

記猓羅音 史祿國

PHONETIC NOTES ON A LOLO DIALECT
AND CONSONANT L.

By S. M. SHIROKOGOROFF

I. INTRODUCTION

The Lolo dialect here discussed* is spoken by the Lolos (ḡoso-in Lolo)** living in south eastern part of Yunnan, namely near the small

*One of the purposes of my recent visit (1928) to Yunnan was to investigate the Lolos living in the south-eastern part of this province. As this work, owing to the temporary local conditions in this region, could not be carried out as I had originally intended, I confined it to what was accessible at the spot. In Yunnanfu, I found a Lolo family, native of the above indicated region, consisting of five adult women, a young man, and two children. All of them used their mother tongue in the family, and when visiting *bušid'i*, but used Chinese when dealing with the Chinese. During my work in this family, practically all members were present, which permitted me to check up individual pronunciation. The time at my disposal and the character of the material did not permit me to gather a very great amount of material. Looking over this material, however, I have found it interesting from the linguistic point of view and thus worthy of being published.

**They use this name for designating their own group and the Lolos in general. The names used by the Lolos for themselves as seen amongst various groups are numerous, but most of Lolo groups use one which lies within the phonetic complex where the initial consonant is either ḡ or n, or rarely l. The following vowel also varies: one meets with o, u, i, a, e. The first syllable ḡo with its variations has been translated as "black" (cf. A. Liétard, *Au Yunnan*, pp. 28 et seq.). However, the first syllable of their names and the word used for "black" do not always coincide, e. g. in *Buš*-dialect where "Lolo" is ḡoso, "black" is no, and ḡo is, for instance "five"; in *Ni* dialect "Lolo" is n'i (𐑦) and "black" is ne (Vial's transcription *neè*—𐑦). In order to warrant against misinterpretation of their name P. Vial (*Dictionnaire*, p. 81) has given a very important explanation which I permit myself to reproduce in full. "Les Lolos n'ont aucun terme qui puisse s'appliquer à toute une nation ou une race d'hommes, pas plus pour les autres que pour eux. Les peuples se divisent simplement en tribus, et chaque tribu porte son qualificatif. En pratique, chez Lolos, chaque tribu ne connaît que les tribus qui l'environnent; au-delà de cet horizon, elle ignore

city of Posi (in Lolo—*bušid'i*). This group, ethnographically speaking is in the process of gradual ethnical desintegration which is also true of most Lolo groups of Yunnan. Two neighbouring Lolo dialects have been investigated by P. Vial and A. Liétard. The first has investigated the dialect styled by him Ni (gni of his transcription), the name which I shall preserve in this paper, spoken by the Lolos living in 路南州, 陸原州 and 廣西州 a region* lying north from that of Buš dialect region, and the second has investigated the dialect styled by this author Ahi, the name which I shall also preserve, spoken by a small group of Lolos living in 路南州, also near 彌勒, south from the Ni dialect and north from the Buš dialect.**

tout. Dans les livres, l'écrivain emploie le nom de sa tribu dans un sens restreint, s'il s'agit d'une histoire particulière; tantôt dans un sens général, si l'histoire s'applique à l'ensemble de la race." It is evident that in Ni dialect *n'i* is used in reference to the speaker's group first, and to all Lolos he knows. It holds good for all Lolo dialects if they are actually Lolo dialects and not dialects of groups included into the Lolos by other ethnical groups, e. g. the Chinese. The syllable varies, but the stem remains the same. Nearly the same phenomenon is observed in the Northern Tungus dialects where the names for the Northern Tungus are invariably derived from *even* and very rarely substituted by non-Tungus names (cf. my Social Organization of the Northern Tungus, pp. 50 et seq.). A. Liétard has also interpreted the second syllable (in the Lolo dialects of Szechuen) *so* as "man, person." This may be true of some dialects, but again in Buš. dialect no such a meaning for *so* is found, while in Ni dialect *co* (Vial's transcription, *ts'o*) is not common in the above sense and altogether lacking in the name of people Lolo. It may be thus formulated: *no* (with its variations) + *so* (with its variations, and sometimes lacking altogether) seems to be the name by which the Lolos style themselves, but its meaning cannot be etymologically understood. Moreover this name among some groups is of little use. The problem is also complicated by the fact of some supposed to be Lolo groups being included into "Lolos" in former times by the Lolos themselves and later by foreigners, who did not distinguish ethnical relations which existed between the Lolos and other groups sometimes controlled by the Lolos. This also has its analogy in the ethnography of the northern regions of China. The name *nos* (and variations) may be of a political origin (like "Manchu"), it may be given by neighbours (like "Tungus"), and it may as well be a name preserved from the immemorial time (like "even").

*P. Vial, Dictionnaire, and earlier publication, Les Lolos.

**A. Liétard, Essai, and Vocabulaire, also Notions de grammaire. Only a part of 路南州 is evidently occupied by the Lolos speaking Ahi dialect, for P. Vial mentions the same 州. As will be shown, these two dialects are different.

A. Liétard has also investigated the Lo-lo-po dialect of western Yunnan, but no dictionary has been published*.

The Lolo writing system, as it is now used, is based upon phonetic principle; but the reading of characters varies among different groups. As to the origin of the characters from ideogrammes, according to P. Vial, there is no doubt about it. In fact, he gives a list of characters some of which (not all quoted by him, I believe) may be connected with the ideas expressed by the corresponding monosyllable words**, but considering the fact of a complete disconnexion between the characters, now phonetically used, and phonemena designated*** these characters may also be supposed to be borrowed from the actual inventors of ideogrammes, some other people, perhaps of the same origin (linguistically), but distinct from Ni. The phonetic equivalents of these characters thus were at a remote time borrowed by the Lolos. According to P. Vial, the number of characters is no more than three thousand, of them in Ni dialect one hundred and eighty characters are used for phonetic transcription of the actual sounds which in this way are sometimes increased by vowels contained in written syllables. The fact of using a syllabic system of writing has caused P. Vial and A. Liétard to see a monosyllabic basis of these dialects and to cut words into syllables as it is practised in European transliterations of the Chinese characters. From the above facts, it is evident that the value of written Lolo language has a very limited importance for my purpose.

The connexion of the Lolo language with other asiatic languages has been definitely established. It is connected with the Tibeto-Burman

*There are some other material which is not sufficient for comparative purpose. For instance, Cl. Madrolle (Quelques peuplades Lolo) has given some words of eleven (Ni dialect/ included) groups. I now mention this publication for I shall quote it once more. The details regarding early information about the Lolos may be found in a paper by H. Cordier (Les lolos. Etat actuel). Moreover, the languages Moso and Si-hia, closely related to Lolo, though investigated, could not be compared with Buš. dialect.

**Cf. P. Vial, Les Lolos, p. 39 et seq.

***e. g. numerals, the sun, the man, the woman, etc.

larger group in which it forms a group by itself with several dialects. The Moso and old Si-hia languages are also included in the Lolo group*.

P. Vial and A. Liétard were quite definite in their assertion of a monosyllabic character of the Lolo language. The polysyllabic words were thus explained as syllables just put together. Besides, the theory as to the monosyllabic character of all Sino-Tibetan languages which influenced these authors, this idea has found a strong support from the Lolo writing system, based, as stated, upon the syllabic principle. In fact, when the Lolo is writing, he has to decompose the complex sounds into the nearest phonetic elements **found in characters**. Owing to this, both consonantal and vowel clusters cannot be phonetically expressed unless one adopts a new conventional reading of characters. P. Vial in the first half of his dictionary has taken into brackets the vowels that are not pronounced**. Unfortunately in the second half of the same dictionary he has omitted them. The using of two characters has been explained as combination of two stems***. Yet even in the case of di-syllabic

*J. Przyluski (Les langues du monde, p. 369) has included these two languages into the Lolo group. Cf. also N. Nevsky, B. Laufer (The Si-hia Language) has considered Si-hia as a language by itself, showing affinities with Lolo and Moso within the Tibeto-Burman "family," and all of them included into "Indo-Chinese," about which J. Przyluski says "il ne peut être question de faire actuellement la théorie du sino-tibétain commun" (op. cit. p. 361). The classification of the Lolo dialects is far from being completed. Their classification is still hindered by the fact that some groups now classified among the Lolos may happen to be non-Lolos, but only controlled by them, and yet some other groups which have changed their language. The instances of Tungus (they are so styled) who speak Mongol (Buriat), e.g. in Transbaikalia, Nomad Tungus, shows that a group may be considered as belonging to certain ethnically larger unit by the tradition, and not by the language spoken. Yet the cases-verse versa are common, too.

**cf. Dictionnaire, p. 9, his remarques très importantes.

***The monosyllabic stems may be increased by prefixes and suffixes mistaken for distinct "stems." On the other hand, the phonetic syllabic system when meeting with the initial consonantal clusters may mislead when they are expressed by two characters understood as "stems" and morphological parts. The same may happen with the Lolos when they forget the conventional new reading of characters when used in combinations with other characters. From the psychological point of view it is curious that the Manchus being familiar with the syllabic system (from their previous

words, where the stem may be distinguished from the second component (the latter may be either another stem, or prefix, or suffix) the written syllables have nothing but phonetic meaning. Therefore one cannot make a conclusion as to the monosyllabic character of Lolo word formation*. The further analysis of Lolo will show perhaps that there are not only monosyllabic but also di-syllabic stems. As to the words, there are di- and tri-syllabic ones which are used as such**. A large number of word is composed of syllables and morphological parts, like suffixes and prefixes agglutinated. Yet some, especially monosyllabic words, may take meaning of nouns and verbs which depends upon the place of the word in the sentence. If such a word is incorporated either into a polysyllabic word or between the noun (also pronoun) and verb (according to the

experience with the Chinese characters and various attempts at the creation of syllabic writing from the Chinese characters) of twenty six letters of their alphabet made over thousand combinations with which almost all possible consonantal and vowel clusters could be expressed. However, not all combinations, even of their own language, could be foreseen whence clumsy spelling sometimes originated. Those Manchus who did not know their own language, as it was common among the Manchus living in China, used to read the syllabic combinations one by one pronouncing all the syllables according to the rules, and even cutting off the suffixes when written separately. This reading was just as P. Vial's transliteration of the Lolo characters. However, the Manchu syllabic system was much more superior to that of the Lolos, for the former did solve the problem of a moderate accumulation of vowels and consonants in clusters.

*I have detained such a long time on the opinion of the first investigators of the Lolo language, for this opinion has greatly affected their records by cutting words in a syllabic manner, while there might be no voiced elements contained to form a syllable. This idea was so strong that J. B a c o t, who had investigated the Moso dialect (of T'oung Pao, Vol. XII, 1911, p. 266) when the monosyllabism could not be disclosed said: "la langue Mosso est actuellement polysyllabique," leaving to understand that it was not so before.

