

*The dinguist's dilemma:
Regular and sporadic l/d interchange in Sino-Tibetan and elsewhere*¹

[Suggested short title: *The dinguist's dilemma*]

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This paper explores interactions between the lateral liquid **l** and the voiced stop **d** (with parenthetical remarks about **n** and **t** as well) in a variety of language families, especially Sino-Tibetan/Tibeto-Burman. These apical sounds participate both in synchronic patterns of variation and in diachronic patterns of sound change. Sometimes changes of ***l** > **d** or ***d** > **l** seem quite regular, as e.g. in the passage from Old to Middle Chinese. More often perhaps, these changes appear sporadic. Recognition of **l** ≈ **d** alternations in ST/TB permits the refinement of several etymologies. The phonetic similarity between these sounds accounts for the fact that they interact with such frequency in languages all over the world.

Di gantse velt shteyt oyf der shpits tsung. (Yiddish proverb)²

1.0 Introduction

The apical consonants [l], [d], and [n] are quite similar in articulatory terms, all voiced sounds involving the occlusion of the tip of the tongue near the alveolar ridge or the back of the upper teeth. Many languages show dialectal variation among these sounds. There is, e.g., a well-known tribe of American Indians known variously as *Dakota*, *Lakota*, or *Nakota*.^{3 / 4} A number of Sino-Tibetan (ST) etymologies show

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² “The whole world stands on the tip of the tongue.” That is, “the words one utters can have profound effects on one’s life”.

³ Interchange between [l] and [n] is beyond the scope of the present paper. It is a notable phenomenon in Chinese dialectology (e.g. in Southwest Mandarin), and is also characteristic of child language (Greenlee & Ohala 1980). A famous example of the exceptional appearance of [n] where a dental stop would be expected is Chinese 鳥 ‘bird’ OC ***tiōg**, but Mandarin **niǎo** (GSR 1116a). Although Karlgren observes that this “is irregular, quite a riddle”, a satisfactory explanation has since been offered. As Hirayama Hisao (1992) points out, the word **diǎo** long ago developed the secondary meaning ‘penis’, thus motivating a euphemistic pronunciation with **n-**.

interchange between [l] and [d], for which the conditioning factors are sometimes rather obscure, in a manner reminiscent of the so-called “sporadic” cases of **d** \approx **l** in Indo-European.⁵

The question of the *directionality* of such alternations is not easy to answer. Which is more likely to occur, a “hardening” of [l] to [d], or a “softening” of [d] to [l]? Although both types of development are attested, the best-known cases in Indo-European are softenings of ***d** to **l** in Latin and Romance languages.

2.0 Indo-European

(a) Other Indo-European **d-** > Latin **l-** ⁶

	Other IE	Latin
‘Ulysses (Homeric hero)’	Gk. odysseus	ūlixēs
‘tongue’	PIE * dŋghu- , PGmc tungōn-	lingua ⁷
‘tear’ (n.)	PIE * dakru- , PGmc * taxru-	lacrima
‘brother-in-law’	Lithuanian dieveris ⁸	lēvir

⁴ I am told (Andrew Garrett, p.c. 2010) that Hittite **laman** ‘name’ is an example of the frequent but sporadic dissimilation of PIE ***n-** > **l-** before another nasal (cf. Latin **nōmen**). There is an interesting case of *metathesis* of /l/ and /d/ in the Austronesian word for ‘tongue’, where, e.g. Malay and Javanese **lidah** reflect the PAN form directly, while Cham has developed **dilah**. See Haudricourt 1956/1972: 249.

⁵ Colleagues have been kind enough to provide me with examples of association between [l] and [d] in other language families. Ian Maddieson points out that the classic Proto-Bantu reconstructions of Meinhof and Guthrie differ in the way they treat a certain correspondence with both stop and lateral reflexes, Meinhof preferring ***l-** while Guthrie reconstructs ***d-**: e.g. ‘tongue’ pBantu ***limi** (Meinhof) vs. ***dimi** (Guthrie). Some Central Congo languages show allophonic variation between these sounds, with /l/ appearing as [d] after nasals. Claire Bowern tells me that variation among initial **d** ~ **n** ~ **l**[~**r**] is widespread in the Pama-Nyungan family of Australia. Dominic Yu reports from the field in Mianning County, Sichuan, that the Mandarin syllables /li/ and /lǐ/ are pronounced with prenasalized voiced stops [ndi] in the speech of his consultants, e.g. 李 ‘Li (surname)’, standard Mand. /li/, Mianning (SW Mand.) [ndǐ]; 濾 ‘filter’, standard /lǐ/, Mianning [ndǐ]. Zev Handel notes the Sino-Korean pronunciation **-l** for Middle Chinese final **-t**, due perhaps to a Northwest MC softening of **-t** to [-d] and thence to a liquid. Handel also cites an interesting pattern of denasalization in S. Min dialects (e.g. Taiwanese and Amoy), where initial /m- n- ŋ-/ have denasalized to /b- l- g-/ in certain environments, with this [l-] actually some sort of phonetic combination of **d** and **l**, perhaps [d^l] or [l^d].

⁶ No entirely convincing explanation has ever been given for this sporadic phenomenon. Among the various suggestions in the literature is “Sabine influence” on Latin. “Les conditions, dans lesquelles cette alternation du **d** a eu lieu, sont malaisées à déterminer. Le passage de *dingua* à *lingua* est peut-être dû à une étymologie populaire...On a aussi songé à une influence de certains patois ruraux, en particulier de celui des gens de la Sabine, sur le parler des gens de la capitale...” (Niedermann 1953: 89-90). And again, “Das **l** für **d** hat Conway (*Indogermanische Forschungen* 2, 157 ff.) als dialektisch sabinisch erweisen wollen; doch fällt es schwer *odor* als echlat., dagegen *olēre* als sabinischlat. anzusehen” (Leumann 1963: 128-9).

⁷ Hence the title of this paper. If it were not for this Latin development, we would all be called “dinguists” nowadays! It is perhaps no accident that the word for “tongue” itself shows **d** \approx **l** variation, both in IE and ST (see below).

‘long’ ⁹	Slavic dlin-	longus
(b) Latin -d- > French -l-		
‘cicada’	Latin cicāda	French cigale ¹⁰
(c) Latin -d- > Spanish -l-		
‘tail’	Latin cauda	Spanish cola ¹¹
(d) Internal -d- ≠ -l- variation within Latin		
	Latin A	Latin B
‘smell’	odor ‘a smell’	olēre ‘emit an odor’
‘sit’	sedeō ‘I sit’	solium ‘raised seat; throne’
‘wet’	ūdus ‘wet’	ūligō ‘moisture’
‘entertainment given to foreign ambassadors to Rome’	dautia (Old Latin)	lautia (Classical Latin)
(e) Greek -d- > Italian -l-		
‘helmsman’ ¹²	PIE *pēd-o- , lengthened grade of *ped- ‘foot’ > Med. Gk. pēdon ‘blade of an oar’, (pl. pēda), whence *pēdōtēs ‘helmsman’ > Old Italian pilota , <i>alteration of pedota</i> > Old French pilote > Eng. <i>pilot</i>	

3.0 The search for physiological explanations

As my colleague John Ohala maintains, such phenomena as delatocism are not due to “human laziness”, but rather to “inherent anatomical, physiological, and neurophysical constraints characteristic of all vocal tracts – even those of hardworking speakers” (Ohala 1974).¹³

Ohala points out that [d] is the “most vocalic” of the voiced stops, with a much more pronounced formant structure than either [b] or [g]. This seems to lie behind the report that Danish postvocalic **-d** (actually a

⁸ Also Skr. **devār-**, Gk. **dāēr**, Arm. **taigr**, OE **tácor**, OHG **zeihhur**.

