

Chapter 5.

THE VERB

3.1. Simplex vs. complex verbs

Like nouns, verbs are largely monosyllabic in KT. Of 638 lexical verb entries, 538 or 84% consist of a single syllable (= one morpheme). Examples of verbs in their stem1 form are presented below arranged by syllable type and tone: XX check tone of lèp ‘deny’; khìet ‘tie’.

| | /HL/ | | /H/ | | /L/ | |
|-------------|-------|----------|------|-----------|-------|----------|
| CVV | tsôo | ‘buy’ | věe | ‘look at’ | hlùu | ‘fall’ |
| CVD | hlûng | ‘arrive’ | măn | ‘catch’ | kòw | ‘call’ |
| CVVD | tâaw | ‘pray’ | vũuy | ‘bury’ | thàan | ‘waste’ |
| CVq | ngâq | ‘wait’ | văq | ‘feed’ | bèq | ‘attach’ |
| CGVq | lêq | ‘lick’ | zũoq | ‘sell’ | --- | |
| CVT | --- | | --- | | pèt | ‘bite’ |
| CVVT | lûut | ‘enter’ | zěep | ‘whip’ | khìet | ‘tie’ |

As in the case of nouns, there are systematic gaps which are also revealed in the following syllable/tone distributions among verbs:

| | /HL/ | /H/ | /L/ | totals |
|---------------|------|-----|-----|--------|
| CVV | 23 | 9 | 53 | 85 |
| CVD | 48 | 62 | 49 | 159 |
| CVVD | 48 | 85 | 39 | 172 |
| CVq | 16 | 23 | 21 | 60 |
| CGVq | 4 | 6 | 0 | 10 |
| CVT | (1) | 0 | 21 | 22 |
| CVVT | 26 | 3 | 2 | 31 |
| totals | 166 | 188 | 185 | 539 |

As seen, *Cieq* and *Cuoq* verbs may not be /L/, while CVp and CVt verbs must be /L/ tone. In addition, most CVVT verbs have /HL/ tone. The small number of /H/ CVV verbs is also noteworthy.

Verbs may also be lexically reflexive, occurring with *kì*. The following 20 such verbs have been identified (presented in their stem1 form):

| | | | |
|----------|----------------------|----------|---------------------|
| kì bàng | ‘be equal’ | kì phèet | ‘dodge’ |
| kì dèl | ‘fight’ | kì sũum | ‘avoid, abstain’ |
| kì hlôn | ‘go together, match’ | kì thèp | ‘search, grope for’ |
| kì khăay | ‘hang (intr.)’ | kì thĩng | ‘thunder’ |

| | | | |
|---------|-----------------------|----------|----------------------|
| kì khôl | ‘accumulate wealth’ | kì tìi | ‘be called’ |
| kì làng | ‘appear, resemble’ | kì tùm | ‘control oneself’ |
| kì lạp | ‘float, lift oneself’ | kì tsiem | ‘play’ |
| kì lèe | ‘return to a place’ | kì tsii | ‘close, touching’ |
| kì mây | ‘grope’ | kì tùoq | ‘go together, match’ |
| kì nây | ‘be close’ | kì tûup | ‘be in order’ |

Some of these are independent verbs that may occur without *kì* (stem1/stem2 forms are indicated): *dèl/dèl* ‘chase, run after’, *khăay/khày* /‘hang (tr.)’, *khôl/khòl* ‘accumulate’, *lạp/lạp* ‘lift’, *lèe/lèe* ‘respond, reverse’, *nây/nây* ‘close’, *tsii/tsii* ‘tie, bind with a string’. In addition, *kì hlôn* ‘go together’ is clearly related to the dual postposition *hlon* (§XX), while *kì tùoq* ‘go together, match’ is related to the noun *tùo* ‘pair, couple’. The remaining verbs have been found only in the reflexive.

In addition to the 538 monosyllabic or simplex verbs, 75 compound verbs appear in the lexicon. The following consist of a (stem1) verb+verb combination:

| | | | | | |
|-----------|------------------|-------|----------|------|-----------------|
| sìem phâa | ‘repair’ | siem | ‘make’ | phâa | ‘good’ |
| sút hlàa | ‘undress (tr.)’ | sút | ‘untie’ | hlàa | ‘drop, release’ |
| sám sê | ‘yell at, curse’ | sám | ‘curse’ | sê | ‘bad’ |
| háang sén | ‘brave’ | hăang | ‘fierce’ | sén | ‘red’ |
| ngăay lúu | ‘love deeply’ | ngăay | ‘like’ | lúu | ‘precious’ |

It is easy to determine that the above consist of two verbs not only because each exists in its own right (ngăay ‘like’, lúu ‘(be) precious’ etc.), but also because each one regularly changes into stem2 in the appropriate context (*ngăay lúu* vs. *ngày lút*).

