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Cover photo: A Tibetan woman milking a yak in Qinghai Province, China;
taken by Shiho EBIHARA on August 12, 2014.
“Rice (plant)” in Asia

Despite many debates, one can say that Asia contains the homeland for domesticated rice species: China. Because of divergence of climate conditions, rice cultivation is not pervasive there, and Asian languages thus do not always have any word forms concerning ‘rice’; however, those spoken in the rice cultivation region have various semantic categories regarding the word ‘rice’ in English. ‘Rice plant’ is described here.

1. Origin and expansion of ‘rice’

Oryza sativa, edible rice, has two major subspecies: japonica and indica. Japonica varieties are usually cultivated in dry fields, in temperate East Asia, upland areas of Southeast Asia, and high elevations in South Asia, while indica varieties are mainly lowland rices, grown mostly submerged, throughout tropical Asia (Wikipedia ‘Oryza sativa’).

There are numerous debates regarding the origin of cultivated rice. With an analysis of a map of rice genome variation, Huang et al. (2012) claim that the domestication of rice occurred in the China’s Pearl River Delta valley region, and rice was spread from East Asia to South and Southeast Asia.

Many cultures have evidence of early rice cultivation, including China, India, and the civilisations of Southeast Asia. However, the earliest archaeological evidence comes from central and eastern China and dates to 7000-5000 BC (Encyclopaedia Britannica ‘Rice’). In India, agricultural activity during the second millennium BC included rice cultivation in the Kashmir and Harrappan regions (Smith 2000). In Korea and Japan, rice agriculture was firstly introduced into Korea circa 850-550 BC, and then reached Japan by circa 300 BC (Crawford and Lee 2003). In South-east Asia, rice cultivation may date back over 1500 years in Indonesia, from the first to second millennium BC in the Philippines, and to 2200 BC in Thailand.

2. Classification of word forms


This fact implies that these words date back to their ancient stratum which already classified ‘rice’ into many subcategories. Around half of language groups have multiple subcategories of ‘rice’.

Table 1: Main word forms for ‘rice plant’.

<table>
<thead>
<tr>
<th>Languages</th>
<th>Word forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japonic</td>
<td>ine 稔 (Sinitic mi 米)</td>
</tr>
<tr>
<td>Korean</td>
<td>pjo 稲</td>
</tr>
<tr>
<td>Sinitic (SN)</td>
<td>dao 稲</td>
</tr>
<tr>
<td>Hmong-Mien</td>
<td>PHM <em>njau</em>nuajie</td>
</tr>
<tr>
<td>Tibeto-Burman</td>
<td>PTB *b-ras (WrT ‘bras)</td>
</tr>
<tr>
<td>Tai-Kadai</td>
<td>yau</td>
</tr>
<tr>
<td>Austroasiatic</td>
<td>ba?</td>
</tr>
<tr>
<td>Austronesian</td>
<td>PAN *pajay</td>
</tr>
<tr>
<td>Ainu</td>
<td>aman</td>
</tr>
<tr>
<td>Tungusic</td>
<td>kandu</td>
</tr>
<tr>
<td>Mongolic</td>
<td>tuturkan (&lt; Turkic tuturqan)</td>
</tr>
<tr>
<td>Turkic</td>
<td>döge</td>
</tr>
<tr>
<td>Indo-Iranian</td>
<td>vreh (&lt; Farsi birinj)</td>
</tr>
<tr>
<td>Dravidian</td>
<td>neli</td>
</tr>
<tr>
<td>Arabic</td>
<td>ruzz (&lt; Greek ὀρζά)</td>
</tr>
</tbody>
</table>

N.B. The numbers such as (*1) and (*2) mean that the forms with the same number have a mutual relationship.
Some examples underwent a semantic change.

1) within the ‘rice’ category
   II šƗli : original Sanskrit meaning ‘grain in the husk’. > Modern Uighur šal.
   SN gu : original Chinese meaning ‘grain’ > TB Bai kuo21 ‘rice plant’.
2) over the species of grain crops
   II dhƗna : original Sanskrit meaning ‘corn grain’ > Nepali dhƗn ‘rice’.
   TB *kƗr/*qƗr-type probably corresponds to WrT khre ‘millet’.

Some languages in Asia, especially spoken in the non-rice-cultivation area, do not have their own words for ‘rice’, such as many Arabic languages (using a loan of Greek ἀργησία or a word with a semantic change) and many Uralic languages (using a loan of Russian пясть).

3. Geographical relationship over language families
   A number of word forms for ‘rice (plant)’ provided above can make a geolinguistic description complicated. Rather, it is very interesting to analyse common word origins as well as loans attested in the languages of Asia. See SAG articles of each language group regarding ‘rice’ for detailed explanations.

3.1. Sinitic gu vs. Tibeto-Burman *kuk
   Even though Sinitic and Tibeto-Burman belong to the Sino-Tibetan macrofamily, they possess various different roots for ‘rice’, among which they share a common root Sinitic gu - Tibeto-Burman *kuk (see STEDT ‘rice’). These word forms are mainly attested in Southwest Mandarin and Loloish languages in Yunnan. This distribution implies a mutual linguistic relationship in that region. Another view regarding the origin of Sinitic gu is provided by Matsumoto (2012:91), claiming that it is a loan of Austroasian *kaux.

3.2. Ryukyuan mai vs. Sinitic mi
   The mai-type attested in Ryukyuan varieties might be a loan of Sinitic mi ‘(rice) grain’, and this Ryukyuan form denotes not only ‘rice plant’ but also ‘rice grain’. It implies that people inhabiting Ryukyuan islands do not belong to a rice-cultivation culture. Note that Sinitic mi, which does not denote ‘rice plant’ in any varieties, is related to PTB *ma-y $mey, of which derived forms are also used for ‘rice plant’ in some TB languages as Jinhpaw and Trung, which have originally been spoken in the non-rice cultivation culture. Another view regarding the origin of Sinitic mi is provided by Matsumoto (2012:91), claiming that it is a loan of Austroasian *may or Austronesian *[su-]may.

3.3. Tai-Kadai mV vs. Austroasian mau
   These two forms are mainly attested in the Southeast Asia. Language contact is highly expected. The origin of the form with a /m/-initial is unclear.

3.4. Austroasian ala vs. Sinitic dao
   Based on Ferlus’ (2010) claim, the Vietic form ala is supposed to have been borrowed from the Old Chinese dao. However, the present distribution of the Sinitic word form connecting dao is mainly the northern area of China, not the southern area. Any links between these two forms are currently missing.

3.5. Indo-Iranian vrƗhi vs. Turkic pirinč
   The pirinč-type found in Turkic is distributed at the western Turkic linguistic area. The expansion of this word form is from Farsi (Persian), and it was west-oriented. In Turkic language, another word form kIrƗ is also borrowed from Farsi. Even in Modern
Uighur, šal is a Farsi loan.

3.6. Mongolic tuturkan vs. Turkic tuturqan

Mongolic tuturkan is regarded as a Turkic loan, but modern Turkic languages do not use this word form any more. An Old Uighur text (ca. 13th c.), however, uses the form tuturqan for ‘rice straw’ (UiO Polyglotta). The word form in many Turkic languages has been replaced by a Farsi word.

3.7. TB *b-ras vs. Hunza Burushaski, Domaaki bras

The form derived from PTB *b-ras for ‘rice’ is mainly found in Tibetic languages among TB. The westernmost Tibetosphere almost contacts the Burushaski area; however, any intense language contact between them has not been attested. See also Ryavec (2015) for the local geography. Their historical background would help for understanding this lexical borrowing. It is also noteworthy that the donor language is Tibetic, which does not belong to a rice cultivating culture.

3.8. Note regarding PAN *b.Ras and its expansion

It is noteworthy that Ferlus (2010) claims that Proto-Austronesian *b.Ras might be a common origin of ‘rice’ in Indo-European languages. However, the present geolinguistic analysis does not provide any evidence to support or protest this hypothesis. Note also that according to Blust and Trussel (2010-ongoing) the proto-form *beRas designates ‘rice between harvesting and cooking’.

3. Conclusion

We can find nearly 40 roots which designate ‘rice (plant)’ in Asian languages. Due to difficulty to provide presice history and chronological order of all the roots, the present article concentrated on an explanation regarding the semantic change and the loan process of ‘rice’ in Asia based on the data available at present.

Keywords: semantic category, semantic change, loan

(Hiroyuki Suzuki)

REFERENCES


STEDT (=The Sino-Tibetan Etymological Dictionary and Thesaurus). Online: http://stedt.berkeley.edu/


“Rice” in Ainu

1. Classification of word forms

In Ainu folklore, amám “cereal grains” were stolen by the progenitor of Ainu from the place of either kamúy mosír “the land of gods” or sísam mosír “the main land of Japan” (Yoneda 1995). In fact, Ainu people have gotten rice from Japanese for a long time. At the end of the 17th century, it was the first time a Japanese man harvested rice plants in Hokkaido, c.f., “Matsumaeshi (1692).

Hattori (eds.) (1964) reported that there were two types of terms for “rice plant” (ine in Japanese), which must be the extended use of the words for “cereal grains” and “rice”:

A) amám
B) síámam

2. Geographical distribution and interpretation

Form A, amám, originates from the generic term for “cereal grains,” such as foxtail millet, barnyard millet and rice (awa, hie, kome in Japanese, respectively). It was distributed over all dialects of Ainu. In the Japanese works of the 17th century, the presumable form amam, was always translated as 米 “rice” (Hirayama 2013), probably because rice was the typical grain for Japanese people and society.

The words X amám could occur for distinction among grains, as in Table 1. For example, although Ainu were basically hunter-gatherers, they have cultivated mánçiro “foxtail millet” and piyápa “barnyard millet.” Therefore, in some dialects, these grains are called tôyta amám (lit. “cultivated grain”).

<table>
<thead>
<tr>
<th></th>
<th>amám</th>
<th>X amám</th>
<th>Original form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice (plant)</td>
<td></td>
<td>síámam</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tonó amam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>etc.</td>
<td></td>
</tr>
<tr>
<td>Foxtail millet</td>
<td>amám</td>
<td>tôyta amám</td>
<td>mánçiro</td>
</tr>
<tr>
<td></td>
<td></td>
<td>áynu amam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>mánçuu amam</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>etc.</td>
<td>piyápa</td>
</tr>
<tr>
<td>Barnyard millet</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: The word amám

Form B, síámam, consists of the prefix sí- “real, the very” and amám “grain.” Chiri (1976[1953]) suggested that its original form would be sísam amam “Japanese grain.” There is no evidence for Chiri’s suggestion; however, “rice” is certainly called tôno amam in the Horobetsu dialect. The word tonó, which was borrowed from Japanese to no 殿, means “a Japanese government official; yakunin 役人 in Japanese.” In contrast, foxtail/barnyard millets are called áynu amam (lit. “Ainu’s grain”) in Hokkaido, and mánçuu amam (lit. “grain in Manchuria 滿州) in Sakhalin.

