

# Algonquian-Ritwan, (Kutenai) and Salish: Proving a distant genetic relationship\*

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A connection between Algonquian and Salishan was first suggested almost a century ago, and several Americanists have mentioned it or briefly discussed it (Boas, Haas, Sapir, Swadesh, Thompson, Denny). However, nobody has tried to provide proof for the matter beyond a few suggestive lexical correspondences (Haas, Denny) and typological similarities (Sapir).

In my paper I follow the method used by Goddard (1975) and focus on morphology to try and prove a genetic relationship between the two families. The morphological organization of the Salishan and Algonquian verbs are highly similar. Moreover, some of the pertinent grammatical morphemes also show striking formal similarities. In addition, a number of shared quirks between Salishan and Algonquian point to a genetic connection. There is archaeological evidence linking both Algonquian and Ritwan languages with the Columbia Plateau, where Salishan languages dominate, suggesting a shared history of the three groupings in the Columbia River area.

## 1 Introduction

The title of this paper is a clear allusion to Ives Goddard's famous 1975 paper *Algonquian, Wiyot, and Yurok: Proving a distant genetic relationship*. The genetic relationship between Algonquian and the two Californian languages (together the Ritwan family) was controversial, but is now generally accepted, and Ritwan and Algonquian families are now conceived of as members of the Algic stock. I use, to the extent that this is possible, the same method as Goddard used for Algic. Whereas Goddard compared Proto-Algonquian (hereafter PA)

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\* I am not a Salishanist, neither do I have knowledge of Proto-Algonquian. This is a preliminary paper and I hope to receive feedback. It is also unfinished and sometimes imprecise and not double-checked, as I only realized the striking similarities between the two families less than a month ago, with no access to some of the crucial literature. Most likely, I will not have the possibility to present the paper in person due to a lack of travel funds, so written comments by email or mail are very welcome at any stage. Comments most welcome.

with modern Wiyot and Yurok, I will take one the one side modern Cree and (if possible) Proto-Algonquian as a point of departure, and proto-Salishan (hereafter PS), or generalized Salishan, on the other side.

I will show that there are a striking number of morphological similarities between Salishan and Algonquian - more than can be expected on the basis of chance or shared typological properties. Likewise, they are too similar in details to be due to diffusion. These morphological similarities are found both in the patterns and in a respectable number of forms.

## **2 Earlier suggested links between Algonquian and Salish: Sapir**

Edward Sapir (1929; pages refer to 1958 reprint) was perhaps the first to suggest a link between Algonquian and Salishan, both as parts of a larger grouping he called "Algonkian-Wakashan". He did not only hint to a connection, but also gave arguments. He provided a brief generalized description of the languages of his grouping Algonkian-Wakashan languages, which comprises (1) Algonquian-Ritwan (Algonquian, Beothuk (?), Ritwan), (2) Kutenai (also spelled Kootenay), (3) Mosan (Wakashan, Chimakuan, Salishan), in other words five or six families grouped into one "super-family".

The other North American groups Sapir proposed were Eskimo-Aleut, Na-dene (Haida, Athapaskan, Tlingit), Penutian (languages spoken in the USA), Hokan-Siouan (languages of the USA, where Iroquoian and Siouan are potentially relevant) and Aztec-Tanoan.

Sapir also gives brief descriptions of the structures, and he characterizes Algonkian-Wakashan as follows:

"The Algonkin-Wakashan languages, too, are "polysynthetic" [like Eskimo-Aleut] and, especially as regards Algonkian, inflective; make use of suffixes; to a much less extent, particularly in Algonkian-Ritwan, of prefixes; have important inner stem modifications, including reduplication; have a weak development of case; and illustrate to a marked degree the process of building up noun and verb themes by suffixing to stems local, instrumental, adverbial, and concretely verbalizing elements" (Sapir 1928 [1958]: 174).

He also characterized the other super-groupings, and the northernmost of these are summarized in Table 1.

Table 1: Summarizing overviews of Sapir's macro-groupings of North American languages

	<i>Algonkin-Wakashan</i>	<i>Eskimo-Aleut</i>	<i>Na-dene</i>	<i>Hokan-Siouan</i>
<i>morph. Typology</i>	poly-synthetic	poly-synthetic	poly-synthetic	agglutinative
<i>affixation</i>	suffixes rather than prefixes	suffixes	prefixes	prefixes rather than suffixes
<i>stems</i>	inner stem modifications & reduplication	inner stem modifications & reduplication & compounding	monosyllabic elements	-
<i>alignment</i>	-	(ergative)	active-stative	active-stative
<i>nouns</i>	weak case	case	-	-
<i>adpositions</i>	-	-	postpositions	-
<i>stems</i>	built up by suffixing	verbs complex (mode, person)	radicals with derivational elements	compounding

A number of observations can be made on the basis of this overview (where a - means that Sapir does not mention the category for a grouping, and things between brackets are my additions). First, all of the common features of these groupings are typological features, not necessarily with common formal similarities. Whether one can use typological similarities for genetic classification is controversial, and I will discuss that in more detail below. A second observation is that each grouping shows a unique profile, but few groupings are unique in many respects. For instance the Algonkin-Wakashan languages share polysynthesis with three of the four other groupings, combined prefixing and suffixing with Hokan-Siouan, stem formation with Eskimo-Aleut.

On the whole, however, the Algonkian-Wakashan are quite distinct from the other groupings. Third, the features cover different parts of the grammar, but most of all morphology. In fact, all features with the exception of adpositions, have a clear morphological background. In this respect, it is appropriate to start with a morphological comparison of Salishan and Algonquian, almost 80 years after Sapir's hint.

### 3 The 'supremacy' of morphological similarities

Goddard (1975) is a study of the method and the way of proving distant genetic relationships as much as proving the relationship between Ritwan and Algonquian. He emphasizes morphology and downplays the importance of lexical similarities. His point of departure (p. 249-250) is:

"Proving a genetic relationship between two languages is a matter of showing that they share similarities which can only be accounted for by the assumption that the languages have descended from a common ancestor. There are, logically, two stages in such a demonstration. It is necessary to show not only that the resemblances are so numerous and detailed as to exclude the possibility of chance as an explanation but also that they are so tightly woven into the basic fabric of the languages that they cannot be explained away as borrowings. It goes without saying that there is not always agreement about how many and what sorts of resemblances can be reasonably explained away as accidental, or about what sorts must necessarily be a common genetic inheritance. Proof in such matters then, can never be completely objective."

Goddard claims that systematic morphological similarities are the backbone of proof (p. 250):

"Accordingly, it will be argued that the kinds of similarities which are most valuable for showing genetic inheritance are those which involve details of the morphological structures of the languages. If one finds in two languages what is essentially the same system, with the same internal structure, embedded in their grammars, then it is likely that the criteria for proof can be met. Similarities between lexical stems are much less satisfactory, since individual words are readily borrowed and since each comparison must stand alone and does not have the added impact which it would gain from being part of a system of similarities."

In other words, lexical similarities are never in themselves sufficient: "In fact it is virtually impossible to prove a distant genetic relationship on the basis of lexical comparisons alone" (p. 255).

