Interior Glottalization and the Suffix -(v)p
in Lillooet, Shuswap and Thompson

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0. Introduction. Lillooet, Shuswap and Thompson belong to the Interior branch of the Salish (or Salishan) language family, and are spoken in British Columbia, Canada. (For a map of the Salish language area, see Thompson 1979.) In what follows, we discuss two aspectual devices in Lillooet, Shuswap and Thompson, in sections 2-6. General information on the phonology of these languages is given in section 1. Lillooet material is taken from Van Eijk 1985,1 Shuswap material is from Kuipers 1974, and Thompson material is from Thompson and Thompson 1980. Lillooet forms marked F are from the northern dialect (spoken around Fountain), and forms marked M are from the southern dialect (spoken around Mount Currie); both dialects are completely mutually intelligible; forms bearing no marker are the same in both dialects.

1. Phonology: general information. Lillooet, Shuswap and Thompson share the following consonants: p f e c q k k' k'w q d q' d' s x x' x w h n m n' i' y y' y w w. (The superscript ' indicates glottalization.)1 Lillooet and Thompson also have w, while Shuswap has v (the latter pronounced [i] or [u], see Kuipers 1974:21). Lillooet and Thompson also have v (or [v]) in a few loan words. In addition, Lillooet and Thompson have z [z] and velarized q [q], while Shuswap also has velarized [j]. (Lillooet q resembles Arabic ġadh, while [j] resembles English 'dark I' of 'pilip'.) Moreover, Lillooet and Thompson have ç (In Shuswap, ç coincides with ?, see Kuipers 1974, section 1.3.) As for vowels, Lillooet has a i u ə (in broad phonetics [g e o a]), and velarized q ç ç ç [a ê o A].3 Shuswap falls into two major dialects: Western (described in Kuipers 1974) and Eastern. Both dialects have e i u ø ø (corresponding to Lillooet a i u ø q q q), while Eastern Shuswap (which is not reflected in the discussion below) also has a counterpart to Lillooet ø. Thompson has e i u ø ø ø (corresponding to Lillooet a i u ø q q q). The favorite root shape in these languages is CVC. Lillooet and Thompson (but not Shuswap) allow ø to occur under the stress. All three languages delete or insert unstressed ø under certain morphophonemic conditions. The vowel ø/ø is rare in all three languages. (In particular, it is difficult to find roots which have ø/ø and also employ any of the aspectual devices discussed below. We therefore leave roots with ø/ø out of consideration in this article.)

2. Aspect in Lillooet, Shuswap and Thompson. Like other Salish languages, Lillooet, Shuswap and Thompson have a complex aspectual system. (For our definition of 'aspect' we follow Comrie 1983: 'aspects are different ways of viewing the internal temporal constituency of a situation' (p. 3). See Thompson 1979:733-36 for a general discussion of Salish aspect.) Many details of the aspectual systems of Salish languages are still unclear. However, two aspectual devices have been described in sufficient detail to permit a contrastive analysis. These devices are (1) 'interior glottalization', which consists of the insertion of the glottal stop (?) adjacent to a root-vowel, (2) the addition of a suffix -(v)p or -(v)p to a root. Both interior glottalization and the affixation of -(v)p have an inchoative function (at least in Lillooet and Thompson). Moreover, these devices are largely in complementary distribution on the basis of the shapes of the roots involved. We discuss the Lillooet facts in section 3, Shuswap in 4, and Thompson in 5. In section 6 we discuss some problems that are presented by the data.

