

THE RANGE OF SOUND ALTERNATIONS IN TIBETAN WORD FAMILIES

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Tibetan philology will always feel indebted to the regretted Stuart N. Wolfenden for his painstaking efforts in assembling Tibetan word families. His etymological researches, started in 1928¹, received a further stimulus from the publication, in 1934, of B. Karlgren's *Word Families in Chinese*², which lead Wolfenden in a succeeding paper³ to place his Tibetan word families by the side of those proposed by Karlgren. In a further paper Wolfenden extended the scope of his comparisons to Kachin word families⁴.

Wolfenden did not, of course, limit himself to grouping in one etymological family what according to meaning seemed to him related. He drew definite conclusions as to which sound alternations could be safely assumed and which had to be considered doubtful or altogether untenable. The object of this paper is to discuss certain alternations the assumption of which was either clearly professed by Wolfenden, or tacitly implied in his method of word grouping. Furthermore, I shall attempt to enlarge the scope of Tibetan word families by bringing in certain aspects of word derivation to which so far apparently not enough attention has been paid. It is hoped that as a result of this study we may be able to determine more clearly what type of words can possibly be included in or must definitely be excluded from any potential word family. The remarks on palatalisation and vowel gradation may induce us to look much farther around for possible members of Tibetan word families, and the refusal to see prefixes in *r* and *l* may lead in the opposite direction. On the other hand this refusal has by no means a negative effect only. Since *r* and *l*, if they are not prefixes, must be part of the word body, words in which *r* and *l* precede another consonant are of special interest insofar as they show an initial consonantal cluster. In a linguistic field where we have to deal with a monosyllabic word body

¹ "The Prefix *m-* with certain substantives in Tibetan" in *Language* IV (1928), pp. 277-280.

² *Bulletin of the Museum of Far Eastern Antiquities*, Stockholm, No. 5, pp. 9-120.

³ "On certain Alternations between dental finals in Tibetan and Chinese" in *JRAS*, 1936, pp. 401-416.

⁴ "Concerning the variation of final consonants in the word families of Tibetan, Kachin, and Chinese" in *JRAS*, 1937, pp. 625-655.

generally so devoid of anything "substantial", the latter fact may give most valuable guidance in etymological research.

I. TWO FALLACIOUS CLUES FOR AN ORIGINAL DENTAL FINAL

I should refrain from mentioning again the strictness with which Tibetan keeps to its guttural, dental or labial types of finals¹ were it not to express a warning against what I consider two fallacious clues for an original dental final. Though I have made the necessary reservations with regard to the second clue, I plead guilty for having myself believed in the safety of the first, *viz.*, final *n*².

I have no doubt that this *n* is in fact in many cases a nasal derivative of an etymon originally ending in a dental. However, as was pointed out at the end of my paper in BSOAS³, "*we are no longer justified in inferring an original dental final for a vowel ending word on the sole evidence of a derivative ending in -n*". To the examples *gan* and *hon* of the paper in HJAS, *yin*, *kyin*, *gyon*, and *yan* may be added from the article in BSOAS, and *rdzun* by the side of *rdzub* will be discussed here below⁴.

To give one further example for a guttural, we should be quite justified in combining *mtho* "height, to be high" with *thog* "uppermost" in spite of *mthön* "high".

The second fallacy concerns final *s*. Some time ago P. Benedict assented to taking final *-s* as an indication for an original dental, quoting both Wolfenden and myself as originators of this theory⁵. But I had merely contended⁶ that we must reckon with cases where an original *-ds* had become *-s*, and Wolfenden had at first independently expressed a similar opinion⁷. It is only at the final stage of his researches that he became more and more convinced that *-s* was a conclusive argument for an original dental: "*I cannot help feeling that this elision theory for Tibetan -d explains a very great deal. Even where Tibetan words regularly end in -s throughout I believe there is ground for supposing the disappearance of -d before it*"⁸. The etymology of *-s* as proposed in HJAS⁹ would imply that we must make allowance for this

¹ See "Certain Tibetan Suffixes and their Combinations", *HJAS* (Harvard Journal of Oriental Studies), Vol. 5 (1940), p. 372, n. 3.

² See "*Tibetisch-chinesische Wortgleichungen*" (in the following abbreviated as *W.Gl.*), Berlin 1930, p. 6.

³ "*Tibetan dañ, ciñ, kyin, yin and ham*", *BSOAS* X (1942), p. 975.

⁴ See here below, p. 6.

⁵ See his "*Studies in Indo-Chinese Phonology*" *HJAS* 5 (1940), p. 110, n. 20.

⁶ *W.Gl.*, p. 29.