Goddard shows a number of morphological identities between Proto-Algonquian (PA), Wiyot and Yurok. These include the identity of (i) the structure of stems that show parallel formation (not the form; therefore,

according to Goddard not sufficient proof but “at least *prima facie* verisimilitude” (ii) the four-member pronominal prefix system in the three languages, which share “so many similarities in form and function, that they alone would be sufficient to demonstrate a genetic relationship between the languages” (p. 250). Goddard adds (p. 253): “These are not vague similarities pulled at random from various places of the grammar, but represent a single, self-contained system which is found in virtually identical form in all three languages. It is quite unlikely that such a system, with all its complexities, could have arisen independently in more than one language, or could have been borrowed from one language to another.” The similarities are:

- (1)
  - a. The forms of the pronominal markers are related;
  - b. There are four of them, mutually exclusive, in all three languages;
  - c. Normally, the languages use suffixes, these pronominal elements are prefixes;
  - d. The prefixes are used with both nouns and verbs;
  - e. When showing possession in nouns, there are two classes: dependent nouns (always with a prefix) and independent nouns (with or without a prefix) in Yurok;
  - f. Both PA and Wiyot insert a *-t-* between the prefixes and vowel-initial nouns;
  - g. The nominal obviative suffix of PA has a parallel in third-person possessive suffixes of Ritwan;
  - h. In some forms, the possessive prefixes are reanalyzed as part of the stem.

Further, Goddard points out that similar resemblances are found in the verb, that lower numerals can combine with bound roots, that higher numerals are combined with free elements, that there are a few clear lexical cognates as well, and that there are a few phonological recurring correspondences in consonant clusters.

In short, despite the fact that there are only few clear lexical cognates and few regular sound correspondences (a sufficient number of which would be sufficient for many linguists to accept a genetic relationship), Goddard emphasizes the primacy of morphological resemblances in demonstrating a distant genetic relationship:

“In the final analysis, however, there is a certain superfluity to lexical comparisons in the cases where a relationship can be demonstrated by reference to detailed grammatical and structural parallels. Or, to state it differently, when convincing word comparisons can be made between two languages, a much stronger case for relationship can probably always be made by a presentation of the morphological identities the languages attest.” (p. 259-260).

This is what I am going to do in this paper: I will point to a number of

morphological similarities between Salishan and Algonquian, mostly in the categories used and their positions with respect to each other, but also to a number of identities in forms of a number of grammatical morphemes.

#### **4 Connections between Algonquian and Salishan**

Before embarking on the presentation of linguistic data, let me first state that it is not at all far-fetched to look for a connection between Algonquian and Salishan. It is well-known that Siebert (1967) located the Proto-Algonquian homeland around the Great Lakes, but more recent research has established a more westerly origin of Algonquian. Goddard (1994) showed that developments in the different Algonquian languages display a clear west-to-east cline for the Algonquian languages, suggesting a homeland to the west of its current location, and migration eastwards from there, rather than in the central part of the continent (Great Lakes).

Moreover, there is archaeological evidence that the Algonquian homeland is most likely located on the Columbia Plateau. This was suggested by Peter Denny (1989, 1991), who identified archaeological connections between findings associated with Algonquian speakers with more easterly peoples. He also pointed out some linguistic similarities between Salishan and Algonquian, which he, however, retracted later at the suggestion of some historical linguists. The location also fits incidentally with archaeological facts about the speakers of the Ritwan languages spoken in California, who, according to archaeologists, are immigrants from the Columbia Plateau as well. Thus, both linguistic and archaeological findings seem to point west of the current location of the Algonquian languages.

The languages spoken today on or near the Columbia Plateau are Kutenai and Interior Salishan languages. However, ever since Boas (1920 [1940: 216], cited in Haas 1965) connections have been suggested between Kutenai and Salishan and occasionally also in larger groupings. A genetic unity of Kutenai, Salishan and Algonquian, or any pair of these, cannot be established by orthodox comparative linguistic methods. By focusing on morphology, however, there are clear connections between the three language groups.

Structural similarities between language groupings may or may not point to a genetic connection, but if unrelated languages share rare or unusual structural traits, this is most likely the result of a historical connection. Whether the connection between the languages is genetic (i.e. inherited from a common ancestor language) or diffused (i.e. taken over from an unrelated language because of bilingualism), is perhaps less vital than the fact that there was a historical connection in both cases. The groups share their history, and whether the shared traits are borrowed or inherited is important. Michael Fortescue (1998) has proposed the term “mesh” for a group of languages with historical but not necessarily genetic connections.

Readers who will find the evidence brought forward here to be insufficient for a genetic connection, will probably be forced to accept a historical connection between Salishan and Algonquian (and Kutenai). The

connection of Algonquian to Salishan will get more attention than the connections between Algonquian and Kutenai, or Salishan and Kutenai.

I will first discuss Kutenai briefly, and then Salish in more detail.

## 5 Algonquian and Kutenai

If Algonquian is related to Salishan, and Kutenai is related to Salishan (as has been suggested), then Algonquian and Kutenai must also be related. I have not studied Kutenai in detail. I just present some relevant findings of other people here.

Algonquian and Kutenai share a number of striking structural similarities, but no lexical similarities beyond what could be attributed to chance have been presented in print. Haas (1965) provided some suggestive cognate sets between Algonquian and Kutenai, some of them including Salishan. These number not more than a few dozen, nevertheless she is able to extract a number of suggestive sound correspondences. Morgan (1980), which was inaccessible to me, apparently "includes comparison of intricate grammatical details, and many of the proposed cognate morphemes must be isolated from surface forms both in Kootenay and in Salishan languages in such a way that borrowing would seem a quite impossible explanation of the similarities involved" (Thompson 1979: 749-750), including a number of sound correspondences. Kinkade et al (1998) write that Morgan "attempted to sort out similarities that are best attributed to borrowing or areal influences from those that might represent genetic correspondences. He represented 129 sets of words and morphemes that he considered as possible cognates. He concluded that Kutenai is 'a single member language family which is coordinately related to the Salishan family'". Apparently, specialists do not reject Morgan's conclusions as impossible. Matthew Dryer compared Algonquian and Kutenai directly. Dryer (1992) compared the obviation systems of the two.

Dryer (2002) compared the preverbs of Kutenai and Algonquian, and pointed out a number of structural similarities and a few differences. In both languages, preverbs appear between the subject clitics and the verb, but only in Algonquian other material may intervene between the preverb and the verb. In both languages, the preverbs seem to be neither prefixes nor completely separate elements. In both languages there are preverbs that also function as a root in a verb - but Kutenai does not have the initial-medial-final structure of stems that Algonquian has (cf. Goddard 1990).

The range of meanings shows important similarities. In both languages preverbs express manner ("rapidly, nicely"), locative ("near, far away"), associated motion ("go and..."), temporality ("for a short time", "at night"), tense-aspect ("future, durative"), quantifiers ("all", "both", "many"), adjectival meanings ("small", "bad", "big"), degree ("very"), "higher verb" preverbs ("begin to..."). In addition, the two languages share what Dryer calls "anaphoric" preverbs in Kutenai, essentially the same as what are called "relative roots" in the Algonquian tradition. These are verbal elements referring to another action ("in that way", "there"). However, there are a few semantic categories where

Kutenai uses preverbs but not Algonquian: negation and “also”. In addition, Kutenai preverbs generally seem to have more specific meanings than Algonquian preverbs. All in all, there are striking similarities, but not enough for Dryer to know whether these meanings are just typical for the category preverbs, cross-linguistically, or whether these similarities would point to a genetic connection.

The system of obviation, long assumed to be unique to Algonquian, has a clear parallel in Kutenai (Dryer 1992, 1998).

