

Studies in Asian Geolinguistics

VIII



ILCAA Joint Research Project 2015 - 2017 “Studies in Asian Geolinguistics”

**Research Institute for Languages and Cultures of Asia and Africa
Tokyo University of Foreign Studies**

Studies in Asian Geolinguistics VIII

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“STUDIES IN ASIAN GEOLINGUISTICS”

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“Rice (rice plant)” in Hmong-Mien

1. Classification of word forms

Some of the data sources do not have the item “rice as a plant” distinguished from the item “rice as a grain”. In this case, we look up the forms for “early-ripening rice” and “late-ripening rice”, and identify the part for “rice” in the word-form. In such a case, the part that we use might not be a word, but a bound morpheme.

Most of the forms for “rice plant” in Hmong-Mien come from a single etymon, reconstructed as *mbləu in Ratliff (2010). The initial consonant of the form is a prenasalized plosive, where the nasal part and the plosive part are always homorganic. The tone of the modern reflexes is Tone 2 (Tone A in some lects). We designate all the forms cognate with this proto-form as Type A. Type A lects are divided into several subgroups, depending on the development of the prenasalized initial. First, Subgroup A-1, represented by *mple*, retains both the nasal part and the bilabial plosive part. Subgroup A-2, represented by *blau*, has lost the nasal part with the plosive part voiced. Subgroup A-3, represented by *plau*, has also lost the nasal part but does not have the plosive voiced. Subgroup A-4, represented by *mjo*, does not have the plosive part and the following lateral changes into *j*. In subgroup A-5, represented by *ndli*, the plosive part has the place of articulation assimilated to that of the following lateral. Subgroup A-6, represented by *nu*, only retains the nasal part. These various forms observed in Type A are the result of regular sound changes.

- A-1: mple
- A-2: blau
- A-3: plau
- A-4: mjo
- A-5: ndli
- A-6: nu

Some lects indicate a complex form that comprises one of the Type A forms as a constituent. As is indicated below, one of the Type A forms is coupled with another form X.

- X+A-1: nja^C- mple
- A-1+X: mple-pui⁴ (X=B)
- X+A-2: gjij²-blau
- A-4+X: mjo-e⁷

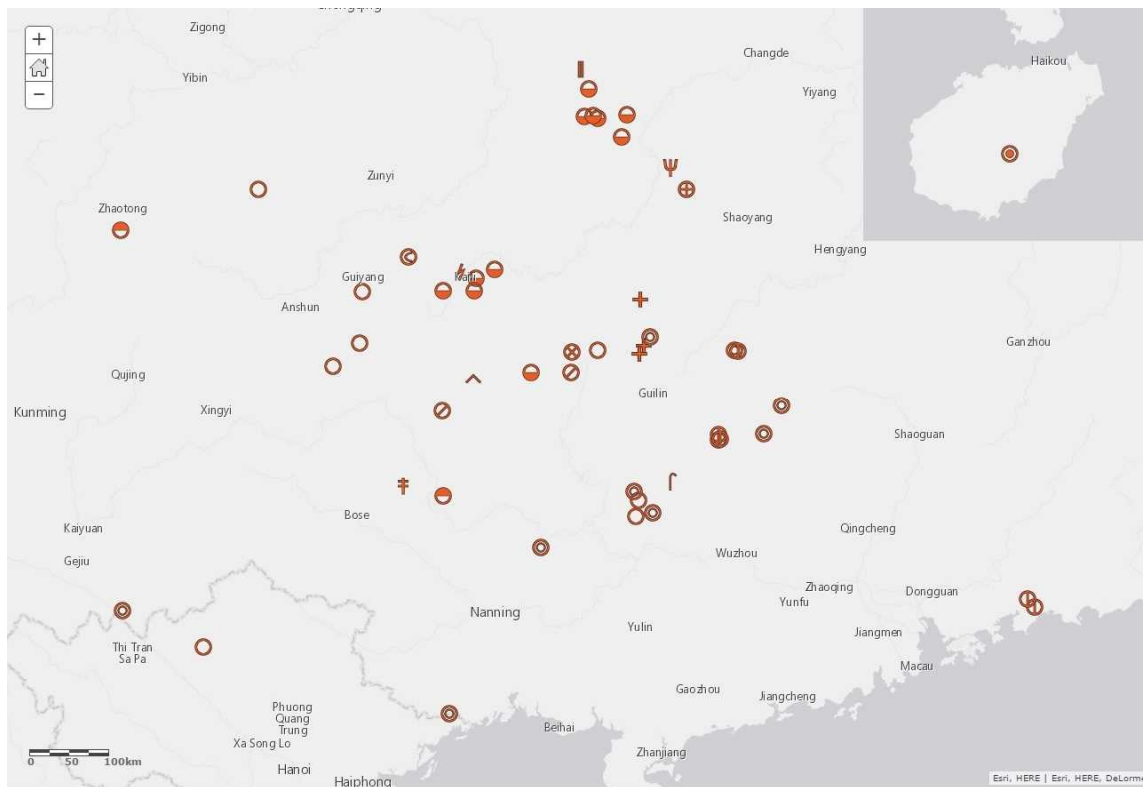
Other groups, designated as Type B through H, show a root that is not cognate with that of Type A. Some of them indicate a complex form.

- B: pui⁴
- C: lei¹ bo³
- D: ke³ sa¹
- E: tso^A ŋku^A
- F: kjoŋ³
- G: ku^{6/7/8} thu²
- H: su⁷

2. Geographical distribution and interpretation

Type A has the widest geographical distribution. Since this form also exhibits the widest distribution in terms of the phylogenetic tree of the Hmong-Mien languages, it can be interpreted as a preservation of the oldest state. In terms of the place of articulation, the bilabial place of articulation of the initial (A-1 to A-4) seems to be an older state, exhibiting an A-B-A distribution with a dental-alveolar place of articulation (A-5 and A-6), although the northern part and the southern part of the dental-alveolar area have probably developed independently. This interpretation supports the initial part of the reconstruction *mbl-.

What is remarkable in the complex forms is that one of them (A-1+X) includes *pui⁴* as a constituent. This form is a root for “rice as a grain” in this Hmongic lect. The cognate forms of *pui⁴* are also used as the form for “rice as a grain” distinguished from the form for “rice as a plant” in some Type A Hmongic lects. This fact suggests that the form *pui⁴* originally means “rice as a grain”, and has expanded to include the meaning of “rice as a plant” in the Type B lects. Some other complex forms have a root for “cooked rice”, for example, *nja^C* (X+A-1), *e⁷* (A-4+X), *ke³* (D) as a constituent. The Type F form *kjoŋ³* also means “cooked rice”. Not surprisingly, the main concern that the Hmong-Mien people have with rice is its use as food; thus the word for “rice as a grain” or “cooked rice” has become a part of the word designating the meaning of “rice as a plant”, and has further replaced the original word for it in some lects.



"Rice (rice plant)" in Hmong-Mien

Type A

A-1: mple



A-2: blau



A-3: plau



A-4: mjo



A-5: ndli



A-6: nuu



B: pui⁴



C: lei¹ bo³



D: ke³ sa¹



E: tso^A ŋku^A



F: kjoŋ³



G: ku^{6/7/8} thu²



H: su⁷



Other Types

X+A-1: nja^C- mple



A-1+X (X=B): mple-pui⁴



X+A-2: gjiŋ²-blau



A-4+X: mjo-e⁷



RICE: Austronesian languages

1. Classification of word forms

The word form for “rice” can be categorized into five main types: Type A consists of “*pai*, *padi*, *pajay*, *pagay*” and similar forms. The Proto-Austronesian (PAN) form for rice plant is assumed to be **pajay*, and Type A forms are clearly reflections of PAN. Forms that belong to Type B are reflections of PAN and Proto West Malayo-Polynesian (PWMP) **beRas*, which means husked rice. Type C consists of reflections of **hemay*, the PAN word for cooked rice. These words have the bilabial nasal /m/ or half-vowel /w/. Types D and E are loaned forms from English “rice” and Japanese “kome” (husked rice), respectively.

A. “*pajay*” type

A-1. Consonants are /p/-/g/: *pagoy*, *pagay* ■

A-2. Beginning with /p/ and the alveolar consonant (/t, d, r, l/): *padi*, *pai?*, *pari*, *palay*, etc. ☐

A-3. “pay” type (No other consonant than /p/): *pae*, *pai*, *pāy* □

A-4. The first consonant is a fricative, /f/ or /h/: *fōli*, *fōs*, *hade*, *haidou*, *hāri*, *bae*, *vari*, etc. ■

B. “*bōras*” type: *bōras*, *bilod* ▲

C. “*hemay*” type, containing /m/ or /w/: *eme*, *ammay*, *ummay*, *mojīs*, *waway* ♡

D. Loan forms from English “rice” type

D-1. Containing the consonant /r/: *rais*, *raisi*, *raiti*, *raic*, *te raiti* ☉

D-2. Containing the consonant /l/: *alaisa*, *laisi*, *lāyi*, *lait* ☉

E. Loan forms from Japanese “kome” type: *kosu*, *kōmē* ▶

F. Other forms: *ase*, *φasə*, *kokulu-keru* ▼

2. Geographical distribution

2-1. Formosan languages and languages in the North Philippines (Luzon) are of two different types: Type A-1 (*pagay*, *pagoy*), A-2 (*paday*, *pālay*), and A-3 (*pai*), all reflections of **pajay*, and Type C, reflections of **hemay* (*mojīs*, *ummay*, *ammay*).

2-2. Philippine and Indonesian languages: Almost all languages in the area take forms belonging to Type A-2, A-3, and A-4. In the Philippines, all three subtypes are found. Western Indonesia, including Sulawesi, Jawa, and Sumatra mostly show Type A-2, which has an alveolar consonant as the onset of the

second syllable: *padi*, *pare*, *pala*, etc. Some languages in Sulawesi show Type A-3 form, which consists of only one consonant /p/. Eastern Indonesia and a language in Mindanao show Type A-4 forms: *fōli*, *fōs*, *voja*.

3. Papua New Guinea and Solomon Islands: Some languages show type A-2 forms (*padi*), but others adapt English loan words and belong to Type D-1 (*rais*). Type A-2 forms might also be loan words from Malay “*padi*.”

4. Oceania: Most Oceanic languages adapt loan words from English (types D-1 and D-2). Type D-1 forms (*rais*, *raic*, *te raiti*) are found more than Type D-2 (with /l/ as the first consonant: *laisi*, *lait*, *lāyi*). A D-2 form with an added vowel /a/ (*alaisa*) is found in Samoan.

3. Word Forms for “rice”

Rice has been the most important grain in most areas where Formosan (Taiwan) and West Malayo-Polynesian languages are spoken (Philippines and Indonesia). Languages spoken in those regions normally have more than one word for the crop—at the least words for “rice plant” and “rice grain.” In this case, most languages reflect PAN **pajay* forms for the former and PWMP **beRas* for the latter. Many languages distinguish between “husked rice” and “cooked rice”; some have a special word for “rice seed” and distinguish “husked rice” from “unhusked rice,” and so on. Rice has long history in this area: It arrived in Taiwan at least 5,000 years ago, spreading to the Philippines and Indonesia after that. The richness of terms for rice in different forms reflects its cultural importance and long history in the area.

In contrast, languages in Papua New Guinea and Oceania do not have many words for “rice,” in fact, usually only one word. In many cases, that word is a loan form from English and, in some instances, from Japanese. In these areas, the staple food has historically been various kinds of potato; rice has only relatively recently become part of the diet, and the use of loan words suggests that shorter history.

Keywords: forms for “rice”: “rice plant,” “husked rice,” “cooked rice,” loan word type.

References: Tryon, Darrell T. (eds.) 1995. *Comparative Austronesian Dictionary*. Berlin and New York: Mouton de Gruyter.

(Atsuko Utsumi)

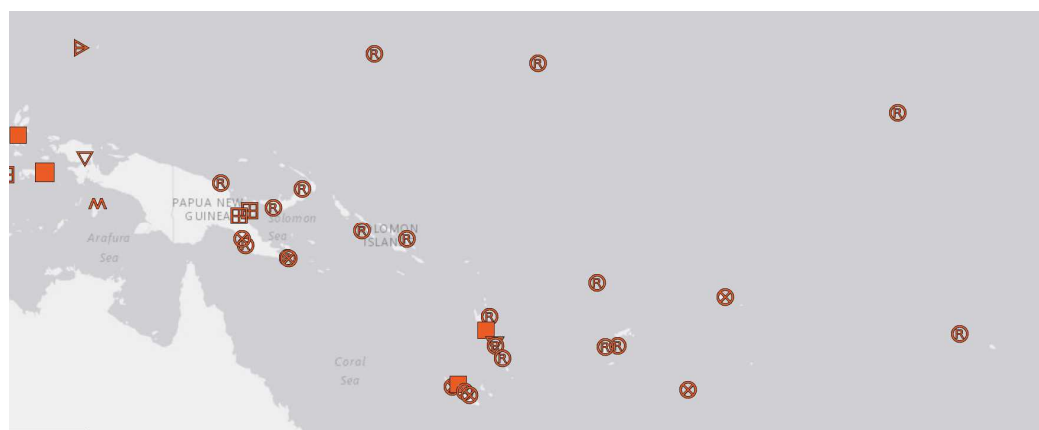


- ▣ pāgoy, pagoy, pagay
- ▣ pati?, padi, paḍi, pade, paday, padoy, parɔy, pari, pare, palay, pālay.
- pae, pai, pāy
- fōli, fōs, hade, haidou, hāri, 6ae, vari
- △ bəras, bilod
- ⋈ eme, ammay, ummay, mojīḡ, waway
- ⊗ rais, raisi, raiti, ɾaic, te raiti
- ⊗ alaisa, laise, laisi, lāyi, lāçi, lait
- ▶ kosu, kōmē
- ▽ ase, ɸasə, kokulu-keru

Map 1: Taiwan and Northern Philippines



Map 2: Indonesia



Map 3: Papua New Guinea and Pacific

“Milk” in Asia

1. Introduction

Milk is an important part of pastoralism; as Umesao (1976) insisted, “invention of milking and milk processing made it possible for humans to depend on livestock.” For over ten thousand years, pastoralists have been using milk for drinking and making dairy products, such as cheese, butter, and yogurt. The aim of this geolinguistical study on the word “milk” is to determine the relation between milk itself and the expansion of milk culture (milking and milk processing). Therefore, this study focuses on raw milk produced by livestock. However, the distinction between livestock milk and (human) mother’s milk is not clear in some languages.

2. Origin and expansion of milk culture

Milking started in West Asia ten thousand years ago, and the techniques of milking spread across neighboring areas to form a foundation of milk processing in the world. Figure 1 shows the origin and expansion of milk culture.

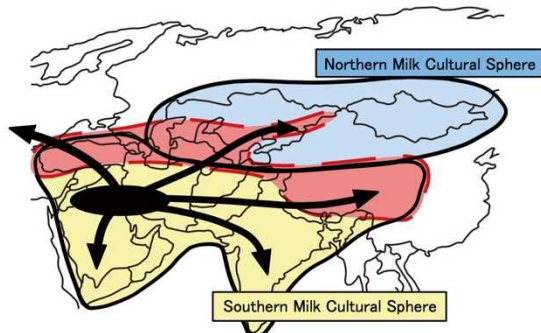


Figure 1: West Asian origin of milk culture (milking and milk processing) and its bipolarization in the Eurasian continent (modified from Hirata 2013)

Asian areas of each language group can be divided into milk and non-milk cultures. Roughly speaking, Arabic, South Asia (SA), Mongolian, Turkic, and Tibetic of Tibeto-Burman (TB) are classified as milk culture, and the other remaining cultures are categorized as non-milk culture. However, even in non-milk culture, wherein they subsisted by other means, such as agriculture, fishing, or hunting, milk spread as a luxury and nutritive product.

3. Word forms

The word forms for “milk” in Asia vary greatly. The following data are based on the publications of Endo (2016) and Taguchi (2018).

Table 1: Main word forms for “milk” in each language group

	Language group	Word form
milk culture	Arabic	<i>laban</i> <i>hali:b</i>
	SA	<i>dugdha</i> <i>ksīram</i> <i>pāl</i> <i>paya</i> <i>pāččī</i> <i>kam réis</i> <i>mama</i>
	Mongolian	<i>sūn</i> <i>ūsən</i>
	Turkic	<i>sūt</i> <i>ūt</i>
	TB (Tibetic)	WT <i>'oma</i> WT <i>numa</i> (“breast”) PTB <i>*s-nəw</i> , <i>*s-nya-n</i> (“breast, milk, to suck”) WT <i>zho</i> (“yogurt”)
non-milk culture	TB (non-Tibetic)	PTB <i>*tsyuk</i> ✕ <i>*dzyuk</i> , <i>*m-ts(y)(u/i)p</i> , <i>*dzy(ə/o)w</i> (“to suck, to kiss, breast”) PQ <i>*s-lu</i> PTB <i>*pa</i> (“breast, nipple”) PLB <i>*pat</i> (“chest”)
	Sinitic (SN)	<i>nai</i> 奶 <i>nin</i> <i>mama</i> 妈妈 (“mother”) <i>tsa</i> 砸 (“to suck”) <i>pe</i>
	Tai-Kadai (TK)	<i>nom</i> <i>u</i> <i>n-</i> type (<i>ne:n</i> , <i>ne</i> , <i>ne:u</i>) <i>tsi</i> type
	Hmong-Mien (HM)	<i>m-</i> type <i>n-</i> type <i>va4</i> , <i>si4</i> , <i>wo7</i> , <i>kəŋ5</i> , <i>pě1</i>
	Austronesiatic (AA)	<i>t-</i> type <i>m-</i> (<i>ʔ-</i>) type <i>b-</i> type <i>ɲ-</i> type
	Austronesian (AN)	<i>susu</i> <i>gatas</i>

	Tungusic	<i>uku</i> (“to suck, to sip”)
	Uralic	<i>*ńim</i> (“to suck”) <i>*jal</i> (“sap, tree juice”) <i>lavso-lofca</i> <i>piimä</i> <i>maito</i>
	Nivkh	<i>motf(k)</i> (“breast”) <i>miz-, miN</i> (“breast”)
	Korean	<i>cec</i> (“breast”)
	Ainu	<i>tópe</i> (“breast+juice”)
	Japonic	<i>titi</i> (“breast”)

4. Classification

By looking at SAG articles on the words for “milk” of each language group, we can find some common word origins, though it is sometimes difficult to distinguish cognate words from loans.

The Old Chinese words **ńju* (乳) for “breast” and **niər* (奶) for “mother; breasts, milk” (STEDT) are cognates of PTB **s-nəw* and **s-nya-n* (“breast, milk, to suck”) in TB, which belongs to the Sino-Tibetan microfamily. The SN word *nin* probably originated from the TK *ne:n* since there is no Chinese character for *nin*. Furthermore, *ne:u* and *pe6* in TK are found in SN, spoken in the vicinity. They therefore might have common origins.

The Mongolian words *sūn* and *ūsən* and the Turkic words *sūt* and *ūt* have common origins, respectively.

Though Japonic (*titi*) and Korean (*cec*) resemble one another superficially, there is a problem in proving them to be cognate. One reason is that the Japanese form was monosyllabic (*ti*), and *titi* is a reduplicated form; whereas, the Korean form originally had a CVC structure. The other reason is that the initial consonant was a plosive in Japanese, but it was an affricate in Korean.

5. Etymology and classification

It is noteworthy that many roots of Table 1 underwent semantic changes (“breast,” “to suck,” “mother,” “to squeeze,” “yogurt,” “sap, tree juice,” etc. > “milk”).

In not a few cultures, loan words can be seen. The Chinese word *nai* (奶) is loaned to Dongxiang; Bonan (Mongolic) and N-type in HM might be loans from Chinese. The Russian word *moloko* is loaned to Nanay (Tungusic), Samoyed (Uralic), and Nivkh. The Indo-Aryan (SA) word *dugdha* is found in Newar

(TB) and Khasi (AA), the Malay word *susu* in Semnam and Jahai (AA), and the Thai (TK) word *nom* in Kui (AA). All are inland or in nearby areas surrounded by major languages. Furthermore, the English word *milk* and French *du lait* can be seen in Fiji (AN).

Reduplication is found in some groups: SA, SN, AN, Japonic, etc.

Other than the word forms above, we can find several types of compounds: cow (sheep)+milk (Loloish and Qiangic from TB, Ainu); milk+water (Loloish and few Tibetic from TB, SN); breast+water (soup) (HM, AN, Ainu); water+milk, breast+milk (TK); water+breast (AA); milk+cow+milk (Turing from TB); milk+fruit (Ganan and Kadu from TB).

5. Conclusion

In this study, we found over 58 roots that designate “milk” in Asian languages as well as some tendencies in these words, such as semantic change, loan, reduplication, and compound.

From the perspective of milk and non-milk culture, semantic change, loan, and compound occur in non-milk culture more frequently than they do in milk culture. Referring to semantic change, the change “breast > milk” is widely seen in non-milk culture. This suggests that mothers’ milk is more important than livestock’s in non-milk culture. Loan and compound offer collateral evidence that consumption of livestock milk is not important in non-milk culture because they do not have a native word for “milk.”

Keywords: pastoralism, milk culture, non-milk culture, semantic change, loan, reduplication, compound

(Shiho Ebihara)

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“Milk” in Hmong-Mien

G: pẽl

1. Classification of word forms

In most Hmong-Mien languages, “milk” is expressed by a compound consisting of a morpheme designating “breast” and another morpheme designating “water” or “soup.” We classified the lects by paying special attention to the part designating “breast” (the part of the compound other than the part designating “water” or “soup”). This decision was made because of the following two reasons. First, the formation of the compound is probably a recent calque of a Chinese compound with the same meaning, *naizhi* 奶汁; thus, it might not indicate meaningful signals about the past. Second, presumably this part of the word by itself can also mean “milk” although we have evidence for this only in some of the lects.

We found 19 cognate word forms, and classified them into two major types and the rest. The first major type comprises the forms beginning with a bilabial nasal, further divided into several subtypes: *ma*1, *mi*4, *me*5, and *me*7 (the number denotes a tone). The second major type comprises the forms beginning with a dental-alveolar (or alveolo-palatal) nasal, further divided into several subtypes: *ne*1, *ni*2, *nen*3, *ni*4, *ne*5, *ŋo*5, *ni*6, *no*6, *ne*6/7/8, and *ne*7/8. Note that the cognacy among these subtypes is not clear.

A: forms a bilabial nasal

- A1: *ma*1
- A2: *mi*4
- A3: *me*5
- A4: *me*7

B: forms a dental-alveolar nasal

- B1: *ne*1
- B2: *ni*2
- B3: *nen*3
- B4: *ni*4
- B5: *ne*5
- B6: *ŋo*5
- B7: *ni*6
- B8: *no*6
- B9: *ne*6/7/8
- B10: *ne*7/8

C: *va*4

D: *si*4

E: *wo*7

F: *kəŋ*5

2. Geographical distribution and interpretation

Many lects have a word beginning with a nasal. This fact needs to be viewed with caution, since Chinese, a language that Hmong-Mien is in deep contact with, has words with a nasal initial for MILK, e.g., 乳 Old Chinese *noʔ, Middle Chinese nyuX (Baxter and Sagart 2014), or Mandarin Chinese *nai* 奶. Thus, if the initial of the word in question is a dental-alveolar nasal, we should be aware of the possibility that the word might be a loanword from Chinese. Compared with limited variety in the initial, we can observe a huge variety in tone. This may also be related to the possibility that some lects acquired the word form in question through recent borrowing.

Keeping the above points in mind, we make the following observations. Among the Hmongic lects we observe that some lects, including North Hmongic distributed in Hunan and Pa-hng distributed in Hunan and Guizhou, indicate a cognate morpheme, which can be reconstructed as *ʔmũa^A based on Ratliff (2010)’s Proto-Hmong-Mien reconstruction. This form may be the most archaic form in the Hmongic branch, since it is distributed the widest in terms of geography and phylogeny. The fact that some lects belonging to the same genetic group of North Hmongic indicate Type B7 suggests that the Type B7 form *ne*7/8 is an innovation, probably through borrowing.



"Milk" in Hmong-Mien

A: forms with a bilabial nasal

A1: ma1

A2: mi4

A3: me5

A4: me7

C: va4

D: si4

E: wo7

B: forms with a dental-alveolar nasal

B1: ne1

B2: ni2

B3: nen3

B4: ni4

B5: ne5

B6: ɲo5

B7: ni6

B8: no6

B9: ne6/7/8

B10: ne7/8

F: kəŋ5

G: pẽ1



“Iron” in Asia

1. Preliminaries

“Iron” in general denotes some kind of iron alloy that is produced by smelting iron ore. It denotes various forms that iron alloy can take depending on the temperature and the amount of carbon. Steel, which is an iron metal containing 0.1-2% carbon, is one such form. Iron can also refer to meteoritic iron, which is a native iron obtained from meteorites. The first iron implement is thought to have been produced using meteoritic iron. Although humans knew about iron metal since ancient times, iron artifacts became widespread after humans acquired the technology of smelting iron.

While the time and place of the technological breakthrough is yet to be identified, it is in general maintained that the Iron Age, where iron replaced bronze in the production of implements, began in about 1200 BCE. The areas that had advanced in ferrous metallurgy of the ancient times are near East and Northern India. Recently, it has been argued that the technology of smelting iron and manufacturing iron artifacts was already established in 1800 BCE both in Central Anatolia (Souckova-Siegllová 2001) and Northern India (Tewari 2003). Concerning East Asia, a recent archeological study suggests that the technology of iron working came from West Asia to Xinjiang, where we can find evidence of iron working from 1000 BCE, and then spread to Central China (Tanaka 2013).

2. Classification of word forms

Representative word forms denoting the word “iron” in some Asian language families are summarized in Table 1.

Table 1 (#: loanwords from other languages)

	Representative word forms
Korean	<i>sø</i> < <i>soy</i> (Middle Korean) [< possibly from Chinese 鐵] <i>c^her[#]</i> < Chinese
Ainu	<i>kani[#]</i> < Japanese <i>teci[#]</i> < Japanese
Turkic	<i>temir, demir</i> < <i>temir</i> (Old Turkic)
Mongolic	<i>tötör[#]</i> < Turkic <i>kasō</i> (Dagur)

Sinitic	<i>tie</i> < <i>t^hiet</i> (Middle Chinese) < <i>*ʃik</i> (OC: Old Chinese)
Tibeto-Burman	<i>ɛam</i> (Burmish, Loloish, Naxi, Nungic, Qiangic, rGyalrongic) < <i>*syam</i> (PTB: Proto-Tibeto-Burman) <i>sya:l</i> (Kuki-Chin, Central Naga, Tangkhulic, Northern Naga, Bodo-Garo, Luish, Kiranti languages) < <i>*sya:l/*syi:r</i> (PTB) <i>lteak(s)</i> (Tibetic, Karenic, Tani languages) < <i>*l-tsya^ks</i> (PTB)
Hmong-Mien	<i>ɭɔ^{5#}</i> (Hmongic) < probably from OC <i>hlje^{7#}</i> (Mienic) < probably from OC
Tai-Kadai	<i>lek^{7#}</i> (Central and Southwestern Tai) < <i>*hle^k</i> (Proto-Tai) < probably from OC <i>khjâk^{7#}</i> (Lakkia) < probably from Chinese <i>khwæt^{7#}</i> (some Kadai languages) < probably from Chinese <i>thi:t^{9#}</i> < Yue or Hakka dialect of Chinese <i>va²</i> (Poi, Northern Zhuang) <i>go:i¹</i> (Hlai languages) <i>ma^a</i> (Sack)
Austro-asiatic	<i>basi?</i> (Aslian) <i>ma:m</i> (Bahnaric) <i>lɔ:s</i> (Bahnaric) <i>ta:?</i> (Katuic, Bahnaric, khmeric, Pearic) <i>tami:</i> (Bahnaric) <i>nar</i> (Khasic) <i>pəsəa</i> (Monic) <i>karaw</i> (Nicobaric) <i>hle^k</i> (Khmuic, Palaungic) < probably from OC <i>rɲaŋ</i> (Palaungic) <i>hrem</i> (Palaungic) <i>si:</i> (Bahnaric, Palaungic) <i>kahɔ:ŋ</i> (Pearic) <i>k^hlat^{7#}</i> (Vietic) < probably from OC
Semitic	<i>parzillu[#]</i> (Hebrew, Modern Mandaic, Urmi) < Anatolian languages <i>hadi:d</i> (Classical Arabic, Maltese, Ki-Nubi, Berber)

<i>brāt</i> (Amhara, Chaha, Harari) <i>ḥašin</i> (Ge'ez, Tigrinya, Tigre, Soqotri) <i>wəz.āl</i> (Berber) <i>benipe</i> (Coptic)

3. Geographical distribution and interpretation

In general, word forms denoting the word “iron” exhibit greater variety in Southeast and Southwest Asia than in East and Central Asia. In East Asia, most language groups—Korean, Ainu (via Japanese), Hmong-Mien, and Tai-Kadai—borrowed Chinese (Sinitic) words from several different sources. Hmong-Mien and Tai-Kadai tend to express more archaic word forms than Korean or Ainu. This suggests that Hmong-Mien and Tai-Kadai have had a longer contact history with the Chinese language in terms of iron metallurgy than the other languages have. Some Tibeto-Burman languages also have word forms that suggest contact relationship with Chinese, that is, *lteak(s)*, but the details are yet to be clarified.

In Central Asia, the word form derived from Old Turkic, *temir*, is prevalent in the area. In Southwest Asia, several word forms of different origins are used, although word forms derived from the Classical Arabic word, *ḥadi:d*, are more widely distributed than other forms. The situation in Austroasiatic is interesting. In this language family, although some language groups found near China use Chinese loanwords, most sub-groups have their own indigenous forms. This might suggest that there has been a considerably long history of iron metallurgy in Southeast Asia.

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Wind and Iron in Nivkh

1. Classification of word forms

‘Wind’ is /la/ in all dialects. No other forms are reported.

The Nivkh word for ‘iron’ is /βitʃ/ or /wat/. The correspondence of each sound is fairly well established in literature. The correspondence between /i/ and /a/ is often observed between the dialects in Amur and Sakhalin (e.g. /tiϕ/ vs. /taϕ/ ‘house’) as well as those between /β/ and /w/ (e.g. /βip/ vs. /wap/ ‘iron pot’). The consonants /β/ and /w/ are contrastive in the Sakhalin dialect, e.g. /βad/ ‘to apply a bandage’ and /wad/ ‘to fight’. This contrast is neutralized in the Amur dialect, e.g. /βadʒ/ meaning both ‘to apply a bandage’ and ‘to fight’ (Kreinovich 1979: 297). As compared to the Amur dialect, the Sakhalin dialect is regarded as being archaic, retaining older traits. The maintenance of /β/ - /w/ contrast can be regarded as one such example. In the Amur dialect these two sounds have merged into /β/ (Austerlitz 1984).

Finally, the correspondence between a final affricate and a stop can also be observed elsewhere, e.g. indefinite suffix /-tʃ/ vs. /t/ as in /lirkʃ/ (Amur) vs. /larkt/ (Sakhalin) ‘to float’.

According to Austerlitz (1984), /wat/ can be analyzed as composing of *wa and *-tti. As for the etymon of *wa, Austerlitz provides the following two hypotheses: 1) “an imported borrowed artefact from a society in Northeastern Asia with a tradition of siderurgy (Austerlitz 1984: 43), 2) a native root meaning ‘molten metal’ or ‘malleable substance’. There are putative semantic cognates such as /wap/ ‘iron pot’, /wa/ ‘sword’ and /wa-d/ ‘to fight’. As for *-tti, Austerlitz reconstructs the etymon ‘hard’ from the semantic parallel with cognates such as /et/ ‘ski-trace’ and /pet/ ‘armor’.

2. Geographical distribution and interpretation

The geographic distribution of /βitʃ/ and /wat/ corresponds fairly well with the Amur-Sakhalin dialect border.

	Type A	Place (Source)
1.	βitʃ	Kal’ma (Savel’eva & Taksami 1965)
2.	βitʃ	Chikalov (Shiraishi & Lok 2008)
3.	βitʃ	Ten’gi (Shiraishi & Lok 2008)
4.	βitʃ	Machula (Lanina 2006)
5.	βitʃ	Kal’ma (Pukhta 2002)

	Type B	Place (Source)
6.	wat	Poronaisk (Yamaguchi & Izutsu 2004)
7.	wat	Tygmuc (Tangiku, Tanzina & Nitkuk 2008)
8.	wat	Poronaisk (Austerlitz 1984)

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.¹ The geographic distribution of Type A and B forms agrees with this taxonomy: Type A – the Amur dialect and Type B – the Sakhalin dialect.

