# The Khmu Color System and Its Elaborations

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Every language has expressions that denote the sensation of color although there are differences among languages in the way in which colors are named and defined. From my experience working on Khmu and other languages in Thailand I have found that the system of color is one of the hardest sets of vocabulary to elicit and understand. It is the purpose of this paper to investigate the internal structure of the Khmu color system and its elaborations.

Khmu is a Mon-Khmer language spoken over a large area of northern Southeast Asia, particularly in Northern Laos, Thailand, Vietnam and Southern China. The number of speakers is at least 500,000 (Proschan 1989). The investigation of the color system and its elaborations is based on the Khmu dialect spoken in Chiengkhong District and some villages of Wiengkaen District of Chiengrai Province, Thailand. This is also one of the major dialects spoken in Pak Bang and Huaj Sai in Laos.

#### Problems in Data Elicitation

Even though color is a visual phenomenon, it is abstract, and eliciting such an abstract concept is not simple. Perception and categorization of color in a language system, like any other part of human behavior, has its unique and individual characteristics determined by human biology as well as by culture or by the condition under which the speakers live. In eliciting the data the emphasis has to be put on the native conceptual system that is seen through their linguistic categories (or native color terms) that have been transmitted as knowledge from person to person and from generation to generation. The investigator must not let his own perception obscure the real native categories. The difference in meaning caused by difference in categorization between languages can be easily overlooked. It cannot be learned only by direct questioning, as seen in the following interrogation.

Q: "What is the word for 'pink' in Khmu?"

A: pətl (This answer is partially true. The word pətl is used for certain kinds of light color, including pink).

Or, perhaps

Q: "What does the word pəil mean?"

A: "It means this (pointing at one particular light color which may be beige, pink or violet)"

This sort of question leads to confusion. Researchers can easily fall into this trap because people can always recognize and identify the typical colors like black, white, and red. This makes it hard for the investigator to understand the semantic

differences of a language in other areas of color when one goes deeper into the internal organization of the whole system.

In studying color terms in Khmu, I looked at all the words and expressions referring to colors occurring in isolation, and in text materials. I began to investigate in a number of ways. Direct questioning can be used only with basic color terms such as red, black, white, green, and yellow. For other colors like grey, pink, beige, violet, purple, etc., asking for direct translation and description of specific items in the natural and artificial surroundings at first caused a lot of inconsistencies and overlappings. However, despite all of the confusions and incongruity of informants' responses, the contrasts can still be made in certain situations. I found that Khmu color terms can be elicited only in a system by looking at the contrast between words or distinctive components of the meaning of each word, not by studying each term in isolation or by translating it or by asking for the description of the word individually. The use of a color chart and a set of color pencils has proved to be very useful, also cross—checking by looking at the things around, such as books of different colors in the library or clothes in the market. I have found that the lack of terms similar in semantic range to either English or Thai color systems is a cause of many complications. It is really a preoccupation with the investigators' own color categories that causes the problem because Khmu has its own way of categorizing and organizing things which is different from other languages.

# 1. Khmu Color System

There are altogether eleven color terms in Khmu. They can be classified into two main groups, which are called primary and secondary color terms. A generic term for color equivalent to the English word color and the Thai word sit does not basically appear in Khmu. However, to fill the need sometimes the Thai loan word sit can be used.

1) generic color term	(síː)
2) primary color terms	híəŋ, klóːk, jim, cŋáːr, lɨəŋ
3) secondary color terms	juit, siər, priic, pəil, láic, kláik

Table 1. Khmu Color Terms

## 1.1 Primary color terms

There are five color terms in Khmu that belong to this group. They are hian 'black', klák 'white', jim 'red', cnár 'green-blue' and lian 'yellow'. These terms are used only for clear, pure colors or the focal point of each color. Unclear, mixed or various shades of each color will be classified as belonging to the secondary color terms. The Khmu can recognize and identify these primary colors without delay. Even direct questioning and translating can elicit all these primary terms without any problem except cnár which is a unitary concept covering both green and blue in English and Thai color perception so is not easily translated. Primary color terms can be modified by adding another color term, either primary or secondary, to them as modifers in a compound word construction (see table 3).