⁷ *Outlines of Tibeto-Burman Linguistic Morphology*, London 1929, p. 19, n. 1 and p. 58.

⁸ *JRAS*, 1937, p. 653; see also his paper "*On the Restitution of Final Consonants in certain word types of Burmese*" in *Acta Orientalia* XVII (1939), p. 156.

⁹ *HJAS* 5 (1940), pp. 385, etc.

-s to be affixed indiscriminately to a vowel ending word of originally guttural, labial, or dental type. *gnas* "place, to be in a place", belonging with *nañ* "in" would be one example for the guttural type¹, and *yas* "above", or *gyas* "right" would be another, since original guttural has been meanwhile inferred for *ya* in my paper in BSOAS². A further word with an original guttural final is, I think, *hos*. The translation "to be becoming" places it near its proposed etymon *ho* (*hoγ*), occurring in *hon* "to come", *hog* "below", etc.³. The verb *hoñ* does, in fact, occur in the meaning "to be suitable" (Jaeschke, *Dict.*, p. 502). The nominal origin of *hos*, which we have to assume in view of the final *s=sa* or *so* "place" (*ho-sa*=(be)coming place), would not only confirm the theory of nominal sentences in Tibetan, discussed at length in my paper in BSOAS⁴, but has also a remarkable parallel in the syntactical use of the synonymous Greek noun *χρῆ*.

To adduce a few more cases, *rgyas* "extensive", or "to increase" clearly belongs with *rgyañ* "distance", etc., and not only can *nus* "to be able" now be compared with Chinese 能 *nəng* and Burmese *nuiñ*, *hnuiñ*, but it would also seem possible to connect it with *nañ* in the Tibetan field. The alternation *a-u* will occupy us here later⁵, and the idea of "to be able" can well be implied by a derivative of *nañ* "inside" (what is "inside" one's power). The semantic connection could be extended to Burmese *nuiñ* and *hnuiñ*, and on the Tibetan side *gnañ* "to allow" (cp. the parallel semantic development in "to admit") can be added as another derivative. In the same way *thos* "to hear" may well be related to *mthoñ* "to see", the primary meaning in both cases being "to perceive"⁶.

In the same manner, we find side by side with *rmugs* "dense fog", also "inertness, languid, sluggish", the obviously related words *rmu-ba* "dullness, heaviness" and "fog", *rmus-pa* "dull, heavy, foggy, gloomy" and *rmun-po* "dull, heavy, stupid".

To give at least one example for the labial type, *rdzas* "thing" and *rdzus-ma* "something counterfeit" and the past (*b*)*rdzus* of *rdzu-ba* "to give

¹ See *HJAS* 5 (1940), pp. 387/8.

² See *BSOAS* X (1942), p. 973.

³ See *HJAS* 5 (1940), pp. 373/4.

⁴ See *BSOAS* X (1940), pp. 967, etc.

⁵ See here below, p. 8.

⁶ *mthoñ* "to see" obviously corresponds to Chinese 聽 *ting* (anc. and arch. *t'ieng*) "to hear". The equation can be substantiated by an exact parallelism existing with regard to the Tibetan and Chinese words for defects in hearing and seeing, respectively. The Tibetan word for "blind" *ldoñ* (<**dloñ*) corresponds to the Chinese word for "deaf" 聾 *long* (anc. and arch. *lung*). As Professor Haloun kindly told me years ago, we have to reckon with an original *dl-* in this word since its phonetic 龍 *long* "dragon" (anc. *liwong*, arch. *liung*) is compounded on its part with the character 童 *tong* "youth" (anc. and arch. *d'ung*). In his *Grammata Serica* Karlgren has now included 龍 *choong* (anc. *t'iwong*) with an archaic value *t'liung* though he has refrained from assuming an archaic *dl-* for the remainder of the phonetic series (No. 1193).

a deceptive representation" belong in a labial series as is borne out by *rdzub* "deceit, imposture", *rdzob* "vain, empty, spurious", and *rdzab-rdzub* "sham, emptiness, falsehood". As we have just seen, *rdzun* "falsehood, fiction" would no longer form an argument to the contrary. It must, I think, be referred back to *rdzu-na* so that *rdzun smra-ba* "to lie" would literally be "to speak in falsehood" (which can in fact be found as *rdzun-du smra-ba*¹).

II. PALATALISATION AND VOWEL GRADATION

Although Tibetan etymologists have noticed both palatalisation and vowel gradation, the extent to which these two means of word derivation prevail in Tibetan word families had not been fully realised by Wolfenden. The very term of "palatalisation" for what was called jodization (*Jotierung*) by Schiefner² may be helpful to that effect because it necessarily involves such alternations as *n-ny*, *s-ś*, *z-ž*, *ts-c*, *dz-ǰ*, etc.

