



OC onsets in the Baxter-Sagart 1.01 system: examples with corresponding forms in Proto-Min, Vietnamese, and Hmong-Mien.

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OC onsets in the Baxter-Sagart 1.01 system: examples with corresponding forms in Proto-Min, Vietnamese, and Hmong-Mien.¹

Laurent Sagart, William Baxter, Mathieu Beaudouin

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Abbreviations

CL: classifier

E: eastern

GSR: Karlgren's Grammata Serica Recensa

HM: Hmong-Mien

MC: Middle Chinese

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MR: Martha Ratliff

MSC: Modern Standard Chinese

OC: Old Chinese

pH: Proto-Hmongic

pHM: Proto-Hmong-Mien

pLakkia: Proto-Lakkia

pM: Proto-Mienic

PM: Proto-Min (Norman)

PP: Pittayawat Pittayaporn

PT: Proto-Tai

pY: Proto-Yao

VN: Vietnamese

W: western

ZH: Hanyu Fangyin Zihui

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| OC > MC > MSC | PM | VN | HM | Notes |
|--|--------|---|--|--|
| 邊 *p ^f e[n] > pen > biān 'side' 0224c | p | bên 'side; party; team; area, place' | | |
| 別 *pret > pjet > bié 'separate (tr.)' 0292a | | biết 'to know, to realize' | | |
| 斧 *p(r)a? > pjuX > fǔ 'axe' 0102h | pio B | búa 'axe' | MR pM *pou B 'axe' | |
| 弗 *put > pjut > fú 'writing brush' 0500a | | | | Pron. in Yān 燕, ap. Shuōwén, E. Hán |
| 真 *ti[n] > tsyin > zhēn 'true, real' 0375a | tšin A | | | |
| 氐 *t ^f ij? > tejX > dǐ 'bottom' 0590a | | đáy 'bottom' | | |
| 點 *t ^f em? > temX > diǎn 'black spot' 0618n | t | đốm 'spot' | | |
| 隻 *tek > tsyek > zhī 'single' 1260c | | chiếc 'CL for vehicles' | MR pM *tsiɛk D 'classifier for birds' | |
| 摘 *t ^f rek > treak > zhāi 'pluck (v.)' 0877p | t | | | A variant with m- or mə- prefix was borrowed by Hmong-Mien : MR pH *ndruei C 'strip leaves for pig feed' |

| | | | | |
|---|---------|----------------------------|--|--|
| 織 *tək > tsyik > zhī ‘weave (v.)’ 0920f | ts / tš | | MR pM *tsiɛk D | |
| 得 *t'ək > tok > dé ‘obtain’ 0905d | t | | MR pHM *təuk 'get' | |
| 炙 *tAk > tsyek > zhì ‘roast, broil’ 0791a | | | MR pHM *ci C | Jiànyáng /tsio 7/, compatible with pMin *ts and *tš |
| 著 *t<r>ak > trjak > zhuó ‘to place’ 0045n’ | | | MR pH *trɔ C 'put on, wear' (shoes) | |
| 桌 *t'rawk (no pre-Qin exx.) > traewk > zhuō ‘table’ 1126 | t | | | |
| 燭 *tok > tsyowk > zhú ‘torch’ 1224e | | đuốc ‘candle’ | | |
| 斗 *t'o? > tuwX > dǒu ‘bushel; ladle’ 0116a | t | đầu ‘bushel’ | | |
| 節 *ts'ik > tset > jié ‘joint of bamboo’ 0923a:0399c | ts | tết 'New Year festival' | | (< Proto-Vietic *ts-) |
| 酒 *tsu? > tsjuwX > jiǔ ‘wine’ 1096k | ts | | pH *cow B | |

| | | | | |
|---|------|--------------------|-----------------------|--|
| 蚤 *ts ^č u? > tsawX > zǎo 'flea' 1112d | ts | | | Jiàn'ōu /ke 3 tse 3/ 'flea', not softened: ke 3 狗 'dog'. The prefix has been reinterpreted as 'dog' in certain modern dialects. |
| 蟲 *srik > srit > shī 'louse' 0506a | š | chét 'flea, aphid' | | cp. Proto-Tibeto-Burman *s-r(y)ik 'louse' (Matisoff 2003:153) |
| 生 *sreŋ (or *s.reŋ?) > srjaeng > shēng 'bear, be born; live' 0812a | š | | | |
| 生 *sreŋ > sraeng > shēng 'fresh, raw' 0812a | tsh | | | MC is irregular (tsh- expected). MC could have generalized the prefixless form 生 *sreŋ > sraeng > shēng 'bear, be born; live' |
| 心 *səm > sim > xīn 'heart' 0663a | s | | MR pM *sim 'heart' | |
| 疏 *sra > srjo > shū 'wide apart' 0090b | š | | | |
| 彫 *s(č)ram > sraem > shān 'long hair' 1154a | | | MR pM *suam A 'beard' | |
| 沙 *s ^č raj > srae > shā 'sand' 0016a | s | | | Yong'an dialect argues against pMin *š- |
| 支 / 枝 *ke > tsye > zhī 'branch (of tree)' 0864a | ki A | | | |

| | | | | |
|--|---|----------------------------|---------------------|--------------------------------|
| 繭 *k ^č [e][n]? > kenX > jiǎn 'cocoon' 1250a | k | kén 'cocoon' | | |
| 芥 *k ^č r[e][t]-s > keajH > jiè 'mustard plant' 0327j | k | cài 'cabbage' | | PP PT *ka:t D 'mustard greens' |
| 解 *k ^č re? > keaX > jiě 'cut up; unloose' 0861a | k | cǎi 'to untie' | | PP PT *ke: C 'to untie' |
| 金 *k(r)[ə]m > kim > jīn 'metal, bronze' 0652a | k | kim 'metal, needle' | MR pHM kjeəm 'gold' | |
| 力 *k.rək > lik > lì 'strength' 0928a | | sức ' | | Rực /khrík7/ |
| 故 *k ^č a?-s > kuH > gù 'old (not new)' 0049i | | | MR pHM *quoH 'old' | |
| 柬 *k ^č r[a]n? > keanX > jiǎn 'select, distinguish' 0185a | | kén 'to choose, select' | | |
| 貴 *kuj-s > kjuw+jH > guì 'precious; expensive' 0540b | k | cùi 'high price' | | |
| 鼈 *q ^w re > 'wea, 'wae > wā 'frog' 0879y | | | | PP PT *krwe A 'small frog' |
| 腰 *?ew > 'jiew > yāo 'waist' 1142b | | | | PP PT *?je:w A 'waist' |
| 燕 *?e[n]-s > 'enH > yàn 'swallow (n.)' 0243a | | | | PP PT *?e:n B 'swallow' |

| | | | | |
|---|---|-------------|--------------------------------------|--------------------------|
| 饜 *?<r>em-s > 'jemH > yàn 'satiated' 0616d | | | | PP PT *?i:m B 'satiated' |
| 衣 *(r)əj > 'j+j > yī 'clothes' 0550a | ? | | Theraphan pY *?rui A 'upper garment' | |
| 臆 *(r)ək > 'ik > yì 'bosom' 0957i | | | | PP PT *?ək D 'chest' |
| 瓮 *?əŋ-s > 'angH > àng 'basin; (tublike:) swollen' 0718j | | | | PP PT *?a:ŋ B 'basin' |
| 溫 *?ən > 'won > wēn 'warm; gentle' 0426c | | | | PP PT *?ən B 'warm' |
| 媼 *?u? > 'awX > ǎo 'old woman' 1244e | | | MR pHM *?əuX 'elder sister/wife' | |
| 對 *[t]ə[u]p-s > twojH > duì 'respond' 0511a | t | | MR pHM *tau A 'answer' | |
| 接 *[ts][a]p > tsjep > jiē 'connect' 0635e | | | MR pHM *tsep 'receive/borrow' | |
| 箭 *[ts]ən-s > tsjenH > jiàn 'arrow' 0245h | | tēn 'arrow' | | |
| 粢 *[ts]ij > tsij > zī 'Setaria italica' 0555g | | | MR pM *tjəi A 'millet' | |
| 捉 *[ts](r)ok > tsraewk > zhuō 'grasp (v.)' 1219e | | | MR pM *tjək D 'to take' | |

| | | | | |
|---|----|--------------------------------------|-------------------------------|------------------------------------|
| 斬 *[ts]ram? > tsreamX > zhǎn ‘cut off’ 0611a | | chéṁ 'to cut, chop, slash; behead | | |
| 走 *[ts] ^f o? > tsuwX > zǒu ‘run’ 0119a | ts | | | |
| 細 *[s] ^f e(k)-s > sejH > xì ‘small, minute’ 12411 | s | | MR pM *sæi C 'small/fine' | |
| 酸 *[s] ^f or > swan > suān ‘sour’ 0468e | s | | MR pHM *suj A 'sour' | Proto-Chǔ-Qú *soi 1 (Akitani 2003) |
| 送 *[s] ^f oŋ-s > suwngH > sòng ‘escort (v.), send’ 1179a | | | MR pHM *sunj H 'send/deliver' | |
| 想 *[s]aŋ? > sjangX > xiǎng ‘think’ 0731d | s | | | |
| 雪 *[s]ot > sjwet > xuě ‘snow’ 0297a | s | | | |
| 絲 *[s]ə > si > sī ‘silk’ 0974a | s | to̥ 'silk' | | Shíbēi /çɪ 53/, Jiànyáng /soi 55/ |
| 漱 *[s]rok-s > srjuwH > shù ‘wash’ 1222t | | | MR pHM *ntshuH 'launder' | |
| 雙 *[s]roŋ > sraewng > shuāng ‘a pair’ 1200a | š | | MR pM *sunj A 'pair' | |
| 刷 *[s]r[o]t > srwaet > shuā ‘brush (v.)’ 0298a | š | | MR pM *sot 'wipe' | |

| | | | | |
|---|---|---------------------------------|--|---|
| 膠 *[k] ^h riw > kaew > jiāo 'glue' 1069s | k | keo 'glue' | | |
| 卦 *[k] ^w re-s > kweaH > guà 'prognosticate with Achillea' 0879s | | què 'lots' | | |
| 腳 *[k]ak > kjak > jiǎo 'leg, foot' 0776gs | | gốc 'stump, foot, root' | | proto-Pong (Ferlus) *tko:k ⁸ |
| 印 *[?]inj-s > 'jinH > yìn 'seal' 1251f | | in 'to print; to strike off' | | |

Table 1: examples of OC singleton voiceless unaspirated obstruents.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|--------------|--|-------|
| 騙 *p ^h en(?)-s > phjenH > piàn 'to fool, to cheat' 0246 | | phỉnh 'coax' | | |
| 片 *p ^h e[n]-s > phenH > piàn 'half; partial; one-sided' 0218a | | | MR pHM *phəan A 'classifier for quilts' | |
| 拂 *p ^h [u]t > phjut > fú 'to brush, shake' 0500h | | | MR pM *phuət D 'to sweep' | |
| 覆 *p ^h (r)uk > phjuwk > fù 'turn over' 1034m | ph | | | |
| 蜂 *p ^h (r)oŋ > phjowng > fēng 'bee' 1197s | ph | | | |

| | | | | |
|---|----------|--------------------|--|--|
| 奉 *p ^h (r)oŋ? > phjowngX > fēng 'hold with both hands; to present; receive' 1197z | | | MR pH *phueŋ B 'to carry in two hands' | |
| 尺 *t ^h Ak > tsyhek > chǐ 'foot (measure)' 0794a | tšhiok D | thu᷑c 'meter' | | Xiàmén /tshioŋ? 7/, Fúzhōu /tshuoŋ? 7/ |
| 春 *t ^h un > tsyhwin > chūn 'springtime' 0463a | tšhiun A | | | |
| 吹 *t ^h o[r] > tsyhwe > chuī 'blow (v.)' 0030a | tšhye A | | | pLakkia *tshoi A 'breezy' (Theraphan) |
| 穿 *t ^h o[n] > tsyhwen > chuān 'bore through' 0232a | | | MR pHM *chuen A 'to thread' | |
| 秋 *ts ^h iw > tshjuw > qiū 'autumn; crop' 1092a | tsh | | | |
| 溪 *k ^h ɔe > khej > xi 'valley with stream in it' 0876q | kh | khe 'ravine' | | |
| 苦 *k ^h a? > khuX > kǔ 'bitter' 0049u | kh | khó 'hard, bitter' | | |
| 客 *k ^h rak > khaek > kè 'guest' 0766d' | kh | | MR pHM *Khæk 'guest' | |
| 空 *k ^h oŋ? > khuwngX > kǒng 'hollow, empty; hole' 1172h | | | MR pH *qhaŋ B 'hole' | |

| | | | | |
|--|----|-----|-------------------------|--|
| 脅 *q ^h <r>ep > xjaep > xié 'flank, side of the body' 0639e | kh | | | Jiànyáng, Shíbēi /khe 7/; Shàowǔ, Héping, Chóng'ān /khie 7/, all 'wing' |
| 飲 *q ^h [ə]p > xop > hē 'sip, drink' 0675- | | hóp | | pLakkia *ho:p D 'to drink' |
| 吸 *q ^h (r)əp > xip > xī 'inhale' 0681j | kh | | | |
| 豨 *q ^h əj? > xj+jX > xǐ 'pig' 0549e | kh | | | Northern Min kh- |
| 香 *q ^h aŋ > xjang > xiāng 'fragrance' 0717a | | | WM pHM *qeŋ A fragrant' | |
| 許 *q ^h (r)a? > xjoX > xǔ 'allow' 0060i:0086 | x | | | Xiàmén and Jiànyáng have kh- |
| 虎 *q ^h ra? > xuX > hǔ 'tiger' 0057b:0069:0078 (W dial) | kh | | | Northern Min kh- |
| 華 / 花 *q ^{wh} ra > xwae > huā 'flower (n.)' 0044 | x | | | |
| 化 *q ^{wh} <r>aj-s > xwaeH > huà 'transform' 0019a | x | | | |
| 薅 *q ^h u > xaw > hāo 'weed (v.)' 1244d | kh | | | Northern min kh- |

| | | | | |
|---|-----|---|--|--|
| 好 *q ^h u? > xawX > hǎo 'good' 1044a | | | MR pM *khuw B 'good/tasty' | pM < *qh. No qh in pM. |
| 蠢 *q ^h <r>oŋ > trhaewng > chōng 'stupid' 1192d | | | | cp. 愚 *q ^h oŋ-s > xuwngH > zhuàng 'stupid' 1015e |
| 漆 *[ts ^h]i[t] > tshit > qī 'varnish' 0401a | | | MR pHM *thjet 'lacquer' | |
| 初 *[ts] ^h ra > tsrhjo > chū 'beginning' 0087a | tsh | VN xưa 'in the early times' (Alves) | | |
| 瘡 *[ts ^h]raŋ > tsrhjang > chuāng 'boil, tumor' 0703n | | | MR pHM *tshaŋ A 'sore/blister/boil' | |
| 察 *[ts ^h]ret > tsrheat > chá 'examine' 0337j | | xét hỏi 'interrogate, question' | | |
| 草 *[ts ^h]u? > tshawX > cǎo 'grass, plants' 1049b | tsh | tháu 'scrawling' | | Bái /chu 1/ |
| 巧 *[k ^h]ru? > khaewX > qiǎo 'artful' 10411 | | khéo 'clever, skilful' | | |
| 牽 *[k] ^h i[n] > khen > qiān 'pull, lead, drag' 0366k | kh | | MR pM *khien A 'to lead' | |
| 掘 *[k ^h]ut > khwot > kū 'hole' 0496p | | | MR pM *khot 'hole' | |

| | | | | |
|---|----|------------------------------|---|-------------------|
| 開 *[k] ^h əj > khoj > kāi ‘to open (v.t.)’ 0541a | kh | | MR pM *kh <u>ə</u> iA (< *kh-) 'to open' (v.t.) | pLakkia *ha:i A |
| 誇 *[k ^w h] ^g ra > khwae > kuā ‘boast’ 0043b:0044:0097 | | khoe 'brag, boast, show off' | | |
| 去 *[k] ^h (r)ap-s > khjoH > qù ‘depart’ 0642a | kh | | | Dialect : -p > -k |
| 屎 *[q ^h]ij? > syijX > shǐ ‘excrement’ 0561d | š | | | |