In other cases one or both components of a verb combination may be fixed in shape. The invariant second element *dòq* occurs in a number of verb entries:

| | | | |
|----------|----------------|-------|------------------|
| hàm dōq | ‘scoop up’ | hăm | ‘snatch, grab’ |
| hùq dōq | ‘rescue, save’ | hùq | ‘protect, favor’ |
| lá dōq | ‘pick up’ | lâa | ‘take, pick’ |
| lùng dōq | ‘flow out’ | lũong | ‘flow’ |
| mèq dōq | ‘squeeze out’ | měq | ‘ooze, exude’ |
| pũuy dōq | ‘take out’ | pũuy | ‘guide’ |
| záam dōq | ‘escape’ | zâam | ‘run away, flee’ |

As seen from the meanings, *dòq* has meanings similar to the English particles ‘out’ or ‘away’ and is likely derived from the stem2 form of the verb *dôq/dòq* ‘stick out’. The invariant causative postposition *sàq*, derived from the stem2 form of *sàa/sàq* ‘build’, may also be lexicalized:

| | | | |
|-----------|---------|------------|------------------|
| mòq sàq | ‘waste’ | mỏq/mòq | ‘(be) left over’ |
| khieq sàq | ‘drop’ | khie/khieq | ‘fall’ |

As seen, *sàq* requires that the main verb be in stem2 (§XX). The second element may also be adverbial: *hé zìng* ‘remember’ (*hêe/hêet* ‘know, understand’, *zìng* ‘always, often’).

In some cases a verb compound may have a noun as its first member:

| | | | | | |
|-------------------|--------------------|---------------|----------------|--------------|--------------|
| <i>lúng héy</i> | ‘contrite, repent’ | <i>lúng</i> | ‘heart’ | <i>hěy</i> | ‘change’ |
| <i>ùul sùoq</i> | ‘perspire’ | <i>ùul</i> | ‘perspiration’ | <i>sùoq</i> | ‘emerge’ |
| <i>gám léeng</i> | ‘hunt’ | <i>gám</i> | ‘country’ | <i>lěeng</i> | ‘fly’ |
| <i>hlàang sâm</i> | ‘broadcast’ | <i>hlăang</i> | ‘mountain’ | <i>sâm</i> | ‘announce’ |
| <i>thá sè</i> | ‘lazy’ | <i>thâa</i> | ‘strength’ | <i>sè</i> | ‘break down’ |

Five verbal entries have been found which are both reflexive and compound:

| | | | | | |
|---------------------|----------------|-------------|------------------|-------------|----------------|
| <i>ki hàà bòol</i> | ‘try’ | <i>hàà</i> | ‘hard’ | <i>bòol</i> | ‘do’ |
| <i>kì háq sìel</i> | ‘vow, promise’ | <i>háq</i> | ‘?’ | <i>sìel</i> | ‘?’ |
| <i>kì níem sàq</i> | ‘be humble’ | <i>níem</i> | ‘lower’ | <i>sàq</i> | (causative) |
| <i>kì thùo pìi</i> | ‘help’ | <i>thùo</i> | ‘double, be two’ | <i>pìi</i> | ‘?’ |
| <i>kì tòng khâa</i> | ‘wounded’ | <i>tòng</i> | ‘work’ | <i>khâa</i> | ‘hit the mark’ |

While the etymologies are not always clear, there can be little doubt that three morphemes are involved in the above verbs.

3.2. Stem1/Stem2

KT verbs are subject to the allomorph variation known as stem1/stem2. This is seen in the following sentences involving the intransitive verb *nũuy/nùy* ‘laugh’:

| Person | C1: stem1 | C2: stem2 | C3: stem1/stem2 |
|------------|-------------------|---------------------|------------------------|
| 1st (excl) | <i>kà núuy êe</i> | <i>ká nùy nững</i> | <i>ká nùy á hìi êe</i> |
| 1st (incl) | <i>ì núuy êe</i> | <i>í nùy nững</i> | <i>í nùy á hìi êe</i> |
| 2nd | <i>nà núuy êe</i> | <i>í nùy nững</i> | <i>ná nùy á hìi êe</i> |
| 3rd | <i>à núuy êe</i> | <i>á nùy nững</i> | <i>à núuy á hìi êe</i> |
| | ‘... laughed’ | ‘after ... laughed’ | ‘... laughed’ |

In the above table, verb forms are provided preceded by the subject markers *á* ‘he, she’ and *ká* ‘I’. Three sets of contexts must be distinguished to predict the occurrence of stem1 vs. stem2:

The first set of contexts (C1) requires stem1 verb forms. A widespread example of C1 is main clauses that are marked by declarative *êe* (but without copular *hìi*). As seen, the stem1 verb *pèt* occurs independent of the choice of subject.

The second set of contexts (C2) requires stem2 verb forms. The examples shown here are subordinate clauses marked by *nững* ‘after’. As seen, the stem2 verb form *pèe* is required independent of the choice of subject.

The third set of contexts (C3) includes historical cleft sentences that are marked by the copula *hìi* (§XX). C3 presents a split situation depending on transitivity and the nature of the

subject. If the verb is intransitive, stem1 will be used with a third person subject vs. stem2 with first and second person subjects. On the other hand, if the verb is transitive (e.g. *pèt/pèe* ‘bite’), stem2 is required independent of the choice of subject: *ká pèe hùi êe* ‘I bit him’, *á pèe hùi êe* ‘he bit him’.