Keywords: Nivkh, iron, Amur dialect, Sakhalin dialect

(Hidetoshi Shiraishi)

¹ Kreinovich (1934) reported the number of speakers to be 3,200 for the Amur dialect and 850 for Sakhalin.



‘iron’ in Nivkh

Tone and accent in Asia

Based on the maps and commentaries included in SAG-7, this summary proposes a division between *inner group* and *outer group* to deal with the geographical distribution of suprasegmental features in Asian languages.

The inner group includes Tai-Kadai, Hmong-Mien, Austroasiatic, Lolo-Burmese and Sinitic. Macroscopically these languages are surrounded by the languages of the outer group which consists of Uralic, Altaic, Ainu, Arabic, Korean and Austronesian (languages in India may probably be included in this group). This dichotomy generally corresponds to ‘tonal’ vs. ‘accentual’. However, the distinction between these two notions are not clear-cut. One reason is that Sinitic, Tibetan and Japanese dialects can have tones on polysyllabic units, instead of monosyllables, and tonal realization is affected by stress. For example, metrical phonology usually accounts for the tonal rightward spreading of Northern Wu dialects in terms of left (or initial) stress existent in polysyllabic units (Chen 2000). Such tones are referred to as ‘word tone,’ in which ‘the invariable number of tones is realized irrespective of the length of tone bearer’ (Hayata 1999). Similar phenomena are observable in a number of Tibetan dialects. Also, the accentual system of Japanese Kyoto dialect is deemed as a coexistence of pitch accent and word tone.

The proposed dichotomy, inner vs. outer, is conceived from a historical perspective: languages of the inner group are defined as those characterized by larynx-based tonogenetic properties: ‘phonation type’ or ‘register’. Those lacking such properties are classified as belonging to the outer group. In this dichotomy, Tibetic and Japanese may stand at an intermediate status.

1. Outer group

In the commentaries for the languages of this group included in this volume, the term ‘accent’ generally refers to the location of a higher pitch, while ‘stress’ refers to that of an intensity elevation. Vowel length, including an elongation in accented or stressed syllables or a reduction in unaccented / unstressed syllables, is a relevant cue for predicting the location of accent or stress. Although the heading is unified as ‘accent,’ the phonetic substance of this term is not unique depending on the authors, probably reflecting

the tradition of each linguistic field.

Under such perspectives, this group is divided into three subgroups.

A. Fixed accent

A-1 Bearer of accent: Initial syllable

Uralic, Nivkh, Mongolic

A-2 Bearer of accent: Final or penult syllable

Tungusic, Turkic, Arabic, Austronesian

B. Lexical accent

Ainu, Proto Austronesian, some Korean dialects

For the fixed, hence, non-distinctive accent, A-2 is the type in which accent falls on the rear part of the word, i.e. either final (Tungusic, Turkic, Austronesian), penult or antepenult (Arabic, Austronesian), while A-1 is the type in which accent falls exclusively on the initial syllable. Note that this is merely a rough sketch, focusing on the majority of types of accentual phenomena for each language group, with exceptional phenomena observed as well. For example, some Mongolian, Turkic, Arabic and Austronesian languages have developed lexical accent or tonal contrasts.

Accents in the languages of the outer group are generally characterized by association with syllable weight: a heavy syllable, typically long vowel, bears the accent while a light syllable is accentless, e.g., Ewen and Evenki (Tungusic), Tagalog (Austronesian). Along with this tendency, quantitative accent in Ainu is assumed to have been converted to pitch accent in Hokkaido.

Lexical accent of the outer group came into being in compensation for the loss of segmental elements. For Ainu, an open long vowel was reduced to a short one once the given syllable carried an accent. Japanese pitch accent may probably have come into being through the same process (Hattori 1979, Uwano 2017). Korean tonogenesis is said to be created due to “vowel syncope and apocope and the resulting syllable crisis” (Ramsay 2001). Such a trade-off relationship between segments and suprasegments is similar to but different from the tonegenesis prevalent in the inner group, in which creation of lexical tone is the event of laryngeal strategies instead of supra-laryngeal activities such as vowels and consonants. A seemingly exceptional case in this respect is the creation of tonal contrast in Tuvan (Turkic), which, according to Saito’s commentary, is a compensation for the loss of laryngealization or pharyngealization in vowels.

2. Inner group

Tai-Kadai, Hmong-mien, Lolo-Burmese, Sinitic and Vietnamese all exhibited a 4-syllabic tone system in the original stage: A (Ping), B (Shang), C (Qu), D (Ru). According to the theory of tonogenesis (Haudricourt 1954, Matisoff 1973, Sagart 1999), this tone system was created in compensation for the loss of a distinction in the syllable final laryngeal segments or phonation types: modal, creaky and breathy. Note that this hypothesis presupposes the toneless status of all these languages in the proto stage. The particular 4-tone system later experienced successive tonal splits under the following conditions.

- (1) Voiced/ voiceless contrast in initial consonants
- (2) Aspirated/ unaspirated contrast in initial consonants
- (3) Long/ short contrast in vowels

Remarkably, a series of parallel changes occurred among genetically unrelated or less-related languages in East Asia. Contact induced change from toneless status to the birth of distinctive tone is very likely, as Shimizu's commentary affirmatively mentions for Austroasiatic. However, since the triggers of changes all relate to laryngeal features, that is, every language of the inner group possessed a prerequisite for evolving into a tone language, it is also probable that changes progressed independently in each language without the inducement of language contact. There may have been a chronological gap in a language's evolving into a tone language, so that some languages such as Sinitic and Tai-Kadai were first to have a tonalized process, while Austroasiatic caught up with them later.

Tibetosphere is a crucible of various tonal and accentual phenomena as exhibited on the maps by Iwasa et al., as well as those appearing in Suzuki's independent article. This latter article points out that syllabic tone and phonation tends to be coexistent in this language group, indicating that Tibetic as a whole is in a transitional status.

An assumption proposed here is that Tibetic was originally an accentual language, hence, belonging to the outer group. The hypothesis by Caplow (2016a, b), who argues for the existence of stress in Old Tibetan, is attractive in this sense (refer to p. 42 in Suzuki's article). If this hypothesis points to the truth, Tibetic must have experienced the process of acquiring a larynx-based tonogenetic property such as register or phonation type, which, then, developed into the pitch

distinction, i.e., tone. This process must have been induced by contact with tone languages found in the east or southeast of Tibetosphere. However, the conversion from accent to tone probably was not straightforward. A probable scenario of change is presented here:

- (1) Polysyllabic lexical accent (stress)
- (2) Acquisition of the larynx-based tonogenetic property, i.e., register or phonation type distinction
- (3) Formation of polysyllabic word tone (WT), presumably conditioned by trochaic stress.
- (4) Creation of syllabic tone (ST), presumably due to deletion or fusion of syllable(s).

As for (3) and (4), WT tends to distribute in the northern and western area within Tibetosphere, whereas distribution of ST contiguously extends to the area of Lolo-Burmese, Tai-Kadai and Hmong-mien (refer to Maps 1 & 2 in the commentary by Iwasa et al.). The hypothetical change from WT to ST is actually contradictory to a prevailing view argued for Chinese Northern Wu, in which WT was formed on the basis of ST due to the deletion of non-initial tone(s) in the trochaic prosodic structure. This issue waits for detailed theorization based on evidence.

3. Sinitic

Chinese may be one of the earliest ones, which evolved from register or phonation distinction into pitch distinction. Larynx-based tonogenetic properties, such as phonation type and checked vs. unchecked distinction in syllables, are still retained in southern dialects, especially in Wu, while Mandarin dialects in north china have lost them and tones are distinguished solely by pitch height and contour. The fact that the Tibetic Kam dialects have generally no register distinction may be explained in terms of the contact with northwestern Sinitic dialects in which only pitch plays a role in tonal discrimination.

Yagi maps the number of phonological tones by considering the interaction between tones and such segments as initial consonants and syllable final stops. This treatment succeeds in showing a clearer transition from Southern Chinese to Northern Chinese than a simple mapping of phonetic tones.

Iwata's article describes and maps tone sandhi patterns. From a historical point of view, tone sandhi may originate from positional variants of tones: tone of edge syllables (initial or final syllable) remained

unmodified, while those of non-initial or non-final syllables tended to change in their pitch shapes. The initial- vs. final- accented contrast introduced in Iwata's article refers to this status.

The term 'tone sandhi' generally refers to the phonologized variety of tone, such as Mandarin 3rd tone sandhi and South Min tone sandhi known as tonal chain shift or tone clock, in which the changed tone is identical with any base tone existent in the given tonemic inventory. Although there have been disputes about the homonymity of changed tone and specific base tone (refer to Hocket 1947 for Mandarin 3rd tone sandhi), what is relevant is if they are perceived as one tone, in which case, the particular tone sandhi belongs to the type of 'categorical alternation.' This type is quite prevalent in both north and south China, forming a majority in Sinitic. However, there is a trend of tonal neutralization in the dialects of inland Fujian, Southwest Zhejiang and their neighboring areas, with the tones in non-final positions strongly tending to lose their contour feature to give a tonal system of two or three level tones. This means that in these dialects the changes were directed toward the merger of tones in non-final positions; meanwhile South Min chose the way of avoiding the merger, eventually producing the chain-shift type of alternation. These two trends are merely opposite sides of the same coin.

In line with the analysis mentioned in the last paragraph, the level-tone system found in Xiang (dialect group distributing in the southern reaches of Yangtze River) may be a reflection of the tendency of tonal merger occurring in unstressed positions. In Northern Wu dialects, the change has progressed one-step further, and non-initial tones are realized as a default tone (this process is usually explained in terms of tone deletion). A contributing factor to the changes in these Yangtze dialects may have been a trochaic stress. Presumably, formation of trochee was not an original characteristic in Yangtze dialects; instead it may have been acquired through contact with northern dialects. Meanwhile, these dialects as well as some dialects in Fujian, e.g., East Min dialects, indicate a trace of iambic stress, which has been fossilized but manifests itself in the default tone appearing in non-final positions, mostly in the initial position.

In northern Chinese dialects, both trochaic and iambic stress are vital, the former contributing to producing an increasing number of colloquial polysyllabic words with suffixing a neutral (light) tone,

and the latter contributing to forming phrasal stress.

Tone sandhi types can also be divided into conditional and unconditional types. The term 'condition' here refers to a syntagmatic context, i.e., before or after any tone, hence, this dichotomy is also referred to as 'context-dependent' vs. 'context-independent.' A general statement in this respect is that northern dialects are generally sensitive to the context while southern dialects are generally blind to it. An exception is East Min dialects, in which any tone in the penultimate syllable is affected by the following final tone and categorically alternates with any other tone.

Though no one has ever proved or disproved it, common sense among researchers is that the birth of tone sandhi phenomena is far later than the birth of monosyllabic tone. However, considering the existence of hundreds of bisyllabic compounds referred to as *Lianmian* words in Old Chinese, one may not exclude the possibility that register or phonation distinctions tend to neutralize in non-initial or non-final position.

4. Japanese

Japanese dialects exhibit a tidy 'concentric distribution' with respect to tonal and accentual features: the most complex Keihan (Kinki) type ('Central type' hereafter) distributing in the innermost area (old capital Kyoto and its surrounds), the simplest accentless type and N-type distributing in the outermost area, and Tokyo type distributing in a broad intermediate zone. A feasible historical explanation for this distribution is propagation theory: the proto type was Central type, as documented in *Ruiju Myōgishō* (11th to 12th century); it later propagated over the entire Japan archipelago, and then underwent a successive process of simplification. It is actually the process of merger of accent/tone classes (categories) from the prototype to the simplest one through the intermediate type. However, it is questionable how the most complex Central type propagated all over Japan, and more crucially, how was the proto system created?

While the concentric type of distribution is striking, important evidence seemingly missing in related discussions is that the so-called 'N-pattern accent' seldom appears in the dialects of eastern Japan. The article by Kishie et al. mentions, "Accent tends to be distributed in eastern Japan, whereas tone tends to be distributed in western Japan. In the Kinki district these

are intersecting.” The term ‘tone’ here refers to the N-pattern accent, which can be considered word tone (WT), and accordingly Central type can be interpreted as the combination of word tone (high and low tones) and distinctive pitch accent (Hayata 1999).

An assumption proposed here is that there once existed a western vs. eastern opposition of distribution in the pre-middle Japanese period: dominance of word tone in the west and that of pitch accent in the east. This division implies an encounter of the inner group and the outer group occurring in the Japan Archipelago. Under this assumption, the birth of Central type may owe to the contact of tonal dialects in the west and accentual dialects in the east. However, a question again is how the tonal languages acquired pitch accent, or reversely how the accentual language acquired tone.

Besides the contact-induced change, it is worth examining the possibility of internal conversion from tonal language to accentual language or vice versa. Chinese evidence from some Northern Wu dialects indicates that word tone language could evolve into equipping accentual features (Iwata 1999, 2001). For example, word tones in Hangzhou (one of Wu dialects) are actually discriminated in terms of the location of ‘H’ tone (indicated in bold), thus possessing the feature of pitch accent.

Pitch accent system in Hangzhou

1 st syllable accented	T3 [53] → [55 +22+21]
2 nd syllable accented	T5[45] → [34+ 55 +21]
	T6 [113] → [11+ 55 +21]
3 rd syllable accented	T1 [334] → [33+34+ 53]
	T2 [23] → [22+34+ 53]

Keywords: Tone, Accent, Stress, Phonation, Register, Laryngeal feature, Inner group, Outer group

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(Ray Iwata)

Accent: Formosan and West Malayo-Polynesian languages (Austronesian)

1. Stress/Accent in Proto-Austronesian (PAN)

In descriptions of Austronesian languages, both “stress” and “accent” refer to the last high-pitched syllable. In some languages, vowel quality differs—in which case the term “stress” is adequate. In other languages in which vowel quality does not differ between stressed and unstressed syllables, the term “pitch accent” seems better.

Wolff (1993) cites fairly strong evidence that PAN roots had a stress contrast in the final two syllables of the root. The first kind of root had a long vowel in the penultimate syllable, and the second kind had one in the ultimate syllable. The syllable with the long vowel seemed to be stressed.

The contrast in stress/accent has disappeared in many languages, but has left traces in other areas of phonology, for instance, weakening or loss of vowels in Formosan languages, and *t changed to an affricate /c/ under certain accentual conditions of the root (Wolff 1991). Morphological category influenced the process of historical change in stress placement. As Wolff (1993) states: “1) The stress patterns of nouns and some other forms which occur unaffixed other than stative adjectives tend to remain unchanged. 2) In the Philippine languages in verbal roots the stress pattern of the actor focus verbs tends to reflect the inherited stress pattern. Verb forms in the Formosan languages rarely provide evidence.”

Some Chamic languages, such as Utsat in South Hainan and Phan Rang Cham in Viet Nam, underwent historical tonal development. Chamic words have word-final stress, resulting in a distinction between so-called pre-syllables and the main syllable, due to their intimate and long interaction with neighboring Austroasiatic languages (Thurgood 1993).

2. Stress/Accent Patterns in Formosan and WMP

Formosan and WMP languages can fundamentally be divided into two groups: The first group consists of languages with predictable stress placement, and the second consists of those with unpredictable and phonemic stress. The group with predictable stress placement is divided into three subgroups: languages that have stress on the ultimate syllable, those that have it on the penultimate syllable, and those that have it on the antepenult syllable.

No single pattern is prevalent, nor is it possible to conclude that the majority of languages are paroxytone (accent falling on the penult).

No single pattern is prevalent, nor is it possible to conclude that the majority of languages are paroxytone (accent falling on the penult).

3. Stress/Accent and vowel length in Philippine languages

Presumably, PAN root stress or length is still retained only in Philippine languages. In most cases, the contrast consists of vowel length so that stress placement is predictable in terms of length. In Tagalog, stress falls on the long vowel nearest the end of the word, and if there is no long vowel, then stress falls on the end. Final syllables are always short (Wolff 1993).

Stative adjectives in the Philippines tend to have stress on the final syllable: In Tagalog, this is fairly intact, but in Cebuano, it has been lost as a marker for the word class.

There is inherited length in Bisayan, Bikol, Tagalog, Ilokano, Sambal, Kapamangan, Ifugao, Isneg, Bontok Hanunoo, etc. Secondly introduced phonemic stress is found in Ibanag, Casiguran-Dumagot, and Pangasinan (Zorc 1993). PAN *e influences stress in a different way from other vowels in Sarangani-Manobo and Tiruray.

4. Stress/Accent in Indonesia

Languages in Western Indonesia usually do not show phonemic stress contrasts. In Toba Batak, a majority of roots show penultimate stress, but a few high-frequency forms have final stress. The morphological category also influences stress placement. Adjectives show final stress. Stress falls on ultima in languages such as Javanese, Balinese, and Aceh, whereas it falls on penult in Malay and Makassar. Some languages show phonemic contrast in stress placement; this is not a reflection of PAN, but of a secondarily introduced feature, generally due to consonant loss, analogical leveling, or borrowing as in Old-Javanese and Malagasy.

Stress placement can vary among closely related languages or through changes in the historical process. Old-Javanese has phonemic contrast in stress, whereas today's Javanese has stress on ultima. Among Sangiric languages, Talaud has stress on penult whereas stress is phonemic in Bantik and Ratahan.

In Malay, stress usually falls on penult, but when a penultimate syllable has a schwa, it moves to ultima.

Keywords: stress, pitch accent, phonemic accent, vowel lengthening.

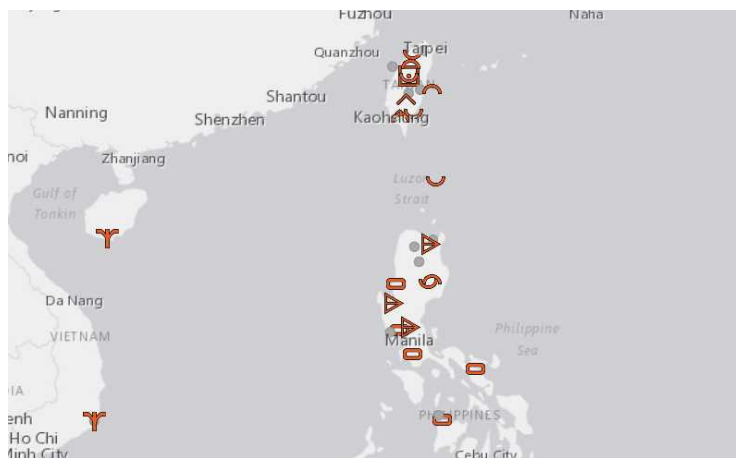
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Map 1: South China, Taiwan, Viet Nam and Northern Philippines (Luzon)



- ↪ stress/accents falling regularly on **ultima**
- ↪ stress/accents falling regularly on **penult**
- ↪ stress/accents falling regularly on **antepenult**
- ◻ stress/accents falling on **penult**, but influence by PAN *e (present day predominantly schwa)
- ▶ phonemic accent (secondarily introduced)
- ◉ phonemic length contrast, stress/accents falling on the last long vowel
- ⌞ phonemic tone

Map 2: Central/southern Philippines and Indonesia



Tone/Accent in South Asia (Aryan, Iranian, Nuristani, Dravidian, Andamanese, and Isolates)

1. Classification







To discuss the tone or accent systems of languages in South Asia, there is a large problem that most grammars of the languages contain any description about such systems. Because the majority of SA languages do not have a distinctive tonal/accent system, it seems that many scholars on SA languages have not tended to write about the point. And even though some good scholars describe it in their grammars a bit, they often have not discussed whether the accent system of languages concerned is pitch or stress. Thus, note that the distinction between stress and pitch is not so strict here that we understand they are different each other.

I classify languages in SA by two axes: (1) distinctive or not, and (2) written as the pitch, stress, or tone type, or not identified, or not available in the descriptive grammar. Pitch accent system includes two kinds (2-way or 3-way), and tonal system also has two subtypes (3-way or 5-way) in this area.

(1) Distinctiveness

Yes [ Overlapped]
No []

(2) Types

A1.	Pitch, 2-way (H / not H)	[]
A2.	Pitch, 3-way (H / M / L)	[]
B1.	Tone, 3-way (R / F / E)	[]
B2.	Tone, 5-way (see below)	[]
C.	Stress	[]
D.	Not identified well	[—]
E.	Not written on accent	[]

2. Geographical distribution and interpretation

Languages with the distinctive tone/accent system in South Asia concentrate in the northwestern part of the subcontinent, see Map 2. They contain Aryan (Panjabi, Gojri, Hindko, Indus Kohistani, Kalami, Dameli, Ushojo, Shina, and Domaaki), Iranian (Pashto), and Burushaski. These languages show a variety of suprasegmental patterns including both pitch and tone, while some of the grammatical descriptions of the languages may remain confusing these different systems.

Type A1 (2-way pitch), Type C (stress), and Type D (n.i.w) languages would be categorised as one group. The 2-way pitch means that vowels always have either high pitch or non-high pitch in an A1 language. In

general, stressed vowels tends to get even high-pitched, lengthened, and peripheral for some. Many old-fashioned grammars written by European scholars use the terms “stress” or “accent” for the description for accent systems of South Asian languages. Languages of these types can be seen all over the area.

All the Type A2 languages, Gojri, Indus Kohistani, and Pashto, distinguish words with 3-way pitch accent systems, that is having trichotomous distinction among High, Middle, and Low pitches. This pattern cannot be explained with a simple, dichotomous stress accent pattern. These languages distribute around lat. 34° N in Pakistan and India.

Type B1, of languages with 3-way tone, consists of Panjabi, Hindko, Ushojo, Shina, and Dameli. They distribute around the Type A2 languages above. It can be just by chance, or can be that there is some confusion or difficulty to judge whether pitch or tone. Many of them distinguish three kinds of tone: Rising, Falling, and Even (Level / Flat). About the tonogenesis in South Asia, at least in Panjabi and Hindko languages, see the next chapter.

The only Type B2 language is Kalami (Aryan), also known as Gawri or Bashkarik. An older description (Edelman 1983) says that this language has a composite system with three tones and two stress accents for word distinction, while a newer one (Baart 1997) describes there are just five tones: High Level, High-to-Low Falling, Low Level, Delayed High-to-Low Falling, and Low-to-High Rising. Anyway, both of them claim the language has five different patterns. Geographically the language is put just on the crossing area between tonal languages and pitch ones.

3. Tonogenesis in South Asia

So-called “Panjabi language group” of Northwestern Aryan subbranch, including individual Panjabi and Hindko languages, have got tones at a respectively later date. Most Aryan languages systematically distinguish four series of stop consonants: Voiceless-Unaspirated, Voiceless-Aspirated, Voiced-Unaspirated, and Voiced-Aspirated (a.k.a. Murmured). After division of the subbranch, many “Panjabi” languages lost the last series Murmured consonants totally, instead of getting tonal distinction. When they got the tone pattern, they also changed the articulation of a word-internal [h] into a tonal element. In this way the languages established 3-way tonal patterns, such as Rising, Falling, and Even (i.e., toneless).

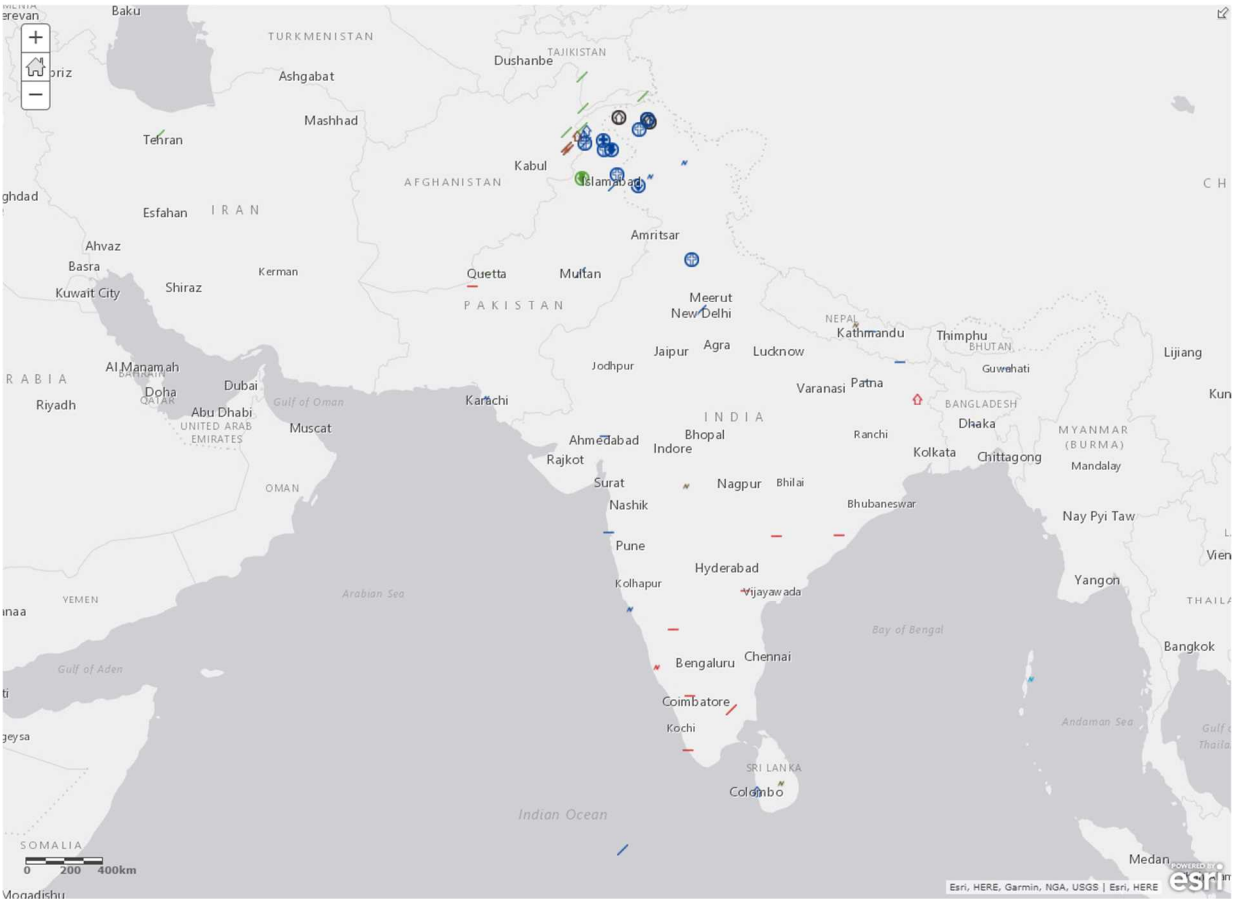
Losing of the aspiration of [h] or consonants being Murmured historically gives the preceding syllable a falling tone (V̌), while the [h] was after a short vowel and before a long vowel, then its losing does not give a falling tone but makes the long vowel with a rising tone (V̌), rarely accompanying a glottal stop. If any historical Murmured consonant is at the word-initial position, it changes into a tenuis consonant as getting the syllable with a rising tone. See examples in (1, 2).

- (1) spelling transcrb. pronun. tone meaning
 वेहड़ा *kōhṛā* [kōṛā] F.E ‘how’

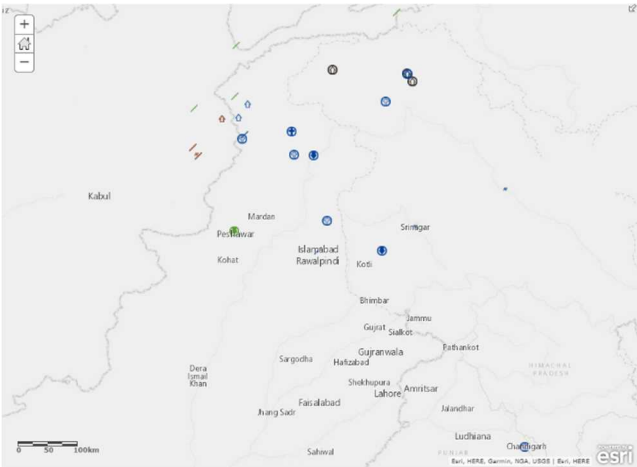
- वेड़ा *kōṛā* [kōṛā] E.E ‘whip’
 येड़ा *gʰōṛā* [kò(ʔ)ṛā] R.E ‘horse’
 (2) ਤੁਹਾਡਾ *tuḥāḍā* [tuāḍā] E.R.E ‘your’

On the one hand Panjabi and Hindko have become tonal languages, on the other hand some “Punjabi” languages have not developed so. For example, Saraiki has no tonal system, and is keeping Murmured consonants. This language has newly got the implosive series of consonants as well as its southern neighbouring language Sindhi has obtained them.

(YOSHIOKA Noboru)



Map 1. Tone/Accent in South Asia (Aryan, Iranian, Nuristani, Dravidian, Andamanese, Burushaski, Isolates)



Map 2. Distinctive tone/accents in northwestern South Asia

‘It rains’ in Asia

1. Introduction

This volume presents a geolinguistic analysis of the sentence structure of expressions in Asian languages that mean ‘it rains.’ Its main point of concern is constituent types; that is, which constituent, or combination of constituents, are principally responsible for conveying the meaning of rainfall. We also discuss the areal diffusion of constituent order.

2. Classification of the constituent types

Expressions for ‘it rains’ in Asian languages can in most cases be classified into the following constituent types (Shirai, this volume; see also Malchukov and Ogawa 2011: 24-27 and Eriksen et al. 2010): [A] the argument type, where the argument is primarily responsible for expressing the rain phenomenon, while the verb is a dummy or rather versatile; [B] the predicate type, where the predicate is primarily responsible, while the noun is zero, dummy, or only somewhat relevant to the weather/natural environment; and [C] the argument-predicate type, where the argument and predicate are more or less equally responsible. Type [C] is further divided into three subtypes: [C-i] the cognate type, [C-ii] the synonymous type, and [C-iii] the split type.

3. ‘It rains’ in each language group

Table 1 surveys the situation in each language group described by the articles in this volume: [1] Ainu (Fukazawa), [2] Nivkh (Shiraishi), [3] Japanese (Kishie, et al.), [4] Sinitic (Suzuki), [5] Hmong-Mien (Taguchi), [6] Tai-Kadai (Endo), [7] Tibeto-Burman (Shirai, et al.) [8] Austroasiatic (Kondo), [9] Austronesian (Utsumi), [10a] Uralic, [10b] Tungusic (Matsumoto), [11a] Mongolic, [11b] Turkic (Saitô), [12] Arabic (Nagato), and [13] South Asian (Yoshioka). “+” means the type is usually found in the language group, “±” means the type is peripheral or limited in distribution, “-±” means the type is so rare that is found only in one or two varieties, “-” means that the type is not found, and “(D)” means the type is dominant or commonly found.

Table 1: Types of ‘it rains’

	[A]	[B]	[C-i]	[C-ii]	[C-iii]
[1]	+(D)	-±	-	-	-
[2]	+(D)	-	-	-	+
[3]	+(D)	-	-	-	-

[4]	+(D)	-	-	-	±
[5]	+(D)	-	-	-	-
[6]	+(D)	-±	-	-	-
[7]	+	±	±	+	±
[8]	+	+	-	+	-
[9]	-	+(D)	-	-	-
[10a]	+	+	+	-	-
[10b]	±	-	+(D)	-	-
[11a]	+(D)	-	-	-	-
[11b]	±	-±	+(D)	-	-
[12]	±	+(D)	-±	-	-
[13]	+(D)	±	+	-	-±

Some examples are difficult to classify into the types listed above. For example, in Amur and West Sakhalin dialects of Nivkh, the argument primarily means “weather,” while the predicate consists of a verb that exclusively expresses precipitation; thus, the meaning ‘it rains’ seems to depend largely on the predicate. However, I classified this pattern in [C-iii], since neither the argument nor the predicate means rainfall exclusively. Moreover, certain Sinitic varieties in Shandong use the onomatopoeia *dida*, which I regard as an exceptional type.

It is often found that a language has more than one type of expression for ‘it rains.’ A number of languages, including Vietnamese (Austroasiatic), Finnish (Uralic), and Northern Qiang (Tibeto-Burman), have both [A] and [B]. Sakha (Turkic) has both [A] and [C-i]. Great Andamanese (South Asia) has both [B] and [C-i].