In Hattori (eds.) (1964), the words for “rice” basically use the same words as “rice plant,” síámam and amám, but síámam has a special meaning of “unpolished rice” (lit. the very grain). The related words for “polished rice” are represented as pirke amám (lit. “polished grain”) and retár amám (lit. “white grain”). The word mesi 萃 in Japanese is borrowed in the term for “cooked rice” in a few Ainu dialects.

Keywords: grain, foxtail millet, barnyard millet

(Mika Fukazawa)
“Milk” in Tungusic and Uralic

Northern people in Siberia have their livelihood by pasturing reindeer, hunting and fishing. Other Tungusic and Uralic people, who are dwelling relatively in south and west area, farming and agriculture.

In their culture of reindeer pasturage the use of milk is not much common. Tugolukov (1969) wrote that Evenki usually milk reindeer only after the female bear calves. They drink it with tea, or they make kinds of cheese, cream, butter. On the other hand Nenets in Tundra do not use reindeer milk in general.

As far as I researched, there is no language which distinguishes the milk between human and animals.

1. Tungusic

Tungusic languages have a common word for “milk” though there are a few different forms with several suffixes.

Ev. ukumnī, ukumnī, ukuvw’-u, Ew. akan, ukuwl, Neg. okon’o, Udh. kos’o, Ulc. kün, Or. uku, Uil. koo, Nn. kū(n) // Sol. uxxn, Oro. ukan 

The root common in these word is uku-, which means “to suck milk, to sip” (cf. sir- “to milk”). In some languages the word for “milk” also means “woman’s breast, a nipple”. “Milk” was made by metonymic use:

uku- (v.) > uku-n (n.)
“to suck” > the organ which a baby suck = “breast” > the secretion of the organ = “milk”

Other words are found only in Nanay and Sibe.

In Nanay, which lives mainly by fishing, moloko (< Rus.) is more popular in use. In China Hezhe uses mama, which origin is unknown. Sibe people use sun for milk. Obviously it is likely that it came from Mongolian sūr as a borrowing.

2. Uralic

In Uralic there are 4 forms for “milk” geographically. The fact that the common word is unable to go up to the proto language would reflect that the word for “milk” was affected by their livelihood.

2.1 Samoyed

Nenets have a few expressions for “milk”: molka, malaka, < Rus. moloko

Evenki usually milk reindeer only after the female bear calves. They drink it with tea, or they make kinds of cheese, cream, butter. On the other hand Nenets in Tundra do not use reindeer milk in general.

Other Samoyed, Nga. nimi, Sel. nīmā means “milk” and “woman’s breast”, and the root *nīm- means “to suck”. It is not sure if it is borrowed from the neighbor languages, the semantic metonymy is same as in Tungusic.

2.2 Permiac

The form with *jāl- is widely used, which means “sap, tree juice” in original, and the cognates are used even in other Uralc: Fi. jālsi.

2.3 Volga-Finnic

In Mordovian loso~lofca is used for “milk”. The cognate form is also found in Baito-Finnic: Fin. lypsää “to milk”.

2.3 Balto-Finnic

2 forms piimä (Est.) and maito (Fin., Veps, Kar.) are found. As maito is used only in Finnish and its surrounding area, maito newly replaced the preceding word piimä.

(Ryo MATSUMOTO)

Map2 Distribution as to the word derivation

2 『トナカイ狩猟民の食文化・社会誌』(吉田陸著、2003年、彩流社)
Map 1: “Milk” in Tungusic and Uralic
Rice and Milk in Nivkh

1. Classification of word forms

‘Rice’ is raq in all dialects. No other forms are reported.

There are no native words for ‘milk’. Some literature list molok, malak, malako (e.g. Savel’eva and Taksami 1965), which are from the Russian word moloko молоко ‘milk’. This is also the form that our Nivkh consultants give when they are asked to translate молоко [məlʌˈko], though it should be noted that the primary stress shifts to the first syllable [ˈmalak], following the default trochaic stress pattern in Nivkh.

In this paper we have decided to use ‘breast (bust, mother’s milk)’ instead since it exhibits broader variety among words that are semantically close to milk.

2. Geographical distribution and interpretation

There are six forms for ‘breast’. We classify them into two types.

<table>
<thead>
<tr>
<th>Type A</th>
<th>Place &amp; Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. moʧ</td>
<td>Kal’ma (Savel’eva and Taksami 1965)</td>
</tr>
<tr>
<td></td>
<td>Khuzi (Shiraishi and Tangiku 2014)</td>
</tr>
<tr>
<td>2. moʧk</td>
<td>Kol’-Nikol’sk ¹ (Shiraishi and Tangiku 2015)</td>
</tr>
<tr>
<td></td>
<td>Novo-Troitskoe (Shiraishi and Tangiku 2015)</td>
</tr>
<tr>
<td>3. mɨʧik</td>
<td>Ten’gi (Shiraishi and Lok 2002)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type B</th>
<th>Place &amp; Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. mizx</td>
<td>Poronaisk (Yamaguchi and Izutsu 2004)</td>
</tr>
<tr>
<td>5. mɨɲX</td>
<td>Tygmyc (Tangiku, Tanzina and Nitkuk 2008)</td>
</tr>
<tr>
<td>6. mɨŋk</td>
<td>Tyk (Nakagawa, Sato and Saito 1993)</td>
</tr>
</tbody>
</table>

¹ This speaker might be a speaker of the Kal’ma dialect, as she has left Kol’-Nikol’sk for Kal’ma at the age of five.

Type A is presumably related to the verb momo- ‘to suck’ or/and to mot- ‘to kiss’. The final -k is a nominalizer. Related words are momos ‘soother’ (-s: nominalizer) and mof soX ‘mother’s milk’ (Savel’eva and Taksami 1970). The vocalic correspondence o:i is unheard of, but the consonantism (m-ʧ-k) provides evidence for moʧk and mɨʧik being related forms.

Type B has either miz- or miN- as roots. It remains to be seen whether these forms are associable to the verb ‘to suck’, since this verb is momo- in these dialects as well. If that could be the case, the transparency with momo- should have been lost at some time in the course of history.

The geographic distribution of Type A and B follows the classic taxonomy of Nivkh dialects which dates back to Shternberg (1900) and Kreinovich (1934): the Amur dialect, spoken in the lower reaches of the Amur River and the west coast of northern Sakhalin, and the Sakhalin dialect spoken on the rest of Sakhalin.² The geographic distribution of Type A and B forms agrees with this taxonomy: Type A – the Amur dialect and Type B – the Sakhalin dialect.

Among the forms in Type A, mɨʧik (Ten’gi) resembles the forms in Type B the most. This is expected since in our investigation Ten’gi is the only Amur dialect speaking spot located on Sakhalin. Thus mɨʧik could be an intermediary form between a proto-type A form moʧ and a proto-type B form miXX. This could be investigated by comparing similar parallels between an intermediary form in Ten’gi and those forms reported in other dialects.

Keywords: Nivkh, breast, Amur dialect, Sakhalin dialect

(Hidetoshi Shiraishi)

² Kreinovich (1934) reported the number of speakers to be 3,200 for the Amur dialect and 850 for Sakhalin.
‘breast’ in Nivkh
“Milk” in Ainu

1. Geographical distribution and interpretation

Ainu has only one form, pekótope (lit. “cow’s milk”), for “milk,” reported by Tamura (1996) and Sunazawa (1983). The word pekó originates from the word bekó, べこ, which means “cows” in the northern Japanese dialects. There were no dairy cattle in Hokkaido until the 19th century. In 1857, Elisha E. Rice, the first American consul at Hakodate, tried milking in private. This is said to have triggered the introduction to dairying in Hokkaido (c.f. Hokkido 1970: 747). In “Ezogo shuroku 蛭夷語集録” (1864), “べく,” the presumable form pekó, was reported as an Ainu word.

The word tópe means “milk” and is composed of tó, “breast,” and pe “juice, liquid, or dew.” The Sakhalin dialect of Raichishka includes the word toope, which uses the long vowel oo. We can see similar compound nouns with pe in the words nú-pe (lit. “eye liquid”) for “tear,” etú-pe (lit. “nose liquid”) for “snivel,” and mún-pe (lit. “grass liquid”) for “dew on the grass.” In the Japanese-Ainu vocabularies in the 19th century, the word tópe often was contained and translated as “chichi-jiru 乳汁” in Japanese. Tamura (1996: 725) suggested that the word tópen, meaning “sweet,” might be derived from tópe, “milk,” and un, “to belong (there).”

Sunazawa (1983: 58–60) wrote her memoir of her life in the 20th century in the Ainu language. She describes one of her stories about milk as follows: after my mother went to work, my little sister began crying because she craved milk. I went to the Japanese man raising cattle and explained this circumstance. Then he gave me a lot of cow milk and I gave it to my little sister (“pekótope porónno ën=kore. pón turési ku=kûre”).

Keywords: cow, breast, sweet

(Mika Fukazawa)
“Milk” in Mongolic and Turkic

1. Mongolic

The word forms representing “milk” in Mongolic can be divided into the following three types:

A) sün-type

The word for “milk” was sün in Preclassical Mongolian, and some modern languages retain the form with little change.

Monguor, Shera Yughur¹ and Moghol have sun. Buriai has undergone the sound change $s > h$, so the Khori dialect has the form hue.

Some languages have lost the word-final nasal and have such forms as sū (Dagur), sū (Mongol: Khakha, Chakhar, etc.). Old Bargu has xū as a result of the sound change $s > x$.

B) üsan-type

Oirat in Xinjiang and its modern offshoot in the lower Volga region, Kalmyk, have üson. The Alar dialect of the Buryad language has uhe with the sound change $s > h$.

Some Mongol dialects have lost the word-final nasal: üs (Alxū), usu (Ordos).

C) naidzï-type

Some languages in Gansu Province use a Chinese loanword (< nǎizi ㄋㄢㄗㄧ): naidzï (Dongxiang), nidzï (Bonan).

If we leave out of consideration the languages with the Chinese loanword (Dongxiang, Bonan) and the languages of the modern emigrants (Kalmyk in Europe and Dagur in Xinjiang), the type A and type B forms are in an ABA-type distribution. A geolinguistic interpretation of the distribution pattern is that the type B word-forms are a later development, though Poppe² says that they are older.