As seen, the choice of stem1 vs. stem2 is to a large extent syntactically determined: a verb will have one vs. another shape depending on whether it is in C1, C2 or C3. These contexts are further examined in §XX. The purpose of the present section is to examine the shape of stem2 verb forms, which are partially predictable from the corresponding stem1.

Of the two verb forms, stem1 is the more basic or underlying. This can be argued on the basis of both the tonal and segmental changes that characterize stem2 forms.

First, as seen in the following table, one of the marks of stem2 is L tone:

| stem1 ↓ | stem2 | | |
|---------|-------|-----|-----|
| | /HL/ | /H/ | /L/ |
| /HL/ | 27 | 0 | 139 |
| /H/ | 0 | 0 | 188 |
| /L/ | 6 | 0 | 178 |
| totals: | 33 | 0 | 505 |

As seen, of the 538 simplex verbs in the lexicon, 505 or 94% have L tone in their stem2. The only other tone acceptable in stem2 is HL. While the direction is towards a stem2 L tone, six verbs have L in stem1 vs. HL in stem2:

| | | | |
|------------|--------------------|------------|---------|
| hlàa/hlâq | ‘fall from height’ | tsùu /tsûq | ‘peck’ |
| hlùu/hlûq | ‘fall’ | zùu/zûq | ‘rain’ |
| khìe/khîeq | ‘fall’ | tsòo/tsôot | ‘blind’ |

As seen, five of the six stem2 forms end in *-q* (from pre-KT **-k*), the sixth ending in *-t*. Curiously, the three verbs in the left column all mean ‘fall’.

With one exception, the 27 verbs that have HL tone in both stem1 and stem2 also end in *-q* or *-t*:

| | | | |
|-----------|-------------------|------------|--------------------|
| bûo/bûoq | ‘spill’ | tsôo/tsôq | ‘buy’ |
| gîq/gîq | ‘threaten’ | zâa/zâq | ‘hear, smell’ |
| gûu/gûq | ‘steal’ | zâa/zâat | ‘feel’ |
| hlâq/hlâq | ‘drop (tr.)’ | gûo/gûot | ‘try’ |
| hlêq/hlêq | ‘exchange’ | hâa/hâat | ‘freeze’ |
| hûq/hûq | ‘favor, protect’ | hêe/hêet | ‘know, understand’ |
| khâa/khâq | ‘score (points)’ | khâa/khâat | ‘bitter’ |
| lâa/lâq | ‘take, get, pick’ | khûu/khûut | ‘cough’ |
| lûo/lûoq | ‘vomit’ | lâa/lâat | ‘far’ |
| lûu/lûq | ‘copulate’ | pâa/pâat | ‘thin’ |

| | | | |
|----------|---------|------------|-------------------|
| nêe/nêq | ‘eat’ | sêe/sêet | ‘break down, bad’ |
| pîe/pîeq | ‘give’ | tsêe/tsêet | ‘drenched’ |
| pûo/pûoq | ‘carry’ | tsîi/tsîit | ‘sneeze’ |

The exception is *hûng/hûng* ‘come’.

Since the bulk of /HL/ stem1 verbs—and all of the /H/ verbs—become L in stem2, this is most reasonably ascribed to a stem1 → stem2 derivational process. While neutralization of tone to L might be seen as a reduction process, it might alternatively be the result of the segmental changes that characterize stem2.

The second argument for a stem1 → stem2 process is that the latter forms often involve a segmental change that is additive and/or neutralizing. In many of the examples already cited, a *-q* or *-t* suffix is added to a CVV stem1 form; cf. *vòo/vòq* ‘hit’, *vǎa/vât* ‘leak’. In other cases to be illustrated below, stem1 *-m*, *-n* and *-ŋ* may be denasalized to *-p*, *-t* and *-q* in stem2. Another neutralization concerns CVVy stem1 verbs which become L tone CVy in stem2, e.g. *sûuy/sù* ‘carve’. These kind of changes are best seen as going from stem1 to stem2.

In the survey to follow it will be seen that many stem2 forms are predictable from the corresponding stem1. Many, however, are not. Some the verbs that differ only in stem2 are clearly related (cf. also *hlâq/hlâq* ‘drop (sth.) into (sth.)’):

| | | | |
|-----------|----------------|-----------|-------------------|
| hlâa/hlâq | ‘drop (intr.)’ | hlâa/hlâa | ‘release, let go’ |
| bèq/bèq | ‘paste’ | bèq/bèe | ‘attach’ |
| zâa/zâq | ‘hear, smell’ | zâa/zâat | ‘feel’ |

However, others are not:

| | | | |
|-----------|-------------------|------------|-----------------|
| khâa/khâq | ‘score (points)’ | khâa/khâat | ‘bitter’ |
| lâa/lâq | ‘take, get, pick’ | lâa/lâat | ‘far’ |
| hoom/hoom | ‘reign’ | hoom/hòp | ‘empty, hollow’ |
| dòng/dòq | ‘ask (question)’ | dòng/dòn | ‘collect’ |

