2) is measured to 15–25 % (Lewis 2009), and the literacy rate in the present Mmen orthography is around 30–50 people by my own estimation, December 2012. The number is expected to rise because the Mmen orthography is presently being taught in the local schools.

1.3.4 Mmen language structure

The Mmen language is rich in consonants, vowels and tones. According to Björkestedt's sketch of the phonology there are 27 distinctive consonants and 9 distinctive vowels. Relevant to this paper is that Mmen also has nine phonetic pitches on single syllables pronounced in isolation, according to Björkestedt (2011a:44):

high [á]
mid [ā]
low [à]
high–low [â]
high–mid [ă]
mid–low [ǎ]
low–mid [ǎ]
mid–high [ǎ]
low falling [ǎ]

In this paper they have been called 'pitches', as they have been introduced as by Björkestedt, and when 'tone' is mentioned it is always the surface tone that is referred to. This shall not be confused with the underlying tone.

The orthography only marks the less common pitches; low (with `), falling (all types with ^) and rising (all types with ~). Further description and explanations can be found in Mmen Orthography Guide (Björkestedt 2011b).

Similar to many other Bantu languages, Mmen has a noun system based on classes. Each noun belongs to a particular noun class (group), which affects the clause by agreement on many other word categories. The common semantic denominators within the classes are not

always completely consistent, but there are patterns, for instance that class 1 is related to the human being, body parts and names of humans. Class 2 is the plural correspondence of the same domain. Each class contains nouns in either singular or plural forms. Some non-count nouns are inherently plural, and belong to class 6.²

Table 1 Noun class affixes Mmen with examples (based on Möller 2012)

Class	Number	Prefix	Examples
1	Singular	<i>w-/Ø-</i>	<i>w-uə</i> ‘person’, <i>Ø-zhwi</i> ‘wife’
2	Plural	<i>gh-/Ø-</i>	<i>gh-ɔyn</i> ‘children’, <i>Ø-ndòm</i> ‘husbands’
3	Singular	<i>e-</i>	<i>e-lu</i> ‘place’, <i>e-ndom</i> ‘road’
4	Plural	<i>(e-)</i>	<i>e-ghi</i> ‘hundreds’, <i>e-lîŋ</i> ‘bamboos’
5	Singular	<i>e-</i>	<i>e-nda</i> ‘tribe’, <i>e-ndam</i> ‘life’
6	Plural	<i>ə-</i>	<i>ə-ndzɪs</i> ‘knees’, <i>ə-ghɔŋ</i> ‘spears’
6a	Plural	<i>m-</i>	<i>m-ndə</i> ‘smoke’, <i>m-chi</i> ‘soil’
7	Singular	<i>a-/ke-</i>	<i>a-cha</i> ‘mud’, <i>a-pɛ</i> ‘tiger’
8	Plural	<i>e-(w)</i>	<i>e-twɔ</i> ‘snails’, <i>e-ndwɔŋ</i> ‘debts’
9	Singular	<i>Ø-</i>	<i>Ø-nyàm</i> ‘animal’, <i>Ø-mbà</i> ‘cloud’
10	Plural	<i>se-</i>	<i>se-ndzələ</i> ‘cane rats’, <i>se-pfiyn</i> ‘mountains’
13	Plural	<i>te-</i>	<i>te-tɛ</i> ‘machetes’, <i>te-fiŋ</i> ‘bruises’
19	Singular	<i>fɪ-</i>	<i>fɪ-chə</i> ‘bow’, <i>fɪ-kàm</i> ‘fist’

As seen in Table 1 are the classes 1, 3, 5, 7, 9 and 19 classes of singular, and 2, 4, 6, 6a, 8, 10 and 13 classes of plural. Some singular-plural pairing normally follows a particular system (Class 1 & class 2, 7 & 8, 9 & 10 and 19 & 6a) but many combinations occur in a complex pattern and for instance can class 13 be a plural class for all of class 1, 3, 5 and 7 (Möller 2012).

Membership in each noun class is indicated by its class prefix. The prefix is reflected in agreement with other word categories like quantifiers and demonstratives, as in examples 3–10 among others.³ Further description can be read in Möller (2012).

1.3.5 Orthography and glossing in this paper

Björkestedt proposed, as mentioned, in 2011 a suggestion for Mmen orthography which is the basis for the current work. Minor changes have been made by the Mmen Language Committee, for instance few vowel changes and orthography of associative nouns. The Mmen examples in this paper are all written following the current orthographic practise (December 2012).

² For example *blood, milk, wine, salt* and *flour*.

³ The prefix sometimes also changes to the final position of the word. *Akaŋ* (‘bowl/dish’ class 7) can sometimes be *kaŋa*. This might have to do with focus, but has not been marked in the glossing as it is not investigated.

Low, Falling and Rising tones are marked, and High and Mid tones are left unmarked. Section 4.1.1 is an exception, where all tones are marked to describe the tonal patterns in a general preposition which will be described. It will be shown that this preposition sometimes is realized as a schwa with a high tone, and sometimes only as a high tone in the first syllable of the following noun (section 3.1.1). Therefore it is important to know that the current orthographic practise is to write out a separate schwa in both of these cases. This orthographic decision was agreed upon in October 2012 and has not yet had time to be tested in the literacy classes, so it might be changed again if the way of writing turns out to be problematic.

Future spelling changes in other areas are probable. There are still many decisions to make and they will be made by the Mmen Language Committee in the order they turn up. I am also aware that in this paper there might be missing markings for low, falling and rising tones.

1.3.6 Previous research

Previous documented linguistic description in Mmen started in the late 1980's with a phonological description of Mmen (Agha 1987). In the 1990's, the work continued with a description of the noun class system (Agha-ah 1992) and a survey of Mmen dialects and neighbouring languages, together with another related language, Aghem. (Troyer, Huey and Mbongue 1995). The first survey of the noun phrase was made by Bangha (2003). Kiessling has written an unpublished sketch of Mmen, and one of the Mmen tonology. Thereafter, Björkestedt made a new phonological sketch (2011a) and an orthography suggestion (2011b) in purpose of developing a writing system.

Mmen has recently been part of a comparison of cultural use of complaining, requesting and apologizing, which is partly still in process (Kießling et al. 2011, and Schröter et al. forthcoming). Description of the noun and verb phrase has been continued and further analysed by Möller (2012). Other works on Mmen include 'Serial verb constructions' (Meh n.d., quoted in Möller 2012).

More research has been done in neighbouring languages for instance Babanki and Kom (very closely related to Mmen), not least by Hyman (2005).

1.4 Structure of this thesis

Chapter 2 will describe the methodology. Thereafter, the results will be presented in section 3 and discussed alongside. The first part is called 'Stative relations' and covers all topological relations, the different prepositions used in space and their grammatical structure. The second part will cover dynamic relations, containing motion in space (directionals), and motion in time (temporal perspective). Chapter 4 gives a summary of the content of this paper.

2 Method

The data was collected during a four month internship with CABTAL (Wycliffe in Cameroon), in cooperation with SIL Cameroon. The sending organisation was Folk & Språk (Wycliffe in Sweden) through the Swedish Mission Council (SMC), and the program was sponsored by Sida (Swedish International Development Cooperation Agency).

2.1 Language consultants and places

All language consultants who took part in this study were born and raised in the village of Bafumen, had Mmen as their mother tongue and lived presently in the village. Most of the recordings took place in the private school of St. Gabriel's College, in Bafumen, because that was where the Mmen Language Committee met weekly. Some recordings took place in the home of the consultant, and a few recordings took place in Bamenda, at the office of SIL.

2.2 Data collection and analysis

2.2.1 Structured elicitation using pictures.

The starting point was to record native Mmen speakers in Bafumen describing the location of Figures in relation to Grounds (an object of focus in relation to its reference object) according to the stimuli from Bowerman and Pederson (1992), hereafter referred to as "BowPed". These pictures were all looked through beforehand and discussed with a native Mmen speaker. The aim was to find a set of pictures that would cover as many spatial relations as possible, and which would be appropriate in the cultural context. Many of the pictures showed a concept from the western world, which is not always suitable in this particular situation of research.⁴ This resulted in the removal of 11 of the pictures (see appendix A1) due to various reasons, mainly because of difficulties in relating to the image as it had a western concept, or that the situations and items were foreign.⁵

Nine pictures were replaced by other images. The intention was to give the same concept as the originals, but to be easier to understand in the cultural environment. One example was to change the 'clothes on a clothes line' to a similar picture without the clothes pins, and another was to replace the 'apple on a stick' with meat on a stick. The arrow pointing at the Figure was drawn by hand on the printed-paper.

⁴ Some pictures were impossible to understand, but many were understandable although it was not "normal" for them. P49 for instance shows a tree and a church. Churches, many times, do not look like this picture in other parts of the world, and trees were commonly drawn with the branches instead of the way the tree here was drawn.

⁵ The pictures 8 and 9 in appendix A1 was taken away by me personally because of being uncomfortable in what signals I possibly would send by using them. I asked one language consultant instead of using them in the series.

Another 13 pictures were added to widen the understanding of location. Among them were seven self-made images, added to test hypotheses I developed by living closely to the language. The pictures were hand drawn or arranged with printed images and then photographed. Three of those pictures had to do with a tree being in relation to a house, two pictures of two houses in relation to each other⁶ and one with a pen on an opened book.

In the process of adding new pictures to the series, 63 images describing spatial relations were recorded with a native speaker. Among these, particularly interesting pictures were chosen as additions to the original BowPed Series, see appendix A2 and A3.

All final 73 pictures were printed on an A5 sheet of paper, taken to the village where the responses were recorded individually with each consultant. The consultant was given an explanation of what was asked for each picture, according to the BowPed introduction of usage. The language of communication between me and all consultants was English (mixed with Pidgin), which, as previously mentioned, is also the lingua franca in the North West region.

The data used in the analysis came mainly from 5 consultants (1 woman and 4 men) in the age group of 30–65. The results from one of the consultants was written down, rather than recorded. The recorded material was transcribed in Word and Excel. In specific cases, where the word boundaries were unclear, the sound file was analysed in Praat Speech Analyser for control of auditory segmentation and visualisation in a spectrogram. When the consultants were inconsistent in using prepositions in different contexts, other people in the village were asked and the question was discussed, including acceptability judgment.

There were various difficulties in this section, both in recording and transcribing. During recording, there could suddenly be unexpected background noise by for instance birds and pigs, or falling rain that made such noise pollution that it made no sense to continue at that moment. When transcribing, it was difficult to understand one of the consultants who occasionally spoke too fast, and another consultant who spoke with very lengthy sentence constructions.

2.2.2 Tone elicitation

The tone elicitation was begun because it, at an early stage, was obvious that locational information sometimes was expressed by tonal change (see below in section 4.1.1, *General locative*).

To clarify the tonal pattern, 17 locative and corresponding non-locative expressions were recorded and compared. The sentences were built in a context for the preposition to be the only distinctive feature; *this is a _ _ _*, and *this is on a _ _ _*. Later on, another seven sentence pairs were recorded to make the analysis more complete; now having examples

⁶ This did not give any results. They were added to investigate usage of Front and Back, but the consultants were only confused.

from various noun classes and syllable structures.

The tones were written down by a native Mmen speaker (who had taken a 5 weeks course in analysing tonal patterns, SIL Yaoundé July–August 2012) and me. I wrote down the tones as I heard them in the recordings, and the differences between our tone transcriptions were discussed and clarified. All tones marked in *appendix B* are agreed upon by the native speaker. Table 2 in section 3.1.2 was made together with a language consultant.

2.3 Elicitation of translation equivalents

The method for collecting the Mmen sentences for direction and time in sections 4.2.1–3 was through translation from English; sentence elicitation. Also, in these sections, acceptability judgment was used to see what was and wasn't possible to say, although not as detailed as for the spatial part.

2.4 Verification of examples

To confirm the validity of the examples, one native speaker with linguistic education looked through and corrected them according to the present orthography. The future Mmen–English lexicon (Mua and Björkestedt, forthcoming), has been used to look up noun class belonging to some of the nouns.