In terms of the presence and absence of the word-final nasal, it is possible to say from the geographic distribution that the forms with the final nasal are older.

2. Turkic

The word forms representing “milk” in Turkic fall into the following two groups:

A) süt-type

Old Turkic had süt, and most modern languages have basically the same form: süt ~ süd (Azeri), süjt (Turkmen), sut (Uzbek), süt (Uighur), sūł (Khalaj), sēl (Chuvash), etc.

Bashkir has undergone the sound change $s > h$, and has the form höt.

B) ┃-type

Sakha and Dolgan in northeastern Siberia have a form without the initial consonant, i.e. ┃t.

These two types of words are in a simple AB-type distribution.

The Mongolic and Turkic words for “milk” are similar in form, and are usually considered to be cognates.

Keyword: milk

(Yoshio Saitō)

¹ Shera Yughur has the form somo in addition to sun.
“Milk” in Mongolic (word-final nasal)

“Milk” in Turkic
Milk: Sinitic languages

1. Classification of word forms

The common theme of today’s conference is animal milk, however the map we have created indicates distribution of words for the generic term, “milk.” Because most of the survey reports revealed that there was no clear distinction between animal milk and human milk.

In this map, word forms are classified as 5 large types: nai 奶 type, nin 奶 type, mama 媽妈 type, tsa 嬰 type and the others.

A. nai 奶 type

- A-1 nai 奶 type
  - nai 奶 [ne] [le], nainai奶奶 [nei nei] [nie nie]
  - A-2 naishui 奶水 type: milk+water(squeeze)
    - 奶水 [nai suei]
  - A-3 naipo 奶婆 [la bu]: nursing mother
  - A-4 niuniu 牛牛 [niau niau], 獨独 [nie nie]: cow etc.

B. nin 嬰 type

- B-1 nin 嬰 [niin] [lin][ndiin]
- B-2 nen 嬰 [nen][len][nden][nen]

C. mama 媽妈 type: "mother" type

- C-1 mama 媽妈 [ma ma]: mother
- C-2 mimi 媽咪 [mi mi]
- C-3 manman 媽咪 [ma man]

D. tsa 嬰 type: "suck" type

- D-1 za 嬰（ㄐ）[tsa(t)], 嬰[tsa tsa]
- D-2 zhi 牙 [tsi][tsi][tsi][tsi]

E. pe □ type

- □[pe]

F. others

- 个个 [k1 k1], □[ten], □[tou tour]

2. Geographical distribution and interpretation

Let me note that words referring to milk in Chinese are strongly related to or synonymous with words for "breast". With respect to terms for the breast in China, there is a previous study (Cao2008). Distribution of "milk" roughly corresponds to that of "breast".

A. nai 奶 type is widely distributed in whole of China, except for the coastal area in southeast China.

In Standard Chinese, there are two Chinese characters which refer to milk or breasts. Nai 奶 and ru 乳. Nai 奶 is primarily a spoken term, ru 乳 is used primarily in writing, and is rarely used among other dialects of Chinese.

<table>
<thead>
<tr>
<th>Table 2: The case of Modern Standard Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>milk</td>
</tr>
<tr>
<td>奶(zhi) nai</td>
</tr>
<tr>
<td>乳汁 ruzhi</td>
</tr>
</tbody>
</table>

Historically, there is another Chinese character denoting Milk. 揚 dong (MC:*dun). Xu Shiyi 2007 stated that 揚 was a colloquial term in use during the Eastern-Han Dynasty(25-220), it originated as a foreign loan-word. He believes that the term originated in the North, and was brought to south. People from Jiangnan 江南 are recorded as having used dong 揚 to indicate milk in the historical documents.

ex. “江南人呼乳为揔。” 宋本《 Yupian 玉篇》

But it is no longer found in modern dialects.

B type (nin □ type and B-2 nen □ type) is distributed in Guangdong(广东) and Guangxi(广西). In "breast" map(Cao2008), it spread to Fujian and a limited area of Jiangxi. This type is believed to have been derived from Tai-Kadai (ne:n). The change in pronunciation mirrors that of the change in pronunciation of the Chinese character “年” that has taken place in Cantonese. (年 *ne:n >niin >ni:n )

C. mama 媽妈 type is distributed in the central China. In "Breast" map(Cao2008), nai 奶 type and 媽妈 mama type form an ABA distribution, suggesting that nai is the older term. Meanwhile, in "Milk" map, it is used together with Type A nai 奶 at almost all of the observation points. This means that they are preserving A Type while coexisting with Type C in this area.

D-1 tsa 嬰 type is distributed in the North-Eastern area. According to a survey report, this type is old term compared to Type A 奶.

E. pe □ type is distributed in Guangxi(广西). Much like the B-type pronunciation, this expression is found in Tai-Kadai. Please note the map of Tai-Kadai.

Xu Shiyi(徐时仪)2007. 乳、揔与奶及乳、揔的兴替考, 南京师范大学文学院学报，2007-04
Cao Zhiyun(曹志耘)2009. 汉语方言地图集 (Linguistic atlas of Chinese dialects), 商务印书馆

Keywords: ABA distribution

(Takashi Ueya, Kenji Yagi)
Milk: Tibeto-Burman

1. Classification of word forms

The classification of “milk” in Tibeto-Burman (TB) is based on 533 languages and dialects. From the data, we found thirteen stems (word roots) to denote “milk.” Many of them are etyma of the proto-level forms such as Proto-Tibeto-Burman (PTB; see STEDT), Proto-Qiangic (PQ; see STEDT), Proto-Lolo-Burmese (PLB; see STEDT), Indo-Aryan (IA), Proto-Loloish (PL; see Bradley 1979), Proto-Kuki-Chin (PCK; see VanBik 2009), Proto-Karen (PK; see Solnit 2013), and Written Tibetan (WrT) and Written Burmese (WrB). A list of stems follows:

N-type

N1: PTB etymon *s-nəw (BREAST / MILK / SUCK), incl. reflexes of WrT nu ma (BREAST) nau33, no, nu’, ȵi33, nu55nu31, nu m3. nu ma, nama, etc.

N2: PTB etymon *s-nya-n (BREAST / MILK / SUCK)

a44 ne13, ȵi53, ȵi53, etc.

TS-type

TS1: PTB etymon *syuk ≥ *dyuk (SUCK / KISS / BREAST / MILK) or *m-ts(y)(u/i)p (SUCK / KISS / BREAST / MILK)

a55 tʃi33, a55 dʒi33, tsu35 yɯ31, tsəp. cəʔ, etc.

TS2: PTB etymon *dzy(a/o)w (SUCK / KISS / BREAST / MILK)

tʃu55, a1 tʃu55, tʃu55, etc.

O-type: WrT etymon ‘o ma (MILK)

ɗaː, ɦɔː, wāː, oma, ʔo ma, oma3, ɦo ma, ʔo wā, ʔyo: m3, ko ma, wo ma, ŋa po, etc.

L-type: The PQ etymon *s-lu (MILK) can be divided into three types: i) voiced l-initial (incl. rGyalrongic words beginning with prefix tV-) la55, la55, liu, ta’lu, t alo, t alo’, etc., ii) voiceless l-initial (incl. rGyalrongic words beginning with prefix tV-) la55, la, ɬə55, ɛtʃi33, fo, njo, ta’lu, t alo, etc., and iii) LC la55, la55, la55, etc.

ZH-type: WrT etymon zho (YOGURT) or zho (SQUEEZE [for milk]), which might belong to the L-type in the PTB level

ɡo, ɛ3, su

PA-type: PTB etymon *pa (BREAST / NIPPLE / MILK)

pa55, pa55, a55 bu, a55 pa21, pap, m4po’a humiliating, pa55 mu’, etc.

PAT-type: PLB etymon *pat (CHEST)

bə32 bə55

DUT-type: IA etymon *du-t (MILK / BREAST)

duru, dudu

S-type: The etymology is not clear.

sa

M-type: The PTB etymon *mam (BREAST)

M-types appear only in compounds.

PI-type: PTB etymon *(p/b)i (ROUNDED PART / NIPPLE / FOREHEAD / SHOULDER)

PI-types appear only in compounds.

The PTB etyma mentioned above contain several meanings in addition to “milk”: PTB *s-nəw (BREAST / MILK / SUCK); PTB *s-nya-n (BREAST / MILK / SUCK); PTB *syuk ≥ *dyuk (SUCK / KISS / BREAST / MILK); PTB *m-ts(y)(u/i)p (SUCK / KISS / BREAST / MILK); PTB *dzy(a/o)w (SUCK / KISS / BREAST / MILK); and PLB *pat (CHEST) (see STEDT). The WrT etyma are nu ma (BREAST); zho (YOGURT), or zho (SQUEEZE [for milk]). In addition to the above-mentioned forms, most of which are monosyllabic (with an affix), we also found ten types of compound forms (excluding examples with an affix). A list of compound forms follows:

N1 + type

N1 + L: ne ne lo’

PA + N1: βɛ55 ne35

N1 + water: na te5 u, ȵu21 zi33

cow + N1: n55li31 n33 (cow + N1)

nu55 gua55 nu55 (N1 + cow + N1?)

N2 + type

N2 + PI: a33 ne21 pi44

N2 + water: a55 nu21 zi33

cow + N2: ko’ru4 wu4 nu4, k5i noŋ

TS1 + type

PA + TS1: ba33 dʒi33, bu33 dʒi33 zi33

TS1 + N1: dʒi33 tʃi33

cow + TS1: a55 n31 a55 tʃi33, nu33 tʃu35 yɛ31

TS1 + fruit: sauʔshi, souʔci

TS2 + type

TS2 + water: tsu13 zi21

cow + TS2: ȵi21 tʃu33

O + type

O + water: wO b8’u
We found compounds of different roots for “milk,” compounds of roots for “milk,” and other roots (“water,” “cow,” “fruit,” and “raw”).

2. Geographical distribution and interpretation

The N-type is the oldest type because this form widely disperses from a geographic location and is found in broader language groups. This type is divided into two groups, one of which is N1, a cognate of the Old Chinese *niu, for “breast” (see STEDT). This type is widely dispersed in the Lolo-Burmese (WrB ni1), Karenic, Kuki-Chin, Nungic, Tibetan, and Qiangic languages. N2 is a cognate of Old Chinese *niə ‘mother; breasts, milk’ (see STEDT), which is found in the Loloish, Situ, Aiangic, and Tibetic languages. Compound forms (N1+ and N2+) are located closer to the center of distributions of N1 and N2, which indicates that compound forms are newer than plain forms (N1, N2).

