

0.2 L.C. Thompson (1977:40) proposes a revised phonological chart for PS. The labials (*p *p̥ *m *m̥) are bracketed because they may have been lacking. The labiovelars *kʷ *k̥ʷ *ŋʷ *ŋ̥ʷ (the latter two additions to the traditional inventory) are regarded as having developed to p̥ p̥̄ m̥ m̥̄ in all Salish languages except St, where they yielded č č̣ ŋ (and if all St words with p̥ p̥̄ m̥ m̥̄ are borrowings, the bracketed PS labials can be eliminated from the chart). A phoneme *ŋ is tentatively added for theoretical reasons (*ibid.*, 23) -- it could possibly account for the Northern IS velar resonant γ and for some unexplained cases of y. The uvular resonants are given as (boxed) *γ *γ̣ *γʷ *γ̣ʷ; in addition there are two laryngeals *ʕ *ʕ̣. One concludes that *γ *γ̣ represent an alternative origin for IS γ γ̣. Phonemes *r *ṛ are given between brackets. The vowels are listed as *a *i *u *ə.

0.3 In what follows, sect. 1-3 consist almost entirely of material. Sect. 1 gives examples substantiating the correspondence IS ʕ ʕʷ // CS ǰ ǰʷ. Sect. 2 presents uvular - velar doublets. Sect. 3 contains all-Salish examples of l - ɫ doublets. In sect. 4 a number of conclusions are drawn from the material given in sect. 1-3. Sect. 5 deals with some IS problems of detail. In sect. 6 Thompson's proposed revision of the PS phonological chart is discussed. Sect. 7 contains some concluding remarks.

1 THE CORRESPONDENCE I.S. ʕ ʕʷ // C.S. ǰ ǰʷ, proposed in Kuipers 1978:fn. 6 is not yet generally accepted (cf. Thompson 1977:14). The set of examples has grown since, and the equation now has a firmer footing.

(1) Li ʕis Th ʕəʕís (recorded ʔaʕís) Sh ʕis- to shrink (with derivative ǰs-ʕís-s-m arch one's eyebrows; ǰ-...-s eye) // Sq ǰis- shrink, contract, cramp (with derivative ǰís-qs-am turn up one's nose; -qs nose).

(2) Li ʕeñ get tough with sb., try really hard Sh ʕn-em to growl // Sq ǰíʔn-m Ld ǰíd-ib to growl, cf. also, with (z <)y instead of n, Li záʕ-ən (inversion) Th ʕaz-én Cb ʕíy-m // Ch ǰa·y- to growl.

(3) Li ʕəʔíʔəí Sh ʕil- lose (contest, etc.) Cb ʕəl-p broke, lose Ka aál- lose in gambling // Sq ǰǰǰíʔ be lost (of special gift or ability).

(4) Cb t-ʕíl-aʔst-m cut hair Ka aíl cut with scissors // Sq ǰá-ǰl-qʷ-n cut sb.'s hair.

(5) Sh ʕʷeí- glittering Cb ʕʷəí bright, shiny, glisten // Cx ǰʷaí-, ǰʷəí- shiny.

(6) Sh yʕ- to grind // Be ʔíǰ grind, crush.

(7) Sh ʕʕtin rattlesnake // Sq ʕəǰtn id., poison.

(8) Th cʔiʕʷ Sh ciʕʷ- to bleed // Sq cə-cíǰʷ girl's puberty.

(9) Cr saʕʷ to flow // Cx saʔ-sǰʷ dew Se sa-sǰʷ-úlmixʷ damp ground Sq sa-sǰʷ damp séǰʷaʔ urinate (semantically cf. Skt dhavate flows Engl. dew).

(10) Li ʎʎʎ- Th ʎuʎ- Sh ʎʎʎ- hard // Be ʎaʎʎ Sq ʎəʎʎ id.

(11) Li 1áʎʎ-1əx make room for oneself Sh liʎʎ- loose, leaving room // Sq yəʎʎ- free, loose.

(12) Sh ʎuʎʎ-t sore // Be ʎu-ʎqʎʎ, ʎuuʎ- having sores (delabialization automatic).

Additional possible examples involve irregularities:

(13) Li ʎʎic-ém tell a joke // Be ʎʎis-m to play, joke (c - s to be explained).

(14) Sh liʎʎ thaw, open up (of ice in river) // Be ʎʎay (inversion) Cx ʎaʎʎ Se yaʎʎ Sq yaʎʎ Cl ʎaʎʎ melt, where the CS forms have y instead of l (cf. 41).

(15) Th ʎʎayʎ sleep Sh ʎʎuy-t withered, tired s-ʎʎuyʎ-m-qñ dandelion-type withered flower (-qñ head) // Cx ʎʎuw-um-us Se s-ʎʎul-um Sq s-ʎʎuy-um grey hair, where the CS forms have l instead of y (cf. also Ld qʎul-ub grey hair, with a deviating initial).

See also exx. 52, 53 and 54.

2 UVULAR-VELAR DOUBLETS. The PS velar (incl. w) and uvular series parallel each other as follows:

k	ʎ	kʎ	ʎʎ	x	xʎ	ɣ	w
q	ʎ	qʎ	ʎʎ	ʎ	ʎʎ	ʎ	ʎʎ

Here examples are presented of words that have alternative forms with members of either series. In a number of cases the alternation has a sound-symbolic value.

(16) UVULAR Cb t-ʎʎʎ-ʎʎʎ-alqʎ flute -- VELAR Cb xʎa-xʎiwʎ-mñ whistle Sh Cb xʎiw- to whistle Cw ʎ-xʎəwʎ-qəñ whistling swan. -- Conss. of both series in Ld ʎʎiw- to whistle.

(17) UVULAR Cb qʎəʎʎ- to shove, slide stg. qʎəʎʎ-p/s-c-qʎəʎʎ-n-ʎʎt-əxʎ to slide (as children playing) -- VELAR Cb kʎuw-mín-ct crawl on belly Sh kʎw- to shove, slide stg. kʎiw-lx to drag oneself along the ground kʎw-íłəp to slide (as children on sledge). -- Conss. of both series in Sh qʎiw-lx to creep.