3 Results and Discussion

3.1 Stative relations

Stative relations describe location in space without motion being involved. (Direction in space is under part 3.2, Dynamic relations.) The section for stative relations is divided into three parts; General locative section 3.1.1, Specific locations including discussion about different dimensions in Mmen section 3.1.2, and Frames of reference section 3.1.3. The general locative will be present in all other sections, by being a part of specific locations' origin, and by being used in directional and temporal expressions. Section 3.2.1.1 about Fictive motion is also a stative condition, but described in connection with directional motion because of the grammatical construction.

3.1.1 General locative (simple preposition)

The most common way to talk about spatial relations between Figures and Grounds in Mmen is to relate them by using a general locative preposition. This preposition consists of only one vowel with a high tone, but is sometimes realized only as a high tone on the following noun. Furthermore, it conveys a wide range of meanings, which is understood pragmatically depending on the context of which Figures, Grounds and also verbs are involved.

3.1.1.1 Realization

The locative preposition is realized in different ways, depending on the noun that follows. In some cases, it is realized as a schwa with a high tone before the noun, and sometimes only as a high tone on the first syllable of the noun.

In the first case, the locative preposition is realized as a schwa with a high tone. As seen in example 3) compared to example 4), the locative marker is perceived as a separate unit before *sekí*.

	H L		H	M M
3)	<i>sínè</i>		<i>Nyí</i>	<i>sékĩ</i>
	these.cl10AGR	Be		shields.cl10
	'These are shields'			

	H L		H	H	M M
4)	<i>sínè</i>		<i>Nyí</i>	<i>é</i>	<i>sékĩ</i>
	these.cl10AGR	Be		LOC	shields.cl10
	'These are on shields'				

In case where the noun (being the Ground) is vowel initial, the schwa isn't perceivable, and the tone is the only distinctive feature. The 'a' in *atu* changes in example 6) its mid-tone into a high tone to express the locative meaning. Also, the following vowel 'u' is affected; its high tone changes into mid:

	H M		H	M H
5)	<i>kínè</i>		<i>nyí</i>	<i>ātú</i>
	this.CL7AGR	be		head.CL7
	'This is a head'			

	H M		H	H M
6)	<i>kínè</i>		<i>nyí</i>	<i>átū</i>
	this.CL7AGR	be		LOC.head.CL7
	'This is on a head'			

In the trisyllabic word *atûñne*, the same pattern as in example 5–6 is repeated on the first syllable. The tone of 'a' in example 8 changes from mid to high, and thereafter the middle syllable, *tûñ*, gets a low tone instead of High–low falling. The final vowel retains its Mid tone as it was in example 7:

	H M		H	M HL M
7)	<i>kínè</i>		<i>nyí</i>	<i>ātûñnè</i>
	this.CL7AGR	be		ear.CL7
	'This is an ear'			

	H M	H	H L M
8)	<i>kɪnē</i>	<i>nyí</i>	<i>átùŋnē</i>
	this.CL7AGR	be	LOC.ear.CL7
	'This is on an ear'		

The locative being realized in a high tone only also happens in one nasal phoneme; *m*. 'M' can, unlike 'n' and 'ŋ', be a tone bearing unit in Mmen.⁷

	L M	H	M HL
9)	<i>mɪnē</i>	<i>nyí</i>	<i>m̄kâ'</i>
	these.CL6a.AGR	be	trees.CL6a
	'These are trees'		

	L M	H	H L
10)	<i>mɪnē</i>	<i>nyí</i>	<i>míkà'</i>
	these.CL6a.AGR	be	trees.CL6a
	'These are on trees'		

If the noun already has a high tone on the first syllable and starts with a tone bearing unit, no difference in pronunciation will be perceived. This is the case of *ekwɪ nyam* ('horses' class 8), see *appendix B*.

A summary of what is happening in the examples above, (3–10) is that when the following noun is consonant initial (except *m* in noun class 6a) the general locative marker, *á*, is perceived as a separate unit before the noun. However, when the following noun is vowel initial (or starts with *m* in noun class 6a), the high tone of the locative marker spreads to the first syllable of the noun.

The tonal changes of the other syllables are not investigated. What also has been said but worth repeating is that all tones described in this paper are reflecting the surface pitch. The underlying tones may be different and this requires further analysis. In *appendix B*, all 25 sentence pairs are transcribed and marked with tone. Note that the sentences in the section '3.1.1 Realization' have not been transcribed following the orthographic practice.⁸

⁷It seems to be tone bearing only when being the class 6a prefix. In other contexts, it neither stands on its own, nor is tone bearing, e.g. *mbi* 'world' is phonetically realised as one tone bearing unit. *Mb* is considered one phoneme in Mmen and the syllabic prefix of noun class 6a, *m*, is never combined with *b* alone. 'Insects', which takes class 6a in plural, is *m̄mbê* with two syllables. Another phoneme that is not tone bearing is *mbv*, See Björkestedt (2011a) for further explanations.

⁸ The current orthographic rule is that the general locative marker is always written as a separate segment, even when the realization only is in tonal changes. Also, high and mid tones should not be marked.

3.1.1.2 Usage

When using the general locative preposition alone, location is pragmatically understood, based on canonical object relations and the particular word combination (Figure + Ground, Figure + verb). For more precise specification of location, complex prepositions, which will be described below, are used. The translation of the locative maker in examples 11 and 12 are ‘on’ respectively ‘in’, where the preposition in Mmen is identical: ⁹

11) *fɔndzèa'* *ni* ə *atu*
cap.CL7 be LOC head.CL7
‘The cap is on the head’ (P05)

12) *ɲwà'lè* *nyi* ə *shəyn*
book.CL9 be LOC bag.CL9
‘The book is in the bag’ (P14)

The native speakers seem to focus as much on the disposition and manner of the Figure as upon the stative relation to the Ground. Problems that occurred repeatedly were with picture 63 (a lamp hanging above a table) and picture 9 (a coat hanging on a hook). In both cases the usual way to say in Mmen would be simply ‘it’s hanging’. When pressed for an answer, one expressed the lamp in picture 63 being ‘in the middle’, one ‘on top of the table’ and one ‘under the ceiling’. One described the coat hanging on a rope, although the consultant was aware that it was not a rope. ¹⁰

13) *ndzise* *ghaɲnê* ə *kwil*
dress.CL10 hang.IMP LOC rope.CL9
‘The coat is hanging on a rope’

3.1.2 Specific locations and Dimensions in space

Mmen can also express specific locations by using complex prepositions. These are all derived from nouns (some nouns are body parts, others not) and the expressions seem to be grammaticalized to various extents, discussed in 3.1.2.4. The structure of the complex prepositions is that each consists of a noun, preceded by the general locative marker described above, and followed by an associative marker as it is called in Möller (2012:20). The associative marker consists of the same vowel as the general preposition in most noun classes, but not necessarily with a high tone. In noun class 1 the associative marker has a low tone; *zhwi è ndom* (woman.CL1 + AM.CL1 + husband.CL1), ‘woman of husband’ = ‘bride’.

⁹ Example 11 is the same as example 6, but here the sentence is written in the current orthography. The schwa which is written before *atu* is there to mark the locative preposition, although it is realized as a high tone on ‘a’ in *atu*.

¹⁰ Mmen doesn’t have a work for ‘hook’, but for ‘nail’. In their houses they often have nails on the walls to hang things on, and the items are often referred to as hanging.

Hereafter the associative marker is written in brackets. The complex prepositions can therefore have two writings, because in the current orthography it is written when it is heard (simplified before consonant initial nouns) and omitted when it is not heard (before vowels).

Table 2. Proposed classification of the complex prepositions' underlying forms and origins:

<u>Preposition</u> (as it is written in the orthography)	<u>English translation</u>	<u>Underlying forms</u>	<u>Original Noun</u>	<u>English translation</u>
asi(ə) (or ashi(ə))	in front of	á áshī ə LOC front of	āsi.CL7 (āshi.CL7)	Front
echo(ə)	in front of, at the opening of	á échō ə LOC mouth of	ēchó.CL5	Mouth
epamə	behind	á épàm ə LOC back of	ēpām.CL5	Back
epòlè	at the corner of	á épòlè ə LOC corner of	ēpòlà.CL5	Edge, corner
esasə	under, below, at the bottom of	á ésàs ə LOC bottom of	ēsás.CL5	Buttocks, butt
eti(ə)	Under	á étíə ə LOC bottom of	ētýə.CL5	Bottom, lower part
etipi(ə)	at, next to, beside, around	á ētípī ə LOC side of	ētípì.CL5	Side, surroundings
etu(ə)	on, on top of	á étū ə LOC heads of	etú.CL8	Heads
ewùnê	on, beside	á ēwýn ə LOC body of	ēwýn.CL3	Body, skin
əfitê	in the middle of, inside of, in, on	á fítəyn ə LOC middle of	fítəyn.CL19	Middle

The table shows that the same tonal process that is described in 3.1.1 occurs here, i.e. a vowel initial noun takes a high tone from the locative marker. The tones of the nouns and the associative markers have been checked against the forthcoming Mmen–English dictionary and one native speaker. However, the main focus was to confirm the presence of the general locative marker by the tone that affects the initial noun syllable.

3.1.2.1 Front and Back dimensions

There seem to be three distinct dimensions of Front and Back. First, however, some words about the origins of these expressions.

Location ‘in front of’ can be expressed in two ways, one derived from the noun *ashi* / *asi*, class 7, ‘front’. This does not seem to be a body part, although there might perhaps be a connection with the word ‘eye’ (*eshi/esi*, class 5). The other expression is derived from the noun ‘mouth’ (*echo*, class 5). *Ashi* and *asi* seem to be allophones because some speakers use one in the same contexts as other speakers use the other. In this paper I use the spelling *ashi*, but during the time of writing this is not a standardised form. The prepositions are *echo(ə)*¹¹ and *ashi(ə)*, consisting of the general locative marker, the noun and the associative marker, as seen in table 2. The difference between *echo(ə)* and *ashi(ə)* is not completely clear. *Echo(ə)* was only found in one context, a tree being in front of a house, but four consultants confirmed that *ashi(ə)* could be used with an identical meaning.

The relation of being ‘behind’ is expressed by *epâmə*¹², derived from the noun ‘back’ (*epam* class 5). This does also not seem to be a body part, because the word for the body part ‘back’ is *tsɨm*, (which also can be used more widely: *ə tsɨm ə ŋwà'è*, on (the) back of (the) book.¹³) The exact meaning and use of the noun *epam* is not fully investigated.

Another expression for ‘behind’ is *epâ*. This was only used when ‘house’ was the Ground; *epâ ndɛ*, behind the house. *Epamə ndɛ* is also possible, and gives, according to the five consultants asked, the exact same meaning. *Epâ* was combined with a number of other Grounds (from various noun classes and syllable structures such as nasal initial) to find a pattern for the usage, but ‘house’ seemed to be the only possible combination. No original noun to this preposition has been found.

The perspectives of front/back are;

- a) Figure is positioned in the region ‘in front of’ the Ground's front.
e.g. ‘in front of the house’ is in front of the house’s entrance–side.
- b) Figure is positioned between Ground and the observer.
e.g. a dog is in front of the tree if it stands between me and the tree, and I'm facing the tree and the dog.

¹¹ The ‘ə’ which is in brackets is, as mentioned, written when it is pronounced before consonants.

¹² This associative marker is always written, as it is always pronounced because of the preceding *m*.

¹³ Again the question came up of viewing expressions as prepositions or prepositional phrases. This is interpreted as a prepositional phrase; ‘on’ + ‘the book’s back’.

- c) Position of the Figure in a sequence facing the same direction.
e.g. a line of people or vehicles, a line of letters and words in a text.

The peculiarities of Mmen in perspective c) were identified as a result of many misunderstandings. This will be discussed in section 3.2.4, *temporal frame of reference*.

Examples 14 and 15 are examples of perspective a):

14) *ka'fe* *tyəm əpâ* *ndɛ*
tree.CL19 stand behind house.CL9
'The tree stands behind the house' (P22)

15) *ka'fe* *tyəm etipiə* *ndɛ*
tree.CL19 stand beside house.CL9
'The tree stands beside the house (church)' (P49, see figure 2 next page)

Six out of seven Mmen speakers did not say that the tree was in front of the house, but instead beside, which is an example of perspective a). The position of the tree is related to the Ground without influence of the observer, the door is used as an index of the front of the house. One of the seven said that the tree was in front of the house, perspective b).