⁹ This root evidently involves a proto-cluster ***dl-**, so it is not really an example of ***d-** > **l-**. Cf. also Russian **dolgij** < Proto-Slavic ***dŭlgŭjŭi**; also Skr. **dirgha-**, Avestan **darəga**. My thanks to G. Jagodziński for these forms.

¹⁰ This form has been identified by some scholars as a loan from Provençal.

¹¹ For a persuasive explanation of this anomalous development in terms of contamination with Sp. **culo** ‘buttocks’, see Dworkin 1980.

¹² I am indebted for this example to David Solnit and the *American Heritage Dictionary*. Solnit also reminds me that Proto-Tai and Kam-Sui preglottalized or imploded ***ʔd-** frequently becomes **l-** or **n-** in daughter languages, e.g. pTai ***ʔda** ‘carrying cloth for child’ > Po-Ai **na**, Shan **la**. Li Fang Kuei (1977: 129-31) also reconstructs a pTai cluster ***ʔdl-** or ***ʔdr-** for a group of forms with similar reflexes in Siamese, Po-Ai, and Shan.

¹³ Ohala’s sensible approach to phonological developments in terms of universal articulatory constraints is further developed in Ohala 1983, and in many subsequent works.

weakly voiced interdental fricative [ð]) is sometimes interpreted as -l by non-native listeners.^{14/15} J. Sun reports that the Labrang subdialect of Amdo Tibetan has replaced the final stop represented by WT “-d” (actually an unreleased [-t]) with /l/.

Diachronic tendencies involving laterals may be characterized in general terms as involving hardening, epenthesis, or frication. Vowels and glides tend to be fricativized in the environment of yod [-j-], because close vowels give rise to a higher velocity of the oral airflow, thus inducing greater turbulence and frication of the segment.¹⁶ The universal tendency for *l(j)- or *j- to develop into ʒ- or dʒ- is noticeable both in Romance and Tibetan:

Latin > Romance

‘horse’	Latin caballus ‘pack horse/nag’ > Iberian Romance * cabalyo > Spanish caballo (Standard Sp. [kaβaljo], but Argentine Sp. [kabaʒo])
‘youth’	Latin iuventūs > Italian gioventù [dʒoventu], French jeunesse [ʒœnes]

Tibetan

	<i>Proto-Tibeto-Burman</i> ¹⁷	<i>Written Tibetan</i>
‘bow/sling’	* d/s-ləy	gzu ¹⁸
‘four’	* b-ləy	bzi
‘flea’	* s-ləy	ldzi-ba, ḥdzi-ba
‘heavy’	* s-ləy	ltsi-ba, ldzi-ba
‘tongue’	* s-lyə	ltse
‘wind’ (n.)	* g-ləy	rdzi

The “hardening” or “frication” of the lateral in such cases may perhaps be viewed as a type of *epenthesis*, i.e. the insertion of a phonetic segment between two sounds that are difficult to pronounce in sequence. This seems to occur most frequently in the environment of nasals or liquids,

¹⁴ (Line Mikkelsen, p.c. 2010). While on the subject of Scandinavian, we may note that the pronunciation of the currently erupting Icelandic volcano *Eyjafjallajökull*, which has caused such despair among news broadcasters, is relevant here. Evidently the sound written “ll” in Icelandic is actually some sort of stop with lateral release [tʰ]: [eːjafjatʰajökutʰ]. (The volcano’s name is actually simply *Eyjafjalla* ‘island-mountain’; *jökull* means ‘glacier’, referring to the ice-sheet through which the volcano erupted.)

¹⁵ Although it is also beyond the scope of this paper, we might also mention the phonetic similarity between a flapped [r] and a voiced dental stop, as witness the English allofams (see fn. 36) *carry* and *caddy*, as well as the near phonetic identity of Japanese intervocalic **-d-** and **-r-** (cf. pairs like **dōdō** ‘stately’ and **dōro** ‘road’). There is one important TB root, ‘weave’ (***rak** × ***dak**) which shows alternation between ***r-** and ***d-** at the PTB level (see Matisoff 1972: #192). Cf. also the alternate names *Bodo* ~ *Boro* for one of the key languages in the “Bodo-Garo” group of TB.

¹⁶ The Lahu syllables /yi/ and /ye/ are pronounced with noticeable frication: [j̥i], [j̥e]. See Matisoff 1973: 56, 1988a: 1269.

¹⁷ Several etyma in this group (FOUR; HEAVY; TONGUE; WIND) have cognates with dental stop initials in other TB languages and/or in Chinese (see GSR series #413). See below.

¹⁸ For discussion of the WT vowel reflex in this root, see Matisoff 2003 (“HPTB”): 50, 192.

with several familiar subtypes:

- (a) *nasal + fricative* > *nasal + stop + fricative*
 Eng. *warmth*, often pronounced [wɔrmpθ]; *sense*, usually pronounced [sents]; *Thompson* < *Thom*(’s) *son*
- (b) *nasal + liquid* > *nasal + stop + liquid*
 Latin *cam(e)ra* ‘room’ > French *chambre*
- (c) *lateral + fricative* > *lateral + stop + fricative*
 Eng. *else*, often pronounced [ɛlts]; *false*, often pronounced [fɔlts]
- (d) *fricative + liquid* > *fricative + stop + liquid*
 PIE ***sreu-** > Sanskrit *sravati* ‘flow’, but Eng. *stream*, Russian *ostrov* ‘island’
- (e) Slavic has a rather strange epenthesis rule, whereby an [l] is inserted anytime there is a hard labial followed by a real yod, as when the cluster **bj-** becomes **blj-** before a vowel,¹⁹ e.g. Russian **ljubitj** ‘to love’, but **ljublju** ‘I love’. Here the lateral is the epenthetic element, not the environment for its insertion.