Table 2: Examples of OC singleton voiceless aspirated stops.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----------|---------------------|-----------------------|---|
| 平 *breŋ > bjaeng > píng ‘even (adj.)’ 0825a | b A | bằng 'even, level' | MR pM *ben̩ A 'level' | Xiàmén /pĩ 2/ ‘level, even, smooth’ |
| 縛 *bak > bjak > fù ‘bind (v.)’ 0771m | | buộc 'to tie, bind' | | |
| 白 *b ^r ak > baek > bái ‘white’ 0782a | b | bạc 'silver' | MR pM *bæk D 'white' | |
| 石 *dAk > dzyek > shí ‘stone’ 0795a | džiok D | | | |
| 上 *daŋ?-s > dzyangH > shàng ‘top, above (n.)’ 0726a | džion̩ C | | | Xiàmén /tsi 6/, Jiēyáng /tsiõ 6/, Jiàn'ōu /tsioŋ 6/ |

| | | | | |
|--|----------------|--------------|----------------------------|--|
| 住 *dro(?)s > drjuH > zhù 'stop (v.)' 0129g | diu C | đỗ 'to stop' | | |
| 餳 *dzij > dzij > cí 'rice or millet cake' 0555j | dz | | | |
| 叢 *dz ^w oŋ > duwng > cóng 'collect; thicket' 1178a | dz | | | |
| 畫 *g ^w rek > hweak > huà 'draw (v.)' 0847a | fiuak D = Ø | | | |
| 下 *g ^w ra? > haeX > xià 'down' 0035a | fia B = Ø | | MR pHM *GaX 'low/short' | Xiàmén /e 6/ 'below' Jiàngyáng /a 5/ ~ /ha 5/ |
| 紅 *g ^w oŋ > huwng > hóng 'pink' 1172i | fi = Ø | | | |
| 翼 *G ^w rəp > yik > yì 'wing' 0954d | zit D | | | Dialect: *-p > *-k |
| 羊 *gaŋ > yang > yáng 'sheep' 0732a | ioŋ A | | MR pHM *jun A 'sheep/goat' | Kabeo /qa-jun/ 3/ 'sheep' : Solnceva (1993) |
| 院 *G ^w ra[n]-s > hjwenH > yuàn 'wall round a courtyard' 0257u:0111:0160 | Ø | | | |
| 煩 *[b]a[n] > bjon > fán 'troubled' 0264a | | buồn 'sad' | | |

| | | | | |
|---|-----|------------------|-----------------------------------|-------------------------------------|
| 耙 *[b]⁊ra > bae > pá 'rake (n.)' 0039e | b | | MR pM *ba A 'to rake' | |
| 是 *[d]e? > dzyeX > shì 'this' 0866a | ž | | MR pM *dzej B 'be' | The Min form is the verb 'is, are'. |
| 成 *[d]eŋ > dzyeng > chéng 'to become (v.i.)' 0818a | ž | | | |
| 孰 *[d]uk > dzyuwk > shú 'cooked, ripe' 1026a | | | MR pM *djuok 'cooked/ripe' | |
| 廚 *[d]ro > drju > chú 'kitchen' 0127m | d | | | |
| 箸 *[d]<r>ak-s > drjoH > zhù 'chopsticks' 0045j | | đũa 'chopsticks' | MR pHM *drouH 'chopsticks' | |
| 慙 *[dz]⁊am > dzam > cán 'ashamed' 0611c | | | MR pH *dzaŋ A 'ashamed' | |
| 助 *[dz]ra-s > dzrjoH > zhù 'help (v.)' 0046z | -dz | | | |
| 罪 *[dz]⁊uj? > dzwojX > zuì 'crime, offense' 0513a | -dz | | | |
| 造 *[dz⁊]u? > dzawX > zào 'make; achieve' 1051a | -dz | | MR pH *dzo C 'reach/arrive at' T! | |
| 跪 *[g](r)oŋ? > gjweX > guì 'kneel; foot' 0029f | -g | | MR pHM *ɟwəiH 'knee' T! | |

| | | | | |
|--|-------|----------------------------------|------------------------|---|
| 鞋 *[g]ˤre (no pre-Qín exx.) > hea > xié 'shoe' 0879 | f = ∅ | | | |
| 極 *[g](r)ək > gik > jí 'extreme' 0910e | g | | | |
| 葫 *[g]ˤa > hu > hú 'gourd' 0049k' | | | MR pH *ga A 'garlic' | Pulleyblank gives the meaning 'garlic'. Not attested in pre-Han texts in that meaning. |
| 舅 *[g](r)u? > gjuwX > jiù 'Mother's brother' 1067b | g | cậu 'uncle, mother's brother' | | |
| 求 *[g](r)u > gjuw > qiú 'seek' 1066a | | cầu 'demand' | | |
| 橋 *[g](r)aw > gjew > qiáo 'bridge' 1138g | g | cầu 'bridge' | MR pHM *jow A 'bridge' | |
| 裙 *[g]u[r] > gjun > qún 'skirt' 0459f | g | | MR pM *gjun A 'skirt' | |
| 櫃 *[g]ruj-s > gwijH > guì 'box' 0540h | g | cũi 'cage; dog-house' | | |
| 臣 *[g]i[ŋ] > dzyin > chén 'slave, subject' 0377a:0368 | | | | cp. 賢 *gˤin > hen > xián 'worthy' 0377a:0368e |
| 夜 *[G]Ak-s > yaeH > yè 'night' 0800j | ia C | | | |

| | | | | |
|--|------|--|------------------|---|
| 養 *[G]aŋ? > yangX > yǎng 'nourish, raise' 0732j | ∅ | | MR pM *juŋ B id. | |
| 芋 *[G] ^w (r)a-s > hjuH > yù 'taro (Colocasia antiquorum?)' 0097o | ∅ | | pHM *wouH | |
| 禾 *[G] ^f oj > hwa > hé 'growing grain' 0008a:0357 | ∅ | | | |
| 寅 *[G](r)ər > yin > yín '3rd earthly branch' 0450a | | | | Buyang ɳi11 (either B or C2) ; Lü ji ² , Dioi ngien ² , Pu-yi ɳan ² . Pittayaporn cites Saek /runA2/ from Hudak. |
| 鹽 *[Gr][o]m > yem > yán 'salt (n.)' 0609n | z | | | |
| 有 *[G] ^w ə? > hjuwX > yǒu 'have, exist' 0995o | iu B | | | |

Table 3: Examples of OC singleton voiced stops.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|--------|---------------------------------|------------------------|-------|
| 磨 *m ^f aj > ma > mó 'rub, grind' 0017f | muai A | mài 'to file, sharpen, whet' | | |
| 望 *maŋ-s > mjangH > wàng 'look at from a distance' 0742m | | | MR pHM *maŋH 'look at' | |

| | | | | |
|--|---|------------------|--------------------------|--|
| 馬 *m ^r a? > maeX > mǎ 'horse' 0040a | m | | MR pH *mjæn B 'horse' | |
| 買 *m ^r aj? > meaX > mǎi 'buy' 0006:0026:1240c | m | | MR pHM *mɛj X 'buy' | |
| 懼 *n ^r [i]p > nep > zhé 'afraid, to fear' 0696a:0685h | | | | Second (dial.) reading 懼 *t-nip > tsyip > zhí 'id.' 0696a:0685h. |
| 二 *ni[j]-s > nyijH > èr 'two' 0564a | ń | | | |
| 鬻 *n ^r er > nej > ní 'pickled meat with bones in it' 0152l | | | | Also read OC *ner > MC nye |
| 南 *n ^r [ə]m > nom > nán 'south' 0650a | n | | | |
| 鬚 *nam > nyem > rán 'whiskers' 0622k | | | MR pH *jan A 'beard' | |
| 難 *n ^r ar > nan > nán 'difficult' 0152d | n | nàn 'difficulty' | | pLakkia *na:n A 'difficult' (Theraphan) |
| 銀 *ŋrə[n] > ngin > yín 'silver' 0416k | ŋ | | MR pHM *ŋʷjən A 'silver' | |
| 鵝 *ŋ ^r a[r] > nga > é 'goose' 0002p | ŋ | | | |

| | | | | |
|---|---|--------------------|-------------------------|--|
| 逆 *ŋrak > ngjaek > nì 'go against' 0788c | ŋ | ngược 'go against' | | |
| 條 *l ^f iw > dew > tiáo 'branch (n.), shoot (n.)' 1077f | | | | Xiàmén /liau 2/ 'a long strip' |
| 田 *l ^f inj > den > tián 'field; to hunt' 0362a | | | MR pHM *ljinj 'field' | Gǔzhàng /lɛ 13/ |
| 易 *lek-s > yeH > yì 'easy' 0850a | ∅ | | | |
| 夷 *ləj > yij > yí 'level, peaceful' 0551a | | | | Written in early texts as 尸 *ləj (> syij > shī) 'corpse' |
| 遲 *l<r>ə[j] > drij > chí 'slow' 0595d | | | | Gǔzhàng /li 13/ |
| 大 *l ^f at-s (MC F!) > daH > dà 'big' 0317a | d | | | Sometimes written in received texts as 世 *lap-s (> *lat-s > syejH) 'generation' (Gāo Hēng 1989:633–634) Gǔzhàng /lu 22/ |
| 楊 *laŋ > yang > yáng 'poplar' 0720q | | | MR pH *jianŋ A 'poplar' | Later loan |
| 澤 *l ^f rak > draek > zé 'marsh; moisture' 0790o | | | | Xiàmén /la? 8/ 'moist' |

| | | | | |
|---|-----|------------------------------------|------------------------------------|-----------------|
| 腸 *lraŋ > drjang > cháng 'intestines' 0720y | d | | MR pM *Gljaŋ A 'intestines' | |
| 蛻 *lot > ywet > yuè 'exuviae of insects or reptiles ' 0324e | | löt 'to skin; to throw off' | | |
| 筒 *l ^f oŋ > duwng > tǒng 'tube' 1176g | d | | MR pH *droŋ A 'tube/flute' | Later loan |
| 簾 *rem > ljem > lián 'bamboo curtain' 0627- | | rém 'door curtain, bamboo curtain' | | |
| 淋 *r[ə]m > lim > lín 'to water' 0655e | l | | MR pM *rəm A 'to water' | Gǔzhàng /ze 13/ |
| 離 *raj-s > ljeH > lì 'reject' 0023f | | rāy repudiate (one's wife) | | |
| 梁 *raj > ljang > liáng 'beam; bridge' 0738a | | rường 'beam, girder' | | |
| 鹵 *r ^f a? > luX > lǔ 'salty (sc. land)' 0071a | l | | | |
| 流 *ru > ljuw > liú 'flow (v.)' 1104a | l A | | MR pM *rjəu C 'to flow' | |
| 牛 *[ŋ] ^w ə (< uvular?) > ngjuw > niú 'ox' 0998a | ŋ | | MR pHM *ŋjuŋ A 'water buffalo/cow' | |

| | | | | |
|--|----|--|------------------------------------|-------------------------------------|
| 地 *[l]⁻ej-s > dijH > dì ‘earth, ground’ 0004b' | | | MR pM *dej C 'non-irrigated field' | Later loan to HM Gǔzhàng /li 22/ |
| 達 *[l]⁻at > dat > dá ‘arrive at’ 0271b | -d | | | |
| 場 *[l]raŋ > drjang > cháng ‘arena’ 0720x | -d | | | |
| 鹵 *[r]⁻aʔ > luX > lǚ ‘salty (sc. land)’ 0071a | l | | | Méixiàn /lu 1/ |
| 闌 *[r]⁻an > lan > lán ‘railing’ 0185f | | ràn 'fence, enclosure'; 'stable, pen' T! | | |

Table 4: Examples of OC singleton plain resonants.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----|----|-------|
| 黑 *m̥⁻ək (dial. *m̥⁻- > x-) > xok > hēi ‘black’ 0904a | x | | | |
| 海 *m̥⁻əʔ (dial. *m̥⁻- > x-) > xojX > hǎi ‘sea’ 0947x | x | | | |

| | | | | |
|---|--------|--|---------------------------------|---|
| 芴 *m ^ʳ ut > xwot > hū ‘careless; confused’ 0503j | | | | cp. 勿 *mut > mjut > wù ‘don’t’ |
| 昏 *m ^ʳ u[n] (> *x ^ʳ un) > xwon > hūn ‘dusk, dark’ 0457j | | | | Ancient phonetic component of 聞 *mu[n] > mjun > wén ‘hear (v.)’ |
| 身 *ni[ŋ] > syin > shēn ‘body; self’ 0386a | š | | | Used in excavated documents as a phonetic element to write 仁 (rén < nyin < *niŋ) Is the Min form literary ? |
| 灘 *n ^ʳ ar > than > tān ‘foreshore’ 0152m | | | | cp. 難 *n ^ʳ ar > nan > nán ‘difficult’ |
| 饂 *nanj > syang > xiǎng ‘bring food to’ 0730c | | | | cp. 壤 *naŋ? > nyangX > rǎng ‘cultivated soil’ |
| 餉 *nanj(?)s > syangH > shàng ‘give food; food’ 0715e | | | MR pHM *hnrəaŋ H 'rice, cooked' | |
| 手 *nu? > syuwX > shǒu ‘hand’ 1101a | tšiu B | | MR PM *?ŋau B claw, talon' | |
| 退 *n ^ʳ [u]p-s > thwojH > tuì ‘withdraw (= advance)’ 0512a | th | | | Written in Mǎwángduī silk manuscripts (Western Hán) with the phonetic 內 *n ^ʳ [u]p-s (> nwojH > nèi) ‘inside’ |

| | | | | |
|---|----|---------------------|------------------------|--|
| 犧 *ŋ(r)a[j] > xje > xī ‘sacrificial animal’ 0002z | | | | cp. 我 *ŋ'aj? > ngaX > wǒ ‘we, I’ |
| 舔 *l ^h [i]m? > themX > tiǎn ‘to lick, to lap’ [not in GSR] | | liέm | | High-register tone in VN |
| 天 *l ^h i[n] > then ~ xen > tiān ‘heaven’ 0361a | | | | Phonetic in 吞 *l ^h ən (> thon > tūn) ‘to swallow’ and 舔 *l ^h [i]m? (> themX > tiǎn) ‘to lick, to lap’ “Shì tiān 穈 天” chapter of the Shì míng 《釋名》 (c. 200 ce) by Liú Xī 劉熙 gives sound glosses for two different pronunciations for 天 tiān: 顯 xiǎn < xenX ‘display, manifest’ and 坦 tǎn < thanX ‘level, at ease’ Bai /xě 55/ |
| 尸 *[l ^h]j > syij > shī ‘corpse’ 0561c | | thây 'corpse, body' | | Used in oracle-bone and bronze inscriptions as a loan graph for 夷 *ləj > yij > yí ‘foreigner (especially to the east)’ |
| 梯 *l ^h [ə]j > thej > tī ‘stairs’ 05911 | th | | MR pHM *hlæ A 'bridge' | Zhuang /lai 1/ (cited by Yakhontov 1976:79) |

| | | | | |
|---|-----|-----------------------------------|--------------------------|---|
| 試 *lək-s > syiH > shì ‘test, try’ 0918n | tšh | thǔ 'to test, try, attempt to' | | Xiàmén /ts ^h i 5/ |
| 賒 *l ^h A > syae > shē ‘trade on credit’ 0082s | tšh | | | Cháozhōu /ts ^h ia 1/ |
| 舒 *la > syo > shū ‘slow, easy’ 0083k | tšh | | | |
| 太 *l ^h a[t]-s > thajH > tài ‘great’ 0317d | | | MR pHM *hljo A 'big' | |
| 湯 *l ^h aŋ > thang > tāng ‘hot liquid’ 0720z | | | MR pH *hlaj A 'to scald' | Bai xă 55 'soup' cp. 易 *laŋ > yang > yáng ‘bright’ |
| 首 *lu? > syuwX > shǒu ‘head’ 1102a:1048 | tšh | | | |
| 抽 *lru > trhjuw > chōu ‘take out, pull out’ 1079f | th | | MR pH *thro C 'pull out' | |
| 偷 *l ^h o > thuw > tōu ‘steal’ 0125u | th | | | |
| 蛻 *l ^h ot-s > thwajH > tuì ‘exuviae of insects or reptiles’ 0324e | | lôt 'exuviae' | | High-register tone in VN |
| 喙 *lo[r?]-s > xjwojH > huì ‘snout; to pant’ 0171i | | | | W dialect: *l- > MC x- |

| | | | | |
|---|----|------------------------------------|--|---|
| 隋 *l ^o js > xjwieH > huì ‘shred sacrificial meat’ 0011b | | | | W dialect |
| 隋 *l ^o oj? > thwaX > tuǒ ‘shred sacrificial meat’ 0011b | | | | E dialect |
| 瘳 *riw > trhjuw > chōu ‘recover’ 1069k | | | | E dialect |
| 體 *r ^o ij? > thejX > tǐ ‘body; limbs’ 0597i | | | | E dialect |
| 鑠 *rewk > syak > shuò ‘melt, infuse’ 1125o | | thuốc 'medicine' (< 'infusion') | | W dialect: *r ^o - > *x-, palatalizing |
| 擴 *ra > trhjo > shū ‘extend’ 0069x | | | | E dialect |
| 獺 *r ^o at > that > tǎ ‘otter’ 0272i | th | | | E dialect |
| 虺 *ru[j]? > xjw+jX > huǐ ‘sound of thunder’ 0572a | | | | Cognate with 雷 *C.r ^o uj > lwoj > léi ‘thunder’ |
| 寵 *ron? > trhjowngX > chǒng ‘favor, grace’ 1193p | | | | cp. 龍 *[mə]-ron > ljowng > lóng ‘dragon’ |
| 燒 *[ŋ]ew > syew > shāo ‘burn’ 1164t | tš | | | |

| | | | | |
|--|--|--|--|--|
| 舍 *[l]Ak-s > syaeH > shè 'lodging-house' 0048a:0082 | | | | cp. 夜 *N.rak-s > yaeH > yè 'night' 0800j:0779:0793 W dialect: *l- > *x-, palatalizing. |
| 虺 *[r]u[j]? > xjw+jX > huǐ 'snake-brood' 0572a | | | | Vowel-conditioned reflex: x- preceding u; th- or sy- elsewhere. W dialect: *r- > MC x- |