(18) UVULAR Li 1áʎʎ-1əxʎ, etc. (see ex. 11) -- VELAR Be law, lu- loose.

(19) UVULAR Li ʎʎəy-ʎʎy-áqs maggots on head of deer Th ʎʎeʎ-ʎʎáʎe Sh ʎʎy-ʎʎeye maggots Be ʎʎa-ʎʎi eggs of bluebottle (fly) Ch məxʎ-ʎʎiy-ʎʎiy centipede-like bug in salmonberries Cz ʎʎayə-ʎʎayəxʎ fly (zool.) Se ʎʎa-ʎʎayú black fly Sq ʎʎəʎʎayʎ housefly ʎʎixʎicʎ maggots Ck ʎʎə-ʎʎeyə big fly, blowfly ʎʎə-ʎʎiyəyə (also ʎʎi-) housefly -- VELAR Li s-xʎú-xʎəʎ Th s-xʎú-xʎeʎe Sh s-xʎy-xʎeye ant Se s-xʎí-xʎn-am worm Ck xʎə-xʎíye worm in salmonberry Ld šúʎə maggots.

(20) UVULAR Li ʎʎey-t many people dead Th ʎʎey-t Sh ʎʎey- Sq ʎʎay- perish Cz ʎʎayʎ- miss, be gone -- VELAR Li xʎeʎ- Sh xʎey- disappear.

(21) UVULAR Li ǰəl Th ǰiʔ-ǰéyʔ-t steep -- VELAR Sh xl-xal-t steep n-xl-xl-
ank steep (slope) Cb xəl-xəl-t/xər-xər-t steep (bank) Ka šal steep, possibly
also Cr šar be difficult, disobedient, annoying.

(22) UVULAR Sh ʔs-t-ɬəpəq fall in the mud -- VELAR Sh ʔs-t-ɬəpək fall in
the snow.

(23) UVULAR Sh ʔqʷ-up-t explode (tire, firecracker), go off (firearm) Cr
ʔəqʷ id. -- VELAR Li ǰəkʷ burst open Sh ʔkʷ-up-t break, burst open (as egg)
Cb ʔəkʷ-p blow up, burst Sq ʔəkʷs explode.

(24) UVULAR Li qʷeqʷs small -- VELAR Li kʷikʷs Th s-kʷis id.

(25) UVULAR Cr saʔʷ flow Cb saʔ-sǰʷ dew² Se sa-sǰʷ-úlmišʷ damp ground --
VELAR Sh t-sw-suʔ-t (= -suʷ-t) dew. Cf. ex. 9.

(26) UVULAR Li n-ʔʷuʔs Th n-ʔʷʔus to sink -- VELAR Sh wʔus to dive.

(27) UVULAR Th (Lytton) zəʔʷ-zóʔʷ-t strong (person) Sh yʔʷ-yuʔʷ-t intensive,
hard (work), violent (disease), strong Cb yəʔʷ-yəʔʷ-t hard (work, rain) --
VELAR Th (Spuzzum) zuʔ-zúʷ-t strong (person).

(28) UVULAR Li s-keʔʷ wife, female friend -- VELAR Li Th Sh s-kew Cb nskaw
Fl isčėw woman's sister-in-law Ch s-čaw (Boas: man's) sister-in-law Sq čuáš
wife Cz kuwɨ wife, woman.

(29) UVULAR Cb k-šɬ-aws-n shake (a tree) -- VELAR Sh seɣ- to shake off.

(30) UVULAR Li ʔəl-ʔəl strong ʔəl-ílx māke a big effort -- VELAR Sh ɣl-
yal-t strong Cr žarʔ firm, strong.

(31) UVULAR Li n-qʷoɬon-étkʷe yellow moss Th s-qʷliʔ copper, green Cb qʷəliʔ
gall Be qʷli green, yellow Sq qʷəy-qʷi copper -- VELAR Li kʷliʔ green, yellow
kʷaʔʷús pale in face Th kʷloʔ gall kʷaʔʷ turn green Sh kʷal-t yellow kʷle-ʔəɬp
alder kʷ1-alst gall Cb kʷrayq yellow kʷrit/s-kʷraʔkán gold Ka kʷa.1íʔ yellow
Sq kʷ1úlʔ-ay alder.

(32) UVULAR Cb s-ʔʷáʔ-ʔʷaʔ cougar -- VELAR Li s-wú-ʷe Th Sh s-múweʔ Cr s-ʷaʔ
Sq (n-)s-wúʔ-wu Ck š-xʷəwa id.

(33) UVULAR Li ʔʷəl- Th ʔʷəy- to light, set fire to Sh ʔʷeɬ- glittering Cb
ʔʷəl bright, shiny, glisten Ka ʔo.1ʔ/o.1ʔ/o.1 to burn Cx ǰʷaɬ-, ǰʷəɬ- shiny --
VELAR Li wəl-wəlqʷ-ús-əm lightning Sh wl- to burn wl-wal-t shiny s-wl-ańs-m
(also -eńs-m) flower Cb s-wər-ús-m fishing torch Ka u.1 to burn Sp wiʔʔu.r
id. Cv ʔur(i), ʔurʔ fire Cr gʷel burn, blaze gʷaʔ be silvery, clear s-gʷar-p-əm
flower Se s-wil sunshine Ld gʷílič-əb shine (as fur), luster Ch wəlč- glitter
wəlqʷ- polish.

