The occurrence of schwa constitutes one of the major problems in many Salish languages. The problem begins at the observational level: one often doubts whether, in a particular word, a schwa is present in its unstressed part. And once the presence of schwa has been established, say, on the basis of slow, deliberate speech of several informants, the next problem is whether or not schwa, in a particular position, is predictable and hence non-phonemic. Once its phonemic status is proved, there still remains the problem whether schwa is predictable once the morphemic makeup of a word is given.

The present paper deals with a class of occurrences of schwa in Shuswap which is not phonemically predictable, and the morphemic status of which is, so far as I know, unique in Salish.

Shuswap lacks schwa as a separate stressable vowel. Under the stress, there are the vowels /a e i o u/ and rarely /Λ/. In unstressed syllables there is only one vowel, which in slow speech is phonetically similar to stressed /e/ (phonetically [ɛ]). Phonetically, there are also unstressed [i(:), u(:)], but these represent the vocalic forms of /y/ and /w/. Thus, the reduplication of V k"\textit{uw} slip, slide /k"\textit{wk}"\textit{im}/ is pronounced [k"\textit{uk}"\textit{kim}]; the form with consonant reduplication of /tq"ews/ together /tq"eq"ws/ is pronounced [t"\textit{q}"eq"us] companion (where interconsonantal /w/ is automatically produced [u]). Compare, on the other hand, the suffix /-us/ face which in unstressed position simply loses its vowel, e.g. in /c-pal-s/ smudgy-faced, or the vowel of /mus/ four which is reduced to schwa in /s-mas-ésqt/ Thursday.

In general, then, stressed /Vw  Vw  Vw  Vw/ (V=stressed vowel) are matched by unstressed /w  w  y y/ pronounced [u u i i] in phonetically "vocalic" positions. These "vowels" are less subject to reduction in fast speech than is unstressed /e/, except that certain instances of unstressed /e e?/ show the same relative stability as /y y/ [i i], etc. It can be shown that these cases of /e e?/ represent a third resonant-pair /h  h/. These cases do not concern us here; we deal with the remaining instances of unstressed vowels, which are all written
2. The Shuswap instances of /a/ fall into a number of categories. Morphologically least significant are those cases where /a/ is phonemically predictable. Such is the case where an unstressed root /C_a_C/- is not adjacent to a vowel, in which case its form will be /C_1 a C_2/. This case typically obtains in stressless roots, e.g. /qop-em/ to bandage, /qop-ekst/ pot-holder (-ekst/ hand) but /qap-xit-s/ he bandages it for him. Morphologically significant are those cases where /a/ appears without phonetic necessity, cf. on the one hand /qam-nwén-s/ he accidentally hits it (besides root-stressed /qém-n-s/ he hits it) and on the other hand /qam-nwen-s/ he accidentally swallows it (besides suffix-stressed /qm-nt-és/ he swallows it). It is clear that the /a/ in /qamnwéns/ is conditioned by the root-stressed nature of the verb to hit and represents a reduction of stressed /é/ in the same way as the /a/ in /smesésqt/ Thursday is a reduction of /ú/ in /mus/ four.

The rule exemplified in the above two verbs is not without exceptions in Shuswap. For instance, the suffix-stressed verb /s' em/ to hit, whip has the form /s'ap-/ with several suffixes beginning in a vowel, e.g. /s'ap-ekst/ get hit on the arm. Such cases are unexplainable in Shuswap; in a wider setting they would be explained if the verb historically had root-stressed forms.

3. Besides phonemically predictable /a/ and /a/ as a reduction of a stressed full vowel, there are a number of incidental instances of /a/ which are reductions of resonants. The /a/ in /'úpækst/ ten (the combination of stressed /'úp-/ and the unstressed form of /-(é)kst/ hand would give */'uokst/) must go back to /n/, cf. Th. /'úpnekst/. The /a/ in Sh. /sämex/ guardian spirit goes back to /w/, cf. Sh. /wìmex/ to live, Kal. /su:mé's/ guardian spirit.

4. The cases of Sh. /a/ we are particularly concerned with here are those which result from what we shall term "truncated reduplication", which can be defined as follows: a root /C_1(V)C_2/- is reduplicated to /C_1 a C_1(V)C_2/-; the addition of the nominalizer /s/- to this reduplication results in /s-C_1 a C_1(V)C_2/-.