In view of all these tendencies, we might hypothesize that the emergence of dental stops in these contexts is also partly epenthetic in nature, thus: lateral + yod > lateral + apical stop + yod (with a possible subsequent reduction to apical stop): **lj** > **ldj** > **dj** > **d**.²⁰

4.0 Evolution of liquids within Chinese

Few aspects of Old Chinese phonology have given rise to as much controversy as the fate in OC of the simple liquids ***r-** and ***l-**, and the numerous putative proto-clusters involving liquids.²¹ This is not the place to go into detail about the often contradictory and changeable opinions of the many scholars who have wrestled with these questions, but a couple of citations will suffice to illustrate the complexity of the problem:

¹⁹ According to Jay Jasanoff (p.c. 2010), there is a similar phenomenon in Latvian.

²⁰ Carol Genetti (p.c. 1990) has discovered an interesting allophonic pattern in Sunwar (a TB language of E. Central Nepal), whereby the phoneme /l/ is pronounced [dl] after a syllable-initial stop, e.g. **lě** ‘tongue’, **lisnuñ** ‘stairs’, **laa-taa** ‘hit’, but [phdlēē-tsa] ‘tie’, [bdlii-tsa] ‘fill to the brim’, [khdläāba] ‘pole’.

²¹ Cf. the discussion of “Reflexes of Proto-Chinese ***l-**” in Bodman 1980: 97-108. An excellent discussion of this complex topic is Handel 1998, who summarizes the previous contributions of such scholars as W.H. Baxter, P.K. Benedict, W.S. Coblin, Gong Hwang-cherng, Li Fang Kuei, E.G. Pulleyblank, L. Sagart, A. Schuessler, S.A. Starostin, and S.E. Yakhontov.

Archaic Chinese [=OC] has initial **l-** for both Proto-Sino-Tibetan ***r-** and ***l-**, as in 六 **l̥iôk** ‘six’, PTB ***d-ruk**. Early Chinese loanwords in Thai retain original ***r-**; cf. Proto-Tai ***hrok** ‘six’, and 藍 ***graam** ‘indigo’, Archaic Chinese **glâm**, Written Tibetan **rams**.²² (Benedict 1972: 171)

I keep OC initial ***l-** and ***r-** strictly apart, and take MC **l-** to come from OC ***r-** only, and MC **ji-** to derive from **l-**. ... It seems most likely, on balance, that both OC ***l-** and ***lj-** merged into MC **ji-**. (Schuessler 1987: xii)

As for liquid clusters, MC retroflex initials are generally thought to descend from OC clusters with ***-r-**. Li Fang Kuei (1971/1980) reconstructs both OC ***-r-** and ***-l-** clusters, ***-r-** in Second Division words (an idea first proposed in S.E. Yakhontov 1963) and ***-l-** in *xiéshēng*²³ series where **l-** alternates with stop initials in MC and modern dialects.²⁴ Schuessler recognizes only medial ***-r-**, differentiating between these two sets of words by positing a difference in syllable structure, monosyllables in Division II (e.g. ***gran**) vs. sesquisyllables (e.g. ***gəran**) for First and Fourth Division MC **l-** alternating in *xiéshēng* series with velars (Schuessler, *ibid.*).

As far as interchange between dental stops and laterals is concerned, the direction of development in both Chinese and TB seems to be the opposite of the Latin case, i.e. ***l** > **d**.²⁵ For Benedict, this phenomenon was felt to be real, but not entirely regular in Chinese:

Under conditions of palatalization (not fully worked out), ST ***l-** tends to be replaced in Chinese by **ḷ** or **ḷi/i** ... There is evidence for further evolution of ST ***l** to other dental stops, voiced or

²² In this view, OC is as useless in differentiating between PST ***r-** and ***l-** as Sanskrit is in distinguishing the two liquids in Indo-European. Examples of OC ***l(j)-** corresponding to PTB ***r-** include ‘join; bring together’, 連 or 聯 (Mand. **lián**) OC ***lijan** (Karlgren 1957: 213a, 214a) / PTB ***ren** ‘line up, be equal’ (Benedict 1972: #346). Karlgren 1957 and Benedict 1972 will henceforth be abbreviated to “GSR” and “STC”, respectively. (See the Appendix for a list of symbols and abbreviations.)

²³ A *xiéshēng* 諧聲 (lit. “harmonious sounds”) series is a group of Chinese characters that share the same phonetic element, e.g. GSR series #755, containing 京 ‘capital city’ (OC ***kljāng**, MC **kjōng**, Mand. **jīng**) and 涼 ‘cold’ (OC ***gljāng**, MC **ljāng**, Mand. **liáng**). These words are reconstructed in the Baxter-Sagart system (version 0.99) as OC ***[k]raŋ** > MC **kjæŋ** and OC ***Cə.raŋ** > MC **ljæŋ**, respectively. (Version 0.99 of the Baxter-Sagart system will henceforth be abbreviated to “B/S”.) The aberrant form for ‘bird’ with initial **n-** (above, n. 3) 鳥 (Mand. **niǎo**), belongs to the same *xiéshēng* series (GSR 1116) as 島 ‘island’ (Mand. **dǎo**), with a dental stop initial (OC ***tōg**).

²⁴ Pulleyblank once set up clusters with the voiced interdental fricative **-ḍ-** in some of these series (1961/1962: 115-119), but later (1973) changed his mind and opted for **-l-** instead.

²⁵ A convenient term for this phenomenon is *deltacism*, by analogy with the established term “rhotacism” for the introduction of an **r**-like sound. The opposite development of a dental stop to a lateral (as in Latin, above), we could then call *lambdacism*.

unvoiced...especially in the GSR 413 series.^{26/27}

Subsequent scholars have generally come around to the view that the development from OC *l to MC d was quite regular, while OC *ly tended to become MC yod:

	<i>Non-palatalized *l-</i>		<i>Palatalized *ly-</i>	
	<i>OC</i>	<i>MC</i>	<i>OC</i>	<i>MC</i>
Karlgren ²⁸	d'	> d'	ḍi	> i
Li Fang Kuei	d	> d	r	> j
Schuessler ²⁹	dl	> d	l	> j
Pulleyblank	l	> d	l(j)	> j
Bodman ³⁰	l	> d	l(j)	> j
Baxter ³¹	l	> d	(l)j	> j
Gong	l	> d	lj	> dj

We may illustrate by one non-controversial example of OC *l- > MC d-:

BUTTERFLY

Chinese 蝶 (Mand. **dié**) is reconstructed by Karlgren (GSR 633h) as OC *d'iap/MC d'iep, but by Gong (2000: 56: #53) as OC *N-liap/MC **diap** > **diep**, which brings it into perfect agreement with Written Tibetan **phye-ma-leb** < PTB *lep.³²

The plausibility of this development is powerfully reinforced by a well-established parallel evolution of the OC *voiceless lateral **hl-** to MC aspirated **th-**. The two best examples, LADDER/BRIDGE and TAKE OFF/REMOVE/LOOSEN/FREE, both have PTB cognates with *s-prefixed laterals:

LADDER/BRIDGE

The comparison between Chepang **hlay?** 'ladder' and Chinese 梯

²⁶ (STC: 171, n. 458) These include NEPHEW, LEECH, and perhaps HEAVY. Also LICK/TASTE/SWEET. See below.