(34) UVULAR Li ʔʷoʔʷɨ sucker (fish) Sh s-ʔʷí-ʔʷle lake trout -- VELAR Th
s-we-ʷɨ fish (other than salmon) Sh s-we-ʷɨ fish (generic) we-wl-m to fish Ka
suʷéʔuɨ fish, possibly also Se s-wəl-tn Sq s-wí-tn fishnet Ld s-ʔul-ánxʷ salm-
on (generic). It is possible that (33) and (34) are originally identical (cf.
English "shiner"), cf. also Sh s-wł-wel mica wí-wł-wel snipe Cb wər-wər-íwaʔ

red-winged blackbird, etc. In that case, the semantic range of this root is comparable to that of IE *bhel-, cf. Russ. belyj white Gr. phlégō burn Engl. bleak (1. *pale, 2. a fish), bloom, etc.

(35) UVULAR Li pəʳʷ to bump into stg. Th pəʳʷ- Sh péʳʷ- to knock, rap -- VELAR Th puw-mín drum Sh pw- to drum Cb puw-mín(-tn) drum Ka pu·m to beat the drum Cr paʷ drum on drum peʷ drum on tin.

Though no velar-uvular cons. are involved, the following example exhibits the same pattern:

(36) RETRACTED Sh s-cəs-čəs-lólse Cb ʃ-čəʃ-łúʃaʔ hail -- NON-RETRACTED Cv s-čə-čs-lúsənt Cr s-š-čəs-lúseʔ id.

Many incidental examples can be added to the above list, e.g., qapxʷ/qapxʷ nut, sʰəʳáy/sxʰəʳáy mountain goat, ʃʰay-/xʰay- sharp, qʷtunt/kʷtunt plentiful, etc.

3 DOUBLETS l - ɫ are found all over the Salish area. Often both forms occur in the same language, though not in free alternation. The doublets very probably result from a devoicing of *l. The examples which follow concern words which are found in both IS and CS.

(37) *pi/al -- Sh pil- scatter x-pil-lx disperse (itr., of persons) pal- to smear, smudge Cr piɫ be scattered, possibly Ka pilš to go in, pl. (disperse to homes?), Cx péy-it Se pí-l-it scatter Sq piɫ be smudged piɫ-ánʔ scatter (ordered things), erase.

(38) *pi/al -- Cr pí-píl smashed flat Cx píɫ-it flat pí-pəyʔ thin layer Se s-píɫ-it flat pí-pl thin (layer) Ck píɫ-ət flatten stg. s-pí-pəl flattened, perhaps also Li n-pəl people lying around Sh c-pəl lying state x-pəl-ʷs exhausted, dead-tired (lit. "laid out") Ka pəl-éʔut (also pəl-) to lie, pl.

(39) *maɫ -- Li mlámən medicine Th mlamm id. Sh mlam- heal, marry, baptize Cb məryám medicine Ka ma·liyé drug, medicine Cr mar-im treat for illness Ld baɫ cure by a shaman.

(40) *tuɫ -- Li tət- stretch out a rope tət-ləx to stand up təl- string out a line (from ball), uncoil a line təl unravel a rope Th təl (təlʔ) to stretch-out, extend təl unravel Sh tal- to stretch s-toɫ-tət-xm sit with legs stretched out Cb tət straight Cv tər undo tɫ- straight Ka taál untie, unwrap Cr tət be straight u:-tət-t go directly tar undo tor stretch out, extend (as hand) Cx tət-t to spread out Se tət-t open stg. fan-wise táɫ-at measure with arms túlukʷ unraveled Sq taɫ fathom taʔl-m lengthwise, parallel Ch Cz tuɫ-n to stretch.

(41) *ci/al -- Li čəl-n-ékst-əm shade eyes with hand číl-e alike Sh čit-, čil- same, similar Cb ʔas-čáɫɫ, s-čəlɫ shade s-čəl-čəl, s-čál-čál shadow čál-

čal-t shady Cr čil be outline, shadow (this item shows the connection between the meanings shadow and similar) Be čl to cover, shade off Sq čay? be sheltered (from wind, sun, rain) čay?-tn umbrella Ld čal-bid shadow čal-ič-təd umbrella, cf. also Se čay there is no sun s-čay-ít shade(d) with y for l (cf. ex. 14).

(42) *ču/əl -- Li čet cool off čút-um chilly Th čet-t Sh čet-t Cb čet-t cold čat-n to cool (solids) Cv čat Sp čer Ka čal-t cold Cr čit weather is cool čar-t feel cold to the touch (stove, ice) Sq čút- cold Sg čá?i-əŋ get, feel cold.³

(43) *ki/aməl -- Sh kəmət but, only, red. ké-kme?i almost Ck čiməl (be) almost, near.

(44) *kəi -- Li kəl-q-én cut with scissors Th kil- cut strips of skin Sh kl-am id., cut anything with shears, saw, etc. Cb kər- cut thin material (buckskin, paper, cloth) Cv kar- to cut Cr čar cut flimsy object with shears Ld čet ripped through ("typical use would be when a fishhook pulled through a fish's mouth" Hess s.v.).

(45) *k^wul -- Li k^wul-ən- Sh k^wəlén Cb k^wuín Ka kuín borrow Cr kuí borrow kul lend Be k^wul-t Cx k^wúləma Se k^wúl-tən Sq k^wuín Ld čul- borrow.

(46) *xwal -- Li x^wweí Th (xə-)x^wéí Sh x^wə-x^wwéí Cb xəwál Ka šu?-šuwél Cr n-šég^wel Se šawí Sq šuáí Ms xeí Cw šeí Ld šég^wi Sg saí Cl suí road.

(47) *qal -- Sh qət-qíqñ (red. of -qín) to graze (as bullet) Sq n-qaí be in the way, be hit n-qaí-nəx^w run into, strike (an obstacle) accidentally n-qaí-s be hit.

(48) *xil -- Li xit-c to do stg. Sh xil-m act thus xit-t do stg. thus Cb ?áč-xíl-xil same, similar Ka ?axíl- to behave in this, that way Cr axil do thus Be xit to (often) do stg. Ld xəí as if, like, seem.

(49) *s-?ix^wət -- Sh s-yx^wl-s-čut illegitimate child Cb s-?ix^wí brothers and sisters (collectively) Sq s-?ix^waí child, baby.