Syntactically they can also be modified by various elaboration words to indicate certain characteristics of each color term.

## 1.2 Secondary color terms

To meet the need of the speakers to talk about other colors than the primary color terms, Khmu provides another set of six color terms which are here called secondary color terms. They are siər, priic, pəil, ləic, and kləik. All of them can occur by themselves as color terms but they do not clearly refer to pink, grey, brown, orange, purple as we have in English and Thai. These six color terms are used to indicate three degrees of darkness: very dark, medium dark, and light, with the subgrouping of various shades of colors. For example, medium dark reddish and brownish colors are subgroups of 'medium dark', whereas light reddish, yellowish and greyish are subgroups of 'light' colors. The 'very dark' color is any color with an element of black in it.

Degree of darkness	Shades of Colors	Color Terms	General Description	
very dark	blackish	ju:t	very dark color or any color with ar element of black	
	reddish	siər	medium dark reddish color	
medium dark	brownish	pri:c	medium dark brownish or yellowish color	
light	reddish	pə:l	light reddish color such as pink or violet	
	yellowish	láic	light yellowish or greenish color	
	greyish	klớ:k	light greyish or bluish color	

Table 2. Secondary Color Terms in Khmu

It is noticeable that the subgrouping of shades of color in each group of different degrees of darkness sometimes can be used interchangeably.

# 1.3 Compound color terms

To specificy finer shades of colors, a primary color term (p) may occur as a modifier of another primary color term (P), and the secondary color terms (S) may occur as modifiers of the primary (P) or secondary (S) color terms in a compound construction. The following table shows examples of compound color terms formed by various combinations of primary and secondary color terms in Khmu.

P+P	cກárr híອກ, 'black green', cnárr klórk 'whitish green' ນ້ອກ jim 'reddish yellow', cnárr ນ້ອກ 'yellowish green'
P+S	jim just 'dark red', jim prisc 'brownish red', lien prisc 'tan', jim pesl 'pink red', cnásr lésc 'unclear light green', lien Jésc, 'light creamy yellow'
S+S	prix láx 'a lot of creamy color', prix just 'dark brown'

Table 3. Khmu Compound Color Terms

## 1.4 Metaphoric color terms

In order to specify colors many languages use metaphors drawn from the environment, such as English "sky blue," "steel grey," "pea green," and the like. Table 4 gives examples from Thai. These metaphors may sometimes be used as modifiers of a primary color term, like "sky blue" or may stand by themselves as color terms, like "orchid," "orange." And any object may be used as a color simile, such as "rust-colored," "the color of a midwestern barn," or "the color of your purse." The modifying metaphors and the independent metaphors tend to be conventional terms, limited in number, but the similes may range from conventional to ad hoc and are unlimited.

basic color	specific color
red	(dɛ:ŋ) fiət mŭ: 'pig blood (red)'
green	k <sup>h</sup> 'iəw hùapèt 'duck head green' k <sup>h</sup> 'iəw kâ:n mali? 'jasmine stalk green' (k <sup>h</sup> 'iəw) tɔ:ŋ '?>:n 'young banana leaf (green)'
blue	fá: ná:mthale: 'sea water blue' (fá:) pajáp mɔ̀:k 'mist reflect blue' (fá:) kʰra:m 'kʰra:m tree blue'
purple	mûəŋ pliək maŋkhút 'mangosteen rind (purple)' mét mapra:ŋ 'maprang seed (purple)'
pink	(chomphu:) kli:pbua 'lotus petal pink'
yellow	(Ñəŋ) campa: 'campa color flower'
Other colors	k <sup>h</sup> àj kàj 'chicken egg color' nŧə 'human skin color'

Table 4. Thai Metaphoric Color Terms

In Hmong, pâjéŋ 'poppy' also means 'shocking pink (the most popular poppy flower color)'; it is one of the main colors in Hmong embroidery. In So (Thrz:), a Mon–Khmer language in the Katuic branch, kiəm is the name of a very dark blue color obtained from a plant called kiəm, which is used for dying thread for weaving traditional cloth. It is sometimes called adeh which literally means 'pot used for dying thread'. In Northern Khmer there are a number of examples such as kriəp mpil 'the color of the tamarin seed (brownish red)', ?ac sac 'the color of bird feces (bluish purple)', Iraŋ rmìt 'the yellow color of turmeric', pakat rnoŋ 'the yellow color of the Chinese zuchini flower', kra? khnɔr 'the yellow color of the core of the jackfruit wood' and prapheh 'the greyish color of the charcoal dust'. This device is not employed by the Khmu.