## **6 Algonquian and Salishan**

In this section, I will make a more detailed comparison between Algonquian and Salishan. I will take Czaykowska-Higgins & Kinkade (1998) as a point of departure. That paper (abbreviated as CK) is an introduction to Salishan languages, in which general and comparative data are given for Salishan languages. It is partly typological, partly historical and partly just generalizing over the Salishan languages, providing a sketch of the Salishan family. This will be used for comparison with Algonquian. To the extent that it is possible, I will use reconstructed forms for both languages, but my initial comparison will be with Cree, which is the language I am most familiar with, and which is also a language spoken relatively close to the Salish area. Cree is in many respects somewhat conservative, and generally not very different from Proto-Algonquian. Most Cree data will be from the Plains Cree dialect, and occasionally data from other Cree dialects will be given. Plains Cree is a little simplified, especially in the verbal domain, compared to otherwise closely related dialects.

I will systematically present all relevant traits dealt with in CK, and compare them with Cree/Algonquian. So this is not a list of traits selected to show similarities. I have tried to take all traits into account that the authors consider typical for Salishan languages (and not for only a subgroup) or for Proto-Salishan (hereafter PS). Hence, both differences and resemblances between the two families will be discussed. The similarities, however, are much more striking than the differences.

### **6.1 Phonology: very different**

The main differences between Salishan and Algonquian are found in their phonological systems, especially the consonant inventories. The vowel inventories are reasonably similar: both languages have four vowels (Goddard 1979: 71; CK 7-22, 50-53), but whereas Cree has 10 consonants (most of which can also be pre-aspirated) and PA 13, Proto-Salishan consonant inventories range from ca. 32 to ca. 40 (see Thompson 1979 for some proposals). Salish phonology is generally quite complex.

The stress systems of the two families are perhaps comparable. Cree stress is on the final syllable, with secondary stress on odd syllables from the back, and in interior Salish stress is far to the right (CK 15).



Another area where Cree shares a quirk with Salishan is the existence of special speech styles in which certain phonemes are systematically changed. This is not only typical for (probably) all Salishan languages but also for almost all of the other languages spoken along the U.S. Pacific coast. Nichols (1971) provides an overview of the phenomenon and Cree appears to fit the coastal pattern. More on this below in section 6.19.

## **6.2 Parts of speech**

See 6.15.

## **6.3 Morphology: derivation and inflection**

CK (54-56) state that the distinction between inflection and derivational is difficult to draw. This is the same for Cree and other Algonquian languages. Cree stems are morphologically complex (Goddard 1990), and the complexity of the verbs with a series of affixes is notoriously complex.

I discuss the order of morphemes in section 6.4. I will list all bound grammatical morphemes reconstructed for Proto-Salishan in CK in 6.5, and provide (if available) possible cognates from Cree and/or PA.

## **6.4 Morpheme order in the Algonquian and Salishan verb**

Both in the Algonquian and in the Salishan tradition, sets of idiosyncratic terms are used. These hinder a comparison. In Algonquian, for instance, the following terms are used that are either unique to studies of the family, or used in a sense unique to Algonquian: initial, medial, final, relative root, conjunct order, theme, subjunctive, direction, relational..... In addition, terms are used for phenomena that are either typically Algonquian (obviative/proximate) or Algonquian is the prime example of the phenomenon (inverse/direct). I will try to avoid such terms, and use more widely applicable terms if possible from typological research.

I will therefore first provide a template of Cree morphology with both traditional and more typological terms. This template (from Bakker 2006) can be found in appendix 1. It is both incomplete and overcomplete. It is overcomplete because it is impossible to use the whole sequence of morphemes in one individual verb. In practice no verb forms are used with more than six or seven morphemes beyond the stem. It is incomplete on the other hand, because it does not contain positions for morphemes of a number of rarer phenomena, simply because it is impossible to know where they should be placed relative to all the other morphemes. The omitted morphemes are the diminutive reduplicative prefix, the diminutive suffix, the iterative suffix, some tense-mood-aspect morphemes such as the so-called *h*-preterit and *p*-preterit and the evidential marker *-tok-* and allomorphs, often called dubitative. All of these categories are relatively rare, and most of them seem to have a clear cognate in the nominal and verbal domain. Data are too scarce to determine their relative position relative to

the other affixes (but see Wolfart (1973) for some observations, and Ellis (1971) and Lacombe (1974) for some paradigms, and Bakker (2006b) for some observations).

In this subsection I will compare this Cree morpheme slot with one made for Salishan. There are a number of striking similarities between Algonquian and Salishan verbal morphology, both in the order of the affixes and in the form of the morphemes.

Example (2) shows the Salishan morpheme order (numbers added by me for convenience):

(3)	PS/S(-)	ASP-	LOC-	RED-	ROOT			
	-4	-3	-2	-1	0			
	-RED-	PA-	LS-	TR/ITR/CTL	-O-	S/PS	-ASP	
	1	2	3	4	5	6	7	

The abbreviations used are explained here:

PS/S:	possessive markers, trans/intrans subject clitics
ASP:	variable from language to language; prefixes + suffixes
LOC:	prefixes
RED:	prefixes & suffixes
ROOT	
RED	reduplication
PA:	primary affixes: variable, e.g. INCH, STAT,
LS:	lexical suffixes
TR/ITR/CTL:	(in)transitivity/control
O	Object
S/PS:	subject
ASP	aspect

Most of these categories are found in similar positions in the Cree verb. No morphological reconstruction has been made for Proto-Algonquian at the level of detail. I will therefore rely on the Cree slot presented above. It is quite likely that the order of these affixes, almost all of which have cognates in several or most Algonquian languages - display the same order. In fact, in cases where orders have been discussed (e.g. Bloomfield 1964) no obvious differences can be spotted. I will deal with them one by one, and in the end provide a positional comparison between Salishan and Cree. I will discuss the affixes in linear order.

PS/S [-4]. The first slot cover person markers for possession in the noun, and subject of transitive/intransitive in the verb. The person prefixes in Cree and Algonquian are the same for nouns and (certain) verbs, with minor phonological variation. The difference between Algonquian and Salish is that the prefixes of transitive animate verbs do not mark only subject but also the object, when a so-called inverse marker is added to the verb. In both languages, the preverbal

person markers are found at the left extremity. Third persons are unmarked, and in Cree (but not Salishan) first and second person prefixes are combined with suffixes to form plural forms

ASP [-3] is variable from language to language in Salishan. Aspect is expressed in both prefixes and suffixes, like in Cree (more in prefixes, though), even though the positions are not identical. Aspectual prefixing is found closer to the stem in Algonquian than it is in Salishan, but aspectual suffixing is found at a typologically odd position in both Cree and Salishan (-3, 7). Normally, aspectual markers are found close to the stem (according to Bybee 1985 because of its relevance for the meaning of the verb stem), whereas the suffixes are found close to the periphery in both Cree and Salishan.

Aspectual prefixes are of several kinds. There are a few distinct types of reduplication with an aspectual meaning (Ahenekew & Wolfart 1993) and the first stem vowel can be modified, yielding an aspectual meaning. In addition, there are a number of morphemes (often called preverbs in the Algonquian tradition) that mark aspectual distinctions, with meanings like “to begin”, “to quit”). These are used between the person markers and the verb stems in both languages.