Table 5: Examples of OC singleton voiceless resonants.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|-----|--------------------------|----|--|
| 庳 *N-pe? > bjeX > bì 'low, short' 0874m | | bé 'small, little, tiny' | | Early loan to VN (high-register tone) |
| 別 *N-pret > bjet > bié 'be separated (intr.)' 0292a | b D | | | Min *b in 'other' (Norman 1996:29). cp. 別 *pret > pjet > bié 'separate (tr.)' 0292a. |
| 敗 *N-p ^r a[t]-s > baejH > bài 'suffer defeat' 0320f | | | | cp. 敗 *p ^r at-s > paejH > bài 'defeat (v.t.)' 0320f |
| 折 *N-tet > dzyet > shé 'bend (v.i.)' 0287a | dž | | | cp. 折 *tet > tsyet > zhé 'bend; break (v.t.)' 0287a |
| 定 *N-t ^r eŋ- s > dengH > dìng 'become fixed (v.i.)' 0833z | d | | | Jiàn'ōu /tiā 6/ 'tranquil, quiet', Xiàmén /tiā 6/ 'steady, motionless' |

| | | | | |
|---|--------|--|--|---|
| 直 *N-t<r>ək > drik > zhí 'straight' 0919a | d | | MR pH *ndzræw C 'vertical/upright' | Borrowed after voicing in Chinese |
| 仲 *N-truŋ-s > drjuwngH > zhòng 'middle (of brothers)' 1007f | | | MR pHM *ntrɔŋ 'center, middle'; WM PHM *ŋtɔŋ A/C 'middle'. | Early loan to HM. Also Bái (Jianchuan) 'middle' 中 /tsõ 42/ with tone 42 (Lower Level) pointing to a voiced initial |
| 斷 *N-t ^f o[n]? > dwanX > duàn 'be cut in two' 0170a | d | | | Cantonese /t ^h y:n 4/, Hakka (McIver) /thon 1/ |
| 重 *N-t<r>oŋ? > drjowngX > zhòng 'heavy' 1188a:1175 | d | | | Cantonese /ts ^h uŋ 4/ 'heavy'; Hakka (Méixiàn) /tshuŋ 1/ cp. 肿 *toŋ? > tsyowngX > zhǒng 'swell, swollen; tumor' |
| 淨 *N-tseŋ-s > dzjengH > jìng 'clean (adj.)' 0811d | dz | | MR pM *ndzəŋ C 'clean' | Late loan to HM. cp. 晶 *tseŋ > tsjeng > jīng 'bright, limpid' 0820a |
| 峽 *N-k ^f rep > heap > xiá 'mountain pass' 0630- | | | MR pH *glow D 'mountain pass' | pH reflects post-Old Chinese *g ^f - |
| 狹 *N-k ^f <r>ep > heap > xiá 'narrow' 0630e | fi = Ø | | MR pHM *NGep 'narrow' | Later loan to HM |
| 間 *N-k ^f re[n] > hean > xián 'idle' 0191b | fi = Ø | | | |
| 解 *N-k ^f re? > heaX > xiè 'understand' 0861a | fi = Ø | | | |

| | | | | |
|--|-------|-----------|---|---|
| 憾 *N-k ^ə [ə]m?-s > homH > hèn 'dissatisfied' 0671p | | | | cp. 憾 *k ^ə m? > komX > gǎn 'to move (emotionally) (v.t.)' 06711 |
| 近 *N-kər? (> *Ngər? > *gər?)> gj+nX > jìn 'near' 0443g | g | | | cp. the derived transitive form 近 *s-N-kər?-s (> *s-Ngər?-s > *s-gər?-s) > gj+nH > jìn 'be near to (v.t.)' |
| 舊 *N-k ^w əʔ?-s > gjuwH > jiù 'old' 1067c | g | cū 'old' | | cp. 久 *k ^w əʔ? > kjuwX > jiǔ 'a long time' 0993a. MR pHM *qoH 'old' (= former) unexplained. Late loan to VN (low-register tone) |
| 黃 *N-k ^w aj (> *ŋg ^w aj > *g ^w aj) > hwang > huáng 'yellow' 0707a | h = Ø | | MR pM *?g ^w iəŋ A 'bright' MR pH *G ^w aj A 'bright/light/yellow' | From 光 *k ^w aj > kwang > guāng 'light, brightness' pM implies pHM *ŋk ^w j-; later loan to pH |
| 拳 *N-kro[n] > gjw en > quán 'fist (< rolled-up hand)' 0226g | g | | | cp. 卷 *[k](r)o[n]? > kjwenX > juǎn 'roll (v.)' |
| 共 *N-k(r)oŋ?-s > gjowngH > gòng 'together, all' 1182c | g | | | cp. 𠀤 *koŋ > kjowngX > gǒng 'join the hands; embrace, hold' 1182a |
| 豆 *[N.t] ^f o-s > duwH > dòu 'bean' 0118a | d | đõ 'bean' | | pTai (Li) *thue B 'beans', but Po-ai (northern Tai) tuu B2. North-east Yunnan Miao ntao 6 < *nd- |
| 鹹 *N-[ts] ^f aj > dza > cuó 'salt, salty' 0005m | | | MR PM salty *ndzaiA | |

| | | | | |
|--|--|--------------|--------------------------|---------------------------------------|
| 濁 *[N-t ^f]rok > draewk > zhuó 'muddy' 1224p | | đục 'turbid' | WM PHM ntʃo C | Late loan to VN. |
| 粃 *[N]-k(r)a? > gjoX > jù 'cakes' 0095n | | | MR PHM rice cake *ŋkjuəX | Early loan to HM Could be also *m- |

Table 6: Examples of OC voiceless unaspirated stops and s with preinitial N.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|----|-------------------------|--|
| 晴 *N-ts ^h enj > dzjeng > qíng 'clear (weather)' 0812- | dz | | MR pHM *ntshjɛŋ 'clear' | cp. 清 *tshenj > tshjeng > qīng 'clear (adj.)' |
| 局 *N-k ^h (r)ok > gjowk > jú 'bent, curved' 1214a | g | | | cp. 曲 *k ^h ok > khjowk > qū 'to bend' 1213a |
| 懼 *N-q ^h ak > ngak > è 'scared' 0788h | | | | cp. 嘻 *q ^h <r>ak > xaek > hè 'to frighten' 0779b:0793:0800 |
| 華 *N-q ^{wh} ra > huae > huá 'flower (v.); flowery (adj.)' 0044a | | | | cp. 華 *q ^{wh} ra > xwae > huā 'flower (n.)' |
| 魏 *N-q ^h uj-s (> *N-q ^h wəj-s > *Nχwəj-s > *ŋwəj-s) > ngjw+jH > wèi 'high' 0569k | | | | cp. 阿 魏 'asafoetida', a loan from Tocharian B <i>ajkwāś</i> into Chinese (Bailey 1946:786, cited in Pulleyblank 1962– 1963:99). Our Old Chinese reconstruction for the second character is a good match for the second part of Tocharian <i>ajkwāś</i> . |

Table 7: Examples of OC voiceless aspirated stops with preinitial N.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|----|----|--|
| 雅 *N- ^G ra? > ngaeX > yǎ ‘proper, refined’ 0037g | | | | In pre-Qín documents, written the same as, and probably derived from, 夏 *[G] ^G ra? (> haeX > xià) ‘great’ |
| 偽 *N- ^G w(r)aj-s > ngjweH > wěi ‘false’ 0027k | | | | cp. 為 *G ^w aj > hjwe > wéi ‘make, do, act as’ 0027a. The Mandarin Chinese tone of 偽 is irregular. |

Table 8: Examples of OC voiced stops with preinitial N.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|-----|----|----|--|
| 淫 *N.r[ə]m (> *Nləm > *ləm) > yim > yín ‘excess; licentious’ 0657b | | | | cp. 妾 *[r] ^G [ə]m > lom > lán ‘to covet’ |
| 墮 *N-r ^G uj > dwoj > tuí ‘exhausted’ 0544a; 0540 | | | | cp. 僥 *r ^G uj-s > lwojH > lèi ‘exhausted’ 0577p |
| 酉 *N-ru? (> *lu?) > yuwX > yǒu ‘10th earthly branch’ 1096a:1089 | dâu | | | Tai /rau/, Dioi /ru/ |
| 唐 *[N-]r ^G aŋ > dang > táng ‘great’ 0746a:0700a | | | | 庚 *k ^G raŋ > kaeng > gēng is phonetic. |
| 游 *[N-]ru > yuw > yóu ‘float, swim’ 1080f | z | | | cp. 流 *ru > ljuw > liú ‘flow (v.)’ 1104a |
| 旛 *[N.]ru (> *Nlu > *lu) > yuw > yóu ‘pendants of a banner’ 1080a | | | | cp. 旒 *[r]u > ljuw > liú ‘pendants of a banner or cap’ |

Table 9: Examples of OC plain sonorants with preinitial N.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|-----------|---|---------------------------|--|
| 髀 *m-p ^f e? > bejX > bì 'femur' 0874f | | | | cp. 髀 *pe? > p ^f ieX > bì 'femur, haunch' |
| 暴 *m-p ^f awk > buwk > pù 'expose to sun' 1136a | bh | | | |
| 辯 *m-p ^f e[r]? > benX > biàn 'braid (v.) (Shuōwén)' 0219- | | bên 'to plait; to entangle' | MR pHM *mbjinX 'to braid' | If a popular form, Shíbēi /biŋ 5/ 'braid' (Norman 2000:274), implies pMin *-b, however this word may refer to the noun 'braid'. |
| 杓 *m-tewk > dzyak > sháo 'ladle (n.)' 1120b | džh / dzh | | | |
| 定 *m-t ^f eŋ-s > dengH > dìng 'make fixed, settle (v.t.)' 0833z | dh | dụng 'to erect; to raise; to set up; to put up' | | <p>Muong Khêñ /təŋ'/ (upper shang). Jiàn'ōu /tʰian 6/ 'fix (a date or time) in advance', Xiàmén /tʰiā 6/ 'to take a little food or medicine so as to make one's self feel somewhat more comfortable'</p> <p>cp. 丁, 钉 *t^feŋ > teng > dīng 'nail (n.)'</p> <p>Later loan to VN</p> |

| | | | | |
|--|-----|--------------|-------------------------|--|
| 肚 *m-t ^g a? > duX > dù 'belly' 0062 | d ! | də 'stomach' | | Xiàmén /tɔ 6/, Cháozhōu /tou 4/, Fúzhōu /tou 6/, Jiàn'ōu /tu 6/ cp. 肚 *t ^g a? > tuX > dǔ 'belly, stomach' pMin *d- unexplained (maybe not part of the indigenous layer of pMin) |
| 樹 *m-to? ^g -s > dzyuH > shù 'tree' 0127j | džh | | MR PHM *ntj <u>əŋ</u> H | Earlier loan to HM The root is probably the same as in 柱 *t<r>o? > trjuX > zhǔ 'prop up, support (v.)' Wǎxiāng /tsa C/ |
| 傳 *m-tron > drjen > chuán 'transmit' 0231f | dh | | | Sothern Min forms (Xiamen /tʰŋ 2/, Chaozhou /thueŋ 2/) support pMin *dh-. Softening in Jianyang (W. Min) /lyeŋ 2/ suggests *-d, but tone 9 would be expected if this form reflected pMin *-d: perhaps this is a borrowed form. |
| 柱 *m-t<r>o? > drjuX > zhù 'pillar' 0129h | dh | | MR pHM *ŋjæu 'pillar' | Later loan to HM Ostapirat 1999 Proto-Kra *m-tṣu A 'pillar' Note: both HM and Kra reflect a Chinese form without a glottal stop. |

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|---|---------|--|--|---|
| 盡 *m-tsi[n]? > dzinX > jìn 'exhaust (v.)' 0381a | -dz | | | |
| 淨 *m-tseŋ-s > dzjengH > jìng 'clean, cleanse (v.t.)' 0811d | | | MR pM *ndzəŋ C 'clean' cp. 晶 *tseŋ > tsjeng > jīng 'bright, limpid' 0820a | |
| 挾 *m-k ^r ep (?) > hep > xié 'grasp' 06301 | gap D ! | găp 'to pick up with chopsticks, pull out (bullet from wound)' | WM *ntçap 'to pick food with chopsticks' (Wang and Mao 1995: 273) pM *?jəp D (< *nc-) 'to pick up food with chopsticks' | Min g- unexplained (maybe not part of the indigenous layer of pMin) |
| 蟹 *m-k ^r re? (> *mg ^r re? > *g ^r re?) > heaX > xiè 'crab' 0861d | γ | cáy 'kind of brackish water crab, fiddler crab' | | VN apparently reflects an unprefixed form OC *k ^r re? |
| 忌 *m-k(r)ək-s (> *mg(r)ək-s > *g(r)ək-s) > giH > jì 'warn; avoid' (volitional) 0953s | gh | | | Xiàmén /khi 6/, Cháozhōu /khi 6/ 諫 *k ^r ək-s > keajH > jiè 'warn' |
| 競 *m-kraŋ?-s > gjaengH > jìng 'strive; compete' 0754a | | ganh 'emulate' | | |

| | | | | |
|--|------|--|--|--|
| 合 *m-k ^f op > hop > hé ‘unite’ 0675a | γ | góp ‘to contribute; to pay jointly with others’ gôp 'unite' | | cp. 合 *k ^f op > kop > gě ‘together; put together; combined’ VN góp may be an earlier loan, and gôp a later one |
| 虹 *m-k ^f oŋ > huwng > hóng ‘rainbow’ 1172j | gh | | | |
| 鼴 *m-q ^w re > hwea > wā ‘frog’ 0879y | | | | cp. 鼴 *q ^w re > 'wea > wā 'frog' 0879y. Pittayaporn 2009 PT *krwe A 'small frog' |
| 與 *m-q(r)a? > yoX > yǔ ‘give; for; and’ 0089b | yo B | | | Xiàmén /hɔ 6/ ‘give’ cp. 舉 *C.q(r)a? > kjoX > jǔ ‘lift, raise’ |
| 尹 *m-qur? (> *Gur?) > ywinX > yǐn ‘govern; governor’ 1251l | | | | Often interchanged with OC 君 *C.qur in early documents (see GG 2.29) |
| 鷺 *m-q ^f ruk > haewk > xué ‘spec. of bird’ 1038h | | | | cp. 鷺 *q ^f ruk > 'aewk > xué 'a kind of bird' 1038h |
| 頭 *[m-t] ^f o > duw > tóu ‘head’ 0118e | dh | | | cp. 兜 *t ^f o > tuw > dōu ‘helmet, hood’ |

| | | | | |
|--|------|--|--------------------------|---|
| 扶 *m-[p](r)a > bju > fú ‘assist’ 0101f | bh | | | |
| 皮 *m-[p](r)aj > bje > pí ‘skin’ 0025a | bh A | | | |
| 抱 *[m-p]⁻u? > bawX > bào ‘carry in the arms’ 1113j | bh | | | |
| 鰥 *[m.s]⁻aw > saw > sāo ‘putrid smell’ 1134f | | | Mien /dziaau 1/ < nts(h) | Early loan to HM |
| 韵 *[m-qʷ]<r>i[n]-s (no pre-Qín ex.) > hwinH > yùn ‘rhyme’ 0391:0392 | | | | cp. 均 *C.qʷin > kjwin > jūn ‘even, equal’ 0391c:0392; 鈞 *C.qʷin > kjwin > jūn ‘potter’s wheel’ 0391e:0392 |