Derivation by vowel gradation has mostly escaped observation as soon as it does not confine itself to the vowel alternations which occur in the principal parts of the Tibetan verb. Thus *a-e-o* is generally thought of, but the alternation *a-o-u* was even expressly denied by Wolfenden³.

A. Palatalisation

To give some simple cases of palatalisation, *zabs* "bottom" (and honorific for "foot" is clearly a derivative of *zabs* "depth", or *śul* "furrow of a plough, rut track", and then anything which is left behind or just behind (*śul-pa*, *bśul-pa* "the back") as well as *śol* "intercalation", *gśol* "plough" and *bśol-ba* "to put off, postpone" must be referred back to *sul* "furrow, groove, trench, ditch, plait". *mjed-pa*, according to the *Zamatog* = Sanscrit *saha* "bearing, enduring, etc." would go well with *hdzed* "to hold out", *bzed* "basin" (*lhuñ-bzed* = Sanscrit *piṇḍapâtra*), *bzod* "to suffer", *mdzod* "store house", the basic meaning being "to hold (out)" in all the words. Or *bśal* "to wash", *śel* "crystal" apparently belong with *gsal-ba* "to be clear".

¹ See, for instance, *Mahāvvyutpatti* (ed. Sakaki, Kyōto, 1916), No. 1691. For the connection between *rdzu* "clay", *rdzi* "to knead, press" (with its past (*b*)*rdzis* in spite of the original labial final!) and *rdzu-ba* "to give a deceptive representation" (which recalls Latin *figulus*, *figmentum*, *figere*) see *BSOAS* X (1942, p. 962. *rdzas* "thing, matter, object" seems to have also more concrete meanings such as "ointment, remedy" or even "powder" in *me-rdzas*, which show its connection with *rdza* "clay" and *rdzi* "to knead". In fact, the *Dictionnaire Thibétain-Latin-Français* par les Missionnaires Catholiques du Thibet (Hongkong 1899) writes about *rdzas*: *Istud vocabulum multas habere potest significationes ex contextu intelligendas* (p. 837), and we may think of the similar abstract meanings of Latin *figura*.

² See his "Tibetische Studien" II. *Beiträge zur tibetischen Lautlehre* (*Bulletin de la classe historico-philologique de l'Académie de St. Pétersbourg*, Vol. VIII (1851), cols. 1302, etc. = *Mélanges Asiatiques*, Vol. I (1852), pp. 370, etc.

³ *JRAS*, 1937, p. 628.

The etymon *na*, originally ending in a dental final appears to have given rise to many members, especially if we take palatalisation into account. The primary meaning is "to press", as can be seen from *nan* "pressure", and *non* (*gnon*), Pf. *gnan*, *mnan* "to press, oppress". This primary meaning would lead us to regard as taboos the words *nad* "illness" and *na-ba* "to be ill"¹. *gnad* "the main point" may well be the point to be "pressed", and *gnod* "to hurt" and *snad* "to hurt" clearly belong here. Doubtful is *snod* "vessel" which might be the vessel into which something is pressed or which presses or holds something (cp. English "press"=shelf), but it may belong with *nod-pa* "to receive, obtain".

Among the palatalised variants *nyon* occurs in the well-known compound *nyon moñs pa* "misery, trouble, pain" (= Sanscrit *kleśa*). It can be analysed, I think, as the "experiencing" of "oppression". As Jaeschke's example (*Dict.*, p. 191) from the *Dzañ-lun* "*nyon ma moñs sam?*" ("had you to experience any hardship?") clearly shows, *moñs* must be understood as a verb (which I would like to explain as the etymon of *myoñ* "to taste, experience"). Furthermore, I think, *nye* "to be near" and all its derivatives (*gnyen* "kinsman", *nyen* "relative" belong here (literally: pressed, tightly packed, serried, close). The meaning "oppression" would occur further in *nyen-pa* "to be pained", *nyes-pa* "evil", *gnyan* "plague", also "cruel", the meaning "to press" probably also in *mnyed* "to tan", or "to knead", or "to stamp" in addition to "to rub between the hands and feet", and in *mnyen* "flexible". Finally *snye-ba* "to lean against" and *snyed-pa* crupper might belong here.

This would conclude the above list of *ad hoc* examples of palatalisation, further examples being included in the examples for vowel gradation and in the discussion of the *r*- and *l*- clusters.