The Cree aspectual suffixes [12] need some more comment. These suffixes are those of the *h*-preterits and the *p*-preterit. The forms are rather rare in most Cree dialects, and the label “preterit” may be a bit misleading as that term is more tense-related than aspect-related. Wolfart speculates somewhat about the meaning of the *h*-preterits, and suggests that the *-ht-* preterits are “used mostly of events which are completed” and the *-h-* preterits “may denote occurrences which persist”. These are descriptions of aspects rather than tenses, roughly completive or perfective and imperfective (see also James 1991 for a discussion of these morphemes in several Cree dialects).

LOC [-2] is a Salishan category not found prominently in Cree. However, there are a number of so-called relative roots (see Rhodes 1996) which are found between the person markers and the verb, which have a locative meaning, such as *atimi-* “in your way”, *awasi-* “before, beyond” *isko-* “to this point.”, *it-* “in no particular direction”. The ordering of these elements relative to the other ones that normally occur between person markers and the verb stem is not completely clear, but in any case they precede the aspectual reduplicative markers and follow person markers. In Cree, however, a range of elements (not only locative) can appear between the person markers and the stems.

RED [-1]. Reduplicative markers appear adjacent to the stem in both Cree and Salishan - but that is perhaps a necessity with reduplicative markers. In addition, the semantic ranges are highly similar (see below 6.8 and 6.20).

The prefixes show the same order in Salishan and Cree; in Cree, however, a number of additional categories are expressed in preverbal elements (tense, mood, aspect, discourse markers). The internal order of these preverbs has not been studied and described (see Wolfart 1973, Bakker 2006a). Coming to the suffixes, we again meet reduplication in Salishan.

RED [1]. In Salishan languages there is post-stem reduplication. This is not found in Cree. Muehlbauer (2003) has discussed the reduplication of suffixes.

This, however, describes repetition of the diminutive suffixes to increase the diminutive effect.

PA [2] refers to primary affixes. These are rather variable, and cover aspectual distinctions such as inchoative and stative. Normally, inchoatives are expressed with preverbs in Cree. There is no equivalent to these primary affixes in Cree. However, on a more abstract level, one could analyze the theme vowels or abstract finals as relevant in this domain. Denny (1978) has analyzed the abstract finals in Algonquian intransitive verbs as having the following meanings: *ê* "event" and *in* "process", *â* "spatial", *at(an)* "stative". This interpretation, however, would contradict the order relative to the lexical suffixes. The equivalent of the lexical suffixes would precede the abstract finals in Cree. I would say that there is no positional similarity in this category between Salishan and Cree.

LS [3]. The so-called lexical suffixes in Salishan refer to nominal material in the verb. These can be equated with the so-called medials in the Cree verb (cf. Denny 1978). Medials can be classificatory, or "incorporated" nouns. These incorporated nouns are not the result of a productive process, since the overwhelming majority in both groups show little or no similarity with the nouns of the same meaning. In Algonquian, medials are analyzed as being part of the stem (cf. Goddard 1990). They are preceded by initials, which usually denote a way in which a situation has come about, and followed by a final, denoting a state, configuration or something like that.

TR/ITR/CTL [4]. The Salish elements express (in)transitivity and control. Control does not play a role in Algonquian, but (in)transitivity is a core element in Algonquian. For instance transitive and intransitive verbs inflect differently (interacting with animacy), and they often get different stems or parts of the stem. In fact, the finals just discussed indicate both (in)transitivity and (in)animacy.

O [5]. The difference between subject and object plays a role in Algonquian, but in a rather distinct way. There is no difference in form or position between subject and object, but the semantic and grammatical roles are indicated with a directional suffix appearing between the verb stem and person suffixes. However, it is perhaps possible to equate the position for the obviative in Algonquian with that of the Salishan object. In fact, this suffix in Cree *-im-* refers to the obviative object.

S/PS [6]: The subject suffix follows the object suffix in Salishan, which may be unusual. At least as separate words, there are very few languages where objects precede subjects. Nevertheless, the same can be said about Algonquian. The obviative subject suffix follows the obviative object suffix. These two can not appear together in one verb, however. The order of these suffixes relative to the theme suffix differ: the object suffix precedes the theme marker, and the subject suffix follows the theme marker. In that sense, positions 4, 5, and 6 in Salishan are not identical to the positions in Algonquian. Also, these person markers in Cree are not really agreement markers - those are found near the extremity of the suffixes.

ASP [7] The final position in Salishan is for aspectual marking. This is

rather unusual, since aspectual marking is usually found close to the stem (Bybee 1985). Cree has only one aspectual suffix, and that is a frequentative suffix between person markers and the stem.

If we now make a template of the common elements of Salishan and Algonquian in order to visualize similarities, we get the overview as given in appendix 2. The morpheme orders in this table show a number of differences and resemblances. The most remarkable similarities are:

- (4) a. The fact that person markers and aspect markers are found both as suffixes and prefixes.
- b. Those categories that are found as either prefixes and suffixes are such in both languages.
- c. The order of the prefixes and the suffixes converge for a great deal.

Differences are:

- (5) a. A number of semantic categories are only found in either Salishan or Algonquian.
- b. There are some minor differences in ordering.

Overall, the systems show remarkable similarities, especially if compared with other polysynthetic languages such as Athapaskan, Eskimoan or Siouan.

In order to make a balanced assessment of this morpheme order, we need to establish how typologically unusual these positions are. I have no space to deal with this in depth, but some of the affix positions are typologically odd. The fact that both languages have both prefixes and suffixes is common. Hawkins & Cutler (1988) and Hawkins and Gilligan (1988) present a number of observations based on a 200 language sample on the position of (nominal and) verbal affixes. Only 16 % of the world's languages express plurality with a prefix (HC 293, HG 234). The reduplicative marking of plurality in both Salishan and Algonquian is unusual. Further, aspectual prefixes are less common than suffixes. Most of the shared positions in themselves are not typologically odd.

## 6.5 Forms of morphemes

Below I list all proto-Salishan bound grammatical morphemes mentioned in CK. I will discuss each of them individually, and point to potential shared elements, when comparing Proto-Salishan grammatical morphemes compared with Algonquian.

# (6) Morpheme comparison

	PS morph.	Meaning	Algonquian possible equivalents
a.	*ʔas-/ʔac-	stative	Cree/Ojibwe: <i>-an-</i> , <i>-at-</i>
b.	*-wa, *-a	imperative	-
c.	*we	subjunctive	Cree: <i>-i</i> conditional?, PA <i>-e</i>
d.	*aku	reportative	Cree: <i>étikwê</i> "suppositive", PA <i>-tok</i>
e.	*wəł	collective possessive	Cree: 3d possessive <i>-wa?</i>
f.	*s-	subordinative	Cree: <i>ĕi-</i> future subordinative
g.	*-t-	transitive	Cree: transitivizer <i>-t-</i> .
h.	*-mi-	relational	Cree: <i>-im</i> 4 <sup>th</sup> person, or possessive PA: indefinite 3d person
i.	*-nəw	noncontrol trans.	-
j.	*-xi-, -ni- (-VmV-)	applicative	Cree: causative <i>-h-</i>
k.	*-stew	causative	Cree: <i>-sta-</i> benefactive,
l.	*-wali	topical object	Cree: <i>-yi-</i> , obviative possessor PA: <i>*-wali</i> "objective" (Goddard 1979: 87)
m.	*-t-sewt	reflexive	Cree: <i>-iso-</i>
n.	*-awalxW	reciprocal	Cree: <i>-ito-</i>
o.	*-ilix	autonomous	-
p.	*-álmn	desiderative	-
q.	*-ʔ-	imperfective	- Cree: <i>-h-</i> preterits?