Table 10: Examples of OC voiceless unaspirated stops with preinitial m.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|------|----|----|--|
| 畔 *m-pʰan-s > banH > pà̄n ‘bank between fields’ 0181k | | | | cp. 判 *phʰan-s > phanH > pà̄n ‘divide’ |
| 被 *m-pʰ(r)aj? > bjeX > bēi ‘coverlet’ 0025e | bh B | | | |

| | | | |
|--|------|---|--|
| 奉 *m-p ^h (r)oŋ? > bjowngX > fēng 'present (v.) with both hands' 1197z | (bh) | | Fúzhōu /p'uŋ 2/ (ZH; unclear whether colloquial or literary) cp. 奉 *p ^h (r)oŋ? > phjowngX > fēng 'hold with both hands; to present; receive' 1197z |
| 撤 *m-t ^h ret > drjet > chè 'remove, take away' 0286b | | | cp. 撤 *t ^h ret > trhjet > chè 'remove, take away' 0286b |
| 社 *m-t ^h A? > dzyaeX > shè 'sacrifice to the spirit of the soil' 0062j | | | cp. 土 *t ^h a? > thuX > tǔ 'earth' 0062a |
| 藏 *m-ts ^h ŋaj > dzang > cáng 'store (v.)' 0727g' | | | cp. 倉 *ts ^h ŋaj > tshang > cāng 'granary' 0703a |
| 胫 *m-k ^h eŋ-s > hengH > jìng 'leg, shank' 0831k | | cǎng 'leg' | PP PT *ye:ŋ B 'shin' |
| 胫 *m-k ^h <r>eŋ > heang > kēng 'shank bone' 0831q | | | cp. *k ^h <r>eŋ > kheang > kēng 'shank bone' |
| 午 *m-q ^h a? (> *ŋ ^h a?) > nguX > wǔ 'resist; crosswise' 0060a | | | The character is a pictogram that originally represented 杵 *t.q ^h a? 'pestle' |
| 蛾 *m-q ^h (r)aj? > ngjeX > yǐ 'ant' 0002q | ŋh | | Hailu Hakka upper register (tone 5). |
| 圉 ~圄 *m-q ^h <r>a? > ngjoX > yǔ 'prison' 0058p | | MR pHM *ŋgluə A 'cattle pen, prison' T! | 圉 is a late graph (reflects the late merger of original *m.qh- and *ŋ-) |

Table 11: Examples of voiceless aspirated stops with preinitial m.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|-----------|----|---------------------------|--|
| 鼻 *m-bi[t]-s > bjijH > bí ‘nose’ 0521c | bh | | MR pHM *mbruiH 'nose' | cp. 鼻 *Cə-bi[t]-s > bjijH > bí ‘smell (v.t.)’, pMǐn *-b- The phonetic is 畏 *pi[t]-s > pjijH > bì ‘give’ Xiàmén /phǐ 6/, Fúzhōu /phei 5/, Jiànyáng /phoi 6/ |
| 浮 *m.b(r)u > bjuw > fú ‘float (v.)’12331 | bh | | MR PM *mbjəuA 'to float' | |
| 平 *m-breŋ > bjaeng > píng 'make even' 0825a | bh | | | Xiàmén /phǐ 2/ cp. 平 *breŋ > bjaeng > píng ‘even (adj.)’ 0825a, PM *b- |
| 上 *m-daj? > dzyangX > shàng 'to put up' 0726a | džhiong B | | | Xiàmén /tsʰiǔ 6/ ‘to cause to ascend, to bring up’ (Douglas 1899:88), Fúzhōu /tshuoŋ 6/ cp. 上 *Cə.daj? > dzyangX > shàng ‘ascend’, pMǐn *-dž- |
| 下 *m-g̊ra?-s > haeH > xià 'descend' 0035a | ya C | | MR pH *NGA B 'to descend' | Xiàmén /he 6/ 'descend' cp. 下 *g̊ra? > haeX > xià ‘down’ |

| | | | | |
|---|----------|----------------|--|--|
| 牙 *m- ^g <r>a > ngae > yá 'tooth' 0037a:0047:0075:0089 | ŋ | ngà 'ivory' | | 牙 is phonetic in the early graph for 與 yǔ < yoX < *m-q(r)a? 'give; for; and' |
| 成 *m-[d]ej > dzyeng > chéng 'to complete (tr. v)' 0818a | dzh /džh | | | cp. 成 *dej > dzyeng > chéng 'to become (v.i.)' 0818a, PM *ž- |
| 毒 *m-[d] ^g uk-s > dowk > dú 'to poison (v.)' 1016a | dħəu C | | | Only in Min in this meaning. cp. 毒 *[d] ^g uk > dowk > dú 'poison (n.)', pMěn *d- |
| 坐 *m-[dz] ^g o[j]? > dzwaX > zuò 'to set' 0012a | dzh | | | Xiàmén /tshai 6/, /tshe 6/ 'to set; to place; to place firmly' |
| 窮 *m-[g](r)uŋ > gjuwng > qióng 'exhaust' 1006h | gh | | | Xiàmén /khieng 2/ 'to investigate' |

Table 12: Examples of OC voiced stops with preinitial m.

*see 'Notes' column.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|----|----|---|
| 彌 *m-nə[r] > mjie > mí 'to complete' 0359m | | | | cp. 爾 *n[ə][r]? > nyeX > ěr 'you(r)' |
| 麐 /麐 *m-ŋ ^g e > mej >ní 'fawn' 0873o | | | | JDSW 16/22.1 一音五今反 [nguX + hej = ngej] cp. 倪 *ŋ ^g e > ngej >ní 'young and weak' |

| | | | | |
|--|-----|--|-----------------------------------|--|
| 塍 *m.ləŋ > zying > chéng ‘raised path between fields’ 0893n | | | | cp. 勝 *ləŋ-s > syingH > shèng ‘overcome; surpass’ |
| 秫 *m.lut > zywit > shú ‘glutinous millet’ 0497c | džh | | MR pHM *mblut ‘glutinous/sticky’ | |
| 墜 *m.lru[t]-s > drwijH > zhuì ‘fall down’ 0526g | | | MR pH *mblueiC 'shed leaves/drop' | |
| 埋 *m.r ^f ə > meaj > mái ‘bury’ 09781 | -d | | | The pMin form reflects a variant 埋 *mə.r ^f ə |
| 命 *m-rij-s (dialect: *m-r- > *mr-, *-ij > *-ej) > mjaengH > mìng ‘command’ 0762a | | | | In excavated texts, marked with double stroke indicating disyllabic pronunciation. cp. 令 *rinj > ljeng > líng ‘send (a person)’ |
| 眾 / 還 *m-r ^f əp > dop > tà ‘reach to; and’ 0678a | | | | Character appears to be the early graph for 淚 *rəp-s > lwijH > lèi ‘a tear’ 0532c |
| 麥 *m-r ^f ək > *mr ^f ək > meak > mài ‘wheat’ 32a | | | | The phonetic is來 *mə.r ^f ək > *mə.r ^f ə > loj > lái ‘come’ |
| 蠅 *m.rəŋ (> *ləŋ) > ying > yíng ‘fly (n.)’ 0892a | z | | | Pittayaporn *m.le:ŋ A 'insect'; Rục məlaŋ 'big fly' (Nguyen et al. p. 20) = late loans. cp. 蝰 *m ^f rəŋ? > meangX > měng ‘toad’ |

Table 13: Examples of OC plain sonorants with preinitial m.

| | | | | |
|---------------|----|----|----|-------|
| OC > MC > MSC | PM | VN | HM | Notes |
|---------------|----|----|----|-------|

| | | | |
|---|--|-------------------------|--|
| 獺 *[m- ^r] ^f at > trhaet > tǎ ‘otter’ 0272i | | MR pH *ntshjuaA 'otter' | cp. 獺 *r ^f at > that > tǎ ‘otter’ 0272i The phonetic is 刺 *mə.r ^f at > lat > là ‘wicked; spicy’ |
|---|--|-------------------------|--|

Table 14: Examples of OC voiceless sonorants with preinitial m.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|--------|----|---------------------------------|--|
| 室 *s.ti[t] > syit > shì ‘chamber’ 0413j | tš | | | |
| 識 *s-tək > syik > shí ‘know’ 0920k | | | MR PM *tsjek D 'know/recognize' | Not a colloquial word in S. Min |
| 水 *s.tur? (E dialect *-r > *-j) > sywijX > shuǐ ‘water; river’ 0576a | tšyi B | | | |
| 書 *s-ta > syo > shū ‘write’ 0045t | tšy A | | | |
| 商 *s-taŋ > syang > shāng ‘to estimate’ 0734a | | | | cp. 當 *t ^f aŋ > tang > dāng ‘match (v.); have the value of, rank with’ |
| 升 *s-təŋ > sying > shēng ‘to rise’ 0897a | tš | | | cp. 烏 *təŋ > tsying > zhēng ‘to rise (of steam)’ |
| 曾 / 增 *s-t ^f əŋ > tsong > zēng 'increase (v.)' 0884a | | | | cp. 登 *t ^f aŋ > tong > dēng ‘ascend’ 0883e |

| | | | | |
|--|---------|--|--------------------------------|---|
| 甑 *S-təŋ-s > tsingH > zèng 'boiler for steaming rice' 0884k | | | | cp. 烫 *təŋ > tsying > zhēng 'to steam (v.t.)' |
| 責 *s-t ^f rek(> *ts ^f rek) > tsreak > zé 'blame' 0868m | ts | dǔc 'reprove' | | cp. 谴 *t ^f rek > treak > zhé 'blame (v.)' 0877r |
| 債 *s-t ^f rek-s > tsreaH > zhài 'debt' 0868- | ts | | | |
| 膝 *s-tsik > sit > xī 'knee' 0401c | | | | cp. 節 *ts ^f ik > tset > jié 'joint of bamboo' 0923a:0399c |
| 守 *s-tu? > syuwX > shǒu 'keep, guard' 1099a | tš | | | Xiàmén /tsiu 3/ 'to guard; to keep carefully' (Douglas 1899:56) |
| 收 *s-kiw > syuw > shōu 'collect; harvest' 1064a:1103a | s (Lit) | | MR pH *sjuw A 'receive/gather' | The phonetic is ㄩ *kiw > kjiw > jiū 'to twist' 1064a |
| 劍 *s.kr[a]m-s > kjaemH > jiàn 'sword' 0613i | k (Lit) | gươm 'sabre, sword' | | Rục /təkiəm/ 'sword' (Nguyen, Tran and Ferlus 1988) |
| 肝 *s.k ^f a[r] > kan > gān 'liver' 01391 | k/x | gan 'liver' | | Rục /təkan ¹ L/ Jiànyáng, Jiàn'ōu /xueŋ 1/ Héping /hon 1/, Yǒng'ān /hum 1/ |
| 嫁 *s-k ^f ra-s > kaeH > jià 'marry' 0032e | k/x | gá 'to give (one's daughter) in marriage'. | MR pM *quaC 'marry' (a woman) | Jiàn'ōu /xa 5/, Héping /ha 5/ |

| | | | | |
|--|-----|--------------------------|--|---|
| 教 *s.k ^f raw-s > kaewH > jiào ‘teaching, instruction’ 1167i | k/x | | | cp. 效 *m-k ^f raw-s > haewH > xiào ‘imitate, follow’ 1166r |
| 宣 *s-q ^w ar > sjwen > xuān ‘spread (v.)’ 0164t | | | | cp. 垣 *[G] ^w ar > hjwon > yuán ‘wall’ |
| 筍 *s-q ^w i[n]? > swinX > sǔn ‘bamboo sprouts’ 0392n:0391 | s | | | cp. 紦 *q ^{wh?} i[n]-s > xwenH > xuàn ‘ornate, decorated’ |
| 札 *s-q ^f rət > tsreat > zhá ‘strip (n.), tablet’ 0280b:0505 | | | | cp. 乙 *qrət (> *?rət) > ít > yǐ ‘second heavenly stem’ |
| 少 *[s.t]ew? > syewX > shǎo ‘few’ 1149e | tš | | | |
| 教 *s.[k] ^f raw > kaew > jiāo ‘teach’ 1167i | | | | Jiànyáng, Liándūncūn, Jiàn’ōu /xau 1/ |
| 裹 *s.[k] ^f o[r]? > kwaX > guǒ ‘to wrap’ 0351d | k/x | góí 'to pack; packet' | | |
| 損 *[s-q] ^w ə[n]? > swonX > sǔn ‘diminish, damage’ 0435a:0227 | | | | cp. 隘 *G ^w rən? > hwinX > yǔn ‘fall down’ 0227g:0435 |

Table 15: Examples of OC voiceless unaspirated stops with preinitial s.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|---------|----|------------------------|--|
| 黍 *s-tʰa? > syoX > shǔ ‘Panicum miliaceum (glutinous)’ 0093a | s ! | | | Aspirated initial in Héféi and Yángzhōu Mandarin : Héféi /tʂu 3/, Yángzhōu /tshu 3/ |
| 暑 *s-tʰa? > syoX > shǔ ‘heat’ 0045x | tʂh | | MR pHM *sjiouX 'warm ' | Héféi /tshu 3/, Yángzhōu /tshu 3/ The expected pMǐn *tʂh- is preserved in the Zhāngpíng 漳平 dialect in the expression /tshi 3 tshi 3/ for 處暑 chǔshǔ ‘end of heat’ (Zhāng Zhènxīng 1992:38) |
| 奢 *s.tʰA > syae > shē ‘extravagant’ 0045e | tʂhia A | | | Xiàmén /tsʰia 1/ ‘lavish’ cp. 者 *tA? > tsyaeX > zhě ‘(nominalizing particle)’ |
| 揣 *s-tʰ<r>or? > tsrhjweX > chuǎi ‘to measure; to estimate’ 0168q | | | | Also read as 揣 *tʰor? > tsyhwenX id. |
| 獸 *s.tʰu(?)s > syuwH > shòu ‘(wild) animal’ 1100a | | | | /tsʰiu 5/ ‘wild animal’ in several Hakka dialects (Wēngyuán 翁源, Lùchuān 陸川, Gànxiàn 贛縣, Chángtīng 長汀, etc.; from Lǐ Rúlóng and Zhāng Shuāngqìng 1992:249) |
| 催 *s-tʰ <u>ŋ</u> uj > tshwoj > cuī ‘urge, repress’ 0575j’ | | | | cp. 推 *tʰ <u>ŋ</u> uj > thwoj > tuī ‘push away’ |

| | | | |
|---|----------|--------------------------|--|
| 新 *s.ts ^h i[n] > sin > xīn ‘new’ 0382k | s | MR pHM *tshj̥iəŋ A 'new' | |
| 星 *s-ts ^h eŋ > seng > xīng ‘star’ 0812x | tshaŋ A | | Xiàmén /tshī 1/ Used as a loangraph for 晴 *N-tsheŋ > dzjeng > qíng ‘clear (weather)’ |
| 翅 *s-k ^h e-s > syeH > chì ‘wing’ 0864e | tsh | | Perhaps there was also a reading *k ^h e-s > *tʂ ^h e-s (which would give MC “tsyheH”) > chì, Mandarin /tsʰɿ᷑ 5/, Guǎngzhōu /tʃʰi 5/ cp. 支 *ke > tsye > zhī ‘branch (of tree), limb’ 0864a |
| 寫 *s-q ^h A? > sjaeX > xiě ‘depict’ 0799f | s (Lit?) | MR pM *xja B 'to write' | 舄 *s.q ^h Ak > sjek > xì ‘slipper, shoe’, also read MC tshja; cp. 卸 *s-q ^h A(?)s > *sA-s > sjaeH > ‘to unload’ A qùshēng reading of 寫 must have existed in Rǔnán (the character 卸 xiè is said in the <i>Shuōwén jiězì</i> to be pronounced “like the people in Rǔnán 汝 南 pronounce 寫 in 寫書) |
| 諭 *s.q ^h [a]m > sjem > xiān ‘insincere, ingratiating’ 0613c | | | Second reading s-: 諭 *s-q ^h am > tshjem > qiān ‘insincere, ingratiating’ 0613c |

| | | | |
|--|-----|--|---|
| 所 *s-q ^h <r>a? > srjoX > suǒ 'place (n.); that which' 0053:0091a | | | cp. 處 *t.q ^h a? > tsyhoX > chǔ 'be at' cp. 許 *q ^h (r)a? > xjoX > xǔ 'place (n.)' The Shuōwén glosses 所 suǒ not as 'place' but as 'sound of hewing wood'; 所 can replace 許 (written in some versions of the JDSW as 漢) in Ode 165.3 of the Shījīng ; according to the Shuōwén, the phonetic is 戸 *m-q ^h a? > huX > hù 'door' |
| 碎 *[s-ts ^h]u[t]-s > swojH > suì 'break' 0490n | tsh | | tsh- in some Gan and Hakka dialects, Li and Zhang 1992:44. |
| 溼 *[s-[q ^h][i]p > syip > shī 'low wet ground' 0693a | tsh | | cp. 涼 *qip > 'ip > yì 'moist' 0683h |

Table 16: Examples of OC voiceless aspirated stops with preinitial s.