The verb *zâa/zâa* ‘respect’ provides a near-minimal triplet with *zâa/zâq* ‘hear’ and *zâa/zâat* ‘feel’. Two other such examples:

| | | | |
|---------|---------------|------------|----------|
| sâa/sâq | ‘build’ | tsòo/tsòo | ‘kindle’ |
| sâa/sâa | ‘thick’ | tsòo/tsôot | ‘kindle’ |
| săa/sât | ‘hot (temp.)’ | tsôo/tsôq | ‘buy’ |

On the other hand, one often cannot predict the stem1 form from stem2. Some of the following verbs are not related, while others are:

| | | | |
|-----------|------------------|-----------|------------|
| bèq/bèe | ‘attach’ | bèe/bèe | ‘add to’ |
| dòq/dòo | ‘stick out’ | dòo/dòo | ‘hold out’ |
| khôq/khòo | ‘skin, peel off’ | khòo/khòo | ‘throw’ |

| | | | |
|-----------|-----------------------|------------|------------------|
| sùoq/sùo | ‘emerge, come out’ | sùo/sùo | ‘publish’ |
| tèp/tèe | ‘taste (food)’ | tèe/tèe | ‘measure’ |
| thôw/thòo | ‘get up’ | thòo/thòo | ‘act’ |
| vâq/vàa | ‘wander’ | vàa/vàa | ‘satiated’ |
| băn/bàn | ‘cut’ | băng/bàn | ‘white’ |
| sến/sèn | ‘red’ | sếng/sèn | ‘red’ |
| dòon/dòon | ‘bud, sprout’ | dông/dòon | ‘young, soft’ |
| hlèp/hlèp | ‘fold’ | hlêm/hlèp | ‘deceive’ |
| zèp/zèp | ‘swim’ | zêm/zèp | ‘decorate’ |
| pàa/pàt | ‘spread out’ | pàn/pàt | ‘begin’ |
| bèq/bèq | ‘paste’ | bèng/bèq | ‘beat (w/hands)’ |
| hlòq/hlòq | ‘carry again & again’ | hlòng/hlòq | ‘pick (beans)’ |
| khâa/khâq | ‘score (points)’ | khàng/khàq | ‘awake’ |

The following stem2 (near-) minimal triplets have been found:

| | | | |
|-----------|------------------|----------|----------------------|
| hlòo/hlòo | ‘trample’ | lòo/lòo | ‘earn (money)’ |
| hlòq/hlòo | ‘soft, soggy’ | lòq/lòo | ‘wag’ |
| hlôw/hlòo | ‘weed, plow’ | lôw/lòo | ‘pick (fruit)’ |
| tsòo/tsòo | ‘kindle’ | lâa/lâq | ‘take, get’ |
| tsòq/tsòo | ‘stir (cooking)’ | làq/làq | ‘train’ |
| tsôw/tsòo | ‘dig’ | làng/làq | ‘appear (on screen)’ |

The complexities include stem1/stem2 correspondences that go in both directions:

| | | | |
|--------------|------------------|--------------|---------------------|
| ∅ → q | | q → ∅ | |
| khâa/khâq | ‘score (points)’ | khâq/khâa | ‘shut, close’ |
| lúo/lúoq | ‘vomit’ | lúoq/lúo | ‘scoop, pick up’ |
| ngâa/ngâq | ‘stop’ | ngâq/ngâa | ‘wait’ |
| tsôo/tsôq | ‘buy’ | tsòq/tsòo | ‘stir (in cooking)’ |

As indicated in the following table, these complexities are due to two phonetic changes which have obscured the original stem1/stem2 alternations: $*k > q$ [?] and $*q$ [?] $> \emptyset$.

| stem1 | stem2 | | | | Pre-KT stem1/2 | Pre-KT stem1/2 |
|-------|-------|------|------|------------------|----------------|----------------|
| CVV | CVV | hlàa | hlàa | ‘release’ | *hlà? | *hlà? |
| CV? | CVV | hàq | hàa | ‘open (eye)’ | *hàk | *hà? |
| CV? | CV? | hâq | hâq | ‘preserve’ | *hâak | *hâak |
| CVV | CVV | tsòo | tsòo | ‘kindle’ | *tsò? | *tsò? |
| CVV | CV? | tsôo | tsôq | ‘buy’ | *tsôo | *tsôok |
| CV? | CVV | tsòq | tsòo | ‘stir (cooking)’ | *tsòk | *tsò? |

As a result of the latter change there are two sources of current CVV: *CVV and *CV?. In many cases these can be distinguished by the fact that CVV syllables deriving from *CVV undergo the vowel shortening rule, while CVV syllables that derive from *CV? do not:

nà tsó hlòn êe ‘you (dual) bought it’ < Pre-KT stem1 *tsôo
 ná tsòo hlón nǔng ‘after you (dual) stir it’ < Pre-KT stem2 *tsò?