Stative \*ʔas-/ʔac-: Algonquian verb stems consist of several bound morphemes, usually an initial and a final. Some of these finals have been called "abstract finals" because they did not seem to have a clearly definable meaning. Denny (1978) was perhaps the first to attempt to provide meanings to some of them. He analyzed the four abstract finals for the inanimate intransitive verbs, and concluded that they do have a definable meaning: *ê* "event" and *in* "process", *â* "spatial", *at(an)* "stative". Stative here means "states inferred by processes of judgment and perception, perceived states which lack spatial extension, time states, and states of substances" (Denny 1978: 319). Cree has the same forms as Ojibwe, but *-an-* where Ojibwe has *-at-*. The stative morphemes for PS has been reconstructed as ʔas-/ʔac-. The morpheme has been connected with *in* independent verb, as in Bella Coola *ʔaʔi-* "to stay" (Mithun in press b, section 4). The fact that Salishan has a prefix here and Algonquian a suffix, and the fact that there is a lexical source for the Salishan form makes a direct connection unlikely, unless there was an independent verb that grammaticalized in different positions in Salishan and Algonquian. A possible Algonquian source could be the PA preverb/verb *\*ay-/aya:w-* meaning "to be, be there, exist".

Another possibility would be the Cree conjunct marker *kâ-*, which creates relative clauses or verbal nouns that have a somewhat stative meaning, in contrast to *ê-* which focuses on the action rather than the situation.

Imperative \*-wa, \*-a: Cree has a number of imperative suffix for different combinations of subjects (2, PL, 12) and objects. The person suffixes show similarities with person suffixes of the conjunct verbs. A long *-â-* precedes

the endings with a third person animate object, and it is the ending used in the singular imperative with a third person inanimate object, but it is very doubtful whether these can be identified with the PS imperative marker *-wa/-a*.

Bloomfield (1946) reconstructed a few imperative suffixes for Proto-Algonquian: *\*-lo* intransitive singular, *-ko* intransitive plural, *\*-anlo* transitive inanimate and a few additional forms for the transitive animate verbs.

Subjunctive *\*we*. Cree has an ending *-i* (underlying *-ih*, allophone *-u*) used for conditionals (called subjunctive in Algonquian terminology). The PA form is *-e* according to Bloomfield 1946: 101.

Reportative *\*aku*. If this is in the realm of the evidentials, the PS form *\*aku* may be connected with the Cree evidential particle *etikwe*, used for indirect evidence. It is usually called “dubitative” in Cree and Algonquian traditions. Even though mostly the particle is used today, in earlier days a verbal suffix was used, usually *-okwê*, also *-tok*. This suffix interacts with other suffixes in that it sometimes follows and sometimes precedes person suffixes. Dubitatives follow the first/second person suffixes, whereas they precede the third person suffixes. Bloomfield reconstructs *\*-tok*. The PS and PA forms show a remarkable similarity.

Collective possessive *\*wəf*. Cree does not have a collective possessive. At first sight, the suffix may be connected to the *-wa* suffix in Cree, limited to third person animate possessors, as in *o-mama-wa* “his/her/their mother”.

Subordinative *\*s-*. This PS subordinative shows some formal similarity with the Cree future subordinator *ci-*. This is mostly found in Southeastern dialects, and it may have been borrowed from Ojibwe. Other Cree dialects have *ka/kita/ta*. No equivalent can be found in PA.

Transitive *\*t*. There are several transitivity marker in Cree, one of them *-t* going back to *\*θ* and *\*t*, as in *pīkiskwê-* “to speak” (intransitive), transitivity to *pīkiskwâ-t-êw* “he speaks to him” and *pīkiskwâ-t-am* “he speaks to it”. Bloomfield (1946: 109) identifies three PA transitivity markers: *\*-θ* (transitive animate; /t/ in Cree, /n/ in most other languages), tran: Inan. *\*-t* and pseudotransitive *\*-too*. Other transitivity markers in Cree are *-Lstaw-* and *-totaw-* (Wolfart 1996: 429).

Relational *\*-mi-*. The meaning of this suffix is not explained in CK, it is only said it is a “transitivity morpheme”. This suffix is reminiscent of a number of Cree suffixes. First, the so-called “thematic obviative sign”, *-im-* in Cree, underlyingly *\*em*, PA *\*-em*. Wolfart (1973: 54) describes it as a morpheme that marks obviative goal in transitive verbs. It is also used in some third person possessive nominal forms, e.g. *ni-sisip-im* “my duck”.

There is also a suffix *-am-* associated with some transitive verbs, e.g. *wâp-am-êw* “he sees him” vs. *wâp-aht-am* “he sees it”, and *misk-am* “he finds it” versus *misk-aw-êw* “he finds him”.

Control does not play a role in Algonquian, and I have no proposal for a Cree equivalent for PS *\*-new* marking noncontrol transitive.

Applicatives *\*-xi-*, *-ni-* (*-VmV-*). Cree has a causative suffix *-h-* (PA *-h-*, Bloomfield 1946: 111-112), as in: *nikamo-w* “he sings”, *nikamo-h-ê-w* “he makes him sing”, and applied to a transitive verb: *wâpahtê-h-êw* “he shows it to

him", cf. *wâpaht-am* "he sees it". The *-ni-* form is more difficult to link with a Cree suffix. There is a suffix *-am-* that also transitivizes transitive verbs, but its meaning is benefactive rather than a real applicative. *akot-aw-ew* "he hangs it up for him", from *akotew* "he hangs him up", cf. *akot-âw* "he hangs it up". For the *-VmV-* suffix, see also (8) above, where *-im-* is a suffix marking an extra argument of the verb.

Causative \* *-stew*. This can be linked to Cree: *-sta-* benefactive: *nah-âpi-w* "he sits down", *nah-âpi-staw-êw* "he sits down by it" (W96: 429), or Cree *-stamaw-* (actually three suffixes: *-sta-*, *-am-*, *-aw-*): *pikiskwêw* "he speaks", *pikiskwêstamawêw* "he speaks for him". The PA form of the suffix is *-qtaw/qt* according to Bloomfield (1946: 114) and *-amaw* creates double-goal verbs with transitive inanimates.

\* *-wali* "topical object". This suffix is not found in Cree, but it can be linked to a suffix called "objective" by (Goddard 1967: 1979: 87), which marks definite objects. It survives only in a few Algonquian languages, notably Munsee Delaware. A example: *Máxkwál nihle:w* "he killed a bear", *wānihlá:wál máxkwál* "he killed the bear" or *wānihlá:wál* "he killed him", the latter form going back to PA *\*wene?la:wali*. (Goddard 1979: 87-88; see also Goddard 1967, 1974). The reconstructed form of the PA suffix *\*-wali* "objective" is identical to the PS suffix, and the Salishan and Algonquian morphemes are virtually identical in meaning.

Reflexive \* *-t-sewt*. This suffix shows a formal resemblance to Cree *-iso-* "reflexive" (underlying *\*eso*, PA *\*eso*, also exceptionally *-wiso*; Bloomfield 1946: 108). The *-o-* ending of this suffix recurs in middle forms. An example: *asam-ê-w* "he feeds him", *asam-iso-w* "he feeds himself".