4. The geographical distribution of constituent types

The [A] argument type is predominant in East and South Asia. It is most common in [1] Ainu, [2] Nivkh, [3] Japanese, [4] Sinitic, [5] Hmong-Mien, [6] Tai-Kadai, [11a] Mongolic, and [13] South Asian languages. Moreover, the [7] Tibeto-Burman and [10a] Uralic languages also often have this type, and it is peripherally found in [10b] Tungusic (Sibe, in Western China), [11b] Turkic (Sakha and Dolgan, in Siberia), and [12] Arabic (in Central Africa). The fact that Sibe has this type suggests the influence of language contact with Chinese (Sinitic). This type is not found in [9] Austronesian and rarely found in Central Asia.

The [B] predicate type is mainly distributed in Southeast, West, and Northwest Asia. In [9] Austronesian, this is the only pattern for ‘it rains.’ This

type is also predominant in [12] Arabic, and is commonly found in [8] Austroasiatic and [10a] Uralic. Although the [7] Tibeto-Burman languages with this type are mostly limited to Southwestern China, it is also found in a few remote Tibeto-Burman spots in Nepal and Southern Burma, the latter of which is adjacent to the Austroasiatic area. It is scarcely found in East Asia: [2] Nivkh, [3] Japanese, [4] Sinitic, and [5] Hmong-Mien do not have this type. However, Old Chinese had this type; a single verb 雨 ‘rain (v.)’ by itself meant ‘it rains.’ This is substantial evidence for the shift from the [B] predicate type to the [A] argument type. In Tai-Kadai, there is a parallel hypothesis posed for a historical study.

The [C-i] cognate argument-predicate type is mainly found in Northeast and Central Asia: [10b] Tungusic and [11b] Turkic languages have this as the predominant type. Among Arabic dialects, only Bukhari (in Uzbekistan) has this type, and it is obviously influenced by Turkic languages. Moreover, [8] Austroasiatic, [10a] Uralic, and [13] South Asian languages (Aryan, Iranian, and Great Andamanese language groups) also commonly have this type.

The [C-ii] synonymous type is only found in [7] Tibeto-Burman and [8] Austroasiatic languages. In the former, however, it is the predominant type in Myanmar and Southern border area of China. Examples in Austroasiatic (i.e., Riang and T’in) languages are also found in and around this area. For this reason, I contend that this is an areal feature.

The [C-iii] split type is rare. It is found in [4] Sinitic and [7] Tibeto-Burman, but both show limited distribution.

Map 1 roughly illustrates the main distribution of constituent types for saying ‘it rains’ in Asia.

5. Constituent order

Interestingly, the dominant constituent order of the expressions for ‘it rains’ is V(erb) + N(oun) in Chinese (Sinitic; Type A), although the basic constituent order is S(ubject) + V(erb) + O(bject). It is possible to find the areal diffusion of this constituent order.

Most Tai-Kadai varieties in China have the V + N order, while N + V is dominant in those outside China. Moreover, certain varieties of Tai-Kadai, such as Zhuang in Jingxi Guolexiang (Type A), show Chinese influence: although speakers there originally used the N + V order, the younger generation uses V + N, which is similar to Chinese.

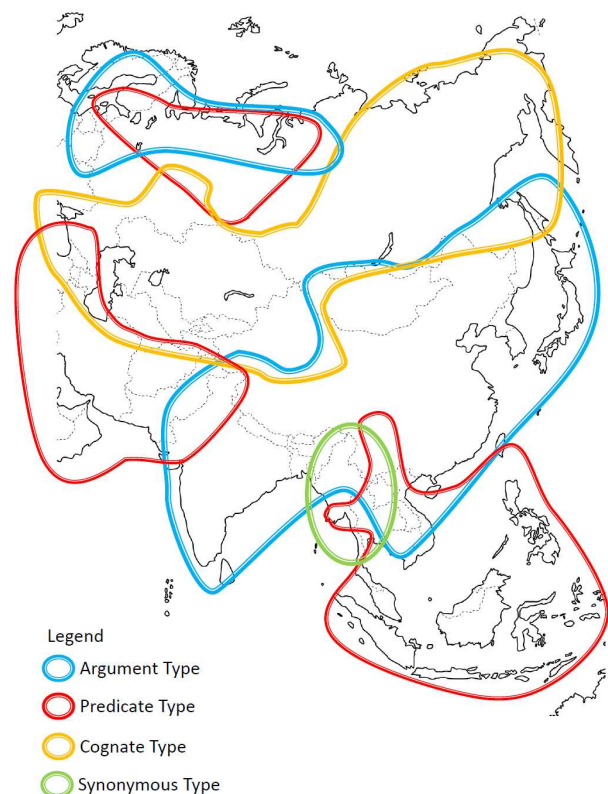
A similar shift is found in Bai (Tibeto-Burman),

which is known for its intensive language contact with Chinese. Among the 17 dialects, three have the V + N order, while the rest have the N + V order, as do the other Tibeto-Burman varieties that use the [A] argument type.

6. Conclusion

This study clarifies that sentence structure may be diffused beyond a genetic group, through geolinguistic analysis of expressions in Asian languages that mean ‘it rains.’ Map 1 demonstrates the areal tendencies in dominant constituent types. Additionally, a shift of types for certain languages is hypothesized. Cases of ongoing shifts of constituent order due to instances of language contact were also found.

Keywords: meteorological expression, areal feature, language contact, geolinguistics, linguistic typology
(Satoko Shirai)



Map 1: Types of ‘it rains’ in Asia

“It rains” in Ainu

1. Classification of Types

The expression for “it rains” in Ainu is basically constructed with the noun for “rain” and an intransitive verb. This is categorized as the “dummy (auxiliary) verb” construction (Mulchukov & Ogawa 2011: 26) and “argument [precipitation] encoding” (Eriksen et al. 2010: 588-589). There are four dialectal forms for “it rains.”

A. RAIN (N) + STAND (V)

A1. *ápto ás*

A2. *ruyánpe/ruanpe as*

A3. *wení ás*

B. RAIN (N) + FALL (V)

B1. *ahto/atto ran*

C. RAIN (N) + STRONG (V)

C1. *ápto rúy*

C2. *ruyánpe rúy*

D. LAND-BAD (V)

D1. *siriwin*

2. Geographical distribution and interpretation

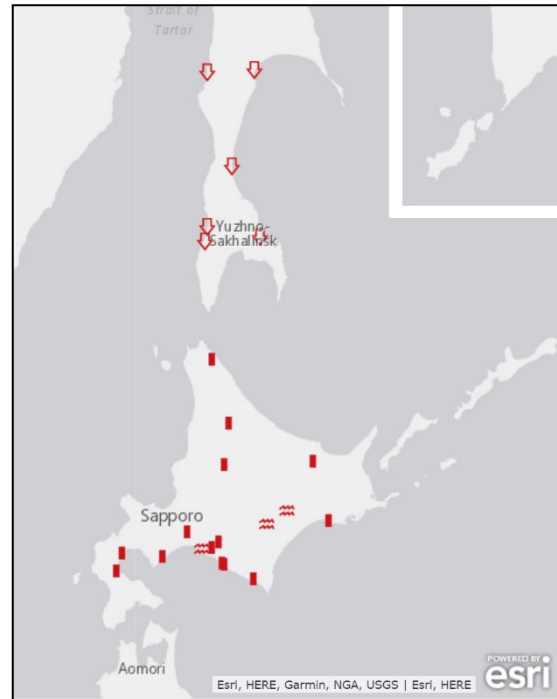
Type A is widely distributed in Hokkaido and Type B is covered in Sakhalin. Type C is found in the Tokachi and Mukawa dialects. Comparing to “wind blows,” the WIND (N) + STRONG (V) construction is more widely distributed in the central Hokkaido than the RAIN (N) + STRONG (V) construction, see the sign 🌩 on Figure 2 and 3. Type D is classified into “the intransitive predicate type” (Eriksen et al. 2010: 589), which is functionally different from the other three types. Torii Ryūzō (1903) reported the term *siriwin*, as the Shumshu dialect in Kuril. It probably corresponds to the zero-argument verb *sírwen* for “the weather is bad” in the Hokkaido dialects, which is constructed with the noun root *sir* and the intransitive verb *wen* and does not take an argument anymore.

There are three types of the intransitive arguments for “rain,” *wení*, *ápto* (*ahto*, *atto*), and *ruyánpe* (*ruanpe*). In “Moshiogusa 藻汐草” (1792), a first Ainu-Japanese dictionary by Kumajirō Uehara, these words were also recorded as follows: アプト [aputo], ルアンベ [ruanbe], ベニ[beni] or [veni], ウエニ [uweni], for which I estimate that the phonological representations are /apto/, /ruanpe/, and /weni/. Moreover, the word “あふと” /apto/ is recorded as “rain” in “Matsumae no Koto 松前の言,” which is the oldest Japanese manuscript, estimated to date back to the 17th century.

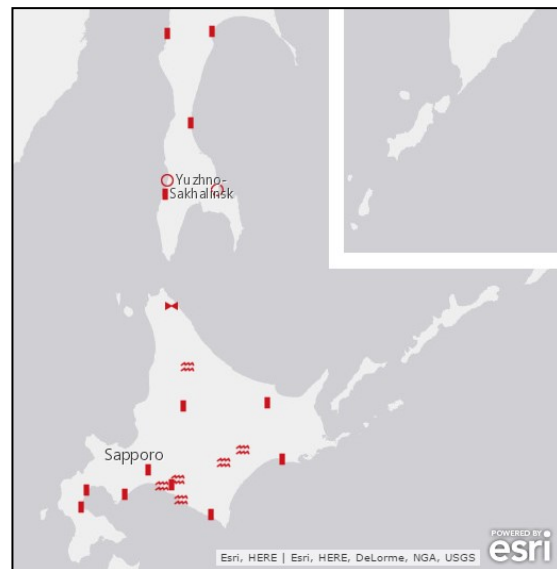
The form *ápto* (*ahto* and *atto* in Sakhalin) is

distributed in the western Hokkaido and Sakhalin. The forms *ruyánpe* and *ruanpe* for “rain” are used in the eastern Hokkaido dialects, while they mean “storm” in the western Hokkaido. Moreover, the form *wení* for “rain” is distributed in the westernmost Hokkaido dialects, Yakumo and Oshamambe, and it may be derived from the word *wen* for “bad.”

Keywords: rain, fall, stand, strong, stormy, blow



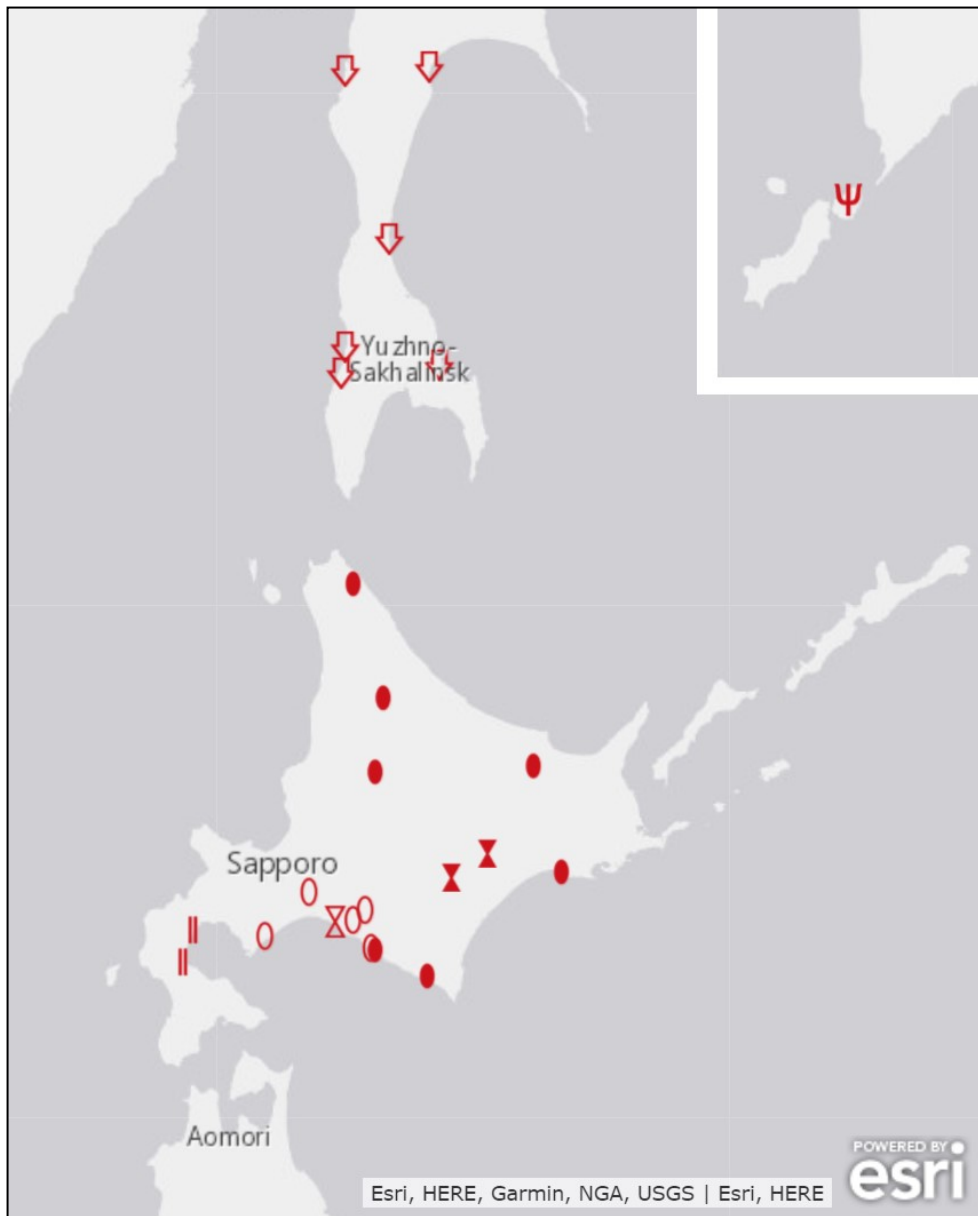
Map 2. “(Rain) falls” in Ainu



Map 3. “(Wind) Blows” in Ainu

- a. *ás/as* “stand”
- b. *ran* “fall”
- c. *rúy* “strong”
- d. *án/an* “exist”
- e. *yúpke* “strong”





Map 1. “It rains” in Ainu

A. RAIN (N) + STAND (V)

A1. *apto as*



A2. *ruyanpe/ruanpe as*



A3. *weni as*



B. RAIN (N) + FALL (V)

B1. *ahto/atto ran*



C. RAIN (N) + STRONG (V)

C1. *apto ruy*



C2. *ruyanpe ruy*



D. LAND-BAD (V)

D1. *siriwin*



(Mika Fukazawa)

‘It rains’ in Nivkh

1. General description

There are three dialectal forms reported for ‘rain’ in Nivkh: *lix*, *nix* and *nux*. When used in a sentence ‘It rains’, one of these forms is followed by a special verb *ki*, which is used exclusively for meteorological phenomena, e.g. *lix ki-fj*. ‘It is raining.’ *ŋaqɹ ki-fj*. ‘It is snowing.’ This word order is common to all intransitive sentences in Nivkh. In the Amur and West Sakhalin dialects, the use of *ki* is crucial to avoid semantic ambiguity, as the same form *lix* refers to ‘weather’, which is the usual interpretation when it is used in isolation (see § 2 for details).

As concerns the form, the dialectal correspondence of the initial consonant [l] vs. [n] is rare; another such case is *lund* (Nogliki) vs. *nud* (Poronaisk) ‘what’ (Itsuji Tangiku, p.c.).

2. Semantic ambiguity

In the Amur and West Sakhalin dialects, *lix* does not only mean rain but also weather. Thus *lix ur-* means ‘The weather is fine.’ not ‘The rain is good.’ (*ur-* ‘good’) Savel’eva and Taksami (1970) give two lexical entries for *lix*: I) погода ‘weather’ and II) дождь ‘rain’. Most consultants of the Amur and West Sakhalin dialects give *lix ki-fj*. ‘It is raining.’ when translating the Russian дождь. As mentioned above, the verb *ki* is added to disambiguate rain from weather, as *lix* in isolation refers primarily to weather. In contrast, the consultants of the Sakhalin dialect give *lix* or *nix* for дождь without the verb *ki* (Nakagawa, Sato and Saito 1991). In the Sakhalin dialect, weather is referred to by a different word *la*, thus there is no ambiguity unlike the Amur and West Sakhalin dialects (see Table 1 and Map 2 below).

Other means of disambiguation is the use of an attributive or a compound. Savel’eva and Taksami (1970) list the following examples: *lax lix* ‘cloudy weather’ (*lax* ‘cloud’), *pij urla lix* ‘weather suitable for flying’ (*pij-* ‘to fly’), *mangla lix* ‘downpour’ (*mangla* ‘fierce’), *lix kespi* ‘raindrop’ (*kespi* ‘drop’), *lix muyv* ‘rainy day’ (*muyv* ‘day’). In fieldwork we have recorded *lix sax* ‘rain water’ (*fʰax* ‘water’).

Interestingly, *la* has a homonym meaning ‘wind’. Wind is *la* in all dialects investigated so far. The form-meaning correspondence is illustrated in the table below (see also Map 2.).

Dialects	rain	weather	wind
Amur/West Sakhalin	<i>lix</i>	<i>lix</i>	<i>la</i>
Sakhalin (North)	<i>lix</i>	<i>la</i>	<i>la</i>
Sakhalin (South)	<i>nix</i> , <i>nux</i>	<i>la</i>	<i>la</i>

**Table 1. Form-meaning correspondence:
‘rain’, ‘weather’ and ‘wind’**

3. Geographic distribution

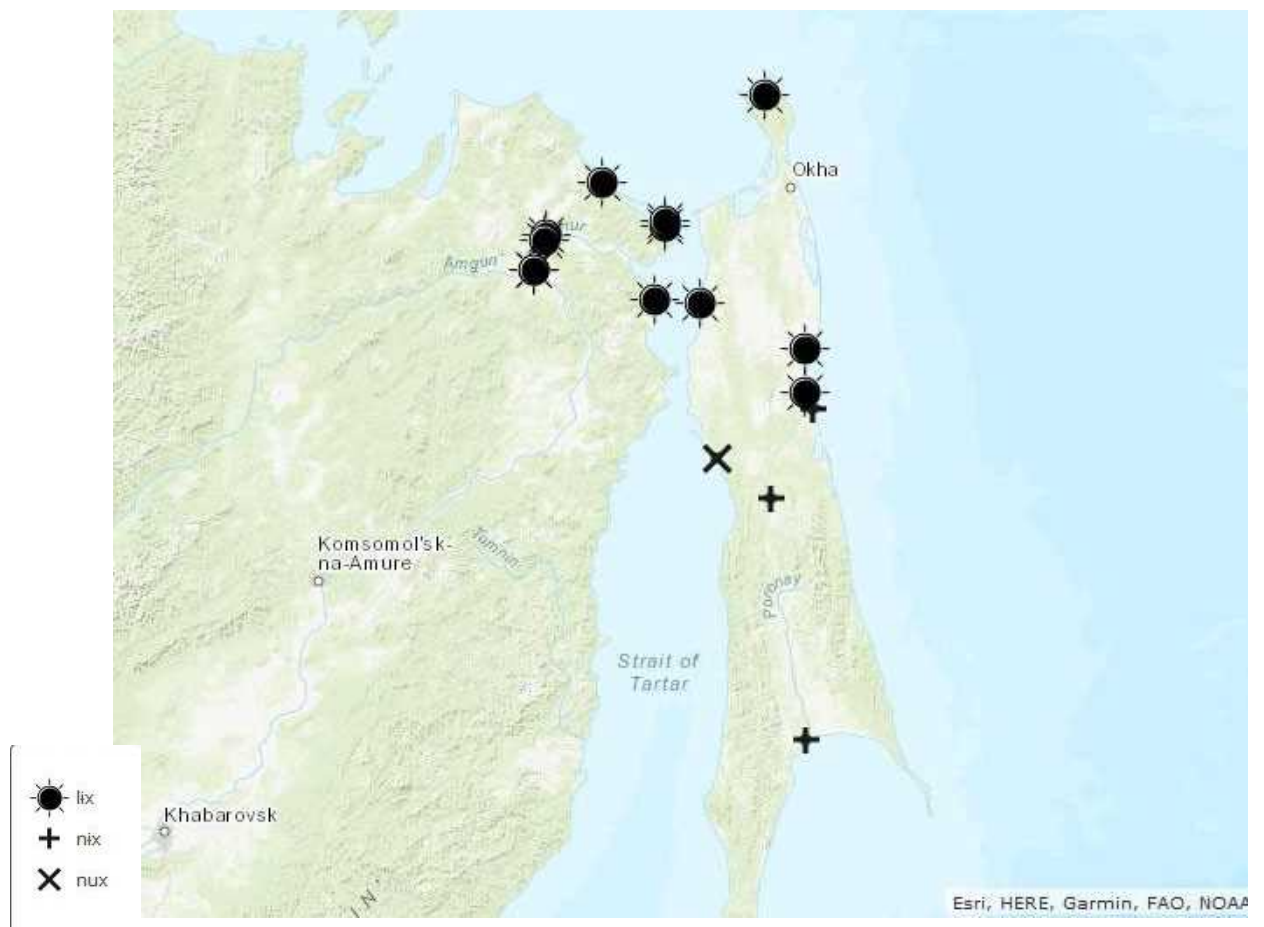
While *lix* is the predominant form, five sources exhibit a form with an initial [n]. These are recorded from speakers born in the following settlements: Trambaus, Chir-unvd, Nyivo, and Poronaisk (two sources).

The n-initial forms are distributed in the southern half of the Sakhalin dialect area. In the standard taxonomy, these dialects are classified as subdialects of the Sakhalin dialect. In the northern area of the Sakhalin dialect, *lix* is recorded in Tygmych and Chaivo.

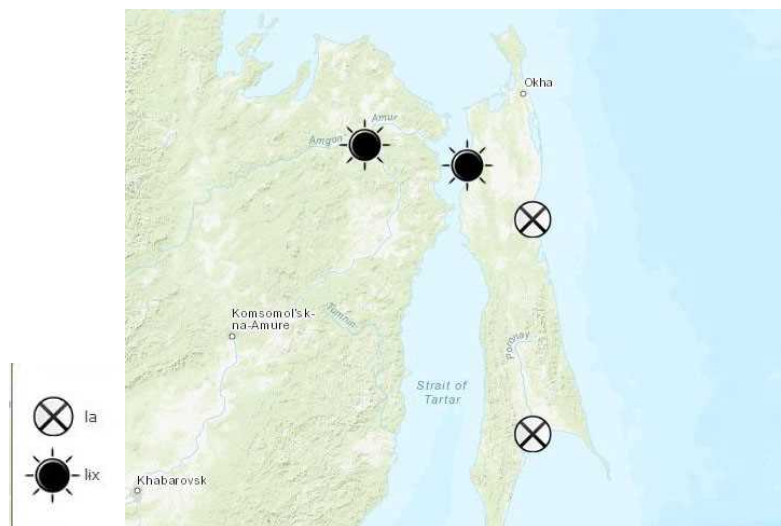
The geographic distribution of *lix* and *nix* is different from the cases reported in the current research project so far; it is not separated by the dialectal border between the two main dialects Amur and Sakhalin. Generally speaking, the southern subdialects differ from the rest in the number of borrowings from Sakhalin Ainu (Shiraishi and Tangiku to appear). This is not the case though, as rain has a different form in Sakhalin Ainu: *apto~ahto* (Piłsudski 1998 [1912]: 403). The dialectal border which separates the southern subdialects from the others requires further investigation (cf. Tangiku 2013 for discussion).¹

Keywords: Nivkh, semantic ambiguity, Amur dialect, West Sakhalin dialect, Sakhalin dialect
(Hidetoshi Shiraishi)

¹ I would like to thank Prof. Itsuji Tangiku (Hokkaido University for Ainu and Indigenous Studies) for providing information on the Sakhalin dialect.



Map 1. 'rain' in Nivkh



Map 2. 'weather' in Nivkh

It rains in Japanese

1. Introduction

This paper aims to present a description on the characteristics of weather related expressions in Japanese from the lexical and syntactic viewpoint.

Japanese languages as with the other world languages are rich in variety of weather related expressions. There are specific words such as *ame* (rain) and *yuki* (snow) for different weather related expressions, which mark the characteristics of Japanese.

The sentence like *ame ga furu* in Japanese carries the sentence pattern with personal subject rather than the sentence pattern, i.e. It rains with impersonal subject as in the Indo-European languages.

Japanese being a SOV language follows the order of subject + object+ verb in the kernel sentence. In the sentence of *ame ga furu* (It rains.), rain is a intransitive verb which constitute a structure of *ame* (rain: subject)+ *furu* (fall: verb) resulting in a SV constituent. Likewise, all the Japanese dialects including the dialect of the Ryukyuan carry the same word order.

2. Case particle representing a Nominative Case

In modern Japanese sentence, the case particle *ga* representing Nominative case connect the subject and the predicate. In ancient Japanese, however, the case particle *ga* as in *ame ga furu* is rarely used as a Nominative case marker and the case particle *no* was used instead.

According to GAJ (Grammar Atlas of Japanese dialects) VOL.1 No.1, *Ame ga Futtekita* (It has started raining), there are regional variation in the distribution of Nominative case particles. The case marker *ga* is used in some regions and *no* is used in other regions, while no case particle is used in some other regions as Nominative case marker. The tendency to omit the *ga* as Nominative case particle was previously thought to be occurred in the dialects of Western Japan. However, the data of GAJ

shows that the omission of *ga* can also be seen to occur in the Tohoku region and Kansai region indicating the usage of *ga* particle to be a country-wide phenomenon.

On the other hand, the particle *no* is found to be distributed in Shizuoka/Yamanashi, the southern tip of the Kii Peninsula, the southwestern part of Shikoku, and the western part of Kyushu. In addition, *n* which seems to have been derived from the particle *no* is distributed throughout the Ryukyu Archipelago.

3. Lexical features of *ame* (rain) and *furu* (to fall)

As shown in Fig.1, there is little dialectal variation, which exists only with phonological distinction and, therefore, is not of worth to mention. However, there is practice to finely distinguish the different kind of *ame* (rain) and, therefore there exists distinctive words to signify the different types of *ame* (rain). For example, *shigure*= winter shower, *yudachi* = evening shower, *samidare* = early summer rain, *gou* = cataracts of rain, *shuu* = a shower of sooty atoms etc.

Likewise, vocabulary exists abundantly also for *yuki* (snow) as well. Hence, it can be said that Japanese has abundant vocabulary about weather. On the other hand *furu* means 'to fall rain', 'to fall snow', 'to hail' and 'to hail chilly rain' from the sky. The verb 'to fall' is not usually used to convey the meaning of those above-said vocabularies. The difference between '*furu*' and '*ochiru*' is that while '*furu*' means the falling in abundance in greater area from the sky, '*ochiru*' means the falling of one or several things from the top.

Since *ame* (rain), *yuki* (snow), *arare* (hail) and *hyo* (chilly rain) do not receive any derived verb, the verb *furu* as in the sentence *ame ga furu* (rain falls) is exclusively used to mean the falling of all of those above-said natural things.

(Shinsuke Kishie/ Yukako Sakoguchi/ Nanami Shiokawa)

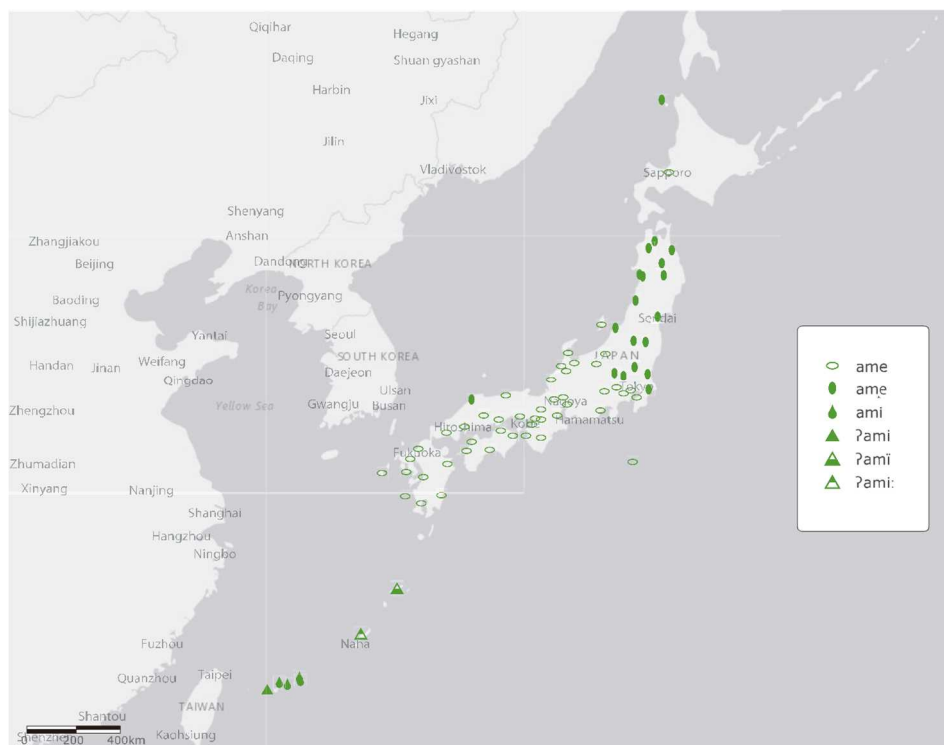


Fig.1 Distribution of Rain “*Ame*” in the Japanese dialects

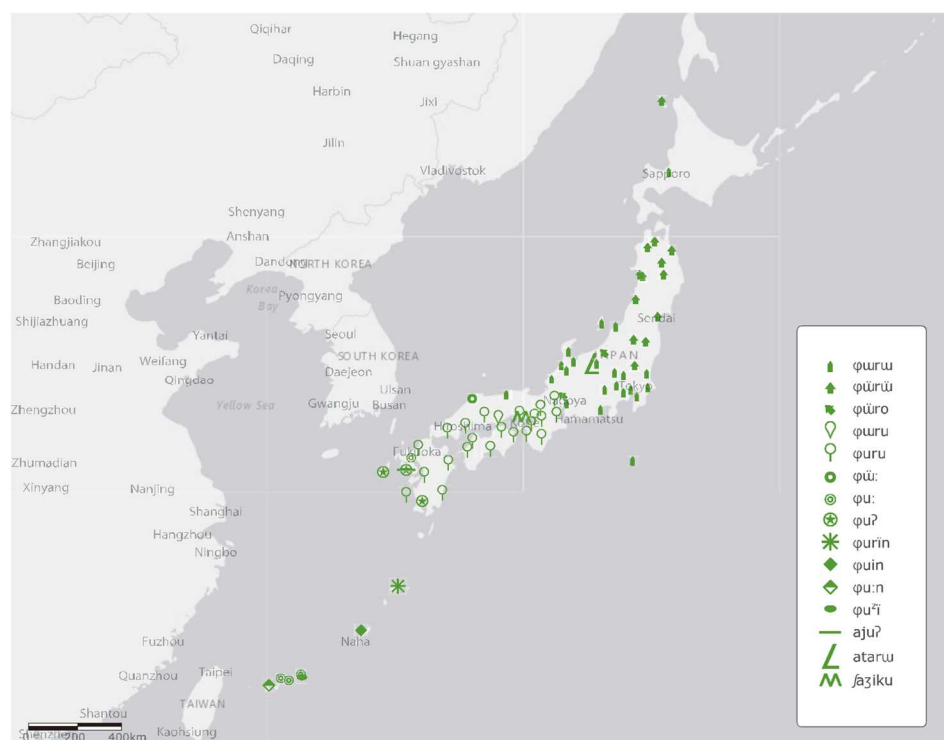


Fig.2 Distribution of *Fall* “Furu” in the Japanese dialects

“It rains” in Sinitic

1. Classification

The lexical forms of “it rains” in Sinitic essentially comprise verb and noun. The lexical meaning of “rain” is carried by its nominal constituents, primarily *yu* 雨. According to the verbal constituents, we classified lexical forms into four types: A *luo* 落, B *xia* 下, C *dang* 盪, and D *zuo* 做.