# 1.5 Other color modifiers

Other devices used for modifying color terms generally employed in Thai, but not in Khmu, are 1) adding an adjective: on the one hand  $k \grave{e}t$  'old',  $k^h \grave{e} m$  'intensified' or  $s \grave{o}t$  'fresh, bright' and on the other hand  $2 \grave{o}m$  'young', which are equivalent to English words "dark" and "light" respectively and 2) adding an

intensifier like  $k^hacii$ , ?aràim,  $c^h$ ăm and cúa? to the words  $k^h$ ĭəw 'green', !ĭəŋ 'yellow',  $d\varepsilon m$  'red', and  $k^h$ ăw 'white' color respectively.

Sometimes a color term can be used as a modifier of another color term, making it more specific such as mûəŋ deŋ 'reddish purple', námtan deŋ 'reddish brown', thawfá:: 'bluish grey', and liəŋsèt 'orangish yellow'. This device is also employed by the Khmu.

#### 2. Khmu Color-texture Elaborations

#### 2.1 Elaboration

The Khmu enjoy using elaborate language. This is generally seen in the use of the language in their everyday life. For color, each of the primary color terms can take an elaboration word. It is a device that the speaker uses to express his specific thoughts and feelings about the characteristics of the thing he is talking about. The color term elaboration words can be classified as a subgroup of 'expressives' (as discussed by Diffloth 1972), "phono-aesthetic words" (Henderson 1965) or "imitatives" (Noss 1964), a characteristic feature of Austroasiatic languages and more generally of many Asian languages. Syntactically the elaboration word occurs in the post-verbal adverb position, modifying the preceding (descriptive) verb. It never occurs on its own as a free form except in connected discourse materials about color. The elaboration words in Khmu are mainly disyllabic words. The presyllable may be open or closed. If it is a closed syllable the final consonant of the presyllable is always rhymed with the final consonant of the main syllable, and the vowel of the presyllable tends to rhyme with the vowel of the main syllable, wherever it is possible. It is noticeable that a lot of final consonants are continuants: nasals, laterals and semivowels. Semantically the elaboration word by itself has no meaning, but when it occurs together with a descriptive verb, it does have some effect on the meaning of the verb. It is more of an iconic and connotative rather than a symbolic and denotative meaning. It usually indicates the shape or size, the kind of material, distribution, intensity, or specificity of the object being described. The syntactic frame where the descriptive verb and its elaboration words occur together is presented here with some examples.

	Predicate  Descriptive verb elaboration word			
Subject				
<i>mar</i> snake	híə <b>ŋ</b> black	cŋlaŋ big, long, black object		
húəl bear	híəŋ black	clmol big, short, black object		
<i>prliə</i> fire	jim red	spramered all over the place		
ர்37 paddy rice	<i>โ</i> ห้อ <b>ท</b> yellow	?rə: yellow all over the place		
kon people	<i>kl3:k</i> white	srjúr pinky white		

**Table 5.** A Khmu Syntactic Frame for Color

It should be noted that some of the color term elaboration words are well established while others are more personal and idiosyncratic. There seems to be a rather high degree of productivity and innovation on the part of individual speakers and dialects.

The following examples present the Khmu primary color terms hiəŋ 'black', klóik 'white', jim 'red', liəŋ 'yellow' and cŋár 'green' occurring with various elaboration words.