Reciprocal\* *-awalxw*. The PS reciprocal suffix shows only a vague resemblance to the Cree: suffix *-ito-*, underlying form *-eto-*, PA *-etwi* (Bloomfield 1946: 108).

Autonomous \* *-ilix*. No equivalent in Algonquian?

Desiderative\* *-âlmn*. There is no obvious candidate for this suffix in Cree or PA. The PA *\*-pan* (or *\*-pa* according to Bloomfield) shows some formal resemblance, but the meanings range from preterit to irrealis, or a past relevant to the present, which seems too remote to be connected.

Imperfective\* *-?-*. This suffix is too brief to find a reasonable cognate, but PA imperfective *-(e)san* marking "a sort of imperfective or present" (Goddard 1989: 89) cannot be excluded. If Pentland (1987) is right and the preaspirated consonants of Proto-Algonquian go back to glottalized consonants, then we may have to look among pre-aspirated consonants or aspirates. There is a slight possibility that the h-preterits are cognate with the Proto-Salishan affix. These h-preterits are apparently unique to Cree, and not found in other Algonquian languages. Whether this is a Cree innovation, or a uniquely preserved archaism, is difficult to determine. According to Bloomfield the *-ht-* forms were archaic, whereas according to Wolfart (1973: 44) "the present data support no such differentiation". Wolfart speculates somewhat about the meaning of the h-preterits, and suggests that the *-ht-* preterits are "used mostly of events which are completed" and the *-h-* preterits "may denote occurrences



which persist". The common element of the two preterits would be that of "a past expectation which has not been fulfilled or describe a situation which no longer exists". A connection cannot be excluded.

Summarizing this overview of PS bound grammatical morphemes and possible Cree or PA cognates, we can only conclude that there are a number of striking similarities, in my view beyond chance. Those morphemes expressing categories alien to Cree/Algonquian (autonomous, control) appear to have no potential formally similar morphemes in Cree.

## 6.6 Lexical morphemes

In Salishan, there are three kinds of lexical morphemes: roots, lexical suffixes, and locatives (and some lexical prefixes). Most of them denote nominal concepts (body parts, common items, geographical items such as "water"); concrete senses or metaphorical senses. They are clearly areal, since Wakashan and Chimakuan languages show similar morphemes. Also verbal concepts. According to Denny (1991) the lexical suffixes of Salishan show functional similarities with Algonquian medials. Both cover not only specific items, also classificatory meanings (secondary) (CK 25).

Salishan has an instrumental suffix which is a nominalizer. Cree has a nominalizer suffix *-ikan* which makes instruments from verbs, e.g. *pâskisam* "he shoots it", *pâskisikan* "gun". This nominal suffix seems to be related to the verbal suffix *-ikê*: *mêtawêw* "he plays", *metawâkêw* "he plays with things".

In both Salishan and Algonquian, the nominal element in the verb are only rarely cognate with the nouns with meaning equivalents. For Salishan, CK remark: "The suffixes are often phonologically, and hence lexically, distinct from correspondent dependent stems". Despite this lack of correspondence, an origin in independent nouns is usually assumed: "Lexical suffixes developed likely from a process of compounding" (p. 26).

## 6.7 Plural (CK 27-28)

Plural is systematically marked in Algonquian, not so in Salishan. Prefixal reduplication to indicate plurality is reported from Salishan and (more marginally) from Algonquian. Bloomfield states (1946: 122-123): "In some cases the reduplicated roots tend to be suppletive use for plurals" e.g. Menomini *kakaanuahkosewak* "they are tall trees", sg. *kenuahkosew* "he is a tall tree". It is present in Fox, Natick, Ojibwe, and therefore likely part of the Proto-language.

Interior Salishan languages distinguish singular and plural in the verb (single actor versus group), and may have suppletive root pairs, but nothing like this (or other, more marginal ways of expressing plurality) is known from Cree.

## 6.8 Aspect (CK 28-29)

There are some similarities between the aspectual systems of Salishan and Algonquian. First, it appears that both Salishan and Algonquian makes use

of prefixes and suffixes. Second, there are some formal and semantic overlaps between the two languages.

C1V reduplication marks imperfective. This is reminiscent of one type of Cree reduplication, expressing durative, frequentative aspect. Plains Cree has two distinct types of reduplication, called “light” and “heavy” reduplication by Ahenekeew & Wolfart (1983), who studied them in detail. The first makes use of the repetition of the first consonant of a word to which a short vowel /a/ is added (Ca-), and the second type also repeats the first consonant but it is followed by a long vowel /a:/ and an aspiration (Ca:h). The light reduplication denotes “ongoing action” and the heavy one “intermittent/ discontinuous” action. The Salishan pattern is very similar to the light reduplication of Plains Cree.

There is a nonperfective morpheme: Southern Interior Salishan has *-mix/emR* and other Interior Salishan has *s(a)c/s-*. The first named suffix shows some similarities with the Cree *-sk* frequentative suffix, e.g. in *sihko-sk-iw* “he spits all the time” (*sihkw* “he spits”).

There are several future tense prefixes in Salishan *seʔ-*, *tu-* and the future/unrealized form Columbian *kaʔ-*/Bella Coola *ka-*. This last one shows a striking similarity with Cree: *ka-* (also *kita-*, *ta-*) for future.

Repetitive aspect. This is expressed with vocalic infix in root in Salishan. This shows clear formal and semantic similarities with Cree initial change. That is a change in the initial vowel of a stem or preverb, e.g. *sipwêhtêw* “he goes out”, *sêpwêhtêci* “when he went out”. Initial change marks subordination (“that it is...”, “it being..”, “if it be”, “whenever it is”) (Wolfart 1973: 45-46; 1996: 405-408, 435; Ellis 1971: 80-81). The last meaning is clearly semantically close to the Salishan process.

## 6.9 Control (29-30)

Control plays a central role in Salish, but not in Cree or Algonquian.

## 6.10 Transitive morphology

Transitivity (CK 30-31) and valency changing markers play important roles in the grammars of both languages. The markers *-\*t*, *-n*, simple transitive markers in Salishan, are too brief to link to Cree; there are several intransitive and transitive suffixes with these forms. The other valency-changing suffixes have been discussed above in 6.5: applicative/causative, transitive/causative/benefactive, reflexive and reciprocal. We can add here the intransitive/middle suffix *\*-m* and its Cree equivalent *-o-*.

In this respect it is also worth mentioning that the indirect object behaves as direct object in the verbal system in both language groups (Cf. Algonquian primary and secondary objects; see Rhodes 2006).

## 6.11 Person markers (CK 31-33)

In Salishan as well as Algonquian, person markers are both suffixed

and prefixed, and in both language there is a partial identity between certain verbal person markers and nominal possessives. In Salishan, possessive affixes/clitics are used both in possessives and as subjects of nominalized clauses, and Cree possessive affixes are used also as person markers in nondependent verbs. In addition, there are first and second person can be prefixes, the rest are always suffixes in both Salishan and Cree.

I won't try to find formal similarities here, for in Salishan "exact forms of the person markers vary (sometimes considerably)". In Salishan suffixes, the object precedes the subject; in Algonquian one cannot really talk about subject and object positions as syntax is organized differently. In addition, the suffixes tend to be portmanteau suffixes or both subject and object. However, the thematic obviative signs precede the person markers, and even though they can never cooccur, the one marking the object-like form is found closer to the stem than the one referring to the subject. These are a number of striking parallels that (especially in combination) is too rare to be accidental.