Cases with initial *l:

(50) *lix -- Li s-líx^w-il fish slime Th lə?íx get slimy Sh s-lex-t fish slime Be lix-, íx slimy Cx líš(-im) Se s-tiš slime.

(51) *lu/aq^w -- Li ləq^w-, loq^w- tear off (as treebark) Th loq^w bald, to peel Sh lúq^w- pull out, pluck (a bird) luq^w- bald Ka loq^w bald-headed Cr íaq^w skin, pull off loq^w be bald, bare Be luq^w-lx skin peels, comes off (de-labialization automatic) Sq luq^w- come off (of skin, bark) íaq^w peel bark Cw s-íaq^w bark Ch Cz luq^w- bald, peeled.

4 A NUMBER OF CONCLUSIONS can be drawn from the material given in the preceding sections.

4.1 With regard to the universal devoicing of PS *ʕ *ʕʷ, Bella Coola (exx. 6, 10, 12, 13) parallels all the other CS languages. This important common innovation ranges Be together with the rest of CS, and the isogloss coincides with the one that divides the languages distinguishing gender in articles (CS) from those which do not (IS). There is a third, far reaching difference of a lexical nature: in all of IS numerous names for parts of structured wholes (body, house, geography) are based on a root *k^ʷm-, of which CS lacks any trace.⁴ In view of these facts, the old primary division of Salish as a whole into CS and IS should not be lightly dismissed.

4.2 The fact that Ld šúʒəʔ maggots (ex. 19) forms part of a group of words where forms with x^w and ʃ^w existed side by side, this group in turn being part of a general velar-uvular alternation, shows that Ld secondarily changed x^wu into šu. The same development may therefore be assumed for the other cases where Ld has palatals before u: čúbə go up landward, proceed away from shore < k^wum, čútəp flea < k^wut^ʰ-p, čúsəd star < k^wusn, čul^ʰ- borrow < k^wul-, -čup firewood < -k^wup, also šul- in Southern Ld šúlak^wčup firedrill < x^wul- (cf. Thompson 1977:22-3). The dynamics are clear: in languages where before u the distinction k - k^w was neutralized, the cons. in a sequence k(ʷ)u could be identified either with k or with k^w; if with k, then it underwent the changes to which k was subject. In the case of star, Li has the reduplicated formation n-ke-kúsn-ət, where the initial phoneme of the root is reduplicated with ke-, cf. the alternative treatment in Th n-k^wə-k^wúsn^ʰ Ka ɪ-k^w-kúsn^ʰ. The Li form provides the link between PS *k^wusn and Ld čúsəd. As is common in Salish, Ld also has forms from other (micro)dialects, cf. sk^wuy mother (Cb sk^wuy).⁵ The alternative possibilities for the identification of the velar in k(ʷ)u help explain the irregular correspondences of k^wu- and ču- forms in the č-languages (a somewhat comparable case is presented by Engl. path-paths (v1), cloth-cloths /clothes (v1/vd), wreath-wreaths (vd) besides Germ. Pfad; Kleid, OHG rīdan). Compare (a) Cx čuy^ʰ young, child (Sh s-k^wúye); (b) Cx k^wúsən^ʰ Sq k^wusn Ld čúsəd star (Sh sək^wúsnt); (c) Cx k^wútəma Sq k^wut^ʰn Ld čul^ʰ- Ch čó·ya^ʰ borrow (Sh k^wuɪn Be k^wul-t); (d) Ld s-k^wuy Ch k^wuy mother (Cb s-k^wuy). Cx has č in (a) but k^w in (b, c); Ch has č in (c) but k^w in (d); Ld has č in (b, c) but k^w in (d). Note also that Cr has ču ču in one example each only, and lacks cases of šu.

4.3 Earlier, seemingly contradictory CS correspondences were noted for IS ʕ ʕʷ, cf. Kinkade 1967:233, where on the one hand Cb ɰiy- (< ʕiy) // Ch ʃa·y- growl (ex. 2) is given as "the best Ch correspondence for a Cb form with an unrounded pharyngeal" -- an opinion which is confirmed --, while on the other hand a correspondence ʕʷ - w is observed, e.g., in Cb ʕwəl^ʰ bright, shiny // Ch wəlč^ʰ- glitter wəlq^ʰ- polish (ex. 33). In the same way, Nater 1977 notes the

etymologies given in ex. 12 (with a Be uvular) and 18 (with Be w). The facts pointed out in sect. 2 provide the explanation: PS had (remnants of) a velar-uvular alternation, the regular IS - CS correspondences are $\text{ɣ}^w - \text{ɣ}^w$ and $w - w$, but since $*\text{ɣ}^w$ and $*w$ alternated, we also find the cross-correspondences $\text{ɣ}^w - w$ as in the examples just given, and on the other hand the opposite cross-correspondence IS $w - \text{CS } \text{ɣ}^w$, cf.

(52) Li čew-én Th čew- Sh čew- Cb čaw- Cv čiw- Ka čé?u Cr čaw wash // Cx čəx^w -t wash Se čəx^w clean (adj.) Sq čəx^w wash (objects) Cw čx^w -at Ch Cz čəx^w -wash, possibly also Be čx^w white Ld čx^w ays bright.

(53) Th céw-ix reach for stg. Sh cew-kst-m id. // Sq cáx^w -am id. A possible connecting link is Li co^w stripe Sh c^w - make a stripe Cb $\text{s-cə}^w\text{ɣ}^w$ -ákst fin-
gers Ka $*\text{co}$ Cr ca^w fringe.

Due to the infrequency of Li Th Sh γ it is hard to find possible CS cognates here. The Southern IS correspondences are exemplified by Li lə^w -c-əñ to cork stg. Sh l^w - put, stick into Cb l^w - stab, poke, spear Cr le^w stab. The uvular correlate of γ is ɣ , see exx. 29 and 30. A Sq candidate for a cross-correspondence IS γ // CS ɣ is

(54) Li yəp- Sh yép- to put up (as pole) cyep tree // Sq x^w p-ay? cedar.