#### híon 'black'

híəŋ cŋlɛŋ/cŋlaŋ	'big, long, black person or object'
híəŋcŋleŋ/leŋ	'small, thin, black person or object'
híon ck?ek	'small black rocks'
híəŋ clmol	'big, fat, short, black person/object'
híəŋ rpmɨ:p	'big, fat, short, black person/object'
híəŋ ckmɨk	'big, fat, short, movable black person/object'
híəŋ clwɛ:l	'black water, (or coffee)'
híəŋ sʔəːj	'color of water from pickled vegetable (not real black)'

#### kló:k 'white'

kló:k cwla:w	'big bright white object (shirts, pants etc.)'
kló:k cwlew	'small bright white object (needle, pen)'
kló:k crtiər	'big bright shiny object (electric bulb)'
kló:k crtu:r	'big bright light'
kló:k crto:r	'bright big piece of white color (zinc roof)'
kló:k sŋjo:ŋ	'pure white object (duck egg)'
kló:k sĺpú:l	'distributed small or fine white object (hair, power)'
kló:k srjúr	'pure, healthy white (woman, milk, button)'
kló:k mcho:n	'big tall white person'
kló:k rŋchə:ŋ	'thin tall white person'

#### jim 'red'

jim sŋrə:ŋ	'full, bright sun/light'
jim ?nlon	'color of fire burning strongly over a large area'
jim spra:p	'a lot of fire burning in many places, jungle fire'
gim sprom	'strong fire bursting out all over the place'
jim spriəp	'a piece of red wood, or strip of red light'
jim rŋʔoŋ	'individual lights, being lit one by one'
jim spkam	'red sunlight, bright star, jungle fire started'
jim spkiəp	'fire burning from one place and going to another'
jim sŋru:ŋ	'big lighted spots of bright red color here and there'
jim sŋro:ŋ	'small lighted spots of bright red color here and there'
jim spk <del>i</del> əp	'color of a lot of bleeding from a wound'
jim sprom	'color of a bleeding wound'
jim prto:n prte:n	'far away or small red spots of poppies among other colors in the field'
jim prtal prtiəl	'close big red of electric light'
jim spna:n	'color of itchy skin'
jim spre:ŋ	'color of a group of red spots'
jim spne:n	'color of face after having been exposed to the sun'
jim spte:p	'some far small red spots'
jim sptorp	'some far big red spots'
jim spna:p	'suddenly appeared red color'
jim sptu:p	'dull red'

### lion 'yellow'

ໂ <del>i</del> ວŋ ?rə:	'bright shiny yellow scattered all over'
ໂ <sup>1</sup> ວŋ ʔrɨɔ	'pure yellow'
lion Intion	'full of yellow color all over the place'
ໃຈ້ອກ ໃກເວເກ	'full of yellow color all over a large area'
lion snrom	'full of yellow flowers on the tree'
liən srpu:r	'clumps of yellow objects'
lion sr?urr	'yellow color of old leaves or autum leaves'
liວŋ rjɲəːj	'small string of yellow flower hanging down'
liən rjna:j	'stream of flowers'
liəŋ ?krék	'yellow spots mixed among other colors'
lion spkion	'line of fresh yellow color'
liəŋ pr?er	'pure bright yellow like Buddhist monk's robe'
liəŋ sŋjoŋ	'bright round yellow object'
lian ?ŋloŋ	'yellow color of light or fire all over the place'

### cnáir 'green'

	'color of young paddy rice in the field' 'color of small green snake'
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# 2.3. Iconic Relation Between Sound and Meaning

There seems to be an iconic relation between sound and meaning in the color elaboration words in Khmu. That is, there is a rather consistent relation between the sizes of the entities referred to and differences of vowel qualities. The back vowel indicates a "bigger size" than the central vowel, and the central vowel in turn indicates a "bigger size" than the front vowel. Moreover the higher vowel also indicates a "smaller size" than the lower vowels and the diphthong indicates "smaller size" than pure vowels.