16) *ka'fe* *tyəm echoə* *ndɛ*
tree.CL19 stand LOC.mouth.of house.CL9
'The tree stands in front of the house (church)' (P49, see figure 2 next page)

Example 15–16 is, as Levinson has pointed out, a confrontation between intrinsic and relative interpretations (1996:369f), see 3.1.3 *Frames of reference* below.

Example 17 (figure 3) is ambiguous between the two views. Either the boy is described as being behind the chair (by all consultants) because he is behind the back of the chair, perspective a). Or he is behind the chair because of the relation to the girl, the observer, perspective b). The example (17) does not say which perspective of the two that are mostly used, but according to example 15 and 16 does perspective a) seem to be prioritised above perspective b).

17) *e* *ndəte* *epamə* *fɪkyâ*
3SG hide.IMPF behind chair.CL19
'He hides behind the chair' (P64, see figure 3 next page)

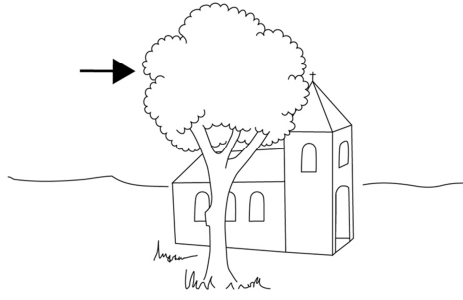


Figure 2; P49

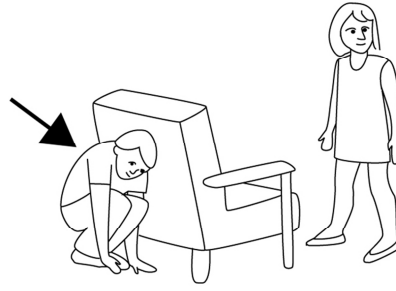


Figure 3; P64

3.1.2.2 Top and Bottom dimensions

There are three expressions for dimensions of the perspective ‘up’ and ‘down’. They come from the nouns ‘buttocks’ (*esas*, class 5), ‘bottom’ (*etya*, class 5), and ‘heads’ (*etu*, class 8). It is not completely confirmed that the origin of *etu* is the plural form, or somehow developed from the singular *atu*. *Esas* is also the name for the body part ‘buttocks’, and *etya*¹⁴ is translated to ‘bottom’ but the use as a noun is not yet investigated.

There is only one preposition that is used for the dimension “up”, *etu*. But some expressions where English may use the prepositions ‘over’ or ‘above’, Mmen can only use an adverb. P25 “The sun shines over the village” or “The sun is above the village” can only be expressed “The sun is up” in Mmen.

Etua is used widely for Figures both ‘on top of’ and ‘above’ Grounds. Examples 18 and 19 show Figures with support from below:

18) *wa nyi etua alaŋ*
 cup.CL9 be on.top.of table.CL7
 ‘The cup is on the table’ (P01)

19) *kwil nyi etua atəŋ əfikà’ə*
 rope.CL9 be on.top.of ‘stump of tree’.CL7
 ‘The rope is on the stump of the tree’ (P23)

Examples 20 and 21 show Figures being higher than Ground without contact:

20) *lwu nyi etua tso*
 bridge.CL3 be on.top.of stream.CL9
 ‘The bridge is over the river’ (P33, replaced)¹⁵

¹⁴ Alternative spelling can be *etia*.

¹⁵ This sentence construction has been rejected by one native speaker who insisted that, although the sentence would be understandable, it is not normal usage. The consultant would have expressed the bridge to be crossed ‘ə tso’, using the general locative. Compare this with the discussion about the pictures 9 and 63 on page 18.

21) *mbà'se nyi etuə pfiyn*
 cloud.CL10 be on.top.of hill.CL9
 'The clouds are above the hill' (P36)

The dimensions of “down” are divided in two: One, *esas(ə)*, describes Figures beside the lower end of the Ground (=at the bottom of), and *eti(ə)* describes location for Figures vertically under Grounds.

a) Figure beside lower end of Ground:

22) *Wuə tsis esasə fika'*
 person.CL1 sit LOC.buttocks.of tree.CL19
 'Somebody sits under a tree'

23) *Nde nyi esasə pfiyn*
 house.CL9 be LOC.buttocks.of hill
 'The house is at the bottom of the hill'

b) Figure being vertically under Ground: (examples 24–27)

Figure without contact with the Ground:

24) *pɪləə nyi etiə fkyə'*
 ball.CL7 be LOC.bottom.of chair.CL19
 'The ball is under the chair' (P16)

25) *fɪtəmu' nyi etiə alaŋ*
 cat.CL19 be LOC.bottom.of table.CL7
 'The cat is under the table' (P31)

Figure with contact with the Ground:

26) *tàsa nyi etiə apaŋ əsendzisa*
 spoon.CL7 be LOC.bottom.of cloth.CL7
 'The spoon is under the cloth' (P24)

As seen in example 22, *esasə* is used to describe someone sitting under a tree. It is also possible to use *etiə*. The sentence in example 27 is more of “being covered” by the tree, and possible to use in a context of seeking shelter from rain. This expression is not common at all, compared to example 22 which is the unmarked case.

27) <i>Wuə</i>	<i>tsis</i>	<i>etiə</i>	<i>fika'</i>
person.CL1	sit	LOC.bottom.of	tree.CL19
'Somebody sits under a tree'			

3.1.2.3 Middle, Side and Body dimensions

In this paper there are three remaining dimensions that will be discussed; middle, side and body. They will be discussed one after another, starting with 'middle'.

There is no evidence that the word for 'middle', *fitəyn*, is a body part, but it is used to refer to the inside of a man. It is clearly grammaticalized as it pronounced *əfitə* instead of *əfitəyn* ə (see section 3.1.2.4). The expression is used to describe Figures 'in the middle' in various aspects. It is applicable in contexts of 1, 2 and 3 dimensions, and both in containment and in substance which is exemplified below.

1 Dimension:

28) <i>ndzise</i>	<i>gharḡnə</i>	<i>əfitə</i>	<i>kwɪ'l</i>
dress.CL10	hang.IMPF	LOC.middle.of	rope.CL9
'The dress hangs at the middle of a rope'			

Source: Verbal conversation with three native speakers

2 Dimensions:

29) <i>pɪla</i>	<i>nyɪ</i>	<i>əfitə</i>	<i>ghɔɔn</i>
ball.CL7	be	LOC.middle.of	children.CL2
'The ball is between the children' (P04)			

30) <i>wàsè</i>	<i>tyəm</i>	<i>əfitə</i>	<i>akaḡ</i>
cups.CL10	stand	LOC.middle.of	dish.CL7
'The cups stand on a dish' (P35) ¹⁶			

31) <i>liḡ əḡwà'lè</i>	<i>nyɪ</i>	<i>əfitə</i>	<i>ḡwà'lè</i>
pen.CL5	be	LOC.middle.of	book.CL9
'The pen is on the book (P61)'			

It was possible to say *etuə ḡwà'lè* here as well. It seemed to be optional which one to use. The reason for using *əfitə* is because the book is opened, it is the inside/centre of the book. If the book would have been closed and the pen lay in the same position, the only option would be to say *etuə ḡwà'lè*, on top of the book.

3 Dimensions (in substance):

32) <i>mbɔa</i>	<i>nyɪ</i>	<i>əfitə</i>	<i>akaḡ əmoa</i>
fish.CL7	be	LOC.middle.of	'bowl of water'.CL7
'The fish is in the water' (P18)			

¹⁶ The plate on the picture looks completely horizontal.

3 Dimensions (in container):

33) *tamke* *nyi* *əfitə* *akaŋ*
 fruit.CL7 be LOC.middle.of dish.CL7
 'The fruit is in the dish' (P02)

The comparison of this dimension 'middle' with 'inside' can be confusing. A personal experience was once in the village when asking whether I was to throw the compost just anywhere outside (meaning outdoors), and got the answer in English: "yes, throw it inside there behind the house" [into 'the middle' of the shrubbery]. 'Inside the house' is also expressed with *fītəyn* however.

As can be seen in all the above examples, the preposition can be used in many different contexts referring to the middle, or inside in some cases, and in many different environments and all dimensions. To conclude, 'middle' is used to mark out a centre point of a line, the centre of an area and the centre of an opened or closed container with or without substance.

When it comes to 'side' the general term that is used is *etipi(ə)*. Firstly, the preposition is used to describe location of the Figure next to the Ground, both in relation to the front/back of the Ground:

34) *ka'fe* *tyəm* *etipiə* *ndε*
 tree.CL19 stand LOC.side.of house.CL9
 'The tree stands beside the house (church)' (P49, see figure 2)

And in relation to the observer:

35) *vayn* *tsis* *etipi* *ewûs*
 child.CL1 sit LOC.side.of fire.CL7
 'The child sits beside the fire' (P38)

Secondly, the expression is also used in a wider sense to be "near", as seen in the example below (the glossing is not verified):

36) ə te ndu pəyn, wuə ə fə afu' ə
 ? PST3 go come person.CL1 PRF work farm of

vəyn ke **etipiə** tso
 3SG:OBJ 3SG:AGR **LOC.side.of** stream.CL9

ə ngwuŋ ə akô
 LOC edge of forest.CL7

‘Once upon a time, a person worked on her farm **near** a stream at the edge of a forest.’

From the story ‘*Ndom ve tsoḅse te pə tə ə Məyn*’, sentence 1:1

The perspective of ‘side’ is also widened by Figure 4, where one consultant expressed the children’s location to be *etipiə tso*, also if they would have been facing the stream. Furthermore, to a question about where Cameroon was in relation to Africa, the answer became *etipi Africa* (Mmen doesn’t have a word for ‘Africa’), as this location obviously is very generally used.



Figure 4, Additional picture describing ‘side’

37) *ghɔyn nyi etipiə tso*
 children.CL2 be LOC.side.of stream.CL9
 ‘The children are at the stream’ (Figure 4)

The concept of ‘body/skin’ is commonly used for all Figures on the surface of a Ground:

38) *njəynse nyi ewùnê fɛnyɪ*
 sap.CL13 be LOC.body.of knife.CL19
 ‘The sap is on the knife’ (P12)
 (changed from butter to sap since butter is not common)

39) *ka’fe nyi ewùnê pɛɪn*
 tree.CL19 be LOC.body.of hill.CL9
 ‘The tree is on the hill’ (P17)

40) *kyà’te nyi ewùnê ndɛ*
 fly.CL13 be LOC.body.of house.CL9
 ‘The fly is on the wall’ (P52)

According to one consultant the expression is especially used for Figures being liquids and mud, but as seen in examples 39 and 40 there are more possibilities. Though, example number 39 is an exception, *etuə* (on top of) was used by all the other consultants. Further

questions about the most common expression of this picture showed that the simplest way was to use the general locative preposition.

Another feature of this dimension is that the expression also would be used for the original picture 53, a chewing gum stuck to the underside of the table (which was not included in the series but discussed with one consultant). Also carvings on a calabash and text on a paper would be ‘on its body’ according to the same consultant. Furthermore, the expression was found in one of the stories written down by native speakers in connection with a grammar course. The context is from a folk story about the tortoise who fools the crocodile and the elephant to compete against him (tortoise). In fact two other animals were having a tug of war against each other, fooled by the tortoise, and while waiting for them to kill one another Tortoise was hiding “on the body” of a rock.¹⁷

41) È	ve	è	pay'e	nê	ghε	tə	ə	ɲàɲnə
he	?	he	?	do	things	the	and	creep
fɪə		pə	ə	ndə	tso	ewùnê		anayn.
come out		come	and	hide	?	LOC.body.of		rock

‘After he had finished, he crawled out and hid beside a rock’

From the story ‘*Anyan̄ andôm̄kòyn̄*’, sentence 11b.

Ewùnê has been translated to ‘beside’. The concept is probably that by hiding from the other animals he is pushing himself to the skin of the rock, on the other side, not to be discovered.

3.1.2.4 Other dimensions and grammaticalization

It was mentioned that these expressions of specific locations are grammaticalized to various extents.