The TS-type is divided into two groups, one of which is TS1, as found in Loloish and Jingpho-Asakian. According to STEDT, TS1 in Jingpaw is derived from PTB *tʂuk *dzyuk, and one in Loloish is from *m-ts(y)(u/i)p. Another group is TS2, which is only found in Loloish. TS1 is surrounded by TS2, which suggests that TS2 is relatively older than TS1.

The O-type is the most widely distributed in terms of geography, however, it cannot be considered older than N1 since it is mainly found in Tibetan languages. Most of the Tibetic languages share it, and present extremely variegated phonetic forms. It is worth mentioning that most of the O-types appear with a suffix. Several non-Tibetic languages such as nDrapa (Qiangic) also share this type, which is regarded as a Tibetan loan.

The L-type is distributed in the eastern most area of Sichuan and found in non-Tibetic languages such as Minyag, Geshitsa, sTau, and rGyalrong. L + type is distributed in the center of the distribution of the plain type (L-type), which indicates the compound form is newer than the plain form.

The ZH-type is found in four Tibetan languages (Rongbrag, Sogpho, sProsnang, and Yotsa) spoken in the eastern part of the rGyalrong area.

The PA-type is found in Loloish, Bai, Lisu, and Qiangic languages. PA is surrounded by TS1 and TS2, which suggests that PA is newer than TS1 and TS2.

The PAT-type is only found in Yi Eastern (Loloish), which is spoken in the southeast of the TB area.

The DUT-type is the loan from Indo-Aryan, and only found in Newar. This is a result of the language contact between the Newar and the Indo-Aryan languages.

The S-type is found only in dGudzong Tibetan. The etymology of this root is not clear but might have some relation with the TS1-type, which includes reflexes with an s-initial.

The M-type appears only in compounds, which is found in Loloish (Polo and Jinuo) and spoken in the southeast of the TB area.

The PI-type also appears only in compounds, which is found in Sanni (Loloish).

3. Conclusion

In this study, we collected data from classifications of “milk” from 533 Tibeto-Burman (TB) languages and dialects and found thirteen stems. On the maps, we distinguished eleven plain forms and ten compound forms. We also described and analyzed its geographical distribution and tentatively conclude that two relative chronological orders of the stems for “milk” are as follows:

i) The N-type is older than the O- and L-type, and

ii) The TS-type is older than the PA-type. In the TS-type, TS2 is older than TS1.

We can see the interesting semantic changes with the roots for “milk,” which originally referred to body parts such as “breast,” “rounded part,” “chest,” etc., or actions such as “suck,” “squeeze (for milk),” etc.

Keywords: Tibeto-Burman, milk, breast, semantic change, compound.

(Shiho Ebihara, K. Iwasa, K. Kurabe, S. Shirai, H. Suzuki, I. Matsuse)
Map 1: ‘Milk’ in Tibeto-Burman: The whole area.
N.B. The mark ‘+’ in the legend means an existence of other morphemes.

N.B. The mark ‘+’ in the legend means an existence of other morphemes.
Milk: Tai-Kadai

1. Classification of word forms

In the majority of Tai-Kadai languages, "milk" and "mammae" are expressed by the same word. Among them, 5 large types can be divided as follows:

A. nom type
   nom A1 ㅐ的人生, ዩ으, nom2, num3, num2, num2

B. u type
   ʔu₁, ʔu₃, ʔu₄, ʔu² ṭu²,

C. n- type
   C-1. ne:n type
      ne:n³, ne:n¹, nen³
   C-2. ne type
      ne₁, ne₄, ne⁵, ṭne⁵, ne⁶, ni⁵
   C-3. ne:u type
      na:u⁵, ne:u¹, ne:u⁵

D. tsi type
   D-1. tsi type
      tsi², tsi⁴
   D-2. ci type
      ci³, cia³

E. Others (not shown in the maps)
   m²¹, mi¹, na³, nou³, njo⁴, tsu³, ṭju¹, teu³⁵, co²², ṭem³⁵, ṭe:mi², pe⁴

2. Geographical distribution and interpretation

As seen in Map 1, the whole area is clearly cut into 3 zones: in the southern zone, A type is distributed; in the northwestern zone, mainly in Yunnan, B type is distributed; and the rest, in the northeastern zone, types C-1, C-2, C3, D1, and D-2 consist a fivefold distributed; and the rest, in the northeastern zone, mainly in Yunnan, B type is 3 zones: in the southern zone, A type is distributed; in the inner part of the inner side of C-2 and the outer side of D-1 and D-2. So it is newer than C-2 type and older than D-1 and D-2 types. This form can emmerge by adding -u ending to type C-2.

D-2 is located in the inside of D-1, so it presumably the newest form. The meanings of D-1 word tsi and D-2 word ci are unknown, however, form the phonetic point of view, D-2 can be derived from D-1 by palatalization and the change from an affricate to a fricative.

In sum, the chronological order of the types in this zone can be postulated as follows: C-1 > C-2 > C-3 > D-1 > D-2.

It is noteworthy that C-1 ne:n type is similar to a Sinitic word nin which is dominant in Min, Yue, and Kejia dialects (Cao 2008, Vocabulary volume, 76 and Ueya 2016). They probably have the common origin. Since there is no Chinese characer for nin in Sinitic, it is even probable that the origin came from Tai-Kadai.

Furthermore, it is a striking fact that similar forms with C-3. ne:u type and pe⁶, one form of E. type are found in Sinitic dialects spoken in the vicinity of the Zhuang language. They can have common origins.

Wu (2002: 316) presumed that A. nom type has a common origin with Burmese no¹ um².

Liang and Zhang (1996: 288) reconstructed the initial consonant for C-2. ne type as *ml- considering mi² as its cognate, since there are 9 other parallel examples. On the other hand, it is possible that C-2. ne type is an old borrowed word from Sinitic nài ㄆ.

Some materials describes word forms to distinguish "milk" and "mammae", as seen in Siamese นํานม "nam C2 water + nom A2" and แม่ C1 breast + nom A2". Such word forms are found in the places denoted by *,(former type) and (later type).

Keywords: borrowing across language families, peripheral distribution

(Mitsuaki Endo)
Map 1  Milk in Tai-Kadai

Map 2  Mammae in Tai-Kadai

Map 3  Enlarged view of the northeastern part of Map 1

Map 4  Enlarged view of the northeastern part of Map 2
Milk: Austroasiatic languages

1. Classification of word forms

Word forms for 'breast' or 'milk' in Austroasiatic languages are classified into six types, Type A to Type F, with or without subtypes.

Type A
- A-1: *tsʰ, toh, tyh, tah, tʰ
- A-2: *toa, toah
- A-3: *dšh

Type B
- B-1: *m:ʃ, mːm, mːm
- B-2: *ʔem, ŋam, ŋim

Type C: *bu, *buʔ, *booʔ

Type D: *nin, *nin, *nam, *ɲo


Type F
- F-1: *susuʔ, *susuʔ, *susuh (from Malay)
- F-3: *nom (from Thai)

2. Geographical distribution and interpretation

The Austroasiatic language family comprises the Mon-Khmer languages in Southeast China and mainland Southeast Asia, the Munda languages in India, and the Nicobarese languages in the Andaman Sea. Cow’s milk or other dairy products have not been played a key role in these regions. “Milk is no part of the Munda's diet in any form”, according to Hoffman et al. (1930-50:4427), even in India where use of butter or ghee overwhelms.

The word forms treated here, therefore, except loanwords denoting ‘milk’, mean ‘breast’, or ‘mother’s milk’, unless explicitly indicated otherwise. In case of specifying ‘cow’s milk’, use of compounding such as <<<water+breast>+cow> is commonly found, as is found in Khmer.

Our main resources for examination are extracted from the SEAlang online Mon-Khmer Etymological Dictionary provided by SEALANG projects, which comprises only Mon-Khmer and Nicobarese languages. We therefore supplemented data of the Munda languages from Hoffman (1930-50) and Bodding (1929-36).

Type A shows broad distribution from Southeast Asia, Andaman Sea to India, thus regarded as the oldest form. Looking from east to west, subtype A-1 *tsʰ is found in Bru, Katuic in Northern Vietnam, Bahnaric in Southern Vietnam, and Monic Old Mon in Southern Myanmar, *tyh in Pacoh, Katuic in Central Vietnam, *toh in Tampuan, Bahnaric in Northeastern Cambodia, *tah in Monic Middle Mon in Southern Myanmar, *teh in Nicobaric Car in Andaman Sea. Subtype A-2 *toah is in Nicobaric Nancowry in Andman Sea, and *toa is in Mundari and Santali, both Munda group in Eastern India. Subtype A-3: *dšh in Khmer is a variant of *ts into d is common in Mainland Southeast Asia.

Type B has nasal m at the syllable final position. B-1, *mːm in Semnam, *mːm in Jahai, *mːm in Semay, all of Aslian group, are found in Northern Malaysia. Subtype B-2, *ʔem in Jahai and *ʔam in Kensiu in Aslian, may be related to B-1 considering the distribution and genetic relations. If it is the case, change from *m to ʔ might be more plausible than *ʃ to m. Although all these words are of Aslian group in Malay Peninsula, the rest ŋim of subtype B-2 in Khmuic Khsing-Mul in Northern Vietnam seems to be isolated.

Type C bu in Danaw and Palaung, and *buʔ in Riang, both Palaungic, are found in Central and Northern Myanmar respectively. *booʔ in Mlabri, Khmuic is in northern Thailand. These words may be cognate considering their geographic distribution.

Type D, having a nasal consonant at the syllable initial position, *nin, in Mangic Bolu in Yunnan, Southern China. *nin in Palaungic Riang in Central Myanmar, and *nam in Aslian Tonga in Northern Malaysia, seem to have no relation with each other since they are far from one another. The rest *ɲo of type D is isolated in Nancowry Island in Andaman Sea.

Words grouped in Type E, having miscellaneous forms with different consonants and rhymes, seem to be not related to one another. Regarding geographic distribution, *toːc, Lamet, Palaungic is in northern Thailad, *phanyː, Tavung, Vietic in Laos near Vietnamese border, *jʃk, Chong, Pearic in Cambodia near Laos, *bot, Temiar, Aslian in Malay, and *sua, Viet in Vietnamese are far from one another.

Type F, loans from Hindi in Khasi is found in Meghalaya State of Northeast India, and in Kharia, of Munda in East india. Loans from Thai (in Kuy), and Malay (in Semnam and Jahai) are in in Thailand near Cambodian border, and in Malay Peninsula, respectively. All are in the inland areas surrounded by major languages.