4.4 Among the $l - \text{ɣ}$ doublets we find cases with both l and ɣ in IS as well as CS in exx. 37, 38, 40, 41, 45; the cases with only ɣ (and not l) in CS are 39, 42, 44, 46, 48, 49, 51, those in IS are 43, 47, and these two each concern one word in one IS language only. CS, then, has a stronger tendency to devoicing $*l$ than has IS, and though with $*l$ it did not become the rule, as in the case of $*\text{ɣ}^w$, it is nevertheless part of the same general phenomenon of devoicing of resonants, the beginning of which must be old, cf. also the devoicing of $*\text{ɣ}$ to h in Cb, and isolated cases like Cb sa^ws^w dew (see fn. 2). The cases involving r in the r-languages are 39, 40, 42, 44, and they parallel those that have l in the r-languages (41, 45, 46, 48, 49). This by itself suggests that in these languages $r < *l$. In cases like (39) Ld ba^w , (44) Ld čə^w one could posit a development $*r > *l > \text{ɣ}$. But this is impossible for the r-languages themselves: if Cr has (40) te^w besides tar , tor , and (42) č^w besides čar , then the opposite development $*l > r$ is compellingly indicated, as this provides the only explanation for the parallel devoiced forms with ɣ . Because of the special development of certain instances of $*l$ in Th and the r-languages, we shall in first analysis posit as ancestor of r not $*l$ but retracted $*l$.

4.5 The cases of parallel forms with velar and uvular cons. are instructive in one more respect. The r-languages do not admit r as C_2 in roots with a uvular C_1 . Accordingly, we find Cb k^w rayq yellow but $\text{q}^w\text{ə}^w\text{l}^w$? gall (31), Cr g^w ar be silvery, clear but Cb $\text{ɣ}^w\text{ə}^w$ bright, shiny, glisten (33), devoiced in Sh $\text{ɣ}^w\text{et-}$.

guages have ʊ (o), which is another innovation. In particular, Cv lacks ʃa < *a before r (l.c. 158; cf. the elimination of retracted vowels before r in Cb and Sp). But the retracted vowel has been introduced in roots where it did not originally belong, cf. Cv ʃʃal- (day)light, which is the same root as in Cb ʃəʃləʃlanx^w sober Th yəʃyíʃ smart treated above (semantically cf. Engl. lucid, bright). We find similar cases in Th Ka Cr. A factor which has contributed to the irregular appearance of retracted vowels after a uvular C₁ is their regular occurrence in the first element of reduplicated forms, cf. the very first Cr irregularity noted by Kinkade and Sloat (1972:31): in Cr q^wám-q^wam-t be pleasant, etc. the first vowel is the regular reflex of PS *a when a uvular follows (not necessarily immediately); the second one is irregular, and is analogous to the first. A new simplex with an irregular vowel could then appear as a back-formation from such a reduplication. Suffixes containing a uvular can have led to the same non-phonetic development.

5.3 Sh, unlike Ka Cv Cr, lacks distinctive retracted vowels after a uvular initial, cf. Sh q^wey-m to blacken besides Cv q^wʃay Ka q^way black; Sh q^wemq^wmt nice besides Cr q^wámq^wamt (in Sh only an immediately following uvular causes a nondistinctive retraction). In this respect Cb largely goes together with Sh where full vowels are concerned, cf. Cb q^wáy-əʃqʃ priest (lit. black-cloak), q^wámq^wamt good, with a rather than a in the root (exception: (nə)q^wáʃt deep). In Sh roots beginning with a uvular resonant the vowel takes on a nondistinctive darkened coloring, but no such root ever takes a darkened suffix. Only roots with distinctively darkened vowels can trigger the darkening harmony in suffixes.⁷ Sh and Cb are conservative as against Cv, where the new distinctive retraction in q^wʃay black triggers the retracted vowel of the suffix in q^wəy-ʃás Black man (cf. Sh q^wy-q^wy-us dark-faced).

5.4 In Cr the opposition l - r has a low functional yield. A root C₁el- will appear as C₁al- if a uvular follows, so that there is an opposition C₁al-Q vs. C₁ar-Q (Q = uvular). Furthermore, Cr, like Cv, has sometimes introduced the back vowel a in forms with l, cf. ʃal redhot, ʃal spy (vs. ʃel lay evenly), q^wal be black from burning. With a non-uvular C₁ we have maʃ be uncomfortably warm, come to a boil (Cb n-³məʃ lukewarm), potentially opposed to mar as in mar-im treat for illness, further čáʃus kingfisher (Cb čəʃís) as opposed to čar be ill, hurt, ache; cf. also ml-óləmx^w soil, earth, where the suffix points to a root with a darkened vowel (confirmed by Sh malt deerlick Ka malt mud, clay, earth). In these cases it is l that has been introduced in roots with a retracted vowel. Similar irregularities occur in Cr words with a C₂ other than l, e.g., in čaw wash, where the retracted vowel may stem from a uvular form *čaʃ^w which would correspond directly to CS čəʃ^w- (ex. 50), cf. also paʃ drum

on drum besides Sh p^éʳʷ- knock, rap (ex. 35). Again, the nonretracted cons. was retained (or reintroduced) in Cr g^wəl burn besides Cb wər- Sp wirʔ/u·r (ex. 33). Cr lacks examples of əʳ (only ar or er) so that this form cannot be opposed to a Cr form *g^wər; but Sh p̄əl- Cb p̄ər- overflow, spreading of water point to PS *p̄əl-, while Sq p̄i- (= p̄əy-) id., if to anything, points to *p̄əl-.