3. Lillooet. A number of Lillooet roots CVC can appear in the shape CVCV ('interior glottalization') or CVC-p (addition of the suffix -(v)p). Both interior glottalization and the addition of -(v)p generally refer to an incipient change or a change in progress, and the term 'inchoative' or 'imperative' may be used here. Interior glottalization is applied almost exclusively to roots CA (A is ø), while Shuswap uses CA. Examples of CVVC: ma?kw "to get dull (blade)" F (cf. mak-makw "dull (blade)" F), n-ti?qw "water gets muddy" (cf. n-ta?qw-tiqw "water is muddy, dirty"), ma?qa "to get damp" (cf. nas-nas "damp"), la?k "to get loose, untied" (cf. lak-lakw "loose, untied"), n-li?kw "water gets clear" (n-li?kw-lakw "water gets clear"), kā?SW "to go out farther" (cf. kāw-lax "to move away", the latter with the suffix -lax "bod­ y, oneself"); the insertion of ø and the glottalization of w in kā?SW are regular), yi?p "to grow (up)" (cf. yi?p-in "to raise someone or something"), ma?qa "to get warm (atmosphere, weather)" (cf. na?q-na?qw "warm (atmosphere, weather)"), kîj-gw "to get embarrassed, hurt" (cf. kîj-us-am "to be em-
barrassed, hurt'). With roots CIV or CIV*, interior glottalization yields the forms CIV I CIV, e.g. IIV to fall apart (cf. IV-in to dismantle, transitive (in)"). Interior glottalization may combine with various types of reduplication and suffixation, as in IXaIX-IX "dried out" (IXx "dry", -aX "completive", and reduplication of K preceding the insertion of \( \) in terms of rule-ordering). There is also a totally unproductive type of interior glottalization where \( \) is inserted before the root vowel (CVC -> CVC). We do not consider this latter type here, since it does not serve any clear function.

Examples of the use of \( \) are: naq-7 "to get warm (atmosphere, weather)" (cf. naq "warm (weather)"), po7-7 "to get lost" (from the root po7 "to be lost"), naq-am-7 "to go blind" (cf. s-naq-naq "blind"), with the static prefix s-; the shifts in the position of unstressed \( \) as a result from deletion and insertion and are regular; both naq-am-7 and s-naq-naq show total reduplication of the root naq, kwe7-7 "to get dull (blade)" (cf. kwe7-kwe7 "dull (blade)"). Note that naq-7 and kwe7-7 are paralleled by naq-p and mkw-p respectively (see p. 2), with roots CAC selecting \( \), and roots CAC selecting -7. Here also belong the cases m7-7at id., from the roots mat- and mat- "paralyzed" and m7-7at id., from the roots mat- and mat- "paralyzed", with both roots showing total reduplication.

We have a few cases of CAC, viz. pa7q "red-hot" (cf. pa7q "white"), Xa7 "tired, aching" (no simplex), pa7q id. (cf. po7-7 id.)

The inchoative function of -7 or \( \) is not always completely clear (at least not from a non-Lillooet point of view): see m7-am-7p and m7-am7at and the cases CAC above, and note also -8l-7 "to burn" (cf. -8l-an "to light it, set fire to it, transitive (-an)"), qem-p "warm, hot" (cf. qem-an "to heat it, transitive (-an)"). It is possible that in these cases -7 and \( \) have lost part of their inchoative function, or that the inchoative function was lost in the translations. (For a further discussion of the semantics of -7 and \( \) see also section 6.)

As a rule, roots CAC retain the stress when followed by a suffix containing \( \). While roots CVC shift the stress to such a suffix. For example, from Xa7 to arrive we form Xa7-kem "I (-kan) arrive", while from naq "to be full from eating" we form naq-kem "I am full". However, stems CAC behave like roots CAC with regard to the stress, as in CAX- (root) "shy, ashamed, embarrassed" -> CAX-an7 "to poke fun at someone, transitive (-an)" vs. CAX-7-ds

"ashamed, shy" (CAX id., -us "face"). Note also the pair k7i7-7aks/k7i7-us-an on pp. 2/3. Interestingly, both interior glottalization and the suffixation of -7 yield forms CVC (e.g., ma7-kw, kaw). Forms like kaw or i7i7-7 (pp. 2 and 3 respectively) are also to be considered CVC, since the presence of -7 and unstressed 1 is automatic in these forms.

4. Shuswap. Interior glottalization in Shuswap inserts \( \) before the vowel of roots CVC (hence CVC -> CVC). Kuipers 1974:40-41 gives some 45 examples, all with roots CAC (A is r a u o). As for the meaning of forms with interior glottalization, Kuipers notes: "Many refer to a state, e.g. po7-p cooled off besides pey-n-s he cools it off for others, the meaning was recorded as the process itself, e.g. c7i7- to bleed". (p. 40). Some more examples are: m7-7ek "blunt, dull" (cf. m7-kaw -id.), c7i7 "stretched (as sweater after washing)" (cf. col-n-s he stretches it), c7i7-al "to hurt, smart, throb" (cf. c7i7-t "bitter, sour, salty"), c7i7-ep "bent over" (cf. c7i7-7-n-s he bends it down), C7i7-thin, skinny" (cf. C7i7-t id.).