Finally, it should be noted that of 538 simplex verbs, 117 or 22% do not have a difference between stem1 and stem2. The following table shows how these are distributed by tone:

| stem2: | HL | L |
|-------------|-----|-----|
| stem1=stem2 | 5 | 112 |
| stem1 stem2 | 161 | 71 |

Since stem2 tone can only be /HL/ or /L/, all stem1 /H/ verbs will have a stem2 form that is at least tonally distinct from the corresponding stem1. As seen, there are five stem1 /HL/ verbs which have an identical stem1 and stem2:

gǐq/gǐq ‘threaten’ hlâq/hlâq ‘drop (sth.) in (sth.)’
 hǔng/hǔng ‘come’ hlêq/hlêq ‘exchange’
 hûq/hûq ‘favor, protect’

These contrast with the majority of /HL/ stem1 verbs whose stem2 is segmentally and/or tonally distinct, e.g.:

tsîi/tsîit ‘sneeze’ tâaw/tàaw ‘pray’
 lûo/lûoq ‘vomit’ nîel/nîel ‘argue’
 kâng/kàn ‘evaporate’ lûut/lûut ‘enter’

By a count of 112 vs. 71, a majority (61%) of /L/ stem1 verbs have an identical stem2. Representative examples:

tùu/tùu ‘sow’ khèel/khèel ‘change’
 khòo/khòo ‘throw’ liem/liem ‘welcome’
 tsòw/tsòw ‘challenge’ thàan/thàan ‘waste’
 thèy/thèy ‘know’ hâp/hâp ‘bark at’
 hìl/hìl ‘teach’ thòt/thòt ‘send (thing)’
 hàaw/hàaw ‘yawn’ ìq/ìq ‘belch’

On the other hand, /L/ verbs such as the following undergo a segmental change in stem2:

| | | | |
|-----------|-----------------|---------------|--------------------|
| tsùu/tsùq | ‘peck’ | lòm/lòp | ‘celebrate’ |
| bàa/bàt | ‘hang’ | tsùn/on/tswòt | ‘step on’ |
| lùm/lùp | ‘lie down’ | bèeng/bèt | ‘beat (w/hands)’ |
| sùn/sùt | ‘stab, prick’ | kàp/kàa | ‘cry’ |
| bòng/bòq | ‘break (intr.)’ | pèt/pèe | ‘bite’ |
| làay/lày | ‘dig’ | èq/èe | ‘split (firewood)’ |

The observed vowel shortening and final consonant changes are discussed in the next section.

3.3. Stem2 formation by syllable type

In the following paragraphs stem2 formation is examined on the basis of the syllable shape of the input stem1 verb form.

3.3.1. Stem1 = CVV

As summarized in the following table stem1 CVV verbs have five different stem2 shapes, presented in order of frequency:

| stem1 ↓ | CVV (L) | CVq (HL) | CVVt (HL) | CVt (L) | CVq (L) | totals |
|----------------|---------|----------|-----------|---------|---------|--------|
| /HL/ | 0 | 11 | 11 | 0 | 0 | 22 |
| /H/ | 1 | 0 | 0 | 8 | 0 | 9 |
| /L/ | 31 | 5 | 1 | 4 | 8 | 49 |
| totals: | 32 | 16 | 12 | 12 | 8 | 80 |

As was seen in §3.1, CVV verbs are disproportionately L tone. This is in part due to the fact that many CVV syllables derive from pre-KT *CV?, and historical *CVT requires L tone. There are other generalizations:

If stem1 CVV is /HL/ tone, the stem2 form will keep HL tone, splitting evenly between CVq and CVVT:

| | | | |
|----------|---------|------------|----------|
| nêe/nêq | ‘eat’ | pâa/pâat | ‘thin’ |
| gûu/gûq | ‘steal’ | khûu/khûut | ‘cough’ |
| pûo/pûoq | ‘carry’ | tsîi/tsîit | ‘sneeze’ |
| bûo/bûoq | ‘spill’ | gûo/gûot | ‘try’ |

It can be recalled from §3.1 that CVVT syllables are overwhelmingly HL tone, which explains why the HL of stem1 is carried over into stem2 (the majority of which are L tone). With one exception, *ûu/ûut* ‘yelp’, this is the only source of falling tone CVVT in stem2 forms. check XX The CVq stem2 forms with HL tone derive from pre-KT *CVVk.

If stem1 CVV is /H/ tone, its stem2 form will be CVt with L tone:

| | | | |
|---------|-----------------|---------|------------------|
| băa/bàt | ‘borrow, owe’ | pũu/pùt | ‘carry’ |
| gǎo/gòt | ‘dry, withered’ | săa/sàt | ‘hot (temp.)’ |
| lũu/lùt | ‘precious’ | văa/vàt | ‘leak’ |
| năa/nàt | ‘sick, ache’ | věe/vèt | ‘look at, watch’ |

The one verb, *thũi/thùi* ‘die’ is a double exception: It is the only /H/ CVV stem1 that does not form its stem2 in CVT, and it is the only non-L CVV that takes a stem2 CVV.