*See 'Notes' field.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|-----|----|---------------------------|---|
| 匠 *s.baŋ-s > dzjangH > jiàng 'craftsman' 0729a | dzh | | MR pHM *dzjɔŋ 'craftsman' | 匚 *panj > pjang > fāng 'box' 0741a appears to be phonetic (probably connected to 方 *C-panj > pjang > fāng 'square') |
| 示 *s-gij?-s > zyijH > shì 'show (v.)' 0553a | | | | Causative of 視 *gij?-s > dzyijH > shì 'look, see' 0553h |

| | | | | |
|--|-----|----------------|--|--|
| 旋 / 還 *s-Gʷen > zjwen > xuán 'turn round; return' 0236a | | | | cp. 圓, 圓 *Gʷ<r>en > hjwen > yuán 'round' |
| 祥 *s-Gaŋ > (*zGaŋ >) zjang > xiáng 'auspicious' 0732n | | | | cp. 羊 *Gaŋ > yang > yáng 'sheep' |
| 自 *s.[b]i[t]-s > dzijH > zì 'self (adv.)' 1237m | dz! | | | Identical with 鼻 *m-bit-s > bjijH > bí 'nose' 0521c in OBI. pMin *dz unexpected |
| 象 *s.[d]aŋ? > zjangX > xiàng 'elephant' 0728a | | pMien *ɣjioŋ B | | Xiàmén /tshiū 6/ Proto-Tai *ja:ŋ C (Pittayaporn 2009:327) |

Table 17: Examples of OC voiced stops with preinitial s.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----|----|--|
| 喪 *s-mˤaŋ > sang > sāng 'mourning, burial' 0705a | | | | cp. 亡 *maŋ > mjang > wáng 'flee; disappear' 0742a |
| 戌 *s.mi[t] > swit > xū '11th earthly branch' 1257h | | | | Ahom /mit/ 'year of the dog' cp. 戌 *met > xwiet > xuè 'extinguish, destroy' |
| 西 *s-nˤər > sez > xī 'west' 0594a | | | | cf. Sagart 2004. |
| 襄 *s-naŋ > sjang > xiāng 'remove' 0730a | | | | cp. 攘 *naŋ > nyang > ráng 'steal; expel' 0730e |
| 信 *s-ni[ŋ]-s > sinH > xìn 'truthful' 0384a | | | | cp. 仁 *niŋ > nyin > rén 'kind, good' 0388f (share the same set of phonetics) |

| | | | |
|---|-------------|--|--|
| 羞 *s-nu > sjuw > xiū 'shame' 1076h | tsh | | Xiàmén /ts ^h iu 1/, Fúzhōu /ts ^h ieu 1/ Same phonetic element as in 紐 *n<r>u? > nrjuwX > niǔ 'fastener' |
| 山 *s-ŋrar > srean > shān 'mountain, hill' 0193a | š | | cp. 嶠 252h *hŋar? > xjonX, hŋrar? > xjenX 'hill top' (毛傳: "小山別与大山也".) |
| 朔 *s-ŋrak > sraewk > shuò '1st day of month' 0788a:0769a | | | cp. 𠩎 *ŋrak > ngjaek > nì 'go against, reverse' |
| 蘇 *s-ŋ ^f a > su > sū 'revive' 0079:0067c | | | Probably a causative from the same root as 悟 *ŋ ^f a-s > nguH > wù 'awake, realize' 0058j |
| 懇 *s-ŋ ^f ak-s > suH > sù 'complain, accuse' 0769b | | | cp. 講 *ŋ ^f ak > ngak > è 'speak frankly' |
| 襄 *s-naŋ > sjang > xiāng 'remove' 0730a | | | The root is 攘 *naŋ > nyang > ráng 'steal; expel' |
| 泄 *s-lat > sjet > xiè 'leak, ooze' 0339h | tsh | | Xiàmén /ts ^h ua? 7/ 'have diarrhea' The phonetic is 世*lap-s > *lat-s > syejH > shì 'generation' |
| 錫 *s.l ^f ek > sek > xī 'tin' 0850n | | | The phonetic is 易 *lek > yek > yì 'change; exchange', also read 易 *lek-s > yeH > yì 'easy' |
| 使 *s-rə? > sriX > shǐ 'send; cause' 0975n | səi B 'use' | | cp. 使 *s-rə?-s > sriH > shǐ 'envoy'; from a root *rə? 'serve', also found in 吏 *[r]ə?-s > liH > lì 'officer' |

| | | | | |
|--|-------|--|--|--|
| 叟 / 窃 / 偻 *s.ru? (dial. > *sru?> srjuwX > sruwX) > suwX > sǒu 'old man' 1097a | | | | cp. 老 *C-r <u>u</u> ? > lawX > lǎo 'old' 1055a |
| 孿 *[s.r]on-s > srwaenH > luán 'twins' 0178q | | | | Mandarin luán |
| 鋤 *s-[l]<r>a > dzrjo > chú 'to hoe' 0046p' | dhy A | | | cp. 除 *l<r>a > drjo > chú 'remove' 0082m:0048 Fúzhōu /tʰy 2/, Xiàmén /tʰi 2/, Jiànyáng /hy 2/ |

Table 18: Examples of OC OC plain sonorants with preinitial s.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|-------|----|----|--|
| 千 *s.n̥i[ŋ] > tshen > qiān 'thousand' 0365a | tsh | | | The phonetic is 人 *ni[ŋ] > nyin > rén '(other) person' |
| 帨 *s.lot-s > tshjwejH > shuì 'kerchief' 0324g | | | | The phonetic is 衤 *sra > srjo > shū 'foot' |
| 窓/窗 *s-l̥<r>oŋ (> *s-t̥h̥<r>oŋ > *ts-h̥ronj) > tsrhaewng > chuāng 'window' 11991 | θəŋ A | | | cp. 通 *l̥oŋ > thuwng > tōng 'penetrate' Xiàmén /tʰanŋ 1/ |
| 採 *s.r̥əʔ > tshojX > cǎi 'gather, pluck' 0942d | tsh | | | cp. 蒔 *s.rək > srik > sè 'reap'; Parallel are 彩 *s.r̥əʔ > tshojX > cǎi 'colorful' and 色 *s.rək > srik > sè 'color; countenance' |

Table 19: Examples of OC voiceless sonorants with preinitial s.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|---|---------------------------|---|
| 紙 *k.te? > tsyeX > zhǐ ‘paper’ 0867 | tš | giấy 'paper' | MR pM tsjej B 'paper' | Lakkia /khjei 3/ 'paper'; Rục kəcáy 'paper' |
| 種 *k.toŋ? > (*toŋ? >) tsyowngX > zhǒng ‘seed’ 1188d:1175 | tš | giống 'species, breed, strain, race' | | Rục /kco:nj 3/ 'seed' Chứt /kəco:nj3/ |
| 登 *k-t'əŋ > tong > dēng ‘a kind of sacrificial vessel; lamp’ 0883a | t | | | Sách /kə ten/ 'lamp' (Chéon 1907) |
| 鬼 *k-?uj? > kjw+jX > guǐ ‘ghost’ 0569a | | | | cp. 威 *?uj > 'jw+j > wēi ‘awe-inspiring’ 0574a |
| 鬻/ 粥 *t-quk > tsyuwk > zhōu ‘rice gruel’ 1024b | | | MR pM *tjuok D 'porridge' | Cháozhōu /kiok 7/ cp. 魷 *m-quk > yuwk > yù ‘nourish’ |
| 箴 *t.[k]əm > tsyim > zhēn ‘needle’ 0671n | tš | gǎm ‘point, prick’ | MR PH *kjəŋ A 'needle' | Lakkia /them 1/ 'needle' belongs to the xiéshēng series of 咸 *[g]r[ə]m > heam > xián ‘all; everywhere’, which includes both velar and uvular material |

| | | | | |
|--|-------|--|---|---|
| 肘 *t-[k]<r>u? > trjuwX > zhǒu 'elbow' 1073a:0992 | t | | | Shàowǔ /tou 3/ |
| 帚 *[t.p]ə? > tsywX > zhǒu 'broom' 1087a:1001 | | | MR pM *?jæuC 'to sweep' (< pHM *nc-) | Xiàmén ts'iu3 and FZ ts'ieu 3 imply pMin *tsh-, with unexplained aspiration. Thai /phe:w C1/ (Pittayaporn) 'to sweep' 婦 *mə.bə? (> *bu?) > bjuwX > fù 'woman, wife' |
| 冠 *[k.?]or > kwan > guān 'cap (n.)' 0160a:0111:0257 | koi C | | MR pHM *?wiən crest/comb' | Xiàmén /ke 5/ 'cock's comb; headdress' (unex- pected qùshēng; Norman 2006:137) |

Table 20: Examples of OC voiceless stops with preinitials p., t. and k.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----|----|---|
| 輕 *t-k ^h reŋ (> *threŋ) > trhjeng > chēng 'red' 0831x | | | | cp. 輕 *[kh]eŋ > khjieng > qīng 'light (=□ heavy)' possibly connected to Proto-Tai *?dl/rieŋ A (Li 1977:129, 274) |

| | | | | |
|--|----------|--|----------------------------|--|
| 出 *t-k ^h ut > tsyhwit > chū ‘go or come out’ 0496a | tsh | | | cp. 挖 *[g]ut > gjut > jué ‘dig out (earth)’ , 揪 *[g] ^h ut > hwot > hú ‘dig out’ |
| 處 *t.q ^h a?-s > tsyhoH > chù ‘place (n.)’ 0085a | | | MR pHM *chouH 'bed, place' | |
| 杵 *t.q ^h a? (> *tha?) > tsyhoX > chǔ ‘pestle ’ 0086a:0060 | | | | Shibei /k ^h y 3/; Jiànyáng /khy 3/ cp. 午 *[m].q ^h a? > nguX > wǔ ‘seventh earthly branch’ |
| 臭 *t-q ^h u(?) -s > tsyhuwH > chòu ‘odor, to stink?’ | | | | cp. 腐 *q ^h (r)u? > xjuwX > xiǔ ‘rot, decay’ |
| 匡 *k-p ^h aŋ > khjwang > kuāng ‘square basket’ 0739m | | | | The phonetic is □ *paŋ > pjang > fāng ‘container, box (Shuōwén)’; cf. 方 *C-paŋ > pjang > fāng ‘square’. The aspiration is unexplained. |
| 烹 *[p.q ^h]raŋ > phaeng > pēng ‘boil (v.)’ 0716a:0751a | | | | cp. 烹 hēng < xaeng < *q ^h raŋ ‘penetrate |
| 齒 *t-[k] ^h ə(ŋ)? (or *t.ŋə?) > tsyhiX > chǐ ‘front teeth’ 09611 | tsh / kh | | | Fúzhōu (etc.) /khi 3/. Norman 1996:22. the phonetic is 止 *tə? > tsyiX > zhǐ ‘foot; stop’ (from the Warring States period) |

| | | | |
|--|-------------------------------|-------------------------------|---|
| 車 *[t.q ^h](r)A > tsyhae > chē 'chariot' 0074a | xa 'spinning wheel; carriage' | pH *tshjua A 'spinning wheel' | cp. 車 *C.q(r)a > kjo > jū 'chariot', 輝 *m-q(r)a > yo > yú 'vehicle, carriage; carry on shoulders' |
|--|-------------------------------|-------------------------------|---|

Table 21: Examples of OC voiceless aspirated stops with preinitial p., t. or k.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|-----|------------------------|------------|---|
| 椎 *k.druj > drwij > chuí 'hammer' 0575r | dh | dùi 'stick; awl' | | Pong /ktu:j/ 'mallet' |
| 氐 *k.de? > dzyeX > shì 'clan' 0867a | tš | | | Used to write 兮 in a dialect where *k.de? went to *ge?. |
| 牀 *k.dzraŋ > dzrjang > chuáng 'bed' 0727r | dzh | giường 'bed' | | Rục /kəciŋ/ |
| 賊 *k.dz ^f ək > dzok > zéi 'injure; murderer, bandit' 0907a:0906 | dzh | giặc 'pirate, invader' | | Rục /kəcʌk/ 'bandit, rebel'; Lakkia /kjak 8/ (< *gdz-) 'bandit' |
| 祇 *[k.d]e > gjie I! > qí 'earth spirit' 0867i | | | | Dialect: *k.d- > *g.d- > *g-, no palatalization |
| 十 *t.[g]əp > dzyip > shí 'ten' 0686a | dž | | pHM *gjuəp | In OBI written with the same char. as 'needle' 簾 *t.kəm > tsyim > zhēn Proto-Lakkia *dzep D (L-Thongkum 1992:64) |
| 甚 *[t.G][ə]m?-s > dzyimH > shèn 'excessive' 0658a | | | | cp. 淫 *gəm > yim > yín 'excess' 0657b |