Evidences of grammaticalization are for instance the word *əfitə* ‘in the middle of’, where the original noun is *əfitəyn* ‘middle’. Following the structure of the other expressions, it “should” be *ə əfitəyn ə*, ‘LOC + noun + associative marker’, and as it is now simply *əfitə*, it clearly seems to have merged into a short form. Additional evidence of the expression being grammaticalized is that it exists a reduplicated expression, *ə fitəyn fitəyn ə*, ‘in the very middle’ (LOC + noun + noun + associative marker) which cannot be shortened *əfitəfitə*. This is therefore not grammaticalized and is to be considered a prepositional phrase, and in comparison with the first expression we can be assured that the first really is

¹⁷ The glossing in example 41 is not complete and most certainly not correctly translated everywhere, because the orthography still is at a very early point and this glossing was made before August 2012. More investigations have to be done in order to complete glossing for whole texts.

grammaticalization. A change of the original noun also occurs in *ewùnâ*, which is reduced and gets a vowel change from the original form *ə ewiyn ə*.

What is more difficult is for instance, the expression *epolə*, and whether it is a complex preposition or a prepositional phrase. Compare the different interpretations in 42 and 43:

Preposition:

42) *ka'fe* *tyəm* *epolə* *ndɛ*
 tree.CL19 stand LOC.corner.of house.CL9
 'The tree is at the corner of the house' (P53)

or

Prepositional phrase:

43) *ka'fe* *tyəm* *ə* *epolə* *ə* *ndɛ*
 tree.CL19 stand LOC corner.CL5 AM.CL5 house.CL9
 'The tree is at the corner of the house' (P53)

Testing this is not as easy as it is in English. The English expression 'in front of' is defined as a preposition, but 'at the front of' is a prepositional phrase. That the first expression is grammaticalized can be seen in that it's impossible to exchange 'in' with 'at'; 'in front of' but not 'at front of'. The articles are also used as a way of testing. In addition to saying 'in front of' is it possible to say 'in the front of'. But then the meaning changes ('I'm in the front of the train' vs. 'I'm in front of the train'), 'in the front' is a prepositional phrase and 'in front of', as said already, a complex preposition.

In Mmen, it becomes difficult to test if the expressions are fully grammaticalized because the language does not have articles and uses the same word for 'at', 'in' and 'on' (the general locative). Probably a lot of tones are involved in the different interpretations that would give clarification by investigating.

3.1.3 Frames of reference

Levinson (1996), has divided frames of reference into three typologies; intrinsic, relative (so-called deictic) and absolute. Intrinsic frames of reference depend on the inherent features of the Ground; for instance inherent fronts and backs. This is what is in perspective a) on page 20 with following examples. The second frame of reference, relative, involves the observer as in 'behind the bush' where the "back" depends on the viewer's position. The absolute frame of reference, however, is dependent on natural features of the environment that do not easily change. Examples of this can be 'west', 'east' or 'to the riverside'. In Mmen, it is already shown that intrinsic frames of reference occur (example 15), as well as relative (for instance example 16).

Some expressions which obligatorily demand a frame of reference are *ekɔynkôu*, used for the left direction (arm= *akɔyn*, class 7) and *ekɔyntwɔu*, used for the right direction. Another expression, *ekɔyn zhiəu*, can also be used for the latter. Mmen also shares the character of

having an identical word for ‘right’ (direction) and ‘right’ as meaning ‘correct’ (*zhiəu* in Mmen) with English, for example. These words can be used both with an intrinsic interpretation, e.g. ‘the cup is at my left’, or a relative, e.g. ‘the tree stands to the left of the house’.

Absolute terms of reference, however, don’t seem to be used in Mmen. The language has words for the cardinal points east, west, south and north (translated: sunrise, sunset, down and up) but they are not commonly used. Some people in the village claim that these words don’t exist, so they are probably translated from European languages. The village is located in a mountain area, with many higher and lower points at a local level. It is therefore common to use ‘uphill’ and ‘downhill’ in reference, but that is not related in absolute terms as the ups and downs are so many. A sentence like ‘he is going uphill’ is understood by the context of where the utterance was made, and does not refer a *particular* hill independent of place of utterance.

Example 44 shows that the relative orientation, in contrast to the absolute, is part of the original system in Mmen. The sentence is taken from a traditional situation in the culture, which traces back to times before the impact of other cultures:

44) *kə tɛɛɛ wuə əkɔyn kɔu*
 NEG pass somebody.CL1 'left handside'
 ‘Don’t let anyone pass by your left hand side’

3.2 Dynamic relations

3.2.1 Directional motion

The directional information is expressed by a verb or a verb series combined with one of the static prepositions. Most commonly the general preposition is used, and its meaning is understood by the preceding verb and the context:

45) *M nduə ə enda’*
 I go.IMPF LOC town.CL5
 ‘I’m going to town’

46) *M ndo pəyn ə enda’*
 I IMPF come LOC town.CL5
 ‘I’m coming from town’

47) *E* *və* *ndo* *nji* *ndu* *ə* *ako*¹⁸
 3SG 3SG.SBJ.PRF go enter go LOC forest.CL7
 ‘She went into the forest’

48) *M* *njiə* *ə* *ndɛ*
 I enter.IMPF LOC house.CL9
 ‘I’m entering the house’

Examples 49 and 50 show that verbs can contain information about altitude, as ‘going up’ and ‘going down’ are used to describe the height difference between the origin and goal of motion. These verbs are not obligatory, and it is also possible to use *nduə* (= ‘go’, generally), but it is more common to use the directional verbs for speakers living in the area:

49) *E* *kɔʔ* *ə* *Fundɔŋ*
 he go.up LOC Fundong
 ‘He goes to Fundong’ (from Bafumen, lower)

50) *E* *ndo* *Fundɔŋ* *tsô* *ə* *Məyn*
 he go Fundong go.down LOC Bafumen
 ‘He is going from Fundong (higher) to Bafumen (lower)’

If the places are on the same height, and the road descends and ascends many times, then the last distance of the road determines the verb to use. Theoretically, it would be logical for there to be a schwa between *ndo* and *Fundɔŋ*. This is probably the case, but has not yet been confirmed.

We can also see that Mmen is an equipollently-framed language (and even more specifically a serial-verb language, described in the introduction) according to Slobin’s typology (Slobin 2004). The example 51 below shows that the English sentence ‘She jumped into the water’ expresses manner and path of the motion event by equivalent grammatical forms:

51) *E* *və* *tàyn* *nji* *əfitə* *mo*[’]
 3SG 3SG.SBJ.PRF jump enter LOC.middle.of water.CL6a
 ‘She jumped into the water’

52) *E* *və* *tàyn* *za*[’] *ə* *tso*
 3SG 3SG.SBJ.PRF jump cross LOC stream.CL9
 ‘She jumped across the water’

¹⁸ This glossing is in need of further research, as the difference between *ndo* and *ndu* isn’t clear.

3.2.1.1 Fictive Motion

Mmen uses fictive motion, that a non-moving Figure is described in terms of moving (the term is also described in 1.1.2).

53) *Ndoma* *təyn* *nduə* *ə* *tso*
path.CL9 REF go.IMP LOC river.CL5
'The path goes to the river'

54) *Ndomve* *kɔ'ɔ* *ə* *pfɪyn*
path.CL9 climb LOC hill.CL9
'The road climbs the mountain'

The path and the road do not move themselves; verbs of motion are 'fictively' used to describe their location.

3.2.2 Moving Ego

As briefly explained in the introduction (1.1.2), 'moving ego' is a concept of "us" moving in relation to temporal events, which stand still. The motion is done by us, and verbs of motion which are used in space are also used in relation to time. The sentence in English *We are nearing spring* describes this view, where "we" are moving and "spring" is a temporal event that stands still. In Mmen, they use this type of perspective as well, which is seen in examples 55 and 56:

55) *Mə* *nji* *ndu* *ə* *piŋ* *fe*
I-PRF enter go LOC year.CL9 new
'I entered into the new year'

56) *E* *və* *ndo* *fɪ* *pəyn* *ə* *vəyn* *endamə wuae*
3SG 3SG.SBJ.PRF go out come of her 'childish life'
'She left childhood'¹⁹

The preposition which is used in expression of time is the general locative that has been described above. Furthermore, the verbs in these temporal expressions are the same as those used in space. In the same way that it is possible to say *M njiə ndɛ* 'I am entering the house' it is possible to 'enter the new year' (example 55).

3.2.3 Moving Time

The opposite perspective of 'moving ego' is the concept of temporal events that move in relation to "us" who stand still. In English, a common expression in early December is "Christmas is coming soon". This describes the perspective of the temporal event 'Christmas'

¹⁹ The *ə* that is glossed 'of' might perhaps be a LOC.

as moving toward us, and not us moving toward Christmas. Examples 57 and 58 show the view of (literally) ‘time’ as moving. See below: (The verb *tsɛ̀* is also used in space.²⁰)

57) *Shiŋa nyi kə tsɛ̀*
 Time.CL7 be PRF.CL7 pass
 ‘Time has passed’

58) *Shiŋa nyi ə tsɛ̀ ndo*
 time.CL7 be PRF pass IMPF(litt. go)
 ‘Time goes by’

In example 59 the dry season is expressed as moving towards us:

59) *Ndòm pana pə ndo*
 dry season.CL5 approach come IMPF(litt. go)
 ‘The dry season is approaching’

The concept of moving time is also transferred into Language 2. The phrase “...when November meets us, we will...” was uttered during a conversation in English with a Mmen speaker. Although native English speakers would not use this grammatical construction of expressing temporal motion, it is common in the NorthWest region of Cameroon, also by Cameroonians with other mother-tongues.²¹

3.2.4 Temporal frame of reference

The third view of Front and Back dimensions from section 3.1.2 (page 21) is the position of Figures in a sequence facing the same direction. As the word “direction” explains, time is involved here. The position of the Figure is expressed in relation to a direction of the sequence, which is “moving somewhere”. Being earlier in the sequence is to be more in front. This might be obvious when we speak of a line of cars in traffic; the car ‘in the very front’ of the line is the one that determined the direction of the movement. That car has its ‘back’ towards all the other cars.

In Mmen, as was briefly mentioned before, letters which are written to the right are viewed as being in front of the letters to the left. It should be emphasized that the writing system is, just as European languages, from left to right. In the Mmen expression below, *kə* is seen as

²⁰ The Mmen-English Dictionary describes the verb (se) *tsɛ̀* to mean in English: 1) pass, 2) bubble, 3) pass by, 4) blow (e.g. wind) and 5) succeed.

²¹ The phrase “November will meet us” is ambiguous and can also be an example of Moving Ego, if the thought is that “November will meet us as we move into ‘it’”. This can be a question of debate.

standing in front of the word *epiə*, and in the word *kə* itself, ə is in front of *k* (reversed *k* behind ə):

60) <i>epiə</i>	<i>kə</i>
smooth	very
'very smooth'	

When it comes to English sentences, this concept can be difficult for Mmen speakers. In an English expression like 'dusty road', most Mmen speakers would say that the word 'road' stands in front of the word 'dusty'. Some speakers, though, would describe 'dusty' to stand in front of 'road', mainly people who have been cooperating with westerners. This can be very problematic, especially as expressions like 'following', 'preceding', 'latter' and 'previous' are commonly used in descriptive texts.

The reason to think of letters and words in this way is not as strange as the first impression might be. Personally have I never perceived letters as facing any particular direction, only being positioned next to each other and the letter that is 'put down on the paper first' is the letter 'in front'. But it can also be very logical to view a text line as moving. It 'moves forward' as it is written down, and while reading movement is also involved. The direction is 'to the right', which makes the right letter to be "first" and in front of the left.

Even in English, and other languages as Swedish, it can be ambiguous: Imagine a row of people lining up for food. If somebody goes to 'the front' of the line it would be closest to the food. But the line 'starts' with the last person.

4 Conclusion

We have seen that there is a general locative in Mmen, which is widely used for different contexts in space and also in time. The realization is as a high tone in front of nouns initiated by a tone bearing unit (usually vowel), and as a 'schwa with a high tone' in front of non-tone bearing units (most of the consonants).

To describe location specifically, complex prepositions are used. They are derived from nouns, and combined with the general locative and an associative marker. The spatial dimensions in Mmen are three for up/down, two for back/front (realized in four words), one for dimension 'in the middle', one for 'at the side' and one for 'on the body/skin'. Other dimensions and expressions are found, but as discussed in section 3.1.2.4, the boundary between a grammaticalized preposition and a prepositional phrase is many times unclear.