If stem1 CVV is L, 31 out of 49 (or 63%) do not change:

| | | | |
|-----------|----------------|-----------|------------|
| bềe/bềe | ‘add to’ | khùu/khùu | ‘cover’ |
| đii/đii | ‘be in pieces’ | khùo/khùo | ‘rinse’ |
| hlòo/hlòo | ‘trample’ | sàa/sàa | ‘thick’ |
| khềe/khềe | ‘peel open’ | tsiè/tsiè | ‘go, walk’ |

These are the verbs that had *-ʔ in both stem1 and stem2 in pre-KT. Other CVV verbs add *-q* [ʔ] in stem2 with either HL or L tone:

| | | | |
|-----------|----------------|------------|--------------------|
| kàa/kàq | ‘burn (intr.)’ | hlàa/hlâq | ‘fall from height’ |
| ngàa/ngàq | ‘stop’ | hlùu/hlûq | ‘fall (over)’ |
| sàa/sàq | ‘build’ | khie/khîeq | ‘fall, decrease’ |
| sùu/sùq | ‘pound, punch’ | tsùu/tsûq | ‘peck’ |
| thàa/thàq | ‘excrete’ | zùu/zûq | ‘rain’ |
| vòo/vòq | ‘hit, beat’ | | |

Four verbs add *-t* and shorten the vowel: XX pàa vs. phàt = intr/tr?

| | | | |
|---------|----------------------|-----------|--------------------|
| bàa/bàt | ‘hang’ | phàa/phàt | ‘good’ |
| pàa/pàt | ‘spread out (intr.)’ | phàa/phàt | ‘spread out (tr.)’ |

Finally, one verb takes *-t* but keeps its long vowel (with HL tone): *tsòo/tsòot* ‘blind’.

3.3.2. Stem1 = CVN

Stem1 verbs have two possible segmental realizations in their corresponding stem2: They can keep the nasality of the final consonant (changing *-ng* to *-n*), or they can denasalize the final consonant (*-ng* changing to pre-KT **-k*, then *-ʔ*). As seen in the following table, only 15 out of 90 CVN verbs have L tone. All of them, however, denasalize in forming stem2, and only 5 verbs with HL or H tone do the same:

| stem1 | stem2 → | CVm | CVp | CVn | CVt | CVng | CVq | totals |
|----------------|---------|-----|-----|-----|-----|------|-----|--------|
| CVm | /HL/ | 15 | 1 | | | | | 16 |
| CVm | /H/ | 15 | 2 | | | | | 17 |
| CVm | /L/ | 0 | 3 | | | | | 3 |
| CVn | /HL/ | | | 5 | 0 | | | 5 |
| CVn | /H/ | | | 6 | 1 | | | 7 |
| CVn | /L/ | | | 0 | 3 | | | 3 |
| CVng | /HL/ | | | 10 | | 1 | 1 | 12 |
| CVng | /H/ | | | 19 | | 0 | 0 | 19 |
| CVng | /L/ | | | 0 | | 0 | 8 | 8 |
| totals: | | 30 | 6 | 40 | 4 | 1 | 9 | 90 |

The following illustrates the maintenance of nasality in stem2:

| | | | |
|------------|-----------------|-----------|---------------|
| kûm/kùm | ‘descend’ | vôm/vòm | ‘black’ |
| nôm/nòm | ‘press’ | šim/sim | ‘count, read’ |
| thâm/thàm | ‘touch’ | dũm/dùm | ‘blue’ |
| zîn/zìn | ‘travel, visit’ | mĩn/mìn | ‘ripen’ |
| zûn/zùn | ‘melt’ | sẽn/sèn | ‘red’ |
| tân/tàn | ‘cut, chop’ | phũn/phùn | ‘murmur’ |
| hlûng/hlùn | ‘arrive’ | hĩng/hìn | ‘alive’ |
| tsîng/tsìn | ‘watch’ | bũng/bùn | ‘stoop’ |
| bêng/bèn | ‘collect money’ | mãng/màn | ‘use’ |

As seen, stem1 *-ng* changes to *-n* (suggesting that there once was an alveolar suffix to condition the change). There is one exception, *hûng/hùng* ‘come’, which is also the only CVN verb that has HL tone in stem2.

Denasalization of a final *-m*, *-n* or *-ng* is seen in the following examples:

| | | | |
|------------|----------------|------------|------------------|
| lùm/lùp | ‘lie down’ | dôm/dòp | ‘lift (w/hands)’ |
| hlàm/hlập | ‘untie’ | tũm/tùp | ‘aim, intend’ |
| sàm/sàp | ‘cry out’ | zỗm/zòp | ‘connect, join’ |
| sùn/sùt | ‘stab, prick’ | mẫng/màt | ‘catch’ |
| pàn/pàt | ‘begin’ | | |
| khàng/khàq | ‘awake’ | hlêng/hlèq | ‘exchange’ |
| tsìng/tsìq | ‘wise’ | | |
| hlòng/hlòq | ‘pick (beans)’ | | |

The regular pattern with L stem1 is seen in the first column. The third column includes all five exceptional HL and H verbs which undergo denasalization.