Keywords: breast, mother’s milk

(Makoto Minegishi)
Map: Milk in Austroasiatic Languages

Type A
- Those with initial t or d
  - A-1: tsh, toh, tyh, tah, tsh
  - A-2: toa, toah
  - A-3: dsh

Type B
- Those with syllable final m
  - B-1: me:m, məm, məm
  - B-2: ʔəm, ʔəm, ʔəm

Type C
- Those with initial b
  - C: bu, buʔ, booʔ

Type D
- Those with initial nasal
  - D: nin, pin, nam, no

Type E
- Miscellaneous forms
  - E: thoː, phanː; jok, bot, sya

Type F
- Loanwords
  - F-1: susuʔ, susuʔ, susuh (from Malay)
  - F-2: dut, dut, twa (from Hindi)
  - F-3: nom (from Thai)

URLs for data extraction
http://sealang.net/monkhmer/dictionary/
http://www.ling.hawaii.edu/austroasiatic/
Milk: Austronesian languages

1. Classification of word forms

The word form for “milk” can be categorized into four main groups: Type A consists of susu and other similar word forms, including forms containing an alveolar consonant such as tutu, ruru, or nunuñoño. All of these forms denote “breast (of the women).” Type B has a form dadish, which also means “breast.” Although it is found in only one language in this data, it is assumed that more languages employ a similar form. Type C consists of gatas or similar forms. This also means “breast” in some languages; it primarily means “coconut milk.” Word forms that belong to Type D have two morphemes: one denoting “water” and the other denoting “breast.” The forms belonging to this group have a glide or a high vowel /w, y, i, e/ or a fricative /ɸ, h/ as the onset of the first syllable, followed by similar forms that are found in Type A. Languages that belong to Type E are loan forms from English “milk,” whereas those belonging to Type F adopt the French word “du lait”.

A. “susu” type
   A-1. disyllabic form with fricative consonants: susu, sūsu, suū, uhu, xuxuʔ.
   A-2. monosyllabic form that takes a part of A-1: su, sur, ū.
   A-3. disyllabic form with non-fricative alveolar consonants: tutu, ruru, rata, nunu, ňoňo.

B. “dadish” type.

C. “gatas” type: gatas, gātas, gɔtɔs.

D. “Breast water” type (two morphemes)
   D-1. The first consonant is a glide or a high vowel: iʔ teʔ, yeh ňoňo, er susu, wa-yu, etc.
   D-2. The first consonant is a fricative: vae čuču, urahan, huʔakau etc.
   D-3. Others with two morphemes: na-sūs, nahui-nah, kapa oe, polo-na-ū, etc.

E. Loan forms from English “milk”: meleke, milika, mimi.

F. Loan forms from French “du lait”: dadiş, dle, dûhi-ti.

2. Geographical distribution

2-1. Formosan languages show two different types: Type A and Type D-3. Both of these adopt the form for “breast.” Type D-3 forms mean “water of (from) breasts.”

2-2. Philippine languages and North Kalimantan: Most languages in the Philippines adopt the Type C form: gatas and other similar forms.

2-3. Indonesian languages: Most languages in Indonesia use the same form for “milk” and “breast”; largely type A and one instance of type B was found in this data. Type A has susu or similar forms that adopt alveolar consonants as onsets, such as tutu in Gorontalo (Sulawesi) or shortened form such as ahu in Sika (Nusa Tenggara). The phonemes /s/, /l/, and /t/ frequently correspond to one another.

2-4. Papua New Guinea and the Solomon Islands: Type A is also prevalent in Papua New Guinea and in some parts of the Solomon Islands. One can find not only the form similar to susu but also the monosyllabic shortened form (sur in Nyindou or tui in Mbula) or forms that adopt consonants /t/ or /l/ instead of /s/ (ex. ratu in Motu). Instances of loan forms from English “milk” can also be found, for example, milika in Mekeu. “Water of breast” expression is also found as in Tolai (polo na-ū).

2-5. Oceanic languages and Madagascar: Various types are found in Oceanic languages, including Type A, D, E, and F. Type A is found in Fiji (sūhu), Type D in North Tanna (nahi-nah), Type E in Nengone (mimi), and Type F in Cémuhî (dûhi-ti).

3. Word Forms for “milk”

In areas where Austronesian languages are spoken, pasturage and dairy products are seldom found. Cattle, buffalos, and goats are sometimes found but their milk is usually unused. Many languages use the same form for “breast (or ‘breast of a woman’)” and “milk.” Forms belonging to types A and B mostly have the above two meanings. Because of the similarity in color and texture, many Philippine languages use the same form for “coconut milk” and “dairy milk” (Type C). Some languages use the expression “breast water (or ‘water of/from breast’),” which is categorized in type D. Due to the lack of utilizing livestock’s milk as diet in these areas, loan forms from English or French (languages of the former suzerain states) are adopted in some languages, mostly in the Pacific islands.

Keywords: forms for “milk”: “breast” type, “coconut milk” type, “breast water” type, loan word type.

Map 1: Taiwan and North Kalimantan and North Sulwesi

Map 2: Papua New Guinea and Oceanic languages

Map 3: Papua New Guinea and Pacific

- susu, sūsu, suḍu, ｕu, xu xuʔ
- su, sur, ū
- tutu, ruru, rata, nunu, ūnoño
- dadiəh
- gatas, gātas, gɔtɔs
- iɔ teʔ, yeh ūnoño, ere susu, wa-yu etc.
- vae čuču, ʃola kwasir, huʔakau etc.
- na-süs, nahui-nah, kapa oe, polo-na-ū, etc.
- meleke, milika, mimi
- dadiəh, dile, dȗhi-tí
Milk: South Asia (IE (Aryan, Iranian, Nuristani), Dravidian, Andamanese, Nihali, Burushaski)

1. Classification of word forms

In this map, there are four major categories of word forms: dugdha, kširám, päl, and paya, and three minor categories. Additionally, there is also an ostensible category, mama.

A. dugdha: dugdhā, dugdh, dūdh, dudha, dudhwā, dudh, dudhu, dūdd, dūd, dūdā, du de, dud, dūd, dūt, dōd, dudu, dudē, dudi, ḍuḍ, didom, dedum

B. kširám: kširam, kširamu, kš, kšr, kšā, kšra, khrā, khra, kīri, kīru, xšira, xšīra, čhrī, čhr, čir, čir, čır, ĉir, ŝir, ŝīr, šīr, šē, Šū, xšīr, xšir; gakkhir; āčč (compounding with *pi in D. paya group); kiritana (with stanya in H. others?)

C. päl: pāl, pa l, pa lū, pālu, pālū, pālātō, pālh, hālu, pādū, pāḍi, pēl, pēru, po s

D. paya: paya, pai, poī, pā, pey, pe, payṭah

E. pāčči: pāčči, pāči

F. kam réis: kam réis, kam rās-da

G. mama: mama, mamū, ir māma ti ōné, ir mamā ti jōné

H. others: samundar, stanya, žarč, zu, amudham, kar

2. Geographical distribution and interpretation

The lexical forms representing the word ‘milk’ can be classified into A) dugdha type, B) kširam, C) päl, D) paya, E) pāčči, F) kam réis, G) mama, and H) others.

The most major types are dugdha and kširam.

The former can be verified in Sanskrit dugdhā दुध ‘milk’, derived from the verbal root १धुह दु ‘to milk’. Forms of this type are located all over the Indian subcontinent, within Indo-Aryan and Dravidian languages, and even in the Nihali language (see Map 2). Historically the form became duddha in Pali. Later some languages, most of them located in northern part of the Indo-Aryan distribution, lost the aspiration of the latter consonant /d/ to /ḍ/. Nonetheless, the variations of this type retain the fundamental form. Examples are distributed over the map in all four cardinal directions: the northernmost example is the Naltar Gujarī død, the southernmost is the Sinhala dudu ஆது, the easternmost is the Assamese dudh दूध, and the westernmost is the Sindhi dūdh 燊.

Forms of the latter kširam type are observed around the area of the dugdha type, i.e. on the geographic periphery of India, Pakistan, and Sri Lanka, and in most Iranian languages (see Map 3). The forms of this type are derived from the Sanskrit word kširām क्षीरम् ‘milk, thickened milk’. Forms of this type vary quite widely. It changed into khrā in Pali, while westwards became xšīrā in Old Persian and then ŝīr in Pahlavi. Modern languages in central and southern India retain the onset consonant cluster kš (but the actual sound is /kš/, not /kʃ/): Tamil kširam கிரமு, whereas farther south and east the cluster changed into /kh/ or /k/: Assamese gakkhir გწჰირ (compounding with ga გ ‘cow’) and Dhivehi kirū ެިރު. In the west, the consonant cluster changed into some fricatives, that is /gʃ/, /ʃk/, or /kː/: e.g. Tajik šīr мап and Lagham Pashayi ʃīr. In the north, the cluster became affricates such as /ʂgʃ/, /sʃk/, or /ʃkː/: e.g. Domaaki چحīr and Palula چی. Two Pamir languages at the border between north-eastern Afghanistan and north-western Pakistan include a consonant cluster xš inherited from Old Persian: the Munji xšīra and the Yidgā xaʃīra.

The third major type, pāl, contains many variants, but they can be seen only in Dravidian languages. The forms certainly originate in the Proto-Dravidian word *pāl ‘milk’. Even today, there are eight languages that keep the exact form pāl (two of them are recorded as pa l for perhaps the same pronunciation).

The paya type is observed in the Marathi paya पय, the Maithili pai, the Oriaṇ payṭah पयं, the Sinhala paya பய பய and pā ப, and the Pashto poi پ , (among others). This minor type comes from Sanskrit pāyas पयस ‘any fluid (especially, milk)’. The Pali paya ‘milk, juice’, the Prakrit ‘milk, water’, and Sinhala forms, which also mean ‘water’, keep somewhat wider semantic ranges.

Pāčči is a minor type in Dravidian. The word originally means ‘milk’ as a nursery word. Sometimes a word of this type is used for ‘mother’s milk’ specially.

Kam réis and kam rās-da are Andamanese words from Áka Bójiihāb and Áka Bīa-da, respectively. These words certainly mean ‘broth of breasts’: Áka Bójiihāb ìr kám-da ‘breasts’ + réis-da ‘broth’. These types are employed by Aryan languages.

The mama type is not an etymological group. The Parji (Dravidian) mama is a nursery word that means ‘milk, food’. Three Burushaski dialects commonly have
the inherent word mamú ‘milk’. I cannot understand the original meaning of the Áka Kédé ír máma tí óné and the Áka Cháriár ír mamát tí jóné. The last part of these phrases (or compounds?) might be something related to ‘food’. AK te jó and ACh áka jéo. I think they are unconnected but similar to each other because of the universal pattern of language acquisition.

