

The Khmer Rice Cycle

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1. Introduction

In Thailand, the Khmer language is spoken mainly in the southern part of northeastern Thailand, especially the provinces of Surin, Sisaket and Buriram. It is alternatively called 'High Khmer' (in contrast with 'Low Khmer', spoken in Cambodia) or 'Northern Khmer' (a term initiated by William A. Smalley). The term 'Khmer' as used in this article refers to the High Khmer or Northern Khmer, especially the Khmer in Surin province.

The Khmer people, as well as other Southeast Asians, plant rice as their main crop, their staple food. Rice is a self-fertilized crop, requiring only earth, water, proper weather, and conditions for survival. It is durable, hardy and can exist independently of man without any connection with man. However, when man cultivates and consumes rice, both man and rice mutually influence each other's survival.

The rice cycle is a complex process, from the preparation of paddy fields to the distribution of the paddy, involving a multitude of activities that progress in a specific sequential order over a twelve month period. This complex cycle, therefore, does not only assume the most important role in the working life of the Khmer people, it also influences their language and the community's activities. Thus, by understanding the rice cycle one can better appreciate the people's way of life and social phenomena.

This article is based on the author's thesis (Naraset 1986), combining both linguistic and anthropological approaches.

The data was organized into semantic fields according to the four stages of the rice cycle: preparing, pre-harvesting, harvesting, and post-harvesting stages. Each

stage was then further sub-divided into several sub-stages (See: Table 1 Semantic Fields). The linguistic data was obtained using a variety of methods that would promote discussion, that is, through elicited texts, drawings, pictures, real objects and brainstorming questions. It was observed that when drawings, pictures or real objects were introduced into the discussion, the villagers gave more helpful information. The lexical items were collected both from discourses and as independent lexical items.

2. Lexical classification by semantic fields

Lexical items that emerged at each stage were semantically classified into lexical fields composed of sub-fields and main fields. Each lexical field was then classified, related to each other, and defined.

The total lexicon of the rice cycle was organized into 27 main fields and 101 sub-fields according to the four stages of the rice cycle. The labels for some sub-fields may be the same, but they contain different words. The sub-fields which significantly present characteristics of each stage are chosen as labels for the main fields. The Khmer labels for the main fields may be not genuine generics, but they reflect an important feature of each stage to which they belong. *sraŋ* 'paddy' and *sreæ* 'paddy field' are the two lexical items which are used in every stage throughout the rice cycle.

Table 1. Semantic Fields

Stage:	Main Field Labels	Sub-Field labels and contents
1. Preparation	1. <i>sreæ</i>	<i>sraŋ</i> 'paddy': parts of paddy <i>sreæ</i> 'paddy field': parts of paddy field
	2. <i>seæn</i>	<i>seæn</i> 'to make an offering': words related to spirits <i>rbəh seæn</i> 'an offering object': things offered <i>seæn</i> 'to make an offering': words related to the purpose of an offering
	3. <i>kheæ</i>	<i>kheæ</i> 'month': related to names of months
	4. <i>wuaəh</i> and <i>wuaəl</i>	<i>wuaəh</i> and <i>wuaəl</i> 'to measure out': units of volume, units of length, units of area
	5. <i>kbey</i>	<i>kbey</i> 'buffalo': buffaloes
	6. <i>ŋkuaəl</i>	<i>ŋkuaəl</i> 'plough': types and parts of plough
	7. <i>cwəl</i>	<i>camkaa</i> 'a swidden field, plantation': actions done to a swidden field <i>cwəl</i> 'to hire': people who hire, people who are hired <i>rap chnəwəl</i> 'to be hired': jobs, places, purpose <i>kheæ</i> 'month': related to rice preparation months, off season months and activities done
2. Pre-Harvest	8. <i>kheæ psaa</i>	<i>kheæ psaa</i> 'raining season': rainy season months <i>smaw</i> 'grass': action done to grass, place, items related to grass <i>cjir</i> 'manure, fertilizer': actions done to fertilizer, sources of fertilizer, action

- of fertilizer, names of non-organic fertilizers
 phlɔp 'rain, to rain': types, actions and qualities of rain, action of people
 srɛɛ 'paddy field': actions done to paddy field, type of paddy field
 tuək 'water': action done to water, quantities and type of water
 srɔw 'paddy': actions, qualities and types of paddy
 srɔw 'paddy': types of paddy
- 2.1 Wet rice cultivation
 9. snaap
 dəy 'earth, soil': action, qualities and types of soils
 snaap 'seedlings': actions done to seedlings
 phlɔw 'dikes between the paddy fields': action done to dikes and qualities of dikes
 knoop 'grasshopper': *item*, action of grasshopper
- 2.1.1 Seed broadcasting
 10. saap
 thnaal 'the ground within the dikes, serves as nursery beds for seedlings: actions done to *thnaal*, quality of *thnaal*
 sbah 'to broadcast': paddy, fertilizer
 saap 'to sow a seed bed for seedlings: seedlings
 pruah 'to sow rice seed': rice seed
- 2.1.2 Uprooting and transplanting of seedlings
 11. stuun
 dɔɔʔ 'to root up': seedlings,
 hɔɔc 'to root up': seedlings,
 dɔɔm snaap 'seedlings, young shoots': actions done to seedlings, quality of seedlings
 phoon 'seedlings for a bundle, seedlings
 dɔɔt 'to transplant (seedlings) by thumb, to plug into the mud with the thumb': action done to seedlings
 stuun 'to transplant': place, actions related to *stuun*
 kɛɛŋ 'corner of a paddy field': action done to *kɛɛŋ*
- 2.2 Dry rice cultivation
 12. camkaa
 camkaa 'a swidden field, a plantation': *item*, actions done to *camkaa* and quality of *camkaa*,
 prɔ 'jungle, forest': actions done to jungle
 pruan 'hole': actions done to holes
 chɔɔ 'wood, tree': types, actions done to *chɔɔ*
 sbaw 'roofing grass': actions done to roofing grass
 phɔw 'guest': action done to guests