The use in the dimension of back/front seems to have three perspectives; One of the Figure positioned in the region 'in front of' the Ground's front, one of the Figure is positioned between Ground and the observer, and one of the Figure being earlier in a sequence facing the same direction. The last is applicable for words in a text line (as described in 3.2.4).

Directional and temporal motion is described with the general locative *á*, and understood pragmatically. Mmen uses verb series to express motion events.

Both Moving Ego and Moving Time occur in Mmen, and time is expressed with words from the spatial realm.

Future research would be to investigate the underlying tones of words and sentences, to confirm the grammatical suggestion in Table 2, to study the nouns which have different forms in different positions of the sentence and to do more research on the level of grammaticalization that the expressions taken up in this paper have. It would also be helpful if the uncertainties of the glossing (for instance in the examples 36, 41, 47 and 56) would be clarified, and confirmation of the general locative marker in sentences like example 50.

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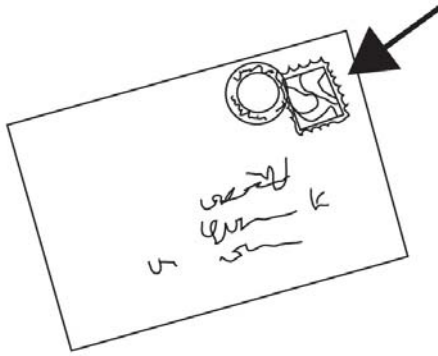
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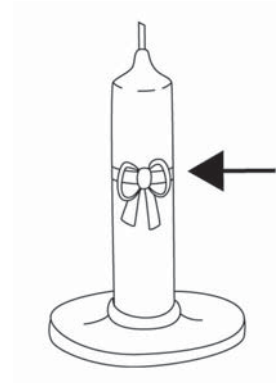
Appendix A) The pictures

Space and Time in Mmen
Signe Nilsson, 2013

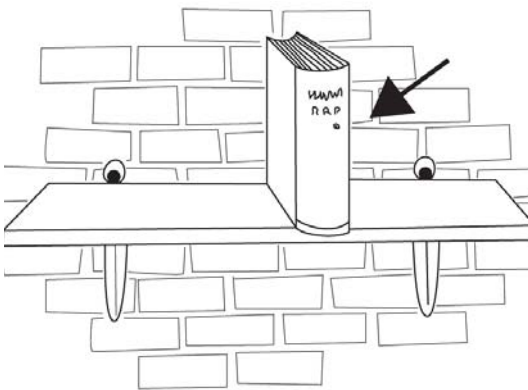
A1- Removed pictures, originals



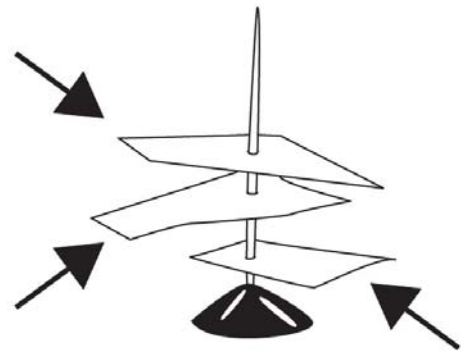
Removed picture (1) (They don't use them)



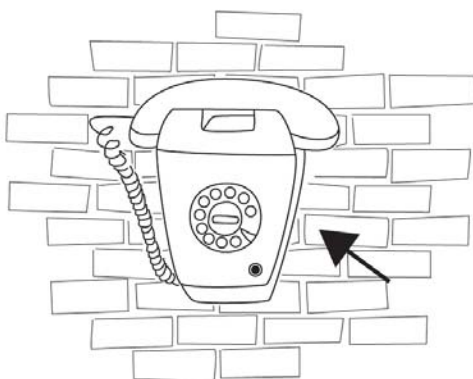
Removed picture (2) (Unfamiliar situation)



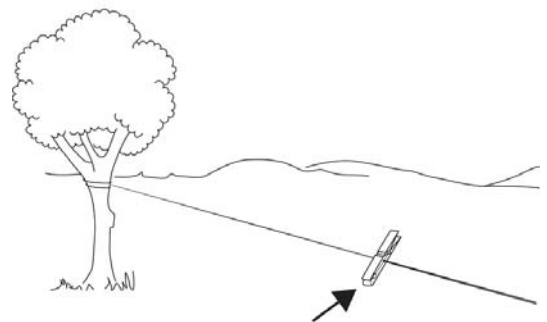
Removed picture (3) (They don't use shelves, instead, they would put books on tables and often pile them up.)



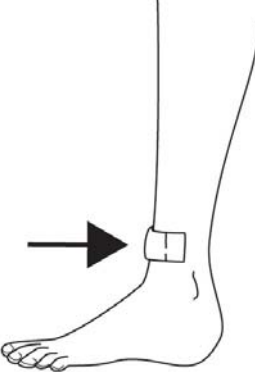
Removed picture (4) (Unrecognizable item)



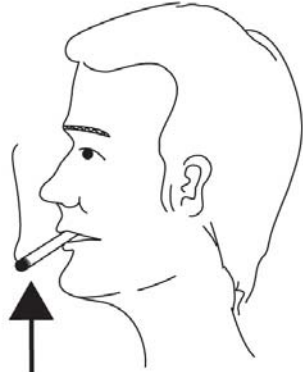
Removed picture (5) (Unfamiliar situation)



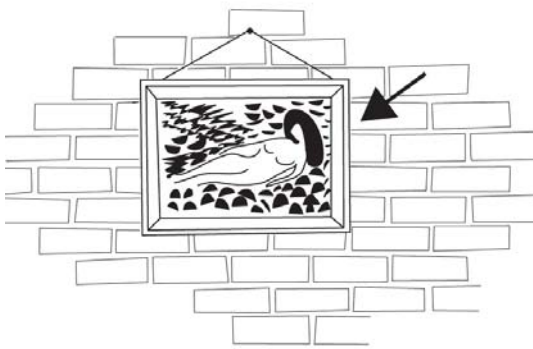
Removed picture (6) (They don't use them)



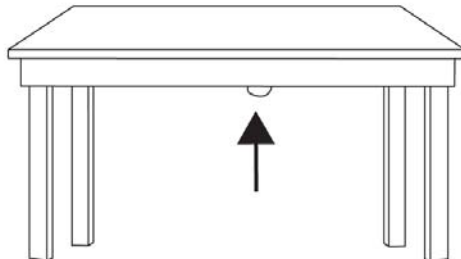
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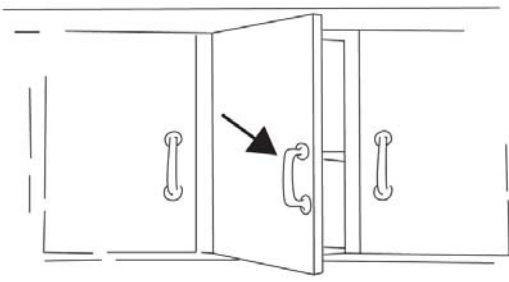
Removed picture (8) (Foreign item)



Removed picture (9) (Foreign item)



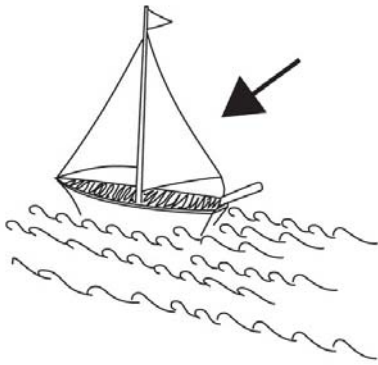
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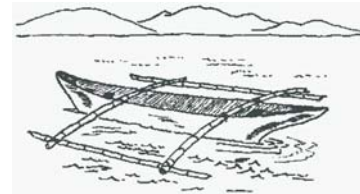
Removed picture (11) (Foreign construction)

A2- Replaced pictures, originals and replacements

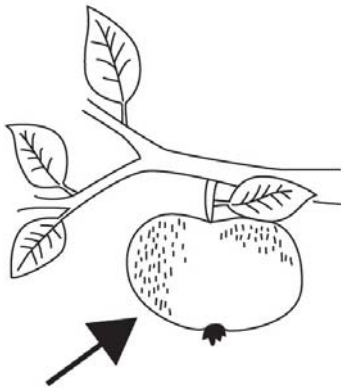
Space and Time in Mmen
Signe Nilsson, 2013



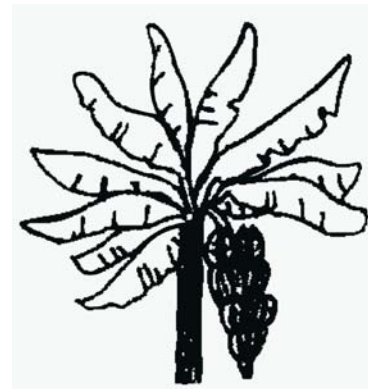
Original P11



Replacing P11



Original P27



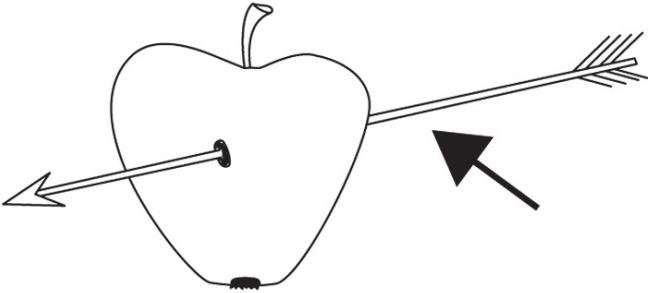
Replacing P27



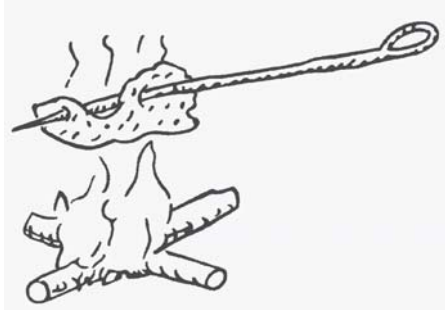
Original P28



Replacing P28



Original P30



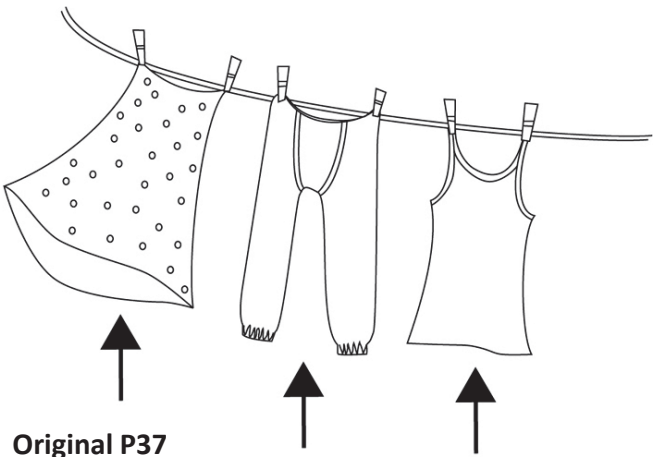
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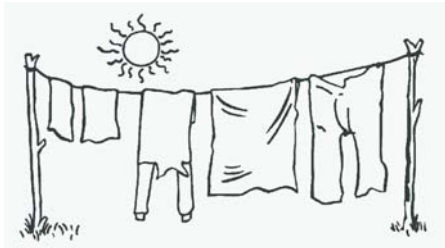
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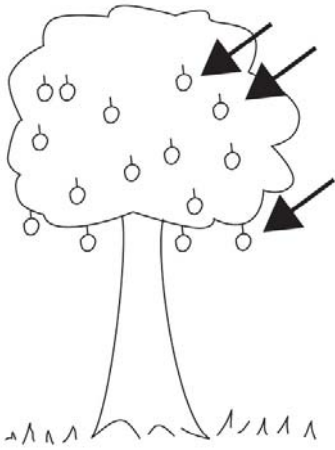
Replacing P34