²⁷ As we shall see, on the Tibeto-Burman side Benedict is more reluctant to admit l/d or l/t interchange within a single etymon, and typically treats the lateral forms as reflecting separate etyma from the stop-initial ones.

²⁸ Karlgren's system (1957) is now universally considered to be out-of-date in many respects, but it is still convenient to cite, since all the thousands of characters in GSR have a unique identifying number.

²⁹ See Schuessler 1974. This scholar has since abandoned this OC reconstruction.

³⁰ See Bodman 1985: 160, where this comparative chart of reconstructions appears.

³¹ Baxter (1992) derives MC l from OC prefixed *r; in his system unprefixated OC *r became MC j. I have, however, identified several etyma where PTB *(C-)l- seems to correspond to Baxter's OC *(C)-r-. See Matisoff 1995: 50-53. Baxter has recently revised his account of the history of OC *r-, preferring the scenario OC *r- > MC l-.

³² See HPTB: 377.

(Mand. **tī**) OC ***t'iar** (GSR 591-L) ‘wooden steps, staircase’ was made already by Bodman (1980: 102, 104), who reconstructs OC ***hləj** and credits Pulleyblank (1961/1962: 114) with being the first to call attention to “a well-known correspondence between WT **lh-** and OC **th-**.”³³ The PTB etymon is set up as ***s-lay** ≈ ***s-ley** in Matisoff 1985a (n. 78, p. 44), where additional reflexes are cited:

***s-lay** > Chepang **hlayʔ**; Tangkhul **śay** ‘small bridge’, **śay-ron** ‘ladder’
***s-ley** > Mizo (Lushai) **lei**; Tiddim **lei**; Lakher **hlei-ri**

TAKE OFF/REMOVE/LOOSEN/FREE

Forms with both velar and sibilant prefixes are abundantly attested in TB:³⁴

***g-lwat** > WT **glod-pa** ‘loosen, relax, slacken’; WB **kywat** ≈ **lwat** ‘free’; Jingpho **lòt** ‘free; escape, gain liberty’

***s-lwat** > WT **hlod-pa** ‘loose, relaxed’; Jingpho **śəlòt** ‘set free’; WB **khywat** ≈ **hlwat** ‘loosen’; Lahu **lêʔ** ‘slip, slide; smooth, fluent’. The obvious Chinese cognate is 脫 (Mand. **tuō**, OC ***twât** ≈ ***d'wât** [GSR 324m], Schuessler 2007: 504 ***l(h)ôṭ**, B/S ***l̥ot**) ‘peel off, take off (as clothes); escape, disappear’; also, in the same phonetic series, 蛻 (Mand. **tuì**, OC ***d̥iwat** [GSR 324e], B/S ***l̥ot-s**) ‘exuviae of insects or reptiles’ (i.e. the outer skin which is shed or moulted).³⁵ Note that both TB and Chinese have voiced and voiceless allofams,³⁶ representing an old simplex vs. causative opposition.

F.K. Li does not relate Proto-Tai **thəət** ‘remove, take off (as clothing)’ (HCT: 102-3) to this etymon, though it certainly looks like a loan from Middle Chinese.

Also worth mentioning in this connection is an ancient areal etymon for IRON, found not only in ST, but also in Tai-Kadai and Hmong-Mien.³⁷

IRON

This ancient loan into ST is to be reconstructed as PTB ***s-lyak**, with such reflexes as WT **Itśags** ‘iron’, Cuona Menba **lek**⁵³ ‘id.’, and WB **jak** ‘bit of a bridle’

The obvious Chinese congener 鐵 (Mand. **tiě**) is reconstructed as

³³ This word is now reconstructed in the B/S system with initial ***l̥-**.

³⁴ See HPTB: 70, 82, 84, 136, 315, 332, 334.

³⁵ In the B/S system, MC **th-** can reflect either ***t^{h̥s}-** or ***l̥-**, and MC **d-** can reflect either ***d^s-** or ***l̥-**.

³⁶ The term “allofam”, meaning “a variant within the same word-family”, was introduced in Matisoff 1978. The symbol ≈ is used to indicate this relationship: A ≈ B means “A and B are members of the same word-family; A and B are co-allofams.”

³⁷ Chang Kun (1972) reconstructed a form ***qhleks**, claiming it was the ancestor of all the forms to be found in these three language families, among which he believed there to be a genetic relationship.

MC **t'iet** in GSR 1256b, which gives no form for OC, but this has been supplied in the Bodman/Baxter system as OC ***s-lek**,³⁸ now revised in B/S to initial ***l̥**-, with no prefix at the OC stage.

F.K. Li reconstructs ***hleḳ** for this old loan into Proto-Tai (HCT: 137), since the tonal correspondences point unambiguously to a pTai ***voiceless initial**.

5.0 *TB/ST etymologies indicating lateral ≠ dental stop*

Benedict is reluctant to admit stop/lateral interchange within a single etymon, and typically treats the lateral forms as reflecting separate etyma from the stop-initial ones. Nevertheless, it is clear that a number of ST etyma show some sort of interchange between laterals and dental stops, with the nature of this relationship varying across the etymologies. For convenience we will discuss some of these etyma in the alphabetical order of their English gloss:

ARROW

Benedict 1972 reconstructs a PTB root ***m-la** (STC: 111: #449), revised from his original reconstruction ***b-la**, on the basis of forms like Bahing **bla**, Vayu **blo**, Newar **bala**, Magar **mya**, Nung **thəma**, Jingpho **pəla**, Jili **məla**, Written Burmese (WB) **hmrā**, Phön (Samong dial.) **bya**, Kha Li (Southern Lolo) **ka-mla**, Garo **bra**, Dimasa **bala**, Tangkhul **məla**, and Proto-Karen ***p(h)la** (p. 139).

He then goes on reluctantly to reconstruct a separate root ***m-da** (n. 313), on the basis of only two forms: Written Tibetan (WT) **mda**, and Jingpho (Hkauri dialect) **niṅda**. Yet WT lacks the cluster **ml-**, and Bodman (1985: 156) rightly suggests that WT **md-** “may sometimes be a reflex of ***ml-**”. The form in the poorly known Hkauri dialect of Jingpho is not enough to justify a separate reconstruction with root-initial ***d-**.

Sun Hongkai (1986: 7) takes the tack of “stuffing the proto-form” by reconstructing ***mdla**. Several forms from the Qiangic branch of TB are of interest,³⁹ especially Zhaba **nde**³⁵ (also with delatocism); yet Zhaba, like WT, lacks the cluster **ml-** (ZMYYC: 225). Some Qiangic languages have developed affricates in this root, e.g. Qiang (Mawo dial.) **ɣdʒa** and Muya **zu³³ntʃhã⁵³**. Note that another dialect of Qiang (Taoping) has a simple lateral initial, **l̥³³**.

In sum, there seems no reason to reconstruct anything more complicated for this etymon than PTB ***m-la**.