A *luo* 落 type

A-1 *luoyu* 落雨 A-2 *yuluo* 雨落

A-3 *luoshui* 落水 A-4 *luodian* 落点

B *xia* 下 type: *xiayu* 下雨, *xiayur* 下雨儿, *xiaryu* 下儿雨

C *dang* 盪 type: *dangyu* 盪(盪)雨, *duanyu* 段雨, *dongyu* 洞雨, *tengyu* 騰雨, *tunyu* 屯雨, *tongyu* 同雨

D *zuo* 做 type: *zuoyu* 做雨

E others

E-1 *diaodian* 掉点, *diudian* 丢点, *dongdianr* 動点

E-2 *diuyu* 丢雨

E-3 *dida* 滴哒, *dige* 滴个, *didadianr* 滴答点儿

E-4 others: 口雨[dzu ua]

2. Geographical distribution and interpretation

The lexical forms for “it rains” in Sinitic belong to the “argument type”. Although SVO is dominant in Sinitic, the constituent order is verb + noun (object), like other meteorological expressions, such as *guafeng* 刮風 (wind blows) and *dalei* 打雷 (it thunders), while lexical forms for “it has stopped raining” take the structure of noun (subject) + verb: Tianjin 天津: 下雨 fall rain “it rains”; 雨停了 rain stop perfect-aspect “it has stopped raining.”

A-2 *yuluo* 雨落 is a solitary instance of noun (subject) + verb construction. According to Liu (2001), A-2 is also seen in Taizhou 台州, Leqing 樂清, and Wenzhou 温州 of Zhejiang 浙江 province. This phenomenon suggests that the object is diminishing in these dialects (Liu 2001: 30).

In the northern area, the dominant lexical form is B *xia* 下 type, which tends to form a north-south opposition with A *luo* 落 type. Its isogloss corresponds to the Yangtze line in the east. In the west, however, the distribution of A *luo* 落 type crosses the Yangtze line to the north, and shows a scattered distribution in Sichuan 四川 and Shanxi 陝西 provinces. In these dialects, A *luo* 落 type collocates with B *xia* 下 type. In dialects along the Yangtze in Anhui 安徽 province, these two types are

differentiated by the amount of precipitation: A *luo* 落 type only refers to a light rain; B *xia* 下 type is used as a general term (Iwata 2012: 138).

C *dang* 盪 type has several orthographies. However, there are similarities in phonetic forms, such as initial (voiced) and tone (*yangqu* 陽去 or *yangshang* 陽上). Therefore, these forms can be regarded as cognates (Li 1992). C *dang* 盪 type is distributed in southwestern Zhejiang 浙江 and eastern Fujian 福建, a distribution divided by D *zuo* 做.

As for nominal constituents, besides *yu* 雨 (rain), *shui* 水 (water) is concentrated in Guangdong 廣東 and Guangxi 廣西 provinces (See A-3 *luoshui* 落水). E-3 *dida* 滴哒 in Shandong 山東 province is a kind of onomatopoeia and tends to collocate with more general forms such as B *xia* 下 type. Usually, *dian* 点 is combined with the verb *diao* 掉, distributed adjacent to E-3 *dida* 滴哒. E-1 *Diaodian* 掉点 is possibly related to the onomatopoeia of rain.

In Old Chinese, the lexical form for “it rains” is *yu* 雨 (v.); it belongs to the “predicate type.” In oracle bones, the morpheme *yu* 雨 had both verbal and nominal functions (Xu 2003: 16): 之夕雨? this evening rain(v.) “Will it rain in this evening?” (Luo, Zhenyu. *Yinxu shuqi xubian*); 不遘大雨? 不遘小雨? neg. encounter heavy rain(n.) neg. encounter light rain(n.) “Will there be a heavy rain or a light rain?” (Guo, Moruo. *Buci tongzuan*)

Tone distinguishes these two functions: the *shang* 上 tone in the noun and in the intransitive verb; the *qu* 去 tone in the transitive verb (Sun 2001: 105-110). Later, the verbal use of *yu* 雨 became exclusive to literary language, and colloquial forms for “it rains” shifted to the verb + noun construction.

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- Keywords:** verb + noun (object) construction, north-south opposition, Yangtze line

(Fumiki Suzuki)



- △ A-1 luoyu 落雨
- ▲ A-2 yuluo 雨落
- ▲ A-3 luoshui 落水
- ▲ A-4 luodian 落点
- † B xiayu 下雨. xiayur 下雨儿
- ▣ C dangyu 盪雨, duanyu 段雨
- D zuoyu 做雨
- ⤿ E-1 diaodian 掉点, diudian 丢点
- ⤿ E-2 diuyu 丢雨
- 💧 E-3 dida 滴哒, dige 滴个
- Y E-4 others

“It rains” in Hmong-Mien

1. Classification of word forms

In the Hmong-Mien languages, the expression of rainfall is composed of a verb denoting “(rain) to fall” and a noun denoting “rain”. As far as the data that we have at present indicate, the word order of these two words is V-N in most lects, which is the same as in the Sinitic languages. Hmong-Mien has three forms for “rain”: a form with a dental-alveolar nasal onset (designated by *noŋ6*), a form with a bilabial nasal onset (designated by *moŋ6*), and a form with a bilabial plosive onset (designated by *bluŋ6*). These three forms must ultimately have come from the same etymon, although the sound correspondence of the onset is irregular.

Concerning to the verb denoting “(rain) to fall”, the situation is somewhat complicated. We found eleven different forms, which are classified into three major types and the rest. The first major type (Type A) comprises forms with a dental plosive onset. The second major type (Type B) comprises forms, which are probably a loanword from Chinese “頽” (Ratliff 2010). The third major type (Type C1-3) comprises forms with a lateral initial, which are possibly related to Chinese “落”.

A: *ta2*

B: *tui2*

C1: *lo4*

C2: *lo5*

C3: *lo7*

D: *ʔjoD*

E: *nto3*

F: *ljeu2*

G: *puŋ1*

H: *ljhuə1*

I: *tehs7/8*

2. Geographical distribution and interpretation

The geographical distribution of the three forms for

“rain” (see Map A below) is determined by the phylogenetic status of the lect. Most Hmongic lects indicate *noŋ6*, and all Mienic lects indicate *bluŋ6*. In between the form *moŋ6* is located (one data point in Vietnam must be due to later immigration). Since the lects that show this form belong to Pa-hng, which is considered the first split-off from the Hmongic branch, bilabial place of articulation in the onset might be an archaic feature. The two data points of in Guangdong (near the sea) belong to the She language (aka, Ho-ne), which is also one of the Hmongic lects. The location of the She language is considered as the result of immigration.

Turning to The distribution of the forms for “(rain) to fall”, if we can assume that forms with a lateral onset (Type C) are a loanword from Chinese, Type A, *ta2*, must be the most archaic one in Hmongic. This form is in some lects is homophonous with a verb denoting “to come”. Presumably, this form originally is a venetive verb “to come”, so that the lects that use this form express a rainfall event in the form of “a rainfall comes”. Interestingly, some Hmongic lects that indicate Type A do not have a venetive verb homophonous with *ta2*. Thus, we can assume that in these lects the original venetive verb is replaced but is retained as a verb for “(rain) to fall”. *Tui2* in Type B is considered to be a loanword from Chinese. Since most Mienic lects show this form, the borrowing could have occurred in the stage of Proto-Mienic.

(Yoshihisa Taguchi)

Map A



noŋ6 ▲
bluŋ6 ●
moŋ6 ●



"(Rain) to fall" in Hmong-Mien

A: ta2	○
B: tui2	◇
C1: lo4	/
C2: lo5	^
C3: lo7	⚡
D: ʔjoD	Y
E: nto3	△
F: ljeu2	+
G: puŋ1	🏠
H: ɬjhuə1	↓
I: tɛhɿ7/8	≡

“It rains” in Tai-Kadai

1. Classification of forms

There are 6 major types for "it rains" in Tai-Kadai:

A. *V* type

fun⁵³ (to rain)

B. "sky" + *V* type

B1. fa¹¹ (sky) + fun⁵³ (to rain)

B2. fa¹¹ (sky) + fun⁵³ (to rain) + be⁵³ (perfective particle)

C. "sky" + *N* + *V* type

fa⁵ (sky) + fun¹ (rain) + tok² (to fall)

D. "sky" + *V* + *N* type

fa⁴ (sky) + lɔŋ² (to fall) + phɔn¹ (rain)

E. *N* + *V* type

fon¹ (rain) + tok¹ (to fall)

F. *V* + *N* type

tok⁷ (to fall) + fun¹ (rain)

2. Geographical distribution and interpretation

Type A is found in the Li language in Hainan Island and the Gelao language around the Vietnamese-Chinese border. In this type, the same word meaning "rain" can serve as both a noun and a verb.

Type B occurs with type A in many cases. According to Ms. Wen Zhen 文珍 of the Li tribe, there are some parallel forms for "it rains" in her Ledong 乐东 dialect: fun⁵³; fa¹¹ fun⁵³; fa¹¹ fun⁵³ be⁵³. In the last sentence, "be⁵³" is similar to Chinese "le 了". The sentence can have two meanings: "it is raining now" and "it will rain". For her, thok⁵³ fun⁵³ (to fall + rain, type F) and lui⁵³ fun⁵³ (to fall + rain, type F) are also acceptable. The verb lui⁵³ is similar to Siamese လိုလဲ ləy meaning "pass, go through". Also, in her dialect fun⁵³ be¹¹ (to rain + perfect particle, type A) is used. According to her, there is an expression ke.fun⁵³ (*ke* is a perfective prefix, fun⁵³ is a verb "to rain") in Shihan 什寒 village, Qiongzong 琼中 county, where the habitants are bilingual in both the Li and Miao languages. Also, there is a place in Hainan Island where pha¹¹ phun⁵³, type B is used.

Type C is used in Red Tai in Baan na ngon, Laos.

Type D is used in Zhuang according to Ms. Li Xiuhua 李秀华 from Jingxi Guolexiang 靖西果乐乡, Guangxi Zhuang Autonomous Region. However, the most frequently used expression for her is type E "phɔn¹ lɔŋ²". She reports that type F "lɔŋ² phɔn¹" is also used among younger generation, although she

rarely uses this form.

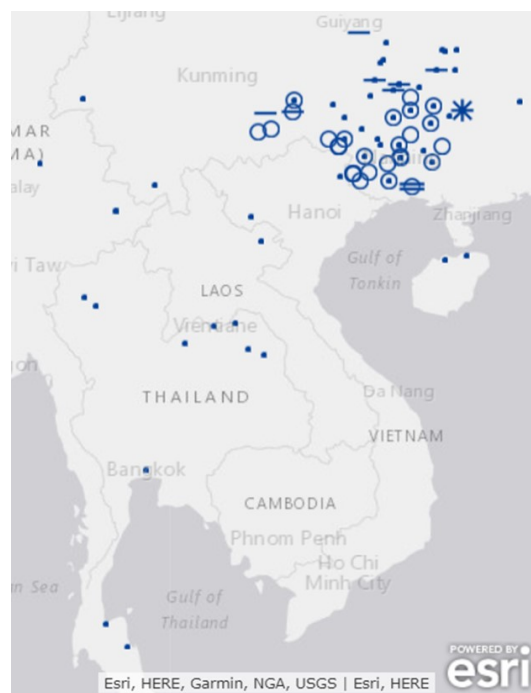
Type E is distributed in Southwestern Tai, including Surat in southern Thailand which is not included in the map.

Type F is distributed in the rest of the areas, all of which are inside China.

Nishida (2000: 157) infers that type A should be the primitive form, and the verb "to fall" was added afterwards; those languages under strong Chinese influence became type F, the others became type E. Also, Nishida (2000: 183) says that type B2 with "sky" is a Chinese-like expression.

On the other hand, there is also the possibility that type F replaced type E under the influence of Chinese, as seen in the Jingxi Guolexiang dialect which Ms. Li Xiuhua reported.

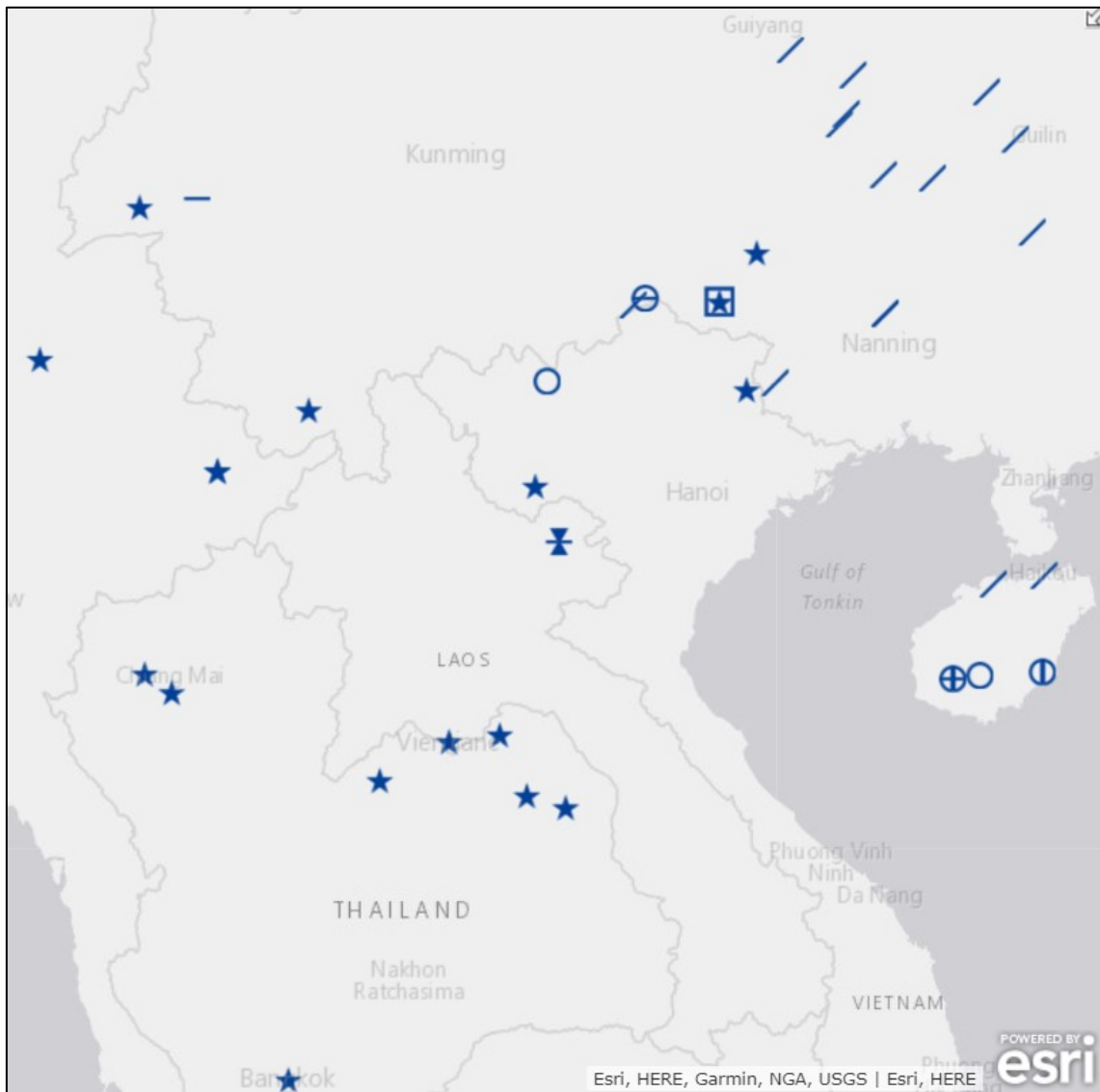
The word for rain almost uniformly goes back to *fon A in proto-Tai. The verb means "go down,



tok descend". Although "tok" is dominant across the area, the other verbs are also used in the northern area. Among them, *Lei* is seen in Jinxi 金秀 Lakkia.

About the chronological order of *long*, *tou* and *tau*, it depends on whether *tou* and *tau* are cognate or not. If so, they are distributed in the outer area where *long* is used, so they should be older. Otherwise, the order of these forms is difficult to infer based on the geographical distribution. In any case, *tok* should be the oldest, and the others emerged later, and used in parallel.

(Mitsuaki Endo)



- A fun53 (to rain)
- B1 fa11 (sky) + fun53 (to rain)
- | B2 fa11 (sky) + fun53 (to rain) + be53 (perfective particle)
- ⌵ C fa5 (sky) + fun1 (rain) + tok2 (to fall)
- D fa4 (sky) + loŋ2 (to fall) + phoŋ1 (rain)
- ★ E fon1 (rain) + tok1 (to fall)
- / F tok7 (to fall) + fun1 (rain)

‘It rains’ in Tibeto-Burman

1. Classification of types

Our data consist of 494 examples of expressions that mean ‘it rains’ in Tibeto-Burman (TB) languages from both primary and secondary sources. We classify them into three major types from a typological perspective: [A] argument type, [B] predicate type, and [C] argument-predicate type. Further, the argument-predicate type is divided into three subtypes: [C-i] cognate type, [C-ii] synonymous type, and [C-iii] split type.

The classification in this paper is based on the synchronic meanings of the elements involved in each expression. When we use the secondary data, we follow the original glosses, except in some instances: For example, when a noun equally refers to both ‘rain’ and ‘sky’ at least synchronically, we gloss it as ‘rain (n.)/sky.’ Moreover, we may gloss the word as ‘sky/rain (n.)’ if we can confirm that it primarily means ‘sky’ from the synchronic perspective.

Below, we survey features of each type with examples.

[A] Argument type: In this type, the argument is primarily responsible for expressing the rain phenomena. In TB, all examples of this type are monovalent, that is, they require only one argument: ‘rain (n.),’ even though in some cases the predicate is originally a transitive verb such as ‘send.’ The argument exclusively means ‘rain (n.),’ except in some cases where it is identical with ‘sky.’ The constituent order is mostly ‘rain (n.)’ + verb, with the exception of three Bai dialects that show the reverse order. Below, the detailed patterns and examples follow. (In the labels of patterns, a noun meaning ‘rain’ is indicated as RAIN(n); a verb ‘rain’ as RAIN(v); other words too are indicated with their representative meaning in capitals. The examples of Tibetic (T.) varieties, except for Lhasa, Dzongkha, Leh, Khapalu, Zangskar, Chabcha, and Pema, are shown in their equivalent Written Tibetan forms transcribed using the Wylie style):

- RAIN(n)+FALL: gSerpō T. etc. *gnam 'bab*; Nyagrang Minyag *mo⁵⁵ f^ha⁵³-re²²*; Yongning Na *hi¹⁵*; Duleng *məlaŋ khāt*; Talu *a55 hu55 dzu33*; Meche *noka haa*; etc.

- RAIN(n)+RELEASE: Jiaomuzu Situ *tə²⁴-mu⁵³ kə²²-le²⁵⁵*; Yadu Northern Qiang *me:⁴ ɛe*; Yelong Khroskyabs *mu⁵⁵ lat³³*; etc.

- RAIN(n)+COME: Geshitsa *mə⁵⁵⁵ ze⁵³*; Kathmandu Newar *wā waye*; Athpare *wet ta(y)-e*; Lisu *mu³³ xa⁵⁵ li⁵³*; Lahu *mū-yè là ve*; etc.

- RAIN(n)+SEND/GIVE: Zangskar T. *te^harpa taŋ*, etc. (only found in four Tibetic varieties)

- RAIN(n)+RETURN: Qiongshan Chuchen *təmo nagus*, etc. (only found in three rGyalrongic varieties)

- RAIN(n)+DO: Trung *si³¹ wa⁵³*; Dzongkha *châp cap* (only these two).

- RAIN(n)+V: Neshu *a55 xo55 xi55*, etc. The meaning of the verb itself is difficult to identify.

- RAIN(n)/SKY+FALL: Puxi sTodsde *mo ni-tdzə* (only found in two rGyalrongic varieties)

- FALL+RAIN(n): Xishanshalang Bai *yuo⁴² vu³³*, etc. (only found in three Bai dialects)

[B] Predicate type: In this type, the predicate is primarily responsible for expressing the rain phenomena. Most varieties except two show the same pattern that consists of a noun that means ‘sky’ and a verb that means ‘rain’ (SKY+RAIN(v)).

- SKY+RAIN(v): Mawo Northern Qiang *mə da-ke⁴*; Takale Kham *nəm wa-*; Naso *mu³³ ho³³*; Lalo *a⁵⁵-m²¹ ha⁵⁵*; etc.

- THAT+RAIN(v): Pwo *chə chən*, etc. (only found in two Karenic varieties.) The word *chə* has abstract usages such as to indicate natural phenomena (A. Kato 2004: 110).

[C] Argument-predicate type: In this type, both the argument and predicate (more or less) equally carry the meaning associated with rain. In this paper, we divide this type into the following three subtypes:

[C-i] Cognate argument-predicate type: Both the argument and predicate have the same or apparently relevant form.

- RAIN(n)+RAIN(v)[cognate]: Mazi sTau *mə²⁴-q^he⁵⁵ rqe⁵⁵ rqe²²*; Yi Southern *Λ⁵⁵-xo³³ xo²¹*; etc.

[C-ii] Synonymous argument-predicate type: Both the argument and predicate primarily express the rain phenomena, like [C-i], though their etymologies are different.

- RAIN(n)+RAIN(v): Bianer Geshitsa *mə q^{hi}*; Lizu *yua³³ zu³⁵*; Rawang *shə zaq*; Myitkyina Jinghpaw *məraŋ thù²*; Geba *wē zū*; Tiddim *gua[?] zu[;]*; etc.

- RAIN(n)/SKY+RAIN(v): Lhaovo *muk^L yu^F*; Yangon Burmese *mo: jwa*; etc. (In our data, all Burmish languages have this pattern.)

- RAIN(n)/WEATHER+RAIN(v): Youle Jinuo *mi³³tha⁵⁵ xo⁴²*-. The noun *mi³³tha⁵⁵* may mean ‘weather’ in different contexts. The verb *xo⁴²*- means

rainfall exclusively (N. Hayashi p.c.).

[C-iii] Split argument-predicate type: Neither the argument nor the predicate expresses the rain phenomena by itself, but they come together to express it.

- SKY/RAIN(n)+FALL: The noun is identical with ‘rain (n.),’ but synchronically its primary meaning is ‘sky.’ gYangkhyung T. etc. *gnam* ‘bab; Sangdam T. etc. *gnam babs* (only found in Tibetic varieties).

- SKY+FALL: Chabcha T. *hnem nbep*; Gewa Lamo *na*⁵³ *ts*^h*o*²⁴; etc.

- SKY+V: Polo *mr*¹³ *ŋo*³³

- SUN+FALL: Buer Trung *nəm*³¹ *za*²⁵³, etc. (only found in Trung; note that the noun *nəm*³¹ ‘sun’ is cognate with Tibetan *gnam* ‘sky (/rain (n.))’)

- WATER+FALL: Lhagang T. *chu* ‘bab.

2. Geographical distribution and interpretation

Maps 1 and 2 illustrate the geographical distribution of the types of ‘it rains’ in TB.

The argument type (indicated with squares in the maps) is predominant in the western spots (Tibetic varieties, Newar, Kiranti, Galo, etc.), although it is also scattered in the southeastern spots (Lahu, Yi Southern, Nesu (these three are Loloish), Bai, etc.). It is found in many spots in the center as well (Qiangic, rGyalrongic, Yi Northern, many Tibetic varieties, etc.). The ‘FALL+RAIN(n)’ pattern, in which the verb precedes the noun, is found only in Bai. It is apparently loan translation of Chinese *xià yǔ* (fall rain (n.)), since Bai is in an intensive language contact situation with Chinese.

The predicate type (circles) shows limited distribution. It is found in the eastern and central spots (Loloish and Qiangic), except for one in Nepal (Kham (Kham-Magar-Chepeng)) and two in Southern Burma (Karenic).

The cognate argument-predicate type (star) mainly concentrates in the eastern spots (Loloish varieties such as Yi, Alo, Nasu, and Lisu); however, it is also found in a few spots in the center (sTau and Zbu (rGyalrongic)).

The synonymous argument-predicate type (rhombuses) is predominant in the southern spots: Burmish, Karenic, Kuki-Chin, Jingpho-Luish, and also Rawang (Nungic) and some Loloish varieties spoken in the southern border area of China. This is a good example of the areal feature, since the distribution is geographically concentrated but genealogically

diverse. Moreover, this type is also found in some spots in the center (Qiang, Shihing (Qiangic) and Geshitsa (rGyalrongic)).

The split argument-predicate type (rectangles) is mainly found in the northern and central areas. Most such spots are of Tibetic varieties in which the noun *gnam* primarily means ‘sky’; however, such spots also involve other languages such as Trung (Nungic) and Lamo (affiliation unidentified) spoken in the neighboring area. The noun is *na* ‘sky’ in Lamo and *nəm*³¹ ‘sun’ in Trung, which suggests the influence from the neighboring Tibetic varieties.

From the maps, we may conclude that the predicate is more likely to encode the event substantially in the east, but it is less likely in the west and north. In addition, all types are found in the central area.

The chronological order of each type cannot be easily demonstrated. One may assume that the predicate type is the oldest because logically rainfall phenomena do not involve a participant, as Van Valin and LaPolla (1997: 150) labeled the argument structure of weather verbs as atransitive, that is, of zero-valency. This cannot be confirmed, however, at least from the distribution of each type. It should also be noted that, at least in Karenic, the predicate type is secondary as opposed to the argument-predicate type, which is more widespread (Atsuhiko Kato, p.c., 2018). Thus far, we have not been able to ascertain the relative time-depth of the types in TB.

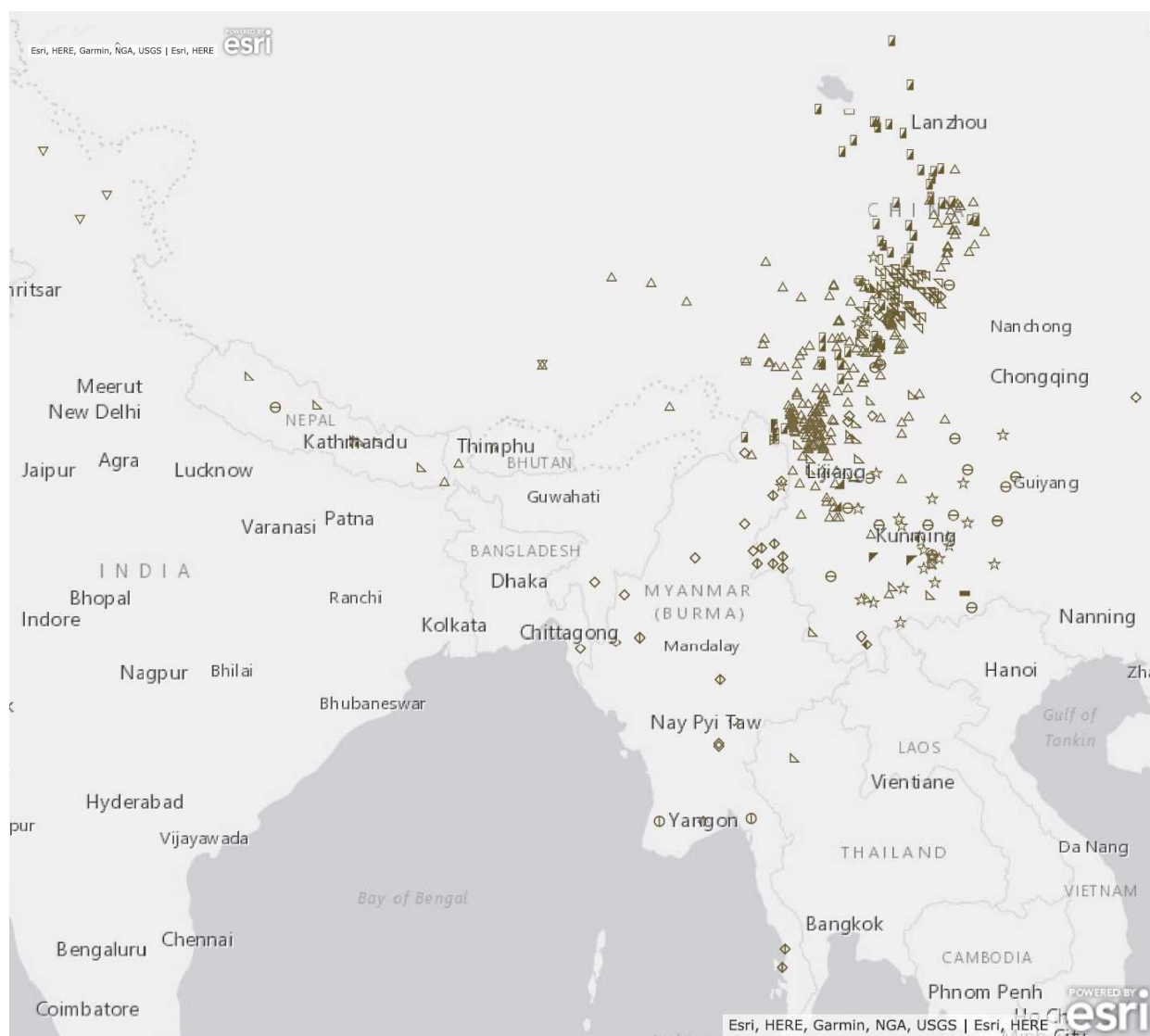
We can find several semantic shifts of the constituents that have caused the change of types: For example, words derived from PTB **r-məw* ‘sky/heavens/clouds’ (STEDT) mean ‘rain (n.),’ ‘sky,’ etc., according to language varieties. This point will be examined in another paper (Shirai et al., this volume).

3. Conclusion

In this study, we examined the geographical distribution of typologically classified types of the expressions that mean ‘it rains’ in TB. It is significant that all major types are found in TB. Through geolinguistic analysis, we found several tendencies of the distribution, although it is difficult to ascertain the chronological ordering among the types.

Keywords: meteorological expression, Tibeto-Burman, semantic shift, language contact

(Satoko Shirai, Keita Kurabe, Hiroyuki Suzuki, Kazue Iwasa, and Shiho Ebihara)



Legend

A. Argument type

- △ RAIN(n)+FALL
- ▽ RAIN(n)+RELEASE
- ▴ RAIN(n)+COME
- ▾ RAIN(n)+SEND/GIVE
- ◀ RAIN(n)+RETURN
- ▶ RAIN(n)+DO
- ▲ RAIN(n)+GO
- ▼ RAIN(n)+V
- ▲ FALL+RAIN(n)
- ▲ RAIN(n)/SKY+FALL

B. Predicate type

- ⊖ SKY+RAIN(v)
- ⊕ THING+RAIN(v)

C. Argument-predicate type

C-i Cognate argument-predicate type

- ☆ RAIN(n)+RAIN(v)[cognate]

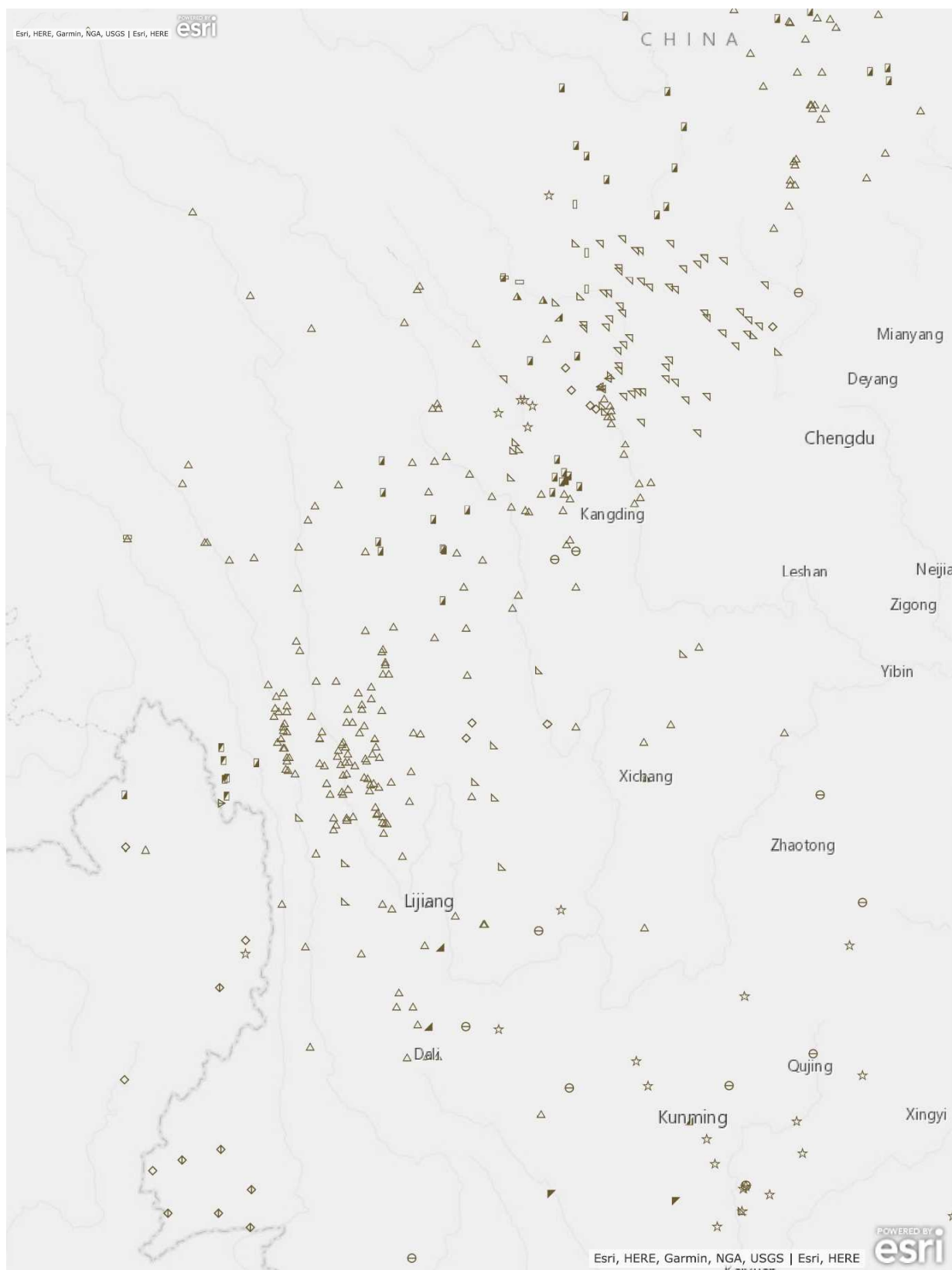
C-ii Synonymous argument-predicate type

- ◇ RAIN(n)+RAIN(v)
- ◊ RAIN(n)/SKY+RAIN(v)
- ◆ RAIN(n)/WEATHER+RAIN(v)

C-iii Split argument-predicate type

- ◻ SKY/RAIN(n)+FALL
- ◻ SKY+FALL
- ◻ SKY+COME
- ◻ SKY+V
- ◻ SUN+FALL
- ◻ WATER+FALL

Map 1: 'It rains' in Tibeto-Burman, the whole area



Map 2: 'It rains' in Tibeto-Burman, enlarged

'It rains' in Austroasiatic

In Vietnamese, an Austroasiatic language, the word for 'rain' is *mưa*. This word can be used both as a noun and as a verb. The expressions for 'It rains' in Vietnamese are as follows:

- A) *trời* 'sky, heaven' (n) + *mưa* 'to rain' (v)
- B) (Noun phrase for place or time) + *mưa* 'to rain' (v)
- C) *mưa* 'rain' (n) + *roi* 'to fall' (v)

Like Vietnamese, there are many Austroasiatic languages in which the distinction between verbs and nouns is ambiguous.