- 2.3 Life after planting
13. *trɛy*
- ʔɔc* 'to light a fire': places
dam 'to plant': items to be planted
yuuu 'to take': actions done to weeds and types of weed
- tuik* 'water': actions done to water, quantities of water
trɛy 'fish': actions done to fish, quantity of fish, items
kbɛy 'buffalo': types of buffalo, actions done to buffalo, actions of buffalo, commands for buffalo
prɔh 'man': action of men
srɛy 'woman': words related to women
- 2.4 Pest and insects
14. *taŋkaw*
- kat* 'to bite': pests and insects, places
sii 'to eat': pests and insects,
kdaam 'crab': action done by crabs, places, time,
taŋkaw 'worm, grub': action done by worms, places, quality of worm, time, results,
knat 'rat': action of rats, place, time, action done to rat, items
koon caap 'rice bird': action of rice birds, places, time, action done to rice birds
sraw 'paddy': actions done to paddy, results
thnam 'medicine, pesticide, insecticide': type, action of *thnam*, items
3. Harvest
15. *tum*
- sraw* 'paddy': actions done to paddy, actions and qualities of paddy
tum 'to be ripe': types of *tum*, time
- 3.1 Reaping
16. *croot*
- croot* 'to cut with a sickle, to harvest': items
- 3.1.1 Flattening green rice
17. *mək*
- sraw mək* 'flattened green rice': types, actions done to *sraw mək*, action of *sraw mək*, qualities of *sraw mək*, items
thɔɔ mək 'to make flattening green rice': implements, purpose
- 3.1.2 Rice maturing and Cutting
18. *phɪtɬw*
- sraw* 'paddy': type, actions done to paddy, related actions, people
mut sraw 'spirit guardian of paddy, Paddy Goddess': type, actions done to *mut sraw*, action and qualities of *mut sraw*
phɪtɬw 'guest': type of guest, actions done to guests, actions of guests

- 3.2 Threshing and cleaning
19. *bɔɔʔ*
liian 'threshing floor': actions done to threshing floor, qualities of threshing floor
knap *sraʷ* 'shelves': actions done to shelves, quantities of shelves, items
pdop 'to pile, to lay sheaves of threshed paddy on heaps on a threshing floor, to pile up together in stacks, to make sheaves and assemble in a group: action done to *pdop*, quality of *pdop*
puuʔ knap 'stacks; a complex pile of sheaves': actions done to stacks, qualities of stacks.
bɔɔʔ 'to thresh': processing, items to be *bɔɔʔ*, implements, actions done to *thniiar* (a heap of threshed paddy), actions of threshed paddy
ʔom 'to winnow': items, types of *ʔom*
- 3.3 Drying grains
20. *haal*
sraʷ 'paddy': qualities of paddy and rice
ŋkɔɔ 'rice': quality of rice
haal 'to dry': items
- 3.4 Storing
21. *daʔ*
daʔ 'to put, to store': storing places
ɗak 'to load on, to put on': vehicles, place, item,
sraʷ 'paddy': actions done to paddy
baw 'rice sack': actions done to rice sacks
wuaal 'to measure out': measuring objects
4. Post-Harvest
22. *sraʷ*
sraʷ 'paddy': quantities of paddy
- 4.1 Distribution of rice and Rice shortage
23. *campiaʔ*
mcah 'owner': types of owner, actions of owners
koon chnuul 'employee': types, actions and life of employees
door 'to exchange': items
bɔl 'to borrow': items, results
campiaʔ 'debt, to be in debt': items borrowed, actions repaying a debt, months, activities related
- 4.2 Rice for cooking
24. *ŋkɔɔ*
sraʷ 'paddy': actions done to paddy,
ŋkɔɔ 'rice': qualities and quantity of rice, containers
- 4.2.1 Hulling
25. *ken*
ken 'to mill, to grind': items, results
boʔ 'to pound': implements, results
ŋkɔɔ deɛl ken baan 'milled rice': types and qualities of milled rice, actions done to milled rice
wliia 'time': time when paddy brought to mill
- 4.2.2 Cooking and Eating
26. *tnam*
tnam 'to cook': utensils, actions related to *tnam*

		baay 'cooked rice': feelings related to cooked rice, actions done to cooked rice, qualities, and types of cooked rice
		phluy 'fire': items, actions done to fire, results of fire
		hoop 'to eat': food items, nom 'sweets': sweets
4.3 Off-season	27. pröh	pröh 'man': jobs, srey 'woman': actions of women mnuh cah 'old man': actions of old men kbey 'buffalo': actions of buffalo, actions done to buffalo khæe miia? thom 'the 3rd lunar month (February-March)': month

3. Factors involved in the rice cycle

3.1 Rice, Rain, Earth

Rice cultivation in the Khmer society is at the mercy of nature, especially rain and earth.

Rainfall (*phluy*) is one important factor for rice cultivation. The rain's vagaries, for example, untimely rainfall, affect cultivation.

The *khæe psaa* 'rainy season' includes :

	khæe ?aasaat	'June-August'
	khæe sraap	'August-September'
•	khæe ben	'September-October'
	khæe ?aasoc	'October-November'

Farmers wait for the rain (*cam mitk phluy*) to start cultivation. If it rains during March-April (*phluy knöj khæe pkun*), farmers who do not have a paddy field will find and rent a field (*ruua cvöl sree*) earlier. When the first rain comes at the beginning of the year (*phluy dlam chnam*), the farmers are then able to begin ploughing (*baan pcvur baan saap*), and thus rice farming begins.