**Indeed, in the living languages there are words and not stems and morphological parts. In other languages like Indo-European, Finno-Ugrian, Altaic, Tungus, etc. the stems are very often monosyllabic, but words containing one syllable are very rare. In Lolo, the number of monosyllabic stems and words may be still higher, for, as will be shown, this language possesses quantity and tones which permit additional combinations. Still this language possesses a large number of particles (e. g. a great number of those used for counting) in order to give a definite meaning to the short words and avoid monosyllabism.

principle well known in all Tibeto-Burman languages) in a written form, it naturally remains a monosyllabic one. However, when pronounced it is included into the polysyllabic word or long word-sentence, and therefore, as will be later shown, is subject to the changes of quantity, tone and stress of vowels and consonants. Such a syllable cannot be thus considered as a word, for taken alone it has no meaning at all, or it may have many a meaning not being at the same time a morphological element.

The incorporation has been understood by P. Vial as a peculiar form of Lolo word order in sentences when "double verbs" are used. He has quoted a list of "doubled" verbs* which as a rule incorporate objective. This list may be enlarged, indeed.** As the stem syllable is getting verb but with the nouns (and pronouns) the former cannot be considered as a verb existing quite independently, so the idea of word order, -noun (pronoun)-objective-verb, - perhaps may be also regarded as a particular form of incorporation. In fact, as stated, a complex sentence-word is pronounced as one word in accordance with which the stress is laid upon one of syllables, and the quantity, also tone, of other syllables may vary.

To the above general characteristic of Lolo it ought to be added, that this language possesses a quite well developed system of suffixes, in nouns, pronouns and verbs, also a large number of suffixes of derivation. These suffixes, especially when written separately,*** in other dialects have

*Cf. Grammar, in Dictionnaire, p. 48. He has tried to give absolute meaning of all syllables of which di-syllabic verbs consist. In many instances however, it was absolutely impossible, so his interpretation of this phenomenon is very clumsy, and still more some of his translations word by word.

**A Liétard has also made an attempt at the analysis of the "verbes composés" (cf. Grammaire, p. 290), but he has not been satisfied himself with this attempt. In the Lolopo dialect he has also met with the same difficulty in the case of the use of the suffix of negation, so he has made a list of "exceptions" when negative suffix is incorporated in di-syllabic verbs (cf. Au Yunnan, p. 243).

***The Manchus for instance sometimes also write suffixes separately e.g. bə, dè, ei, i, n'i, and composite ones, but they never separate them in reading (unless the reader is sinofied), and the European scholars have understand them as agglutinating suffixes and not particles. However, among the sinofied Manchus they are sometimes treated as particles and read separately as the Chinese do.

been understood as particles different as to their function when compared with the agglutinative languages. However, in Lolo several suffixes may be agglutinated to a stem. The lists of suffixes in the Ahi, Ni and Lolopo dialects may be found, but true they are not always presented in a clear form*. In the case when the speaker does not need them for expressing his idea, he does not use them even if the suffix might be required in typically agglutinative languages**. On the other hand, when the speaker needs, he is allowed to agglutinate several suffixes to the same stem, as it is also observed in typically agglutinative languages.

The above facts shown are sufficient for forming a general idea as to the Lolo dialect treated in this paper. It may be classified as a language (1) belonging to the Tibeto-Burman group, the Lolo subdivision; (2) possessing several syllables in words when needed; (3) possessing a well developed system of suffixes and prefixes agglutinated to the stem; and derivatives; (4) using, in a limited manner, the incorporation in polysyllabic words and very commonly in the system of word-order in sentences.

*J. B a c o t (cf. Les Moso,) has treated them as suffixes.

**In typically agglutinative languages as the Northern Tungus are, the omission of suffixes is very common when the sentence may be understood without them. In Manchu Spoken this phenomenon is still more common than in the Northern Tungus.

II

PHONETIC SYSTEM OF THE BUŠ DIALECT

I. Quantity, Tone and Accent of the Vowels.

In this dialect one may distinguish three conditions defining the character of the vowels regardless of their articulation, viz. the quantity, tone and stress.

§ 1 Quantity. There are long (—), medium () and short (˘) vowels.

Note: this definition is, of course, very approximate, for one cannot put exactly the boundaries between these three classes. Yet, sometimes the vowel may be longer or shorter absolutely speaking, which depends upon the tempo of speech, individual and subject of speech, also place in the sentence.

Examples: a ācov'i (violet), ačumo (bride), siǎn (elephant)
 e nōp̄ (ear), p̄eli (shoulder), nĕ (two)
 o ōmó (bamboo), ton (thousand), nšō (green)
 u kû (pali rim), koduso (to malk), kŭ (†) (horn)
 i čimo (goat male), ši (seven), deĩ (to beat), zibo (river)
 y nat̄y (father), mytýža (sparkle), kŷn (he, she)

however, ō and ě seem to have only medium quantity*, e.g.

ō nōbe (nose)
 ě lužě (bridge)

§ 2 Tone. The tone of vowels of the same articulation is subject to variations. One may distinguish vowels of low and high tone, also vowels on which no musical accent is heard. The difference between the low and high tones seems to be a quint.

Examples: gōmō (plough), no difference in tone, but in sŷkē (bark) e is higher than y, in dōbŷ (honey) y is lower than o, though the quantity in all cases is the same.

*Perhaps more numerous material would give instances of long and short vowels of these articulations. As will be later shown, these vowels are rather rare in this dialects.

1. In monosyllabic words the tone may also be either low, e.g. *dō* (bee), *ʒō* (snow), *mō* (horse), *iā* (to-day), or it may be high, e.g. *in'* (yesterday).

The low and high tone may be combined with the long and short vowels.

2. in di-syllabic words, e.g.
sȳkē (bark), *lenē* (hair on the body), *čabē* (sedan chair), *pōli* (father's junior brother's son), *mlé* (cow skin), * *nmō* (cow), * where the second vowel is higher than the first one and quantities are different, on the other hand, e.g.
dōžy (honey comb), *ndō* (chair), * where the first vowel and *n* are higher than the second one.
3. in tri-syllabic words the same cases are seen as in di-syllabic words, e.g. *n'ěcoty* (rock), where *y* is higher in tone. However in tri-syllabic words, just as in sentences (vide § 4) if there is stress on one of vowels the others may be affected by weakening, they are getting shorter and lose the musical accent.

§ 3 Stress. The stress is used very commonly. There are stresses laid upon (1) one of syllables of di- or tri-syllabic words when they are of the same quantitative value and tone, e.g. *mytýza* (sparkle), *n'ěmo* (sweet potato), *citōŋ* (one thousand), also words which are composed of syllables containing vowels of different quantity and tone, e.g. *cikułé* (nineteen), *ācicimō* (twenty one) and (2) on monosyllabic words which then produce impression of an emphatic pronunciation, e.g. *áwn* (father's brother's wife), *ká* (nine).

The stress can be thus laid upon long, medium, and short vowels of low and high tone.

*Though *mlé*, *nmō* and *ndō* include only one vowel each, the nasal consonants *m*, *ŋ* and *n* are distinguished as to their tones, therefore I have included them in the class of di-syllabic cases. The difference in tone in the case of *mlé* is exactly a quint.

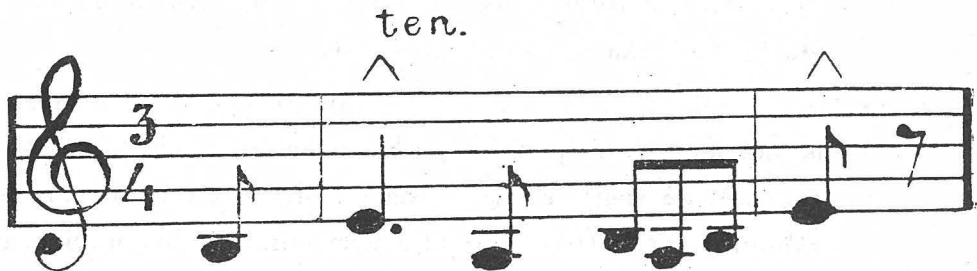
- Note 1. There seems to be a tendency in using stress, namely the final short high vowels are very often stressed. When the vowel is neither stressed nor accentuated by a fixed tone it has a definite tendency of disappearing when in combinations with other syllables forming polysyllabic words and in sentences, e.g. such is the case of **ci (mō)** (one) (in combinations -mō, which is a suffix, is omitted), **ñě** (two), where the vowels disappear altogether.* Such is probably the case of words like **ŋ** (ox) and the like.
- Note 2. There seems to be another tendency, namely, of laying stress upon one of the syllables when all of them, in polysyllabic words forming a word (and sentence-word), have the same quantity and tone, as in the case of **mýtyza** (sparkle) the choice of the syllable which is stressed depends thus upon the phrase as a whole and seems to be closely connected with the musical form of this dialect, in general.
- Note 3. There remain certain words stressed (vide supra § 3,2), but they seem to be used in the narrow sense they contain: **áwn** (an important term of relationship), **kū** (a numeral, relatively rarely used and containing no other meaning, contrary to the case of **ci**, "one" and indefinite article, and **ñě** "two" and "pair", "couple").

§ 4 **Musical system.** The musical system is very essential element in this dialect. The quantity and tones may change the meaning of the phonetic complex, so for instance in **ciťŋ** and **ciťŋ**, in the first case "one thousand" and in the second case "ten thousand" quantity changes though **ťŋ** is the same word, but in the case of **iñ**, "to-day," and **iñ**, "yesterday" the tones are different. In a sentence the tones being preserved may take different **relative** value owing to

*A similar process takes place in Tibetan, I think.

the quantitative value and stress of vowels and voiced consonants which do play the part of musically marked components.

Examples: 1. *noa as'i kolija* (I shall to-morrow cook) the musical phrase consists in a gradual rising of the tone from A to G; 2. *x'engo p'ikolē* (the door shut, i.e. shut the door) the first part *x'engo p'i-* remains under the same musical tone, but beginning from *i* it is getting lower, attaining its minimum at *l*, and then again rises up passing over the initial tone of *x'engo*; 2. *ta ē azo ažulá* (don't cry, child) which is still more complex as it is shown in musical symbols.



The above instances show that the quantity, musical tone and stress may be combined. It is difficult, sometimes, to find the actual nature of sounds taken out of text. Yet, the musical expression as a whole sometimes also affects the original nature of sounds, for instance in the case of question, disapproval, doubt, and order.

REMARKS: To §§ 1, 2, 3 and 4. The nature of sounds as shown is not stabilized, petrified. The four tones of Chinese (mandarin) cannot be applied to this system for (1) the quantity may be combined with different tones, (2) the musical nature of the Chinese tones is sometimes more complex than that of this dialect. So, as stated, the sounds low, medium and high of this dialect may be long and short but they are made of simple tones, as it is, for instance in Japanese where every vowel supposed to have its own tone, which again is not characteristic of this dialect.

II. VOWELS.

§ 5. Non-labilized vowels.