1. Lexical features

The word forms for 'rain' in Austroasiatic languages can be classified into 10 categories as follows:

- A) CmVh type** < *mi? (& *mii??); *mih; *miiw 'rain, to rain' (Shorto, 2006:99)
gəma:h (Aslian: Mah Meri), mi: (Bahnaric: Brao), bai (Bahnaric: Tampuan), etc.
- B) Cle type** < *kleh 'to fall' (Shorto, 2006:527)
le (Palaungic: Son), kle? (Palaungic: Lawa), chəlí: (Palaungic: Lamet), etc.
- C) da? type**
da? (Munda: Mahali [Matindor]), hoida? (Munda: Santali), etc.
- D) phɨj type**
phrɨj (Monic: Nyah Kur), phɨj-dáak (Monic: Nyah Kur), etc.
- E) br- type** < *brii? 'sky' (Shorto, 2006:110)
pròa (Monic: Mon), bray (Monic: Middle Mon), etc.
- F) gur type** < *guur 'to fall' (Shorto, 2006:420)
gur (Monic: Old Mon), guria? (Munda: Gta'), etc.
- G) cuŋ type** < *juuŋ 'rain, to rain' (Shorto, 2006:187)
juŋ (Palaungic: Palaung), cuŋ² (Palaungic: Riang), etc.
- H) hVc type**
hĩc (Aslian: Jahai), hec (Aslian: Tonga), etc.
- I) pliəŋ type** < *pliŋ; *[p]liiŋ; *[p]liəŋ 'sky' (Shorto, 2006:271)
priaŋ (Katuic: Ngeq), pliəŋ (Khmeric: Khmer), etc.
- J) təŋ type**
təŋ (Katuic: Katu), prah təŋ (Katuic: Ta'Oi), etc.

Others

The forms of A) CmVh type are widely seen across all Austroasiatic languages, so it is quite likely that this is the oldest form. We can see that in some

languages of E) br- type and I) pliəŋ type, the word for 'sky' and the word for 'rain' have the same form.

2. Syntactic features

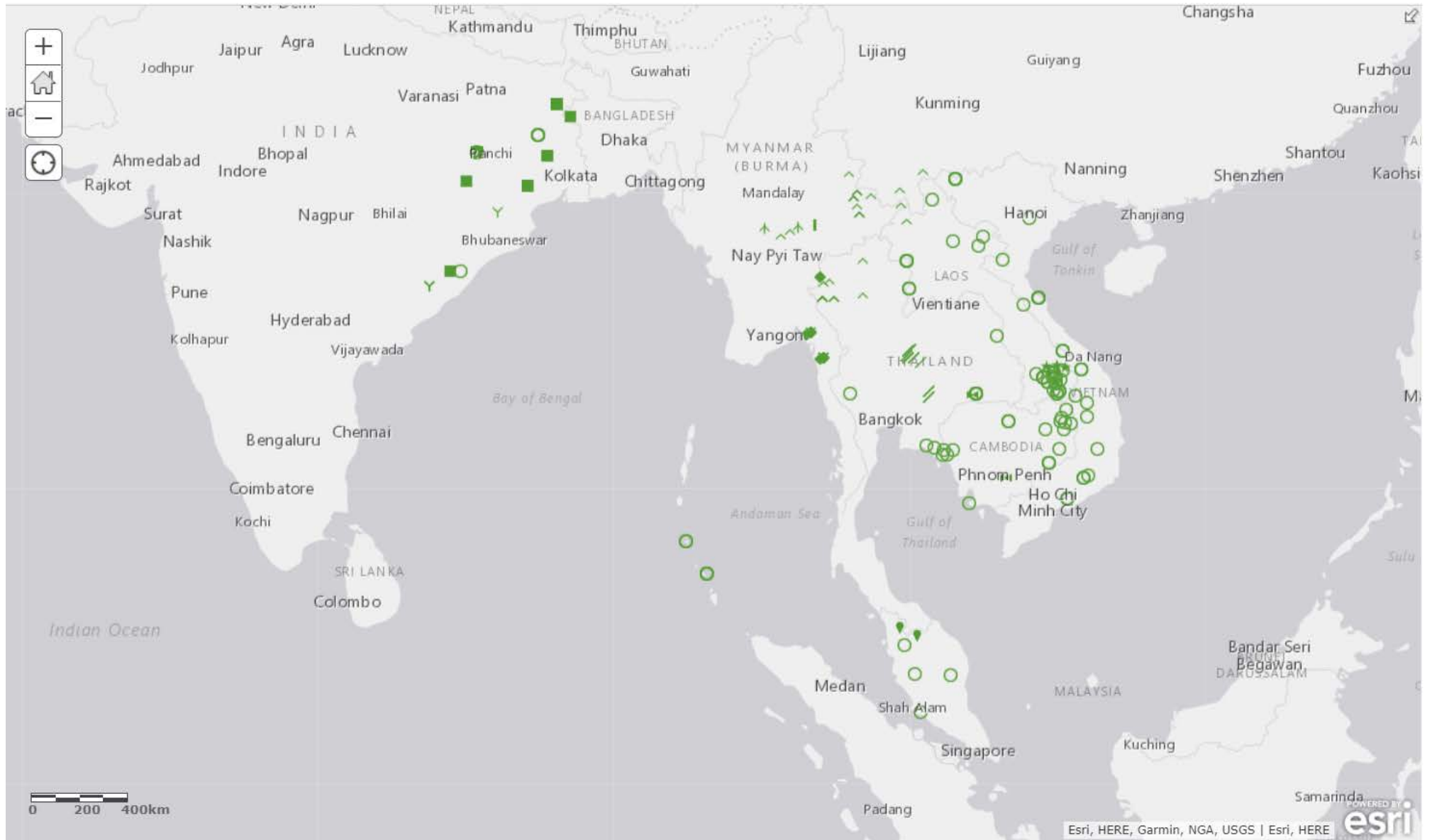
Here, we enumerate some data about the word for 'rain' or expressions for 'It rains' in some Austroasiatic languages. However, further investigation is necessary for details on the usage of words in each language.

- A) (to) rain (n, v) (Brao language)
amə: 'It rains'
amə: 'rain' (Ferlus, 1969)
- B) sky (n) + to rain (v) (Sapuan language)
bri: mmiə 'It rains'
bri: 'sky' + mmiə 'rain' (Ferlus, 1969)
- C) rain (n) + to fall, to rain (v) (Riang language)
cuŋl kləl 'It rains'
cuŋl 'rain' + kləl 'to fall, to rain' (Shintani, 2014)
- D) to fall, to rain (v) + rain (n) (T'in language)
leh mia? 'It rains'
leh 'to fall, to rain' + mia? 'rain' (Filbeck, 2009)
- E) NP[rain (n) + to fall (v)] + to fall (v) (Kengtung language)
glaae le coh 'It rains'
glaae 'rain' + le 'to fall, to rain' + coh 'to fall' (Shintani, 2008)

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<http://sealang.net/munda/index.htm>
(KONDO Mika)

Map: The forms for 'rain' in Austroasiatic



- | | | | | |
|----------------|---------------|---------------|-----------------|-------------------|
| ○ A) CmVh type | ^ B) Cle type | ■ C) da? type | / D) ph̃j type | ◆ E) bri type |
| Y F) gur type | G) cuŋ type | ● H) hVc type | ✧ I) pliəŋ type | ★ J) təŋ type ... |

“It Rains”: Austronesian languages

1. Classification of expression

The expression “It rains” in West Malayo-Polynesian languages can be categorized into two types. Type A involves conversion: a noun that means “rain” used as a verb that means “to rain.” Type B employs verbalization: a noun that means “rain” takes a verbalizing affix and a verb that means “to rain” is formed as a result of the affixation. The forms of the affixes vary but their function is much more consistent—an affix that forms a stative verb or that forms an intransitive active voice verb is used to create a verb that means “to rain.”

2. Types and structural features

The groupings of languages that belong to Type A and those that belong to Type B cannot be stated clearly. However, there is a tendency for languages that have Indonesian type voice alternation to belong to Type A. Languages under this category have the active and the passive voices and usually have a limited number of verb-forming affixes. Most Penan-Kenyah languages in Kalimantan are also Type A.

Formosan and Philippine languages that have more than two undergoer grammatical voices, i.e., three or more grammatical voices, tend to be Type B. It is assumed that languages with a rich verbal morphology need a verbal affix attached to the noun that means “rain” in order to express “It rains.”

3. Geographical distribution

Malayic languages that belong to Type A are spoken all over Malay Peninsula, South Thailand, Brunei, Singapore, and on the Indonesian islands of Sumatra and Kalimantan. Penan-Kenyah languages exist in inland Kalimantan.

Type B languages are mostly found in Taiwan and northern Philippines and North Sulawesi, where Philippine-type languages are found.

4. Examples of languages and expressions

4.1 Type A languages

The Indonesian language belongs to the Type A category. The noun for “rain” in it is *hujan* and this form can be used to express “It rains,” as in the sentence (1) in which *hujan* is clearly used as a verb because it is preceded by aspect markers. In contrast,

(1) *Sudah mau hujan.*

already be.going.to rain

“It is certainly going to rain”

(2) *Hujan hebat*

rain heavy

“It is a heavy rain” or “It rains heavily”

Other Type A languages have features highly similar to that of the examples above.

4.2 Type B languages

A verbalizing affix that attaches to the noun that means “rain” varies in its form from language to language. It is assumed that the word “rain” took a stative affix **ma-*, resulting in **ma-quzaN* in the Proto Austronesian language (PAN). Lun Daye, a language in Kalimantan, takes an affix that is an innovation of this stative prefix **ma-*, as shown in example (3). On the other hand, Bantik, a language spoken in North Sulawesi, takes an affix that is an innovation of **maR-*. The /R/ sound, as in Bantik, is sometimes realized as the nasalization of the first consonant of the verb base in the later innovation as in example (4) (“Rain” in Bantik is *tahiti*).

(3) *m-udan co sini*

AV-rain day this

“It rains today” Lun Daye (Soriente, personal communication)

(4) *rou-i ma-nahiti*

day-this AV-rain

“It rains today” Bantik (Utsumi 2005)

In other Formosan and Philippine languages, the affix attached to “rain” is the innovation of PAN **<um>* as in Sedeq (example 5) and Tagalog (example 6).

(5) *quyux sayan*

<AV>rain today

“It rains today” Sedeq (Tsukida 2009)

(6) *ʔ<um>uʔulan*

<AV>rain

“It rains” Tagalog (Hirano 2012)

In any case, the verb-forming affix that forms an Actor Voice verb and the resulting verb is always an intransitive or stative verb.

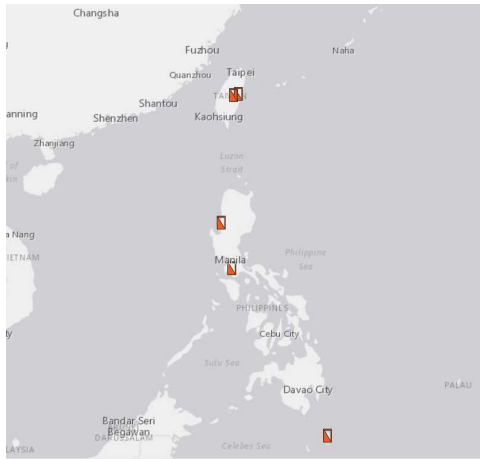
Keywords: expressions for “It rains”, conversion, verbalized form, verb-forming affix, stative verb.

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(Atsuko Utsumi)



Map 1: Taiwan and Northern Philippines

▣ Type A expression: Conversion (A noun meaning “rain” is also used as a verb without any change in form)

✱ Type B expression: Verbalization (An affix is attached to the noun meaning “rain” to form a verb that means “It rains”)



Map 2: Indonesia

"It rains" in Uralic and Tungusic

Ryo MATSUMOTO

1. Classification of the types

The construction of "it rains" is divided into two types according to the words for "rain". The languages of Type A have a dummy verb which means "to fall". If a language of Type B has a cognate noun as the subject, it is classified as Type C.

the word for "rain"	subtype
A. NOUN in nominative	A1
in other cases	A2
B. VERB	
with no subject	B0
with the subject of a dummy form . . .	B1/B2 ¹
of the cognate	AB

In Uralic languages:

Finn.	Tänään sataa. (cf. sataa "to rain")	B0
Kar.	Pihal vihmua. (cf. vihmua "to rain")	B0
Est.	Vihma sajab. (cf. vihm "rain")	A2 ²
Mari.	Jür jüreš.	C
Komi.	Zer zerö.	C
Hun.	Esik az eső.	C
Nen.	Sar'io xaʔmorŋa.	A1

In Tungusic languages:

Ev.	Tigdə tigdəjərən.	C
Sibe.	aɣa da-	A1

2. Other expressions for "rain"

Some languages have a few expressions for rainy weather, for example in Nenets:

Nen. T'uku jal'a pix'ina sar'io. "lit. Today outside rain_is"

The copula verb "to be" is found in this expression, not the verb meaning "(water is) falling", and it is also a very popular expression. This uses a noun-predicate construction. If the marked condition is expressed, a verb is used;

Sar'io sar'iobtirŋa. (мелкий дождь по временам)
 Sar'io xavna. (сильный дождь)

Finnish has such expressions below:

Finn. Sataa vettä. "It is raining." B1 or B2?

¹ B1 with absolutely dummy subject, B2 with intermediate noun subject

² Most Balto-uralic languages have the impersonal construction with the "rain" noun in the partitive case (A2).

Pian tulee sade. "It will rain soon." A1
 Koko päivän oli sadellut.
 "It was raining all day." B0

It has been observed that different types of constructions are found in one language.

3. On other weather constructions

Sometimes there are a few types about other weather than rain. In most of Type A, the same verb – mostly meaning "to fall" – is used not only for "rain", but "snow" or "hail", for example in Estonian, and even in Finnish.

Est. Sajab vihma/lund/rahet.
 is_falling rain/snow/hail

Finn. Eilen satoi lunta. "Yesterday snow was falling."

However in Hungarian:

Hun. Esik as aső. "lit. The rain is raining."
 Esik a hó. "lit. Snow is raining."
 Havazik. "(It is) snowing."

Type B should be considered to be closer to Type C according to whether the subject is obligatory or not.

4. Typical C type – the Cognate construction

Evenki, a typical Type C language, has many kinds of nouns for various weather conditions, and most of these nouns are also used as verbs:

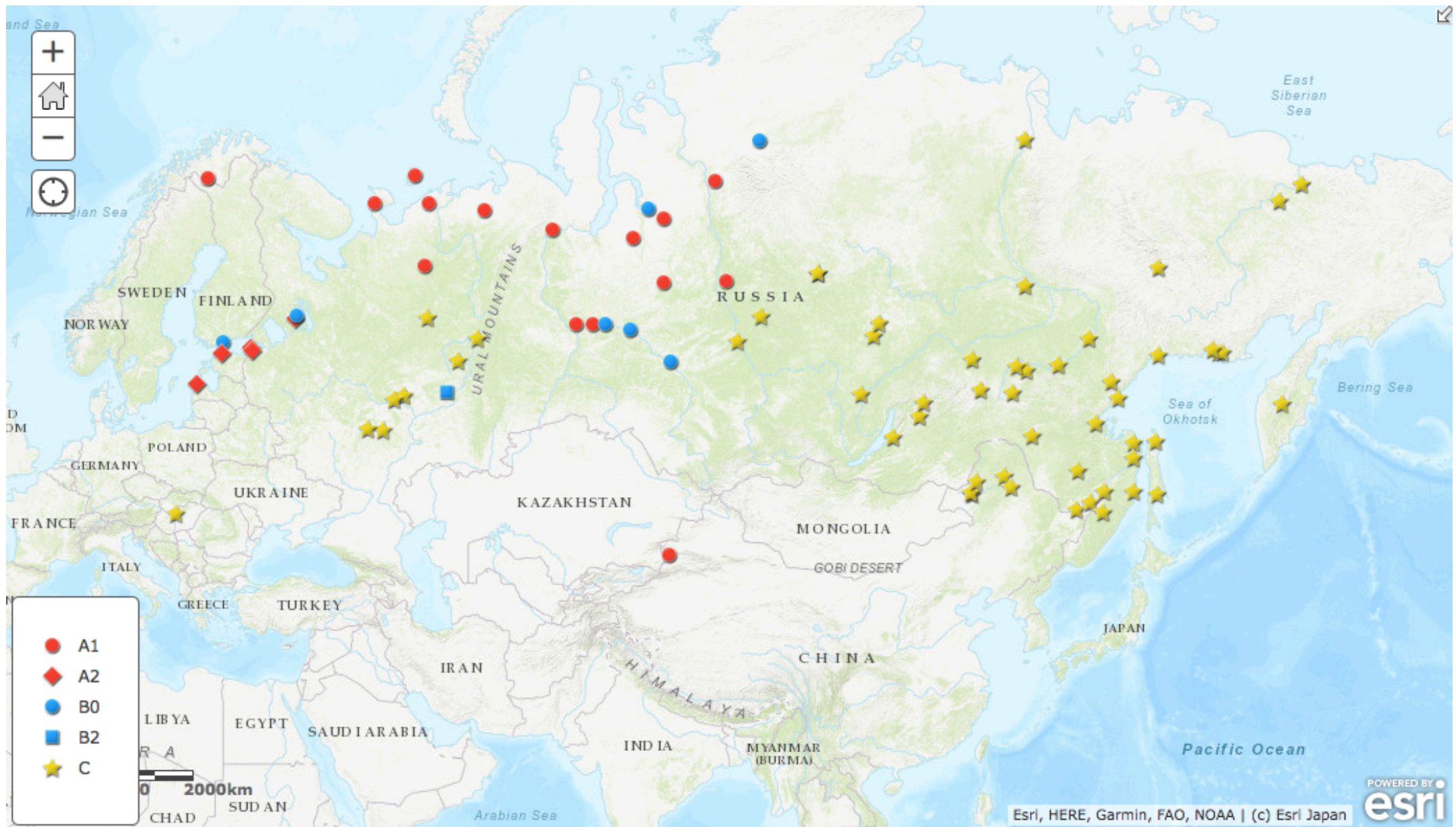
Ev. Imanna imannaŋaran. "It is snowing."
 Agdi agdiŋačan. "Thunder was rolling."
 Ədin ədinjərən. "Wind is blowing."
 Xunŋə xunŋərən. "There is a blizzard"

Indeed, in the Tungusic languages quite a few words are used both for a noun/adjective and a verb.

5. Historical change of the types

Type C is widespread in the central area in Siberia, and the type A and B are distributed in the peripheral area. It is possible that there was a process of historical change of the types (I > II > III > IV, or I > II'.

- (I The noun-predicate construction)
- II A noun is also used as a verb = C
- III A subject noun is substituted by a dummy noun = B
- IV One of the verbs is used generally and a noun for weather is needed as a subject = A
- II' A noun is used in the verb-predicate construction = A



“It rains” in Mongolic and Turkic

1. Mongolic

The Mongolic languages have two types of words¹ for “rain,” but they all use the same word *or-* “to enter” for “to rain.” E.g.:

Mongol	<i>borō or-</i>
Buriad	<i>borō oro-</i>
Shera Yugur	<i>xura oro-</i>
Dagur	<i>huar war-</i> ²

2. Turkic

The words *jag-* “to fall” and *tüs-* “id.” are used for “to rain” in Turkic languages. E.g.:

Sarīg Yugur	<i>jaymər jay-</i>
Uzbek	<i>jomgir jog-</i>
Bashkir	<i>jamkur jaw-</i>
Turkish	<i>jāmur jā-</i>

Chuvash	<i>śumār śu-</i> (<i>śāv-</i>)
Tuvan	<i>ča’s čag-</i>
Chulym ³	<i>suy čap-</i>
Sakha ⁴	<i>ardax/samīr tūs-</i>
Dolgan	<i>hamīr tūs-</i>

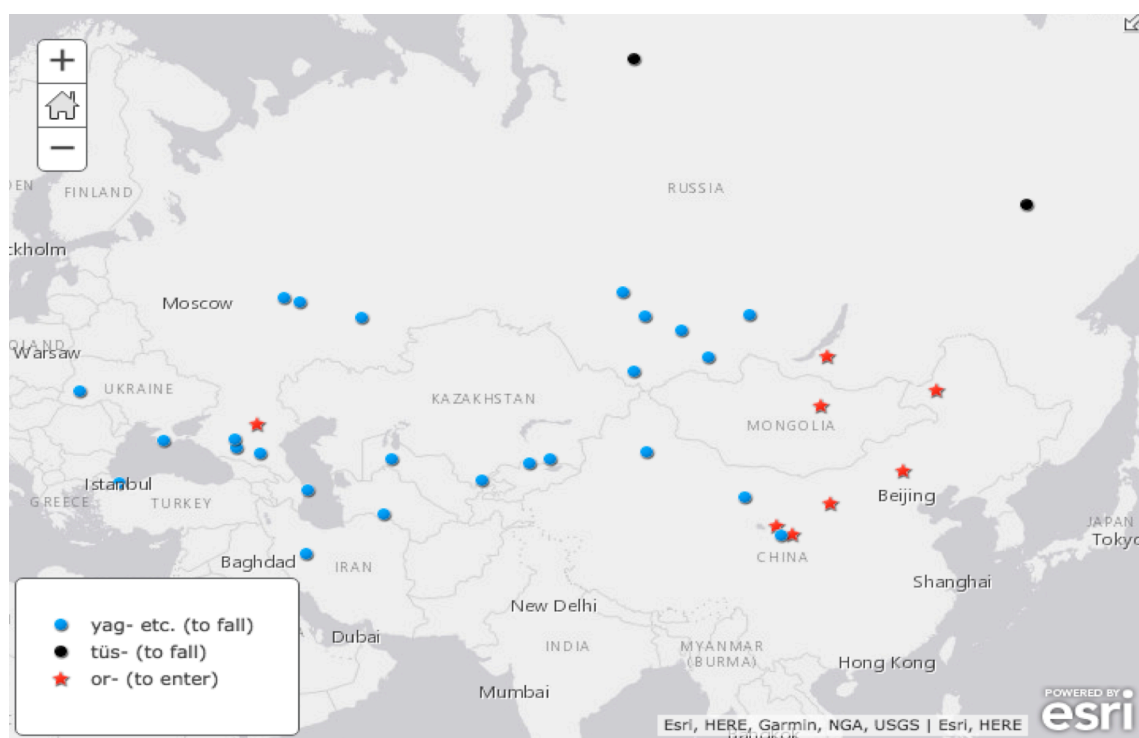
The forms *jaymər*, *jamkur*, *samīr*, *śumār*, *hamīr*, etc. are cognates derived from Old Turkic *jagmur* “rain,” which is made from the verb *jag-* “to fall”⁵ by attaching a nominal suffix *-mur*.

3. Distribution

The distribution of the words for “to rain” is simple. The verb meaning “to enter” is used in Mongolic⁶, and the verbs meaning “to fall,” in Turkic.

Keyword: to rain

(Yoshio Saitō)



¹ *borōn*-type and *xur*-type.

² The form *war-* in Dagur is due to the breaking of a vowel taken place in the first syllable.

³ Chulym uses *suy* “water” for “rain.”

⁴ Sakha also has a verb *ardā-* “to rain.” (Personal communication from Fuyuki Ebata)

⁵ There is no etymological connection between the noun for “rain” and the verb for “to rain” in Mongolic.

⁶ The Mongolic-speaking people in the lower Volga region moved from West Mongolia in the 17th century.

“It rains” in Arabic

1. Classification of “it rains” types of expressions

The expressions of “it rains” are classified as follows.

A. The verb type (“to rain”)

A-1. The no subject type

bəṭmaṭṭar [raining], *btifti*: [raining]

A-2. The dummy subject type

id-dunja bitmaṭṭar [the-world raining]

B. The subject type (“the rain”)

B-1. With a lexical verb

alxariif nāzal [rain went-down]

B-2. With a dummy verb

maṭar dza: [rain came]

taʕmel if-ṭita [do the-rain]

B-3. As alternative expressions

al-maṭar na:zle [the-rain going-down]

C. The repeated cognate subject type

māṭara māṭaret ‘rain rains’

2. Geographical distribution and interpretation

A. The verb type (“to rain”) (the predicate type)

This is the type in which the verb “to rain” takes the main role; it is the primary pattern in Arabic. It is distributed mainly in the core Arabophone areas, but a peripheral dialect, Cypriot, also uses this type.

A-1. The no subject type (the complete predicate type)

The verbs “to rain” are usually used without a subject.

This can be called the complete predicate type.

bjə?moʔ ʔalbi lamma bəṭmaṭṭar: [shackles my-heart when rains] ‘I get the blues when it rains’ (Syrian)

la:kin il-jo:m ma-btifti:-f: [but today not-rains-not] (Palestine)

má kanifatti [not did-rain] ‘it didn’t rain’ (Cypriot)

A-2. The dummy subject type (the sub-predicate type)

In A-1 type dialects, sometimes the dummy subject *id-dunja* ‘the world’ appears. This word is used in weather expressions such as *id-dinja bard* [the-world cold] ‘it’s cold’, *id-dinja baʔat ɖalma* [the-world became dark] ‘it got dark’ (Cairene).

id-dinya bitmaṭṭar [the-world raining] (Cairene)

kull marra nri:d niṭlaʕ tumṭur id-dinya: [every time we-want we-go-out rains the-world] ‘It rains every time we want to go out’ (Iraqi)

muṭrat d-dinja: [rained the-world] (Gulf)

maṭṭarat ad-dunja: [rained the-world] (Yemeni)

B. The subject type (“the rain”)

This is the type of expression in which the subject “the rain” takes the main role. The verb is used for syntactic necessity and adds some grammatical functions such as tense. This pattern is the only pattern of the expression in some peripheral dialects. The weather phenomena tend to be represented by nouns in areas in contact with other languages.

B-1. With a lexical verb (the sub-argument type)

In some peripheral dialects such as in Central Africa (Nigeria, Chad, Kenia, Uganda), the subject “the rain” is accompanied by a lexical verb such as “fall,” or “pour.” It can be called the sub-argument type because the lexical meaning of the verb remains.

alxariif nāzal [rain went-down] (Nigerian)

mátará gí wága [rain being fall] (Nubi Kibera)

sobou almé [pour rain] (Nubi)

almi sabba [rain poured] (Chadian)

mattra soub [rain pour] (S.O. du Tchad)

álme sábbá [rain pour] (Nigerian)

B-2. With a dummy verb (the argument type)

In some peripheral dialects, such as Anatolian and Maltese, the subject “the rain” is accompanied by a dummy verb such as “to come” or “to do.” This type can be said to be the argument type.

maṭar dza: [rain come] (Kozluk in Anatolia)

ʔed taamel if-ṭita [being does the-rain] (Maltese)

B-3. As alternative expressions

Additionally, in the A type area, the subject “the rain” is sometimes used in alternative expressions.

al-maṭar na:zle [the-rain going-down] (Syrian)

u f-ṭia ka-ṭṭih bəzzaf? [and the-rain being-fall a-lot] ‘And does it rain a lot?’ (Moroccan)

ṭṣabb əf-ṭifa [pours the-rain] (Jewish Arabic in Tripoli Libya)

C. The repeated cognate subject type

In Bukhari, “it rains” is expressed as “(the) rain rains” with a repeated cognate subject. Bukhari is the only example of this type in Arabic.

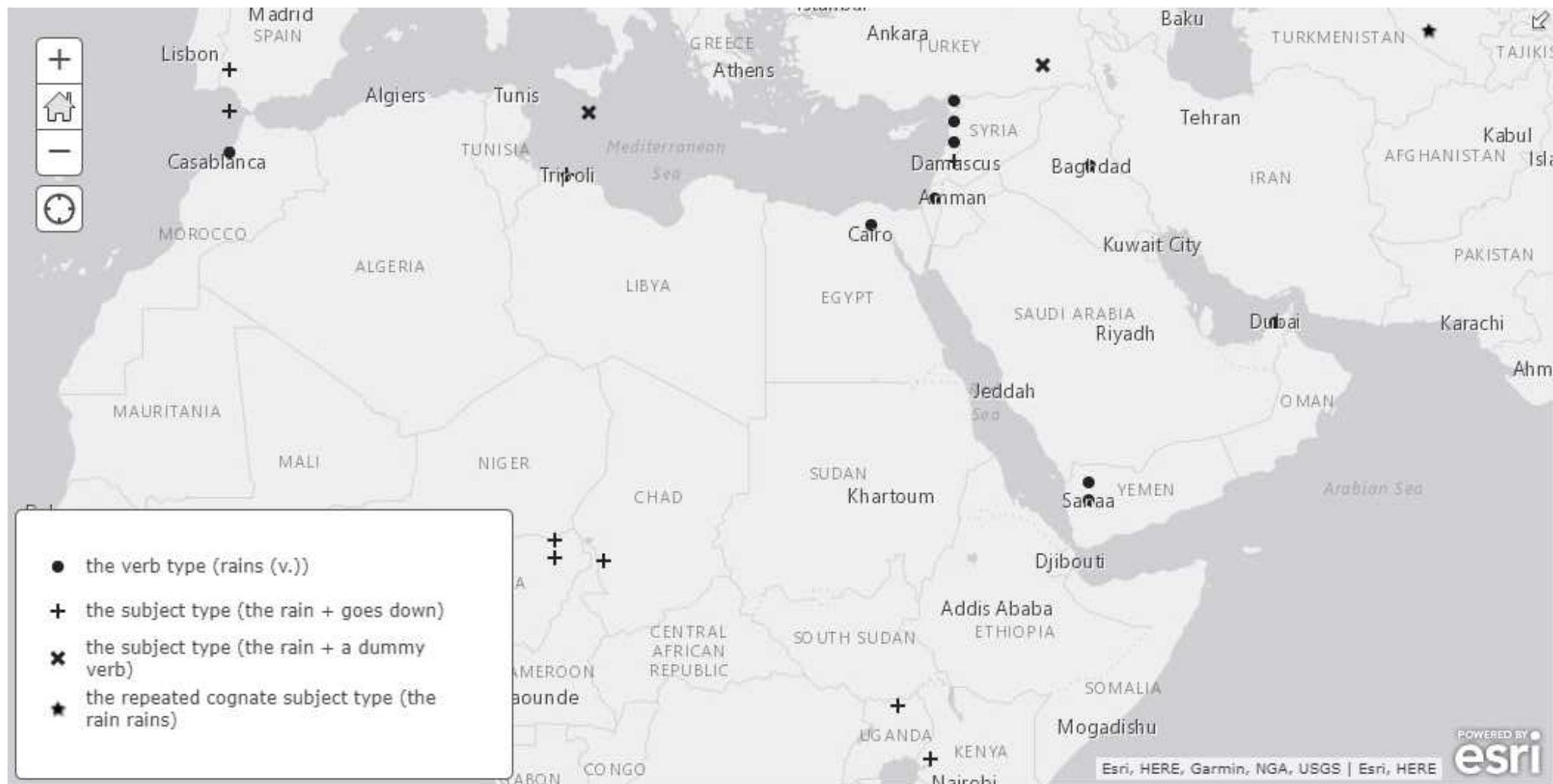
ams māṭara māṭaret: [yesterday rain rained] ‘It rained yesterday.’