B. Vowel Gradation

With regard to vowel gradation I may refer to BSOAS X (1942), p. 962 for the alternation *a-i*, and also for a few examples of wider range such as shown by the demonstrative pronouns *da*, *de*, *hdi*, *do* (*ibid.*, p. 973). The group *rdza* "clay", *rdzi* "to knead" has been adduced there also and has been further enlarged here. It would seem very important to see clearly which vowel belongs to the etymon and which to the derivative. The solution of this problem will, however, have to be deferred until more material is available.

Side by side with the alternation *a-i*, we have an alternation *u-i* and *a-u*. For *u-i*, reference can be made to verbal forms such as *bzuñ*, the past form of *hdxin* "to take out", or *phyuñ*, the past form of *hbyin* "to draw out",

¹ Words for "illness" are often taboos. Cp., e.g., K. Nyrop, *Grammaire de la langue française*, Vol. IV (1913), p. 277, and the German word *Beschwerde* for "illness".

or to *rmi* "to dream", belonging, I think, with the group *rmugs*, *rmu*, *rmun*, mentioned here above.

The alternation *a-u*, invoked here above for the connection between *nus* and *nañ*¹, would occur in *grabs* "preparation" by the side of *grub-pa* "to make ready, complete", or in *hbub-pa* "to be turned upside down" (with the causative *spub-pa* "to turn upside down"), obviously belonging with *hbebs-pa* (Perf. *phab*, Fut. *dbab*, Imper. *phob*) "to cast down, thrown down" (the causative of *hbab-pa* "to move downwards"). Furthermore, *lcug-pa* "flexible, supple branch", and *lcug-ma* "rod, switch" may be mentioned side by side with *lcag* "rod, switch, stick, whip", or *lba-ba* "wen, goitre, excrescence" belonging with *lbu-ba* "bubble, foam", and *bsab*, *gsab*, the past and future of *gsob* "to fill out or up", belonging with *sub-pa* "to stop up, plug up"². By the side of *gzu* "bow" we have *gza* in the compound *gza-tshon* "rain bow" (literally "colour bow"). *mgu-ba* "to rejoice" belongs with *dga-ba* of identical meaning, and the pairs *rwa-ru* and *grwa-gru* will be mentioned here below³.

It is only after realising the full extent of the vowel gradation that we are able to see Tibetan word families, apparently complete in themselves, in their full scope. As an example I should like to take a word family first mentioned by Wolfenden in his paper in *Language* IV (1928), p. 278 and repeated nine years later in *JRAS*, 1937, p. 630. "*hdzugs-pa*, *zug-pa*, P. *btsugs*, *zugs*, F. *gzugs*, Imp. *zug(s)* to insert young plants into the ground, to plant, to erect (as a pillar by setting it into the ground), to prick, to stick into, to thrust into, to pierce, to penetrate, to bore, to sting, *hts'ugs-pa*, P. *ts'ugs* to go into, to enter, to bore into, to take root in, *mdzug-gu* (also *mdzub-mo*) (inset:) finger, toe, claw, *hjug-pa*. P. *bcug*, F. *gzug*, Imp. *chug* to put into, to insert, to inject, *hjug-pa* to be combined with, to have added to, to go in, to walk in, to enter."

Before examining the group in more detail it should be noted that Wolfenden had, in fact, introduced in the last two members of the group words which show palatalisation. But the group is far from being complete, since members with vowels other than *u* were overlooked or purposely excluded. A survey of the complete group would, I think, also require a modification of its basic meaning. According to Wolfenden⁴, "the basic sense of this group is probably one of *insertion* (to set in) as much as *addition* (to put on)". Instead of this, I should like to suggest the meaning of "point, prick, peak" and the corresponding verbal meanings "to prick, pierce, etc."

¹ See above, p. 5.

² As will be shown on another occasion, the word family includes members with *ts-* and *tsh-*, as, for instance, *tshab* "representative, equivalent, substitute" (cp. English "stop gap").

³ See here below, p. 14.

⁴ *Language* IV (1928), p. 278.

On this assumption the words *tshugs-pa* "to hurt" and *gtsug* "vertex, tuft, crest" and *tshugs-pa* "to hurt, harm" can be included with the vowel *u*.

The vowel *a* is shown by *gtsag-bu*, *btsags-bu* "lancet for bleeding", *tshag-ma* (pierced thing:) "sieve", *htshag* "to sieve", *hdzag* (to pierce, filter through:) "to trickle", *tshags* (pointed top, peak:) "cap", *tshag-tshig* (dots, cp. Latin *punctum*;) freckles.

The vowel *o* would seem to be represented by *htshog*, P. *btsags*, F. *btsog*, I. *tshog*, for which Jaeschke notes "to pierce, to inoculate, vaccinate" in addition to "to hew, chop".