(YOSHIOKA Noboru)
Milk: Arabic languages

1. Classification of word forms

The word forms of “milk” are classified as 2 categories: laban and hali:b.

A. laban type (لبن)

laban, labanu, libân,
lib, Iben, Ibejn, Iben, libân, leben, liban,

B. hali:b type (حليب)

B-1. hali:b, hali:p
B-2. hili:b, hli:b, xlip

2. Geographical distribution and interpretation

Although in Persian gulf area camel milk is sold in supermarket but usually cow milk is drunk. hali:b denotes “fresh milk”, and laban is mainly denote “yoghurt” or “sour milk” in the urban dialects.

A. laban type (لبن)

In Egypt laban denotes “fresh milk”. hali:b is added to laban to clarify “fresh”.

laban hali:b “fresh milk”
laban a:jib “curdled milk”

hali:b is found in some points such as Awlād ‘Ali in Saidi. In North-Sinai both laban and hali:b are found.

hali:b is used by Biyyâdíy, Axrasiy, Dwēġriy, ʽGēliy, Ḥassaniya Arabic in Mali.

In Sudan both laban and hali:b are found.

laban type : Obeid Sudan (laban), Chad and Nigeria (laban), Juba (leben), Ki-Nubi (liben).

hali:b : Khartum, Šukriyya “gemolkene Milch”, Darfur (Sudan), Shuwa in Bornu “fresh” (Nigeria), Nigeria.

In other areas laban type is found in some spots.

leben Rwala Saudi Arabia
liban Ḥarb Ḥiğāz, Ḏufār Oman, Abu Ḍabi, Qatar
Iben, Iben hali:b Mauritania
Iban Hassaniya Arabic in Mali

And in some particular contexts laban is used as “fresh milk”: fa:hi lah liban “Tee mit Milch” in North Yemen.

laban mainly denote “sour milk”, or “curdled milk”.
- “petit-lait”: Morocco (iben), Cherchell (iben), Libya (leben),
- “lait aigre”: Algir (leben, iben), East Chad (leben), Libya (liben)
- “lait écrémé”: Marâzîg Tunisia (liban)
- “Sauermilch”: Maghniyya (iben), Palestine (liban), Yemen (laban)
- “yoghurt”: Mecka Saudi Arabia (laban), Tripoli Lebanon (laban), Soukhne (laban), Emirate (laban), IRAQ (laban), Khuzistan (laban), Anatolia (laban)
- “curds” Palestine (laban)
- “sorte de lait caillé” Syria (laban)
- “butter-milk” Bahrain (laban), Kinderib in Anatolia (laban), Urfa beduin (iben)

B. hali:b type (حليب)

B-1. hali:b. The form hali:b is widely distributed.

Fezzan Libya, Tripoli Lebanon, Syria, Iraq, Oman (Ristāq, Khābūra, Bahla, Āl Wāהiba)

Peripheral dialects: Khorasan/Iran, Qašqa Daryaâ/ Uzbekistan, Bukhara/Uzbekistan

B-2. hili:b, hli:b, xlip

In Maghreb a in ha became i (hili:b in Bou Saada Algeria) as a result of assimilation to i, or dropped (hili:b such as in Morokko, Takrouna, Tripoli Libya. This assimilation is found in some other areas too: hili:b in Negev Palestine, hli:b in Taṣāwir Saudi.

halip is in Maltese. In Maltese a does not drop and h changed to h historically, and voiced consonants devoice at the end of words. Note that in Maltese a vowel on which the accent falls is long and there is no phonological distinction between short and long. So phonological /halip/ (in orthography ħalip) is realized as [hariːp]. In Cyprus xlip as the result of the merger of h and x.

The consonant root of hali:b is h-l-b. This is shared with other Semitic languages: hálāb (ז”ל) in Hebrew (modern pronunciation [yalav]), halbā (مالطة) in Syriac, hali:b (كح) in Ge’ez, h-l-b ( ) in Uguritic. But šibru ( )

The form halib:b is a form of passive participle (CaCi:C) of the verb hałaba “to milk”. Its meaning is “(a thing) be milked”.

The words with the consonant root of laban (l-b-n) have meaning of “white” in other semitic languages: lābān ( לבנ ) in Hebrew (modern pronunciation [lavan]), labanu ( ) in Uguritic.

(Youichi Nagato)
Distribution of Dialectal Word-forms Associated with the Word

Chichi (Milk) in Japanese

1. Prologue

The word-form chichi [tʃitʃi] bears the meaning of both milk and breast not only in the standard Japanese but also in its dialects pervaded whole country. Moreover chichi refers not only to the breast milk but also to other milks like cow-milk, the dialectal trend of this kind can be found in the dialects pervaded whole country in the study of, for example, Hirayama et al. (1992). In addition, the word chichi (milk) has likely a connotation with the word chi [tʃi] (blood). Both being fluids of human body, chi (blood) has likely been older than chichi (milk) on the literature. This hypothesis can be confirmed with the dialect distribution pervaded whole country.

The dialectal variation reflects that there is almost no dialectal forms associated with the word chichi [tʃitʃi] in Japanese. The reason for this scarcity of the dialectal forms probably lie with the late development of milk drinking practice as a mass culture in the early modern era or after the Meiji era.

We will reveal the characteristics of the above-mentioned projected distribution of dialectal words for chichi by investigating the dialects of whole country.

2. Distribution of Dialectal Words Representing the Chichi in Japanese

In the dialects of Japanese, both chichi (milk) and mune (nyubou) (breast) are usually represented with the same word-form. As like as the practice of representation of both milk and breast with the same word-form in Japanese is also found in the various dialects of Eurasian countries. Accordingly an investigation is required to know the detail distribution of these dialectal forms. As we have already mentioned that chi [tʃi] has been older than chichi [tʃitʃi] on the literature. We find such examples include, ‘tʃinomigo’ a child at the breast and ‘tʃikjodai’ foster brother. Hence chi [tʃi] is considered to be connoted with blood. In this way, we can formulate a hypothesis whether there are dialects of languages bearing the word-form for milk to express both milk and blood as the word-form chi does in Japanese.

Hence the distribution of dialectal word- forms associated with word chichi (milk) has been as shown in the dialect map-1. It has been drawn on the basis of the dialectal-forms for the word bonyuu (breast milk) found in the Gendai nihongo hōgen dai jiten. The dialect map-1 depicts that the word chichi [tʃitʃi] is distributed in the centre of archipelago, while the dialecta -forms having lineage to chi [tʃi] are collectively distributed in the Ryukyu Islands.

In addition, the dialectal-forms having lineage to the word chi [tʃi] are distributed in the regions of Aomori as well as a part of northern Tohoku and Kumamoto prefecture of Kyushu island. According to the dictionary like Nihon Hōgen Dai jiten, the distribution of dialectal forms having lineage to the word chi [tʃi] further covers the region Hachijo Island and Saga prefecture. Taken together these facts into consideration, chi [tʃi] is found to be distributed around the archipelago. This finding reflects that dialectal forms for chi [tʃi] are distributed in accordance with the dialect radiation theory. That is, in Japanese, the change of the form chi [tʃi] to the form chichi [tʃitʃi] has occurred having aroused at the centre of the archipelago leading to the current distribution of dialectal forms of it.

It should be noted that, according to Nakamoto (1985), the ancient pronunciation of the Japanese word chichi (milk) was tʃi [tʃi], which has become tʃi [tʃi] by the process of syllable repletion.

Keyword: milk, breast, blood, dialect radiation theory
(Hogen Shukenron)

(Kishie Shinsuke, Faquire Razaul Karim, Shimizu Yukichi, Sakoguchi Yukako)
(Gendai Nihongo Hōgen Daijiten)
A Geolinguistic Description of Terms for ‘Milk’ in Tibetic Languages of the Eastern Tibetosphere

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Abstract

This article attempts to describe a dialectal difference of the word ‘milk’ attested in around 220 dialects of the eastern Tibetic languages. The word ‘milk’ generally corresponds to Written Tibetan (WrT) ‘o ma or nu ma. The former form has several phonetic differences, such as the number of syllables and the initial consonant. Other than them, there are also compound forms with a morpheme ‘water’ (corresponding to WrT chu), which are distributed in a small area.

1 Introduction

This article provides a detailed description of the geolinguistic analysis of the word forms for ‘rice’ in the Tibetic languages spoken in the eastern Tibetosphere, which Ebihara et al. (this volume) did not describe in detail due to their focus on the whole of the Tibeto-Burman linguistic area. The geographical scope of the eastern Tibetosphere follows the definition of Suzuki (2015).

The data used to create the linguistics maps at the end of this paper only includes first-hand materials collected by the author from 2003 to 2015. Because of this, as well as because of time constraints on the part of the author, the data points are not equally distributed within this area, and the points on the map only reflect the current research situation. The present map contains 223 points.

The linguistic maps reflect so-called ‘regiolects’, i.e. dialects with regional differences. Sociolects, which certainly exist in the given area, are not dealt with in this article.

2 Classification of semantic categories and word forms

This section provides a classification of word forms of ‘milk’ based on Written Tibetan (WrT) forms and their various phonetic realisations. There are three principal types:

(A) WrT ‘o ma-type.
(B) WrT nu ma-type.
(C) WrT zho-type.

The A-type is attested more widely than the B-type. In addition, the A-type and the B-type can be classified into different subcategories based on its phonetic realisations. The C-type is rarely found, however, the word form zho can be connected with the /l/-form of ‘milk’ attested in rGyalrongic languages, for instance, in an aspect of historical linguistics (see Section 2; Ebihara et al. this volume). Examples are as follows:

1 A suprasegmental description is uniformly omitted.
A4: disyllabic form: / mView/ / mView/ 
[ mView], [ mView], etc.
A5: monosyllabic form: / mView/ 
[ mView], [ mView], etc.
A+: WrT ’o ma + WrT chu ‘water’ 
[fo ma tªu], [w: tªu], [wo tªu]

B-type
B1: disyllabic form: /nM mView/ 
[nu ma], [nu m], [nu ³ma], etc.
B2: monosyllabic form: /nM/ 
[ne:], [nu:].
B+: monosyllabic form /nM/ + WrT chu ‘water’ 
[ne: cªu], [ne: tªu].

C-type 
[so], [co], [su].

M-type (miscellaneous; neither classification nor discussion provided) 
[sa], [©: [ªu], [fªa po]

Note that the difference within the A-type and B-type belongs to the phonological process of coalescence, and similar examples should be considered if we treat it in the aspect of phonological development. The chronological order should be: A1 > A2 > A3; A4 > A5; B1 > B2. The compound type is mentioned as “A+” and “B+2”. The second element of a compound is generally a morpheme ‘water’ (WrT chu).