In some contexts, other subjects or verbs are used.

ke:m únṭur (< *júmṭur*) [cloud rains] ‘It rains.’

hamál sana kasi:r maṭara:t sore:n: [this year much rain become] ‘It rained a lot this year.’

(Youichi Nagato)



It Rains: South Asia (IE (Aryan, Iranian), Dravidian, Andamanese, and Burushaski)

1. Classification of forms

In South Asian languages, there are three major categories of forms – Argument, Argument-Predicate, and Predicate –, and Argument-Predicate type can be divided into two subtypes – Cognate and Split.

A. Argument type: expresses ‘it rains’ with the construction [‘rain’ (n.) + supportive V]. Supportive verbs can be ‘fall’, ‘pour’, ‘come’, ‘do’, and so on.

B. Argument-Predicate type: expresses ‘it rains’ with either B1 [‘rain’ (n.) + ‘rains’ (v., cognate to ‘rain’)], or B2 [N (not ‘rain’) + supportive V (not ‘rains’)]. The only N of B2 type is ‘water’ in this paper, amongst other possibility like ‘waterdrop’ and so on.

C. Predicate type: expresses ‘it rains’ with the construction [(N) (empty or expletive) + ‘rains’].

For my regret, I have not yet gathered much information about how South Asian languages express ‘it rains’ for this report. Many grammars I browsed do not treat any meteorological expressions in particular. Thus I could get information only on some respectively major languages here.

2. Geographical distribution and interpretation

The most major type is A – Argument type in South Asia. And then, B1 and C. B2 – Split Argument-Predicate type is detected just with one language.

Languages of A type can be seen all over the area, at least in India and Pakistan. I guess this type is the most common in South Asia. The languages employ several kinds of supportive verbs: FALL (12 of 24), POUR (3), COME (3), BECOME (3), DO (2), and PUT (1). Among them, the [‘rain’ + ‘pour’]

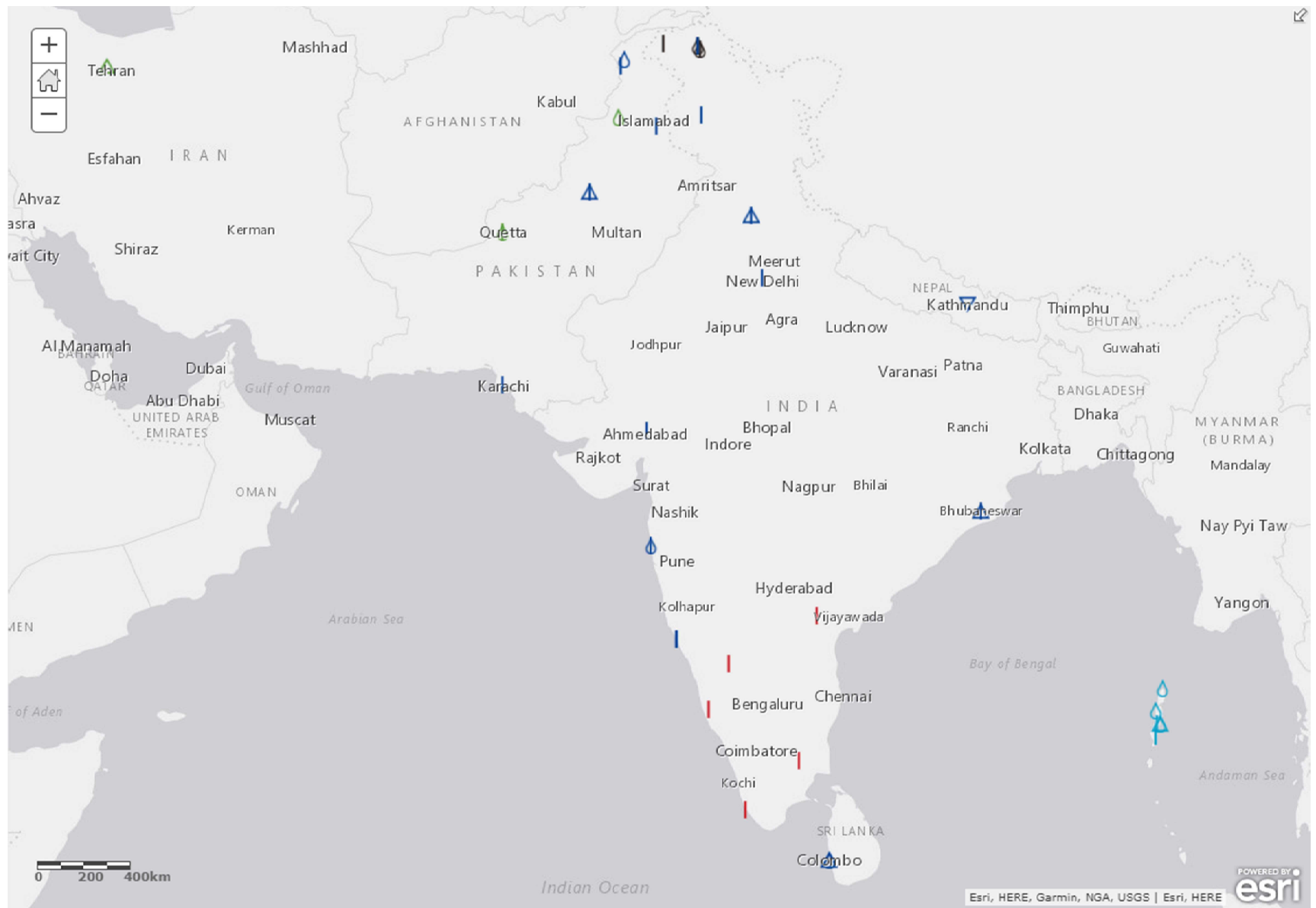
expression is of the Konkani, Tulu, and Kannada languages and shows a partial distribution limited to Goa and Karnataka in middle western India.

Type B1 languages belong to Aryan (Marathi, Oriya, Panjabi, and Sinhala), Iranian (Balochi and Persian), and Great Andamanese (Mixed Great Andamanese). They distribute rather peripheral, but northern Pakistan has no languages of this type. Most of SA languages, which I treat here, are agglutinative (or somewhat inflectional) and have enough verbal morphology, so that it is hard to find any language of these families showing the synonymic argument-predicate pattern [‘rain’ (n.) + ‘rain’ (v.)] as Tibeto-Burman languages do.

The only B2 language is Nepali. Schmidt (1994) translate ‘rain (v.)’ into *pānī āunu* पानी आउनु [‘water’ + ‘come’].

C – Predicate type is of three totally different language groups. The first is Khowar, a northwestern Aryan, particularly so-called Dardic language. This language expresses ‘rain (v.)’ with a simple verb *boşik*, surely derived from Skt *varṣakāla* वर्षकाला ‘rainy season’. A neighbouring language Kalasha does have the cognate, similar word *bāşik* ‘rain’, but uses it as a noun only. The second is Burushaski, which has the noun *harált* ‘rain’ but also has the verb *diáarc-* ‘rain’ of a different root. The verb *diáarc-* is derived from the verbal root *√gáarc* which means ‘run, gallop’. The third is Andamanese languages. For example, Mixed great Andamanese expresses ‘rain’ with the verb *cer*. This language has also B1 type expression *jicer cer* which literally means ‘rainwater+rain rains’ (*ji* ‘rainwater’, *cer* ‘rain’). Khowar and Burushaski are geographically rather close to each other, but no other neighbouring languages have a simple verb meaning ‘to rain’. Andamanese in the Bay of Bengal is located really far from the above two languages in the Krakorum and Hindukush mountain ranges.

(YOSHIOKA Noboru)



Map 1. 'It rains' in South Asia

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Remarks on ‘Rain’ in Tibetans’ Languages in Lithang County

Hiroyuki Suzuki^a

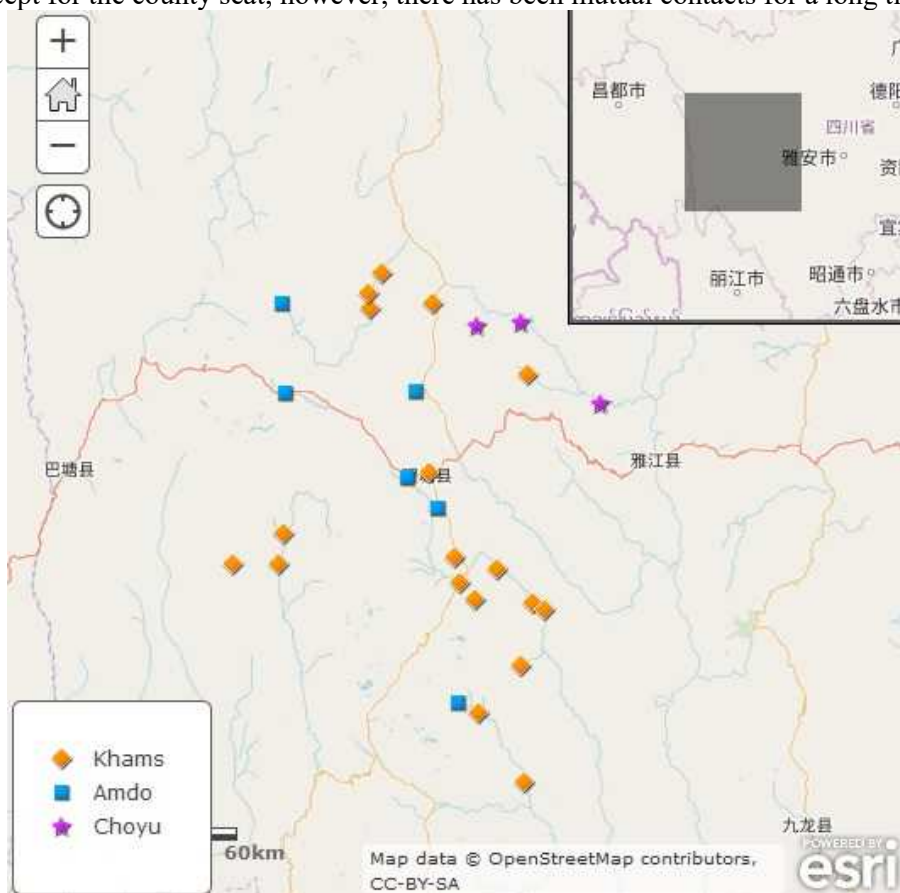
^aIKOS, University of Oslo / National Museum of Ethnology

Abstract

This article describes the expression ‘it rains’ in three Tibeto-Burman languages spoken in Lithang County: Khams, Amdo, and Choyu, and discusses the word form for ‘rain’ appearing there. There are two semantic types for ‘rain’: ‘rain’ and ‘rain/sky’. For Khams and Amdo, two WrT forms appear: *char pa* and *gnam*, of which the distribution is geographically divided. Choyu uses the ‘rain’ type, but sometimes also uses the word form for ‘sky’ instead of ‘rain’, which can be analysed as influence from Amdo.

1 Introduction

In Lithang [Li-thang] County, located in the central area of Kandze [dKar-mdzes] Tibetan Autonomous Prefecture of Sichuan Province, three Tibeto-Burman languages are spoken: Khams Tibetan, Amdo Tibetan, and Choyu (Suzuki 2018, see Map 1; cf. *Litang Xianzhi* 1996). The first two languages are Tibetic, and the last one is Qiangic. These three languages are not directly contacted with each other except for the county seat; however, there has been mutual contacts for a long time.



Map 1: Language distribution of Lithang County

Looking at the form ‘it rains’, which is the main topic of SAG-VIII (see Shirai et al. in this volume-b) in the three languages, we can find an interesting phenomenon concerning language contact and semantic change. This article focuses on examining the word form of ‘rain’ in the languages spoken in Lithang County.

Before beginning the discussion, I introduce the major cases of the form for ‘rain’ in Khams and Amdo with a transliteration of Written Tibetan (henceforth WrT). As Shirai et al. (in this volume-b) present, the majority of Khams uses a form corresponding to WrT *char pa* (cf. Suzuki forthcoming), whereas that of Amdo uses WrT *gnam*. WrT *char pa* is a noun denoting ‘rain’ or ‘raindrop’, and WrT *gnam* designates ‘rain (phenomenon)’, which is the same form as ‘sky’ in several dialects.¹ Shirai et al. (this volume-a, b) pay attention to the semantic development concerning the latter type because it is related to the construction of weather expressions (Malchukov and Ogawa 2011:24-27).

2 ‘It rains’ and ‘rain’ in the varieties of Lithang

I present principal examples of the expression ‘it rains’ in the languages of Lithang as in Table 1. All the data were obtained and described by the present author through the fieldwork conducted in 2017.

Table 1: List of word forms for ‘it rains’

Language	Dialect	Form for ‘it rains’ (with glossing and WrT)
Khams	Lithang	^h nã ‘mbo? [rain/sky fall]; WrT <i>gnam</i> ‘bab
Khams	Gyongba	^h te ^h a ^h ba ‘mbo? [rain fall]; WrT <i>char pa</i> ‘bab
Khams	dGakhog	^h te ^h a ^h ba ‘mbo? [rain fall]; WrT <i>char pa</i> ‘bab
Khams	Jowo	^h te ^h a ^h pa ‘mbo? [rain fall]; WrT <i>char pa</i> ‘bab
Khams	nJawa	^h nã ‘mbo? [rain/sky fall]; WrT <i>gnam</i> ‘bab
Khams	Dewo	^h nã ‘mbo? [rain fall]; WrT <i>gnam</i> ‘bab
Khams	sNapo	^h te ^h wa: ‘mbo? [rain fall]; WrT <i>char pa</i> ‘bab
Khams	dBrarikha	^h nã ‘mbo? [rain/sky fall]; WrT <i>gnam</i> ‘bab
Khams	nGramna	^h nã ‘mbo? [rain/sky fall]; WrT <i>gnam</i> ‘bab
Khams	rDzipa	^h te ^h a: ba ‘mbo? [rain fall]; WrT <i>char pa</i> ‘bab
Amdo	gYongru ² (Tshonkhor)	te ^h ar wa wap [rain fall]; WrT <i>char pa</i> babs
Amdo	sDegzhungma (mChodrtan)	^h nam wap [rain/sky fall]; WrT <i>gnam</i> babs
Amdo	gYongru (Horra rNyingba)	^h nam wop [rain/sky fall]; WrT <i>gnam</i> babs
Choyu	Gayibuli	^h hu ‘lɛ-tu [rain prefix-fall]
Choyu	Atsong	^h hu ^h tu [rain fall]

¹ See also Suzuki (2013).

² For the dialect name of Amdo Tibetan, I follow *tshowa*’s names suggested by Tsering Samdrup & Suzuki (2017).

For the Tibetic languages spoken in Lithang, the forms of ‘it rains’ are derived from WrT *char pa* ‘bab’ or *gnam* ‘bab (babs)’.³ The construction of weather expression for ‘it rains’ is either ‘rain+fall’ or ‘rain/sky+fall’. We should note that some dialects of Khams⁴ use WrT *gnam* for ‘rain’ whereas a dialect of Amdo uses WrT *char pa*. This situation is against the general tendency of the use of the lexical form for ‘rain’ in Khams and Amdo stated earlier. I will examine this issue by drawing a linguistic map later.

Regarding the word form corresponding to WrT *gnam*, the gloss has two types: ‘rain’ and ‘rain/sky’. The former means that the word form corresponding to WrT *gnam* is reserved just for ‘rain’, and the latter means that the word form for ‘rain’ and ‘sky’ is a homonym derived from WrT *gnam*. For example, the word form for ‘sky’ in the Dewo dialect is /^hnã ^hk^ha/, which corresponds to WrT *nam mkha*. This form is not widely used in Khams; however, its use in the Dewo dialect might be in order to avoid a semantic conflict between ‘rain’ and ‘sky’. In this case, since there are more than one word for ‘sky’ in the language, another word form but *gnam* has been employed for ‘sky’. Another manner is also attested: derivation from *gnam*. In the Jowo dialect, the word for ‘sky’ is /^hnõ ñõ/, which corresponds to WrT *gnam sngon*, literally meaning ‘blue sky’. However, this dialect uses /^htɛ^ha^hpa/ for ‘rain’; thus, this derivation has not occurred for the same reason as the Dewo dialect.⁵

Two dialects of Choyu display the same structure of the expression ‘it rains’, which takes a ‘rain+fall’ type. In addition to this, there is another expression for ‘it rains’, which is used less frequently: /^hmu ˉtu/ ‘sky+fall’. The speakers always correct this way of expression because it is not considered as an adequate use of Choyu but as a calque of the Tibetic languages.

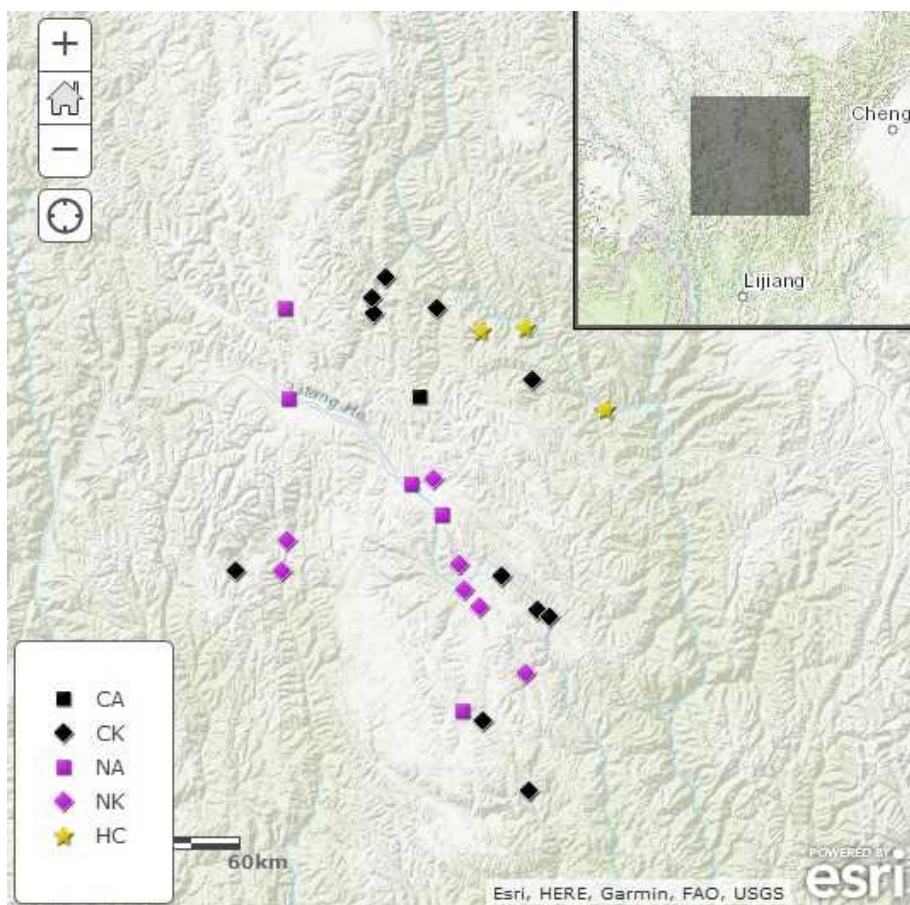
3 Geolinguistic analysis on the form for ‘rain’ in the varieties of Lithang

In order to examine how we can explain the situation attested in Table 1 from a geolinguistic viewpoint, I display two maps below. Map 2 is based on the word form and language:

³ For the inflection of the verb ‘bab’ ‘fall’, many varieties of Khams do not have a stem alternation of verbs between perfect and nonperfect.

⁴ For details and a classification of Khams Tibetan spoken in Lithang, see Suzuki (2018).

⁵ The phenomenon to avoid a semantic conflict by using different word forms for ‘rain’ and ‘sky’ is also attested in Tibetic languages of Eastern Section (Tournadre and Suzuki forthcoming) such as Sharkhog, Khodpokhog, mBrugchu, and Thewo-smad (see Shirai et al. this volume-b).



Legend: CA: *char pa* in Amdo; CK: *char pa* in Khams; NA: *gnam* in Amdo; NK: *gnam* in Khams;
 HC: /hu/ in Choyu

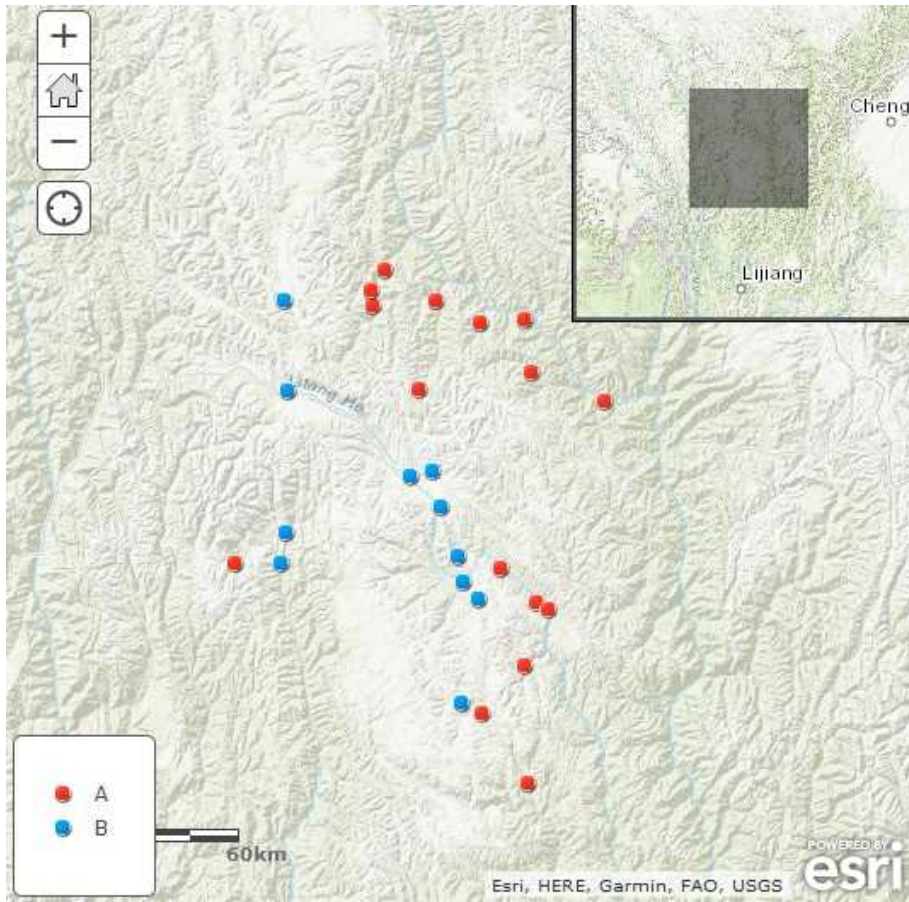
Map 2: Word forms for 'rain' and languages

In Map 2, the colour of the symbols represents the difference of lexical forms (Black: *char pa*; Purple: *gnam*; Yellow: /hu/) and their shape does that of languages (Square: Amdo; Rhombus: Khams; Star: Choyu). Paying attention to the distribution of the colours, we find that Purple is located in the central and western area of the region, and Black surrounds it. Then, Types CA and NK should be noted. Type CA is attested in just one example: the gYongru dialect practised to the north of the county seat of Lithang. This area is close to another Khams-spoken region to its north. The distribution of Khams continues further to the north, and the part of northern Lithang is just a tip of the greater Khams-spoken zone. Hence, the use of Khams might have influenced a part of the gYongru dialect. Type NK is attested in a wider area, in the county seat as well as on the border zone between Amdo and Khams. Interestingly, in the western area of Lithang (dBrakhog district), two dialects use Type NK, and the rest one uses Type CK. This area is mountainous, and the traffic condition is not convenient even within the district. The form for 'rain' suggests that the eastern part of dBrakhog has had a stronger connexion with the Amdo-spoken area on its north because there has been a principal traffic route before.⁶ To the south of the county seat, Type NK is distributed in line. This area is a prairie-like scenery along the main traffic route. Most residents there are half-farmers-half-pastoralists, and they have frequent communications with Amdo-speaking communities. If this lifestyle influences their language, Type NK has developed by an influence from Amdo.

Some dialects with Types NA and NK also use a form corresponding to WrT *char pa* for 'raindrop'. They distinguish the object 'raindrop' from the natural phenomenon 'rain'.

Next, I examine the semantic field regarding the word for 'rain'. See Map 3 below:

⁶ At present, the main traffic route from/to dBrakhog is directly connected to the county seat on its east.



Legend: A: rain; B: rain/sky

Map 3: Semantic field of 'rain'

Type A means the existence of a specific word form reserved for 'rain', whereas Type B demonstrates polysemy. Type B corresponds to Types NA and NK in Map 2 except for one dialect: Dewo. Although the Dewo dialect has Type NK, its word forms for 'rain' and 'sky' are different from each other, and the dialect is thus classified into Type B on Map 3.

Regarding Choyu, even based on the cases shown in Maps 2 and 3, we cannot point out any clear reason why Choyu speakers use the 'sky+fall' type for 'it rains' in an incorrect way instead of the 'rain+fall' type. However, referring to the case and history of Lhagang Choyu, a sister language spoken by descendants of the migrants from the Choyu-spoken area more than 200 years ago (cf. Suzuki & Sonam Wangmo 2016a), we can also find the use of the 'sky+fall' type for 'it rains' (Suzuki & Sonam Wangmo 2017). The migrants might have been together with an Amdo-speaking group from that area (Suzuki & Sonam Wangmo 2016b, forthcoming), and this suggests that Choyu people have also had a connexion with Amdo-speakers. If this is the case, the phenomenon attested in Choyu is influenced by Amdo.

4 Conclusion

In this article, I presented a microscopic analysis of the word for 'rain' in three languages in Lihang County. Khams and Amdo use word forms for 'rain' derived from WrT *char pa* or *gnam*. The former principally appears in Khams, and the latter in Amdo. However, in some dialects on the Khams-Amdo contact zones, the word form is replaced. The word form corresponding to *gnam* is originally a homonym of 'sky', and most dialects have both the meanings. However, the Dewo dialect uses different forms by changing the word form for 'sky'. Choyu distinguishes a word 'rain' from 'sky'; however, the "sky+fall" pattern is to a lesser extent used for 'it rains'. This might be because of influence from Amdo.

Acknowledgements

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Semantic shifts in expressions for ‘it rains’ in Tibeto-Burman

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Abstract

This paper discusses the semantic shifts found in the expressions that mean ‘it rains’ in Tibeto-Burman. All such expressions in Tibeto-Burman consist of one argument and one predicate; moreover, all three possible elements—argument, predicate, and combination of argument and predicate—show semantic shifts. We conducted a geolinguistic analysis of the forms and meanings of the arguments of rainfall expressions in Tibeto-Burman. Geolinguistic analysis suggests a chronological order among their forms. Furthermore, we analyzed the semantic shifts (such as from ‘sky’ to ‘rain’) found in the arguments of rainfall expressions.

1 Introduction

This study examines the semantic shifts of the components of expressions that mean ‘it rains’ (rainfall expressions) in Tibeto-Burman (TB).

Shirai et al. (this volume) surveyed the types of rainfall expressions in TB and analyzed their geographical distribution from a synchronic perspective. However, certain problems in analyzing such expressions are not discussed in detail due to space limitations. The present paper aims to examine one of such problems: the semantic shift. For example, in different Tibeto-Burman languages and dialects, words derived from the Proto-Tibeto-Burman (PTB) root **r-məw* ‘sky/heavens/clouds’ (#2473¹) may mean ‘rain (n.),’ ‘cloud,’ ‘fog,’ ‘sky,’ ‘weather,’ or more than one of them as a polysemy. Herein, we will examine the semantic shifts of such words. Moreover, we will focus on the forms and meanings of the arguments of TB rainfall expressions and conduct a geolinguistic analysis.

The analysis of this study is based on the data of the rainfall expressions of 493 Tibeto-Burman languages/dialects that were compiled by members of the TB team of the Asian Geolinguistic Project at the Research Institute for Languages and Cultures of Asia and Africa, that is, K. Iwasa, S. Ebihara, and I. Matsuse, in addition to the three authors of the present paper. Additionally, we added words for ‘rain (n.)’ from 10 languages to our database.² As for the genetic classification of TB, this study tentatively follows Matisoff (2003) and STEDT.³

This paper is organized as follows: Section 2 illustrates the variation of semantic shifts; Section 3 conducts the geolinguistic analysis on the arguments of rainfall expressions; and Section 4 summarizes the study.

¹ The PTB forms in the present paper are based on the database of the *Sino-Tibetan Etymological Dictionary and Thesaurus* (STEDT). The numbers preceded by a sharp mark indicate the identification numbers given to each PTB root in the STEDT database.

² Gurung, Tamang (Mazaudon 1994), Thulung (Allen 1975), Nocte, Konyak (Marrison 1967), Thado, Sizang, Lai (VanBik 2009), Ao (Bruhn 2014), and Leqi (Dai and Li 2007).

³ The genetic classification of TB is still controversial; thus, there are many other proposals such as Jacques and Michaud (2011) and Thurgood (2017).

2 Variety of semantic shift found in the rainfall expressions in TB

All the rainfall expressions in our data consist of an argument and a predicate. Interestingly, we can find examples of each of the (i) argument, (ii) predicate, and (iii) combination of argument and predicate that have undergone semantic shifts. In this section, we will introduce examples of each pattern.

2.1 Argument

As we mention in Shirai et al. (this volume), all the rainfall expressions in TB are monovalent, that is, each involves a single argument. We can find a variety of meanings in the arguments, such as ‘rain (n.),’ ‘sky,’ ‘sun,’ ‘water,’ ‘thing,’ or a set of more than one of them. We will make a detailed discussion on the semantic shift of arguments in Section 3. Here, we are simply introducing one set of examples.

(1) shows examples of rainfall expressions in three Tibetic varieties. All expressions therein correspond to Written Tibetan (WT) *gnam 'bab*. Nonetheless, they are classified into two different types in Shirai et al. (this volume), since the meaning of argument differs. The noun that corresponds to WT *gnam* primarily means ‘sky’ but also means ‘rain’ in many Tibetic varieties, such as bLabrang Tibetan, as shown in (1a). However, the cognate noun exclusively means ‘sky’ in Chabcha Tibetan⁴ (1b), while it means ‘rain’ in other varieties such as gZari Tibetan⁵ (1c). Consequently, (1a, b) are classified into the split argument-predicate type, while (1c) is classified into the argument type (Shirai et al., this volume).

(1) ‘It rains’ in Tibetic varieties

a. bLabrang (Suzuki, fieldwork):	^h <i>nam</i> sky/rain(n.)	^m <i>bap</i> fall
b. Chabcha (S. Ebihara, p.c.):	<i>hnem</i> sky	<i>nbep</i> fall
c. gZari (Suzuki, fieldwork):	^ʔ <i>nã</i> rain(n.)	^m <i>ba</i> fall

For this type of semantic change and the acquisition of new lexical contrast, see Suzuki’s (this volume) discussion on the case of Tibetans’ languages in Lihang County (Sichuan).

2.2 Predicate

We can also find semantic shifts of predicates, for example, in Nungic. Our data include three Nungic languages: Anong, Rawang, and six dialects of Trung. These varieties show three different types of rain expressions: Anong and Maku Trung display the argument type (2a, b), Rawang shows the synonymic argument-predicate type (2c), Lula and the other four dialects of Trung have the split argument-predicate type (2d) (Shirai et al., this volume).