Cb has eliminated retracted vowels before r, just as Sh and Ka never phonemicized ɭ (in opposition to l) after retracted vowels. This is an indication that PS opposed plain Vɭ to retracted Vɭ as a whole. Since an opposition V vs. V̄ occurs independently of a following l ɭ (cf. Li ɬəɬ Sh ɬat Cb ɬət Cv ɬsat wet; Th mə̄če Sh mə̄če? Cb mə̄čp bee, wasp; Ka sənós Cr snos Cv snʳas snot, for CS cf. Cw snas < *snus fat, grease), it is necessary in first analysis to reconstruct a series of retracted vowels *ā *ū *ə̄ (no plurilingual evidence for *ī). The next question is whether the retracted cons. ɟ ʂ ɭ were positional variants of c s l. It can hardly be doubted that this was originally the case. It provides a simple explanation for the curiously limited distribution of r in the r-languages: r as C₂ developed from *ɭ, which was the positional variant of *l after retracted vowels, and the latter were excluded after a uvular C₁ -- hence r is found only as C₂ after a non-uvular C₁.⁸

We still find cases where a vowel alternation plain - retracted has a symbolic value, e.g., Li ɬək get deflated, go down (of dough) vs. ɬək get pooped, conk out, Th ʔesɬəɬək figured, spotted, spattered (small pattern) vs. ʔesɬəɬək id. (large pattern), cf. also Cr pew̄ drum on tin vs. paw̄ drum on drum. We also still find cases of pure retracted forms, e.g., Li ɟol- to stretch, Th kə̄st dirty, ugly, but in many cases the retracted sounds have been replaced by unretracted ones, cf. Th m̄cuɬ pus vs. Li má̄coɬ (u - o); Th mə̄osé̄ciʔtn kidney vs. Cb mə̄t̄ūʂ (s - ʂ); Th moc crush (Thompson 1977:39) vs. Cb m̄m̄ūɟ soft (c - ɟ). In the last two examples we find in Th mixed sequences os oc which are the counterpart of the Cr mixed cases with al.

As the examples Sh q̄^wey- Cv q̄^way-, etc., and Th moc Cb m̄m̄ūɟ, etc., show, the replacement of plain by retracted and of retracted by plain sounds is largely language-specific. The parallel developments mentioned at the end of sect. 5.1 are likewise independent of each other. It is difficult to make a case for a phonemic distinction c s l - ɟ ʂ ɭ even in Proto-IS; there is no evidence at all for its existence in PS.

⁶ As to Thompson's 1977 revision of the PS phoneme system (see sect. 0.2), little evidence is presented for it, and none of the problems it involves are discussed. Besides the question of St č č̣ ŋ in part of the lexicon corresponding to p p̄ m elsewhere, one of the considerations which underly the proposal

is that "as more etymologies are worked out, it becomes apparent that clear cases of PS *k^w *k^w are not very common" (p. 22). This in turn is based on the conclusion that Ld forms with ču ču point to original velars rather than labio-velars (p.22-3). As was pointed out in sect. 4.2, the development in Ld and other č-languages can be explained as secondary. Another consideration is the existence of the velar resonant γ in Northern IS (p. 23), but as the parallel velar-uvular forms relate it to ʕ (exx. 29, 30, possibly 54) it is unlikely to go back to a nasal.

The main problem the proposal leaves unsolved is presented by the all-Salish cases of k^w k^w not only in IS and the rest of CS, but also in St itself. St words with k^w k^w which have k^w k^w in all known CS and IS languages are Cl k^win how many (Kuipers 1970 no. 84), k^wátən? rat (no. 82), k^was get burned (no. 83), k^wən see (no. 85), x^wək^w pull (Sh x^wúk^w-), ?awk^w belongings (Cr du?uk^w be stingy), Sg k^wənəs hold, take (Sh k^wen-), sčk^wa?í?ws left (hand, side) (no. 41); to these, Sg k^wásən star (no. 79; Ld čúsəd) may safely be added. Note that here one cannot have recourse to borrowing, as the other Salish languages would have had forms with p p rather than k^w k^w. Much larger is the group of St words with k^w k^w which have known cognates in CS only, and here have k^w k^w in all known instances; e.g., Cl k^w- demonstr. particle, tuk^w go home, sk^wú?is co-parent-in-law, sk^wáci daylight, łak^wxən goose, k^wič to butcher, ?əs-x^wáx^wk^w drunk, Sg k^wék^wi be hungry, sk^we be unable, me?k^wi be hurt, etc., including cases where no cognates are known to me from the immediately surrounding languages: Sg nək^w-ásən nod the head (Se yík^wusəm Ch ná?k^wusm/ník^w(u)sm), xčtek^w/xčtk^w to carve (Se xčtk^wəm id. Cx xčtək^w totempole), Cl łək^w take (hold of) (Be łk^w pick up a small object; Ch łək^w pick with a different final cons.).

On the other hand, there are all-Salish sound- and act-imitative roots such as evidenced by Sq pəx^w Cr tə-pex^w to spit (ibid. no. 1), Sq puh- Ka péu blow, pant, breathe (no. 4; cf. Thompson 1977:32), which point to PS *p.

Finally, though typological considerations must always take second place to factual evidence, they do add to counter-evidence. A phoneme ŋ^w would be enough of an oddity to require a firm adstruction.

The labial-to-palatal shift in St (which is a "mixed" language in other respects, too)⁹ may well have been typical of part of a language community, such as the Ms s?ámqsən group(s) described by Elmendorf and Suttles (p.7f), or the Sg sx^wínx^wən group mentioned by Mitchell s.v. The shift could have had an external cause, e.g., the use of labrets or a tendency to avoid visible articulations; it could have been characteristic of one of the sexes only. A similar cause may (but need not) have led to the elimination of labials in Ti. The phenomenon is common enough to have earned the German designation Labialscheu;

not having to account for it (Thompson 1977:24) is no argument in favor of the proposal.