FOUR

Most TB languages reflect a lateral root-initial (usually preceded

³⁸ See Handel 1998, Ch. 5.

³⁹ These are cited both in Sun Hongkai (*loc. cit.*) and in Sun et al. (eds) 1991 (“ZMYYC”): #428.

by a prefix) for this numeral, justifying the PTB reconstruction ***b-ləy** (e.g. Thulung **bli**, Mikir **phli**, Jingpho **məli**, WB **lê**). As we have seen, WT **bzi** shows frication of the lateral before this front vowel (the syllable “bli” does not occur in WT).

Many Naga languages have developed dental stops in this root, including Angami **da**, **die**; Chokri **da**; Kezhama **pedi**; Liangmai and Maram **madai**; Mao **padei**; Mzieme **m(a)dai**; Nruanghmei **padei**; Sema **bidhi**; Tangkhul **mati**; Zeme **medai**. However, the lateral is preserved in the Northern Naga (Konyak) group: Yogli **bəlai**, Moshang **bali**, Nocte **beli**, Wancho **ali**, Konyak **pelī**, Phom **ali**, Chang **lei** (French 1983: 492). This seems to indicate that the deltacism in this etymon is a local development in the Naga group.⁴⁰ The Mongsen dialect of Ao Naga preserves the lateral (**phə²²li²²**), but the Chungli dialect has developed a voiced fricative (**pəzə**), like WT.

This is also one of the words where the deltacizing Manö dialect of Karen has a voiceless dental stop: Manö **ti**.

Chinese 四 (Mand. **sì**, OC ***sjəd**/MC **si** [GSR 518a-d]) shows a strange sibilant initial, perhaps pointing to a variant ***s-ləy**, with preemption by the prefix.⁴¹

GOOD/BEAUTIFUL⁴²

Allofams of this lexeme with both lateral and dental stop initials may be securely set up at the PTB level:

***l(y)ak** ≈ ***l(y)aŋ** > WT **legs-pa** ~ **lags-pa** (Ladakhi) ‘good, elegant; beautiful’; **yag-po** ≈ **hɔ́zɔ́g-po** ‘good’; Lushai **lian** ~ **len** ‘good’
 ***N-d(y)ak** > WB **tak-tak** ~ **tyak-tyak** ‘very’; Lahu **dà?** ‘good, beautiful’
 ≈ **qha-dè?** ‘properly’; Lalo **diq** ‘good’; Tiddim Chin **tak** ‘right, correct’

The nasal prefix must be reconstructed for the latter variant, because of the voiced Lahu initial. Since the usual WB, Lahu, Lalo, and Tiddim reflexes of PTB ***l-** are **l-**, lateral ≈ stop variation should be posited at the PTB level. The palatal glide is attested by WT **yag-po**, WB **tyak-tyak**, and Lahu **qha-dè?**.⁴³

There are several solid Chinese comparanda: 麗 (Mand. **lì**, OC ***lieg** [GSR 878a-b]) ‘elegant, beautiful, refined, good’; 良 (Mand. **liáng**, OC ***liang** [GSR 735a-d]) ‘good’; 易⁴⁴ (Mand. **yì**, OC ***diëk**/MC **iäk** [GSR 850a]) ‘at ease, well-ordered’. For this last lexeme, Schuessler (1987: 744)

⁴⁰ It is also incidentally a further indication that the so-called “Northern Naga” group is not particularly close to the other “Naga” languages of NE India. Tibeto-Burmanists have long suggested that Northern Naga is more closely related to Barish (Bodo-Garo) and perhaps also to Jingpho (Kachin). See Burling 1983.

⁴¹ This is substantially the same as the new B/S reconstruction, OC ***s.li [j] -s**.

⁴² See HPTB: 51, 327.

⁴³ One might of course surmise that an original difficult consonant combination ****nl-** might have been broken up by epenthesis to ****ndl-**, with the **-l-** subsequently becoming the palatal semivowel, yielding ***ndy-**.

⁴⁴ For this last comparison, see Bodman 1980.

reconstructs OC **ljik*, later revising it to “Minimal OC” **lek* (Schuessler 2007: 566).⁴⁵

HAND/ARM/WING/CUBIT/ARMPIT

The best attested TB etymon for the upper limb is **lak* ‘hand/arm’ (STC: #86), reflected by forms like WT **lag-pa**, WB **lak**, Miri **əlak**. An allofam with palatal semivowel and velar prefix, **g-lyak*, must also be reconstructed to account for a group of forms from Lolo-Burmese with meanings ranging from ‘armpit’ to ‘cubit’, e.g. WB **gyak-kəli** ‘armpit’, Lahu **jâ?** ‘cubit’ (a traditional measurement from the elbow to the hand). The voiced Lahu initial is undoubtedly due to the influence of the voiced velar prefix (not in this case due to a nasal prefix).⁴⁶

A similar palatal allofam seems like the immediate ancestor of forms with **d-**, **y-**, or **tś-** in Northern Naga (Konyak) languages (e.g. Namsang **dak**, Tablung **yak**, Moshang **yok**, Banpara **tśak**), as well as Bodo-Garo (Barish) forms like Garo **dźak**, Dimasa **yau** ‘hand’ < PBG **yak* (STC: 34),⁴⁷ and Chin forms like Mizo (Lushai) **zak** < Proto-Chin **yak*. It must be stressed that the usual Northern Naga, Bodo-Garo, and Chin reflexes of PTB unpalatalized **l-* are **l-** or **r-**.⁴⁸

On the Chinese side there are two good comparisons, also reflecting the palatalized variant:

- ‘armpit’ 腋, 亦, 掖 Mand. **yè** ~ **yì**, OC **ziǎk* (GSR 800m); Schuessler (2007: 568) reconstructs OCM **jak*.⁴⁹
- ‘wing’ 翼 (Mand. **yì**), reconstructed as OC **giǎk* in GSR 954d, revised by Benedict to **diǎk* because of the presence of 趩 (Mand. **chì**, OC **t’iǎk*) ‘sound of marching’ in the same phonetic series (954g-h).⁵⁰ Schuessler (2007: 570), however, reconstructs OCM **lək*, while Baxter’s former reconstruction **ljǎk* included the palatal semivowel.⁵¹

Jingpho has the curious form **lətá?**, which can be explained as the result of a development like **lak* > **lyak* > **dyak*, after which a new prefix **lə-** was added, by analogy with words like **ləgō** ‘foot’.^{52/53} The

⁴⁵ In the B/S system, both 麗 and 良 are tentatively reconstructed with initial **r-* as OC **[r]’e-s* and **[r]aŋ*, respectively. 易 has two OC readings in GSR 850a: **diǎk* ‘change, exchange’ (B/S **lek*) and **diǎg* ‘easy’ (B/S **[l]ek-s*).

⁴⁶ Contra Matisoff 1972: #100, where this root is reconstructed as PLB **Nkyak* ≈ **?kyak*.