The Lillooet suffix -7p is paralleled in a suffix -7p which has the form -7p after roots ending in a rounded consonant. Kuipers (1974:61, section 17.3.18) translates this suffix as "arrive(d) into a state". A few examples: pl-7p "get lost", c7i7-7p "get torn", txp-7p "provided with a ration" (for more examples see Kuipers). Interior glottalization and -7p are in complementary distribution (at least in the data supplied by Kuipers in the quoted sections) in that interior glottalization is found only with roots CAC, and -7p with roots CVC. Not all roots which select -7p are always unstressed. For example, besides pl-7p we have pl-i-n-s he loses it", and besides c7i7-7p we have c7i7-n-s he tears it". On the other hand, the root of txp-7p occurs unstressed only, as in txp-7nt-es he adds to it". Shuswap pl-7p/i-l-n-s, c7i7-7p/c7i7-n-s and txp-7p/txp-7nt-es are paralleled by Lillooet po7-p "to get lost", C7i7-an "to tear it", transitive", and txp-7nt-an "to add, to pitch in, transitive". (As is said on p. 1, Lillooet allows \( \) under the stress, but Shuswap does not. It seems that Lillooet has preserved the original Salish state of affairs, see also section 6.) Note that Shuswap forms with interior glottalization are CVC (e.g., C7i7*, plep).

5. Thompson. Thompson has the following two devices for indicating inchoativity: (1) insertion of \( \) before the vowel of so-called strong roots (basically
roots CAC, with A symbolizing e a i j u o), (3) suffixation of -sp to weak roots, i.e. roots with a. Thompson and Thompson (1980:201-202) remark that these operations convey "notions of developing action or changing state", and treat ? and -sp as 'unrelated allomorphy conditioned by the valence of the root" (op. cit., p. 201; the term 'valence' refers to the 'strong' or 'weak' status of roots). A few examples: zucked "it gets tight" (from the root zuc- "tight"), c?ek "it gets cool" (cek- "cool"), sk-?p "to get hit (by falling branch)" (sak- "to club"), k?c-?p "it comes apart" (ka- "to take apart"). As is the case in Shuswap, forms with interior glottalization and those with the p-suffix have the shape CVC. Both types of forms are weak with regard to the stress. ("It is a curious fact that both allomorphs create weak stems—even the infix for strong roots is weak": Thompson and Thompson 1980:203.) Where the stress shifts from such stems to a suffix, the forms CVC generally become CVCC, as in sak-ba-t-t-t-?s as "he (unintentionally) makes it tighter".

As for the first point, there is the problem that the inserted glottal stop and the suffix -(V)p have no formal mutual resemblance whatsoever. The most reasonable solution to this problem seems to be one which presupposes a proto-morpheme that at one stage had both ? and -(V)p and continued ? in one type of root, and -(V)p in the remaining type of root. My hypothesis is that -(V)p was originally applied to all roots (so that from Lillooet mak-"cool") the form *mak?-p was derived), that then ? was applied to all roots with A, in order to give them the same stress-status as roots with ? (so that *mak?-p became *mak?k?-p), and that finally forms with ? dropped ? since it was felt that ?, rather than -p, carried the inchoative notion, giving us *mak?k?. This solution does not account for the fact that in Lillooet we have forms CVCC, while in Shuswap and Thompson we have CVCC. It seems that Lillooet retained the original forms and that at some point in time Shuswap and Thompson applied metathesis to forms CVCC, yielding CVCC. (However, from a synchronic point of view, Shuswap and Thompson are more conveniently described as inserting ? before V immediately (without a preceding stage CVVC), and as affixing -(V)p, rather than applying metathesis to CVCC.) Assuming metathesis, the other hand, gives us a simpler diachronic picture. Also, metathesis is suggested by the following set of cases in Lillooet: stems GvC and GpC become GCvC and GpC when embedded in the combination ka-...a "suddenly, unexpectedly, after much trying (but with a sudden and unexpected result)", as in Xi?d? "to roll down" → ka-Xi?d? ("it rolled down (suddenly)", ?pK?k "broken, not usable anymore" → ka-?pK?k ("to break (like an old rope when pulled), to come loose (rotting hide of dead animal)"). Thus, in Lillooet we do not only have metathesis, but the direction of this metathesis is CVCC → CVCC, and not vice versa. It is quite possible that this was also the pattern in Shuswap and Thompson. (As we have seen in section 5, Thompson forms CVCC become CVCC when unstressed, but this seems to be due to a rather general Salish tendency to avoid initial consonant clusters that do not border immediately on stressed vowels, cf. Lillooet Xi?ka? "to do something fast" vs. Xi?m-an-ci?d? "to hurry" (Xi?m "fast", -an "hand", -ci?d? reflexivizer, -d? suffix.)