3 Geographical distribution and interpretation

I present two linguistic maps (see the end of the article). Map 1 displays an overall distribution of the word forms for ‘milk’, reflecting the classification provided in Section 1. Map 2 is an enlarged version of the southeastern Khams area, respectively. The linguistic maps here were designed with ArcGIS online.

First of all, the minority of examples is to be explained: the C-type (WrT zho). It is only attested in Rongbrag Khams, spoken in Danba (Rongbrag) County, the easternmost area of Khams around the centre of Map 1. The word form of WrT zho originally denotes ‘yogurt’, not ‘milk’. However, the same usage is also found in Chocha-ngachakha (Tsamang), spoken in eastern Bhutan (Tournadre and Karma Rigzin 2015). Furthermore, the WrT zho might be related to Proto-Tibeto-Burman (PTB) initial *ly-, as there are some parallel examples between WrT zh and PTB *ly-: WrT bzhi and PTB *b’(ѥ)-lyi, and WrT zhing and PTB *lying. This means that WrT zho is possibly related to the L-type of ‘milk’ (Ebihara et al. 2016), attested in many rGyalrongic languages. Rongbrag Khams and rGyalrongic languages are just neighbour with each other, however, this vicinity of distribution should be considered as an accident because of the phonetic realisation corresponding to WrT zh, not to /l/. The sound development in Tibetic languages from PTB *l > WrT zh might have completed in an earlier stage of the Tibetic languages called Proto-Tibetic (Tournadre and Suzuki forthcoming).

Secondly, the overall distribution of the A-type and the B-type is discussed. It is obvious that the A-type is dominant in the eastern Tibetosphere, whereas the B-type is geographically marginal, which is distributed at the both directions of north and south of this region (see Map 1). This distribution reminds us of an ABA-distribution, which means that the marginal type (the B-type here) is more archaic than the other. If we take the whole Tibetic languages in this region as a language derived from one single root, this hypothesis is comprehensive. Contrary to the general understanding that the dialects spoken in Sichuan-Gansu border are related to those in Khams, several results of Tibetan dialectology such as

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\[2\] This sound law has been dubbed ‘Benedict’s law’ by Hill (2011:445). See also Hill (2013) for a relative chronology of Tibetan sound laws including Benedict’s law.
Suzuki (2016) do not positively support the hypothesis, hence the ABA-like distribution attested in Map 1 may not represent a historical development following the theory of the geolinguistics.

Thirdly, the order of sound change (A1 > A2 > A3; A4 > A5; B1 > B2) and its distribution are discussed. This case is mainly applicable to the south-eastern Khams area (see map 2). The first type is the order A1 > A2 > A3. The A1 form is a straightforward sound correspondence with the WrT form ‘o ma, and the A3 form is a coalescent form of these two syllables. Looking at the distribution of the A3 form, we see that the easternmost part of the south-eastern Khams (Muli, Daocheng, Xiangcheng, Xianggelila) and a part of Deqin County (from Shengping to Yanmen) dominantly have this type, and a small number of places have the A1 and A2 forms in these areas. This distribution implies that the same process of sound change occurred in these two areas differently; the order A3 > A1 is unimaginable even if we consider that there is an ABA distribution in Yunnan. The second type, A4 > A5, is found in Zhuoni County, Gansu. Based on the present data, it is difficult to explain how this change occurred, however, this type is regarded as a regional feature attested in Zhuoni. The third type, B1 > B2, is also attested in Yunnan, however, the distribution is scattered. Interestingly, the B1 form (a dissyllabic form) is found in the places close to the A1 form (a dissyllabic form), whereas the B2 form (a monosyllabic form) is found in the places close to the A3 form (a monosyllabic form). This situation suggests that the phonetic realisation is related in a given region even though the word stems are different.

Finally, the compound forms (A+ and B+) are discussed. They accidentally use the same morpheme as a part of compound: WrT chu ‘water’. In many Asian languages, ‘milk’ is related to ‘breast’, and it implies ‘liquid produced from the breast’; hence, the use of the morpheme ‘water’ for ‘milk’ is reasonable to make a compound. Another possibility in the Tibetic languages is a borrowing from a Chinese expression nai-zhi ‘milk/breast-juice’. As for the geographical distribution of the compound forms, they are attested in Yunnan, however, scattered. The forms attested in Gongshan County (B+) may be related to that attested in one place alongside Lancangjiang, because there is a migration relationship between these two areas (Suzuki 2014). It is still complicated to give a geolinguistic explanation regarding the forms attested in Xianggelila Municipality (A+), for the distribution is scattered.

4 Conclusion

The word form of ‘milk’ in the eastern Tibetic languages mainly corresponds to WrT ‘o ma and nu ma, and their geographical distribution covers most parts of the eastern Tibetosphere. The lexical variation of morphemes is therefore not rich; there are a few other forms: WrT zho (the original meaning is ‘yogurt’), [sa], [ŋo: tʂʰu], and [fa po]. They are used in isolation or in a limited geographical area.

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Map 1: Overall distribution of word forms for 'milk'.
Map 2: Distribution of word forms in the southeastern Khams region.
Rice and related words in Korean

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Abstract

Korean has a rich vocabulary of words related to rice. This paper gives a tentative synchronic comparison with that of Japanese, and then present linguistic maps for two important words representing rice plant and husked rice. Based on these maps and historical data, the history and etymology of these words will be discussed.

1 Introduction

Rice has been one of the main staple foods in Korea, in much the same way as in other east Asian countries, and vocabulary related to rice is abundant.

2 Modern standard Korean

Modern standard Korean has the following words related to rice:

<table>
<thead>
<tr>
<th>Korean</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>pjô [pjô]</td>
<td>rice plant; unhusked rice</td>
</tr>
<tr>
<td>nwi [npi]</td>
<td>unhusked rice mixed in husked rice</td>
</tr>
<tr>
<td>s’ar [s’al]</td>
<td>husked rice (typically rice but not confined to it)</td>
</tr>
<tr>
<td>ips’ar [ips’al]</td>
<td>non-glutinous rice (as opposed to s’ar of grain other than rice, and also to glutinous rice)</td>
</tr>
<tr>
<td>meps’ar [meps’al]</td>
<td>non-glutinous rice (as opposed to glutinous rice)</td>
</tr>
<tr>
<td>cʰaps’al [tʰaps’al]</td>
<td>glutinous rice</td>
</tr>
<tr>
<td>pap [pap]</td>
<td>cooked rice (typically rice but not confined to it); meal</td>
</tr>
</tbody>
</table>

The distinction between /pjô/ and /s’ar/ is similar to that of Japanese /ine/ and /kome/ but there are slight differences. For example, /pjô/ can mean not only rice plant but unhusked rice which in turn is expressed by a separate word /momi/ in Japanese. The word /nwi/ can mean unhusked rice but it can be used only when it is mixed with husked rice. The word /s’ar/ largely corresponds to Japanese /kome/ but it is different from the latter in that it can mean various other kinds of grain, e.g., /cops’ar/ (foxtail millet), /poris’ar/ (husked barley) etc., by prefixing the name of grain other than rice. In this respect the word /s’ar/ resembles more like Chinese 米 (mǐ).†

† This is pointed out in Ito (2008 : 272).

A tentative comparison of Korean and Japanese vocabulary concerning rice is shown in the following table.
<table>
<thead>
<tr>
<th>Unhusked rice mixed in husked rice</th>
<th>nwi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husked rice (in general)</td>
<td>s’ar</td>
</tr>
<tr>
<td>Husked grain (other than rice)</td>
<td>*s’ar</td>
</tr>
<tr>
<td>Non-glutinous rice</td>
<td>ips’ar, meps’ar</td>
</tr>
<tr>
<td>Glutinous rice</td>
<td>e^haps’al</td>
</tr>
<tr>
<td>Cooked rice (and other grain); meal</td>
<td>pap</td>
</tr>
</tbody>
</table>

3 Dialectal variation

Among various words related to rice, linguistic maps for two important words, /pjɔ/ ‘rice plant (稻)’ and /s’ar/ ‘husked rice (米)’ are shown at the end of this paper, based on the data found in Ogura (1944).

First, various words used for ‘rice plant (稻)’ can be classified into the following two groups, each with a couple of phonetic varieties (see Figure 1).

A. *pjɔ* type
   A1. pjɔ, A2. pe, A3. pó
B. *narak* type
   B1. na-rak, B2. na-rok, B3. na-ruk, B4. no-rak

Based on this map, the following observations can be made for rice as plant (稻):

1. Geographical distribution: we have a clear north vs. south contrast. *pjɔ*-type forms (north) and *narak*-type forms (south).
2. The modern standard form /pjɔ/ is used only in a limited area and a phonetic variety /pe/ is more widespread.
3. Among the four *narak*-type forms found in the southern half of the peninsula, the form /narok/ and its variety /naruk/ are located at several places, mainly at the borders, separated by the /narak/ area so that it can be said that the form /narok/ is the oldest among the four.

Next, we will discuss the data for husked rice (米) (see Figure 2).

A. *s’ar* type
   A1. ñsal, A2. ñsal (Used in many places. Omitted in the map.)
B. *ips’ar* type
   B1. ip-sal
C. *waŋ* type
   C1. waŋ-dr, C2. waŋ

We have three groups of words for this item but the majority of places uses A type words, B and C being used only marginally. The most common word /s’ar/ [ñsal] is not displayed in Figure 2, because it is used in many places and Ogura (1944) does not mention specific locations for this word.

Based on the map for this item, the following observations can be made on the geographical distribution of various forms used to mean husked rice (米).

1. The standard form /s’ar/ (not marked in the map) and a phonetically more conservative variety /s’ɔt/ is widespread.

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2 The alternation between vowels /jɔ/ and /e/ are often observed in many dialects including Seoul.
(2) Other types of forms, /ips’ar/ and /wan/, are mainly located at the northern half of the peninsula. This can be interpreted that the rice was not originally cultivated in these areas.

4 History and etymology

The following table shows modern forms concerning rice and corresponding Middle Korean forms, and data from Jīlín lèishi recorded in the 12th century.