⁴⁷ Joseph and Burling (2006: 128) reconstruct PBG **yak*.

⁴⁸ E.g., ‘road’ PTB **lam* > Konyak **ləm**, Garo **ram-a**, Mizo **lam**; ‘stone’ PTB **r-luŋ* > Moshang **luŋ** (but also Konyak and Phom **yoŋ**), Garo **roŋ**, Mizo **luŋ**.

⁴⁹ B/S now reconstructs OC **[g] (r)Ak* with a uvular rather than a lateral initial.

⁵⁰ Baxter feels this word is onomatopoeic, reconstructing MC **trhik**. The B/S system has not yet ventured an OC reconstruction, though either a lateral or uvular initial would be possible in their scheme.

⁵¹ In the new B/S system, this word is also reconstructed with a uvular, OC **[g] (r)ək*.

⁵² Many other Jingpho nouns and verbs referring to the limbs or actions with the limbs have the **lə-** prefix, undoubtedly a reduction of the original morpheme **lak*. See HPTB: 130.

similarity between Jingpho **lətáʔ** and Namsang **dak** (above) is one further bit of evidence linking Jingpho and Northern Naga.

For a detailed (but possibly outdated) study of the many TB roots for the upper limb, see Matisoff 1985b.

LEAF

This etymon has two major TB allofams, one with an open vowel ***s-la** (which sometimes means ‘tea’), and one with a stop final, ***s-lap**.⁵⁴

***s-la** > WT **lo-ma**; Meithei **la**; Magar **hla**; Dhimal **hla-ba**; Mikir **lo** (all ‘leaf’); WB **la**; Lahu **là** ‘tea’

***s-lap** > West Tibetan **lob-ma**; Kanauri **lab**; Takpa **blap**; Nung **śəlap**

Still another WT allofam has a prefixed dental stop initial: **hdab-ma** ‘wing; broad leaf’. This is superficially similar to GSR’s reconstruction of the Chinese etymon 葉 (Mand. **yè**) as OC ***d̪iap** (GSR 633d), although more modern OC reconstructions still have a lateral initial: ***lap** (Schuessler 2007), ***ljap** (Baxter 1992).⁵⁵ WT **hd-** seems to be the regular reflex of earlier **hl-**, perhaps to be interpreted as from ***ʔl-**.⁵⁶

This word has acquired a dental stop in the Manö dialect of Karen: Manö **ta** ‘leaf’ < ***s-la**.

LEECH

The well-established PTB etymon ***m/s-li:t** ‘water-leech, horse-leech’ reflects both the ***m-** and ***s-** prefixes, e.g. Mikir **inlit**; Ao Naga **melet**; Lushai **hliit**; Lepcha **hlet-büü**. The Chinese cognate 蛭 (Mand. **zhì**) reconstructs with a voiceless palatal stop, OC ***t̪j̥et** (not in GSR 413). In this case modern reconstructions also reconstruct a dental stop for OC, so this seems to be a case where we must posit lateral ≈ stop variation at the PST level.⁵⁷

MOON/MONTH

This TB etymon was originally reconstructed ***s-la** (STC: #144), based on forms like WT **zla-ba**, Nung **səla**, WB **laʔ**, Lahu **ha-pa**, with the remark that the dental stops in Jingpho **šətā** and Kadu **səda** “cannot be explained” (cf. also Nocte [Northern Naga] **³da**, Ao Chungli **ì-tà**, Ao Mongsen **là-tà**, Yacham-Tengsa **lu-ta**). Mizo⁵⁸ **thla** and Meithei **tha** were

⁵³ Benedict (STC: 34: n. 109) offers a different explanation for the Jingpho form, deriving it rather mysteriously from ***glak**. Cf. also his treatment of Jingpho **šətā** ‘moon’ (below), which he regarded as parallel to **lətáʔ**.

⁵⁴ See STC: #321, #486.

⁵⁵ This is now revised in the B/S system to OC ***l[a]p**, with no certain reconstruction of the vocalic nucleus.

⁵⁶ There is not a single case of a prefix occurring before WT **l-**; see Jäschke 1881/1958: 539-554.

⁵⁷ B/S reconstructs MC **tsyit** ~ **trit** ~ **tet** but no OC form, since the word does not occur in pre-Qin texts.

⁵⁸ Mizo regularly developed **thl-** or **tl-** from ***velar-plus-l** clusters. See VanBik 2009, who reconstructs Proto-Kuki-Chin ***khlaa** ‘moon/month’ (#1295).

assigned to another allofam ***g-la**. Later (n. 137), STC revised this reconstruction to ***s-gla**, reconceiving the alternate prefixes as cooccurring in linear order, claiming that this better explained the Jingpho form. However, the posited development ***sgl-** > ***skl-** > **št-** does not seem particularly natural, and one could just as well imagine a delatization of the lateral initial, perhaps via the palatalizing influence of the ***s-** prefix:⁵⁹ ***s-la** > ***s-lya** > ***s-dya** > **šətā** (with regression of the palatal element to the prefix, since Jingpho lacks a **dy-** or **ty-** cluster).

Other scholars have reconstructed an initial consonant combination of sibilant, dental, and lateral for this etymon, in various orders. Weidert (1981) reconstructs ***s-dla**^{h,60} while Bodman (1980: 63), much more plausibly, reconstructs ***d-sla**, cogently citing Sunwar **tāslā** in support, and explaining thereby the highly unusual voiced sibilant in WT **zla-ba**.

This etymon is one of those where the Manö dialect of Karenni (= Red Karen = Kayah) has developed a dental stop from a **lateral* (Manö [= Manumanaw] **ta** ‘moon’). Other examples include Manö **ta** ‘leaf’ < ***s-la**, **ti** ‘four’ < ***b-ləy**, and **pti** ‘tongue’ < Proto-Karen ***ple** (STC: 137). It is also one of the roots where the Kok Chiang dialect of Ugong has developed **d-** from **l-*: Ugong Khök Kway **lua**²¹, Ugong Kok Chiang **dua**^{21,61}.

NAVEL/CENTER

STC sets up two separate roots for ‘navel/center’, one with lateral initial (#287) and one with a voiceless dental stop (#299):

***la:y** > WB **ʔəlai** ‘middle, center’; Mizo **laai** ‘middle, center; navel’;
Tiddim **laai** ‘middle’

***s-tay** > WT **lte-ba**, Jingpho **šədāi** ‘navel’, Garo **ste** ‘abdomen’

In light of all that has been said, these two roots should certainly be considered co-allofams of one and the same etymon.

It is interesting to note that the name of the Central Chin language known as *Lai* /laay/, spoken in such towns as Hakha and Falaam, means ‘central; middle’, and is evidently cognate to the name of the Southern Chin language called *Daai* (see So-Hartmann 2009). Coincidentally, the Kadai language of Hainan known in Chinese as 黎 (Mand. **Lí**) is called *Hlai* by its native speakers, a name evidently cognate to the ethnonym *T(h)ai*. (For the diachronic interplay of voiceless lateral and aspirated dental stop, see the development of OC ***hl-** to MC **th-**, in TAKE OFF/REMOVE, above.)