Combining the origin of ? and -(V)p with the application of metathesis, we arrive at the following schema (solid lines indicate changes in forms, dotted lines indicate the continuation of an existing form):

[See schema on p. 7]

The fact that Shuswap CC?p and CC?p result from CC?p can be proven in the following way: as we have seen on p. 1, Shuswap does not tolerate a under the stress, while Lillooet and Thompson do. Comparative Salish evidence shows that it is Shuswap that innovated here, and that it continued stressed occurrences of a as cardinal (full) vowels, with the phonetic values that approach
Proto-(Interior) Salish:
Affixation of -p:
-CACp:
Deletion of -p from CA7Cp, yielding final stage for Lillooet:
Metathesis in Shuswap/Thompson, yielding final stage for Thompson:

Shuswap:

the phonetics of a as conditioned by adjoining consonants: Kuipers (1974:26) describes the phonetics of a as follows: "The unstressed vowel a varies from [ɛ, ɐ, ɔ], in the neighborhood of rounded consonants also [5], to [a, u] or zero." Obviously, -ep continues the [ɛ] variant, while -up continues the [5] variant.

NOTES.
1. Lillooet data were collected during various periods from 1972 to 1984. Thanks are due to the Netherlands Organization for the Advancement of Pure Research (ZWO), the Ts'zil Board of Education at Mount Currie, British Columbia, and the Mount Currie Indian Band, for enabling me to carry out research on the Lillooet language. I am most deeply indebted to my Lillooet consultants for their information, assistance and advice. The hospitality of the University of Victoria, with which I am currently affiliated as a Visiting Scholar, is deeply appreciated.

2. Kuipers (1974) uses ~ instead of 4, and he uses ~ instead of 4 to indicate labialization. Thompson and Thompson (1980) use 9 and ~ instead of # ~. In this article, all consonant symbols for all three languages are standardized according to the symbols given in section 1. However, vowel symbols in the Shuswap and Thompson examples are those that Kuipers and Thompson and Thompson use.

3. Note that a and 4 overlap phonetically in [ɛ]. The phonetic realisation [4] resembles "ee" of German "Meer", while [ɛ] resembles "ee" of German "See".

4. This development would parallel developments in Germanic languages where a certain ending is attached to a root, then requires umlaut in that root, and is finally dropped, as in Old High German scōnī → Middle High German schōnī → Modern German schön, see Bynon (1985:26). We could also think of Old English *hot-i → fet, see Sapir (1949:172-180). Of course, in the Germanic cases there is a phonetic relationship between the ending and the umlaut, a relationship that is lacking between -p and ? in the Salish case.

REFERENCES

APPENDIX
Kinkade (personal communication) brings to my attention that ~- and -(V)p are also attested in the other Interior Salish Languages, viz. Okanagan-Colville, Spokane-Kalispel, Coeur d'Alene, and Columbia, although in these languages the ? infix is either very rare or (in Columbia) at least considerably less frequent than -(V)p. Kinkade also points out that 1 ? in Thompson are regularly velarized, so that this language (in contrast to Lillooet) lacks an opposition between 'clear' and 'dark' ? types (see my remarks on Lillooet and Thompson phonology in section 1). Finally, it should be noted that ? when it results from interior glottalization is comprised in total reduplication (see maʔamʔat on p. 3). Normally, a C3 that results from a morphological process is not comprised in (further) reduplication: from s-qaq'Xa "pup" (from s-qaqXa? "dog", via *s-qaqXaʔ) we derive s-qaq-qaqXa "pups" and not *s-qaq-qaqXaʔ.