The vowel *e* appears in *tsheg* "point, dot", *thsegs* in *phran-tshegs* (small points:) "trifles, minutiae", perhaps also in *tshe* (point in time:) time and in *mje* "penis".

As another example I wish to give a word family where also palatalisation plays an important part. The common denominator shared by all members of this family consists merely of a guttural plosive (which can be voiced, voiceless and voiceless aspirated) as the initial, and of *r* as the final consonant. With most vowels, there are both unpalatalised and palatalised members. The basic meaning is "bent, crooked" or (with an extension of the bent status) "circular":

VOWEL *a*:

- a) *voiced*: *gar* "dance" (cp. French *ronde*), *mgar* "smith" (the bender), *sgar* "camp" (enclosure), *dgar* "to fold up, confine" (enclose);
- b) *voiceless*: *kar* or *kar-kar*¹ "great pain, suffering" (to writhe¹), *skar-ma* "star" (circling?);
- c) *aspirated*: *mkhar* "castle, citadel" (cp. above *sgar*), *mkhar-ba* staff, stick (cp. crook), (?) *hkhar* "bronze, bell metal" (cp. above *mgar*), *hkhyar* "to deviate, go astray" (pursue *crooked* ways).

VOWEL *o*:

- a) *voiced*: *gor-mo* "round", (?) *hgor* "to tarry, linger, loiter" (as *lam-du hgor* "to linger on the way", departing from the straight road, cp. *hkhyar*);
- b) *voiceless*: *kor* "root denoting anything round or concave" (Jaeschke, *Dict.*, p. 6), *kor-kor* "round, circular", *kor* "loaf", "pan", "hollow in the ground", *skor* "circle", *skor-ba* "to encircle"; *skyor-ba* "enclosure,

¹ The entry "*kar*, also *kar kar*, great pain, suffering" on p. 3 of his *Dict.* was included by Jaeschke from "native dictionaries", as is shown by the abbreviation *Lex.* at the end of this entry. On p. 598 of the same *Dict.* we find, however, *kar kar* as an element of the phrase *hril hril kar kar byed pa*, quoted from the *Padma Thañyig* and translated as "to be writhing, and then again stretching one's self or starting up". Since *hril po* means "round, globular" this would leave for *kar kar* the meaning "to stretch one's self or to start up". The meaning "to writhe" for *both* elements of the phrase would, however, appear more likely in the light of the word family set out above.

- fence"; *skyor-ba* "to repeat", read and re-read, recite (turning *full circle*); *skyor* "hollow of the hand filled with a liquid, handful" (cp. *khyor*);
- c) *aspirated*: *kho-ra* (for *khor-ra*), also *khor-sa* "circumference, fence, surrounding wall", *khor-yug-tu* "in a circle", *hkhor* "circle, circumference", *hkhor-ba* "to run round"; *hkhyor-ba* "to reel, stagger" (cp. English "to reel" from the noun "reel"), *khyor* "handful" (= *skyor*).

VOWEL *e*:

- a) *voiced*: (?) *dgyer* "to sing, chant" (cp. here below *mgur*);
- b) *voiceless*: —
- c) *aspirated*: *hkhyer* "to carry (away)" (cp. here below *hkhur-ba*).

VOWEL *i*:

- a) *voiced*: —
- b) *voiceless*: *kyir-kyir* (= *kor-kor*) "round, circular"; *kyir-ba* "roundness";
- c) *aspirated*: *hkhyir* "to turn round".

VOWEL *u*:

- a) *voiced*: (?) *gur* "tent" (of circular shape?); *mgur* "neck" (round? turner? bender?); *mgur* "song" (cp. Chinese *cheu* 曲 "song" and *chiu* 曲 "crooked"); *dgur-ba*, *sgur-ba* "to bend, crooked"; *hgyur* "to change, become" (cp. English "to turn", Sanscr. *varṭati*); *sgyur* "to turn, transform, change";
- b) *voiceless*: *bkur-ba* "to honour, esteem" (bending down); (?) *skur-ba* "to carry, transmit, deliver" (cp. here below *hkhur*); (?) *skyur* "sour" ("turned", as milk); (?) *skyur-ba* "to throw";
- c) *aspirated*: *khur* "burden, load" (bending down); *hkhur* "to carry" (bent).

While Tibetan word families as varied as the preceding must be considered exceptional, the examples given so far may, however, encourage us to look farther around for potential members than has so far been attempted.

III. R- AND L-METATHESIS

The theory of an *r*- and *l*-metathesis, advanced by me in *W. Gl.*, pp. 30/31, has been objected to by Wolfenden¹, A. Dragunov², and Li Fang-kuei³. While the possibility of certain cases of *r*- and *l*-metathesis is

¹ *JRAS*, 1931, pp. 211/2.