Finally, we may relate the Salishan topical object marker with the Cree system of obviation for both subject and object, whereby a suffix marks the non-topic with a suffix *-a* or *-wa*.

## 6.12 Voice (CK 33)

Active, passive, middle and antipassive are known from Salishan, and Cree has no antipassive, but it has a middle *-o-* (Salishan *\*-m*) and a passive *-ika-tê-* and others (Coast Salishan passive: *\*-lɪ*). In addition there are indefinite actor forms.

## 6.13 Mood (CK 33-34)

Salishan uses particles for the expression of mood, and Cree uses prefixes (preverbs) and suffixes different, which seems quite different ways of organization.

## 6.14 Minor lexical categories

CK (34-35) mention particles, auxiliaries and clitics as minor lexical categories. Three types of clitics are mentioned. First, an interrogative marker. Cree has an interrogative marker *ci*, *na* (depending on dialects), cliticized after the first constituent or at the end of a sentence. Other Cree dialects (e.g. Moose Cree) have been claimed to have interrogative verb forms, but Ellis (1961) showed that these forms are not limited to interrogatives, and that the forms did not stand apart from other paradigms. Second, some temporal markers. There do not seem to be something similar in Cree. Reportatives as such do not exist in Cree, but a similar evidential, called dubitative or suppositive, is found in a suffix. The suffix is (roughly) *-tokwê* in independent forms (following person inflection) and *-w-X-ê*, where X marks person marking in conjunct verbs. In modern Cree, the particle *êtikwê* dominates. This Cree evidential is thus clearly

part of the morphology in the conjunct order, in clitic position in the independent order, or an independent particle. Auxiliaries do not exist, unless one would analyze the preverbs as auxiliaries.

Salishan has prepositions and no postpositions, in line with Greenberg's (1963: 78, 110) observation that VSO languages always have prepositions. (Cf. Greenberg's Universal (2): "In languages with prepositions, the genitive always follows the governing noun, while in languages with postpositions, it almost always precedes").

### 6.15 Lexical categories

With regards to parts of speech, Algonquian and Salishan show differences and similarities (CK 35-37). Within Salishan linguistics, there has been an ongoing discussion about whether nouns and verbs should be considered distinct word classes. This question has never been raised for Algonquian. In Algonquian languages, nouns can become verbs and verbs can be nominalized, but only by means of a morphological operation with an overt morpheme. So there is a clear distinction in Algonquian. Nevertheless, many suffixes can be used for both nouns and verbs, such as the intransitive person markers (possessive in nouns, subjects in verbs), the diminutive, the dubitative (rare on nouns; Wolfart 1973: 31 n. 47), the preterit (*ni-musum-ipan* "my deceased grandfather; 19<sup>th</sup> century Cree also with inanimates", *ni-mohkomân-ipan* "my old knife"; Lacombe 1874: 18), and others.

Neither Salishan nor Algonquian have a formally distinct class of adjectives. In Cree, the equivalents of adjectives are either verbs or prefixes to nouns. Neither language family has separate copulas (Cree uses a verbal suffix in some copulative functions). Adverbial notions are predicates or particles in Salishan, the same in Cree (preverbs, particles).

An important difference between Salishan and Algonquian that gender is pervasive in Algonquian (overt in demonstratives, verbal inflection, sometimes verb stems), but mostly absent in Salishan, except in coastal languages.

### 6.16 Word order

According to CK (37-38), VSO is the preferred word order in most Salishan languages, with VOS, and SVO as alternatives. In Cree, word order is free and S, V and O occur in all six logically possible orders without meaning difference. VSO languages always have prepositions not postpositions, genitives follow the noun, have prefixes and suffixes and tend to have modifiers following the noun (Greenberg 1963). Cree is similar, but has both postpositions and prepositions and much freer word order. These observations are not at all foreign to typological generalizations, and hence probably of little of no value in this paper.

## **6.17 Grammatical roles and relations (38-39); pronominal-argument & configurationality (40-41)**

Salishan and Algonquian show similarities in their expression of grammatical relations. In both families, S and O are marked on predicates, and both families have oblique marking. More significant is that agency hierarchies play a role in determining S, O, OBL in Salishan, which is reminiscent of the person hierarchy in Algonquian, the inverse system and the obviation system. In fact, even though such person hierarchies are somewhat unusual in Western North America outside Algonquian, they predominate along the Pacific coast (Mithun in press a, b). More about that in section 7. See also Van Eijk (2006) for a typological comparison of Salishan, Algonquian and other languages in this respect.

## **6.18 Complex sentences (41-43)**

The similarities between Salishan and Algonquian in this respect are too general to be remarkable (sometimes marked with introductory particles), where Salishan is apparently quite diverse. A difference is that Salishan makes use of nominalization, whereas Cree subordinate clauses have nothing to do with nominalization, except for the fact that nominalized verbs (e.g. as relative clauses, abstract nouns and instruments) can function as nouns.

## **6.19 Ethnosemantics (43-45) and discourse and textual studies (46-49)**

The sections on ethnosemantics and on discourse and text studies in CK (46-49) are mostly not relevant, except that both in Salishan and in Cree (and some Ojibwe dialects), there are special speech characteristics of animals and the trickster. In Cree, c-palatalization can be used, but Salishan uses mostly nasal consonants, glides and laterals for special effects, or velars (Nichols 1971).

## **6.20 Reduplication in Salishan (18-20):**

Reduplication plays a central role in Salishan, and Plains Cree shares some patterns with Salishan, as discussed above. Salishan uses three patterns of reduplication: prefixal CVC, CV and second root consonant. The last one is cross-linguistically very unusual, and it is not found in Cree. The other two are. (i) prefixal CVC is used in Salishan for distributivity; plural of diversity; repeated/distributed/frequent action; there is variation in the nature of the vowel. (ii) CV reduplication denotes diminutiveness and aspectual distinctions (durative, frequentative, intensive)

In modern Cree, two types of reduplication are distinguished, called light and heavy (Ahenekew & Wolfart 1983), who studied them in detail. Light reduplication (*Ca-*) denotes ongoing action, and heavy reduplication (*Ca:h*) denotes “intermittent/ discontinuous” action. These two seem to correspond to the two Salishan types.

In Cree, these types of reduplication are not limited to verbs, they are also found in nouns, and may also be used for prenouns (pronominal modifiers) (Muehlbauer 2003). In addition, there is a third type reported for Cree, but no longer in use. This shows some remarkable similarities with type (b) reduplication, in that it seems to combine a diminutive meaning with a meaning of repetition. In Lacombe's time (1874: 10), reduplication of the first two syllables indicated a diminutive action, with examples such as: *minihkwêw* "he drinks", *mini-minihkwêw* "he drinks a little in different times", *mâti-mâtow* "he cries a little".

## 7 Additional features

Apart from the similarities (and in some cases also differences) between Salishan and Algonquian discussed in section 6, there are a few additional areas where the two families show similarities. Some of these have been touched upon above, but they needed some more discussion. Others have not been mentioned, but a discussion could be clarifying. I will first discuss morphosyntactic traits for Salishan and Algonquian in Fortescue (1998), and then I will discuss a few other in more detail.