Examples below show some of the elaboration words of Khmu color terms that differ only in the vowels (the change of the height and position of the tongue) expressing different sizes of the entities referred to.

híəŋ cŋlaŋ híəŋ clmol	vs. vs.	híəŋ cŋlɛŋ híəŋ clmul	[a > ε] [o > u]	(big, vs. small, thin long object) (big vs. smaller fat short unmovable black object)
kló:k cwla:w	vs.	kló:k cwlew	$[a: > \varepsilon]$	(big vs. small bright white object)
klo:k crtu:r	vs.	kló:k crtiər	[u: > iə]	(big vs. small white shinny object)
klo:k sŋjo:ŋ	vs.	kló:k sŋju:ŋ	[o: > u:]	(big vs. small pure white object [duck egg])
klo:k mcho:n	vs.	klá:k mchəm	[:6 < :0]	(big vs. small tall white person)
cŋáir cŋóir	vs.	cŋá:r cŋó:r	[:e < :c]	(big vs. small green object [ricefield vs. green snake])
lion rjna:j	vs.	l <del>i</del> ວŋ rjnə:j	[a: > ə:]	(big vs. small string of yellow flowers)
jim sprom vs.	jim s <b>n</b> ı	ram vs. jim spriep	[si>a: >iə]	(three different sizes of red fire ranging from
jim spkam vs.	jim s <b>n</b>	kiən vs. jim snkiən	[ei <ei<:a< td=""><td>the biggest to smallest) (three different sizes of burning fire from biggest to smallest)</td></ei<:a<>	the biggest to smallest) (three different sizes of burning fire from biggest to smallest)

# 3. Semantic Universality and Khmu Culture

It is interesting to consider the Khmu color system in the light of Berlin and Kay's (1969) findings about the universal inventory of eleven basic color categories and the sequences of evolutionary stages.

Even though the Khmu color system has an inventory of eleven color terms, they don't match Berlin and Kay's eleven categories. They have been classified into five primary and six secondary terms based on their different natures. According to the primary color terms: kl5:k 'white', híəŋ 'black', jim 'red', cŋár 'green-blue' and liəŋ 'yellow', Khmu may be classified as belonging to the fourth stage of color development. Khmu does not make a distinction between green and blue color; these two colors belong to the same category. It is noticeable that green = blue seems to be true in many Mon-Khmer languages such as Northern Khmer, Praj, So (Thro:), Kui and Vietnamese. The yellow color liəŋ is obviously a Thai loan word.

Table 6 is an attempt to present the color terms in various languages spoken in the same area as Khmu. The data may not be complete. It shows clearly that all the Mon-Khmer languages make at least five distinctions in color perception though in some languages only the words for 'black', 'white' and 'red' are obviously native terms while others are loan words. The word for 'green' in some languages such as Northern Khmer, Kui, and Praj are Thai loan words whereas the word for 'yellow' is a Thai loan word in all these languages. Other words found in these languages are color terms derived from the comparison of color with natural objects. The word for a dark blue color in Khmer is trum, and in So (Thro:) it is kiom. They are derived from plants. So also has two other words for shades of purple color: kulaw 'reddish purple' and ?it 'bluish purple'. The latter word is a Lao loan word whereas the first is an important color in So cloth weaving. The Hmong language has six basic terms. 'Blue' and 'green' colors are in separate categories. There is one important word  $p\hat{a}:j\hat{e}\eta$  which is derived from the outstanding color of the poppy flower. In Thai six of the eleven color terms seem to be basic terms: dam 'black', khảw 'white', deŋ 'red', khiơw 'green', liơŋ 'yellow' and mûang 'purple.' These occur in many Thai dialects. Only the word for 'purple' is different in Lao. Another six color terms: fár 'blue sky', thaw 'grey sold', sôm or sèπ 'orange, rust', námtam 'brown, sugar' and chomphu: 'pink, rose apple' seem to be derived from the natural environment.

#### 4. Color and Khmu Culture

In general speakers use their language to relate to their environment, describing and identifying natural and cultural objects as well as to organizing and coordinating their activities. In Khmu and many other languages color terms appear to relate to