1. a mid-back-wide (with a tendency to low-back-wide shown as *ã*) it may be of different quantity, tone and stress, met with in all positions, e.g. *amo* (mother), *aka* (bucket) *čafun'epa* (window) (*ã* is met with chiefly with the consonants of cerebral and backed articulation; it is rather rare so I have no indications regarding quantity and tone; e.g. *aĩã* (mother's mother), *x'engotudã* (the door bar).
2. ä low-front-narrow; this vowel seems to have no low tone, but high and usually medium; it has been observed as initial; e.g. *elã* (goose), *ikã* (head), *nãnã* (snot).
3. e mid-front-wide; it may vary in quantity, tone and stress; it is met with in all positions, but rather rare as initial; e.g. *elã* (goose), *gẽ* (leg), *v'ẽ* (ig), *šib'ẽ* (soil), *k'egẽca* (dirty), *lemo* (thumb), *ʌeʌe* (to come) (it is very common in combinations with *k*, *g*, *x*, *l*, *n*).
4. e high-mixed-narrow; no variations as to the quantity and tone have been found; it has not been met with as initial one; it seems to be always stressed; e.f. *amẽn* (the father's mother), *arçẽ* (evening), *itẽ* (hat), *hẽ* (mountain), *mẽte* (fire).
5. i high-front-narrow, also sometimes high-front-wide; the variations depend upon the articulation of the preceding consonant; both of them show variations as to the quantity, tone and stress, but *i* is rarely met as initial; the latter is met with in the diphthongs; e.g. *čin* (root), *jinwuka* (fibre/bone/ of tobacco leaf), *cop'i* (hand); also *cimen* (old), *čisi* (claw), *dige* (stair case), *kopoci* (Adam apple); and *sý:ai* (tree), *n'ibucai* (brow).
6. y high-mixed-wide; it may differ as to the quantity, tone and stress; it is met with in all positions, except initial; e.g. *apy*

(abdomen), **buzo** (island), **cydu** (the well), **nynyx'e** (morning),
εy (wood), **xy** (iron).

§ 6. Labilized vowels.

1. **o** mid-back-wide-round; it may differ as to the quantity, tone and stress; it is met with in all positions; e.g. **ōmó** (a kind of bamboo), **sě** (blood), **ŋo** (five), **n'ilo** (red), **m'eho** (buttock), **koču** (tray), **εō** (snow).*
2. **o** mid-front-wide-round; no difference in quantity, tone and stress has been found; it is met with in all positions; **ēpa** (duck), **v'enjō** (wild boar), **nēbe** (nose), **nēvč** (side), **nčbepaŋ** (nostril).
3. **u** high-back-wide-round; it may differ as to the quantity, tone and stress; it is met with in all positions; e.g. **uhumo** (owl), **šu** (to cry), **pu** (suffix, "male"), **sexu** (to sweep), **zomesovŋ** (daughter), **kū** (†) (horn), **cacū** (table), **būžu** (shrimps).**

§ 7. Diphtongs.

1. **ao**, e.g. **baota** (many storied pagoda) (this may be a loan-word, I have no other instances).
2. **oa**, e.g. **ɔoxoa** (/I/ have eaten) (this diphtong is very often met with in verbs to get the idea of an accomplished action, also in some other cases, cf. § 4, example 1, where **ŋo** is increased with an **a** forming a diphtong; also § 5, 1, Footnote).
3. **ua**, e.g. **šixua** (to die), **wucuan** (brick).
4. **i** in all cases of combinations with the vowels may be regarded as component of diphtongs, e.g. **dei** (to beat), **lob'io***** (cousin?) **maičumo** (widow), also cf. § 5, 5-i.

*There is another **o** designated as **ō**, which is somewhat more back, but it is met with very rarely, e.g. **ždō** (drink) (**adōa**-I don't want to drink).

There are two more variations of **u, namely **ū** and **ü**, the first being mixed and second front, both high-wide-round. **ū** is higher in tone than **u**, and **ü** is higher than **ū**; e.g. **sososū** (to read). I believe **ü** is met with only in the loan words of Chinese origin.

***In this particular case **i** is not **j** what one might expect to have.

III. CONSONANTS.

§ 8. Consonants in general.

Certain quantity, tone and stress in this dialect may be given to the consonants mediae lenes. In § 4 we have already seen some instances of it. The greatest variations are naturally met with in nasal and liquid consonants, like **m**, **n**, **ŋ**, **l**, **ɾ** and **λ** which may be long and short. They may sometimes play part of vowels in clusters with tenues, especially in words (and suffixes) without vowels. The same consonants are also affected by the musical accent especially in sentences.

The tenues consonants may also vary, but in a much lesser degree as to their quantity. No such case is met with the occlusive. The emphatic (stress) pronunciation of consonants is also common. They may sometimes produce impression of being "doubled."

§ 9. Labial consonants.

1. **b** bilabial, occlusive, mediae lenes; e.g. **bonogo** (knee), **λōbō** (moon), **nōbe** (nose), **dōb̄y** (honey); when palatalized: **be** (to speak), **labe** (neck); when getting almost tenues and aspirated: **Èè** (mountain), **Èušid'i** (Posi), **Èeli** (shoulder); no palatalized **È** has been found.
2. **p** bilabial, occlusive, tenues; it is sometimes slightly aspirated; e.g. **poli** (glass), **pu** (suffix, "male"); when palatalized: **p'è** (leaf), **p'i** (back), **p'i** (to push), **lop'e** (blue).
3. **w** bilabial, spirant, mediae lenes; e.g. **wu** (roof), **áwn** (father's father's wife), **godow** (road); no palatalized **w** has been found.
4. - **v** labio-dental, spirant, mediae-lenens; e.g. **vāžemo** (carp), **zomesčv.i** (daughter); when palatalized: **v'è** (pig), **v'i** (wolf, hunting dog), **nev'i** (flower).
6. **f** labio-dental, spirant, tenues; e.g. **faču** (wood), * **limefoŋ** (son's son's wife), **mefu** (snake); no palatalized **f** has been found.

*This may be a Chinese lone-word.

§ 19. Dental Consonants.

1. **t** occlusive tenues; e.g. **taže** (saliva), **tamo** (father's sister), **to** (stair), **tyte** (to talk), **tun** (hotel); when palatalized: **t'i** (threshold); when cerebralized: **aĩã** (mother's mother), **geĩu** (plant of foot), **lalaĩe** (to run), **itè** (hat).
2. **d** occlusive, mediae lenes; e.g. **dige** (stair case), **ligādō** (rudder), **čidepó** (stockings); no cases of palatalized **d** have been found; when cerebralized: **cīdi*** (eleven).

§ 11. Alveolar Consonants.

1. **s** spirant, (high), tenues; e.g. **sē** (three), **sýze** (wooden bridge); when palatalized: **s'é** (woman's dress), **s'in'igo** (to breath).
2. **z** spirant, (high), mediae lenes; e.g. **zē** (tiger), **azo** (young, small sister, brother), **žezo** (incisor); no palatalised consonant has been found.
3. **š** spirant, (low), tenues; e.g. **ša** (coast, land), **še** (gold), **ši** (seven), **šu** (to cry); when palatalized: **š'igu** (lung).
4. **z** spirant, (low), mediae lenes; e.g. **žigo** (stream), **ži** (to drink), **zocyle** (to wash), **žymo** (money); no palatalized consonant has been found.

§ 12. Affricate Consonants.

1. **c** (high), tenues; e.g. **cācú** (table), **cēso** (charcoal), **cevu** (to call), **cī** (λe) (ten), **co** (soil, ground?).
2. **č** (low) tenues; e.g. **če** (dog), **čina** (shoe), **geču** (toy), **gegeča** (very nice); when palatalized: **č'in** (root), **č'ižō** (rope).
3. **3** (high), mediae lenes; e.g. **že** (stem of a plant), **žozo** (to eat); when palatalized: **ž'igo duvo** (to marry).
4. **ž** (low), mediae lenes; e.g. **žé** (brass), **ži** (wine), **žu** (buttock), (lower part); when palatalized: **ž'e** (tooth).

*In my records I find only this instance of cerebralized d. Since in the above quoted case **cīdi** (eleven) the word consists of **cī** (**mō**) (one) and **cī** (ten), the existence of **d** must be supported by other evidences. cf. in Ahi and Ni dialects "one" is "t'i."

§ 13. Glottal (back) Consonants.

1. **k** occlusive, tenues; **ko** (year), **ki** (he, she)* **ko**λ**e** (neck), when palatalized: **k'ezō** (star), **k'egēca** (dirty); when aspirated: **ka** (ice), **ku** (six).
2. **g** occlusive, mediae lenes; e.g. **gemo** (small toy), **gy** (to give), **argo** (fish), sometimes it is very short, e.g. **luḡḡede** (wooden post); when aspirated: **ḡodow** (road), **ḡulu**** (wheel).
3. **x** spirant, tenues; e.g. **xō** (flesh), **xō** (hundred), **xuxu** (all together) when palatalized: **x'e** (snake), **x'eṅ** (house).
4. **ɣ** spirant, mediae lenes; e.g. **ɣe** (large, big), **ɣō** (snow), **ɣobuɣa** (to be satiated).

§ 14. Liquid Consonants.

1. **m** bilabial, nasal; e.g. **maʒo** (wife), **me** (to blow), **moli** (father's junior brother); when palatalized: **m'ēbo** (rump), **m'i** (field).
2. **n** dental, nasal, e.g. **nādo** (back), **namo** (mother), **neca** (to live), **noca** (ear-ring), **nȳtū** (tea), **gegečen** (very handsome), **aṅn** (buffalo); when palatalized: **n'e** (crane), **n'en'e** (face), **n'i** (thou) **n'iki** (eye lid), **n'p'e** (beak), **n'do** (seat); when long: **ndo** (chair), **n'mo** (heart), **ncī** (twenty), **ṅkī** (sky), **„iā'** (yesterday), **nā** (ground, floor), **ntōṅ** (chest), **cyā** (dāy) **aī'** (father's sister's husband).
3. **ŋ** glottal (back), nasal; e.g. **ŋ** (ox), **eṅ** (small), **ŋ** (to be) **ṅx'e** (rat), **ṅx'i** (eight), **ṅxopo** (mosquito), **koṅxo** (Yunnanfu), **λaxoṅ** (hat, round, large); when long: **aṅtu** (thunder).
4. **l** lateral, alveolar, (high) (palatalized ʎ); e.g. **lab'e** (neck), **le** (skin), **leču** (finger), **lime** (son's daughter), **lise** (head dress-turban).

*Cf. also **kȳn** (he, she).

**Loan-word from Chinese.

5. λ lateral, cerebral, (low); e.g. $\lambda e\lambda e$ (to come), $\lambda o\lambda e$ (stone), λose (sun), λu (throw away), $\lambda opaje$ (tobacco), $pu\lambda a$ (name of people living near Montse-Yunnan).
6. \dagger lateral, alveolar, (low); e.g. $\dagger opa\check{c}in$ (tendon), $\dagger ob\ddot{y}o$ (cousin?) $te\dagger aze$ (to take), $\ddot{z}oko\dagger a$ (to cook), $k\ddot{u}(\dagger)$ (horn), $n'\ddot{i}pu(\dagger)$ (forehead), $n'\ddot{i}du(\dagger)$ (eye) (cf. § 16, \dagger).