7 CONCLUSION. A reconstructed phoneme system is not only the starting point of a search for wider genetic connections of a language family; it is also a frame of reference within which developments in the separate languages are accounted for. The traditional PS phoneme inventory, with *ạ *ụ *ə̣ added and *ṛ *ṛ̣ eliminated, allows a reasonable account of the main phonetic developments in the separate languages. In particular, it puts the Th cases with l in positions where the r-languages do not have r in their proper perspective. It should be noted that the reconstruction of a Proto-IS (not PS!) r in root-initial position (Kinkade and Thompson 1974:24) is based on three Th roots in all, viz. laḥ- bend stg. over, ləwə- knock, hammer and ləx-, lʔix fishy taste, slimy. For the last of these see ex. 50 and sect. 4.4 above; the second example, as sound-imitative, is given with a question mark by the authors themselves. This leaves only laḥ-, the retracted vowel of which may have given rise to a secondary retracted variant *[ḷ] which did not shift to y (cf. Th sq^wliʔ in 5.1), or the word may be a borrowing, as in all of IS borrowings show a predilection for retracted sounds. On the other hand, the Th 1800-word list (Kuipers 1972) contains ten verbal roots beginning with y- (nine of them matched by Sh l-), but not a single one with l-. The Th root laḥ-, with l- and a retracted vowel, stands out as an exceptional case. The only other evidence given for Proto-IS root-initial *r is Cz yápa- bend down (a branch), "suggesting that PS *r may have developed to Cz y while *l remained l" (ibid. 28). But in all known cases where the r-languages have r the Cz correlate has l rather than y, cf. Cz čəlém kingfisher (Cb čərís, ibid. 26-7), pəlók^w- pierce (Cr paḥk^w), yałómⁿ go around (Sp yír round, ibid. 23), so that Cz yápa- clearly shows the incidental l - y interchange found as an irregular feature all over the Salish area (cf. exx. 14 and 41 above). The evidence even for Proto-IS (let alone PS) initial *r is therefore nonexistent.

It has become a habit to regard the r-languages as conservative because they have two phonemes -- l and r -- where the others have one. At the same time, the IS retracted vowels, which cannot be explained by a regressive influence of a phoneme *r, were left out of account in all reconstructions so far. Once this omission is rectified, the splitup of *l into two phonemes, one of them with a narrowly limited distribution, is not at all surprising: there are numerous examples of a phoneme l being more strongly influenced by a preceding than by a following vowel, and more by a back than by a front vowel. The onetime existence of a symbolic plain-retracted alternation¹⁰ goes a long way towards explaining multiple correspondences between IS and CS, and partic-

ularly inside IS. At the same time, new problems come into focus. It is at present unclear why roots with retracted vowels in so many cases have ablaut u/ą, cf. *tɯ/ął stretch, *(s-)ćɯ/ąm suck (bone), *ćɯ/ął cold, *(s-)nɯ/ąs wet (snot, grease), *kʷɯ/ął yellow, green, gall, *yɯ/ął burn,¹¹ *ʔɯ/ął freeze. Nor is it clear why some of these roots have doublets with m- and n-, cf. Sh moy-/noy- bend, Cb m̄m̄ɯ/ął/Cr noc soft. These and other questions may get closer to a solution as more lexical material, particularly of IS languages, becomes available.

Sources and References

- Adelaar, W.F.H., Tarma Quechua. Lisse 1977.
- Eijk, J. van, Lillooet Stem-List (MS 1978).
- Elmendorf, W.W. and W. Suttles, 'Pattern and Change in Halkomelem Salish Dialects', Anthropological Linguistics 2:7 (1960):1-32.
- Galloway, B.D., A Grammar of Chilliwack Halkomelem. 2 vols. University of California dissertation, Berkeley 1977.
- Hess, Th.M., Dictionary of Puget Salish. Seattle-London 1976.
- Kinkade, M.D., 'Uvular-Pharyngeal Resonants in Interior Salish', IJAL 33 (1967):228-34.
- , Dictionary of the Moses-Columbian Language (MS 1976).
- , Cowlitz Dictionary (MS 1979).
- , Upper Chehalis Dictionary (MS 1979).
- , A Classified English-Columbian Word-List (MS 1979).
- and C. Sloat, 'Proto-Eastern Interior Salish Vowels', IJAL 38 (1972):26-48.
- and L.C. Thompson, 'Proto-Salish *r', Working Papers in Linguistics 4:3 (1972):39-51. Idem, IJAL 40 (1974):22-8.
- Kuipers, A.H., The Squamish Language. 2 vols. The Hague 1967-9.
- , 'Towards a Salish Etymological Dictionary', Lingua 26 (1970):46-72.
- , A Classified English-Thompson Word-List (MS 1972).
- , 'About Evidence for Proto-Salish *r', Dutch Contributions to ICSL 1973.
- , The Shuswap Language. The Hague 1974.
- , 'On the Phonological Typology of Proto-Salish', Actes 42e Congr. int. des Américanistes 1976, vol. 6:607-21 (1978).
- Mattina, A., 'Pharyngeal Movement in Colville and Related Phenomena in the Interior Languages', Working Papers XI ICSL 1976:148-66.
- Mitchell, M.R., A Dictionary of Songish, a Dialect of Straits Salish. University of Victoria dissertation, 1968.
- Nater, H.F., Stem List of the Bella Coola Language. Lisse 1977.
- Nichols, J., 'Diminutive Consonant Symbolism in Western North America', Language 47 (1971):826-48.
- Reichard, G.A., 'Stem-List of the Coeur d'Alene Language', IJAL 10 (1939):92-108.
- Sloat, C., 'Vowel Harmony in Coeur d'Alene', IJAL 38 (1972):234-9.
- Suttles, W., Multiple Phonologic Correspondences in Two Adjacent Salish Languages and their Implications (MS 1965).

- Swadesh, M., 'Salish Phonologic Geography', Language 28 (1952):232-48.
- Thompson, L.C., Salishan and the Northwest (MS 1977).
- and M.T. Thompson, 'Clallam: A Preview', Studies in American Indian Languages (ed. J. Sawyer), Berkeley-Los Angeles 1971.
- , M.T. Thompson and B.S. Efrat, 'Some Phonological Developments in Straits Salish', IJAL 40 (1974):182-96.
- Timmers, J., A Classified English-Sechelt Word-List. Lisse 1977.
- , Sechelt Stem-List (MS 1978).
- , Comox Stem-List (MS 1978).
- Vogt, H., The Kalispel Language. Oslo 1940a.
- , Salishan Studies. Oslo 1940b.