² *Orientalistische Literaturzeitung*, 1931, col. 1087. In his paper "Osobennosti fonologičeskoj sistemy drevnetibetskogo jazyka" (*Zapiski Instituta Vostokovedeniya Akad. Nauk S.S.R.*, VII (1939), pp. 284-295), Dragunov refers to *r* and *l* as prefixes (for instance, on p. 289).

³ "Certain phonetic Influences of the Tibetan prefixes upon root initials" in *Academia Sinica. Bulletin of the National Research Institute of History and Philology*, Vol. IV (1933), pp. 135-157. Cp. particularly p. 140, n. 2.

admitted by all three scholars, each of them refuses to believe in the wholesale metathesis which I had assumed.

There can be no doubt as to the importance of the problem both from the point of view of assembling word families and with regard to such general discussions on the structure of Tibetan words as they are offered by Li and Dragunov in their papers just quoted. If it can be proved that *r* and *l* are *not* prefixes then all the words included in word families on the assumption that they are, must be eliminated from those word families. On the other hand, words in which *r* and *l* precede what I consider the initial consonant would then be members of potential word families of their own and, as was pointed out in the preamble to this paper, they would be of special interest in so far as they show an initial consonantal cluster.

Let us first realise what the assertion means that *r* or *l*, when initial, are prefixes and not part of the word body. It would seem that more is needed than to argue, as did Dr. Li against the theory of metathesis merely on the ground that "in that case we cannot understand why we have at the same time *lg-* and *gl-*, etc."¹. To speak about prefixes involves the obligation to account for their function by assigning a meaning to them, or rather two meanings, because if *r* and *l* are not just shifted sounds there is every reason to suppose that each of the two alleged prefixes had a meaning and a function of its own.

Wolfenden had, in fact, attempted to define *r* and *l* as prefixes with a directive value²—he called them infixes because according to his theory they can be preceded by other prefixes. The assignment of the function of prefixes to *r* and *l* was, however, part of and subject to Wolfenden's general theory according to which the whole of the Tibetan prefix system was no longer working at the time when the Tibetan script was introduced, and for this reason Wolfenden apparently felt justified to dispense with an elaborate proof for the alleged function of *r* and *l* as prefixes. But it must be borne in mind that this general theory of Wolfenden's has never been fully discussed by other scholars. To my mind it represents an additional hypothesis which one would be glad to discard as soon as it were possible to account in a different way for the facts which it attempts to explain.

At present it may be sufficient to state that no successful attempt has been made to fit *r* and *l* as prefixes into the system of the other prefixes recognised as "alive" by the native Tibetan grammarians and to assign to them special meanings and special functions in word derivation.

On the other hand, there are strong reasons for suspecting a metathesis of the two sounds. An *r* and *l*-metathesis is very frequent in many languages. The two sounds are difficult to articulate. Speakers of certain languages will

¹ *loc. cit.*, p. 140, n. 2.

² "Outlines of Tibeto-Burman Linguistic Morphology, London 1929, pp. 43, etc.

normally only produce either *r* or *l* but not both. It is therefore justifiable from the psychological point of view that the speaker should wish to deal with these sounds first when consonantal clusters formed with *r* and *l* add to the difficulties of articulation. Thus it would seem easy to understand why in the case of the initials *ñ, ć, j, ny, t, d, n, p, m, ts, dz, h* and *ky, gy, my* we find *l*, and in the case of the initials *ñ, j, ny, t, n, m, dz* and *ts* we find *r* always before never after these consonants.

The only difficulty, in fact, arises from clusters formed by *r* and *l* with *k, g, b*, and by *r* with *d* and *t*, because we find *r* and *l* then both before and after these consonants. Would it, however, be a satisfactory way out of this difficulty if we considered *r* and *l* as prefixes when they precede, and part of the word body when they follow *k, g, b*, etc.? This would land us in great difficulties indeed. The obligation to find meanings for *r* and *l* when they allegedly function as prefixes has already been mentioned. Nor is this all. Once we make allowance for the function of *r* and *l* as prefixes we must under no circumstances ignore the words starting with *lñ, lc, lj, lny, rñ, rj, rny, rt*, etc. Surely all these words must then be examined as to whether their *r* and *l* function as prefixes or whether these two sounds have merely shifted place in order to simplify the pronunciation. The meanings to be assumed for the alleged prefixes *r* and *l* would therefore be acceptable only if they gave us a means to make a clear distinction between these two possibilities.