§ 15. *Varia Consonants.*TABLE I.
Consonants

| Character \ Articulation | | Labial | | GLOSSAL | | | | | Larin-geal |
|--------------------------|------------|----------|--------------|---------|-------------------------------|---------|--------------|-----------|------------|
| | | Bilabial | Labio-dental | Frontal | | Mid | Back | | Larin-geal |
| | | | | Dental | Alveolar | Glottal | Back glottal | Velar | |
| Occlusive | tenues | p | | t | \dot{t} | | k | \bar{k} | |
| | med. lenes | b b | | d | \dot{d} | | g g | | |
| Affricate | tenues | | | | c \check{c} | | | | |
| | med. lenes | | | | \ddot{z} $\check{\ddot{z}}$ | | | | |
| Spirant | tenues | | | | s s | | x | | h |
| | med. lenes | | | | z z | j | \ddot{z} | | |
| Lateral | tenues | | | | L | | | | |
| Liquid | Lateral | | | | l Δ \ddot{l} | | | | |
| | Nasal | m | | n | | | η | | |

1. **h** laryngeal, spirant; e.g. **helo** (to stand), **uhumo** (owl); [some cases of **hx**, perhaps ought to be considered as nasalized **h** or aspirated **h**, e.g. **hxome** (fly), **hxopo** (mosquito), **amhxo** (rain), **amhxũ λ o** (lightening)].
2. **j** mid glottal spirant; e.g. **je** (chicken), **jĩnwuka** (fibre of tobacco leaf), **lopaje** (tobacco), **janfaču** (match).*
3. **L** lateral, spirant, tenues (high); e.g. **Lon** (egg), **ciLi** (fourteen).

Vide § 22, where details concerning this consonant are given,

§ 16. *Final and Initial Sounds, Clusters, Nasalization.*

1. Both vowels, including diphthong, and consonants may be final. All vowels can be so, but as to the consonants I have found only **n**, **h**, **w**

and *ɬ*. The instances of the final vowels can be found in previous sections, so I shall here give but some examples of final consonants.

n e.g. *in* (to-day), *kŷu* (he, she), *áwn* (father's brother's wife); when palatalized: *iñ* (yesterday).

ŋ e.g.; *ton* (thousand), *amèn* (father's mother), *cimen* (old, person)

Note: some cases of final *ŋ* may be considered as further variation of nasalization (cf. *infra* § 16,4). The consonant *ŋ* does not appear always as well pronounced in different words, and by different persons, also in combination with other words.

w there are very few instances of final *w*; of its existence in this dialect, however, there is not any doubt. It may be supposed that it is in the process of formation, for the words ending in diphthongs show a tendency of increasing the second component with *w*. This phenomenon is perhaps connected with the emphatic bilabialization of labialized vowels.

ɬ in § 14,6. I have already quoted some cases of final *ɬ* which I put into brackets for its pronunciation is rather weak. However, finals *ɬ* is heard even in the isolated words, i.e. when they are not followed by another word with an initial vowels. This phenomenon is perhaps a recent one.

2. The initial sounds may be all consonants and all vowels excepting diphthongs, and *y*. Some of the consonants are rarer than the others, so for instance, *f* and *h*, are met with in a few cases, while all affricate and alveolar consonants are very numerous. Among the vowels, *o* and *ö* are very rare. This may also be connected with the limited use of *ö* in general, but it cannot be said so in reference to *o*, which is the most numerous vowel. The bilabialization of the initial *u* which is preceded by *w* seems to be also common.*

3. Clusters of consonants and vowels are very rare. No clusters have been found excepting that of consonants with *n* and *ŋ*. In some cases they are due to the stricture of vowels (short and not accented.

*This phenomenon has affected Chinese dialects, also Manchu (cf. my Notes on Aspiration and Bilabialization).

The stricture occurs but in the cases when there are final **n** and **ŋ** and initial **n**, **ŋ** and **m**. The loss of vowels may take place even in monosyllabic words, e.g. **ŋ** (ox), **n̄** (two).

4. The nasalization of vowels and some consonants is well marked in this dialect. Almost all vowels has been found to be sometimes nasalized, e.g. **x'en** (house), **aŋce** (evening), **ameŋ** (father's mother), **toŋ** (thousand), **luŋgede** (wooden post), **č'in** (root). The glottal consonants, as **x** and **g**, perhaps also undergoes nasalization, e.g. **ŋxe** (rat), **ŋxi** (eight), **ŋxopo** (mosquito), **ŋxome** (fly), **amŋxo** (rain). The alternation **ŋ**↔**ŋg** may perhaps be referred to the same phenomenon. The nasalization may change into the consonant **n**. As the individual variations of the pronunciation, emphatic pronunciation, etc. present great variations I have used **ŋ** (consonant) without presuming its origin either from the nasalization of vowels, or as independent consonant, or as nasalization of consonants.

§ 17. Chinese loan-words.

I give here some recent borrowing of the Chinese words which may help the understanding of the present Lolo phonetic character. One must remember that the Chinese characters I give are pronounced in Yunnan according to the phonetic system of the Chinese of Yunnan which is near to that of the northern dialects.

gulu (wheel) 話轆, **jan'zi** (turkey) 洋鷄, **inŋtoŋ** (chimney) 煙筒, **janfacu** (match) 洋發炷, **poli** (glass) 玻璃, **p'i** (writing brush) 筆, **pupoŋ** (sail) 布蓬 (?) **s'ian** (elephant)* 象, **zi** (wine) 酒.

This list may be enlarged by including many other words which have been completely assimilated, e.g. **aje** (father's father) (corr. 爺), where **a** is Lolo prefix and **je** is Chinese word; also I have suspicion as to **zo** (child, small animals and birds) which seems to be of a Chinese origin (cf. 子) but well assimilated as it has also happened in Mongol and Tungus.

*I believe it to be a recent loan-word for the corresponding word in other Lolo dialects for "elephant" is different. The same is true in reference to other languages of the Tibeto-Burman group. **sian** has been borrowed by the Manchus -**sufan**-, but the Mongol word **žan žaγan** may better be compared with the Siamese-Laos, etc. **čan, tsan, tsan** and not with the Chinese **siang** (the Siamese-Laos parallels I quote from B. Laufer, op. cit. p. 66).

III

COMPARISON OF THE LOLO DIALECTS.

§ 18. Methods of Recording.

The difficulty of comparison of this dialect with other Lolo dialects, besides the fact of rather limited material, is that P. Vial and A. Liétard who have published their material, had not recorded phonetics with all desirable precision. Both of them have analysed the Lolo phonetic system, not from the point of view of articulation, but chiefly from the point of view of acoustic effect as it had been perceived by themselves. Yet as basis of comparison, both of them have taken their own language. Moreover, they did not sharply distinguish the phonetic elements and complexes from their graphic expression in French. Owing to these conditions, none of them were able to give an exact phonetic picture and many a sound have been either mixed up or split. I have here made an attempt of restoring, in so far as it was possible, the actual character of sounds recorded by them basing my restoration on their description of sounds and their own phonetic system. Not in all cases was it possible to do it. In spite of all the defects of my restoration, I shall compare my material with that of P. Vial and A. Liétard, for there are some interesting differences which may bring other problems to light.

The greatest difficulty these authors had were with the following vowels: *ö*, *è* and *y* which in many cases are designated by them as “*eu*”. P. Vial says “*c’est précisément une des difficultés de cette langue, de gutturaliser les voyelles, même quand la consonne est labiale, de cette manière eu devient facilement ou, o, oo et même un son intraduisible avec nos lettres*”.*

These vowels are *è* and *y* probably. A. Liétard considered them, one may guess from his description, as “*voyelles composées (diphthongues)*”,* so he concludes: “*eu souvent aussi est confondu avec o, ou avec ou et parfois *ö*, *ê* même, mais très-rarement cependant, avec a, et vice*

*P. Vial, Dictionnaire, p. 6.

versâ". In his case one may also guess the existence of the same vowels ö, è and y which are, as a matter of fact, difficult for foreigners unfamiliar with these sounds. As it has not always been possible to guess which of these sounds had been heard by these authors I give in brackets their original records.

Some difficulties have also been met by these authors with the record of consonants. They did not mention the existence of cerebral *t̪*, *d̪*, *ʎ*, but they did emphasize many aspirated consonants which I think in some cases are merely cerebralized. The consonant *t̪* has also been omitted though its existence is very likely, indeed. They have introduced "r" which does not exist in Lolo and which has been recorded instead of *ʁ* and sometimes instead of *x*.** The latter has also been understood as *k'* (aspirated) and even *h*, for this consonant is lacking in French. One sound more, namely, *ŋ*, which has not been understood but perceived, is shown by P. Vial as "gh" and by A. Liétard usually as "ng". P. Vial's transcription "ghh" is that of *ʁ*, too. In these cases he could not get the spirant and voiced character of it produced by the back of the tongue ("s'essaie à sortir du fond du gosier," according to his description). The consonant *L* with its variations has not been understood and is designated as a group of consonants, e.g. "shl" (P. Vial), "hl" (A. Liétard). The details will be given in § 22. Other peculiarities of their transcription require no special explanations when restored by me. I here used *ch*=*š*, *dj*=*ž*, *gn*=*n'*, *tch*=*č*, and *ts*=*c*.

*A. Liétard, *Au Yunnan*, p. 198. To this he has also added all syllables composed of *j* and *w* and different vowels.

**P. Vial says (*Dictionnaire*, p. 7) "r n'est jamais dure; c'est à peu près notre r grassyé. Il est à remarquer que, dans certains villages, on tend à confondre le *k'* aspiré et l'r grassyé." This is quite true the alternation *x*↔*ʁ* is very likely, for the articulations in both cases are the same and since the process of alternation of mediae lenes with tenues affect the dialect in one of directions both *x* and *ʁ* may happen to be present. The mistake of *ʁ* for *r* is known from other works, too. Cf. for instance M. G Soulié, *Éléments de grammaire mongole*, analysed by A. Rudnev.

§ 19. Vowels (Comparative).

I give below two tables showing frequency (in percentage) of alternations of principal vowels. I have omitted rare vowels like *ä*, *ö*, *ü* and *ü* of my records. In the second table the frequency (in percentage) of the same vowels in three dialects is shown. For this analysis I have chosen the words of the same stem in these dialects. So I have compared one hundred and eighty words of Buś dialect with one hundred and forty-six words of Ni dialect, and one hundred and fifty-two words of Ahi dialect.