3.3.3. Stem1 = CVN

Stem1 CVVN verbs show a similar skewing to CVN with respect to whether the final consonant denasalizes or not in stem2:

| stem1 | stem2 → | CVVm | CVp | CVVn | CVt | CVVng | CVq | totals |
|----------------|---------|------|-----|------|-----|-------|-----|--------|
| CVVm | /HL/ | 12 | 5 | | | | | 17 |
| CVVm | /H/ | 17 | 3 | | | | | 20 |
| CVVm | /L/ | 2 | 4 | | | | | 6 |
| CVVn | /HL/ | | | 6 | 1 | | | 7 |
| CVVn | /H/ | | | 7 | 0 | | | 7 |
| CVVn | /L/ | | | 6 | 6 | | | 12 |
| CVVng | /HL/ | | | 4 | 1 | 0 | | 5 |
| CVVng | /H/ | | | 27 | | 0 | | 27 |
| CVVng | /L/ | | | 1 | | 1 | 1 | 3 |
| totals: | | 31 | 12 | 51 | 8 | 1 | 1 | 104 |

However, there are two differences. First, L tone CVVN is not required to denasalize. Second, denasalization of CVVm to CVp is not restricted to L tone stem1 verbs. The different patterns are seen in the following examples:

| | | | |
|------------|-----------|-----------|------------------|
| pôm/pòm | ‘swell’ | hlêm/hlèp | ‘deceive, cheat’ |
| lăam/làam | ‘dance’ | hõom/hòp | ‘distribute’ |
| liim/liim | ‘shady’ | lòom/lòp | ‘celebrate’ |
| hûon/hùon | ‘cook’ | bûon/bwòt | ‘wrestle’ |
| dõon/dòon | ‘drink’ | sòon/sòt | ‘push’ |
| thàn/thàan | ‘waste’ | khèn/khèt | ‘hit, strike’ |
| gûong/gùon | ‘prepare’ | bèeng/bèq | ‘beat (w/hands)’ |
| lěeng/lèen | ‘fly’ | | |

As seen, denasalization is accompanied by the shortening of the preceding vowel. Historically such nasals were glottalized, and before which long vowels were not permitted: *CVVN > CVVNʔ > CVNʔ > CVT. As a result, *-p* and *-t* have two pre-KT sources: *T and *Nʔ. As a result, when a nasal becomes a stop in stem2, the preceding vowel is shortened. This applies equally well to diphthongs:

| | | | |
|-----------|----------|------------|-----------|
| tiem/tyèp | ‘invite’ | bûon/bwòt | ‘wrestle’ |
| liên/lyèt | ‘big’ | tsûon/twòt | ‘step on’ |

Since CVVT have a long vowel in both stem1 and stem2, there is a potential long/short contrast on diphthongs before final *-p* and *-t*: *lyèt* ‘big’ (stem2) vs. *sìet/sìet* ‘spit’.

Two exceptional verbs are worth noting: *kèeng/kèeng* ‘nude, naked’ does not change *-ng* to *-n*, while *hèeng/hèt* ‘pack, put in (basket)’ exceptionally changes *-ng* to *-t*.

3.3.4. Stem1 = CVI, CVVI

32 CVL and 29 CVVL verbs occur in the lexicon. All appear without segmental changes in stem2:

| | | | | | | |
|------|----|----|-------------|---------------|-----------|--------------|
| CVI | HL | 6 | khôl/khòl | ‘accumulate’ | hêl/hèl | ‘uneasy’ |
| CVI | H | 12 | phăl/phàl | ‘allow’ | vêl/vèl | ‘dazzle’ |
| CVI | L | 14 | lèl/lèl | ‘be defeated’ | phâl/phâl | ‘extinguish’ |
| CVVI | HL | 8 | hôol/hòol | ‘look for’ | dâal/dâal | ‘protect’ |
| CVVI | H | 12 | sêel/sèel | ‘hide (tr.)’ | bôol/bòol | ‘do’ |
| CVVI | L | 9 | tsòol/tsòol | ‘rest’ | vèel/vèel | ‘excessive’ |

In all cases stem2 is L tone. As a result, L tone CVL and CVVL verbs will be identical in stem1 and stem2.

3.3.5. Stem1 = CVG, CVVG

There are 19 CVw and 8 CVVw verbs in the lexicon. CVw have two realizations which are predictable by tone: If the stem1 verb is HL tone, stem2 will be CVV. If stem1 is H or L, stem2 will be CVw. On the other hand, all CVVw verbs are realized CVVw with L tone:

| | | | | | | |
|------|----|---|-----------|----------------|-------------|-----------|
| CVw | HL | 8 | thôw/thòo | ‘get up’ | tsôw/tsòo | ‘dig’ |
| CVw | H | 4 | sôw/sòw | ‘boil (intr.)’ | kějw/kějw | ‘bare’ |
| CVw | L | 7 | kòw/kòw | ‘call’ | kìw/kìw | ‘knock’ |
| CVVw | HL | 4 | tâaw/tàaw | ‘pray’ | pâaw/pàaw | ‘proud’ |
| CVVw | H | 2 | zâaw/zàaw | ‘wide’ | thăaw/thàaw | ‘fat’ |
| CVVw | L | 2 | hâaw/hàaw | ‘yawn’ | zâaw/zàaw | ‘include’ |

Recall from §XX that [ow] is likely derived from /aw/. The alternations seen in the first row above therefore traces back to pre-KT *thâw/thàw/, *tsâw/tsàw/, where stem2 The historical developments are: *aw > ow? > o? > oo.