On the other hand, the fact that we should add to our difficulties if we were to accept the prefix theory does not constitute an absolute proof against it. But we should feel less inclined to accept it if we could account in a different way for the cases where *r* and *l* form clusters *k, g, b*, etc. both for and after these consonants, and we should feel like rejecting it if we were to realise that the prefix theory does not suffice to explain fully the very cases when it seemed preferable to the assumption of a metathesis. This latter situation, however, arises in at least two cases.

The first is based on the assumption of the vowel gradation *a-e*, which has, however, long been recognised.

The verb *bgre-ba* (Perf. *bgres*) "to grow old", then, clearly belongs with *rgad, rgan* "old", *rgas-ka* "old age" and perhaps also with *rgud* "decline". Surely the *r* cannot be part of the word body in *bgre-ba* while functioning as a prefix in *rgad, rgan*, etc.

The second case is formed by *rgal* "to cross" and its causative *sgral* (or *sgrol*) "to ferry over, to (make) cross". But before examining the pair *rgal-sgral* (*sgrol*) more closely we should note two words which are clearly derived from *rgal* by palatalisation, *viz.*, *rgyal* "to be victorious" and *brgyal-ba* "to faint", to which tentatively *rkyal* "to swim" may be added as a member with voiceless guttural plosive. The semantic link of crossing (a river, lake, etc.) is obvious in the case of *rkyal*. For *rgyal* a very similar

semantic link may be found in Latin *superare*, which combines the meanings of "coming over" and "overcoming". The primary meaning of "crossing" in *rgyal* would seem to be further confirmed by the secondary derivative *brgyal* "to faint" which shows us that the loss of consciousness was seen as a "passing over" (cp. German "hinübersein") just as the regaining of consciousness is called "to come round" in English.

That the pair *rgal-sgral* (*sgrol*) should so far not have been discussed may—at least partly—be accounted for by the fact that in Jaeschke's *Dictionary* (pp. 122/3) *sgrol* "to ferry over" appears as the second meaning of *sgrol* "to rescue, deliver", the third being "to remove". Evidently both *sgrol* "to rescue" and *sgrol* "to remove" belong with *hgrol* (Pf. *bkrol*, Fut. *dgrol*) "to loosen, untie, unfasten, take off, release, remove", and *sgrol* "to ferry over, cross" should have been given a separate entry. This was accorded to *sgrol* in the meaning "to cross over" as an intransitive in the *Dictionnaire Thibétain-Latin Français par les Missionnaires Catholiques du Thibet* (Hongkong 1899, p. 256), and the same intransitive meaning has been recorded for *sgral-ba* in Sarat Chandra Das's *Tibetan-English Dictionary* (p. 332) as the second meaning of the entry *sgral-ba* (the first, taken from Jaeschke's *Dictionary* being "to cut into small pieces"). From the examples given in the note¹ it will become evident that in spite of the incomplete and partly confused entries in the standard dictionaries there can be no doubt that side by side with the neuter verb *rgal* "to cross" we have a causative *sgral* (Perf. and Fut. *bsgral*, Imp. *sgrol*) "to ferry over", though I have no examples for a Present *sgrol* with the latter meaning.

Since the Prefix theory would be of no avail in the two cases mentioned above, it would seem imperative that we should find an explanation which would account for the fact that we have *bgre* by the side of *rga*, and *sgral* (*sgrol*) by the side of *rgal*. The latter pair is all the more remarkable because it can be contrasted with the pair *hgrol* "to loosen"—*sgrol* "to deliver, rescue, save". Looking at this linguistic situation there is hardly any other explanation

¹ The Present *sgral* (not *sgrol*!) occurs twice in a passage in the *Vinayavastu Kanjur*, *Narthang Print*, *hDul*, Vol. Ka, p. 406A, ll. 5/6, and the Perf. and Future *bsgral* occur once each. The corresponding Chinese passage is to be found in Vol. XXIII, p. 1054c of the *Taishō Tripitāka*. *Khyed bdag cag gis bsgralo* ("We (the monks) shall take you (women) across". *De dag gis de dag sgral ba rab brtsams pa na . . .* ("While they were trying hard to take them over . . .") *De dag gis de dag bsgral nas smras pa/Sriñ mo dag yañ tshur sog/kho bo cag gis phyir yañ sgralo* ("After they had taken them over they said, Sisters, come, we are taking you back again"). The Imperative *sgrol* occurs in the translation of the well-known formula (see e.g., *Divyāvadāna*, ed. by F. B. Cowell and R. A. Neil, Cambridge 1886, p. 39) *mukto mocaya tīrnas tārāya*, etc., which is of particular interest because one would expect the identical imperative forms of *sgral ba* "to ferry over" and *sgrol ba* "to deliver", which was, however, avoided by the translators. The translation corresponding to the passage in the *Divyāvadāna* (Pūrṇa-Story) reverses the order of the verbs: (*hDul*, Vol. Kha, p. 52, B7) *ma bsgral ba rnam ni sgral cig*, *ma grol ba rnam ni grol cig*. A stricter translation of the formula, though again in reversed order, occurs in a passage of the *Karmaśataka*, Chapter XXIX (*Kanjur*, *mDo*, Vol. Sa, p. 33, B4) *bdag rgal nas gzan sgral cig/bdag grol nas gzan grol bar gyis sig*.