	20.0.5-		
Thai	'black' 'white' 'red' 'green' 'blue' 'yellow' 'purple' m 'orange nn 'orange hut' pink 'grey' 'grey'		n Lao,
	dam khāw de:ij khiāw ffā: ffa: frai haŋ sè:t/sô chomp námta: thaw		led <i>?it</i> i
Hmong	du: 'black' dáə 'white' liah 'red' ndzúa' 'green' siə 'blue' ?da: 'yellow' tʃɔ: 'dark-red' pâijén 'shock- ing-pink'		' is cal
H	du: dás dás liah ndzús si eis Yasi'y pâijéŋ ini		ʻpurple
Praj	'black' taweny 'black' sam 'black' 'white' bua? 'white', pah 'white' 'green' kasaw 'red' so: 'red' 'green' khe:w 'green' 'yellow' fisny 'yellow' hisny 'yellow'	ages	е пи
<u></u>	sam pah so: khlew lian	Langu	in Lao
Kui (Ku:j)	'black' 'white' 'green' 'yellow'	n Some	ht pink'
 x	tawein bua? kasaw kheiw len	erms ii	is 'brig
S o (Thro:)	'black' 'white' 'green' 'yellow'	Color 7	т <i>67</i> ри
T. S. T.	Perny klásik kulaw siw Ivrny	. Basic	ı Thai a
ern er	'black' 'white' 'green' 'green' 'yellow' 'dark-blue'	Table 6. Basic Color Terms in Some Languages	$c^h om p^h u$ 'pink' is called $2 \Im u$ in Northern Thai and $2 \Im u$ is 'bright pink' in Lao. $m \hat{u} \Im y$ 'purple' is called $2 i i$ in Lao, whereas in Thai Dam it is either $m \hat{u} \Im y$ or $i i i i j i$ .
Northern Khmer	≽		Öm in l ir mûəi
			alled 7 s eithe
	black' white' red' green' yellow' very dark' reddish-medium dark' medium dark' light-reddish' light-yellowish' ight-greyish'		nk' is c Dam it i
Khmu	'black' 'white' 'red' 'green' 'yellow' 'very dark' 'reddish-medium d medium dark' 'light-reddish' 'light-yellowish' 'light-greyish'		hu 'pi π Thai I
			chom reas ii
	hien klátk jim cnátr fien jut star paric paric paric klátk		whe

environment and to the artistic use of color, and others. Therefore it is essential to explore the internal organization of color terminology and its relation to the culture of the speakers.

The majority of the Khmu are swidden rice farmers and animists. They still strictly follow the traditional practices according to their belief in sickness treatment as well as other aspects of their life. The Khmu neither weave cloth nor do the embroidery. The clothes they wear at the present time are mainly bought from the market. Their artistic work is mainly house building, basket weaving, and making household utensils from bamboo, rattan, certain kinds of grass, etc. However at the present time plastic objects have increasingly become a part of their life.

Among the primary color terms in Khmu, híəŋ 'black', klɔk' 'white' and jim 'red' are symbolic in Khmu culture. híəŋ 'black' is used to describe basic things in Khmu life. For example, it is used to describe the soil, the paddy rice, Khmu people, local animals, deep water, and far away mountains. It is the color of their traditional clothes for all occasions. Khmu people always wear black clothes including, their traditional black shirt. [For example pte? hieŋ (soil/black), ŋɔ? hiəŋ (paddy/black), siəŋ hiəŋ (pig/black), trátk hiəŋ (buffalo/black), mar hiəŋ (snake/black), róm cru? hiəŋ (water/deep/black), mók hiəŋ (mountain/black), kón hiəŋ (traditional skirt/black), wáij rwəic (shirt/a kind of black).]

jim 'red' is used to refer to blood, life, danger, some fruits on the tree, the sun, and fire. The women wear a red head scarf sanpon while working as the symbol of cion, the culture hero of the Khmu. In the sickness healing ceremony, where a chicken, pig, or buffalo is killed as a sacrifice for the spirit sút h?ior, sút sion, phám trák (according to how serious the sickness is), the color of the black animal contrasts with the red blood of the animal. The animal blood put on the knees of the sick person and other people in his family, and the red lines painted on the face of the people attending the soul restoration ceremony are the sign of people communicating with the spirit. [For example maim jim (blood/red), sanpon jim (head scarf/red), plé? s?on jim (fruit/red), matpri? jim (sun/red), prlio jim (fire red).]

In contrast with black color, kl5tk 'white' is used for light, dreams, pretty or civilized people, and artistic work (new houses, household utensils such as various baskets, mat etc.), rice wine and cooked meat. The material used for basket and mat weaving, which are made from bamboo, rattan or grass, is described as being 'white.' They are considered pretty when they are new and still white. [For example nat kl5tk plio (she/white/pretty), kan kl5tk (house/white), ?ómtin kl5tk (water/container/white), putc kl5tk (rice/wine/white), plon kl5tk (rattan/white).]