There are 18 CVy and 31 CVVy verbs in the lexicon. Both change to L in stem2. In addition, CVVy undergoes vowel shortening to CVy:

| | | | | | | |
|-----|----|----|-----------|--------------|-----------|------------|
| CVy | HL | 1 | sêy/sèy | ‘say, speak’ | | |
| CVy | H | 4 | hlây/hlây | ‘run’ | vějy/vějy | ‘infected’ |
| CVy | L | 13 | kòy/kòy | ‘keep’ | gějy/gějy | ‘late’ |

| | | | | | | |
|------|----|----|-----------|---------------|-----------|--------|
| CVVy | HL | 6 | sûuy/sùy | ‘carve’ | hlây/hlây | ‘chew’ |
| CVVy | H | 16 | nũoy/nwòy | ‘rub against’ | vũuy/vùy | ‘bury’ |
| CVVy | L | 9 | hàay/hày | ‘breathe’ | lùoy/lwòy | ‘pull’ |

The observed shortening is due to historical glottalization, which was subsequently lost: CVVy? > CVy? > CVy.

3.3.6. Stem1 = CVT, CVVT, CVq

There are 13 CVp and 10 CVT verbs in the lexicon. All have L tone in both stem1 and stem2. The stem2 form may be either CVV or unchanged:

| | | | | | | |
|-----|-----|----|-----------|--------|-----------|---------|
| CVp | CVV | 3 | kàp/kàa | ‘cry’ | tèp/tèe | ‘taste’ |
| CVt | CVV | 6 | pèt/pèe | ‘bite’ | vùt/vùu | ‘drill’ |
| CVp | CVp | 10 | dìp/dìp | ‘pay’ | hlèp/hlèp | ‘fold’ |
| CVt | CVt | 4 | thòt/thòt | ‘send’ | vòt/vòt | ‘cold’ |

There are seven CVVp and 23 CVVt verbs in the lexicon. All but three have HL tone in stem1. Stem2 maintains the long vowel, but changes the tone to L:

| | | | |
|-------------|---------|-------------|---------------|
| tsôop/tsòop | ‘suck’ | tsêep/tsèep | ‘sip, smoke’ |
| kâap/kàap | ‘shoot’ | zâap/zàap | ‘fan, winnow’ |
| lûut/lùut | ‘enter’ | kîet/kîet | ‘bite’ |
| sôot/sòot | ‘long’ | hâat/hàat | ‘strong’ |

The three remaining CVVT verbs have /H/ tone in stem1 and L in stem2: *gòot/gòot* ‘punish’, *zèep/zèep* ‘whip’, *zûut/zûut* ‘massage, plaster’. XX check R of goot.

There are 70 CVq verbs in the lexicon. Of these 47 (or about 2/3) maintain *-q* in stem2. These verbs ended in **-k* in both forms pre-KT. All but four of these change the tone to L:

| | | | |
|---------|---------|-----------|-----------|
| ìq/ìq | ‘belch’ | hũq/hùq | ‘lustful’ |
| měq/mèq | ‘mould’ | thâq/thàq | ‘new’ |

Four CVq verbs have HL tone in both stem1 and stem2:

| | | | |
|-----------|------------|-----------|-----------------------|
| gîq/gîq | ‘threaten’ | hûq/hûq | ‘favor’ |
| hlêq/hlêq | ‘exchange’ | hlâq/hlâq | ‘drop sth. into sth.’ |

The remaining 23 verbs drop *-q* in stem2. These changed their stem1 **k* to glottal stop in stem2. The **-ʔ* subsequently dropped out. All such verbs have L tone in stem2:

| | | | |
|-----------|---------|---------|-----------|
| khâq/khàa | ‘shut’ | tìq/tì | ‘enflame’ |
| kěq/kèe | ‘burst’ | kôq/kòo | ‘point’ |

For the present purposes note that in addition to the stem1 nominalizations, there are two types of nominalization which have opposite properties concerning stem form:

| | Subject nominalization | Event nominalization |
|--------------|-------------------------------|------------------------------|
| Transitive | tsápáng pèt ‘child biter’ | tsápáng pèe ‘child biting’ |
| Intransitive | tsápáng nǚuy ‘laughing child’ | tsápáng nùy ‘child laughing’ |

A subject nominalization creates a nominal oriented towards the participant that fulfills the subject role in the corresponding sentence. It is translatable with English *-er* if the verb is transitive, and with either *-er* or *-ing* if the verb is intransitive (cf. ‘child laugher’). Stem1 occurs in both situations. An action or event nominalization is similar to the English gerund, translated with *-ing*. If the verb is transitive, the event nominalization is frequently ambiguous. Thus, ‘child biting’ could mean ‘biting by the child’ or ‘biting of the child’ (by someone/something). If the verb is intransitive

(see §XX for further discussion of these contexts). In addition,

| stem2: | | CVw | CVV |
|---------------|----|------------|------------|
| CVw | HL | 0 | 8 |
| CVw | H | 4 | 0 |
| CVw | L | 7 | 0 |