⁵⁹ Cf. the development of secondary yod in Lepcha through the influence of prefixal ***s-**, pointed out in Benedict 1943.

⁶⁰ For a critique of this reconstruction, see Matisoff 1982: 36.

⁶¹ Ugong data is from David Bradley (p.c.), who rediscovered this highly endangered Lolo-Burmese language of Thailand, formerly known under the misnomer “Kanburi Lawa”. See Bradley 1988 and section 6.0, below.

NEPHEW/GRANDCHILD/YOUNG MAN

A root with meanings referring to younger male relatives, or young men in general, is PTB ***b-ləy** > Inscriptional Burmese⁶² **mliy** > WB **mrê** ‘grandchild’; Jingpho **məli** ‘young man’; Mikir **phili-po** ‘nephew’. The likely Chinese cognate ‘nephew, niece’, is reconstructed with a voiced dental stop in GSR 4130-p (OC ***d’iet** ≈ ***d̥iēt**).⁶³ In this case, Baxter’s reconstruction ***dīt** has a simple voiced dental stop, while Schuessler (2007: 616) shows uncertainty as to his “Minimal Old Chinese” reconstruction, tentatively suggesting an OC initial cluster: “***lît** or ***d-lit?**”

This word also appears in Karlgren’s series #413, which contains several other roots with l/d interchange. Like LEECH, this root points to l ≈ d at the PST level.

STRAIGHT/FLAT/FULL

I have shown at length (Matisoff 1988b) how two PTB roots reconstructed separately in STC, ***dyam** ≈ ***tyam** ‘full’ (#226) and ***dyam** ‘straight/flat’ (#227), are really one and the same etymon, with meanings referring to perfection in one, two, or three dimensions (straightness, flatness, or fullness), respectively: cf. Bahing **dyam** ‘be full, be straight’; WT **ldem-pa** ‘straight’, **ltam-pa**, **tham-pa** ~ **them-pa** ‘full’; Nung **ədam** ‘plain (level ground), flat’.

To these forms I would now like to relate PTB ***lyap** ‘flat’ (STC: #212), represented by WT **leb-mo** ‘flat’, **gleb-pa** ‘flatten’ and WB **lyap** ‘very thin’, thus positing variation between final homorganic stop and nasal in this root (see HPTB: 51). If this is correct, this etymon must be deemed to show l- ≈ d- variation at the PTB level.

On the Chinese side, Nicholas Bodman (p.c. 1986) has cited scattered forms in southern dialects, including Zhongshan Cantonese **tim**²² ‘straight’ (written with a locally adapted character 掂 [Mand. **diān** ‘weigh in the hand’]) as well as Samheung (S. Min) **tiam**⁴ ‘straight, direct (e.g. of roads); to straighten’, both pointing to a MC prototype **diam** (B2).⁶⁴ Gong Hwang-chenng (2000) has recently proposed another Chinese member of this word family, 牒 ‘tablet’ (Mand. **dié**), reconstructed by Karlgren as OC ***d’iap**/MC **d’iep** (GSR 633g), but by Gong as OC ***N-liap**, MC **diap**.⁶⁵ This word now means ‘official document, certificate’, the probable semantic association being ‘a flat

⁶² “Inscriptional Burmese” refers to the stage of the language attested in the earliest Burmese inscriptions, the first of which (the famous quadrilingual Myazedi Inscription) dates to around A.D. 1112. Written Burmese (WB) refers to the written language of subsequent centuries, reflecting a gradual standardization of the orthography.

⁶³ The final -t, which also occurs in other kinship terms, is probably a suffix (see HPTB: 464).

⁶⁴ In the B/S system, the Cantonese and Min forms could reflect MC **demX**, which would be consistent with either ***d^s**- or ***l^s**-.

⁶⁵ Note that this is exactly the same reconstruction (both in GSR and Gong 2000) as BUTTERFLY (above 4.0).

object written upon’. Also probably related is 碟 ‘plate’ (Mand. **dié**), in the same *xiéshēng* series, but not in GSR 633.

Here TB shows **d** ≈ **l** at the PTB level, but Chinese seems self-consistent, with OC ***l-** > MC **d-**.

TONGUE/LICK

Just as in Indo-European (above 2.0), the principal ST/TB root for ‘tongue’ displays **l** ≈ **d** interchange. This ST/TB word-family is particularly intricate, both morphophonemically and semantically. A “pan-allofamic formula” of roughly the following structure may be set up, including at least half a dozen variants:

***m-lay** ~ ***s-lay** ≈ ***m-lyak** ~ ***s-lyak** ≈ ***s-lyam** ≈ ***s-lya:w**:

			-y
s-			-w
m-	l	(y) a	-t
(g-)			-k
			-m

One well-established sub-root is ***m-lyak** ≈ ***s-lyak** ‘lick/cause to lick’.⁶⁶ Here again Jingpho has the puzzling reflex **mətáʔ**,⁶⁷ for which I would simply posit the development ***m-lyak** > ***m-dyak** > ***m-dak** > **mətáʔ**. Very similar is the deltacized WT form **ldag** ‘lick’ (ignored in STC), a co-allofam of WT **ltse** ‘tongue’ (< ***s-lay**) and WT **ldzags** ‘tongue (respectful)’ < ***s-lyak**. A good candidate for cognacy is Chinese 食 (Mand. **shí**, OC ***ḍʰiək** [GSR 921a]) ‘eat’, with more up-to-date reconstructions offered in Baxter 1992 (***Ljik**) and Schuessler 1987 (***mljək**). Another Chinese allofam is 舐 (Mand. **shì**) ‘lick’, reconstructed by Karlgren as OC ***ḍʰiëg** (GSR 867f) and by Schuessler as ***m-leʔ**.⁶⁸

STC relates Chinese 舌 ‘tongue’ (Mand. **shé**, OC ***ḍʰiat** [GSR 288a])⁶⁹, to PTB ***g-lyat**, and groups 舔 ‘lick, taste’ (Mand. **tiǎn**, OC ***tʰiam** [not in GSR]) to PTB ***s-lyam** ‘tongue/flame’. The Chinese word 甜 ‘sweet’ (Mand. **tián**, OC ***dʰiam** [also not in GSR]), is cited as well, but as if it represented an entirely different etymon from ‘lick’. I would like to claim that Chinese ‘lick’ 舔 and ‘sweet’ 甜 are in fact members of the same word-family, with the semantic link being furnished by substances like sugar-cane. In Lahu the word **lèʔ** ‘lick’ is also used to mean ‘eat’, especially of things other than rice which are eaten to give gustatory pleasure rather than simply to satisfy hunger, like sweet and

⁶⁶ See STC: #211 and HPTB: 153, 323, 327, 528. Cf. Ahka **myəʔ** and Lahu **lèʔ** ‘lick’ ≈ **lé** ‘feed an animal’ (i.e. “cause to lick”).