The shades of 'green,' which are the most visible features of the natural environment, are considered as something natural and common. It is not used decoratively. It is used only to describe plants and certain kinds of animals such as some kinds of snakes. Certain kinds of plants which are used for protecting the people from the evil spirits (by putting them at the entrance of the house where the ceremony is taking place) are called sancnár 'green object'.

The preferred colors for esthetic purposes are 'red', 'white' and 'yellow'. Yellow is used to describe flowers and crops. For example ram s?om lion (flower/yellow), prlio lion (fire/yellow).

In industrialized or complex societies color terms have evolved to an abstract level. The color is dissociated from natural objects or materials and other sources of pigment in the environment. In such societies more color terms are needed for very fine shades of colors. For the Khmu the set of secondary color terms enables the speakers to be able to talk about hues of color. The Khmu use them mainly for clothes they buy from the market and for other unclear colors newly introduced to their life.

In conclusion, the study of the Khmu color system presents a good illustration of semantic universality in human experience as well as the uniqueness of the Khmu's perception of the world. The investigation needed to be done in its own system, and the knowledge of intracultural data as well as physical environments, is essential for understanding the factors determining the categorization of this language. The Khmu color system shows an adaptation of a primitive society to the changing world of modern technology.

#### BIBLIOGRAPHY

- Berlin, Brent, and Kay Paul. 1969. *Basic Color Terms*, Urfiversity of California Press, California.
- Bornstein, Marc H. 1975. "The Influence of Visual Perception on Culture." AA 77, 774–798.
- Conklin, Harold C. 1964. 'Hanunoo Color Categories' in Language in *Culture and Society: A Reader in Linguistic Anthropology*. edited by Dell Hymes, p.189–192.
- Eastman, Carol M. 1978. Aspects of Language and Culture. Chander & Sharp Publishers, Inc., San Francisco, California.
- Frake, Charles O. 1980. Language and Cultural Description. Essays Selected and Introduced by Anwar S. Dil. Stanford University Press, California.
- Hickerson, Nancy P. 1980. *Linguistic Anthropology*. Holt, Rinehart and Winston, New York.
- Proschan, Frank. 1989. Kmhmu Verbal Art in America: The Poetics of Kmhmu Verse. Ph.D. Dissertation. The University of Texas at Austin, USA.
- Rudder, John. 1983. Qualitative Thinking: an exmination of the classificatory systems, evaluative systems and cognitive structures of the Yolnu people of North-east Arnhemland. MA Thesis, ANU.
- Sahlins, Marshal. 1976. "Colors and Cultures". Semiotica 16:1, p.1–22.
- Suriya, Ratanakul. 1987. "Sgaw Karen Color Categories" JSS, Vol. 69, p.138–144.
- Suwilai Premsrirat. 1992. *Thai–Khmu–English Dictionary*. Institute of Language and Culture for Rural Development, Mahidol University, Thailand.
- Suwilai Premsrirat. 1991. Khmu Traditional Medicine and Thai-Khmu Medical Conversations. Institute of Language and Culture for Rural Development, Mahidol University, Thailand.
- Suwilai Premsrirat. 1989. Khmu Life Styles From 50 Conversational Lessons. Institute of Language and Culture for Rural Development, Mahidol University, Thailand.

Suwilai Premsrirat. 1987. Khmu, A Minority Language of Thailand (A Khmu Grammar and A Study of Thai and Khmu Cutting Words). Papers in South-East Asians Linguistics No. 10. Pacific Linguistics Series A-No. 75 The Australian National University, Canberra, Australia.

Svantesson, Jan-Olof. 1983. Kammu Phonology and Morphology. Travaux de L' Institute de Linguistique de Lund 18. C.W.K. Gleerup. Sweden.

Withowski, Stanley R. and Brown Cecil H. 1981. Lexical Encoding Sequences and Language Change: Color Terminology Systems." AA 33:1, p. 13–27.

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