(2) ‘It rains’ in Nungic varieties

a. Anong (Sun and Liu 2009: 279):	<i>ts^hɣ31</i> rain(n.)	<i>dzaŋ55</i> fall
b. Maku Trung (L. Qin, p.c.):	<i>si31</i> rain(n.)	<i>wa53</i> do
c. Rawang (LaPolla and Sangdong 2015: 277):	<i>shø</i> rain(n.)	<i>zaq</i> rain(v.)
d. Lula Trung (L. Qin, p.c.):	<i>nəm31</i> sun	<i>zaʔ53</i> fall

⁴ The independent noun for ‘rain’ in Chabcha is *te^har* (*wa*), which is completely different from *hnem* in (1b) (S. Ebihara p.c., 2018).

⁵ In gZari Tibetan, the word for ‘sky’ is *ʔnã ɲkha*, which corresponds to WT *nam mkha*’.

Note that the verbs in Anong (*dzaŋ*⁵⁵ ‘fall’), Rawang (*zaq* ‘rain (v.)’), and Lula Trung (*za*²⁵³ ‘fall’) are related diachronically, but synchronically, their meanings differ from each other. The verb *zaq* specifically means ‘rain (v.)’ in Rawang, which utilizes other verbs for ‘fall’ such as *loq* ‘fall,’ *ja* ‘drop, fall from high to low,’ and *dʷm* ‘fall, roll down.’ One of the factors of the semantic difference between ‘rain (v.)’ (in Rawang) and ‘fall’ (in Anong and Trung) is language contact: Rawang is under the influence of languages such as Burmese, Jinghpaw, and Shan (all of which belong to the argument-predicate type; see Shirai et al., this volume), while Lula Trung may be influenced by Tibetic varieties that have the argument *gnam* ‘sky/rain (n.),’ since we can find at least two such varieties around the Trung area: Sangdam Tibetan and Bodgrong Tibetan.

2.3 Clauses for ‘it rains’ which are identical to the independent noun for ‘rain’

In certain languages, each element found in the expression ‘it rains’ is different from the noun that means ‘rain’ in the same language.

For example, in Sani, according to K. Iwasa (p.c., 2017), the sentence *m*¹¹ *hw*³³=*tso*³³ ‘it rains’ consists of the noun *m*¹¹ ‘sky,’ verb *hw*³³ ‘rain (v.),’ and the durative marker =*tso*³³, as in (3). The verb *hw*³³ is used exclusively for rainfall phenomena, as it cannot express even snowfall. The independent noun *m*¹¹ *hw*³³ is a compound that consists of the noun stem and verb stem. A parallel pattern is found in Darmdo Minyag, as in (4).

Interestingly, in all varieties with the pattern ‘SKY+RAIN(v)’ in our data, including Sani and Darmdo Minyag, the noun that means ‘rain’ has the same form with the phrase ‘it rains,’ leaving aside the morphological requirements of each word class.

- (3) Sani (Loloish) (Kazue Iwasa p.c., 2017)
- | | | | |
|----|--|--|-------------|
| a. | <i>m</i> ¹¹ | <i>hw</i> ³³ = <i>tso</i> ³³ | ‘It rains.’ |
| | sky | rain(v.)=DUR | |
| b. | <i>m</i> ¹¹ <i>hw</i> ³³ | | ‘rain (n.)’ |
- (4) Darmdo Minyag (Qiangic) (Suzuki, fieldwork)
- | | | | |
|----|--|---|-------------|
| a. | <i>mə</i> ⁵⁵ | <i>na</i> ⁵⁵ - <i>q</i> ^h <i>Λ</i> ⁵ | ‘It rains.’ |
| | sky | DWN-rain(v.) | |
| b. | <i>mə</i> ⁵⁵ <i>q</i> ^h <i>Λ</i> ⁵⁵ | | ‘rain (n.)’ |
- (5) Shihing (Qiangic) (Sun et al 2014: 163)
- | | | | | |
|----|--|---|---|---------------------|
| a. | <i>φui</i> ⁵⁵ | <i>εe</i> ³³ <i>εe</i> ³³ | <i>za</i> ³⁵ - <i>ji</i> ⁵⁵ | ‘It rains heavily.’ |
| | rain(n.) | hard | rain(v.)-PROG | |
| b. | <i>φui</i> ⁵⁵ <i>za</i> ⁵⁵ | | | ‘rain (n.)’ |

Shihing shows a slightly different pattern, as in (5). In the original data (Sun et al. 2014: 163), the argument *φui*⁵⁵ is glossed as 雨 (rain (n.)). However, the independent noun collected in the wordlist is *φui*⁵⁵ *za*⁵⁵, as in (5b), that is, the compound of the noun and verb stem. Based on Sun et al. (2014: 163), we tentatively give the gloss ‘rain (n.)’ to *φui*⁵⁵ in (5a).⁶

3 A geolinguistic analysis of the argument of rainfall expressions

Here, we examine the semantic shifts of the arguments of rainfall expressions in TB, making a geolinguistic analysis of the etymologies and synchronic meanings of the arguments. We use the PTB forms reconstructed by the STEDT project (<http://stedt.berkeley.edu/>) in the analysis of the etymologies. Thus, if we cannot assume the corresponding PTB forms, such arguments are omitted from our analysis.⁷ Table 1⁸ at the end of this paper shows representative nouns that are used as the argument of rainfall expressions in each TB subgroup.

⁶ We can find its cognates in our data: for example, Lhagang Choyu *h*^w*i* ‘rain (n.).’

⁷ Examples follow: Pwo *chə* ‘thing’ (Kato 2004: 110, A. Kato p.c.); Newar *noka* ‘rain’ (I. Matsuse p.c.); Rawang *shə* ‘rain’ (LaPolla and Sangdong 2015: 277); Zbu *tərzi* ‘rain’ (Nagano and Prins 2013); etc.

3.1 Classification of types

The etymologies of nouns include PTB roots **tshyar* ‘rain(n)’ (#5902), **r-məw* ‘sky / heavens / clouds’ (#2473), **r/s/g-wa* ‘water / rain’ (#2080),⁹ **g-nam* ‘sun / sky’ (#2484), **m/s-raŋ* ‘rain’ (#3571), **rəy* ‘water / liquid / bodily fluid’ (#1013), and so on, and compounds such as **r-məw* plus **r/s/g-wa*.¹⁰

The synchronic meanings of the arguments derived from such PTB forms include ‘rain,’ ‘sky,’ ‘sun,’ ‘rain/sky’ (that is, it means both ‘rain’ and ‘sky’), ‘sky/rain’ (it primarily means ‘sky,’ but also means ‘rain’ in certain contexts), and so forth.

Note that we ignored general nominal affixes in the classification. For example, although Mulan Situ *təmoʔ* ‘rain’ and Lhasa Tibetan *ṽchaapa* ‘rain’ contain a prefix (*tə-*) and a suffix (*-pa*), respectively, they are simply classified as words derived from **r-məw* and **tshyar*, respectively.

We classify them as follows:

[A] **tshyar*. In this type, the arguments in our list that are derived from **tshyar* exclusively mean ‘rain’ (labelled as “**tshyar* : rain” in Map 1). Examples: Tielou Tibetan (WT)¹¹ *char*, Daan Tibetan *tṣʰo wa*, Gochang *tṣʰaŋ*⁵³, Anong *tṣʰɿ*³¹, and so on.

[B] **r-məw*. In this type, the argument is derived from **r-məw*. We found three types of synchronic meanings for this root: (i) ‘rain’ (**r-məw* : rain), (ii) both ‘rain’ and ‘sky’ (**r-məw* : rain/sky), and (iii) ‘sky’ (**r-məw* : sky). Examples: (i) Lisu *mu*³³, (ii) Burmese *mo*:, (iii) Sani *ṽ*¹¹, and so forth.

[C] **g-nam*. In this type, the argument is derived from **g-nam*. We found four types of synchronic meanings for this root: (i) ‘rain’ (**g-nam* : rain), (ii) primarily ‘sky’ but also ‘rain’ in certain contexts (**g-nam* : sky/rain), (iii) ‘sky’ (**g-nam* : sky), and (iv) ‘sun’ (**g-nam* : sun). Examples: (i) gSerpo Tibetan *nā*, (ii) Lithang Tibetan *nā*, (iii) Chabcha Tibetan *hnem*, (iv) Buer Trung *nəm*³¹, and so on.

[D] **r/s/g-wa*. In this type, the argument derived from **r/s/g-wa* exclusively means ‘rain’ (**r/s/g-wa* : rain). Examples: Taoba Prinmi *gui*⁵⁵, Nesu *a*⁵⁵ *xo*⁵⁵, Tiddim *guaʔ*, and so forth.

[E] **m/s-raŋ*. In this type, the argument derived from **m/s-raŋ* exclusively means ‘rain’ (**m/s-raŋ* : rain). Examples: Jinghpaw *məraŋ*, Kadu *həlāŋ*, and so on.

[F] **rəy*. In this type, the argument derived from **rəy* exclusively means ‘rain’ (**rəy* : rain). Examples: Mojiang Hani *u*³¹ *je*⁵⁵, and so forth.

[G] Compound types. There are many varieties of compounds. Among them, the following four types of compounds are found in a number of language varieties and are thus indicated in the map: (i) **r-məw*+**r/s/g-wa* : rain, (ii) **tshyar*+**s-nak* : rain (**s-nak* means ‘black’), (iii) **r-məw*+**rəy* : rain, and (iv) **r-məw*+ : rain (compounds consist of **r-məw* and other morphemes). Examples: (i) Xide Yi *ma*³³ *ha*³³, (ii) bTsanlha rGyalrong *tʃan*⁴⁴ *nak*⁴⁴, (iii) Mianchi Southern Qiang *mzɿ*, (iv) Tujia *mue*³⁵ *tsie*²¹, and so on.

3.2 Geographical distribution and geolinguistic analysis

Map 1 shows the geographic distribution of the abovementioned types. The etymologies are distinguished by shapes: [A] a diagonal line, [B] triangles, [C] a circle, [D] rhombuses, [E] rectangles, and [F] an arrow. Moreover, colors indicate their meanings: blue indicates ‘rain,’ black indicates ‘sky,’ red indicates ‘sun,’ orange indicates ‘rain/sky,’ and green indicates ‘sky/rain.’

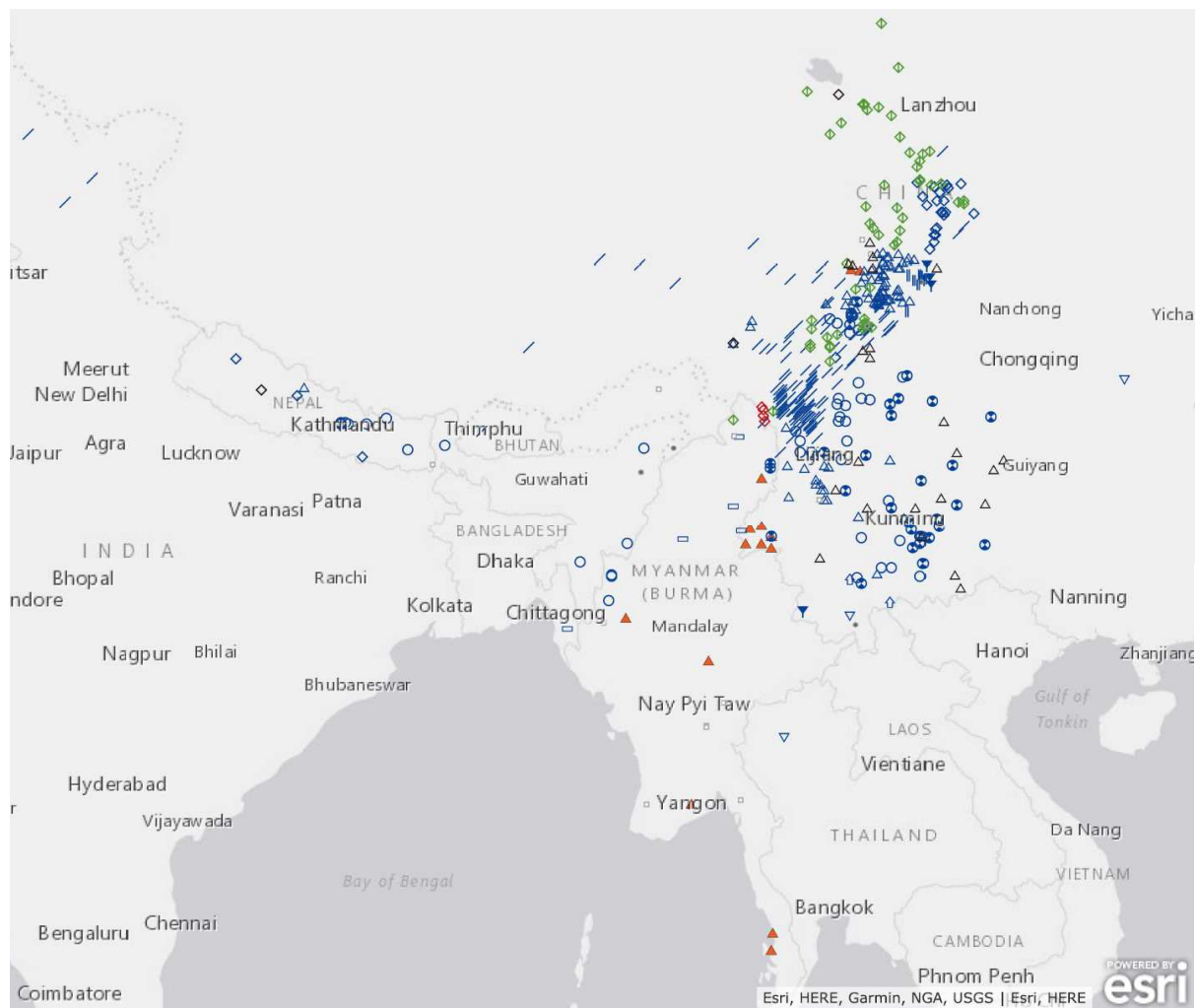
Below, we will provide a geolinguistic discussion on [A]-[F] and the compounds involving them.

⁸ In this section, the examples listed in Table 1 or collected in the authors’ fieldwork are cited without reference.

⁹ Both **r-məw* and **r/s/g-wa* involve the prefix **r-*. According to Matisoff (2003: 127), the PTB prefix **r-* is attached to various roots including natural objects.

¹⁰ Lhagang Tibetan and Ganbao Situ have *chu* ‘water’ (PTB **tsyū* ‘water’) and *tṣʰənək* ‘rain’ (PTB **tsyū* ‘water’ + **s-nak* ‘black’) respectively. However, we omitted **tsyū* from the geolinguistic analysis since it is found only in these two varieties. Moreover, Lhagang Tibetan also uses *char pa* (< **tshyar*).

¹¹ Examples of some Tibetic varieties are shown in their equivalent Written Tibetan (WT) forms transcribed using the Wylie style. In such cases, the name of each language variety is followed by “(WT).”

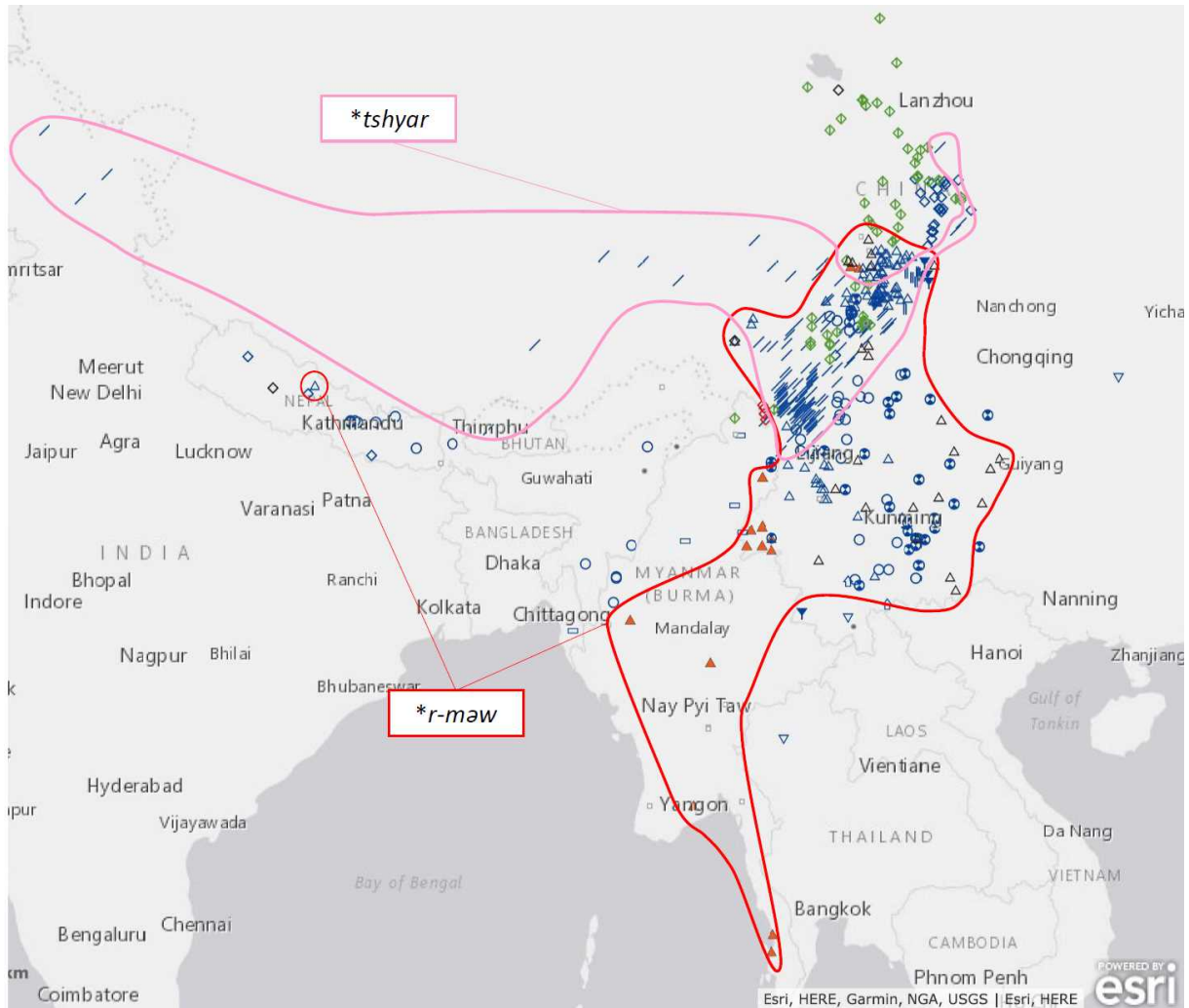


Legend:

- | | |
|---------------------|---------------------------|
| ✓ *tshyar : rain | □ *m/s-ran : rain |
| △ *r-məw : rain | ⬆ *rəy : rain |
| ▲ *r-məw : rain/sky | ⊕ *r-məw+*r/s/g-wa : rain |
| △ *r-məw : sky | *tshyar+*s-nak : rain |
| ○ *r/s/g-wa : rain | ▼ *r-məw+*rəy : rain |
| ◇ *g-nam : rain | ▽ *r-məw+ : rain |
| ◇ *g-nam : sky/rain | □ (PTB unknown) |
| ◇ *g-nam : sky | • (Other Compounds) |
| ◇ *g-nam : sun | |

Map 1: The argument of 'it rains' in Tibeto-Burman across the whole area

3.2.1 *tshyar and *r-məw



Map 2: *tshyar and *r-məw as the argument of rainfall expressions

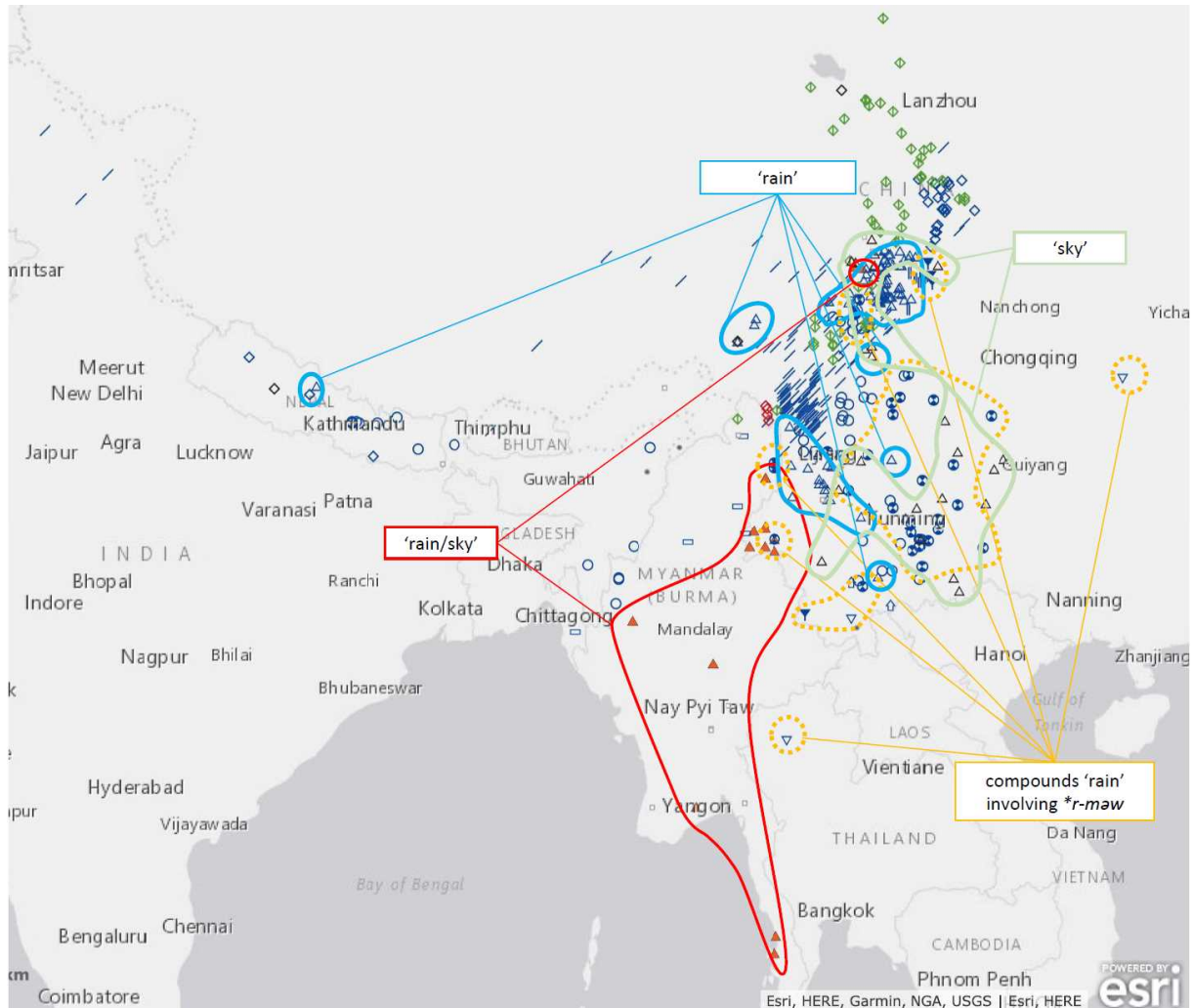
[A] *tshyar and [B] *r-məw are the most broadly found forms from a geographical viewpoint, as shown in Map 2. However, the following facts suggest that [B] is considerably old while [A] is relatively new.

The distribution of [A] is mostly limited in the Tibetosphere (Tibetan cultural area), although it is less frequently found in the northeastern Tibetosphere, where [D] *g-nam is predominant in Tibetan dialects. Moreover, in all such spots, the arguments of rainfall expressions derived from *tshyar can be traced back to Written Tibetan (WT) *char* (*pa*) and share a single meaning: ‘rain.’ The variation of compounds with *tshyar is also limited. The only pattern of such a compound is derived from WT *char nag* (*tshyar + *s-nak, that is, [G-ii] listed above), which is found in certain rGyalrongic varieties, such as Miyaluo Situ rGyalrong *te^hanak*¹² (Nagano and Prins 2013), spoken in the northeastern periphery of Tibetosphere.

[B] is found in the southern and eastern area of TB (except for Gyayu Manang *mo*², a TGTm [Tamang-Gurung-Thakali-Manang] variety spoken in Nepal), amongst multiple genetic groups—Burmish, Loloish¹², Qiangic, rGyalrongic, and Bai. There are at least three types of meanings: (i) ‘rain,’ (ii) ‘sky,’ and (iii) ‘rain/sky.’ The geographic distribution of the semantic variation is illustrated in Map 3. (i) is distributed mainly in the central area with an exception of Manang, (ii) is

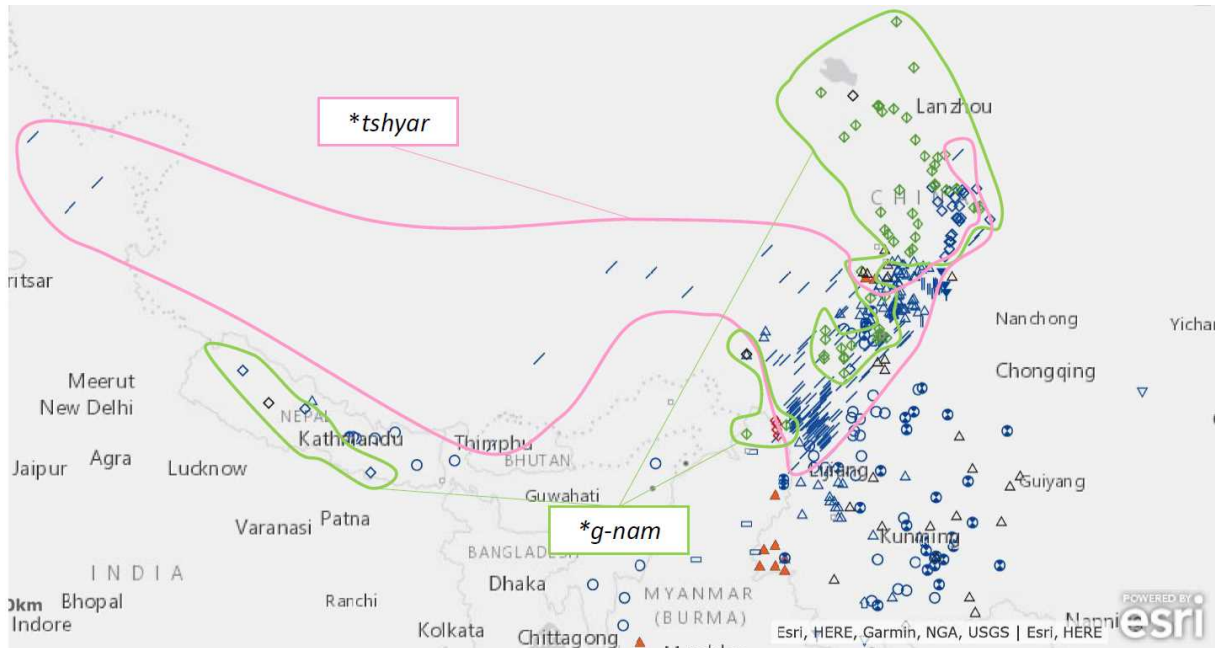
¹² The forms in Burmish and Loloish can be traced back to Proto-Lolo-Burmese (PLB) : PLB **mo*² ‘sky’ (Bradley 1979: 324), PLB **məw*² ‘sky’ (Matisoff 2003: 183).

distributed mainly in the eastern area, and (iii) is found in Myanmar and the China-Myanmar border area, with the exception of Puxi sTodsde (a rGyalrongic variety spoken in Sichuan, China). Logically, we can theorize that the words derived from **r-məw* used to mean ‘sky,’ then came to be used in rainfall expressions, and finally in part have come to mean ‘rain,’ even as an independent noun. This analysis could be supported by the fact that **r-məw* is also found as a constituent of compounds used as the argument of rainfall expressions, which are listed as [G-i, iii, iv] above. Most such compounds mean ‘rain.’ This suggests that the morpheme derived from **r-məw* did not originally mean ‘rain’ on its own.



Map 3: Semantic variation of **r-məw* as the argument of rainfall expressions

3.2.2 *g-nam

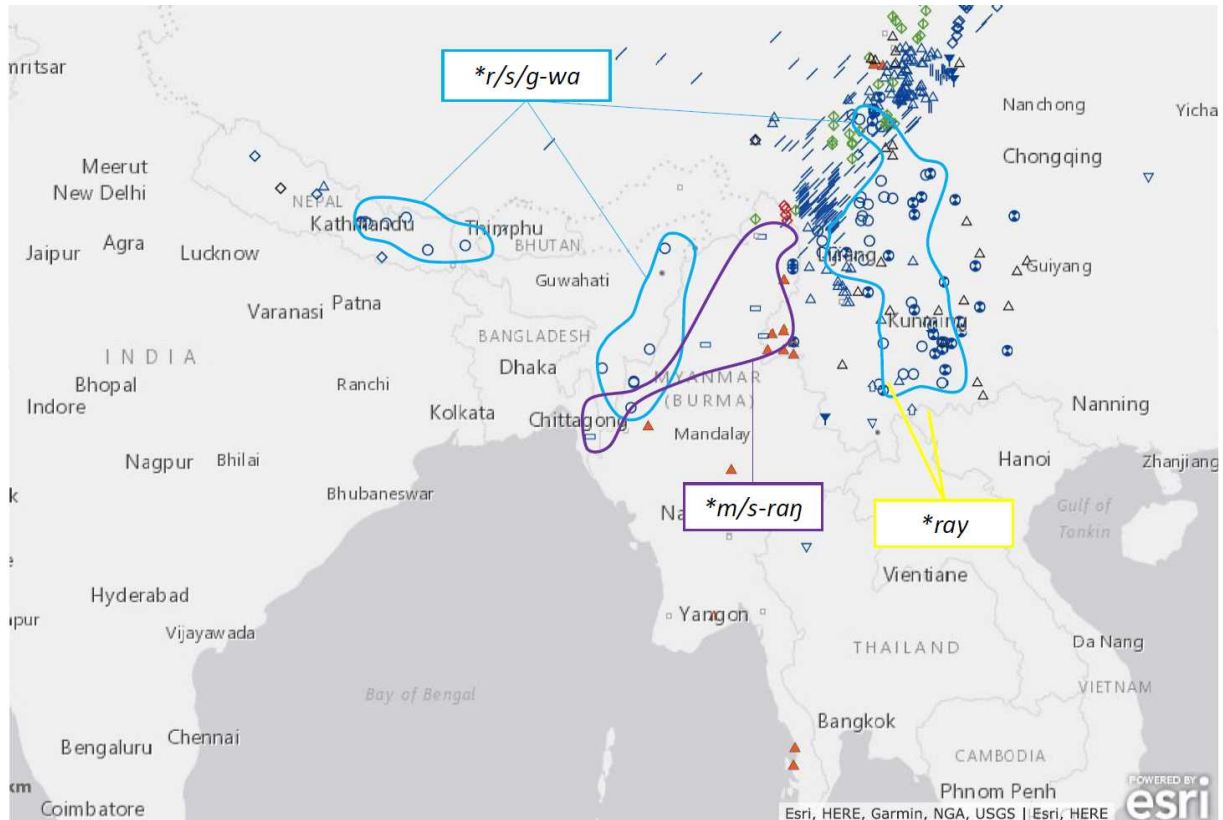


Map 4: **g-nam* and **tshyar* as the argument of rainfall expressions

The spots of [C], that is, language varieties with an argument derived from **g-nam*, are found in the northeastern, central, and southwestern areas of TB. Compared to the distribution of **tshyar*, as illustrated in Map 4, we can find that the spots with **g-nam* are divided into those north and south of areas with **tshyar*. This is a clear “ABA distribution,” which suggests that **g-nam* is older than **tshyar*. Genetically, [C] is found in Tibetic, TGTm, and Nungic, although it is geographically concentrated in the northeastern periphery and southern side of Tibetosphere. The meanings of [C] vary among ‘rain,’ ‘sky,’ ‘sun,’ and ‘sky/rain.’ Again, we can logically assume that **g-nam* used to mean ‘sky,’ with later semantic shifts toward either ‘rain’ or ‘sun.’¹³

¹³ Discussions on **g-nam* with the meaning of ‘sun’ are found in Shirai et al. (2016) and Shirai (2017).