Original P37



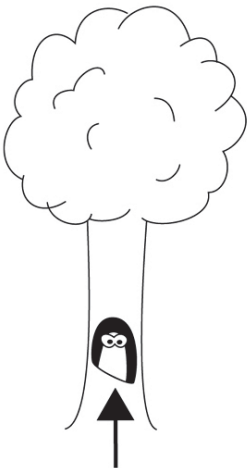
Replacing P37



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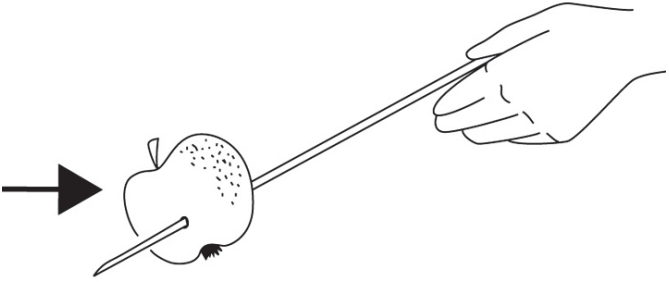
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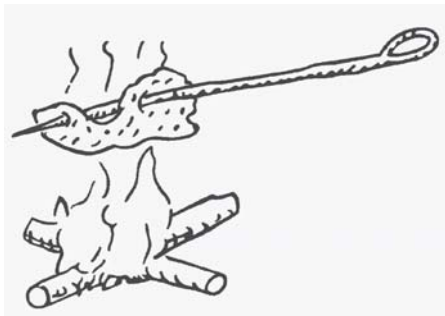
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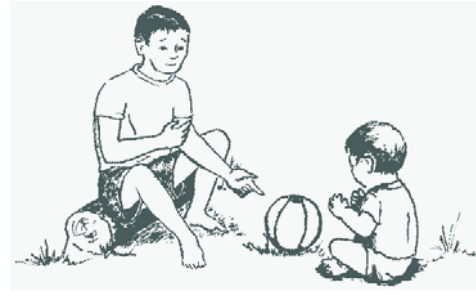
Original P70



Replacing P70



Added picture (1)



Added picture (2)



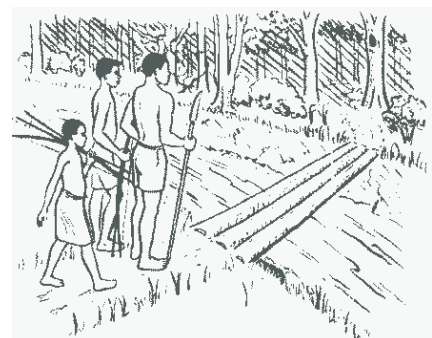
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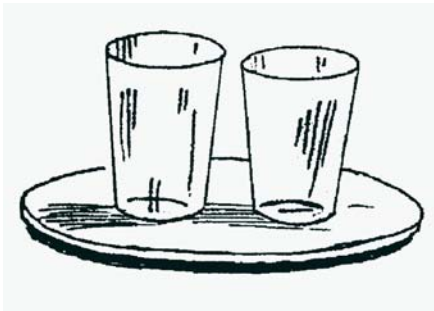
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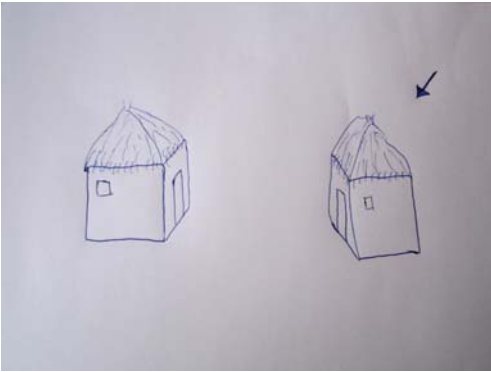
Added picture (5)



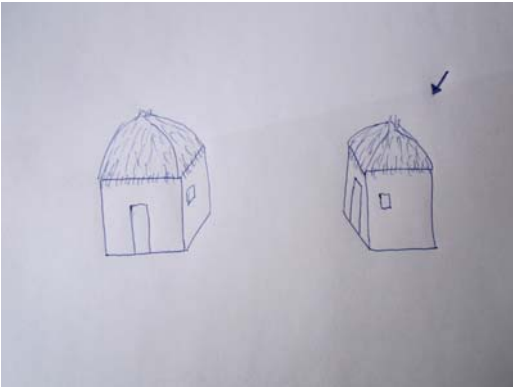
Added picture (6)



Added picture (7)



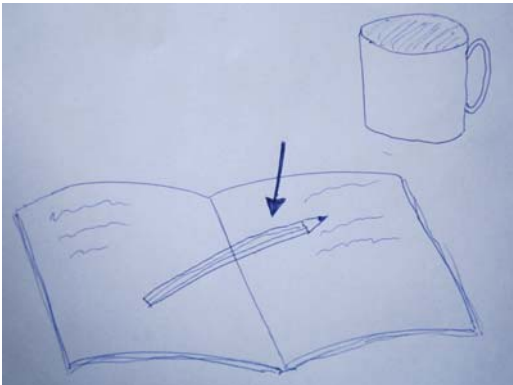
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Added picture (9), Self-made



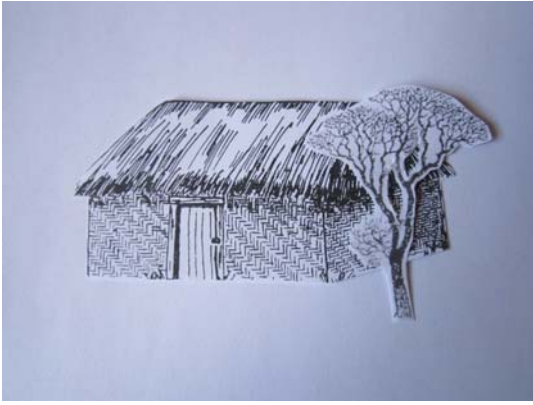
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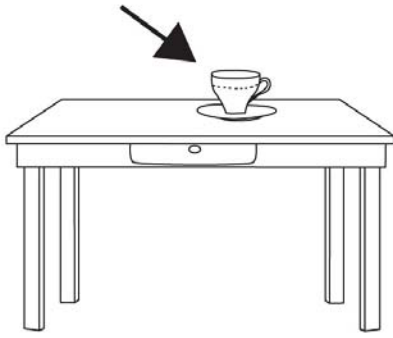
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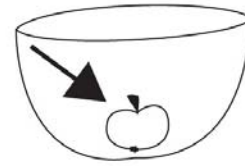
Added picture (12)



Added picture (13), Self-made



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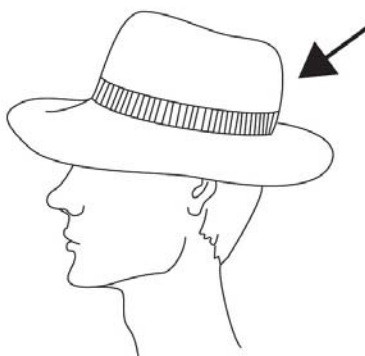
P02



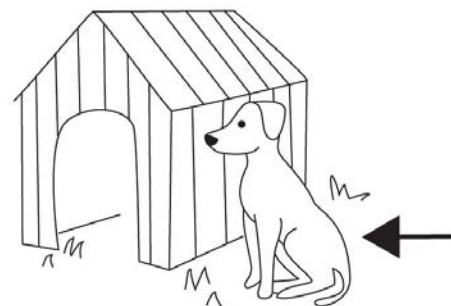
P03 (Arrow pointing at the buckets was drawn manually)



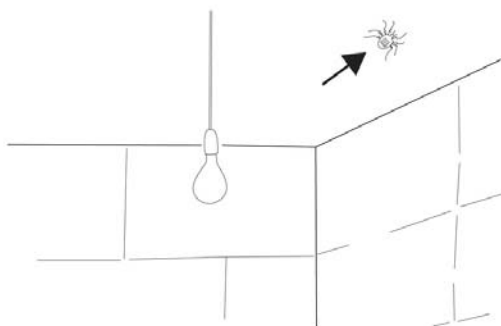
P04 (Arrow pointing at the ball was drawn manually)



P05



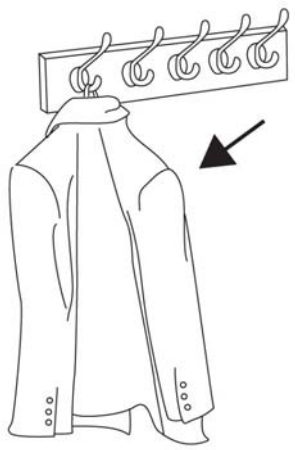
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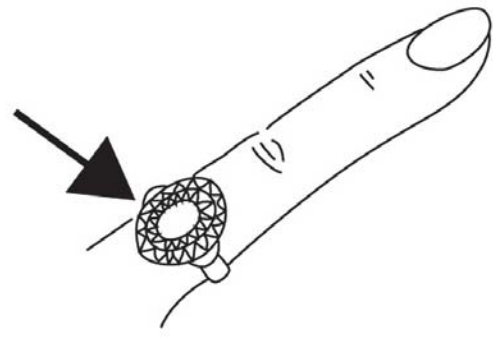
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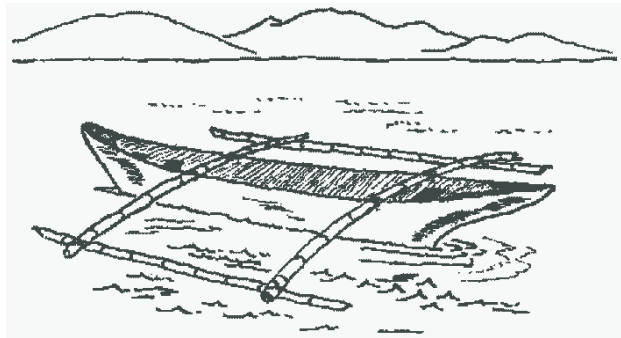
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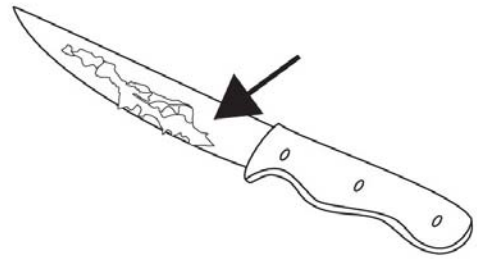
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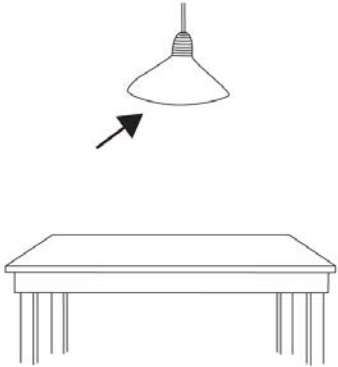
P10



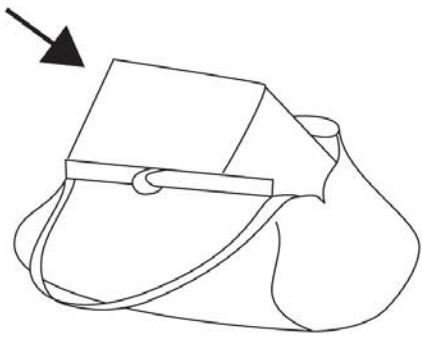
P11 (Arrow pointing at the boat was drawn manually)