Unfortunately, the rainfall varies from year to year. It may rain in the wrong season (*phluy khöch rdaw*). If there is a drought in the middle of the year (*phluy rianj knaal chnam*), the seedlings will be destroyed (*snaap khooc möt*). If the rain comes only at the end of the year (*phluy cöj chnam*), the farmers can do nothing, because the cultivation season has passed (*möt rdaw stuuj*).

This is why farmers in the Khmer society usually conduct a ceremony called *pañ?öb? priañ khæe* or 'feeding the moon'. The ceremony involves providing flattened green rice (*sraw mök*) on the full moon day in the 12th lunar month (November-December) to ensure having rain for the cultivation.

In Khmer society, the best or the worst field is considered according to the amount of water and the field position (easily watered) rather than by soil fertility.

The best paddy field is considered *dɛy lʔɔɔ* 'fertile soil, well watered field' which includes:

sɾɛɛ tamniiap	'a low lying paddy field'
sɾɛɛ cɾɔw	'a deep paddy field'

The worst paddy field, with no access to water supply, is described as *man lʔɔɔ* 'not beautiful, not good', this includes:

sɾɛɛ kantʌl	'a high lying paddy field'
sɾɛɛ kʊk	'a high lying paddy field'

Rain and earth divide the cultivation method as wet rice or dry rice cultivation. Significantly, there are 2 lexical items for each method: *thəə camkaa* '(lit.) to do a swidden' and *thəə sɾɛɛ* '(lit.) to do a paddy field'.

"*thəə camkaa*" is for dry rice cultivation in upland areas (or forest leanings) in which rice seeds are directly *dam* 'planted'. This method depends solely on rain without the use of irrigation.

"*thəə sɾɛɛ*" refers to the cultivation of wet rice in low lying paddy fields in which seedlings are *stuuj* 'transplanted' using either a system of dikes and terracing or simple irrigation canals designed to retain rain water.

Lexically, *stuuj* 'to transplant' and *dam* 'to plant' are for wet and dry rice cultivation, respectively. To start wet rice cultivation is called *cɔh sɾɛɛ* '(lit.) to go down to the paddy field'. A paddy field (*sɾɛɛ*) is normally situated in a low place, so when the seedlings are transplanted (*stuuj*), the farmers have to 'go down' (*cɔh*) to the field, that is, *cɔh stuuj* 'to go down (to the field) for transplanting' and *cɔh sɾɛɛ* 'to go down to the paddy field (to start rice cultivation)'. They never say **stuuj camkaa* or **dam sɾɛɛ*.

Both *camkaa* and *sɾɛɛ* are continually troubled by weeds. Weeding a *camkaa* is called *yua rbah* 'to take off grass, to weed' but weeding a paddy field is called *yua smaw* 'to take off grass, to weed'. Both *rbah* and *smaw* mean 'weed'. Using *rbah* or *smaw* depends on the type of field.

These natural surroundings (rain and earth) influence the rice cycle and the Khmer language. Furthermore, the relationship between the two lexical items *camkaa* and *sɾɛɛ* reflect an intimacy between the Khmer people and the geographical environment. A village develops from *pru* 'forest or jungle'. The *pru* is cut down for planting purposes, becoming *bɔh* 'a newly cleaned plantation'. Over time the farmers develop the *bɔh* to be used as *camkaa* later. The *camkaa* is well arranged with a system of dikes designed to retain rain water. Then the *camkaa* is developed into a *sɾɛɛ*. Usually, the *sɾɛɛ* is a place for cultivating not for residence. People come to work in the *sɾɛɛ* and return home. In Khmer a village is known as *sɾɔʔ sɾɛɛ*, or commonly just *sɾɔʔ*. (In Khmer as spoken in Cambodia, *sɾɔʔ* is also referred to a country, such as *sɾɔʔ thay* 'Thailand'). This sequence can be presented as follows:

prt1	'forest, jungle'
↓	
bph	'newly cleaned plantation'
↓	
camkaa	'swidden field, plantation'
↓	
sreε	'paddy field'
↓	
srɔʔ sreε	'village and fields, home area'
↓	
srɔʔ	'village, country'

3.1.2 Rice and Seed

According to the maturing stage, rice seeds may be divided into 2 types :

srAW sraal	'early rice, light rice'
srAW thɣuan	'late rice, heavy rice'

The *srAW sraal* 'early rice, light rice', unlike *srAW thɣuan* 'late rice, heavy rice', needs less water, so it is planted in high land areas where water is scarce. It will take 90-120 days (very early) or 120-150 days (early) to be ripe for harvest. *srAW thɣuan*, planted in low land areas, takes more than 210 days to be fully ripe.

Rice planted in a swidden is called *srAW camkaa* 'swidden rice' and when planted in a paddy field, it is called *srAW mpuak* 'wet rice'. It may be nonglutinous rice (*srAW ksaay*) or glutinous rice (*srAW tnaap*).