TABLE II.
Vowel frequency (in percentage)

| Vowels Dialects | o | e | i | u | a | y | ö | ä |
|--------------------|------|------|------|------|------|-----|------|-----|
| Buś | 33.3 | 26.7 | 21.1 | 7.2 | 4.4 | 4.4 | 1.7 | 1.1 |
| Ni | 4.0 | 37.6 | 12.8 | 17.6 | 20.0 | | 7.2 | |
| Ahi | 33.3 | 15.1 | 12.7 | 7.1 | 12.7 | | 19.0 | |

TABLE III.
Frequency (in percentage) of alternation of vowels

| Buś Ni and Ahi | a | | e | | i | | ö | | o | | u | | y | |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| a | 25.0 | 60.0 | 3.3 | 22.7 | 3.1 | | 33.3 | | 46.7 | 5.6 | | 8.3 | | |
| e | | | 66.7 | 29.5 | 50.0 | 12.9 | 66.7 | | 8.8 | 2.8 | 33.3 | 8.3 | 50.0 | |
| i | 25.0 | | 6.7 | 18.2 | 37.3 | 51.6 | | | 4.4 | 8.3 | | 8.3 | | |
| ö | 25.0 | | 13.3 | 15.9 | 3.1 | 16.1 | | 50.0 | 4.4 | 5.6 | 16.7 | 25.0 | | 75.0 |
| o | | 40.0 | 3.3 | 11.4 | 6.2 | 12.9 | | 50.0 | 4.4 | 72.2 | | 16.7 | | 25.0 |
| u | 25.0 | | 10.0 | 2.3 | | 6.4 | | | 31.1 | 5.6 | 50.0 | 33.3 | 50.0 | |
| | Ni | Ahi | Ni | Ahi | Ni | Ahi | Ni | Ahi | Ni | Ahi | Ni | Ahi | Ni | Ahi |

From these tables it may be seen that in Buš. the vowels **o, e, i** cover roughly speaking 80 per cent, while in Ahi and Ni 60 and 50 respectively. In Ni dialect **o** is rare, so in descending order the vowels are **e, a, u, i**, and in Ahi dialect the order of vowels is again different, namely **o, ö, e, i, a**. Taking into consideration the most frequent vowels one may characterize these dialects: Buš (**oai**), Ni (**eau**), and Ahi (**oče**).

Frequency of alternations also shows the character of these dialects. If one compares these dialects as seen in combinations of alternations the number of these combinations is rather limited.

| when in Buš | in Ni is found | in Ahi is found | Frequency in per cent |
|-------------|----------------|-----------------|-----------------------|
| o | a | o | 40.0 of all Buš o |
| o | u | o | 18.2 of all Buš o |
| e | e | e | 31.3 of all Buš e |
| e | e | i | 18.7 of all Buš e |
| i | i | i | 30.8 of all Buš i |
| i | e | i | 17.9 of all Buš i |

I give some instances of alternations shown in the previous table
 type **oao kézō**, **keza** (keèzà ㄎㄜㄗㄚ), **hazo** (ha³-zo)—the star;
 type **ouo toŋ**, **tu** (toù ㄊㄨ), **to** (to³)—thousand;
 type **eee leko**, **leku** (leèkoū ㄌㄜㄎㄡ), * **lečo** (lyé²-tcho¹)—the armlet
 type **eei gepē**, **čebe** (teh'ébee ㄔㄜㄅㄜ), **k'ib'e** (k'i-bye¹)—the foot
 type **iii lep'i**, **lepi** (leē pī ㄌㄜㄆㄧ), **lepi** (lyé²-pi¹)—the ring
 type **iei Li**, **Lē** (shlē ㄌㄜ), **li** (li²)—four.

I shall not give the examples of other combinations of alternations for it will take too much space in this paper. Some of combinations are very rare, so for instance, the coincidence in all three dialects of **a, o**, and

*P. Vial gives also another reading of this character, **gou**.

u are especially rare. Some of combinations are lacking altogether. I must point out that the above material perhaps does not exhaust all the mathematically possible combinations, but for us it is important just to see the tendency, which appears quite clear from the above tables.

From the Table III one may see that P. Vial has probably understood *ö* chiefly as *e* and *y* as *u*, while A. Liétard—*ö* as *ö*, i.e. quite correct, but *y* as *ö* and *o*.

The diphthongues *ei* and *ai* of Buś have their corresponding in Ni *e* and *ö*, while in Ahi only *a*.

The quantity and tones have been recorded by these two authors. A. Liétard* has found in Lolopo dialect nearly the same tones as in Chinese and in Ahi four Chinese tones. Father Martin** has found a somewhat different system among the Lolo of Sechuen. P. Vial has also found five tones, but he did not compare them with the Chinese tones. As I have shown the tones of Buś are not of the Chinese type and yet they change in the sentences which has also been noticed by these authors.*** In all dialects there is tendency of preserving the quantity, but it cannot be generalized. In a lesser degree the tones, in so far they may be compared, are also sometimes preserved.****

§ 20. Consonants (comparative).

The aspiration and palatalisation are met with in both dialects. I have already pointed out that in some cases the cerebralization has been mistaken for aspiration and even palatalization. No definite tendency as to the preservation of aspiration and palatalization have been disclosed.

1. Labial Consonants alternate:

- a. *b*↔*p* without any definite tendency, e.g. *bonogo* (Buś) -*po*↔*ö* (*po*⁸-tseu') (Ahi) [knee];

*A. Liétard, *Ay Yunnan*, p. 199.

**Ibid. p. 199, footnote 2.

***A. Liétard, *Essai*, p. 628.

****These authors, I think, in their search for the tones in Lolo, were influenced by the Chinese system of tones with which they were familiar. Cf. *supra* § 4, Remarks.

bè (Buš) -pō (peù 𐎆) (Ni) -po (po³) (Ahi) [mountain];
 gēpē (Buš) -č'ebe (tch'e bee 𐎆 𐎆) (Ni) -k'ib'e (k'i-bye) (Ahi)
 [foot]. The most frequent case is that when in all three dialects
 p is found (47.1 per cent of all cases).

Note: All three dialects may be suspected of undergoing the process of alternation mediae lenes into tenues.

- b. v and w seem to alternate with v and g, also w↗b, and b↗v, so, for instance, nēvō (Buš) -nōṽ'e (neù ghhé 𐎆 𐎆) (Ni) -nōgō (neu-geu) (Ahi) [side];
 wuka (Buš) -ṽ'epu (ghhé pou 𐎆 𐎆) (Ni) -ṽčko (reu⁴-kō¹) (Ahi) [bone];

ṽō (Buš) -va (vá 𐎆) (Ni) -wo (ouo⁴) (Ahi) [snow];

wu (Buš) -buben (bou¹-ben⁴) (Ahi) [roof];

lab'e (Buš) -leṽe (lài ghhé 𐎆 𐎆) [neck].

- c. b↗m has been met only once, namely žibo (Buš) -jimo (yi³-mo³) (Ahi) [river], so this alternation may be only suspected as existing in these dialects.

2. Dental Consonants alternate d↗s, d↗z, t↗š; e.g.

dei (Buš) -de (dái 𐎆) (Ni) -ža (dja⁴) (Ahi) [to beat];

n'idu (t) (Buš) -nesé (neesé 𐎆 𐎆) (Ni) -n'esa (nyé-sa⁴) (Ahi) [eye];

-žē (Bus) -že (dje 𐎆) (Ni) -d'i (dyi) (Ahi) [brass];*

moše (Buš) -mata (mata 𐎆 𐎆) (Ni) -moto (mō¹-to³) (Ahi) [bamboo];

on the other hand t (t)↗c is also known, e.g. ci (Buš) -ti (t'i 𐎆) (Ni) -ti (t'i) (Ahi) [one]. Alternations t↗i is common. In Buš t and d seem to be better preserved.

3. Alveolar Consonants alternate z↗c, ž↗č, ž↗j, s↗š; [previously shown: s↗d, š↗t; (vide also infra 4. Affricate Consonants)], e.g.

ze (Buš) -cō (tseù 𐎆) (Ni) -cō (tseu³) (Ahi) [bridge];

dōzy (Buš) -dōčō (do⁴-tch'eu) (Ahi) [honey comb];

ziče (Buš) -že (jè 𐎆) (Ni) -již'e (yi-djye) (Ahi) [water];

*Cf. Mongol žed, Burist -žes (brass).

taže (Buš) -n'ize (gnijè ㄋㄣ ㄓㄝ) (Ni) -tiji (ti¹-yi³) (Ahi) [saliva]*;
čiši (Buš) -k'isa (k'i³-sa³) (Ahi) [claw].

4. Affricate Consonants alternate *cʌč*, *cʌk*, *čʌk*, *cʌʒ*, *čʌʒ*, *čʌz*, *čʌʒ*, *čʌg*, *ʒʌk*, *ʒʌg*, *ʒʌʒ* (?) [also previously shown, *cʌz*, *čʌz*, *dʌʒ*, *cʌt*, /, e.g.

čilon (Buš) -ciLu (ts'ishlou ㄘㄧ ㄌㄨ) (Ni) [rice];

n'ib'ucai (Buš) -nibucö (nee boù ts'eu ㄋㄧ ㄅㄨ ㄘㄞ) (Ni) n'ebuka (nye¹-bou²-k'a) (Ahi) [eyebrow];

či (Buš) -ci (ts'í ㄘㄧ) (Ni) -k'i (k'i²) (Ahi) [goat];

če (Buš) -če (teh'é ㄘㄝ) (Ni) -ki (k'i⁴) (Ahi) [dog];

syjai (Buš) -secö (sètse ㄙㄝ ㄘㄞ) (Ni) -söc'e (seu³-ts'ê²) (Ahi) [tree];

ž'e (Buš) -čema (tehèma ㄘㄝ ㄇㄚ) (Ni) -čavö (tcha³-reu⁴) (Ahi) [tooth];

wučäpo (Buš) -zopo (zo⁴-p'o⁴) (Ahi) and zu (ts'ou) (Ahi) [man] (čäpo-zopo);

godow (Buš) -kama (kamà ㄎㄚ ㄇㄚ) (Ni) čoma (tcho³-ma³) (Ahi) [road, way];

čizö (Buš) -kicö (kits'eú ㄘㄧ ㄘㄞ) (Ni) -k'icö (kyé-ts'eu⁴) (Ahi) [rope];

gomo (Buš) -guma (goúmà ㄎㄚ ㄇㄚ) (Ni) -žoma (djo⁴-ma³) (Ahi) [plough];

lēži (Buš) -leže (leéghhedlou ㄌㄝ ㄓㄝ) (Ni) -ležö (lyé²-reu) (Ahi) [arm];

5. Glottal Consonants alternate *kʌʒ*, *kʌh*, *ʒʌg*, *ʒʌx*? [*xʌh* (aspiration)], *ʒʌŋ* [also previously shown *ʒʌʒ*, *gʌʒ*, *kʌc*, *kʌč*, *kʌʒ*]; e.g.

koduso (Buš) -že (ghbe ㄎㄝ) (Ni) -zo (ouo¹) (Ahi) [to walk]** (ko-že-zo)

*že (ži)-ji, the second component is "water," see *supra*.