possible than that originally the initial clusters were different. In other words, *rgal* and *rga* must have had a more complicated cluster originally, *gr*+another sound, which, on the one hand, brought about the metathesis in *rga* and *rgal* (and vanished later) and which, on the other hand, was elided owing to the addition of the prefixes *b* and *s* in *bgre* and *sgrol* (*sgral*).

We may also speculate on the nature of this sound. It can hardly have been any other but the *va zur*, i.e., a bilabial fricative, which I shall transcribe as *w*. As I pointed out in *W. Gl.*, p. 60, we have to assume that the *va-zur* had vanished already in a great number of cases when Tibetan was first written. The assumption of a vanished *va-zur* would, then, account in a simple way for the linguistic facts with which we are confronted: **grwa* became **rgwa* and later *rga*, whereas **bgrwe* became *bgre*. In the same way **grwal* became **rgwal* and later *rgal*, whereas **sgrwal* or **sgrwol* became *sgral* or *sgrol*.

Two objections must, however, be met before we can proceed to finally rejecting the Prefix theory. The first arises from contrasting *rga* and *bgre* on the one side, with *rgal* "to cross" and its Perf. and Fut. *brgal* on the other. How can *bgre* be a derivative of *rga* if the Perf. and Fut. of *rgal* is *brgal* and not *bgral*? Obviously we are dealing here with different strata of the language. The prefix *b* as a tense indicator (and even the prefix *b* in *brgyal* "to faint", indicating its derivation from *rgyal* "to be victorious"¹) would appear to be a more recent addition made at a time when the linguistic conditions which brought about the metathesis were no longer operative.

The second objection arises from contrasting *rgal* < **grwal* with *grwa* "angle, school". Why should metathesis have occurred in *grwal* if the cluster *grw-* is tolerated in *grwa*? Again we are dealing with different strata of the language. In the case of *grwa* the *g* is secondary, the word going back to an earlier **nrwa* as does the *g* in the synonymous *gru*, the two words being varied by vowel gradation².

¹ See here, above, p. 12.

² The initial cluster **nr-* of *gru* can be confirmed by Chinese 角 *yu* (anc. and arch. *ngiu*) with which it was equated in *W. Gl.*, No. 81. As is well known, Laufer had already recognised (*Wiener Zschr. f. d. Kunde d. Morgenlandes* 1899, pp. 199, etc.) that *grwa* and *gru* belong together and he had compared the relation of the two words to that of *rwa* and *ru* "horn". I think one must go one step further and maintain that all the four words are etymologically closely related, being doublets arising from an initial cluster **nr-* varied by vowel gradation (*a-u*). The cluster **nr-* (**nrw*) could be dealt with in two ways. Either the initial **n* was dropped (which resulted in *rwa* and *ru* (<*rwu*)), or the transition from nasal to oral articulation effected the formation of an additional *g*, followed later by the fall of the *n* (which resulted in *grwa* and *gru* [<*grwu*]). There is no difficulty from the semantic point of view since "horn" and "angle" are essentially the same thing seen from without in the former and from within in the latter case. Rumanian *corn* unites the two meanings, and H. Schuchardt surveyed a great number of parallel cases in an article "Ecke, Winkel" in *Zeitschr. f. Roman Philologie*, XLI (1921), pp. 254-258. In Tibetan the different phonetic development has apparently led to a differentiation in meaning so that the forms without a guttural initial now exclusively mean "horn" and those with guttural initial "angle".

After dealing with these two objections it would now seem possible to reject the Prefix theory since in two clear cases it has failed to explain the very fact for which it was given preference to assuming an *r*- or *l*-metathesis. Summarizing the position reached it may, then, be said that *r* and *l* must be considered as shifted sounds and not as prefixes even when they precede a consonant with which they can form a cluster when following it. Moreover the explanation proffered for their appearance before such consonants gives us a further valuable clue. It is likely that in the cases when they precede these consonants the clusters were originally labialised (containing a *w* element). It will be a matter for a later paper to substantiate this latter conclusion further by comparative research.