P12



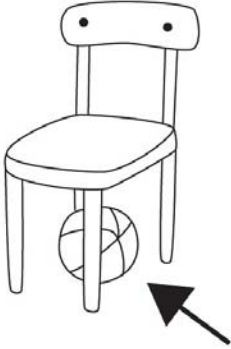
P13



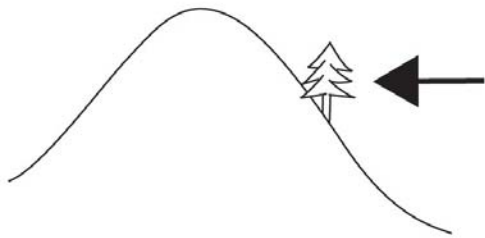
P14



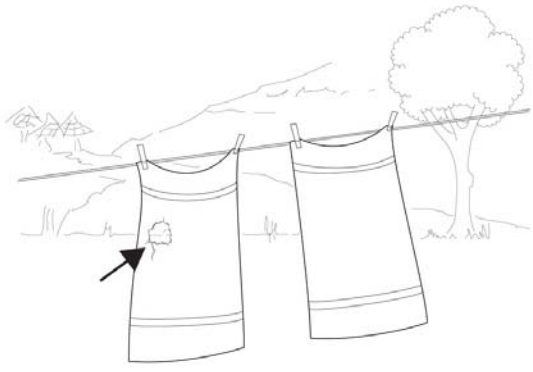
P15



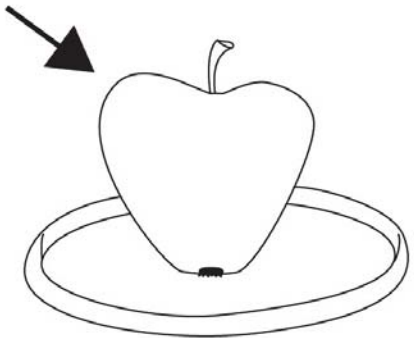
P16



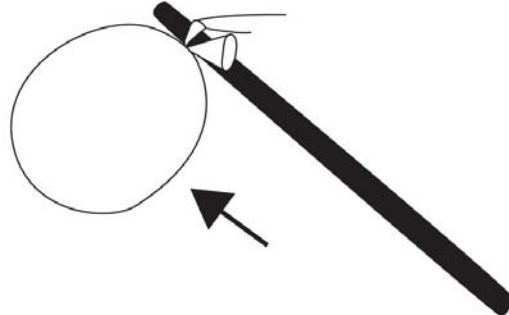
P17



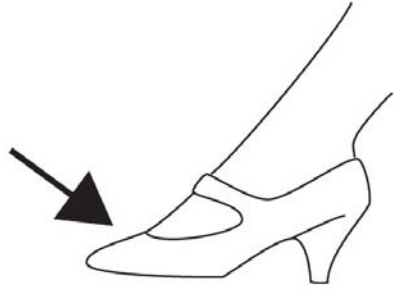
P18



P19



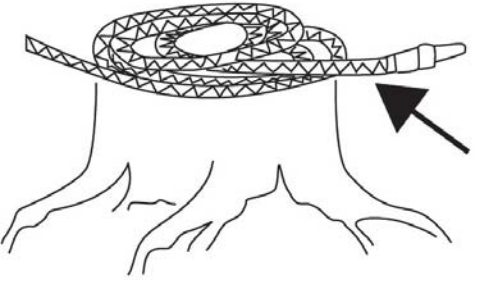
P20



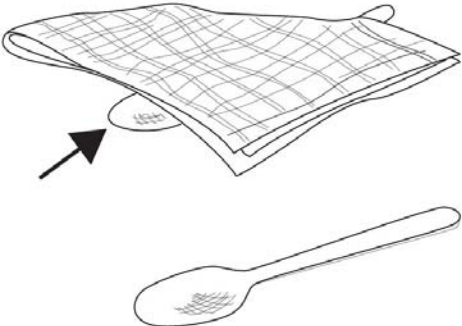
P21



P22 (Arrow pointing at the tree was drawn manually)



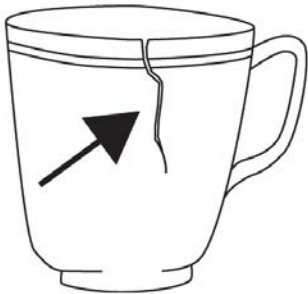
P23



P24



P25 (Arrow pointing at the sun was drawn manually)



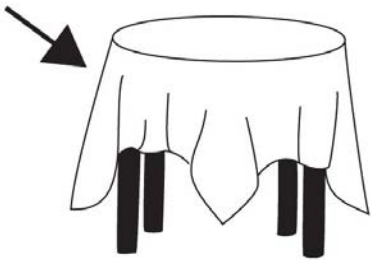
P26



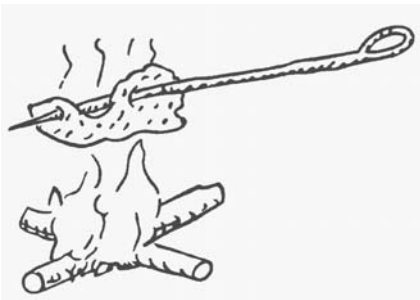
P27 (Arrow pointing at the bananas was drawn manually)



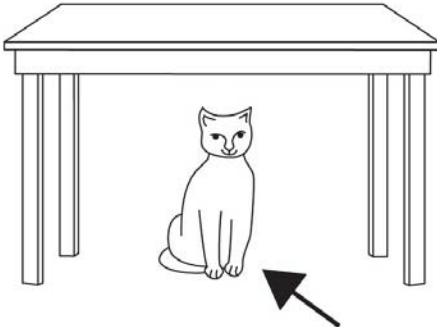
P28 (Arrow pointing at the book picture was drawn manually. Each consultant was told not to pay attention to the person reading)



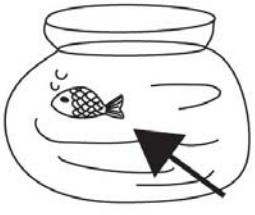
P29



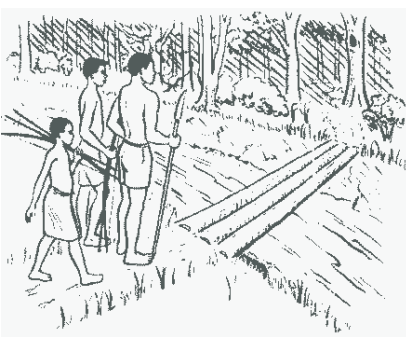
P30 (Arrow pointing at the stick was drawn manually)



P31



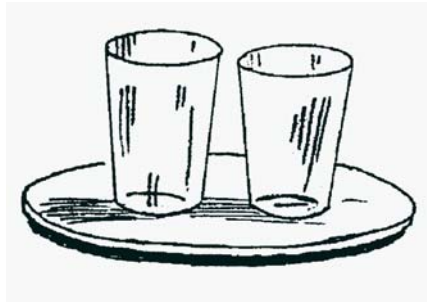
P32



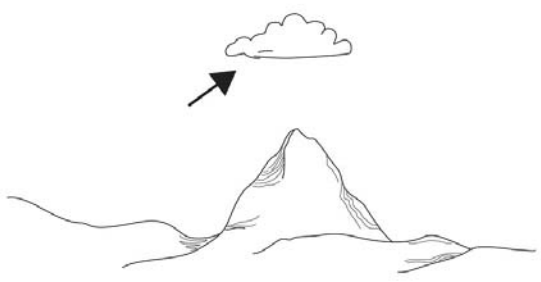
P33 (Arrow pointing at the bridge was drawn manually. Each consultant was asked to relate the bridge to the river, not to the people.)



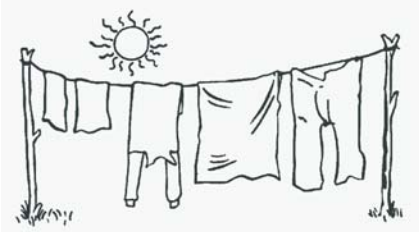
P34 (Arrow pointing at the man was drawn manually)



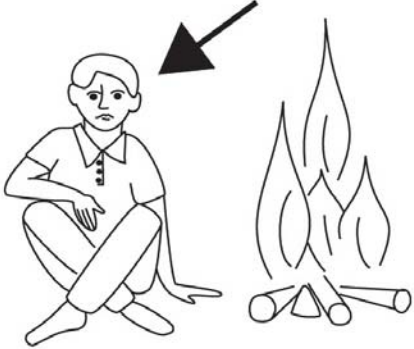
P35 (Arrow pointing at the glasses was drawn manually)



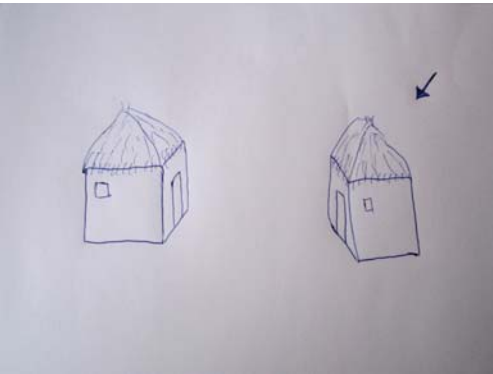
P36



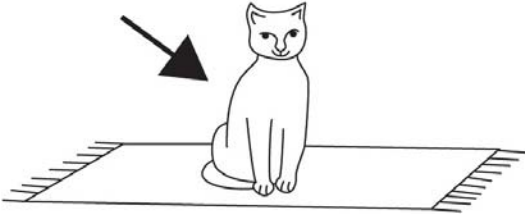
P37 (Arrow pointing at the clothes was drawn manually)



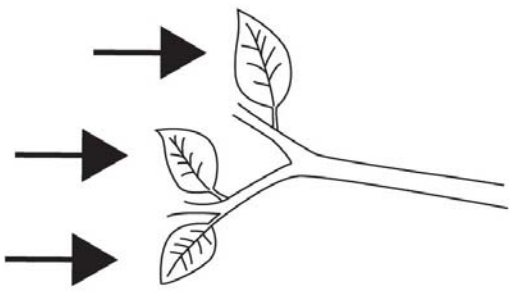
P38



P39



P40



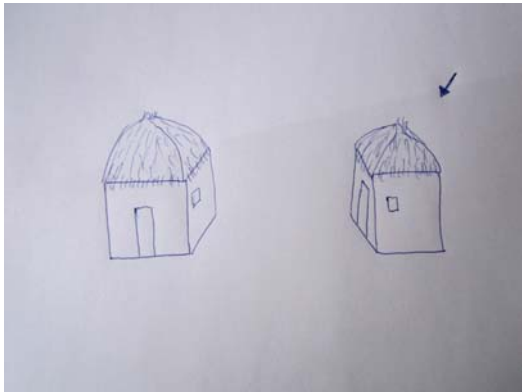
P41



P42



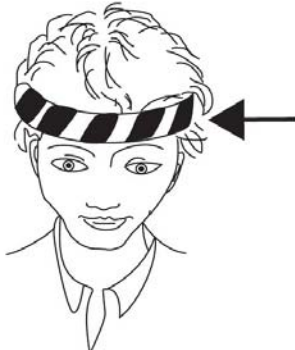
P43



P44



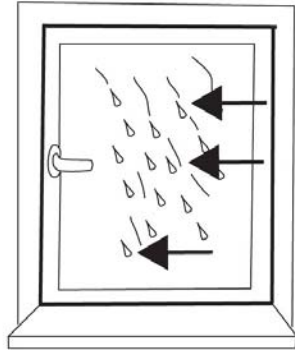
P45 (Arrow pointing at the pawpaws was drawn manually)



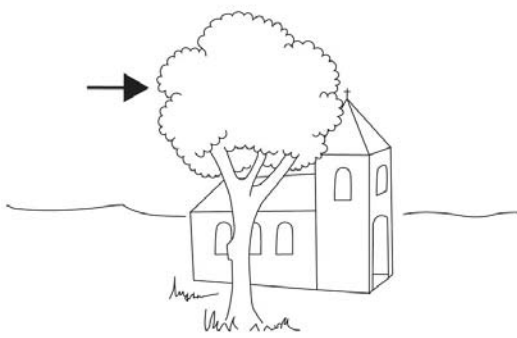
P46



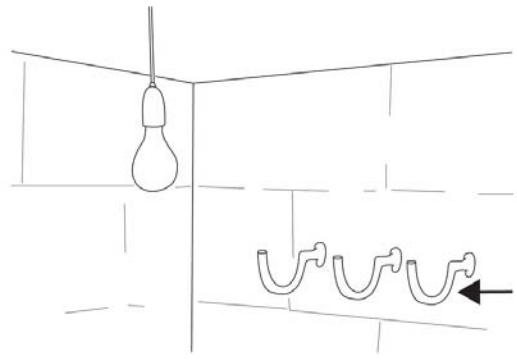
P47



P48



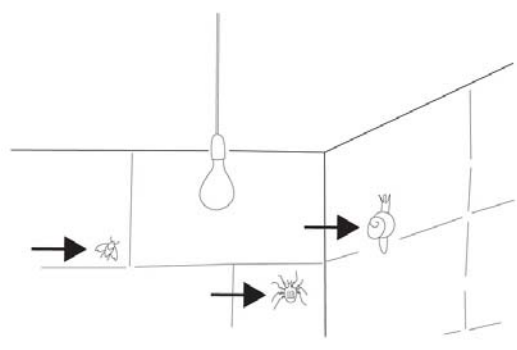
P49



P50



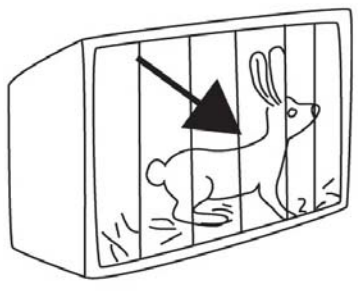
P51



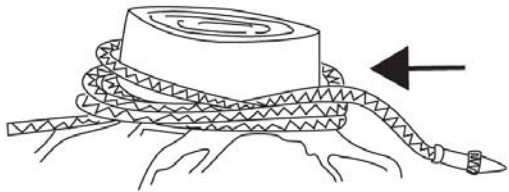
P52



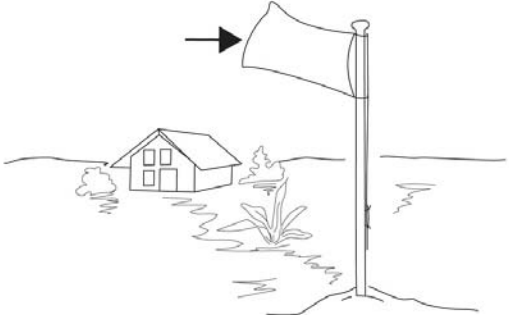
P53 (Arrow pointing at the tree was drawn manually)