Table 22: Examples of OC voiced stops with preinitial p., t. or k.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|--|----|--|
| 露 *p.r ^f ak-s > luH > lù ‘dew; let appear’ 0766t' | lh | | | PP PT *p.ra:k D 'to be exposed' Lùfēng Hakka /lu 5/. |
| 兩 *p.raŋ? > ljangX > liǎng ‘a pair’ 0736a | lh | | | Early graph consists of two 丙 *pranŋ? side by side. |
| 凌 *p.rəŋ > ling > líng ‘ice’ 0898f | | | | cp. 𠂇 *p.rəŋ (dial. > *prəŋ) > ping > bīng ‘ice’ 0899a |
| 稟 *p.rim? > limX > lǐn ‘rations’ 0668a | | | | cp. 稟 *p.rim? (dial. > *prim?) > pimX > bǐng ‘rations’ 0668a |
| 輒 *t-n ^f ep > tep > zhé ‘paralysed, unable to move’ 0632b | | | | cp. 蹤 *n<r>ep > nrjep > niè ‘unable to walk’ 0632c |
| 質 *t-lit > tsyit > zhì ‘substance, solid part’ 0493a | | | | cp. 實 *mə.li[t] > zyit > shí ‘fruit; full’ |
| 舞 *k.m(r)a? > mjuX > wǔ ‘dance (v.)’ 0103g | mh | múa ‘to dance ritually, with fan or sword or veil’ | | Rục /kumu'a/ ' to dance'. Xiàmén /bu 3/ (Lit. ?) |
| 囂 *k-mraŋ? > kjwaengX > jiǒng ‘bright window’ 0763a | | | | cp. 明 *mraŋ > mjaeng > míng ‘bright’ |

| | | | | |
|---|--------|---|------------------------|---|
| 袂 *k.met-s > mjiejH > mèi 'sleeve' 0312d | | | | Second (dial.) reading 袢 *k.m ^f et > kwet > mèi 'sleeve' 0312d Mandarin mèi is based on this reading |
| 肉 *k.nuk > nyuwk > ròu 'meat, flesh' 1033a | nh | | | Vietic evidence for prefixed k-. Pong /knuk 7/ Cháozhōu /něk 8/ |
| 亢 *k-ŋ ^f aŋ > kang > gāng 'lift high' 0698a | | | | Lakkia /khǎŋ 3/ cp. 印 *ŋ ^f aŋ > ngang > áng 'high, lift high' |
| 經 *k-l ^f eŋ > keng > jīng 'regulate; norm' 0831c | k | | | The phonetic is 壬; for the root, cp. 程 *l<r>eŋ > drjeng > chéng 'rule, norm' 0835t. |
| 力 *k.rək > lik > lì 'strength' 0928a | lhət D | súc < *kr- 'strength' | MR pHM -rək 'strength' | |
| 鬲 *k.r ^f ek > lek > lì 'tripod with hollow legs' 0855a | | | | Lakkia (LQY) khje:k 7 'kind of frying wok' |
| 蓮 *k.[r] ^f e[n] > len > lián 'lotus fruit' 0213d | lh | sen < kr- 'lotus' | | cp 蘭 jiān < kean < *k ^f re[n] (dial. *k.r ^f - > k ^f r-) |
| 籠 *k.r ^f oŋ > luwng > lóng 'cage, coop' 1193l | lh | chuòng 'cage, shed, shelter, coop, stable, sty' | | Méixiàn Hakka /luŋ 1/ P-Tai (Li: 11.2) *krong A 'cage' |

| | | | | |
|--|-----------|--------------------------------|---|--|
| 朗 *k.r ^f aŋ? > langX > lǎng 'bright' 0735h | | sáng < *kr- 'bright, clear' | | Rục /pləj kàraŋ/ 'sunny weather' |
| 籃 *k.r ^f am > lam > lán 'basket' 0609 | lham A | | | Méixiàn Hakka /lam 1/ 'basket' *k. based on phonetic series. |
| 六 *k.ruk > ljuwk > liù 'six' 1032a | lh | | Theraphan pMienic *kluk D pHM *kruk | |
| 螺 *k.r ^f oj > lwa > luó 'spiral' 0577 | lhoi A | | MR pM *kluei A/B | |
| 笠 *k.rəp > lip > lì 'bamboo- splint hat' 0694e | lh | | MR pM *kuw D 'bamboo hat' | PP PT *kləp D 'bamboo hat' Méixiàn Hakka /lip 7/ 'bamboo hat' |
| 卵 *k.r ^f or? > lwanX > luǎn 'egg' 0179a | lhon B | | MR pM *kləu C 'egg', pH *qæw C 'egg' | Méixiàn Hakka /lon 3/ |
| 健 *k.r[a]n-s (no pre-Qín exx.) > ljenH > liàn 'chick' 0213- | lh | | WM PHM *kla:n C 'young hen'. | |
| 多 *[t.l] ^f aj > ta > duō 'many' 0003a | t | | | Proto-Tai *hlai A 'much, many' (Li 1977) or *hlai:j A (Pittayaporn 2009) Proto-Hlai *hlə:y (Norquest 2007:464) |
| 蹇 *[t-l]ri[t]-s > trijH > zhì 'slip (v.)' 0415a | | | | cp. 跌 *l ^f it > det > diē 'stumble' 0402j |

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|---|--|--|--|---|
| 卬 *[k.ŋ]́aŋ > ngang > áng 'high; lift high' 0699a. | | | | cp. the doublet 廿 *k.ŋ́aŋ > kang > gāŋ 'lift high' 0698a. Lakkia (LQY) khǎ:ŋ3 'lift' implies earlier *k + nasal cluster. |
|---|--|--|--|---|

Table 23: Examples of OC plain sonorants with preinitial p., t. or k.

| OC > MC > MSC 魯 *r.ŋ́a? (dialect > *rŋ́- > *r̥-) > luX > lǔ (place name) 0070a cp. 魚 * [r.ŋ]a > ngjo > yú 'fish (n.)' | PM ŋh | VN | HM | Notes cp. 魚 * [r.ŋ]a > ngjo > yú 'fish (n.)' Norman 1991 *ŋh-, correcting Norman 1973 (*ŋ). cp. pBai (Yuan Mingjun) *hŋ |
|--|----------|----|----|--|
|--|----------|----|----|--|

Table 24: Examples of OC plain sonorants with preinitial r.

| OC > MC > MSC 喙 *t-ɿo[r?]s > tsyhwejH > huì 'snout; to pant' 0171i | PM ? tshyi C 'mouth' | VN | HM | Notes XM /ts'ui 5/, CZ /ts'ui 5/, FZ /ts'uei 5/, JO /ts'y 5/ (HYFYZH). Norman's early data indicated *tsh-, because Yǒng'ān uses /tse 3/ 嘴 instead of this etymon. But Gàizhú (Deng Xiangzhang 2007:363) has /tʃ̥yi 5/ for 'mouthful', the measure word. So pMin should be *tshyi C. HOWEVER, this may not match 喙 |
|--|----------------------------|----|----|--|
| 康 *k-ɿaŋ > khang > kāng 'tranquil; at ease' 0746h | | | | The phonetic is 庚 *ḱraŋ, also phonetic in 唐; both 唐 and 康 are used to write the name of the Shang founder, usually written in received texts as 湧. |

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|--|--|--|--|--|
| 泣 *k-rəp > khip > qì 'weep' 0694h | | | | The phonetic is 立 *k.rəp (> *rəp) > lip > lì 'stand (v.)' cp. 淚 *rəp-s > lwijH > lèi 'tear (n.)' 0532c |
| 謙 *k-r̥em (dial. > khem) > khem > qiān 'modest' 0627f | | | | cp. 廉 *rem > ljem > lián 'frugal' 0627l |
| 考 *k-r̥u? > khawX > kǎo 'old; deceased father' 1041d | | | | cp. 老 *C-r̥u? > lawX > lǎo 'old' 1055a |
| 娉 *p.[r]eŋ-s > phjiengH > pīng 'inquire about (marriage)' 0839c:0817 | | | | Xiéshēng contact to 騍 *lren? > trhjengX > chěng 'gallop' 0817a:0839. Shuo Wen notes that the character is "read like" 聲, our *leŋ. |
| 曠 *[k-m̥]aŋ-s > khwangH > kuàng 'desolate, waste' 0707o | | | | cp. 荒 *m̥aŋ > xwang > huāng 'weed-covered' 0742e'. |
| 闊 *[k-m̥]ik (*-ik > *-ek dialect) > khwek > qù 'quiet' 0860d | | | | 洫 *m̥ik > xwik > xù 'still, quiet' 0930b |

Table 25: Examples of OC voiceless sonorants with preinitial p., t. or k.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|-------------------------------------|----|-----------------------|
| 本 *C.p̥ə[n]? > pwonX > běn 'tree trunk' 0440a | p | vốn 'capital, principal; origin' | | |
| 壁 *C.p̥ek > pek > bì 'house wall' 08531 | p | vách 'partition, wall' | | |
| 板 *C.p̥ran? > paenX > bǎn 'plank, board' 0262j | p | ván 'plank, board' | | PP PT *pe:n C 'board' |

| | | | | |
|--|----|---|--------------|--|
| 比 *C.pij? > pijjX > bǐ ‘compare’ 0566g | | ví ‘to compare’ | | |
| 方 *C-paŋ > pjang > fāng ‘square’ 0740a | | vuông 'square' | | |
| 刀 *C.t ^f aw > taw > dāo ‘knife’ 1131a | t | dao ‘knife’ | | |
| 正 *C.teŋ > tsyeng > zhēng ‘1st (month)’ 0833j | tš | giêng 'the first month' | | |
| 謫 *C.t ^f rek > treak > zhé ‘blame, punish’ 0877r | t | dứt ‘reprove’ | | |
| 張 *C.trŋ > trjang > zhāng ‘draw a bow’ 0721h | | giương 'to spread; to stretch, esp. the bow' | MR pH *trŋ A | |
| 井 *C.tseŋ? > tsjengX > jǐng ‘well (n.)’ 0819a:0808 | ts | giêng well | | |
| 謔 *C.s ^f aw-s > sawH > zào ‘shout’ 1134c | | rao 'shout' | | |
| 燥 *C.s ^f aw? > sawX > zào ‘dry’ 1134d | | ráo 'dry' | | Cantonese /chou 5/ |
| 棟 *C.k ^f <r>ep > kaep > jiā ‘chopsticks’ 0630f | | | | Also read *k ^f ep > kep ‘chopsticks’ Maleng Kha Pong (Ferlus) /təkap7/ |

| | | | | |
|---|---|----------------------------------|-------------------------------------|---|
| 鋼 *C.k ^f aŋ > kang > gāng ‘cast iron; steel’ 0697h | k | gang ‘cast iron’ | | Vietic evidence for prefixed t-. cp. 剛 *k ^f aŋ > kang > gāng ‘strong; hard’ 0697b |
| 鏡 *C.qraŋ?-s > kjaengH > jìng ‘mirror’ 0752c | k | guoŋ ‘mirror’ | | cp. 影 *qraŋ? > jaengX > yǐng ‘shadow (n.)’ |
| 君 *C.qur (> *kur) > kjun > jūn ‘lord; ruler’ 0459a | | | | Often interchanged with OC 尸 *m-qur? in early documents (see GG 2.29) |
| 舉 *C.q(r)a? > kjoX > jǔ ‘lift, raise’ 0075a:0037:0047:0089 | | | | 與 *m-q(r)a? > yoX > yǔ ‘give; for; and’ |
| 筋 *C.[k]ə[n] > kj+n > jīn ‘sinew’ 0445a | k | gân ‘nerve; tendon; sinew; vein’ | MR pM *k ^w jan A 'sinew' | |
| 箱 *C.[s]aŋ > sjang > xiāng ‘box (of a carriage)’ 0731f | | ruong ‘box, trunk’ | | |

Table 26: Examples of OC voiceless stops with unidentified preinitials.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|----|----|---|
| 乞 *C.q ^h ət > khj+t > qǐ ‘beg, ask’ 0517f | kh | | | cp. 氣 *q ^h ət-s > xj+jH > xì ‘to present food’ |

| | | | | |
|---|----|--|--|---|
| 气 *C.q ^h əp-s > khj + jH > qì '(inhaled thing:) breath, air, vapors' 0517a | kh | | | |
| 愆 *C.q ^h ra[n] > khjen > qiān 'exceed, err' 0197b | | | | cp. 衍 *N-q(r)an? > yenX > yǎn 'over ow' |
| 勸 *C.q ^{w^h} ar-s > khjwonH > quàn 'encourage' 0158s | kh | | | The phonetic element is said to be 喊 (= 詺, 嘵) *q ^{w^h} ar > xjwon > xuān 'clamor, shout' |

Table 27: Examples of OC voiceless aspirated stops with unidentified preinitials.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|-------|----|-----------------------|-----------------------|
| 騎 *C.g(r)aj (~ *[Cə.g](r)aj) > gje > qí 'straddle; ride' 0001u | gh | | MR pHM *jej 'to ride' | Note à rajouter (min) |
| 畫 *C-g ^{w^s} rek-s > hweaH > huà 'drawing (n.)' 0847a | yua C | | | |
| 橫 *C.g ^{w^r} raŋ > hwaeng > héng 'crosswise; horizontal' 0707m | y | | | |
| 擒 *C.G(r)[ə]m > gim > qín 'catch' 0651n | gh | | | |
| 環 *C.G ^{w^r} <r>en > hwaen > huán 'ring (n.)' 0256n:0829 | gh | | | |

| | | | | |
|---|-------|-----------------|--|---------------------------------------|
| 園 *C.G ^w a[n] > hjwon > yuán ‘garden’ 0256b | γ | | MR pH *waŋ A 'garden', pM *hwun A ‘id.’ | |
| 遠 *C.G ^w an? > hjwonX > yuǎn ‘far’ 0256f | γ | | | |
| 雨 *C.G ^w (r)a? > hjuX > yǔ ‘rain’ 0100a | γio B | | | |
| 縫 *C.[b](r)oŋ-s > bjowngH > fēng ‘seam’ 1197x | bh | | | |
| 稗 *[b]ʳe-s > beah > bài ‘weed resembling grain’ 0874s | bh | | | |
| 伴 *[C.b]ʳan? > banX > bàn ‘comrade’ 0181c | bh | bạn 'friend' i! | | |
| 雹 *C.[b]ʳuk > baewk > báo ‘hail’ 1113n | bh | | | |
| 團 *C.[d]ʳon > dwan > tuán ‘round, plenty’ 0231n | dh | | | |
| 市 *[d]ə? > dzyiX > shì ‘market (n.)’ 0963a | džh | | | PTai *z.jw:C 'buy' (Pittayaporn 2009) |
| 蠶 *[dz]ʳ[ə]m > dzom > cán ‘silkworm’ 0660i | dzh | | | |
| 柴 *[C.dz]ʳe(j) > dzrea > chái ‘firewood’ 0358v | dzh | | | |

| | | | | |
|---|-----|--|----------------------|--------------------------------|
| 巷 *[g]ˤronj-s > haewngH > xiàng 'lane, street' 1182s | ɣ | | | |
| 河 *[C.g]ˤaj > ha > hé 'river' 0001g | (y) | | | Fúzhoū /xaj 2/ "the milky way" |
| 鉗 *[C.[g]<r>[e]m*C.g<r>em > gjem > qián 'pincers, tongs' 0606i | gh | | | |
| 臼 **C.[g]ʷə? > gjuwX > jiù 'mortar' 1067a | gh | | MR pH *jo B 'mortar' | |
| 芹 *[C.[G]ər > gj+n > qín 'cress' 0443f | gh | | | Xiàmén /khun 2/ |