Both nonglutinous and glutinous rices are of different varieties, and their names may be divided into 11 types:

- (1) A *niiay* type (*niiay* 'girl, beauty'), such as:

srAW niiay lʔo	'white beauty rice'
srAW niiay khmaw	'black beauty rice'
srAW niiay ric	'blossom beauty rice'
- (2) An *animal* type, such as:

srAW puah	'snake rice'
srAW koon khmum	'baby bee rice'
srAW taŋkaw	'worm rice'
srAW cuŋ muan	'leg of chicken rice'
- (3) An *earth* type, such as:

srAW tnaap phoʔ	'mud rice'
srAW laŋʔo ksaac	'fine dust of sand rice'
- (4) A *flower* type, such as:

srAW ktum	'Bubiaceae rice'
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- | | | |
|------|--------------------------------------|---------------------------------------------------------|
| | srɔw pkaa snuul | 'snuul flower rice' |
| | srɔw pkaa kwutbah | 'cotton flower rice' |
| (5) | A <i>plant type</i> , such as: | |
| | srɔw dooŋ | 'coconut rice' |
| | srɔw maŋkaʔ | 'olive rice' |
| | srɔw khnɔŋ | 'jackfruit rice' |
| (6) | A <i>feature type</i> , such as: | |
| | srɔw kruap tuuc | 'small grain rice' |
| | srɔw kruap thom | 'big grain rice' |
| | srɔw kruuŋ weeŋ | 'long tip rice' |
| (7) | A <i>desired type</i> , such as: | |
| | srɔw seetheey | 'millionaire rice' |
| | srɔw ruɔc campiaʔ | 'free from debt rice' |
| (8) | An <i>action type</i> , such as: | |
| | srɔw tuual ruuat | 'support a beam rice' * |
| | srɔw luan yuŋ | 'collapse a granary rice' |
| (9) | A <i>Thai loan type</i> , such as: | |
| | srɔw maliʔ | 'Thai. มะลิ (jasmine)' |
| | srɔw kduuk | 'Thai. กระดูก (bone)' |
| | srɔw kaak dam | 'Thai. ากดำ (black dregs)' |
| | srɔw muat chnaŋ | 'Thai. ปากหม้อ (a mouth of a pot)'
(a semantic loan) |
| (10) | A <i>unique name type</i> , such as: | |
| | srɔw piŋ | 'a kind of nonglutinous rice' |
| | srɔw randiiw | 'a kind of glutinous rice' |
| (11) | <i>Other types</i> , such as: | |
| | srɔw chmar thom | 'big fort rice' |
| | srɔw ben | 'the 10th lunar month rice' |

Khmer is rich in paddy names, and the names can be classified into at least 11 types. The above list of rice varieties seems to ensure that rice cultivation has been a long practice in Khmer society. Some local varieties have been recently lost and new varieties introduced.

A heap of threshed paddy is called *thniar* srɔw, and a heap of unthreshed paddy is known as *pdop* srɔw. A generic term for both kinds is *knuuar* srɔw. This also indicates a long experience of rice cultivation for the Khmer people.

3.1.3 Fertilizer

The use of fertilizer is a good example of how society is affecting the natural and geographical environment. Former forest areas have been turned into fertile cultivated fields. When a field's fertility is exhausted, chemicals are used.

Chemical fertilizers were unknown in Khmer society until recently. There is no specific lexical item for 'chemical fertilizer'. So *ciir* is used. Similarly, an organic fertilizer, such as: manure, buffalo dung, etc. is also *ciir*. Specific lexical items for chemical fertilizer are borrowed from the Thai language, but organic fertilizer *ciir* is a Khmer term for all fertilizers.

A specific kind of fertilizer may be named according to its source, such as:

ciir ʔac kɔv	'cow dung'
ciir ʔac kbɛy	'buffalo dung'
ciir cen	'Chinese fertilizer, fertilizer obtained from a Chinese merchant'
ciir phɔɔ khaa	'merchant fertilizer'
ciir tlaat	'market fertilizer'

It may also be named according to its trade mark or brand, such as:

ciir taa chaawnaa	'farmer brand fertilizer'
ciir taa huua.ɲua.khan.thay	'cow head and plough brand fertilizer'

Farmers rarely call a chemical fertilizer according to its formula, such 16-16-8, 16-20-8.

Lacking scientific knowledge and being pressed by their natural surroundings, the farmers culturally use a spirit fertilizer to enrich the paddy field in addition to manure. The spirit fertilizer is *baay bat thoor* 'glutinous rice ball mixed with sugar and sesame'

Traditionally, the *baay bat thoor* is used as an offering to ancestors during the *khe ben* ceremony. After the ceremony, part of it is sown in the paddy field to ensure a bumper crop. This cultural evidence seems to illustrate an idea of enriching the paddy field, in other words, soil enrichment, as a long practice in Khmer society until destructive chemical fertilizers were introduced.

3.1.4 Buffalo

Rice cultivation is done by traditional methods. Most operations, such as field preparing, sowing, and ploughing, are done by human labor, with a buffalo.

Despite the availability of modern machinery, conventional agriculture methods are usually employed, since mechanical implements are too expensive.

Buffaloes are distinguished by several terms, such as:

kbey kluc	'white buffalo'
kbey mu	'female buffalo'
kbey claay	'female buffalo that has not yet dropped its young'
koon ɲɛ?	'buffalo calf'

Lexical evidence shows the one-way communication between buffalo farmer. Several commands are used, such as:

ហ្លាប	'walk'
ហ្លាប	'stop'
អ័ប្ប	'stop'
kac,bæ,wil,bɔɔt,ɲia?	'return'

Buffaloes may be rented. The rented buffalo is called *kbey cvul* 'a buffalo'. A buffalo may be mortgaged by its owner who is in need of money lender as security against the loan payments. This is known as *camnam* 'a mortgaged buffalo'.

During the seedling and transplanting periods, a buffalo usually work. A mortgaged buffalo (*kbey camnam*) works especially hard. It is forced to work harder than any other buffalo in order to give extra benefit to the money lender.

During the rice maturing period, a buffalo is free from work. It is usually near the house (*cvɔɔɲ but ptiah*), to avoid eating paddy (*sii srav*) in the field causing trouble to its owner. It may graze along a natural park (*khwiia. tamlu sat*). It is the duty of its owner to look after (*mrv*) and to water (*srɔ*) the buffalo.

The climate is hot during the off-season period, so a buffalo is tied under the shade of a tree (*nɔw mlvɔp chɔɔ*) or grazed along a natural park (*sat. tamlu sat*, literally means 'a place for animal', but they are now rarely used).