<table>
<thead>
<tr>
<th>Modern forms</th>
<th>MK (15-16c.)</th>
<th>Jīlín lèishi (鶴林類事, 12c.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pjɔ/</td>
<td>/pie/ (H)</td>
<td></td>
</tr>
<tr>
<td>/narak/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/s’ar/</td>
<td>/psar/ (H)</td>
<td>菖薩 (*psar)</td>
</tr>
<tr>
<td>/ips’ar/</td>
<td>/nipsar/ (RH)</td>
<td></td>
</tr>
<tr>
<td>/meps’ar/</td>
<td>/moipsar/ (LH)</td>
<td></td>
</tr>
<tr>
<td>/cʰaps’ar/</td>
<td>/cʰpsar/ (HH)</td>
<td></td>
</tr>
<tr>
<td>/pap/</td>
<td>/pap/ (H)</td>
<td></td>
</tr>
</tbody>
</table>

Ogura (1943) gives a detailed account on the etymologies of words related to rice, in which the main points are summarized as follows:

(1) Modern /ips’ar/ goes back to MK /nipsar/ and the morpheme /ni-/ is cognate with Japanese /ine/.
(2) According to a folk etymology, the /ni-/ in /nipsar/ was derived from Li ‘李’, the family name of the Chosŏn dynasty, as opposed to another form /wan-mi/ (‘王米’), in which the element /wan/ is related to Wangkŏn (王建), the founder of the Koryŏ dynasty. But Ogura denies this theory because the prefix /wan/ is used simply to denote various things that are ‘big’.
(3) Modern /s’ar/ goes back to MK /psar/ and it was recorded as ‘菩薩’ in Jīlín lèishi (鶴林類事). But it has neither Chinese or Sanskrit origin, and it has its origin in another word /pjesir/ (official position in bureaucracy).
(4) The word ‘菩薩’ is also used in some Japanese dialects but it was borrowed from Korean.
(5) The word /narak/ is related to the word /narah/ (nation, country), because rice was considered to be the foundation of politics in the old days.
(5) He also tries to find cognates in Austronesian and other language families for the word /s’ar/ but presents no definite conclusion.

I have the following questions on these points:

(1) No mention was made about the origin of the word /pjɔ/.
(2) /ni-/ included in MK /nipsar/ contained a rising tone (R). This must be taken into account in considering etymology of this word.
(3) It is difficult to admit the relationship between the word MK /psar/ (<‘菩薩’) and /pjesir/ because we have no other cases of the vowel /je/ dropped in such an environment.

Although I do not have answers to these questions, I would like to point out the possibility that the MK form /psar/ might be related to Austronesian (or other language family’s) words for rice, for example brar, thereby supposing a metathesis occurred between the second liquid and final consonant.3

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3 This view was pointed out to me by Professor Ito Hideto (personal communication).
Acknowledgements

I would like thank Professor Endo Mitsuaki for inviting me to this conference and also to Professor Ito Hideto for valuable opinions about the origin of words for rice in Korean.

References

Ogura, Shinpei (1975) Ogura Shinpei Chosakushyû 2 (小倉進平著作集(二)). Kyoto: Kyoto daigaku kokubungakkai.
Figure 1. Geographical distribution of the words used for rice plant ‘(稲)’. 
Figure 2. Geographical distribution of the words used for husked rice (米). Note that the most common word /s’ar/ [ʔsal] is omitted in this map.
Milk in Korean

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Abstract

This paper discusses various aspects of the Korean word for milk /cec/. After briefly reviewing its relationship with the corresponding Japanese word, phonological features and three kinds of meanings, namely breasts, human milk and milk of mammal for both Modern and Middle Korean will be discussed. It will be also shown that these three kinds of usages can be attested in the Middle Korean texts.

1 Introduction

The Modern Korean word for milk is /cec/. This word can be used with the meanings of both milk and breasts in much the same way as in the case of Modern Japanese /cici/.

There have been several researchers who tried to explain words for milk in Korean and Japanese as possible cognates in their attempts to show a genetic relationship between Korean and Japanese (e.g., Kanazawa (1910), Martin (1966), Whitman (1985), Starostin (1991), etc.). However, despite the surface resemblance of the modern Korean and Japanese forms there are two problems in this view. First, the original Japanese form was a monosyllabic /ti/ and /cici/ a reduplicated form, whereas the Korean form had originally a CVC structure and we have no evidence of reduplication. Secondly, the initial consonant was a plosive in Japanese but it was an affricate in Korean, throughout the known history of these words.

Aside from Japanese, however, Starostin (1991) presents various forms for Tungusic, Mongolian and Turkic languages that seem to show closer relationship to the Korean form (see Robbeets (2003) Etymological indexes. p. 383).

2 Modern standard Korean

Modern standard Korean form /cec/ shows almost no dialectal variation. The final affricate /c/ is morphophonemic in that it appears only when it is followed by a particle beginning with a vowel and otherwise it is phonetically realised as a [t].

(1) /cec/ (in isolation) [ʃat]
(2) /cec-i/ (nominative) [tʃɔdʒi], /cec-ul/ (accusative) [tʃɔdʒil]

However, the actual colloquial pronunciation of this final consonant has a variant [s] as shown in the following example.

(3) (nominative) [tʃɔʃi], (accusative) [tʃɔsil]

This kind of variation can be a dialectal one but it actually occurs within the Seoul dialect (see, for example, Umeda (1960)) so that it is difficult to describe in terms of geographical distribution.
3 Middle Korean

The Middle Korean form of this word was /cyec (H)/. The modern form is a regular development of this: semivowel dropped, the quality of the initial and final consonants and the vowel slightly changed and the high tone being no longer distinctive in the Seoul dialect. And there is one additional difference concerning the phonetic realization of the final consonant. Unlike modern [t], it was realized as an [s] in MK in isolation.

(4) /cyec/ (in isolation) [tsjɔs]
(5) /cyec-i/ (nominative), /cyec-ul/ (accusative)

The modern phonetic final consonant [t] is a result of the merger between a syllable-final /s/ and /t/, then distinctive even in the syllable-final position.

The meaning of this word was the same as the modern word in that it can mean both ‘milk’ and ‘breasts’. As for the former meaning ‘milk’, it can be either human or of mammal.

This word can be attested in a variety of MK texts written in Hangul script and among them examples from the following two pharmacological texts are the most interesting ones.

*Kugüppangónica* (1466) ‘救急方譯解 (Prescriptions for emergency treatment, abbreviated as PE below)’
*Kugüp kani pangónica* (1489) ‘救急簡易方譯解 (Simplified prescriptions for emergency treatment, abbreviated as SPE below)’

The above mentioned all three kinds of usage, i.e., breasts, human milk and milk of mammals can be attested in these two texts.

A. /cyec/ as breasts

(6) 호다가 거지비어든 두 젖 가온ديل 쓰라 <PE 1: 40a>
hotaka kyecip-i-eten twu *cyes* kawondoy-l stu-ra
“if the patient is woman, apply cautering with moxa between breasts.”

(7) 거지비 젖게 좋게 나 것간 나디 아니호야 …… <SPE 7: 70a>
kyecip-i *cyec-* ey cywongkuy na *cyec*-i na-ti aniho-ya
“if a woman had a tumor in her breast and no milk from breast ……”

(8) 빼고 큰 반 근을 족가 누르겨든 글헌 초에 문라 것을 우희 비로 멸 즉제 스러디라라 <SPE7: 74b>
mil-s-kolo pan kun-ul pwosk-a nwuru-ketun kulhi-n chwo-ay mol-a *cyes* wuh-uy polo-myen cukcyw suleti-li-la
“fry a half pound of flour until it becomes yellow and put it into boiling vinegar, and put it on the breasts. Then it will soon disappear.”

(9) 과골이 답답으야 펼찍흡겨든 젖 아래 혼 치만혼 더 닭끔 못글 뜻면 …… <SPE2: 41a>
kwakoli taptapho-ya puy-n-poy-com-ho-ketun *cyes* alay hon chi man-ho-n toy nilkwup pwosk-ul stu-myen
“if the patient feels bad and vomits, apply cautering with moxa seven times one inch below the breast.”

B. /cyec/ as human milk

(10) 아기 나혼 후에 젤 나게 혼단 …… <SPE7: 83a>
aki nah-on hwu-ey *cyes* na-key hwo-l-tyeyn
“in order to have milk after bearing a child”

(11) findAll the milk flowing after giving birth <PE 2: 59a>
stwo salom-uy cyes cup hon-can-ul meki-myen tywohulila
“also, feeding a cup of human milk will make the patient better”

(12) findAll the milk flowing after giving birth <PE 2: 46b>
stwo ahoy wocwuun-kwa salom-oy cyes cup-kwa-lul kak pan tyung can-ol sesk-e tey-ye mek-ula
“also, mix and warm a half cup of child’s urine and a half cup of human milk and feed it.”

(13) findAll the milk flowing after giving birth <PE 2: 42a>
mwun-i mwul-ey syang-ho-ya alpho-n-i-l kwothy-wotoy, pwun-ul salom-oy cyes cup-ey phul-e
nwun-ey puzu-la
“If a patient is hurt in his eyes, dissolve face powder in human milk and put it on his eyes.”

C. /cyec/ as milk of mammals (cow and sheep)

(14) findAll the milk flowing after giving birth <SPE 3: 90a>
nwulu-n sywo-y cyes twu hwop-kwa hoy-n psol se hwop-kwa-lo mwoncye sywo-y cyeec-ulo
phah-ol pwook-a nik-key ho-ko
“prepare two cups of cow milk and three cups of white rice and then fry well welsh onion with cow milk and ……”

(15) findAll the milk flowing after giving birth <SPE 6: 66b>
kem-uy mulG-ye mwom-ay taytwohi sil-i na-ketun yang-uy cyec-ul masi-myen tywohu-li-la
“if a patient is bitten by a spider and get welts allower his body, feed sheep milk and he will be better.”

As for the last usage of this word, cows were bred officially in farms called ‘Yuwuwuswo (乳牛所)’ which was first placed during the Koryo period and lasted in the early Choson dynasty until its name was changed to ‘Thalaksayk (酪酪色)’ in 1438. It seems like cow’s milk was only served for the King and royal family members, not served for ordinary people as can be seen in the following record at that time.

(16) The warrant officer told the King “The Yuwuwuswo (lit. milk cow’s place) was made solely for the sake of serving His Majesty with 200 officials who change positions every year, their highest rank being the fifth grade, without thinking this is adequate or not, only its name existing without substance. Please abolish Yuwuwuswo. …… (further details omitted) ……” He followed it. (The Annals of King Sejong, Feb. 9th, 1421)

○兵曹啓：「乳牛所専為供上而設，置諸員二百，每年運轉，官至五品，而為別坐者不考能否，名存實無，請罷乳牛所。上王殿供上乳牛，屬於仁壽府；主上殿供上乳牛，屬於禮賓寺，其諸員令所在州郡充軍。」從之。（世宗實錄11巻（世宗3年（1421年）2月9日壬寅））

However, examples of pharmacological texts shown above, (14) and (15), indicates that it was not impossible for ordinary people to use cow’s or other mammal’s milk at least for medical treatment.

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References