Table 28: Examples of OC voiced stops with unidentified preinitials.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----------------|----|----------------------------------|
| 墓 *C.mˤak-s > muH > mù 'grave (n.)' 0802f | | mǎ 'grave' | | Hailu Hakka /mu 5/ |
| 梅 *C.mˤə > mwoj > méi 'plum tree' 0947l | | mə' 'apricot'. | | See Norman 1991 |
| 蚊, 蟊 *C.mə[r] > mjun > wén 'mosquito' 0475l, 0475k | mh | | | Vietic evidence for t.m (Ferlus) |
| 萬 *C.ma[n]-s > mjonH > wàn '10,000' 0267a | | | | Tai /hmu:n B1/ |

| | | | | |
|--|----|-------------|------------------------|--|
| 蔓 *C.ma[n]-s > mjonH > wàn ‘creep; creeping plant’ 0266d | | | MR pHM *hmein A 'vine' | |
| 巫 *C.m(r)[o] > mju > wū ‘magician’ 0105a | | mo 'shaman' | | Pittayaporn 2009 PT * ^h mo:A 'shaman'. Siamese /mɔɔ A1/ |
| 貓 *C.m ^r aw > maew > māo ‘cat’ 1159c | mh | | | Cant. /mau 1/, MSC mao1, Lùfēng Hakka /mau 5/, all upper register. |
| 面 *C.me[n]-s > mjienH > miàn ‘face’ 0223a | mh | | MR pM *hmienA 'face' | Lùfēng Hakka /mian 5/ |
| 目 *C.m(r)[u]k > mjuwk > mù ‘eye’ 1036a | mh | | | Méixiàn Hakka /muk 7/ |
| 糜 *C.m(r)aj > mje > mí ‘rice gruel; destroy, crush’ 0017g | mh | | | |
| 媒 *C.m ^r ə > mwoj > méi ‘match-maker, go-between’ 0948c | mh | | | |
| 木 *C.m ^r ok > muwk > mù ‘tree, wood’ 1212a | mh | | | Méixiàn Hakka /muk 7/ |
| 脈 *C.m ^r <r>[i]k > meak > mài ‘vein’ 0848a | mh | | | Méixiàn Hakka /mak 7/ |

| | | | | |
|--|---------|--------------|--------------------------|---|
| 夢 *C.məŋ-s > mjuwngH > mèng ‘dream’ 0902a | mh | | | |
| 毛 *C.m ^f aw > maw > mó ‘hair’ 1137a | mh | | | Cantonese /mou 1/, Méixiàn Hakka /mo 1/ |
| 妹 *C.m ^f ə[t]-s > mwojH > mèi ‘younger sister’ 0531k | mhye C | | | Lùfēng Hakka /moi 5/ |
| 麻 *C.m ^f raj > mae > má ‘hemp’ 0017a | mhuai A | | | Lùfēng Hakka /mun 5/ Xiàmén /muā 2/, Cháozhōu /muā 2/ |
| 問 *C.mu[n]-s > mjunH > wèn ‘ask’ 0441g | mh | | | |
| 襪 *C.m[a]t > mjot > wà ‘stockings’ 03111 | mh | | | Kabeo /qa-mat/ 'stockings' : Solnceva (1993) 'The words with presyllables in Kabeo'. 26th ICSTLL, Osaka. |
| 染 *C.n[a]m? > nyemX > rǎn ‘to dye’ 0623a | n(h) | nhuóm 'tint' | | Méixiàn Hakka /niam 3/ |
| 年 *C.n ^f i[ŋ] > nen > nián ‘harvest; year’ 0364a | nh | | MR pHM *hɲuəŋH 'year' | Méixiàn Hakka /nian 1/ |
| 弩 *C.n ^f a? > nuX > nǔ ‘crossbow’ 0094z | nh | | MR pH *hnæn B 'crossbow' | |

| | | | | |
|---|--------|----------------------------|-------------------------------|--|
| 耳 *C.nə? > nyiX > ěr 'ear' 0981a | nh | | | Méixiàn Hakka /i 3/ |
| 艾 *C.ŋ ^f a[t]-s > ngajH > ài 'Artemisia; moxa' 0347c | ŋh | ngǎi 'sagebrush=Artemisia' | | Cháozhōu /hiā 6/, Xiàmén /hiā 6/ |
| 五 *C.ŋ ^f a? > nguX > wǔ 'five' 0058a | ŋh | | | Méixiàn Hakka /ŋ 3/. PTai (Pittayaporn) *ha: C PLakkia *ŋɔ: C 'five' (Theraphan) cp. 吾 *ŋ ^f a > ngu > wú 'I, my' |
| 瓦 *C.ŋ ^w ra[j]? > ngwaeX > wǎ 'roof tile' 0020a | ŋh | ngói 'tile' | pHM *ŋ ^w æX 'tile' | Méixiàn Hakka /ŋa 3/ |
| 顏 *C.ŋ ^f rar > ngaen > yán 'face, forehead' 0199c:0145:0186:0194 | | | MR pH *hpen A 'forehead' | |
| 藕 *C.ŋ ^f (r)o? > nguwX > ōu 'lotus root' 0124- | ŋhəu B | ngó | | Méixiàn Hakka /ŋeu 3/ Tai /ŋau B2/ ~ /hŋau C1/ (Norman 1991:210) |
| 嚦 *C.l ^f e > dej > tí 'cry; weep' 0870d | dh | | | Now written 啜 |
| 蟲 *C.lruŋ > drjuwng > chóng 'insect' 1009a | dh | | | Gǔzhàng /liaɔ 13/ |

| | | | | |
|--|----|-----------------------------|------------------------|---|
| 治 *C.lrə > dri > chí 'regulate, arrange' 0976z | dh | | | |
| 餳 *C.l ^f aŋ (no pre-Qín exx) > dang > táng 'sweets' 0720c' | dh | | | |
| 讀 *C.l ^f ok > duwk > dú 'read (v.)' 1023m | dh | | | Gǔzhàng /lu? 53/ |
| 桃 *C.l ^f aw > daw > táo 'peach' 1145u | dh | | MR pHM *Glæw A 'peach' | Gǔzhàng /laɔ 13/ |
| 糖 *C.l ^f aŋ > dang > táng 'sugar' 0700- | | | | Gǔzhàng /loŋ 13/ Bái /ta 7/ |
| 冽 *C.r[a]t > ljet > liè 'cold, raw' 0291b | | rét 'cold' (Bodman 1980:85) | | |
| 郎 *C.r ^f aŋ > lang > láng 'young gentleman' 0735r | lh | chàng 'young man' | | |
| 老 *C.r ^f u? > lawX > lǎo 'old' 1055a | lh | | | Méixiàn Hakka /lau 3/ 'old' Jiàn'ōu /se 6/, Jiànyáng /seu 5/, Shàowǔ /sa 7/ |
| 李 *C.rə? > liX > lǐ 'plum' 0980a | lh | | MR pHM *hljəŋX 'plum' | |

| | | | | |
|--|------|--|--------------------------------|------------------------------------|
| 梨 *C.r[ə][j] > lij > lí ‘pear tree, pear’ 0519i, h | | | | Gǔzhàng /za 13/ |
| 利 *C.ri[t]-s > lijh > lì ‘sharp; profit’ 0519a | lh | | MR pHM *-rajH 'sharp' | |
| 鱗 *C.r[ə][n] > lin > lín ‘fish scale’ 0387k | lh A | | | Méixiàn Hakka /lin 1/ ‘fish scale’ |
| 聾 *C.r ^f oŋ > luwng > lóng ‘deaf’ 1193m | lh A | | | Méixiàn Hakka /luŋ 1/ ‘deaf’ |
| 米 *(C.)m ^ʳ [e]j? > mejX > mǐ ‘rice grains, dehusked and polished’ 0598a | mh | | MR pM *hmei B 'rice, dehusked' | Méixiàn Hakka /mi 3/ |

Table 29: Examples of OC plain sonorants with unidentified preinitials.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|-----|----|--|-------|
| 沸 *Nə.p[u][t]-s > pj + jH > fèi ‘boil (v.)’ 0500q | -p | | MR pHM *mpuæiH 'boil (v.i.)' Yao /bwei 5/ | |
| 早 *Nə.ts ^f u? > tsawX > zǎo ‘early’ 1049a | -ts | | MR pHM *ntsiouX 'early' Yao /dzyou 3/ | |

Table 30: Examples of OC voiceless stops with preinitial *Nə-.

| OC > MC > MSC | PM | VN | HM | Notes |
|---------------|----|----|----|-------|
|---------------|----|----|----|-------|

| | | | |
|--|--|--|---|
| 坼 *Nə-q ^{h̥} <r>ak (W dialect: *q ^{h̥} r- > *ṛ ^{h̥} - > trh-) > trhaek > chè ‘split (v.i.)’ 0788a:0792d | | Mien dzε? 7 (< *ntsh-) 'cracked, as earth' (Downer) | cp. 拆 *q ^{h̥} <r>ak > trhaek > chāi ‘take apart, dismantle’ cp. Mien /tshe? 7/ (< *tsh-) = 拆 (v.t.) |
| 開 *Nə-[k] ^{h̥} əj > khoj > kāi ‘to open (v.i.)’ 0541a | | Mien /goi 1/ (< *ŋkh-) 'to open, as a flower, the heart' | cp. 開 *[k] ^{h̥} əj > khoj > kāi ‘to open (v.t.)’ cp. Mien /khoi 1/ < *kh- 'to open' (v.t.) |
| 缺 *Nə-[k] ^w et > khwet > quē ‘break; defective’ 0312h | | MR pHM *NK ^w et 'have a gap' | |
| 渴 *Nə-[k] ^{h̥} at > khat > kě ‘thirsty’ 0313j | | MR pHM *NKhat 'thirsty' | |

Table 31: Examples of OC aspirated stops with preinitial *Nə-.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----|---------------------------------|-------|
| 滑 *Nə-g ^{h̥} rut > hweat > huá ‘slippery’ 0486e | -g | | MR pHM n̄guat 'smooth/slippery' | |

Table 32: Examples of OC voiced stops with preinitial *Nə-.

| OC > MC > MSC | PM | VN | HM | Notes |
|---------------|----|----|----|-------|
| | | | | |

| | | | | |
|--|--|--|----------------------|---------------------------|
| 漏 *[Nə-r]⁹ok-s > luwH > lòu 'leak (v.)' 0120a | | | MR pH *ŋgro C 'leak' | Ratliff's PHM has no *ŋr- |
|--|--|--|----------------------|---------------------------|

Table 33: Examples of OC plain sonorants with preinitial *Nə-.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|--------|--------------------|--|-------------------------|
| 粉 *mə.pən? > pjunX > fěn 'flour' 0471d | | | WM PHM *mpwə:n B | |
| 轉 *mə-tron? > trjwenX > zhuǎn 'turn around' 0231e | -t | | Yao /dzwon 5/ < *nts 'return' | |
| 賭 *mə.t⁹a? > tuX > dǔ 'wager' 0045 | -t | | Yao /dou 3/ < *nt 'bet, wager' (Lombard & Purnell 1968 ap. Norman 1986:382). | |
| 擔 *mə-t⁹am > tam > dān 'carry on the shoulder' 0619k | -tam A | | MR pHM ntam A 'carry on the shoulder' Yao /daam 1/ | |
| 散 *mə-s⁹a[n]?-s > sanH > sàn 'scatter (v.t.)' 0156a | s | rân 'to propagate' | pMien *dzhan C < (pHM *ntsh-) 'to disperse' | |
| 繢 *mə-ts⁹aw? > tsawX > zǎo 'to wash' 1134i | | | MR pHM *ntsæwX 'wash' | PP PT za:w A 'to wash' |
| 指 *mə.kij? > tsyijX > zhǐ 'finger; point' 0552f | -tš | | | Jiàn'ōu /ki 6/ 'finger' |
| 菇 *mə.k⁹a > ku > gū 'mushroom' 0049 | -k | | MR pHM *ŋkjæu 'mushroom' | |
| 蔭 *mə-q<r>[u]m-s > ímH > yìn 'shade' 0651b' | | | pMien (L-Thongkum 1993) *ʔglom C (< *ŋkl-) 'shade' | |

| | | | | |
|---|----|--|--|--|
| 眨 *mə-[ts]ʳr[a]p (< *mə-S.pʳrap ?) > tsreap > zhǎ ‘blink’ 0641 | | | MR pHM *ntsrep 'to wink' | |
| 鉸 *mə-[k]ʳr[a]w? > kaewX > jiǎo ‘shear; scissors’ 1166- | -k | | MR pM *?gljieu B 'scissors' (< PHM *ŋk) | |

Table 34: Examples of OC voiceless stops with preinitial *mə.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|----|---------------------------------|--|
| 被 *mə-pʰ(r)aj > phje > pī ‘cover oneself with’ 0025e | | | WM pHM *mpai C 'put on clothes' | Note lack of aspiration in HM. |
| 拍 *mə-pʰrak > phaek > pāi ‘to strike’ 0782m | | | WM pHM *mpjæk 'clap' | Note lack of aspiration in HM. |
| 唱 *mə-tʰaŋ-s > tsyhangH > chàng ‘to lead (in singing)’ 0724d | | | WM pHM *ŋtʃwjaŋ A 'to sing' | Note lack of aspiration in HM. |
| 稱 *mə-tʰəŋ-s > tsyhingH > chèng ‘steelyard’ 0894g | | | MR pHM *nthjuŋH 'balance' | Máonán (Kam-Tai, Jianzhi: 102) /ndaŋ 5/ 'to weigh' |

Table 35: Examples of OC aspirated stops with preinitial *mə.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|-----------|-------------------------------|--------------------|
| 婦 *mə.bə? (or *tsə.-? see Min) > bjuwX > fù ‘woman, wife’ 1001a:1087 | -b | vợ ‘wife’ | MR pM *mbuŋ B Yao /bwaŋ 4/ | Cantonese /phou 4/ |

| | | | | |
|--|-----|-----------------------|---|---|
| 步 *mə-b ^g a-s > buH > bù ‘step’ 0073a | -b | vã 'go on foot, walk' | Yao /bia 6/ < *mb- ‘step, stride’ (Lombard & Purnell 1968 ap. Norman 1986:382). | |
| 紵 *mə-dra? > drjoX > zhù ‘flax’ 0084e | -d | | MR pHM *nduH 'ramie/hemp' | Ratliff adds "The labial initial in Pa-Hng suggests an ancient prefix or disyllabic form.". The Pa-hng form she cites is /mjo 6/. |
| 字 *mə-dzə(?)s > dziH > zì 'breed, love (v.); character' 0964n | -dz | | MR pM *ndzaŋ C 'word, character' Yao /dzaaŋ 6/ | |
| 猴 *mə-g ^g (r)o > huw > hóu 'monkey' 0113g | -g | | | Cantonese /ma 4 lǎu 1/ 'monkey' |

Table 36: Examples of OC voiced stops with preinitial *mə.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----|----|--|
| 無念 *mə-n ^g im-s > nemH > niàn 'make oneself think of' 0670a | | | | Ode 235.5: 無念爾祖“think of your ancestors !” (volitional) |
| 鯉 *mə-rə? > liX > lǐ 'carp (n.)' 0978j | -d | | | |
| 蠍 *mə-rat-s > ljejH > lì 'stinging insect' 0340f | -d | | | |

| | | | | |
|---|-----|--|--|---|
| 來 *mə.r ^f ək (> mə.r ^f ə > *r ^f ə) > loj > lái ‘come’ 0944a | | | | Gǔzhàng /zə 13/ |
| 鹿 *mə-r ^f ok > luwk > lù ‘deer’ 1209a | -d | | | Buyang /ma 0 lok 8/ (Li Jinfang 1999: 199) ‘deer’ |
| 舌 *mə.lat > zyet > shé ‘tongue’ 0288a | -dž | | MR pHM *mblet ‘tongue’ Yao /byet 6/ | |
| 食 *mə-lək > zyik > shí ‘eat’ 0921a | -dž | | MR pH *mbljæ C ‘to have food w/rice’ | |
| 實 *mə.li[t] > zyit > shí ‘fruit; full’ 0398a | -dž | | | PP PT *m.lec D ‘grain’ |

Table 37: Examples of OC plain sonorants with preinitial *mə.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|------|----|---|---|
| 蠻 *mə-r ^f a[t]-s > trhaejH > chài ‘scorpion’ 0267.0326a.0340 | -d ! | | | pMin *-d to explain Fúzhōu /tie 6/ ‘stinging insect’. We assume the Fúzhōu form comes from *mə-r ^f at-s and MC from *mə-r ^f at-s. |
| 脫 / 脱 *mə-l ^f ot > thwat > tuō ‘peel off’ 0324m | th | | MR pM *?dut (< *nt-) ‘to peel off/escape’ | Note lack of aspiration in HM. |

Table 38: Examples of OC voiceless sonorants with preinitial *mə.

| OC > MC > MSC | PM | VN | HM | Notes |
|---------------|----|----|----|-------|
| | | | | |

| | | | | |
|--|-----|--|--|--|
| 脣 *sə.dur > zywin > chún ‘lip’ 0455u | -dž | | | Fúzhōu /suŋ 2/, Jiàn’ōu /œyŋ 3/ The phonetic is 辰 *[d]ər > dzyin > chén ‘fifth earthly branch’ |
| 邪 *sə.GA > zjae > xié ‘awry’ 0047a:0037:0075:0089 | -dz | | P-Hmong (Wang 1979) *Gei A '邪, 歪' askew, slanted' | Shui /qa:i 2/ < G- Used in a place name: 琅邪 *[r]‘aŋ- G(r)A > lang-yae > Lángyá (name of a mountain in Shāndōng) |
| 松 *sə.goŋ > zjowng > sōng ‘pine (n.)’ 1173a:1190a | -dz | | | 公 *C.q‘oŋ > kuwng > gōng ‘impartial, just; public’ |

Table 39: Examples of OC voiced stops with preinitial *sə.