3.1.5 Man

Man's role in the rice cycle is as producer and consumer. Besides buffaloes' assistance and some traditional forms of implements, all activities in the rice cycle are mainly managed and done by man (*mnuh*).

With regards to the rice cycle, people's roles may be distinguished from different perspectives.

(A) men (*prɔh*) vs. women (*srɛy*)

Labor spent in rice cultivation involves both men and women, but the lexical items especially connected with men are:

prɔv	'to plough'
bat phluu	'to repair the dikes'
baak tuuk, baak phluu	'to open the dikes and let water into the paddy field'

After cultivation, lexical items connected with men are often:

rap chnuul	'to be hired'
ruua chnuul	'to seek jobs'
ʔar chɔɔ	'to saw wood'
kaap mpɔw	'to cut sugar cane'

but women are connected with:

nəw ptiah	'to stay home'
tbaan sampuuat sbay	'to weave cloth'

Labor seems to be divided by gender. Women do most of the cooking work which is considered as light work. Men do the heavier labor such as ploughing. It seems from the lexical items that men do heavier work than women.

Actually, a woman's role, played in every stage of the rice cycle, is no less important than a man's. Culturally, a woman in Khmer society prefers a silent role, her duties in the field are not mentioned much; for example: ploughing work is said to be done by men, but some women also plough.

(B) host (*nia? ptiah*) and guest (*nia? phnɯw*)

A host is sometimes called *mcah srɔw* or *nia? mcah srɔw* 'a paddy owner'. Lexical items related to a host are *ruua phnɯw* or *cəh phnɯw* 'to find a guest to come and help with harvest'. Those who come to help with the harvesting are called *phnɯw* or *nia? phnɯw* 'a guest'. The most important lexical item related to a guest is *cwɯy* 'to help'.

Peripheral guests are learned people (*?aacaan*) and monks (*lvok*). They would be invited to perform a ceremony. Social class may be reflected in language: a lexical item for 'to invite' for a learned person is *ruua* '(lit.) to find', whereas for a monk it is *nimon* or *nimuan* 'to invite'

(C) the rich (*nia? miian*) and the poor (*nia? ksət, nia? yaa? nia? krɔɔ, ?aa nak yaak ?aa nak krɔɔ*)

Nouns related to the rich are:

mcah srɛɛ	'paddy field owner'
mcah ciir	'fertilizer owner'
mcah kbəy	'buffalo owner'
mcah srɔw	'paddy owner'
mcah pɔɔl	'creditor'

Nouns related to the poor are:

koon chnɔɔl	'employee'
koon kaar	'employee, worker'
koon səh, koon səh koon kuan	'student, subordinate'
nia? man kaat srɛɛ	'those who have no field'

The rich rely on the poor for labor and the poor rely on the rich for assistance. A productive relationship between these two groups decides the paddy distribution. An amount of paddy, a lot (*crɔaən*) or a little (*tec*), is distributed to the poor in exchange for work. Verbs related to the rich are:

វិប័យ	'to give'
ចែចែ	'to distribute, to apportion'

Verbs related to the poor are:

ruua	'to find'
bəl	'to borrow'
cul	'to borrow'
door	'to exchange'
campia?	'to be indebted'
səŋ	'to repay a debt'
bəŋ	'to repay a debt'
dəh	'to remove a debt'
yuaa khləwŋ man ruəc	'to be hard to make a living'

All kinds of ceremonies and offerings (*kaar kampeh kampiian*) are held in the village in order to socially consume the paddy. On several occasions, the paddy is distributed:

thəc bəŋ	'to perform meritorious deeds'
cuəy bəŋ	'to help with a funeral'
bamruŋ wuat	'to give support to a temple'
kaar kəc sək	'a cutting of the top knot ceremony'

It is thus evident how the quantity of the paddy is decreased by social consumption.

A society and its physical surroundings are closely interrelated. The change that man's labor introduces into the environment are revealed in such vocabulary items as the following:

trəwł, kat, ckaa, kaap វិប័យ bak	'to cut down'
វិច	'to set fire'
ruəw	'to demolish'
chəh	'to kindle, burn'
pcəw	'to plough'
bət	'to construct'

4. The rice cycle's main outputs

4.1 Paddy

"What is it that during drought seasons lives in a granary and during the rainy season lives in a field?" The answer is 'paddy' (*srəw*).

It is true that the paddy lives in a field during rainy season, this is because the rice cultivation depends on rain. When the first rain comes, farmers start cultivation. By the end of June, the seedlings are generally transplanted. From August to October, the paddy is growing. The earliest variety of paddy ripens and is cut in early October. Then the flattened green rice (*mək*) is made. Most kinds of paddy are ripe and the harvest is started by the middle of November. The harvest continues to the beginning of February.

The harvesting is done with a sickle (*knitw*). When a certain amount of paddy plants (*daam staw*) are harvested (*croot*), the harvested paddy is made into sheaves'. The paddy is dried in the sun for a few days before threshing (*bɔɔk*). A threshing floor is prepared before the threshing. Preparation of the threshing floor includes:

ruuw	'to select'
chɛh	'to clear by burning'
thəə	'to make, to do'
caʔ tuuk	'to pour water'
liiap	'to smear'

Nouns connected with threshing are:

liian	'threshing floor'
knap staw	'sheaves'
pnuʔ knap	'a complex pile'
thniiar	'a heap of threshed paddy'

Verbs related to the threshing process are:

pdop	'to pile up, a simple pile'
kuuar	'to pile up'
bɔɔʔ	'to thresh'
ʔom	'to winnow'

The sheaves are later piled up simply or complexly as a pile at the threshing floor. After threshing, the threshed paddy is collected into a heap. The threshed paddy is then winnowed. What remains on the threshing floor after threshing and cleaning is:

• cmɣvŋ	'rice straw'
sney	'empty seed'
ciw	'rice straw once threshed'
canruh	'little piece of hay mixed in with the paddy after threshing'
smaw	'grass'
lnuaʔ	'dust from paddy'

Paddy is dried in the sun to remove moisture before storing. A container or a place in which paddy is stored varies in size. They are:

thoŋ	'a generic term for bags'
baw	'rice sack'
dɔɔʔ	'a woven bamboo container for paddy'
tɔʔ	'a paddy container, bigger and higher than dɔɔʔ'
yuj	'a permanent store house for paddy, a generic term for granary'
chaan	'a big granary'

sraw puuc 'seed rice' is stored in a *baw* 'rice sack', *sraw* 'ordinary paddy' may or may not be stored in a rice sack.

yut and *chaat* are near synonyms, and are sometimes called together *yut chaat*. In Khmer society, a big granary gives prestige to the owners.

do? and *ta?* are more traditional, and they are tending to disappear from Khmer houses.

4.2 Pounded rice

ηkoo 'milled or pounded rice' and *baay* 'cooked rice' are distinguished. Paddy which is extremely moist (*salam khlat*) will become low quality pounded rice. This includes:

<i>ηkoo tiia</i>	'rice for ducks, low quality rice'
<i>ηkoo thii.sii</i>	'the 4th class rice, low quality rice'

Milled rice is composed of *ηkoo kual* 'whole grain milled rice' and *ηkoo co?* or *kanc?* *ηkoo* 'broken milled rice'. As regards degree of pounding, rice may be divided into 2 kinds:

<i>ηkoo sanroop</i>	'rice from the first pounding, bran still clinging to it'
<i>ηkoo slat</i>	'rice from the second pounding'

Pounded or milled rice is kept in *ktti* 'a cloth bag used to keep rice', or *kr?* 'a woven container of various sizes for rice, rice seed or sugar'. It may also be kept in any other receptacles. It is sometimes *wic* 'to be wrapped in cloth' to transport during a journey.

A half coconut shell with a hole at the bottom, used as a measuring cup for cooking (or used as a mold to make sweets) is called a *niial*.

A verb phrase for cooking rice is *tnam baay* '(lit. to cook cooked rice' not **tnam ηkoo* '(lit. to cook milled rice'.

baay 'cooked rice' is divided into 2 types:

<i>baay ksaay</i>	'nonglutinous cooked rice'
<i>baay tlaap</i>	'glutinous cooked rice'

In Khmer society, people are more familiar with *baay ksaay* than *baay tlaap*.

People's way of life is reflected by the way the rice is cooked, for instance, *baay kanc?* 'cooked rice wrapped in banana leaves'. In the past, food was plentiful and served everywhere. People were very familiar with each other. One could have his food wherever he visited, there was no need to bring food. One who brought a *baay kanc?* with him was considered a friendless person.

The Khmer people distinguish *tnam* and *pbɔɔr* as:

tnam	'to cook plain'
pbɔɔr	'to cook as gruel, without pouring off the rice water'

Rice (*baay ksaay*) which is cooked the *tnam* method is called *baay tnam* 'cooked rice', whereas the *pbɔɔr* method is called *baay pbɔɔr* 'mushy cooked rice' and takes more time than *tnam*. *baay pbɔɔr* may end up as either *pbɔɔr* or *phe?*.

pbɔɔr	'plain rice gruel'
phe?	'mushy cooked rice, to be mixed with vegetables, potatoes, garlic, papaya pith, salt, etc., in order to save rice'

pbɔɔr and *phe?* are not eaten daily. They are mostly eaten by the poor. *Poverty in Khmer is sometimes expressed by the idiom:*

krɔɔ nah sii phe? sii pbɔɔr
'to eat *phe?* and *pbɔɔr* due to impoverishment!'

Besides being a staple food, rice is used to make sweets. Sweets (*nom*) especially made from nonglutinous rice (*srɔw ksaay*) are plentiful. Their names vary from a plant to a musical instrument, such as:

nom krooc	'orange sweet'
nom chook	'lotus sweet'
nom khɛy	'ginger sweet'
nom thlɔɔm kbɛy	'buffalo liver sweet'
nom puuaŋ	'egg sweet'
nom puuaŋ puah	'snake egg sweet'
nom puuaŋ kɔvɔv	'crocodile egg sweet'
nom niial	'coconut cup sweet'

Names for sweets may be borrowed from the Thai language, such as :

nom saŋkhyaa	'Thai ขนมสังขยา'
nom khok	'Thai ขนมครก'
nom buua loy	'Thai ขนมบัวลอย'

Many sweets are named after an egg. This reflects people's way of life. The egg plays a crucial role in Khmer society. An egg is employed to read an omen to determine or predict such events as sickness and weather. It is used as a magic charm to expel evil spirits which haunt a person's body, as well as being an important object offered to spirits.

5. Linguistic results from the rice cycle

The rice cycle impacts the Khmer language in creating new words, losing words, borrowing words, and changing meanings (see Fig. 1).

5.1 Creating new words

How new words are created can be seen in the names for sweets and paddy varieties. Several items are named after plants, such as *sraw dooŋ* 'a kind of paddy named after the coconut', or *sraw maŋka?* 'a kind of paddy named after the olive'. Several lexical items are named after animals or animals' body parts, such as: *sraw puah* 'a kind of paddy named after a snake', or *sraw cyvŋ muan* 'a kind of paddy named after the leg of a chicken'. Several lexical items are named after flowers, such as *nom chook* 'a kind of sweet named after lotus', or *sraw pkaa snuul* 'a kind of paddy named after a 'snuul flower'. Nature is a base for creating a new lexical item.