**I have some doubts as to ži-že-zö. Perhaps we have here two different components. Yet "ghhe" may be *x*, and "ouo" may be *wo*.

k'ezč (Buš) -keza (keèzà ㄎㄜㄗㄚˋ) (Ni) -hazo (ha³-zo⁴) (Ahi) /star/;
 xe (Buš) -g'e (giái ㄍㄞˊ) (Ni) -ṇa and ɣ'a (nga,⁴ ra⁴) (Ahi) /large,
 big/;

xy (Buš) -ɣe (re ㄖㄟ) (Ni) -hö (heu) (Ahi) /iron/; (ɣ [r] in Ni
 might be shown by mistake, instead of x, also h in Ahi). Though
 there are many instances of x^h I have some doubts as to
 these records. In fact, as shown both P. Vial and A. Liétard
 did not distinguish the consonant x, so in some cases it might be
 taken for h and even a simple aspiration. Therefore I omit all
 these alternations. The same ought to be referred to ɣ^h, e.g.;
 in the above case, for ɣ and ṇ presented great difficulties to these
 authors.

6. Liquid Consonants

- a. m^h, vide supra Labial Consonants; generally speaking,
 the consonant m seems to be very stable in all dialects; the same
 holds good for n. However, the alternation n^h is common, e.g.
 ṇ (Buš) -n'i (gni ㄍㄢˊ) (Ni) -ni (ni⁴) (Ahi) /ox/;
 ṇe (Buš) -n'a (gna ㄍㄢㄚˊ) (Ni) -na (nā¹) (Ahi) /small/; ṇ^hg alter-
 nation is also somewhat doubtful, though there are cases like ṇo
 (Buš) -ṇa (gha ㄍㄞㄚˊ) (Ni) -ge (go³) (Ahi) /I, me/, which together
 with the case ṇ^hɣ ought not to be omitted from consideration.
 Moreover, there are many instances when ṇ is present in Buš
 while lacking in other dialects, e.g. toṇ (Buš) -tu (tòu ㄊㄡˋ) (Ni)
 -to (to³) (Ahi) /thousand/;
 č'iṇ (Buš) -ki (k'i-tcho¹) (Ahi) /root/;
 laxoṇ (Buš) -laxo (la'o ㄌㄚˊㄠ) (Ni) /hat (round, large)/.

Note: It may be noted that in most cases oṇ (Buš) corr. u (Ni),
 whence, it may be supposed that the final ṇ may be regarded
 as effect of nasalization of vowels.

- b. as to the alternations † (l) (λ) vide supra § 18. In Buš
 alternations of this type are possible, so in some cases I have
 found in my notes (from different and even from the same per-

sors) palatalized and cerebralized l combined with different vowels and sometimes with the same vowels.

7. **V a r i a C o n s o n a n t s.** It has already been stated regarding comparative material in general, as to *h* (*vide supra* § 20,5). The alternation *j*↔*ž* has been shown in § 20,3. The case of *L* will be analyzed in § 22. The yodization of vowels is observed in all three dialects simultaneously. However, it may be sometimes lacking in one or two of them.

§ 21. **G e n e r a l R e m a r k s.**

1. No regular process of transition of mediae lenes into tenues or vice versa has been found in these dialects.
2. The alternation of alveolar and glottal consonants (*c*↔*k*, etc.) seems to be very common. Buš may be characterized by the presence of alveolar consonants which are glottal in other dialects.
3. Buš may be characterized by the presence of numerous *č*, *ž*, *š*, used instead of *c*, *z*, *s* found in other dialects, however *ž*↔*z* is also common in Buš.
4. The aspiration in Buš seems to be less developed than in other dialects [This remark ought to be taken with great reserves as to its validity, for in P. Vial's and A. Liétard's works the palatalization and cerebralization might be mistaken for aspiration, for the decrease of the voice as well/].
5. The nasalization seems to be more pronounced in Buš than in other dialects.
6. The final consonants (*t*) and *w* are met with only in Buš. Yet the final *n* and *ŋ* are also much more common in this dialect than in the others.
7. The stricture of vowels, in so far as it is possible to see from the material published, is more common in Buš and Ni than in Ahi.
8. The bilabialization (*w*) and its further changes into the spirant *w* is met with in Buš and it may also be suspected in Ahi.

IV.

CONSONANT L.

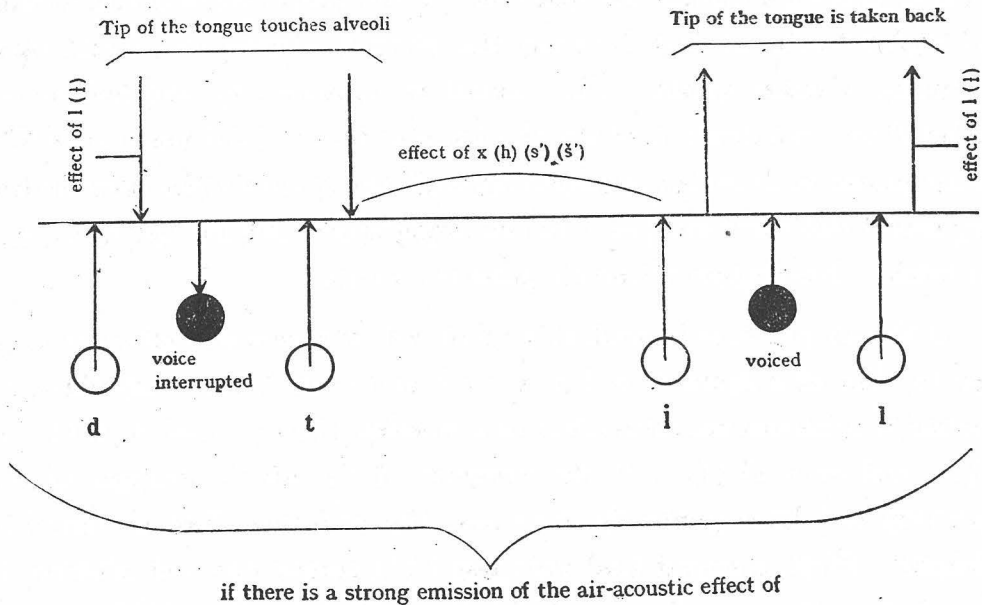
§ 22. In the Lolo Dialects.

The articulation and production of this consonant in Buś is as follows. The tip of the tongue touches the alveoli of the upper incisors, the lateral edges of the tongue approach the molar teeth, and the back of the tongue is raised to the palate leaving a narrow passage for the air; the vocal chords and velum are relaxed. For producing the sound, the air is moderately emitted first between the palate and back of the tongue and later passing through the space left by the lateral edges of the tongue and molar teeth, at last between the relaxed cheeks and teeth, thus producing a *tenues spirant*. This sound is increased by another sound produced by the vibration of the cheeks, also in a relaxed position, while the air passes with certain strength through the narrow space between the tongue and teeth and escapes into the larger space formed by the cheeks and teeth. No change of the air pressure occurs.

If the air pressure is gradually increased, the acoustic effect is very near to that of a spirant, either *x*, or *h* and even *s'*, but when abruptly stopped it produces acoustic effect of a *voiceless l* (l), that is, *xl* (l), or *hl* (l), and even *s'l* (l). If the pressure of the air is stronger at the beginning and later gradually decreases, the acoustic effect is naturally different. First, a sound like voiceless *l* (l) comes out and afterwards the spirant, either *x*, or *h*, or even *s'* is heard, that is either (l) *lx*, or (l) *lh*, or even (l) *ls'*. Let us now suppose that the air emission is similar to that in the case when an occlusive is produced. The above described sound will be modified into *tl* (l), or *tl* (l) *h*, or even *tl* (l) *x*. Let us now make another step by supposing this consonant to be voiced. With such a supposition, the acoustic effect will again be different, and we shall have *dl* (l), (l) *ld*, which may also be perceived as increased by *x*, *h*, etc.

In the speech, this consonant is rarely met with without voiced vowels and consonants either preceding or following it. In case the articulation of the consonant **L** takes place before the vanishing of the preceding voiced sound, it may appear just as it has been described, but if it is not so, then **L** may be perceived as **l** (**l**) - **x** (**h**). In the case of a preceding either occlusive voiced, or stressed vowel, **L** may be perceived as **dl**, etc. The same holds good in the case of a following either voiced consonant or vowel. All these cases can be clearly seen from the Scheme I.

SCHEME I.
L and its variations



The conventional sign **L** I use for designating this consonant in Lolo does not imply its connexion with **l**, **t** and **λ**. The acoustic effect produced by this consonant may be nearly the same (for an ear not yet accustomed to these sounds) as that of **l**, but since the nature of this sound, as described, is entirely different, we cannot generalize it with **l**. It is getting especially evident when the further variations of this sound are established. In fact, several sounds, like simple **d**, **t**, **x**, **k**, **h**, with

their modifications may originate from **L**. Among these consonants **l** (ɬ), and **λ** may also originate.

Since, as I shall later show, this consonant is not confined to the Lolo dialect here discussed, but is also met with in other languages, I shall give details first within the Lolo dialects.

In P. Vial's work, so far as it may be seen from what he says, I find three different complexes which seem to originate from one and the same source, namely **L**. P. Vial gives "shl", "dl" and "tl" as "groupes" of consonants. For the time being, I shall leave open the question whether these are really groups of consonants or certain consonant differently perceived, but we may point out that in Buś there is but one consonant **L**, the groups **dl** and **tl** are lacking. In A. Liétard's work there are slight traces of this consonant, namely when he uses "hl" and "ll". In all other cases to my **L** and P. Vial's "shl" one finds corresponding "l". He understands it as "aspiration initiale" of **l** which he describes in the following words: "elle (aspiration) se rapproche au contraire de la sifflante palatale, marquée dans les transcription scientifiques par s". In his examples he says "hlo-bo (luñe); prononcez.... chlo-bo ou shlo-bo"* whence it is evident that he did distinguish this consonant, but could not understand its articulation and production of sound. Whether A. Liétard did not find it in Ahi dialect or he did merely simplify it we cannot see from his material, for this consonant **L** is in a process of variation. The fact of finding only **L** and **l** (ɬ, λ) in Buś, "shl", "dl" and "tl" in Ni, also "hl", "ll" and "l" in Ahi points to the fact of such a process. There may be naturally different ways of losing it, which will be discussed later on. I now quote some parallels from the three dialects.