⁶⁷ This form is mentioned in my note 102 in STC, but is otherwise ignored in that work.

⁶⁸ B/S reconstructs MC **zyeX**, an initial which could come from OC ***m-l-** in their system.

⁶⁹ Schuessler (2007: 467) reconstructs 舌 as “***m-lat!**”, with an exclamation point. B/S now reconstructs MC **zyet** < OC ***m.lat** ~ ***mə.lat**.

salty snacks.⁷⁰ The word for ‘salt’ is **á-lèʔ** “that which is licked”, while sugar is often called **á-lèʔ-cho**, lit. “sweet salt”. In Lahu, as in many other TB languages, the word for ‘delicious’ (**mè**) also means ‘sweet’. Other ways to say ‘sugar’ are **á-lèʔ-mè** “delicious salt”, or **kə-vá** (< Thai **klyá-wǎan** “sweet salt”).

This lexeme is one of those that has developed a dental stop in Manö (a Karenni dialect): Manö **pti** ‘tongue’ < Proto-Karen ***ple** (STC: 137). (See also **FOUR, LEAF, TONGUE**.) It is also one of the words that has developed **d-** < ***l-** in the Kok Chiang dialect of Ugong: Khɔ̀k Kway Ugong **liʔ**²¹, Kok Chiang Ugong **diʔ**²¹ (see below).

6.0 Conclusions

The exact nature of the **l/d** interaction in the ST/TB roots we have discussed varies from etymology to etymology, but certain general themes emerge:

1. Recognizing such interaction permits the combining of roots previously treated as quite separate, often implying that the phenomenon may be traced back to PTB or PST: **ARROW**; **GOOD/BEAUTIFUL**; **LEECH**; **NAVEL**; **NEPHEW/GRANDCHILD/YOUNG MAN**; **STRAIGHT/FLAT/FULL**.
2. Sometimes the deltacism in TB is confined to a particular subgroup. Thus for **FOUR**, dental stops have been found only in Naga languages, but not in those of the “Northern Naga” (Konyak) group. On the other hand, for **HAND/ARM/WING/CUBIT**, the stops are found in Northern Naga, Bodo-Garo, and Chin, but not elsewhere.
3. Sometimes the deltacism is characteristic of one dialect of the same language but not of others. In **ARROW**, Taoping Qiang preserves the ***lateral**, but Mawo Qiang has developed **d-**. The Manö subdialect of Karenni (Red Karen) has developed **t-** in many words where other Karen dialects preserve original ***l-** (see **FOUR, LEAF, MOON, TONGUE**). The Khɔ̀k Khwaay dialect of Ugong preserves PTB ***l-**, but the Kok Chiang dialect has changed it to **d-** in many but not all words (see list below).
4. Sometimes the lateral \approx stop interaction is more apparent than real, as in **LEAF**, where both the WT **hd-** in **hdab-ma** ‘wing’ and the **d**’ in Karlgren’s reconstruction of the OC form can be shown to descend quasi-regularly from earlier ***laterals**.
5. Whereas in Italic the direction of sporadic change seems to be ***d- > l-**, in ST/TB it is the opposite tendency ***l(y)- > d-** that seems to be dominant.

⁷⁰ See Matisoff 1988a: 1393-4.

6. Sometimes the delatcism seems quite regular in a particular language or dialect, e.g. the development of **d** in Middle Chinese from OC ***l-**; the evolution of **t-** from ***l-** in Manö Karen.

7. Sometimes, however, the delatcism, though attested in several good examples, is sporadic, in that it is not characteristic of all roots with a given provenance in a particular language. Such is the case in Latin, as well as in the Ugong dialects described in Bradley 1988. In many words the Kok Chiang and Khɔ̌k Khwaay dialects agree in both having either **d-** or **l-**, although there are at least 10 examples (two of them in old loanwords from Tai) where Khɔ̌k Khwaay preserves ***l-** while Kok Chiang has developed **d-**:

	<i>Khɔ̌k Khwaay</i>	<i>Kok Chiang</i>
'come'	lie ³³	die ³³
'hat'	ku ³³ luoŋ ³³	ku ³³ duoŋ ³³
'heavy'	li ³⁵	di ³⁵
'moon'	lua ²¹	dwa ²¹
'tiger'	lua ⁵⁵	dwa ⁵⁵
'tongue'	li? ²¹	di? ²¹
'want to'	lu ²¹	do ³⁵
'wind'	li ³⁵	di ³⁵
'Lao' (< Tai)	luo ³⁵	duo ³⁵
'study' (< Tai)	lian ³³	dian ³⁵

8. As Benedict suspected long ago, high vowels (especially yod) seem powerfully to favor the delatcization process, just as they frequently lead to frication of the previous initial consonant.⁷¹ In this connection, the group of etyma with the phonetic 至 in GSR 413 are especially interesting; several of them have developed voiceless dental stops in Chinese (HEAVY, LEECH, NEPHEW) and in Ugong (HEAVY, WIND).⁷²

It is to be hoped that this study will not be taken as an example of *Obscurum per obscurius*, that is, explaining something obscure by something even more obscure! Strange as it may appear, the very sporadicity of **l/d** interaction is a consequence of its basis in articulatory fact. Sound changes which are based on universal articulatory tendencies may be activated at any time, so may paradoxically appear to be sporadic in their operation.

⁷¹ See the WT data in 3.0 above and HPTB: 192-3.

⁷² These etyma are also characterized by strange vocalic reflexes in Loloish (Lahu -ɔ̌, Akha -ø), which have been discussed repeatedly in the literature. See HPTB: 192-3.

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Appendix: Symbols and Abbreviations

A ≈ B	A and B are co-allofams; A and B are members of the same word-family
Arm.	Armenian
B/S	Baxter-Sagart Old Chinese, version 0.99
BSLP	<i>Bulletin de la Société de Linguistique de Paris</i>
Gk.	Greek
GSR	Karlgren 1957
HCT	Li 1977
HPTB	Matisoff 2003
IE	Indo-European
LTBA	<i>Linguistics of the Tibeto-Burman Area</i>
MC	Middle Chinese (= Karlgren's "Ancient Chinese")
OC	Old Chinese (= Karlgren's "Archaic Chinese")
OCM	Minimal Old Chinese (Schuessler 2007)
OE	Old English
OHG	Old High German
PAN	Proto-Austronesian
PBG	Proto-Bodo-Garo
PGmc.	Proto-Germanic
PIE	Proto-Indo-European
PTB	Proto-Tibeto-Burman
PST	Proto-Sino-Tibetan
Skr.	Sanskrit
ST	Sino-Tibetan
STC	Benedict 1972
STEDT	Sino-Tibetan Etymological Dictionary and Thesaurus project (Berkeley)
TB	Tibeto-Burman
WB	Written Burmese
WT	Written Tibetan
ZMYYC	Sun et al. (eds) 1991