5.2 Losing words

Losing words may result from political and economic factors. Farmers tend to plant high yield varieties of paddy promoted by the government in order to sell for a good price. Some local varieties of paddy have been replaced or lost, for instance *sraw sreŋ* 'a kind of local paddy'. Consequently, a lexical item is lost, being indirectly caused by the political and/or economic factors.

A loss of a lexical item may be due to the rice seed itself. Some varieties are too difficult for farmers to thresh, so an easier threshed variety replaces it. The paddy which is difficult to thresh is therefore no longer prevalent. The lexical item is then lost.

5.3 Borrowing new words

Here again, political factors may influence the language. A Khmer speaker from Thailand is considered as a Thai citizen. The national language, Thai, is used as the official language for communication, so words from Thai are inevitably referred to.

A number of lexical items have been borrowed from Thai. Paddy names have been borrowed from Thai, such as:

mali?	มะลิ	'jasmine'
kaak dam	กากดำ	'black dregs'

Name for sweets, such as :

nom saŋkhyaa	ขนมสังขยา	'a kind of sweet'
nom ranphuy	ขนมรังผึ้ง	'(edible) honey comb'

Additional lexical items borrowed from Thai are as follows:

thii sii	ที่สี่	'4th class'
ruuŋ sii	โรงสี	'rice mill'
chuuua laa	เชื้อรา	'spore'

5.4 Changing meanings

Language is dynamic, its meanings change due to environment, etc. such as:

baay	'cooked rice', its connotative meanings include 'food', 'bait'
baay phlyvŋ	'food of a fire', a complete expression is <i>dam (- tnam) វ័យ</i> <i>baay phlyvŋ</i> 'to cook as a gift of food to the fire'
baay rbaal	'food for cholera' (see section 6)
baay tmaat	'food for a vulture'. (see section 6)

6. The linguistic impact of the rice cycle in society

The rice cycle is a big cycle, assuming a very important place in the Khmer way of life, for example, a shortage of rice always causes trouble to the society.

Linguistically, the rice cycle lexicon is composed of several lexical fields (See Sec. 2). This lexicon is used throughout the Khmer society and affects the society. The impact of the rice cycle on the society through language may be charted as follows:

Rice -----> Language -----> Society

The society is influenced indirectly by the rice cycle through language in five aspects.

(1) Communication and entertainment.

The message of rice cultivation inspires people in Khmer society. It is presented in the form of songs, tales, and riddles as social communication and entertainment, such as stories about transplanting the seedlings, paddy reaping, and farming.

(2) Advice and instruction

The rice cycle is referred to when giving advice and instruction.

thəə sræ 'do farming', is referred to when talking about the importance of careful preliminary observation in order to get good results, 'When farming, notice the grass; when arranging a wedding for one's children, notice the race and disposition of the partner'.

niial 'rice measuring cup' is referred to by the elders when instructing a younger person who is disobedient, using the proverb 'Sweets are never bigger than their *niial*'.

(3) Evaluation

People are often evaluated in rice cycle metaphors.

phluuw 'paddy ridges'

'A seam of cloth as big as paddy ridges' will describes laziness, especially of a lazy girl.

kbey 'buffalo'

'Making someone to work as hard as a mortgaged buffalo (*kbey camnam*)' describes merciless behavior.

rteh 'cart'

'Driving an old cart, and hammering a wedge all the way describes irresponsibility, especially a lazy man. (The cart, an important vehicle for rice transportation, is in bad condition because the man is too lazy to take good care of it)

cmAAŋ 'rice straw'

'You are very much like rice straw' describes a person who lacks hospitality.

yuy 'granary'

'A granary full of paddy' refers to a rich person.

(4) Reprimand

Two lexical items, *baay* 'cooked rice' and *dɛy* 'earth, soil' are frequently used in reprimand.

baay 'cooked rice'

(a) *?aa baay rbaal* '(lit.) you cooked rice of cholera' is a expression used to scold a person as in, "May you be food for cholera", meaning, 'may you die of cholera'. The phrase is sometimes *?aa rbaal yuua* 'you who are taken by cholera'.

(b) *?aa baay tmaat* '(lit.) you cooked rice of vulture' is used in scolding someone as in, "May you be the food of a vulture", meaning 'may you die'.

dɛy 'earth, soil'

?aa knaal dɛy '(lit.) you middle of the earth' is used to scold someone as in, "May he die unnaturally, being killed in public, meaning that to die in public is the opposite of dying naturally at home of old age (*dɛy* is used as a generic term for earth, soil, land, paddy field)

(5) *General reference*

baay 'cooked rice' is used in plant names, as in:

<i>baay kday</i>	'a kind of herb (lit. 'cooked rice crust')
<i>baay krut</i>	'a kind of herb (lit. 'dried cooked rice')
<i>baay bæc</i>	'a kind of herb (lit. 'broken cooked rice')

baay is also used in the description of corneal opacity' (*phneec baay* 'lit. cooked rice eyes')

kbcy 'buffalo' is used in a plant's name, such as *doh kbcy* 'a vine or tree with scented flowers which grow in clumps (lit. 'breasts of buffalo')