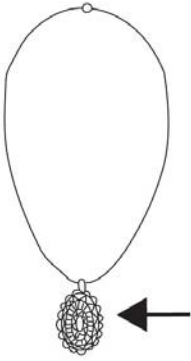
P54



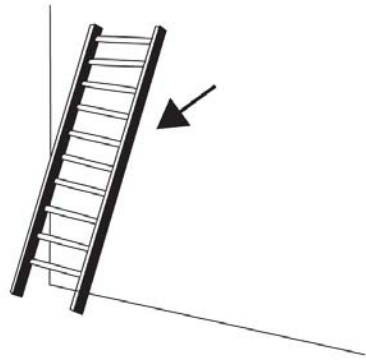
P55



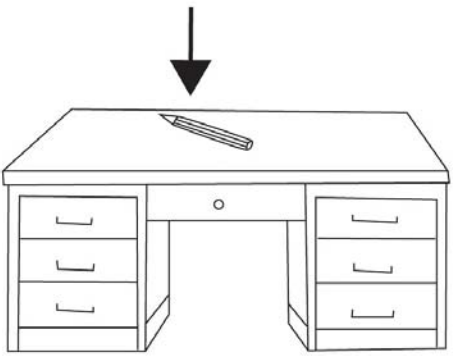
P56



P57



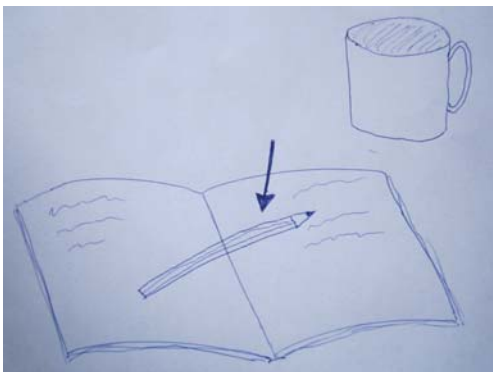
P58



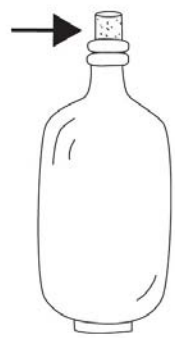
P59



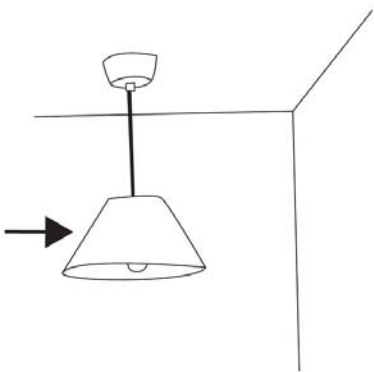
P60



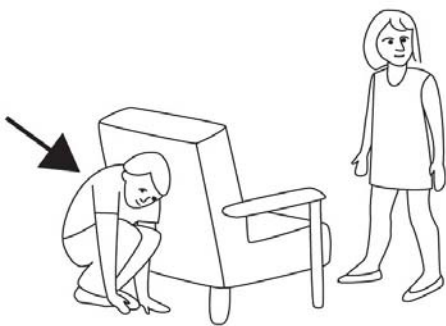
P61



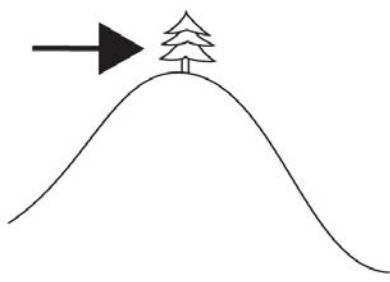
P62



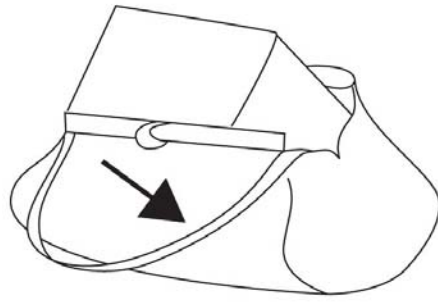
P63



P64



P65



P66



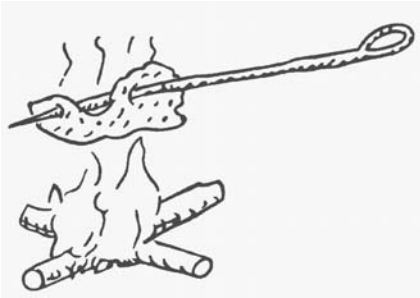
P67 (Arrow pointing at the monkey was drawn manually)



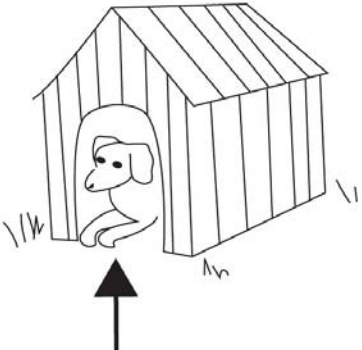
P68



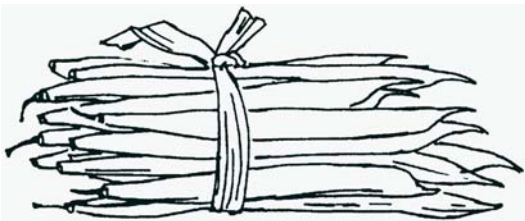
P69



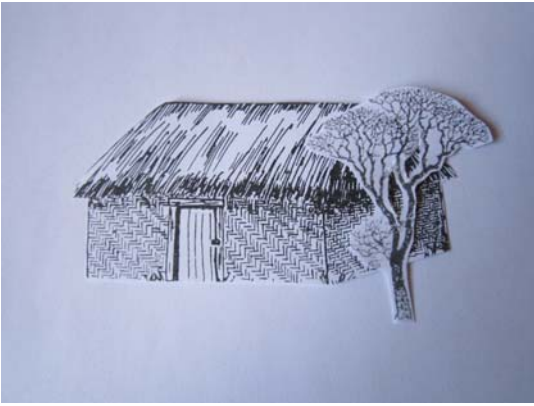
P70 (Arrow pointing at the meat was drawn manually)



P71



P72 (Arrow pointing at the band was drawn manually)



P73 (Arrow pointing at the tree was drawn manually)

Appendix B) Stimuli and results for the general locative marker; é

Space and Time in Mmen
Signe Nilsson, 2013

Pairs from the noun classes 1, 2, 3, 5, 6, 6a, 7, 8, 9, 10, 13 and 19. All classes except 4.

Red marking=preposition

Yellow marking=the differences in tone because of the preposition

Green marking=the differences in tone, but probably not because of the preposition

Words:

Sentences:

Tones:

Noun class 1 (sg):

“vayn” (child)

vínē nyí váyn

-This is a child

L M H H

vínē nyí éváyyn

-This is on a child

H M H H H

“wuə” (person)

vínē nyí wùè

-this is a person

L M H L

vínē nyí éwùè

-this is on a person

H M H H L

Noun class 2 (pl):

“əndom” (husbands)

ghínē nyí əndóm

-these are husbands

H M H M H

ghínē nyí éndóm

-these are on husbands

H M H H M

“əghóyn” (children)

ghínē nyí əghóyn

-these are children

H M H M H

ghínē nyí éghóyn

-these are on children

H M H H H

Noun class 3 (sg):

“ewiyn” (body, skin)

vínē nyí ewiyn

-this is a body

H M H M HM

vínē nyí éwiyn

-this is on a body

H M H H L

“etwɔyn” (ceiling, attic)

vínə nyí ētɔyn	H M H M H
-this is a ceiling	
vínə nyí étɔyn	H M H H M
-this is on a ceiling	

Noun class 5 (sg):

“emi” (neck)

zínə nyí ēmî	H M H M HL
-this is a neck	
zínə nyí émî	H M H H L
-this is on a neck	

“echo” (mouth)

zínə nyí échó	H M H M H
-this is a mouth	
zínə nyí échō	H M H H M
-this is on a mouth	

Noun class 6 (pl and non-count nouns):

“əghôm” (eggs)

ghínə nyí əghôm	H M H M HM
-these are eggs	
ghínə nyí əghòm	H M H H L
-these are on eggs	

“əsəŋ” (Guinea corn)

ghínə nyí əsəŋ	H M H M H
-these are ‘Guinea corn’	
ghínə nyí əsəŋ	H M H H H
these are on ‘Guinea corn’	

Noun class 6a (pl):

“mka” (trees, wood)

mìnə nyí m̃kâ'	L M H M HL
-these are trees	
mìnə nyí m̃kà'	L M H H L
-these are on trees	

“mpɔɔŋjɔ” (kind of bird)

mìnə nyí m̃pɔɔŋjɔ	L M H L H H H
-these are ‘specific birds’	
mìnə nyí m̃pɔɔŋjɔ	L M H H H H H
-these are on ‘specific birds’	

Noun class 7 (sg):

“atu” (head)

kínē nyí ātú H M H M H

-this is a head

kínē nyí átū H M H H M

-this is on a head

“atuḡne” (ear)

kínē nyí ātūḡnē H M H M H L M

-this is an ear

kínē nyí átūḡnē H M H H L M

-this is on an ear

“ake” (basket)

kínē nyí ākè H M H M L

-this is a basket

kínē nyí ákè H M H H L

-this is in a basket

Noun class 8 (pl):

“ekwì nyàm” (horses)

vínē nyí ékwì nyàm H M H H L L

-these are horses

vínē nyí ékwì nyàm H M H H L L

-these are on horses

“engḡne” (ants)

vínē nyí ēngḡné H M H M H H

-these are ants

vínē nyí éngḡné H M H H H H

-these are on ants

“epiayn” (kind of food)

vínē nyí ēpiayn H M H M H

-these are ‘corn fufu’

vínē nyí épiayn H M H H L

-these are on ‘corn fufu’

Noun class 9 (sg):

“kwìl” (rope)

zínē nyí kwìl L M H L

- this is a rope

zínē nyí ókwìl H M H H L

-this is on a rope

“tso” (stream)

zínē nyí tsò

-this is water

zínē nyí ɛtsò

-this is in water

L M H L

H M H H HL

“ngɔyn” (branch)

zínē nyí ngɔyn

-this is a branch

zínē nyí ɛngɔyn

-this is on a branch

L M H M

H M H H M

Noun class 10 (pl):

“sekile” (flying ants)

sínè nyí sēkílé

-these are ‘flying ants’

sínè nyí ɛ sēkílé

-these are on ‘flying ants’

H L H M H H

H L H H H H

“seki” (shields)

sínè nyí sēkī

-these are shields

sínè nyí ɛ sēkī

-these are on shields

H L H M M

H L H H M M

Noun class 13 (pl):

“əcho” (mouths)

ghínē nyí ɛchó

-these are mouths

ghínē nyí ɛchō

-these are in mouths

H M H M H

H M H H M

Noun class 19 (sg):

“fika” (tree)

fínē nyí fīkâ

-this is a tree

fínē nyí ɛfīkâ

-this is on a tree

H M H M HL

H M H H H L