1. Cases when **L** is preserved in both Buś and Ni dialects:

Li (Buś) -**Le** (shle ɯ) (Ni) -**li** (li²) (Ahi) [four];

Licu (Buś) -**Live** (shivee ɬw ɬw, according to P. Vial, out of use,

*A. Liétard, Essai, p. 629.

preserved only in written form) (Ni) -/cf. male (ma⁴-lyé¹) (Ahi) (fiançailles) [bridegroom];

Lobe (Buš) -**Lu** (shloù ▷) [white];

Loŋ (Buš) -**Lu** (shioù ▷) [silver];

Lope (Buš) -**Lape** (shlap'ee ㄌㄞ) [leg];

ciLoŋ (Buš) -**ciLu** (ts'ishloù ㄘㄧ ▷) (Ni) [rice];

2. Cases when **L** is lost in Buš, but preserved in Ni dialect:

sifo (Buš) -**aLama** (ashlâma ㄙㄩ ㄌㄞ) (Ni) -**tiLo** (ti⁴-hlo³) (Ahi) [hare];

li (Buš) -**Li** (shli ㄌㄩ) (Ni) -**li** (li) (Ahi) [boat];

lizo (Buš) -**Leza** (shlêzá ㄌㄩ ㄌㄞ) (Ni) -**lizo** (li¹-zo⁴) (Ahi) [son's son];

lu (Buš) -**Lu** (shlu ▷) (Ni) -**lô** (leu¹) (Ahi) [worn out, to];

lôpi (Buš) -**La** (shla ㄌㄞ) (Ni) -**lu, lo** (lou³, lo³) (Ahi) [tongue];

lob'e (Buš) -**Labe** (shlâbâi ㄌㄞ ㄌㄞ) -**lubi** (lou-bi⁴) (Ahi) [trousers];

amŋũlô (Buš) -**mulô** (moùshleu ㄇ ㄌㄞ) (Ni) -**mulo** (mou-llo) (Ahi) [lightening];

aλolimo (Buš) -**aLalamũ** (ashlâlâm (ou) ㄞ ㄌㄞ ㄌㄞ ㄌㄞ) (Ni) -**alalimi** (a¹-la³-li-m⁴) (Ahi) [ass];

lôbô (Buš) -**Laba** (shlâ-bâ ㄌㄞ ㄌㄞ) (Ni) -**Lobo, hobo** (hlo-bo, ho-bo) (Ahi) [moon];

3. There are some cases where **L** seems to be lost, e.g. **šelo** (Buš) -**šedla** (chedla ㄕㄞ ㄌㄞ) (Ni) [orange]; however, in this case, **L** has been perhaps perceived as **dl**. The complex **tl** I do not find in my material, but it is met with in a limited number of cases in Ni dialect. The consonant **L** in its modified (either by the observer or on the soil of the dialects) form is found in Cl. Madrolle's material, namely in Wu-ni (Ha-ni) [Laokai province, in Tonkin] dialect "moon" is "ba-tl'a-ma" (cf. **Laba** of Ni dialect).*

*In the same publication some other evidences as to the existence of the consonant **L** are found, e.g. in Man-tseu (No-so) dialect "moon" is "la ba" and "hlo po" (**Lopo**); in Eul-yi-tseu (Ni-se) dialect are found, for instance, "sdli" (four, cf. **supra Li**); "shlie" (boat); "y slou" [cf. **šela** (je shla ㄕㄞ ㄌㄞ) (Ni)] (river); "ti-mi-slâ" [cf. **meLi** (mai shli ㄇ ㄌㄞ) (Ni)] (wife).

The above shown evidences of the existence of the consonant **L** in different degrees modified, also in different ways and manner perceived and recorded by the investigators are convincing enough for making up conclusion as to its wide spreading in different Lolo dialects. It is not confined to the Buś dialect where it has sometimes already given its place to **l**, **l** and **λ**, being evidently better preserved in Ni dialect. These evidences also show that this consonant is in the process of variation going on in different dialects.

The material I have at my disposal does not suffice for finding the present boundaries and variations of this consonant. Unfortunately, some observers have "simplified" their transcription of sounds perceived, so it is impossible to distinguish **L** from other consonants recorded in the same manner. I have some suspicions as to the records of A. Liétard who evidently has simplified his records. In fact, in many respects, the Ahi dialect occupies an intermediary position phonetically speaking, and geographically as well, but only in three cases out of ten, one may suspect **L** (**ll**, **hl** of his transcription), while the consonant **L** is well represented in Ni dialect and sufficiently represented in Buś.

The loss of this consonant may be due to the variation of (1) the character of the air emission, (2) voicing, (3) mode of articulation. The Lolo dialects are affected in different degree by these processes. In Buś dialect, the consonant **L** in all the above quoted cases is substituted either by **l** or **l** or **λ**, whence one may see that the loss of **L** is due to the voicing with slight change of the air emission. This seems to be in accordance with other analogous variations of phonetics sometimes resulting in the change of tenues into mediae lenes.

§ 23. In Other Languages of the same Group.

The consonant **L** seems to be known* in Tibetan, where one meets very often with "hl" and "lh" which may be guessed to be **L**. In the Tibetan colloquial, the writing system used in Tibetan shows quite clearly its existence. In fact, the subjoined consonant **Ṛ** is used but with **Ṛ**

*I have no extensive phonetic descriptions of this language.

eg. 𑖀 "a god". According to C. A. Bell* it is pronounced "hla, the "h" being pronounced before l". This sign is also used in Sanscrit words. A different treatement of the same sound we find in another author, A. Desgodin** who says that it is very aspirated and in combination with 𑖀 is pronounced "lha", while in Bathang it is sometimes "ha" and "lha". From these two contradictory evidences one may guess that there is neither "hla" nor "lha", but a different sound perceived by some persons as "hl", and by others as "lh" and varying in different dialects. It is sure these sounds are connected with L. In fact, "trousers" **Labe** (Ni), **labe** (Buš), **lubi** (Ahi) in Tibetan "lhangbo"***. The common words in Burmese are also met with "lh" where we may expect to have L, e.g. "tongue" **La** (Ni), **lopi** (Buš), **lu** (Ahi) in Burmese "lhya", in Bunan "lhe", but in Tibetan "lče"****. The latter parallel is interesting for it brings forth another way of variation of the same consonant L. This is not an isolated case in Tibetan we have, for instance, "heavy" in Tibetan "lči", corr. "hlö" (Lö, S. Sh.) (Ahi), **lze** (lje 𑖀) (Ni). On the other hand, the same consonant L in Tibetan is sometimes found as "ld". It is also true of Lolo dialects (cf. supra § 22,3), "to lick" is "ldagpa" in Tibetan, and "tongue" is **La** in Lolo, as shown. This may also be supported by a series: "moon" **Laba** (Ni), **labe** (Buš), **Lobo** ("hlo-be"), (Ahi), [according to B. Laufer,—in Southern Chin—"k-h-lo", in Kuki—"lha", in Haka—"k-la", in Thulun—"k-h-le" and "k-h-lye"/], in Ladakhi "ldava", while in Tibetan "z-la-ba"*****.

*Bell, C. A. Grammar, p. 12.

**Desgodins, A. Essai, p. 18.

***I quote from F. Savina, op. cit. p. 51. It may be restored as **Labe**, where a is nasalized, as it is common in Buš.

****This and other parallels I quote chiefly from B. Laufer, op. cit. p. 49.

*****I believe that Tibetan "zla" cannot be cut into "za-la" as B. Laufer does (op. cit. p. 29), just as in the case of "lči" (heavy). This author did not hesitate to cut into two syllables "lho" of A. Liétard in **muLo** (mu-hlo) (Ahi), corre. **muLe** (mouhshle 𑖀) (Ni) [wind] stating that "the form h-lo is evidently (why? S. Sh.) a contraction of he-lo, as shown by Lisu me-hei, mi-hi ("wind")" (p. 43, footnote 2). As a matter of fact the latter cases shows that **lh** may alter into **h** (supposing the records are correct) and not that "h-lo" is contracted form of "he-lo". In the case of P.

To the above cases of $L \rightarrow l\check{c}$ (Tib) and $L \rightarrow ld$ (Tib) perhaps one may also associate the case of $L \rightarrow rl$ (Tib); so, for instance, *muLe* (Ni) *muLo* (mu-hlo) (Ahi), *le* (Burmese, cf. B. Laufer), in Tibetan is “rlun”—“the wind”. Indeed, in all these cases one must have first of all exact phonetic equivalents. Therefore, for the time being, I shall not discuss them. However, the possibility of $d\overset{\check{c}}{\underset{3}{\nearrow}}$ and $L \rightarrow rl$ is evident.*

I want now to draw attention to the Thai language where the consonant *L* also seems to be present. F. M. Savina in his Dictionary and another work gives very clear hints as to this consonant. So referring to the pronunciation of the initial *s* (*x* of his transcription) in numerals he says that they are pronounced sometimes as *sl* (*xl*). and *th*, etc. Yet, there are many other words with the initial *sl* (*xl*). Supposing that they are further modifications of the consonant *L*, I have restored them as shown and brought forth with some parallels, e.g. *Lon* (two),

Vial's “shl” B. Laufer has even introduced his correction, namely, he uses *šl* instead of “shl” while P. Vial quite clearly shows (Dictionaire, p. 7) this consonant (*L*) among other simple consonants like *š*, *ž*, *ž*, *ŋ*, *c* and *č*, among which he has also included “dl” and “tl”. Yet, in his transcription (particularly “shl”) he pronounces them, as he says, “à la française” so it cannot be read “à l'anglaise” and transcribed as *šl*. This sound transcribed by P. Vial in his way and corrected by B. Laufer, who is familiar with phonetics, in a different way, really looks like *š + l* which when needed may be cut into *š* and *l* and also supplied with the imaginary vowels. This is not an isolated case in B. Laufer's treatment of P. Vial's and A. Liétard's material. B. Laufer has used the peculiar transcription of P. Vial's consonant “gh” for showing the existence of a hypothetic prefix *k*- in Si-hia language (op. cit. p. 14) and which he did not read *ŋ*, as P. Vial tried to explain (cf. also A. Liétard's “ng” used instead of P. Vial's “gh”) as a peculiar consonant lacking in French. The third case is that of P. Vial's “r” (also of A. Liétard's) which has also been used by B. Laufer for establishing various prefixes and affinities. In this case B. Laufer has also omitted the description of this sound given by P. Vial and transcribed it as English “r”, a sound quite different from “r grassayé” understood by P. Vial. Such a method of treatment of the linguistic material leaves, of course, great doubts as to the validity of results obtained by B. Laufer.

*The cutting of “rlun” into “ro-lun”, as B. Laufer does (op. cit. pp. 43-4) again raises some doubts. Yet, it is not absolutely clear on what basis he proposes Si-hia *lo* (the wind) to be “ro”? The long discussion about the prefix “r” and synonymous words is, of course, very ingenious, but an absolutely unnecessary construction.