7. Recapitulation

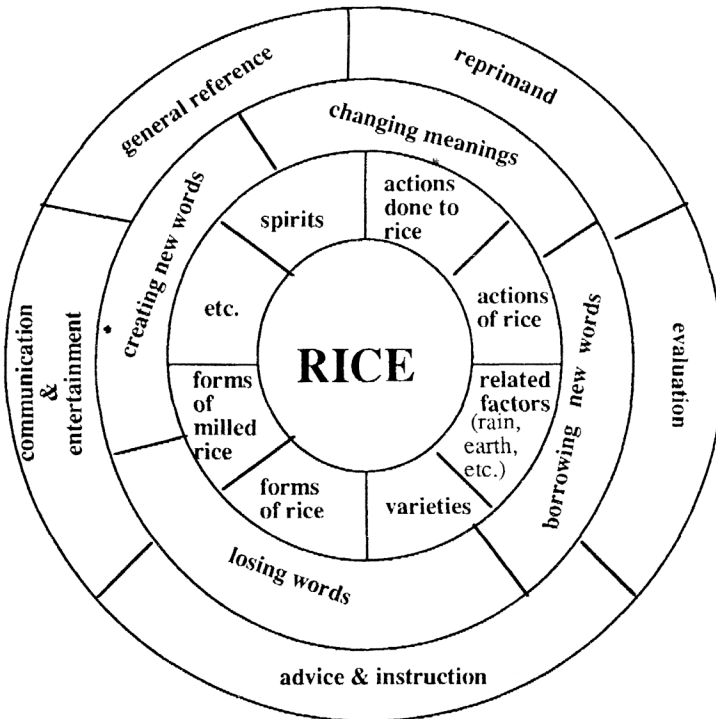


Figure 1: The linguistic results from the rice cycle environment and the linguistic impact of the rice cycle on the society.

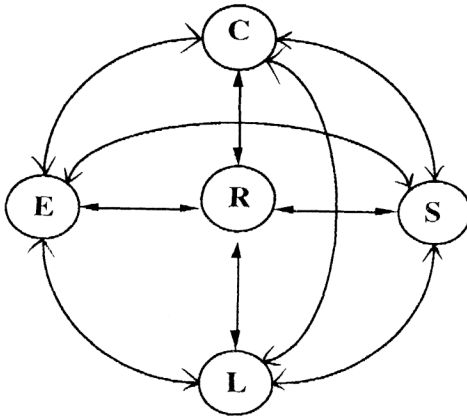


Figure 2: The interrelation of environment (E), language (L), culture(C), society (S) and rice cycle (R).

(1) R<-->E

The rice cycle (R) and the environment (E) share a strong relationship. Rice production is affected by rain and soil. Similarly, the environment is changed by man's activities through the rice cycle.

(2) R<-->C

The rice cycle (R) and the culture (C) are also correlated. Farming, for instance, is affected by cultural activities. The offering of *baay bat thoor* is used to make fertile the soil in rice cultivation. Some cultural activities are initiated under the influence of rice cultivation, such as making an offering to the granary.

(3) R<-->S

The rice cycle (R) and Khmer society (C) mutually influence each other. For example: a paddy field may serve as a dowry for a wedding, social prestige may be measured by one's paddy yield and the quality of one's granary, the ownership over a paddy field distinguishes the rich from the poor. A rice shortage forces members of a society to organize a rice bank to assist each other.

(4) R<-->L

The rice cycle (R) and the language (L) affect each other. Periods of the year, besides being divided into 12 months, can be distinguished as *khæ stuuj* 'transplanting month or transplanting season' and *khæ croot* 'harvesting month or

harvesting season'. The total lexicon of the rice cycle (such as lexical items for paddy variety and fertilizer) is a consequence of the need to describe specific items or actions. The language also affects the rice cycle, paddy measurement for instance. No paddy was measured by kilogram because there is no such term in Khmer. (The term *kiloo* 'kilogram' was recently borrowed from English through Thai). Seed types are labeled by language. A loss of paddy name, *sɾəw sɾəh* 'a kind of paddy seed' for instance, is a result of the rice cycle: no more use of *sɾəw sɾəh* in rice cultivation. As regard the labor force in the rice cycle, the term *khɛe stuuj* or *khɛe croot* reminds Khmer farmers of labor preparation for rice cultivation.

(5) E<-->C

Believing in the supernatural (C) is tied to the geographical or natural environment (E). Likewise, the environment is also affected by cultural practice, soil enrichment for instance. Khmer farmers practiced *baay bat tboor* 'glutinous rice balls mixed with sugar and sesame', during the *khɛe ben* 'ceremony' for soil enrichment, it is a kind of traditional soil conservation.

(6) E<-->L

A linguistic innovation (L) may also be based on the environment (E) in order to create a new lexical item (as in 'to live coolly' (*nəw trcia?*) due to the hot climate). Furthermore, a geographical environment such as a paddy field can be referred to as units of an area.

(7) S<-->C

A shortage of rice in a society (S) is often due to extravagant expenses in performing ceremonies (C). However, the cultural activities such as ceremonies or making an offering are created by members of the society for spiritual or entertainment support.

(8) S<-->L

The society (S), such as social class or people's way of life, is reflected by language (L). Similarly, a meaning is changed by a social phenomenon, such as the connotative use of *baay* 'food' which is used in relationships between people in a society.

(9) E<-->S

The environment (E), such as rain and earth, provides members of a society (S) with natural resources for survival. Similarly, the environment is consistently being changed by society, as in the case of a former forest area being deforested for rice cultivation purposes. A change in the geographical environment may result from man's activities, such as cutting down trees, demolishing things, and the like.

(10) C<->L

A culture (C) and its language (L) mutually affect each other. Language is the main vehicle by which culture is expressed; it is used to describe spirits, ceremonies, etc. A change in culture, may cause the loss of a lexical item, such as a spirit name. And language may affect culture by its meaning, for example, *phlut* 'rain' in Khmer gives positive meaning. Traditionally Khmer people wished each other good by saying 'may you live cool' (*nəw trcia?*).

In summary, in Khmer society, as in most Southeast Asian societies, the rice cycle commonly dominates the culture and the thought patterns, and it is a very prominent part of linguistic communication of all kinds.

The rice cycle underlies the interrelationships of the environment (geographical, natural and political), languages, culture and society, all of these things are reflected in the Khmer language.

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