The latter form can in a number of cases be reduced to /s-aC_1(V)C_2/-, i.e. the consonant of the reduplication-syllable is dropped, but the vowel remains. Three groups of cases have to be distinguished: (a) full and truncated reduplication...
are in free variation, (b) truncated reduplication is regular with the nominalizer but the full reduplication is found in other cases, (c) only the truncated form occurs. It is clear that in case (c) there is no direct evidence in Sh. that we are faced with a truncated reduplication — we just have an "unexplained /a/" after the nominalizer. It is our purpose to show that at least some of the cases (c) historically represent truncated reduplications, and to sum up the remaining cases, which may be explained as belonging to this type or to the type /səməx/ (see 3) as more comparative evidence becomes available.

5. The most obvious cases of truncated reduplication are those where full and truncated form occur side by side:

(1) /kakew/ far, /s-(k)akew-s/ its being far.
(2) /šəx*eyt/ all, /s-(š)*αx*eyt-s/ its being all.
(3) /papen/ to find, /s-(p)papen-s/ his finding it.

The above cases concern nominalized verb-forms of the "factual" type. Free variation was also observed in the nouns

(4) /s-(c)čuye/ porcupine.
(5) /s-(c)səwémx/ Okanagan people.

In another group of cases, the nominalization of a verb was recorded in truncated form exclusively:

(6) /šəx*yystēs/ he likes it, /s-šəx*yystēs/ his liking it.
(7) /səqnim/ to hear, /s-əqnim/ his hearing it.

All the above cases except (1) concern "factual" nominalizations. There are, in addition, simple nouns which show truncated reduplication:

(8) /s-akéwx/ Cree Indians, lit. the faraway people, cf. /kakew/ under (1).
(9) /s-əq*lút/ word, cf. /q*əq*lút/ to speak.
(10) /s-əx*ú/ a coughing cold, cf. /š*əx*ú/ to cough.
(13) /s-əcex/ witness, cf. /cæčx/ to look, /s-əcex/ to look hither (where /s-/ is the allomorph of /c-, s-/ hither required before /t t c c/).
6. There remain a number of cases of Sh. /səC1.../ which are not matched by forms with full reduplication. These cases are not necessarily the result of truncated reduplication. They are listed below, with appropriate comments.

Historical truncations of reduplicated forms may be safely assumed in those cases where closely related languages show reduplication:

(14) /s-əq*yic/ rabbit, cf. Th. /sq*əq*yic/, Kal. /sq*əq*ci?/ (here CdA. has the unreduplicated form /sq*icyni/).

(15) /s-ək*ůʃt/ star, cf. Th. /nk*ək*ůʃt/, Kal. /ək*kůsəm/ (where /ə-/ plus reduplication has a diminutive function).

(16) /s-ək*əw/ rosebud, cf. Th. /sk*ək*əw/.

(17) /s-əkléx*ə?/ muskrat, cf. Th. /skəkaléx*ə?/.

Those of the above Sh. cases which start with /səK.../ (K=obstruent, R=resonant) allow an alternative pronunciation /skəR.../ but the forms given above (14, 17) are practically certain to be the original ones and hence historically represent truncated reduplications.

The following two cases are slightly more difficult: they have correspondences with reduplication, but these reduplications are of a different type:

(18) /skáʔ?/ cactus, cf. Th. /skəzaʔʔ/. Th. has a total reduplication here; nevertheless an older Sh. */s-kaʔʔ/ is probable.

(19) /s-əcəʔ/ raven, cf. Kal. /scəʔʔ/ crow. The Kal. form, with final reduplication, suggests that /s-/ is the nominalizer; if so, the Sh. form goes back to */s-Scəʔ/.

The remaining cases of which cognates are known each present their own peculiar problems:

(20) /səxəxəʔe/ father-in-law, cf. Kal. /səxaʔxə/ wife's father. Here the same remark as was made under (19) would apply, except that CdA. has /nasəʔaʔxə/, which throws doubt on the status of /s/ as the nominalizer. Th. /sxiʔəʔi/, shiʔ-hiʔ/ pleads for the nominalizer, as does Pug. /(s)xəxə/ in-laws, but this may be a secondary development, cf. Sq. /səʔxə/ parent- or child-in-law, where /s/ belongs to the root. A Sh. reduplication /C1sC1VC1C2/ (as we would have in a presumed */səxəxəxəʔe/) is in itself possible: it is regular in comparatives, e.g. /q*ec/ warm, /q*əq*eʔc/ warmer. The Sh. form could be a derivative of V*xeʔ, cf. /xəxəʔ/ impressive, intelligent, powerful, etc.
(21) /s-ax*yenst/ woodworm, cf. Sh. /s-x*y-x*eye/ ant (the latter with the known cognates Th. /sx*x*-eye/, Kal. /sxux*iye/, CdA. /sux*-enef/, cf also Pug. /šija/ maggot). An underlying Sh. */sx*e*yenst/ is possible but by no means certain, as there is another Sh. case where the formative /-(ë)nst/ is preceded by /C1WCy/-, viz. /(s)łak*yenst/ medicine made of balsam-tree bark, so that the original Salish root may be */sux*-/, cf. the CdA. form.

(22) /s-aq*ut/ half besides /s- quàt/ side. Here the other evidence for truncated reduplication strongly suggests an older */s- quàt/ half. The related forms only cause several problems of a different nature (Kal. / quàt/ half of something, Sq. /qw(?), quàw(?), quàu? side, etc., Pug. /ku/ to be together, /šku?/ companion).

There is, in addition, a case where the cognates point to a "sonantal" (cf. 3) rather than a reduplicative origin of /a/:

(23) /saklep/ coyote, cf. Th. /snklijep/, Kal. /sançalé(p)/. Here the Sh. /a/ goes back to /n/, as it does in /núpakst/ ten. Note that this word has the structure /saKR.../ and hence allows an alternative /sKeR.../ (cf. nos. 14, 17); Here the form with /saKR.../ is certainly the original one. These vocalizations of syllabic /n/ are rare and incidental in (Northern) Shuswap, cf. e.g. /snce-sqexe?/ horse, where the /n/ is preserved.

Finally, there are a number of words of the type under discussion of which no cognates are known. Only of the first of these there is a possible interior reconstruction as a truncated reduplication. The others are merely summed up. Additional comparative data may clear up the origin of /sa.../ in these cases.

(24) /satétk*e/ river, cf. /ste?/ to drink; possibly < */statétk*e/. The suffix water occurs both as /-k*e/ and as /-étk*e/.

(25) /sansyulax*/ moss.
(26) /sattèke/ mountain blueberry.
(27) /sæq*ex/s Saskatoonberry.
(28) /sawaqìn/ unidentified plant.

For truncated reduplication in plant names see (16, 18) above.

(29) /sax*epmx/ Shuswap.
(30) /sak*ak*fìnmx/ people of Sugar Cane Reserve near Williams Lake.

For truncated reduplication in ethnic names see (5, 8) above.
It remains to define the theoretical status of /a/ in such cases as
(6) /saxystás/, (9) /səq'lút/, etc. There is sufficient evidence to show
that we are dealing with roots /qy-, qel-/ (cf. e.g. /qel/ discuss, talk
in group, with interior glottalization). What is reduplicated in such cases
is not a syllable /Ca/ but just the syllabic peak. The term "truncated re-
duplication" may synchronically be applied to those cases which are matched
by full reduplications (1-13). Where no such counterpart exists, and where
nevertheless the existence of the unreuplicated root in Sh. is established
(as in 22), we could speak of "syllabic reduplication". The remaining cases
are on the synchronic level best kept apart; e.g. in /saxépmx/ Shuswap we
do not really know whether the word contains a V sax- with the well-known
suffx /-ep/ (semantically cf. Sh. V sax- recognize and Kal. V-six root
of several relationship terms) or whether we are dealing with a syllabically
reduplicated form of Sh. V-xep- unfold. For both interpretations there would
be analogies in other tribal-ethnic terms: (a) recognize, know and procreate,
beget cf. Indo-European V-g'en- (Lat. gens, genus, etc.), (b) spread cf.
Spóroi (Procopius), one of the possible etymologies of which is the widely
spread ones -- a notion quite applicable to the Shuswap.

Footnotes
1) For a more detailed discussion of Shuswap phonology see the author's
The Kalispel, Coeur d'Alene, Southern Puget Sound Salish and Squamish mater-
ial is taken from the respective descriptions by Vogt, Reichard, Snyder and
the author; the Thompson material is based on the author's field notes, for
which thanks are due to Mrs. Mamie Henry and Mr. Louis Philips of Lytton,
B.C.
2) Quoted from Nancy J. Turner, Thompson Indian Ethnobotany (Preliminary