3.2.3 **r/s/g-wa*, **m/s-raŋ*, and **rəy*



Map 5: **r/s/g-wa*, **m/s-raŋ*, and **rəy*

Map 5 illustrates the geographical distribution of [D], [E], and [F], that is, language varieties with the argument derived from **r/s/g-wa*, **m/s-raŋ*, and **rəy*, respectively.

[D] **r/s/g-wa* shows a relatively broad distribution: eastern Nepal, India-Myanmar border, and southwestern China. Genetically, it is found in Loloish, Kuki-Chin, Qiangic, Naxi, Newar, and Lepcha. Additionally, some of the Kiranti, Naga, and Northern Naga varieties also have a noun for ‘rain’ derived from **r/s/g-wa*, although we could not ascertain whether that noun is the argument of the rainfall expressions. Semantically, all arguments derived from **r/s/g-wa* in our list mean ‘rain.’ Moreover, compounds consisting of both **r-məw* and **r/s/g-wa* are found broadly in the southeastern and central parts of the territory (cf. Map 3).

The distribution of [E] **m/s-raŋ* is limited to northern Burma, northeastern India, and eastern Bangladesh. Apparently, it divides the distribution of [D] **r/s/g-wa* into an eastern and western side, showing the so-called ABA distribution. Thus, we can assume that **m/s-raŋ* is newer than **r/s/g-wa*. This is further supported by the fact that languages with **m/s-raŋ* genetically belong to a single group called “Sal”; thus, this is considered to be an innovation in this group, in contrast to languages with **r/s/g-wa*, which include a wide range of TB groups. **m/s-raŋ* is reflected with the meaning of ‘rain’ or ‘sky’ (Burling 1983: 11, 20).¹⁴

Only certain dialects of Hani have arguments of rainfall expressions that have their diachronic sources in PTB **rəy* ‘water,’¹⁵ suggesting a semantic shift from ‘water’ to ‘rain.’ This hypothesis is

¹⁴ Burling (1983) points out that the root *raŋ* independently means ‘sky’: “The syllable *raŋ* crops up in most of these languages as the first syllable of compounds that refer to celestial phenomena such as ‘sun’ and ‘rain.’ When *rang* occurs by itself, it seems always to have the meaning ‘sky.’” (Burling 1983: 11)

¹⁵ Written Burmese *re* ‘water’, PLB **re* (Bradley 1979: 326)

supported by the fact that more varieties of Qiangic and Loloish have compounds that consist of **r-məw* and **rəy*, for example, Taoping Southern Qiang *ma³¹zɿ⁵⁵* (Sun 1981) and Lahu *mv⁵³ ze³¹*.

4 Conclusion

In this study, we examined the semantic shifts found in the constituents of rainfall expressions in TB, especially focusing on the nouns used as the arguments of rainfall expressions.

Most such nouns are classified into the following types:

[A] the words for ‘rain’ derived from PTB **tshyar* ‘rain(n)’ (#5902)

[B] the words derived from **r-məw* ‘sky / heavens / clouds’ (#2473) that mean either (i) ‘rain’; (ii) both ‘rain’ and ‘sky’; or (iii) ‘sky’

[C] the words derived from **g-nam* ‘sun / sky’ (#2484) that mean either (i) ‘rain’; (ii) primarily ‘sky’ but also ‘rain’ in certain contexts; or (iii) ‘sky’

[D] the words for ‘rain’ derived from **r/s/g-wa* ‘water / rain’ (#2080)

[E] the words derived from **m/s-raŋ* ‘rain’ (#3571), that mean either (i) ‘rain’ or (ii) both ‘rain’ and ‘sky’

[F] the words for ‘rain’ derived from **rəy* ‘water / liquid / bodily fluid’ (#1013)

[G] compounds

The geolinguistic analysis suggests the chronological order of them as shown in (6).

(6) Tentative chronological order among types [A]-[F]

$$[B] > \begin{matrix} [C] > [A] \\ [D] > [E] \end{matrix} > [F]$$

However, we found it difficult to analyze the chronological order of their semantic variations based on their geographical distribution. For example, though the semantic variation of [B] shows a certain areal tendency (Map 3), it does not suggest the relative time depth. We tentatively drew a conclusion from a logical perspective: the words derived from **r-məw* once meant ‘sky,’ then came to be used in the rainfall expressions, and finally, part of them have come to mean ‘rain,’ even as an independent noun. The existence of compounds with morphemes derived from **r-məw* supports this conclusion. We also made a parallel analysis on the semantic shifts of **g-nam*: it used to mean ‘sky,’ with later semantic shifts toward ‘rain’ or ‘sun.’

Abbreviations

DUR: durative; DWN: downward directional prefix; PROG: progressive; PLB: Proto-Lolo-Burmese; PTB: Proto-Tibeto-Burman; TB: Tibeto-Burman; WT: Written Tibetan.

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Table1: The argument of ‘it rains’ in Tibeto-Burman¹⁶

Group	Language (Place)	Form	*PTB	Meaning	Data source
North Assam	Galo (Siang)	pidóo	?	‘rain’	Post 2007
Kuki-Chin	Tiddim (Tedim)	gua?	*r/s/g-wa	‘rain’	K. Otsuka p.c.
	Mizo (Aizawl)	rùah	*r/s/g-wa	‘rain’	VanBik 2009 via STEDT

¹⁶ This table lists representative arguments of rainfall expressions in each group of TB, as far as possible. The grouping follows STEDT. For the groups wherein we have not been able to find rain expressions, a word for ‘rain’ is listed instead, in gray-colored rows.

Naga	Ao (Mokokchung)	tsəŋ ¹ lu ¹	? +*r/s/g-wa	‘rain’	Bruhn 2014 via STEDT
Meithei	Meithei (Manipur)	chumthang	?+*twaŋ ¹⁷	‘rain/rainbow’	Marrison 1967
Mikir	Mikir (Karbi Anglong)	arve	*r/s/g-wa	‘rain’	Marrison 1967
Mru: n.d.					
Sal					
Bodo-Garo	Meché (Jhapa)	noka	?	‘rain’	Meché & Kiryu 2012
Northern Naga	Nocte (Tirap)	rangpat	*m/s-raŋ+ ?	‘rain’	Marrison 1967
	Konyak (Sibsagar)	wai	*r/s/g-wa	‘rain’	Marrison 1967
Jingpho-Luish	Jinghpaw (Myitkyina)	məraŋ	*m/s-raŋ	‘rain’	Maran 1978
	Duleng (Machanbaw)	məlaŋ	*m/s-raŋ	‘rain’	Kurabe (fieldnotes)
	Kadu (Banmauk)	həlaŋ	*m/s-raŋ	‘rain/sky’	Huziwara 2013
Tibeto-Kanauri					
Western Himalayish	Kanauri (Sātlāj Valley)	tī / lāgēt tī / lāgēts tī	?	‘rain’	Bailey 1910
Tibetic	Tibetan (Loshod)	˦tɛ ^h a: pa	*tshyar	‘rain’	Suzuki (fieldnotes)
	Tibetan (gSerpo)	˦nā	*g-nam	‘rain’	Suzuki (fieldnotes)
	Tibetan (Lithang)	˦nā	*g-nam	‘sky/rain’	Suzuki (fieldnotes)
	Tibetan (Chabcha)	hnem	*g-nam	‘sky’	S. Ebihara p.c.
	Tibetan (Lhagang)	˦tɛ ^h u	*tsyu	‘water’	Suzuki (fieldnotes)
Lepcha	Lepcha (Kalimpong/Sikki m)	so	*r/s/g-wa (?)	‘rain’	Plaisier 2007
TGTM	W. Tamang (Sahu)	˦nam	*g-nam	‘rain’	Taylor 1972 via STEDT
	Manang (Gyayu)	mo2	*r-məw	‘rain’	Nagano 1984 via STEDT
Newar	Newar (Kathmandu)	wā	*r/s/g-wa	‘rain’	I. Matsuse p.c.
Kiranti	Athpare (Dhankuṭā)	wet	*r/s/g-wa	‘rain’	Ebert 1997 via STEDT
Kham-Magar-Chepeng	Takale Kham (Rukum)	nəm	*g-nam	‘sky’	Watters 2002

¹⁷ PTB *twaŋ ‘rainbow’ (#6002)

Qiang-rGyalrong					
Qiangic	nDrapa (Zhongni)	mokku3	*r-məw+*r/s/g-wa	‘rain’	Shirai (fieldnotes)
	Prinmi (Taoba)	gui ⁵⁵	*r/s/g-wa	‘rain’	Lu 2001
	S. Qiang (Mianchi)	mzì	*r-məw+*rəy	‘rain’	Evans 2001
	Gochang (Shiji)	ts ^h aq ⁵³	*tshyar	‘rain’	Suzuki (fieldnotes)
	Darmdo Minyang (Shade)	mə ⁵⁵	*g-nam	‘sky’	Suzuki (fieldnotes)
rGyalrongic	Geshitsa (Jiaju)	mə ⁵⁵	*r-məw	‘rain’	Suzuki (fieldnotes)
	Zbu (Ribu)	tərzi	?	‘rain’	Nagano & Prins eds. 2013
	bTsanlha rGyalrong (Qiaoqi)	tʃan ⁴⁴ nak ⁴⁴	*tshyar+*s-nak	‘rain’	Shirai (fieldnotes)
	sTodsde (Puxi)	mo	*r-məw	‘rain/sky’	Nagano & Prins eds. 2013
	Zbu (Rongan)	təmu	*r-məw	‘sky’	Nagano & Prins eds. 2013
Nungic	Rawang (Putao)	shø	?	‘rain’	LaPolla & Sangdong 2015
	Anong (Mugujia)	ts ^h l ³¹	*tshyar	‘rain’	Sun & Liu 2009
	Trung (Buer)	nəm ³¹	*g-nam	‘sun’	L. Qin p.c.
Tujia	Tujia (Poijiao)	mwε ³⁵ tsie ²¹	*r-məw+?	‘rain’	Huang ed.1992
Burmish					
	Lhaovo (Tsawlaw)	muk ^L	*r-məw	‘rain/sky’	Sawada 2004
	Burmese (Yangon)	mo:	*r-məw	‘rain/sky’	Ohno 2000
Loloish					
N. Loloish	Yi (Xide)	ma ³³ ha ³³	*r-məw+*r/s/g-wa	‘rain’	Huang ed. 1992, K. Iwasa p.c.
	Nesu (Yuanjiang)	a ⁵⁵ xo ⁵⁵	*r/s/g-wa	‘rain’	Chen 2010, K. Iwasa p.c.
	Lipo (Huaping)	a ⁵⁵ mu ²¹	*r-məw	‘sky’	Chen 2010, K. Iwasa p.c.
C. Loloish	Lisu (Kangpu)	mu ³³	*r-məw	‘rain’	Suzuki (fieldnotes)
	Lahu (Lancang)	mv ⁵³ ze ³¹	*r-məw+*r/s/g-wa	‘rain’	Huang ed. 1992
	Jinuo (Youle)	mi ³³ tha ⁵⁵	*r-məw+ ?	‘rain/weather’	Hayashi 2009
	Sani (Lunan)	ṃ ¹¹	*r-məw	‘sky’	K. Iwasa p.c.
S. Loloish	Hani (Mojiang)	u ³¹ jε ⁵⁵	*rəy	‘rain’	Huang ed. 1992, K. Iwasa p.c.

SE. Loloish	Phola (Wadie)	mɔ ³¹ xi ⁵⁵	*r-məw+*r/s/g-wa (?)	‘rain’	Pelkey 2011
	Azha (Binglie)	a ⁴⁵ xɔ ²¹	*r/s/g-wa (?)	‘rain’	Pelkey 2011
Naxi	Na (Yongning)	hiɭ	*r/s/g-wa	‘rain’	Michaud 2015
Karenic	Geba (Leiktho)	w̥ɛ	?	‘rain’	Kato 2008
	Pwo (Hpa-an)	chə	?	‘thing’	A. Kato p.c.
Bai	Bai (Dali)	v33	*r-məw	‘rain’	Wang 2008

Legend

? : The corresponding PTB form is unknown; C. : Central; N. : Northern; n.d. : no data; S. : Southern; SE. : Southeastern; W. : Western.

- Gray rows indicate that it is uncertain whether it is used as the argument of the expression ‘It rains.’ The forms in such rows are nouns that mean ‘rain’ taken from secondary sources.

An Overview of Typological Studies on ‘it rains’

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Abstract

In this study, I discuss the typological classification of expressions that convey the meaning ‘it rains’ or similar rainfall expressions. First, I survey previous studies that mention meteorological expressions in various languages that convey this meaning. Then, I review Eriksen et al.’s (2010) study on the classification of precipitation encodings. Finally, I propose a tentative classification of these expressions in terms of the types of argument and predicate: (A) argument type; (B) argument-predicate type, which consists of (B-i) cognate type; (B-ii) synonymic type; (B-iii) split type; and (C) predicate type.

1 Introduction

The purpose of this paper is to provide introductory information that could be useful in the geolinguistic study of ‘it rains’ in Asia. I will survey previous linguistic studies of weather/meteorological expressions, in particular expressions meaning ‘it rains.’

The linguistic expressions of rain phenomena vary between languages; this is because rain is so essential to our life, while at the same time its exact process and substantial participants are extremely difficult to grasp. This has been pointed out in many previous studies, including Ruwet (1986):

“[Meteorological phenomena such as rainfall] are beyond our control and—apart from what we learn from the science of physics—their causes are hidden from us.” (p. 202)

“[I]t is extremely difficult for us to distinguish what would in our experience [of meteorological phenomena] correspond to a predicate on the one hand, and an argument (or several arguments) on the other.” (ibid.)

The ‘impersonal verb’ [非人称動詞] in *The Sanseido Encyclopaedia of Linguistics* (Vol.6, Kamei et al. eds. 1996) also briefly mentions the correspondence between linguistic expressions and rain phenomena:

Expressions such as *it rains* just mean the existence of rain phenomena. However, since no sentence can exactly express the existence of such phenomena only, we need to borrow the form of a normal predication [which consists of a subject and predicate]. [It rains. などの表出は、降雨現象についての存在判断を述べているだけであるが、存在判断だけを表す文がないので、普通の賓述判断の表出の形を借りて表わす外はない] (Kamei et al. eds. 1996: 1110)

The [Japanese] expression *ame=ga furu* [rain=SBJ fall] is also a pro forma construction that does not fit the fact. It does not mean that there is substantial ‘rain’ and it falls but just expresses rain phenomena. [雨が降ルという表現も事実にそぐわない形式的な構文である。というのは、これも降雨現象を述べているだけで、雨というものがあって、それが降るのではない] (ibid.)

Rain is a typical meteorological phenomenon. There are a number of linguistic studies on meteorological expressions including ‘it rains,’ although rainfall by itself is rarely the main topic of typological studies.

2 Studies on meteorological expressions in particular contexts

A number of previous studies briefly mention meteorological expressions including ‘it rains’ in the context of specific languages or specific linguistic theories. I will briefly survey such studies below.

2.1 Studies on meteorological expressions in specific languages/language groups

Impersonal constructions, including meteorological expressions, have attracted linguists’ attention, particularly in languages with an elaborate argument structure and person-agreement system, such as Latin.

Bauer (2000: 93-150) conducted a study on impersonal verbs in Indo-European languages, and, by contrasting them with some weather expressions in non-Indo-European languages, she pointed out the significance of weather verbs in Indo-European languages as follows:

In addition to etymological similarities, impersonal weather verbs in Indo-European share syntactic characteristics as well: they typically do not feature argument structure. In this respect, they also differ from the other impersonal verbs in Indo-European. (Bauer 2000: 100)

The impersonal construction was first studied in the context of Indo-European languages, and later the discussion was extended to non-Indo-European languages (Siewierska 2008, etc.). Thus, few linguistic studies on meteorological expressions in Asian languages have been conducted in the last century.¹

However, since typological studies (such as Aikhenvald et al. eds. 2001 and Siewierska 2008) extended the notion of impersonality to non-Indo-European languages, some studies have been conducted in such contexts: e.g., Wang (2016) and Wu and Siewierska (2012) on Chinese impersonal constructions; Hashimoto (2016) on Mongolian impersonal constructions; and Salo (2011) on meteorological expressions in Uralic languages.

2.2 Studies on meteorological expressions in specific linguistic theories

Several studies have examined meteorological expressions in the context of impersonal constructions; for example, Ruwet (1986, 1989) and Malchukov and Ogawa (2011). In addition, we can find discussion on meteorological expressions in such papers as Croft (1991: 141-142) on lexical semantics, Keenan (1987: 103) on subject-ness, and Van Valin and LaPolla (1997: 150) on argument structure.

Here, I introduce some points from these studies.

Van Valin and LaPolla (1997: 150) labelled the argument structure of weather verbs *atransitive*, that is, zero-valency, since they take no arguments semantically.²

Croft (1991: 141-142) briefly discusses meteorological expressions in terms of lexical semantics and provides a simple vision: “[T]here exists typological variation in the expression of weather events between nounlike and verblike constructions (or unmarked forms that are both nominal and verbal)...”

- (i) nounlike constructions: e.g., Russian *idët dožd’* (go.3SG rain); Lakhota *wa-pa* (snow-fall) ‘it is snowing’; Quiché *š-ok aqap* (PAST-come dew) ‘the dew has come [evening greeting]’ (“in all these cases, the phrase itself uses a (processual) verb of motion in combination with a noun”)
- (ii) verblike constructions: e.g., Classical Greek *hýei* (rain.3sg)
- (iii) unmarked forms that are both nominal and verbal: English *rain* (v./n.), Lakhota *pó* ‘fog/be foggy’; Spanish *llov-* ‘rain (v.)’ *lluv-i-* ‘rain (n.)’

¹ Aside from the context of impersonality, some studies mention the Chinese expression *xià yǔ* (fall rain): e.g., as “empty subject” in many grammars (Zhu 1982, etc.) and in the context of word order (LaPolla 1995).

² Note that Eriksen et al. (2010: 573) mentions that they use the term “atransitive” in a different sense of syntactically zero-valency.

Croft's attention on verb-like vs. noun-like types appears to be significant in typological studies. Eriksen et al. (2010), who mainly investigate meteorological expressions, also employ this as the core of their analysis (See 3.3).

3 Typological studies on meteorological expressions

In this section, I will discuss three previous studies that examined meteorological expressions in detail. I will also discuss how we can make use of these studies in our project.

3.1 Ruwet (1986, 1989)

Ruwet (1986, 1989) is probably one of the earliest studies on meteorological expressions that involves non-Indo-European languages in the target. Ruwet (1986: 203-204) classifies the structural patterns that languages employ to express rain phenomena:

- (i) The semantic content can be concentrated within the predicate, the subject being null or expletive.
e.g. Italian *piove*; French *il pleut*.
- (ii) Purely nominal sentences; something like *thunder!*
- (iii) A lexical subject and an (almost) empty verb.
e.g., Basque *urra da* (rain is); Russian *idet dožd* (goes rain)
- (iv) The verb duplicates the semantic content of the subject.
e.g., Japanese *ame=ga furu* (rain fall); German *der Wind weht* (the wind blows)
- (v) The reduplication, in the verb, of the root of the subject noun. (an extreme case of (iv).)
e.g., French *le tonnerre tonne* (the thunder thunders); Turkish *yamur yayur* (rain rains).
- (vi) Analytical representation of the phenomena; something like *water is descending from the sky*.

Ruwet (1986: 204-205) analyses Japanese *ame ga furu* as a “beautiful case of (iv).” I will discuss this later.

3.2 Malchukov and Ogawa (2011)

The meteorological construction has attracted attention as a typical impersonal construction: i.e., impersonal constructions with non-referential subjects. Malchukov and Ogawa (2011) provide a typological analysis of such constructions. Their analysis of meteorological constructions is summarized in Table 1. One of the main interests here is which constituent carries the lexical meaning of ‘rain (n/v/other?).’ The types of non-lexical constituent are also notable.

Table 1: Types of constituents (cf. Malchukov and Ogawa 2011: 24-27).

Types of constituent		Examples that mean ‘it rains.’
weather verb (lexical)	zero subject	Guaraní: <i>O-ki</i> . (3SG-rain(v.))
	dummy subject	English: <i>It rains</i> .
	intermediate type subject*1	Arabic: <i>id-dunya ti-shti</i> . (the-world 3SG.MS-rain(v.))
weather noun (lexical)	dummy (auxiliary) verb*2	Russian: <i>Dožd’ idët</i> . (rain goes)
cognate construction		Even: <i>Udan udana-n</i> . (rain(n) rain(v)-AOR.3SG)
regular subject-predicate structure		(English: <i>The sun shines</i> .)

*1 A construction between a dummy and lexical subject: a nominal meaning ‘world,’ ‘weather,’ or ‘sky’ appears as a formal subject (Malchukov & Ogawa 2011:26).

*2 The Japanese example *Ame ga furu* is classified as a “dummy (auxiliary) verb construction.”

3.3 Eriksen et al. (2010)

Eriksen et al. (2010) conducted a comprehensive typological study on meteorological expressions based on the data from various languages. Their paper also includes an introduction that surveys previous studies on meteorological expressions.

They divide meteorological expressions into three major types based on the element primarily responsible for coding weather: (i) predicate type, (ii) argument type, and (iii) argument-predicate type (Eriksen et al. 2010: 571). These three types are further divided into subtypes as illustrated in Figure 1.

PREDICATE TYPE:	VALENCY VARIATION: Atransitive type Expletive type Intransitive predicate type Transitive predicate type PARTS OF SPEECH VARIATION: Verbal type Adjectival type Adverbial type Nominal type Locative type
ARGUMENT TYPE:	Intransitive argument type Existential type Transitive argument type
ARGUMENT-PREDICATE TYPE:	Cognate type Split type

Figure 1: Classification of meteorological expressions in Eriksen et al. (2010: 571)

Eriksen et al. (2010) also include a section that focuses on precipitation encoding (abbreviated as *p-encoding*) (588-594); that is, linguistic encoding patterns that express precipitation events such as rainfall or snowfall. According to them, this can be summarized as in Figure 2, where “argument p-encoding and predicate p-encoding are presented as extreme oppositions” and where “generalized p-encoding and argument-predicate p-encoding each constitute their own type of intermediate position.”

Argument p-encoding <i>rain falls, snow falls</i>	Generalized p-encoding <i>(it/place) rains, snow rains</i>	Predicate p-encoding <i>(it/place) rains, (it/place) snows</i>
	Argument-predicate p-encoding <i>rain rains, snow snows</i>	

Figure 2: The scalar typology of p-encoding (Eriksen et al. 2010: 593)

Below, I will cite examples of the encoding patterns in Figure 2 from Eriksen et al. (2010: 588-594) with brief expressions of the type in Figure 1 which corresponds to each p-encoding pattern.

3.3.1 Argument p-encoding

The argument type is subdivided into three subtypes as in Figure 1. However, I will focus on the intransitive argument type in this section, since all examples of the argument p-encoding pattern from Eriksen et al. (2010: 589) are of the intransitive type. In addition, according to Eriksen et al. (2010), “the intransitive argument type is attested in languages all over the globe” (ibid. 581), while the transitive type (both predicate and argument) is rare (ibid. 583).

In the intransitive argument type, the argument of the construction refers to the denoted meteorological event, while the presence of the predicate is grammatically required. In some cases, the verbs (e.g., ‘happen’ or ‘come’) have little semantic content of their own, and function as the expression of features such as aspect, mood, or tense. Grammatically, the noun of the intransitive argument type is best regarded as the subject in many languages. However, there are languages in which the only syntactic argument present is best regarded as an object due to its morpho-syntactic features.

(1) Russian (Eriksen et al. 2010: 589)

<i>idet</i>	<i>sneg</i>
go.3SG.PRES	snow
‘It is snowing.’	

In (1), a precipitation event is expressed by an argument type, where the argument *sneg* ‘snow’ is responsible for expressing the event. The “semantically bleached” supportive verb (Eriksen et al. 2010: 589) *idet* (the third person present form of *iditi* ‘go’) is involved to form a sentence.

The following languages are mentioned as having this type of encoding for precipitation events in Eriksen et al. (2010: 588-9): Russian, Albanian, Ainu, Khalkha Mongolian, Persian, Japanese, Korean, Lhasa Tibetan, and Lezgian. They point out that this encoding is frequent in Eurasian languages.

3.3.2 Generalized p-encoding

The generalized type is not involved in Figure 1. In the general discussion on the argument-predicate type (ibid. 583-6), examples of this type are included in the split type, as a subtype of the argument-predicate type (See Figure 1). In the split argument-predicate type, the argument and predicate “together describe the meteorological event, but each element encodes a different facet of the event” (ibid. 584). In the generalized p-encoding, “[the] supportive verb [like ‘go’ in Russian] has developed one step further. Due to its association with precipitation, the verb has seemingly acquired ‘to precipitate’ as one of its meanings, maybe even the only meaning, and it can also alone encode the most unmarked type of precipitation, namely rain. If a more marked type of precipitation is to be expressed, an argument occurs” (ibid. 589).

(2) Finnish (Eriksen et al. 2010: 589)

<i>sataa</i>	(<i>vet-tä</i>) / <i>lun-ta</i>
rain.3SG.PRES	(water-PART) /snow-PART
‘It is raining/snowing.’	

The verb *sataa* in (2) originally meant ‘to fall’ in earlier Finnish. In modern Finnish, however, the original meaning has been lost and *sataa* can only mean ‘to rain,’ or ‘to precipitate’ (Eriksen et al. 2010: 589-590).

The following languages are mentioned as having this type of encoding for precipitation events in Eriksen et al. (2010: 589-590): Finnish, Hungarian, Swahili, Polish, and Turkish (probably also Romanian and Northern Akhvakh, which are exemplified in the discussion on the split type (ibid. 585)).

In my opinion, however, generalized p-encoding does not seem like a good classification. I will discuss this later.

3.3.3 *Argument-predicate p-encoding*

Eriksen et al. (2010: 583-6), in their general discussion on the argument-predicate type, distinguish two subtypes: the cognate type and split type. All examples of argument-predicate p-encoding are of the cognate type: the argument and predicate express more or less the same information. In (3), the argument and predicate are clearly of the same origin, and are phonologically identical. In (4), the two elements are only semantically similar and seem to express the same information, although, formally, their resemblance is not as obvious.

(3) Mwotlap (Eriksen et al. 2010: 592)

na-smal	me-smal
ART-rain	PFV-rain
'It is raining.'	

(4) Ma'di (Eriksen et al. 2010: 584)

éjǐ	ō-dǐ	rá
rain	3-rain	AFF
'It did rain'		

The following languages are mentioned as having this type of encoding for precipitation events in Eriksen et al. (2010: 583-4, 591-2): Udihe, Ma'di, North Vanuatu languages (Mwotlap, Bislama, Araki and Hpi), and Latvian.

However, I would like to suggest distinguishing the type in which the argument and predicate are phonologically different as in (4) from the “genuine” cognate type as in (3). I will discuss this later.

3.3.4 *Predicate p-encoding*

“[Meteorological expressions] in which a predicate is responsible for denoting the given meteorological event, are viewed in this paper as instances of the predicate type. [...] If a syntactic argument occurs, it does not refer to the weather phenomena itself, but has other (grammatically required) functions.” (Eriksen et al. 2010: 572).

(5) North Saami (Eriksen et al. 2010: 592)

arvá
rain.3SG
'It is raining.'

Eriksen et al. (2010: 592-3) mention that this type of p-encoding is found in the following language groups: a few restricted subfamilies of European languages—Germanic, Romance, and Saami; and North American Indian languages such as Choctaw and Kwaza.

4 Discussion

In this section, I will discuss some problems found in the classifications of previous studies and suggest alternative classifications. In general, intermediate types tend to involve problems.

4.1 Generalized p-encoding

The generalized p-encoding (Eriksen et al. 2010: 589-591) does not seem a good classification, at least in respect of the following two points: [i] The difference between the argument p-encoding and generalized p-encoding is not clear-cut. [ii] It is not purely typological, since it requires a change from the earlier meaning of the “generalized” predicate. In addition, [iii] it can be divided into two existing types, since they recognize language-internal variation (ibid. 566).

Regarding point [i], Eriksen et al. (2010: 591) also point out the existence of an intermediate type between argument p-encoding and generalized p-encoding: In the example of Turkish, (6), the generalized verb *yağmak* ‘rain (v.), precipitate’ rarely drops its argument when coding rain.

(6) Turkish (Eriksen et al. 2010: 591)

yağmur / ka / dolu yağ-iyor.
rain / snow / hail rain-PROG.PRES.3SG
'It is raining/snowing/hailing.'

We can recall Japanese expressions with the verb *furu* as another example. It is worth noting here that Ruwet (1986: 204-205) (See 3.1) points out its characteristics as follows:

"Apart from more or less metaphorical extensions, the subjects of *furu* are restricted to *ame* (rain) and *yuki* (snow); the content of *furu* covers what is common to a rainfall and snowfall."

For example, "*ishi ga furu* would be appropriate in the case of a battle in which the armies use stones as projectiles or, even better, in the case of a volcanic eruption; *ishi ga furu* would be translated into French as *il pleut des pierres* (it's raining stones)."

However, the Japanese expression *ame ga furu* is classified into the argument type. It is difficult to measure the degree of "generalization" in different languages. The criteria for not classifying Japanese as generalized p-encoding are not clear.

Regarding point [ii], Eriksen et al. (2010: 589-590) refer to earlier Finnish, which has the argument p-encoding with the verb that means 'fall,' to classify modern Finnish into this type. If this type assumes such a semantic shift, it is at least difficult to use in our project of Asian geolinguistics.

According to point [iii], Finnish may have both the predicate p-encoding and argument-predicate p-encoding, while Turkish may have both the split type and cognate type of the argument-predicate p-encoding. Thus, I suggest the following classification:

- a) If the expression does not involve the argument, such as *sataa* (rain.3SG.PRES) 'it is raining' in (2), it comprises predicate p-encoding.
- b) If the expression involves an argument that supports expression of the event, or "encodes a different face of the event" (Eriksen et al. 2010: 584), such as *sataa vet-tä* (rain/precipitate.3SG.PRES water-PART) 'it is raining' in (2), it comprises split argument-predicate p-encoding.
- c) If both argument and predicate equally encode the event and have apparently identical forms, such as *yağmur yağ-iyor* (rain rain-PROG.PRES.3SG) 'it is raining' in (6), it comprises cognate argument-predicate p-encoding.

4.2 Synonymic argument-predicate type

The cognate argument-predicate type in Eriksen et al. (2010: 583-584) does not require that the argument and predicate are really cognate. Therefore, expressions in which the argument and predicate are not cognate but equally express the event (e.g., (4)) are involved in this type. This is probably because only a few such expressions could be found. However, in our project, we found a number of such expressions in Tibeto-Burman languages (Shirai et al., this volume):

(7) Jinghpaw (Maran 1978: 837, compiled by Keita Kurabe)

məraŋ thù?
rain(n.) rain(v.)
'It rains.'

(8) Jinuo (Hayashi 2009: 123)

mi33tha55 xo42-
rain(n.)/weather rain(v.)-
'It rains.'

Both the argument *məraŋ* ‘rain (n.)’ and predicate *thù?* ‘rain (v.)’ in (7) are used exclusively for rain phenomena. In (8), the primary meaning of the argument *mi33tha55* is ‘rain(n.),’ although it may mean ‘weather’ in other contexts; The verb *xo42-* ‘rain (v.)’ is used exclusively for rain phenomena, thus it cannot be used even for other precipitation events such as snowfall (Norihiro Hayashi p.c.).

It is misleading if we label expressions like (4), (7), and (8) as the “cognate” type. Therefore, I suggest another subtype of the argument-predicate type: the synonymous type.

5 Conclusion

I tentatively use the following scale to classify the expression ‘it rains’ in terms of the types of argument and predicate. The scale is revised from that of Eriksen et al. (2010: 593, see also Figure 2 above). Another point of classification would be the constituent order, although I tentatively regard it as a subdivision of each of the types shown in Table 2.

Table 2: The tentative classification of the expression ‘it rains’

Argument type		<i>rain</i> (n.) + <i>falls</i> (supportive v.)
Argument-predicate type	Cognate type	<i>rain</i> (n.) + <i>rains</i> (v.)
	Synonymic type	<i>A</i> (‘rain (n.)’) + <i>B</i> (‘rain (v.)’)
	Split type	<i>waterdrops</i> (n.) + <i>precipitates</i> (v.)
Predicate type		(<i>it</i>) (empty/expletive n.) + <i>rains</i> (v.)

Abbreviations

3: third person; AFF: affirmative; ART: article; n.: noun; PART: partitive; PFV: perfective; PRES: present; PROG: progressive; SBJ: subject; SG: singular; v.: verb.

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