| OC > MC > MSC | PM | VN | HM | Notes |
|--|----|----|----|---|
| 隨 *sə.loj > zjwe > suí ‘follow’ 0011g | | | | cp. 墮 *l‘oj? > dwaX > duò ‘to fall’ |
| 徐 *sə.la > zjo > xú ‘walk slowly’ 0082p:0048 | | | | cp. 余 *la > yo > yú ‘1sg., prob. a polite form’ |
| 鉤 *sə.lə? > ziX > yí ‘handle of plow or sickle’ (< ‘instrument of holding’) 0976c’ | | | | cp. 以 *lə? > yiX > yǐ ‘take, use’ |

| | | | |
|---|---------|-------------------|--|
| 似 *sə.lə? > ziX > sì ‘resemble’ 0976h | | | 以 *lə? > yiX > yǐ ‘take, use’ Cantonese /ts ^{hi} 4/ |
| 馴 *sə.lu[n] > zwin > xún ‘docile; gradually’ 0462f:0422 | | | cp. 順 *Cə.lu[n]-s > zywinH > shùn ‘follow; obey’; 訓 *lu[n]-s (dial. > *xun-s) > xjunH > xùn ‘instruct’ |
| 謝 *sə-lAk-s > zjaeH > xiè ‘decline, renounce’ 0807g | -dzia C | giā 'say goodbye' | Jiànyáng /lia 6/ |

Table 40: Examples of OC plain sonorants with preinitial *sə.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|--|----|--|
| 脰 *kə.d ^o ok-s > duwH > dòu ‘neck’ 0118d | -d | dọc 'pétiole charnu des feuilles de certaines plantes, dos (d'un couteau), tuyau, tige (d'une balance)' etc. | | Rục /kadɔ'k/ ‘nape’ (Nguyen et al. 1998) |

| | | | |
|---------------------|---------|--|---|
| *kə.dz- 'cockroach' | -dzat D | | Northern Mǐn: Jiàn'ōu /tsue 4/, Zhènghé /tsuai 5/, Chóng'ān /luai 8/; also Shàowǔ /tshai 6/ (Norman 1982:548), Hépíng /thai 4/ (Norman 1995:122), Zhènqián /tsua 5/; Jiànyáng /loi 8/, Wǔfū /luai 8/ (Norman 1996:37), Liándūncūn /lue 8/ (Norman 2002:357); cp. Fú'ān /sat 8/ ~ /ka 1 sat 8/, Fúzhōu /ka 6 sak 8/, Xiàmén /ka 1 tsua? 8/; cp. Cantonese /ka-tsat 8, kat-tsat 8/ |
|---------------------|---------|--|---|

Table 41: Examples of OC voiced stops with preinitial kə.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|----|----|---|
| 霧 *kə.m(r)[o]k-s > mjuH > wù 'fog, mist' 1109t | | | | Lùfēng Hakka /mu 5/. Vietic evidence for prefixed k-. |
| 溺 *kə.n ^r ewk-s > newH > niào 'urine' 1123d | n | | | PLakkia *kl-Niu B 'urine' (Theraphan) Lakkia /kīu B1/ (L-Thongkum 1992) |
| 落 *kə.r ^r ak > lak > luò 'fall (v.)' 0766q' | l | | | Cháozhōu /ka-lau? 8/ 'fall'; Pingyao (Shanxi) /kΛ? lΛ?/ 'to fall in small quantities' |

| | | | | |
|---|--------------|--|-------------------------|--|
| 道 *[kə.l]⁻u? > dawX > dào ‘way’ 1048a:1102 | -dau B ‘far’ | | MR pHM kləuX 'road/way' | |
|---|--------------|--|-------------------------|--|

Table 42: Examples of OC plain sonorants with preinitial kə.

| OC > MC > MSC 攝 *kə.ɳep > syep > shè ‘catch, grasp’ 0638e | PM | VN | HM | Notes Lakkia /khjɛ:p 7/; Shui /?njap7/ 'id'. Rục /kǎnáp/ 'close (the eyes)' (Nguyen et al. 1998:75). |
|---|----|----|----|--|
|---|----|----|----|--|

Table 43: Examples of OC voiceless sonorants with preinitial kə

| OC > MC > MSC | PM | VN | HM | Notes |
|---|------|----|------------------------|-------------------|
| 發 *Cə.pat > pjot > fā ‘y forth, send forth’ 0275c | -p | | | Shíbēi /buai 3/ |
| 搬 *Cə.p¹an > pan > bān ‘move’ 0182- | -p | | | Jiànyáng /voiŋ 9/ |
| 反 *Cə.pan? > pjonX > fān ‘reverse (v.)’ 0262a | -p | | | |
| 飛 *Cə.pə[r] (dialect: *-r > *-j) > pj+j > fēi ‘fly (v.)’ 0580a | -p A | | | Jiànyáng /ye 9/ |
| 崩 *Cə.p¹əŋ > pong > bēng ‘collapse (v., of a mountain)’ 0886m | -p A | | MR pH *pəŋ A 'to fall' | Jiànyáng /vaiŋ 9/ |

| | | | | |
|---|-----------------------------|---|--|-------------------------------|
| 戴 *Cə.t ^f ək-s > tojH > dài ‘carry on the head’ 0943e' | -t | | | Jiànyáng /lue 9/ |
| 單 *Cə.t ^f ar > tan > dān ‘single, simple’ 0147a | -tuan A | | | Jiànyáng /lueŋ 9/ |
| 斲 *Cə.t ^f rok > traewk > zhuó ‘chop, cleave’ 1235b | -t | | | Jiànyáng /lo 3/ |
| 簪 *Cə.ts ^f [ə]m > tsom > zān ‘hairpin’ 0660g | -ts | | | Jiànyáng /laŋ 9/ |
| 薦 *Cə.ts ^f ə[r]-s > tsenH > jiàn ‘grass, fodder’ 0477a | -tsun C ‘straw mattress’ | | | Jiànyáng /luŋ 9/ |
| 醉 *Cə.tsu[t]-s > tswijH > zuì ‘drunk (adj.)’ 0490h | -ts | | | Jiànyáng /ly 9/ |
| 灑 *Cə.s<r>ər? > srjeX,H > sreah > xǐ ‘sprinkle’ 0878i | | rǎy 'sprinkle' | | |
| 釅 *Cə.sre > srje > shāi ‘to strain off wine’ 0878h | | rây ‘sieve; to sieve’ | | |
| 膏 *Cə.k ^f aw > kaw > gāo ‘lard (n.)’ 1129i | -k | | | Jiànyáng /au 9/ |
| 錦 *Cə.k(r)[ə]m? > kimX > jǐn ‘brocade’ 0652e | | gǎm 'brocade, embroidered silk, damask' | | Xiàmén /gim 3/ '俗' 'brocade'. |

| | | | | |
|---|----|---|-----------------------------------|--------------------------------------|
| 狗 *Cə.k ^r o? > kuwX > gǒu 'dog' 0108d | -k | | MR pHM *qluwX 'dog' | Jiàn'ōu /e 3/ |
| 蕨 *Cə.kot > kjwot > jué 'bracken (a kind of edible fern)' 0301d | -k | | MR PM k ^w jət D 'fern' | Jiànyáng /ue 9/ |
| 牯 *Cə.k ^w a? > kuX > gǔ 'male (bovine)' 0049- | -k | | | Jiànyáng /o 3/ |
| 飢 *Cə.k<r>ə[j] > kij > jī 'hungry' 0602f | -k | | | Jiànyáng /ue 9/ |
| 假 *Cə.k ^r a? > kaeX > jiǎ 'borrow; false' 0033c | -k | gá tiéng 'use someone else's name' | | |
| 倚 *Cə.q(r)aj? > 'jeX > yǐ 'lean on' 0001f | ? | ghé 'aborder; accoster; approcher; s'approcher' | | |
| 補 *[Cə]-p ^r a? > puX > bǔ 'to patch' 0102c' | -p | vá | MR pHM *mpjaX 'repair/mend' I! | Rục /təpa: ³ / 'to patch' |

Table 44: Examples of OC voiceless stops with unidentified loose preinitials

| | | | | |
|---------------|----|----|----|-------|
| OC > MC > MSC | PM | VN | HM | Notes |
|---------------|----|----|----|-------|

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|--|--------------------------|--|--|--|
| 鼻 *Cə̃-bi[t]-s > bjijH > bí ‘smell (v.t.)’ 0521c | -b | | | Shíbēi /bi 6/ |
| 吠 *Cə̃.bo[t]-s > bjojH > fèi ‘bark (v.)’ 0348a | -b | | | Shíbēi /by 6/ |
| 彈 *Cə̃.d'ar > dan > tán ‘pellet’ 0147n | -d | | | Shíbēi /duaiŋ 2/ ‘pluck a stringed instrument’ |
| 嘗 *Cə̃.danj > dzyang > cháng ‘taste (v.)’ 0725f | -dž | | | Jiàn'ōu /ioŋ 3/, Jiānyáng /ioŋ 9/ ‘taste’ |
| 上 *Cə̃-danj? > dzyangX > shàng ‘ascend’ 0726a | -džionŋ B | | | Xiàmén /tsiū 6/ ‘above, upon, upper, superior, former . . .’ (Douglas 1899:58), Jiēyáng /tsiõ 4/, Fúzhōu /suonŋ 6/, Jiàn'ōu /ioŋ 4/, Jiānyáng /ioŋ 5/ ‘ascend’ |
| 癢 *Cə̃.ganj? > yangX > yǎng ‘itch’ 0732r | -dž | | | Xiàmén /tsi 6/, Fúzhōu /suonŋ 6/, Jiānyáng /ioŋ 6/ Wǎxiāng /dzonŋ 3/ ‘itch’ cp. 羊 *Ganj > yang > yáng ‘sheep’ |
| 檐 *Cə̃.gam > yem > yán ‘eaves’ 0619g | -dž | | | Lóngyán /giam 2/ Xiàmén /tsi 2/, Fúzhōu /sieŋ 2/ |
| 腎 *Cə̃.[g]i[n]? > dzyinX > shèn ‘kidney’ 0368h | -gin B 'gizzard' , | | | Fúzhōu /keiŋ 6/, Jiānyáng /iŋ 5/ (Norman 2006:138) |

| | | | | |
|---|----|--|-----------------------|-------------------|
| 汗 *Cə.[g]ʷa[r]-s > hanH > hèn 'sweat (n.)' 0139t | -g | | | |
| 厚*Cə.[g]ʷ(r)o? > huwX > hòu 'thick' 0114a | -g | | MR pM *fiou B 'thick' | Cantonese /hǎu 4/ |
| 鹹 *Cə.[g]ʷr[o]m > heam > xián 'salty' 0671f | -g | | | |

Table 45: Examples of OC voiced stops with unidentified loose preinitials.

| OC > MC > MSC | PM | VN | HM | Notes |
|---|-----|------------|-------------------------|--|
| 狃 *Cə.n<r>u? > nrjuwX > niǔ 'animal tracks; claws' 1076f | | | pM *ʔpauB 'claw, talon' | Western Hakka /n̩iau 1/ 'claw' (Lǐ Rúlóng et al. 1999:124) |
| 袋 *Cə.l̥ek-s > dojH > dài 'bag' 0918 | -d | | MR pM *di C 'bag' | Jiànyáng /lui 6/ |
| 奪 *Cə.l̥ot > dwat > duó 'seize' 0274a | -d | | | Jiànyáng /lue 8/ |
| 池 *Cə.lraj > drje > chí 'pool (n.)' 0004t | -d | | | Shíbēi /di 2/ |
| 蛇 *Cə.lAj > zyaε > shé 'snake' 0004l | -dž | xà 'snake' | | Xiàmén /tsua 2/, Fúzhōu /sie 2/ |
| 船 *Cə.lo[n] > zywen > chuán 'boat' 0229e | -dž | | | Shíbēi /yijŋ 2/ |

| | | | | |
|---|----------|--|---------------------------------|---|
| 射 *Cə.lAk > zyek > shè ‘hit with bow and arrow’ 0807a | -džiok D | | | Jiànyáng /ia 8/ |
| 繩 *Cə.ləŋ > zying > shéng ‘string, cord’ 0892b | | | MR pH *hljaŋ A 'cord/sash/belt' | Jiànyáng /siŋ 9/ < *-dž |
| 路 *Cə.r ^f ak-s > luH > lù ‘road’ 0766l' | -d | | | Jiànyáng /lio 6/, Shàowǔ /thio 6/ Lùfēng Hakka /lu 6/ 'road' |

Table 46: Examples of OC plain sonorants with unidentified loose preinitials

| OC > MC > MSC | PM | VN | HM | Notes |
|---|---------------------|-------------------------|----|---|
| 緒 *s-m-ta? > zjoX > xù ‘arrange in order’ 0045s | ž | | | |
| 席 *s-m-tAk > zjek > xí ‘mat’ 0797a | dzh (Norman džh) | | | cp. 著 *t<r>ak > trjak > zhuó ‘to place’ |
| 食 *s-m-lək-s > ziH > sì ‘feed (v.)’ 0921a | dzh | | | |
| 羨 *s-N-qɑ[r]-s > zjenH > xiàn ‘covet, desire’ 0207a | | ghen 'jealous, envious' | | |
| 近 *s-N-kər?-s > gj + nH > jìn ‘be near to (v.t.)’ 0443g | | gân | | Rục /tʃkɛŋ/ (Gérard Diffloth, personal communication) |
| 旬 *s-N-q ^w i[n] > zwin > xún ‘ten-day cycle’ 0392q | | | | cp. 鈞 *C.q ^w i[n] > kjwin > jūn ‘potter’s wheel’, 韻 *[m-q ^w]<r>i[n]-s > hwinH > yùn ‘harmony; rhyme’ |

| | | | | |
|--|---|--|--|--|
| 泅 *[s-N].ru > zjuw > qiú ‘swim’ 1094c | z | | | |
|--|---|--|--|--|

Table 47: Examples of OC complex onsets beginning with s-

| OC > MC > MSC | PM | VN | HM | Notes |
|---|-----|---------------|-------------------------|---------------------------------------|
| 粗 *[Nə-s.r̥a > tshu > cū ‘coarse, thick (as hair)’ 0046h’ | tsh | | MR pH *ntsha A 'coarse' | |
| 藍 *[N-k.]r̥am > lam > lán ‘indigo’ 0609k | l | chàm 'indigo' | MR PHM *ŋglam 'indigo' | Pittayaporn (2009) proto-Tai *gra:m A |
| 懶 *[N-kə.]r̥an? > lanX > lǎn ‘lazy’ 0272- | d | | pH *ŋglæn B | |

Table 48: Examples of OC Examples of OC complex onsets beginning with N-

| OC > MC > MSC | PM | VN | HM | Notes |
|---|-----|----|----|--|
| 層 *[m-s-t̥əŋ > dzong > céng ‘additional floor or field’ 0884i | dzh | | | Displaced 田 *l̥iŋ > den > tián as ‘eld’ (Norman 1996:31) |
| 莖 *[m-k-l̥r̥eŋ > heang > jǐng ‘stalk (n.)’ 0831u | | | | cp. 筏 *l̥eŋ > deng > tíng ‘stalk, stem’ 0835k |

| | | | | |
|------------------------------|---|--|--|--|
| 事 *[m-s-]rəʔ-s > dzriH > | d | | | |
| shì 'serve; service, affair' | | | | |
| 0971a | | | | |

Table 49: Examples of OC complex onsets beginning with m-

| OC > MC > MSC | PM | VN | HM | Notes |
|---|----|-----------------|--|---|
| 含 *Cə-m-k ^f [ə]m > hom > hán 'hold in the mouth' 0651l' | -g | | MR pM *?gjəm A (< *ŋk) 'hold in mouth' pHM *ŋkjɔ:m A 'hold in the mouth' (Wáng and Máo 1995) | Máonán (Kam-Tai, Jianzhi: 100) /ŋgam1/ 'hold in mouth' |
| 長 *Cə-[N]-traŋ > drjang > cháng 'long (adj.)' 0721a | -d | | MR pH *ndaŋ A 'long sword' | |
| 動 *[Cə-m-]t ^f oŋ? *Cə-m-t ^f oŋ? > duwngX > dòng 'move' 1188m:1175 | -d | | | Méixiàn Hakka /θuŋ 1/ |
| 房 *[Cə-N-]paŋ > bjang > fǎng 'side-room' 0740y | -b | buòng 'room' I! | | |

Table 50: Examples of OC complex onsets with Cə- plus nasal prefix.

| OC > MC > MSC | PM | VN | HM | Notes |
|---------------|----|----|----|-------|
| | | | | |

| | | | | |
|---|----|--|-----------------------|-------------------|
| 懶 *[N-kə.]r ^{r̥} an? > lanX > län ‘lazy’ 0272 | -d | | MR pH *ŋglæn B 'lazy' | Siamese /gra:n 2/ |
|---|----|--|-----------------------|-------------------|