F o o t n o t e s

1) I thank M. Dale Kinkade for many useful discussions and for extensive Columbian, Cowlitz and Upper Chehalis lexical material; also Laurence C. Thompson for additions and corrections to nos. 1-1304 of the Classified English-Thompson Word-List. Gratitude is also due to Messrs. J. van Eijk, H. F. Nater and J. Timmers for abundant material and etymological suggestions, and to the Netherlands Organization for the Advancement of Pure Research (Z.W.O.) for supporting their work on Lillooet, Bella Coola and Sechelt/Comox respectively. The responsibility for the present paper is my own.

The following abbreviations of language names are used:

Be Bella Coola	Cv Colville	Ka Kalispel	Sg Songish
Cb Columbian	Cw Cowichan	Ld Lushootseed	Sh Shuswap
Ch Upper Chehalis	Cx Comox	Li Lillooet	Sp Spokane
Ck Chilliwack	Cz Cowlitz	Ms Musqueam	Sq Squamish
Cl Clallam	Fl Flathead	Ok Okanagan	St Straits
Cr Coeur d'Alene	Hl Halkomelem	PS Proto-Salish	Th Thompson
CS Coast Salish	IS Interior Salish	Se Sechelt	Ti Tillamook

The transcription is that of the respective authors, with the usual modernization of Reichard's (ä replaced by e); for Th that of Thompson 1977 is used. As retracted vowels are important in the discussion, here follow those immediately recognizable as such: Li Th Sh a o ə (vs. nonretracted e u ə; Sh ə replaces the symbol Λ of Kuipers 1974), Cb ą ɥ ə, Ka Cr a o (note that o and ɥ are graphic variants of the same retracted vowel; a retracted ɨ also occurs, viz. in Li Th Cb, but it plays no role in the discussion). Sh [a o] are written e u in positions where they are automatic: immediately before all uvulars and after uvular resonants. Retracted c s l are written with a subscript point: ç ş (Li Th Cb), ɿ (Li Cb). The symbol ʋ is used for any retracted vowel.

The term uvular is used for all the ten phonemes in the columns of q and q^w in the chart on p. 1; in part of IS the articulation of the resonants is pharyngeal (see Kinkade 1967).

2) This form shows an incidental devoicing, cf. also Cb səχ^w-p to drip vs. Cr sa^w-p leak. Such cases are rare outside the alternation l - ɿ. Sh has ʔk-xi[?] there besides ɣi[?] that tɿ-ɣi[?] from there (parallel to ʔk-tu[?] over yonder besides lu[?] there, that, non-present); other possible cases are Li xəɿ cold (weather) besides ʔəl-úl^wməx^w frozen ground and Ka o^wəncút laugh, sg. besides xə^wa·x^we[?]éi id., pl.

- 3) The root cold may well be identical with the roots hurt, smart (Cr čar, etc.) and salt, sour (Cr čor, etc.), all from an original meaning stinging or the like, but for our purposes the group of cold suffices.
- 4) In Kuipers 1974:212-3 the items ḳm-ekst-m to get a handful (e.g., of berries) and ke-ḳm-lx to tiptoe, sneak up should have been listed separately, and not under the root referred to here. For the first of these cf. Cb ḳṃ- grab a handful Cr čim grab some Sq č̣ṃ? bite (semantically cf. Russ. kusók piece kus-át' to bite, also Engl. a bit).
- 5) Alternative identifications of velars or uvulars before u could also become apparent after a change of u to a. As far as I know, Hl and Northern St retain labialized velars. A possible example of a delabialized uvular is Hl qa? (Li q^wu?) water. The only possible example with a velar I have found is Cz kási? star, but I know of no u > a shift in this area. One does find other isolated examples of sound-shifts far from the area where they are regular, cf. Sq ʔíx̣^wič̣ maggots (ex. 19) with č̣ for *ʔ̣ as in Th, or Ld q^wulub grey hair (ex. 15) with q^w for x̣^w as often in Be.
- 6) For the doubtful value of Sq l as indicative of a correlate r in the r-languages see Kuipers 1973:5. Where CS cognates have l, Sq has l in two thirds and y in one third of the cases. Hence the evidence -- if any -- of Sq y for *l is greater than that of Sq l for *l.
- 7) A darkened suffix with a uvular-initial root is found only in the petrified complex q^wəq^wíóỵe gills (?). The item x̣los to boil dried salmon was corrected to x̣qlus. Neither item (both in the appendix Kuipers 1974:296) is quite familiar to the Shuswap speakers that were consulted.
- 8) Vogt is therefore right -- synchronically as well as diachronically -- in treating Ka vowel harmony as one phenomenon (1940a:19f.): the case čal-t it is cold, in-čal-átk^w the water is cold is exactly the same as the case i-pás he is bewildered, ps-ap he gets scared. Cv eliminated retracted vowels in roots *C₁al > C₁ar and with them the alternation a i u // ʔa in their suffixes (cf. Mattina 1978:154-5, particularly fn. 5).
- 9) Cf. the double reflex of PS *k *ḳ; the minority of cases with č̣ č̣ rather than c/s č̣ includes such basic items as Sg če?- make neč̣ different, change x̣č- know, find out, learn x̣ələč̣- twist, turn sātəč̣ cold N. wind, etc. The numerous

cases for which only CS cognates are known (Sg ieč dark čəčáyʔə́ short sčóʔét clever ɪqelč month ʎčes island ǎčə lake, etc., etc.) include a function element like the evidential clitic č apparently.

10) The precise details of this alternation in PS deserve to be the object of a special investigation. An excellent account of the details of similar sound-symbolic processes -- though involving consonants only -- is found in Adelaar 1977:290-2. See also Nichols 1971.

11) For this reconstruction cf. Cr yar be torch Sq yuɪ burn.