Lam (three), Li (four, cf. Li [Lolo]), Lip (ten), Lin (thousand), Lit (snow), Lao (girl), Lay (intestine), Lu (dress, cf. Loba [Lolo]), * Lābo [Tib], Lun (garden, cf. kelun [Ni/?]), Lua (tiger, cf. la [Ni, Ahi, Moso]), Lu (to buy), Li (to write), Lai (to wash), Las (steel), Lay (small). If we suppose that *sl* has substituted *L*, then it may also be inferred that in Thai the variations of the consonant *L* has taken place by a slight change of the original articulation (*s*) with a stronger emission of the air, but preserving of the tenues and spirant character of the original consonant. Though the relationship between Thai and the languages of the Tibeto-Burman group is not yet definitely established, the fact of common words is evident. As to the common phonetic peculiarities found, for instance, in the existence of the consonant *L*, it may be due to the common origin of the phonetic

Scheme II

Variations of consonant *L*

| Character | Voice | Air emission | Character | | | | |
|-----------|-------|--------------|------------------------------------|--------------------|----------------------------------------|----------------------------------|-------------------------------------|
| Occlusive | — | Strong | Diminuendo starting by explosion | | | tl di | tl di |
| | + | | Crescendo culminating by explosion | | | ld (→ lɛ) ¹ | ld (→ lɛ) ¹ |
| Spirant | — | Moderate | even | L ↓ l (a. l) | L [hl] ² ↓ l (a. l) ? | L [shl] ² ↓ l ? | L [lh. hl] ² ↓ l ? |
| Liquid | + | Slight | Diminuendo | | x [h] ² | | |
| Spirant | — | | | | | | |
| | | | | Buś. | Ahi | Ni | Tibetan |

1. When the articulation is changed. 2. Recorded as shown in brackets.

elements and borrowing from other languages as well.* The phonetic elements in this respect do not differ from other ethnographical elements.

The above shown facts are tabulated in the Scheme II in which I have included but three Lolo dialects compared in this paper, and Tibetan. The variations of the consonant **L** in Tibetan are shown only partly. All possible and observed variations of the consonant **L** may be found out from this Scheme.

§ 24. In the Palaeasiatic and American Languages.

The phenomenon of the consonant **L** is not an isolated case in Asia. Another group of languages the common origin of which is far from being proved is that of the North-Eastern palaeasiatic languages considered as a group by themselves owing to some common phonetic phenomena, and generally linguistic and ethnographical features.

W. Bogoras** has given the following description of this sound

*The instances of spreading phonetic fashions in Asia I have shown in another paper (cf. Notes on the Bilabialization, etc.), where I analyse the spreading of bilabialization and aspiration in relatively recent time in Northern and Southern Tungus, from certain common sources of these "fashions."

**W. Bogoras, Chukchee, p. 645. I have some doubts as to this description. First of all its definition as a "stop" does not clear up the question. Second, "back of the tongue pressed against the hard palate" makes the producing of the consonant impossible unless the speaker changes this position into that above described (cf. *supra*, § 22).* When one learns to produce this sound W. Bogoras' description may perhaps help, but this is not the position of the tongue for the direct production. I had the opportunity of analysing this (Chukchi) sound through the kindness of Madame Xrenov, who had spent among the Chukchis a very long time and, owing to the local conditions and her love for these people, had become absolutely familiar with this dialect (Maritime). Moreover, she knew at the moment of her living among the Chukchis four European languages and possessed a good musical ear. Yet her idea was to speak Chukchi as they did it. She made rather extensive dictionary with very numerous examples. This material, for some time, was at my disposal and all sounds of the Chukchi dialect have been analysed. She learned the language from the natives. The analysis of her material and that published by W. Bogoras show that "back of the tongue pressed" has nothing to do with the production of this consonant for certain clusters would become absolutely impossible, the formation of syllables and their succession, as well.

in Chukchi language: "L stop produced by the tip of the tongue touching the upper alveoli back of the tongue pressed against the hard palate, and sudden lateral release with slightly continued stricture. L like L, but sonant." The American languages L. J. Frachtenberg* defines it as "lateral", "sonant", "surd" and "fortis" in the Coos language, and as "lateral", "surd" and "fortis", in the Siuslaw language.**

The above quoted definitions of this sound show a coincidence with the definition given for the Lolo consonant. Among the Americano-Asiatic groups this consonant is evidently the same which permitted the editor, F. Boas, to designate it by the same sign L, L (voiced) ("sonant" of his definition) and L! (emphatic) ("fortis"). The distribution of this sound (in its tenues form) in America, according to E. Sapir is confined to the group of "rough languages of the Columbia valley, and the North Californian and Oregon coast (Chinookan, Salish, Alsea, Coos, Athapaskan, Yurok)".*** The same consonant is met with in Kwikwäutl****. Its distribution in Asia is not confined to the Chuchi language. It is met with in a modified form in Koriak, Aleutian, Kamchadal, and perhaps some other languages.

Bogoras-Boas***** treats this consonant L (and L) as "double consonants" by their origin and actual use for the reason that they never appear in clusters and as terminal ones.***** The reason given cannot, however, be justified from the phonetic point of view. In fact, these authors have also considered the palatalized t', d', j' (ž' of the transcription here used), č' (č') as "double consonants" for, according to them, these consonants have originated from t' < t+y; d' < d+y and from the assimilation j' < d'+y; č' < t'+y (or ž' < d'+j; č' < t'+j of the transcription

*L. J. Frachtenberg, Coos, p. 307.

**L. J. Frachtenberg, Siuslawan, p. 444.

***Cf. E. Sapir, The Takelama Language, p. 8.

****F. Boas.

*****W. Bogoras' material has been re-worked out by F. Boas (cf. W. Bogoras, p. 637) so that, for safety, I shall join the name of F. Boas to that of W. Bogoras.

*****Bogoras, W. op. cit; §§ 5 and 4 respectively.

here used). By these equations is shown not the actual character of these consonants but their *hypothetical* origin through the assimilation. As a matter of fact, one thing is palatalization and another thing is assimilation. The palatalization is a type of articulation, while the assimilation is a process, but palatalized consonants are as simple as non-palatalized. In Chukchi as in any other language there are some consonantic combinations which are common and others which are not, but it cannot be generalized that palatalized **t'**, **d'**, and some others are never met with in clusters, since there are "exceptions", **t'h** and **nd'**,* rather frequent occurrence in Chukchi. So the palatalization treated as "doubling" of consonants cannot be held responsible for avoidance of some consonants in clusters. Now, the reasoning *vice versa*: since **L** is not met with in clusters it may be supposed to be a "doubled" consonant through the assimilation "**L**<**t**+**l** and **L**<**l**+**l** or **l**+**r**".** But as the facts observed do not support the hypothesis and **L** and **l** are met with in clusters, these authors have introduced **I**, **E**, **A**, of their transcription, defined as "obscure, short vowels" everywhere when the clusters contradicting the above theory are met with. Since W. B o g o r a s has asserted that the dialect of the Maritime Chukchis is "almost identical with that of the Reindeer breeders of the Kalyma river"*** I shall quote some instances from the material gathered by another investigator, Madame X r e n o v. I find in this material many cases of clusters, so for instance, **alxva kaliet** (let me go away), **tyñLxwēna** (the saw), **ralkākwin** (the horizon), **tinLiLet** (the spectacles) **relkos'ikāipe** (from the house), **tuanLtārēken** (to be busy).**** No obscure vowels have been found in these

*Ibid, p. 652, footnotes 1 and 2.

This supposition is in flat contradiction with the description of **L and **l** where "back of the tongue is pressed against the hard palate."

***Ibid. p. 639; where he also explains "the work on the Chukche is also facilitated by the fact that this language has no dialects."

****There are also some instances of clusters **t'** not only with **h**, e.g. **rylt'i** (the wing). To the same class of cases must be related all cases of **lt'** (very common in Chukchi) where **t'** is palatalized, but has been understood by W. B o g o r a s as not palatalized **t**. This is a very common mistake on the part of investigators familiar with the Russian language taking as starting point the Russian orthographic system, where the syllable "ti" is presumed to contain **t'** palatalized. The last remark holds good for palatalized **d'**, and **č**.

cases, though short vowels and glides do exist in the Maritime dialect. In Bogoras-Boas analysis of L these "obscure vowels" make a bridge between the theory and facts. The consonant L cannot be thus regarded as "double consonant" in Reindeer Chukchi, just as it is simple in Maritime Chukchi and Lolo, in the latter two languages its articulation and sound production being identical.

In the Maritime Chukchi dialect, in the Reindeer Chukchi as well, L alternates with tl. In Koriak, as W. Bogoras says, it has changed into L and, as it may be seen from other examples, into l.* Yet, as this consonant is sometimes treated as "cluster" "lh" in Koriak (Kamenskoye) it is found (lñ) ln' which is due to a general process of transition of tennes into mediae lenes also nasalization and palatalization. In the form of tl it is also found in Aleut.** In Kamchadal this consonant has altered: L (Chukchi)→tl and tč (Kamchadal).*** There are some indirect evidences of former existence of this consonant in Gilak, as for instance, the occurrence of tl and lx not so frequent a phenomenon as it is in other Palaeasiatic languages.**** In this language shows a definite tendency for cutting off final vowels, and omitting them (especially according to L. Sternberg's records) when possible, the phonetic system as a whole is somewhat different as compared with other Palaeasiatic languages.

[When this manuscript went into press, the writer was away in Canton and was not in a position to supervise the reading of the proofs, or to correct some possible errors in the manuscript of the rest of this article. As, however the publication of the present issue is urgently wanted for, we deem it desirable to publish this article as far as here for the time being.—Editor].

*Cf. Bogoras, W. op. cit. 16. According to his description the Koriak consonant is somewhat different as compared with the Chukchi L.

**W. Jochelson, Archæological, p. 129, where he defines it as "lateral affricative sound" met with in Atka dialect. Unfortunately I have no other publications of this author at hand.

***W. Bogoras, op. cit. 678, § 21, 7.

****Cf. W. Grube and L. Sternberg.

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Editorial Note: For the convenience of those who are used to the International Phonetic Alphabet only, a table of equivalence between the notation of this article and the I P A is appended here. The form of I P A is based on a pamphlet called *Lautzeichen und Ihre Anwendung in Verschiedenen Sprachgebieten* (Berlin, 1928), by D. Jones, and the equivalence is based on the definitions of symbols given in this article.

| In This Article | I P A | In This Article | I P A |
|-----------------|---------|-----------------|-----------|
| a | ɑ | č | tʃ, tʃ(?) |
| ä | ɛ, æ | č' | tʃ |
| e | e, ɛ | ž | dz |
| è | î(?) | ž | dʒ, dʒ(?) |
| i | i | ž' | dʒ |
| y | ɪ(?) | k | k |
| o | o, ɔ | g | g |
| ø | ø, œ | x | x |
| u | u, ʊ | ɣ | ɣ |
| <hr/> | | m | m |
| b | b | n | n |
| p | p | ŋ | ŋ |
| w | w | l | l |
| v | v | ʌ | ʌ |
| f | f | ʔ | ʔ(?) |
| t | t | h | h |
| d | d | j | j |
| s | s | L | ʔ |
| z | z | □' | □ |
| š | ʃ, ʃ(?) | □' | □h, □' |
| š' | ʃ | □ | □x |
| ž | ʒ | ǎ | ǎ |
| c | ts | | |