Fortescue (1998) is an attempt to try and find deep genetic links between the indigenous languages on both sides of Bering Strait. The geographical area studied covers not only the Northwest coast, but also a considerable part of the interior, including Algonquian. Fortescue points out a number of similarities between Salishan and Algonquian, often also found in other neighboring languages, which I will summarize here. I will only discuss morphosyntactic features, not phonological ones. I will indicate also how neighboring languages behave, but only for the westernmost Algonquian languages, in practice Blackfoot and Cree. Details can be found in Fortescue (1998, chapter 3, and the maps following page 251).

Both families have antipassive and indefinite object affixes. Salishan has a middle voice with an anti-passive like function, and Algonquian has suffixes reducing the specificity of objects of transitive verbs (1998: 61, map 10). All surrounding languages have functionally close constructions. Both have a morphological "have" suffix (map 20), in contrast to Kutenai, Athabaskan and other neighbors; it is not prominent in Cree. Algonquian is predominantly head-marking, Salishan double-marking (map 21). Like most neighboring languages, both families display some kind of nominal incorporation (map 23) and like all neighbors they have morphological causatives and applicatives (map 30). Both have morphological evidentials, like some of the neighbors (map 31). Both have morphological passives and perhaps Salishan has some inverse, which is prominent in Algonquian (map 33). Both families have numeral classifiers (map 35; vestigial in Cree, present in Ojibwe and Ritwan). In both families only plural is marked, not singulative or (also) dual, in contrast to all of their neighbors (map 37). Both families have possessive affixes, like some of the neighbors (map 40). Both have prefixes and suffixes, like their southern neighbors (map 41). Both families make limited use of stem-internal Ablaut

(map 43). Both families use verbal and nominal stem reduplication (not mentioned for nouns in Algonquian; it is indeed marginal in Cree) (map 44). Both have transitive/intransitive verbal paradigms (map 49), not found among southern neighbors.

Salishan and Algonquian sometimes share the *absence* of a construction, in contrast to neighboring languages: neither has distributive affixes on verbs, whereas almost all neighbors have them (map 15); no case marking, like the northern neighbors (map 19; present to the south); neither language family has an indicative based on participles, like the neighbors (map 24). Neither language has a morphological negation (Ojibwe does; Cree doesn't) or a negative auxiliary verb (map 32). Neither family make use of tones (map 48).

There are also some clear *differences*, however. Algonquian has a morphological copula, Salishan a zero-affix (map 13); Salishan has suppletive plural verbs, Algonquian doesn't (map 15); Algonquian has an inclusive/exclusive distinction, most Salishan does not (map 22); only Algonquian has subordinate verb moods (map 34), and Salishan does not, like most of its neighbors. The order of head and possessor differs (map 36). Only Algonquian distinguishes alienable/inalienable possession grammatically (map 40). Kutenai and Algonquian can incorporate the pronominal possessor in the verb, but not Salishan (map 40). Salishan has no postpositions, Algonquian has postpositions and prepositions (map 42). Algonquian and Kutenai have an obviation system, Salishan does not (map 46). Among the neighbors, only Athapaskan has a comparable structure (map 46). In Salishan, aspect predominates over tense, but not in Algonquian (map 47).

In short, Salishan and Algonquian share a significant number of these features with each other. Fortescue (1998: 79) associates the following traits with the wave of languages that includes Algonquian, Salishan, Kutenai and Wakashan ("Mosan"): numeral classifiers (and noun gender), a propensity for consonant clusters, V(S)O word order, a phonemic glottal stop, inclusive vs. exclusive 1<sup>st</sup> person, lexical affixes, stem reduplication, distributive affixes on verbs, a high degree of overlap between verbal and nominal stems, and morphological applicatives and inverse.

## 7.1 Diminutive consonant symbolism

Another feature that connects Algonquian with the Northwest coast is diminutive consonant symbolism, i.e. the change of the articulation place of manner to a different consonant, often palatalized. This is very common along the Northwest coast, and rare elsewhere (Nichols 1971). It is very common from Oregon to Northern California, along the Pacific coast. Outside North America Nichols mentions Georgian (Caucasus), Basque and Chukchi. Outside of the Northwest coast it is found occasionally in other North American languages: Luiseño in Southern California, Huave in Mexico and Dakota (Siouan) on the plains. Cree is mentioned by Nichols as the only Algonquian language displaying the phenomenon, and - together with Dakota - the only one in Western North America.

Most Salishan languages change the velars and uvulars in sound symbolism, but Cree does not do that. On the other hand, there is also sound symbolic alternation between /l, n, r/ in Salishan which is also found in dialectal variation between /l, n, r/ in several Algonquian languages, and one could surmise a connection between the two phenomena.

Pentland (1975) shows that Cree is not the only Algonquian language with consonant symbolism, and finds it in Cree, Montagnais, Delaware, Micmac, Narragansett, Shawnee, Ojibwe, Potawatomi and Fox. He distinguishes two types (1) \*t > č and s > š (2) l, r n. The first type can be traced back to Proto-Algonquian, in fact to Proto-Algic, whereas the other type, according to Pentland, is found in Ritwan and "it is not beyond reason to posit / to r sound symbolism in the proto-language" (Pentland 1975: 248). Proto-Algonquian, however, had only one lateral, reconstructed as \*l (Bloomfield 1946: 87).

Apparently Algonquian languages, and Cree in particular, share this trait with languages that belong to the Northwest coast area, without itself being part of it, which may be due to diffusion from Interior Salish, or inherited from common ancestors. The specific change /t/ > /č/ is known only from Yurok and Cree (and Basque, for that matter). I follow Pentland in his conclusion that the double palatalization is inherited from Proto-Algic, because it is (or was) so widespread in Algonquian. Pentland (1975: 248) suggests that Proto-Algic is the source for the spread of consonant symbolism west of the Rock Mountains, but his arguments are not convincing.

## 7.2 Multiple diminutives

Lacombe (1874: 10) discussed briefly the possibility to have double diminutives. Apart from the ordinary diminutive suffix, he also reports the endearing use of double diminutive suffixes on the noun (*nitanis-is-is* "my dear little daughter"). This has more recently been discussed by Muehlbauer (2003), and it is apparently still in use.

## 7.3 Pejorative diminutives.

They are not common today in Cree, but quite common in Ojibwe. These Cree examples are from Lacombe (1874: 10): *nâpêw* "boy", *nâpêsis* "little boy", *nâpêšič* "stupid boy"; *nimisis* "my older sister", *nimičič* "my stupid older sister" (Lacombe 1874: 10). This phenomenon is also quite common along the Northwest coast, but I do not have specific information on Salish.

## 7.4 Pre-aspirated and glottalized consonants.

Cree has pre-aspirated consonants, and these go back to pre-glottalized consonants in Proto-Algonquian. Pre-glottalized consonants have been reconstructed for Proto-Algonquian (Goddard 1979: 71).

David Pentland (1987) has pointed out that the pre-aspirated consonants of Proto-Algonquian are distributed in frequency in a rather asymmetrical way.



Pre-glottalized /p/ and /k/ are absent, and this may point to the presence of glottalized consonants in pre-Proto-Algonquian, as glottalized /p/ especially is typologically uncommon.

As glottalized consonants are uncommon east of the Rocky Mountains and very common along the northwest coast, this may be taken as a corroboration of the link between Algonquian and the Northwest coast.

## 7.5 Person hierarchies

Nichols (1992) distinguishes six types of argument structure: (i) Neutral (without inflectional oppositions); (ii) Accusative (iii) Ergative (iv) Three-way (v) Stative-Active/ Agent-Patient systems (vi) Hierarchical. Mithun (in press a) shows that the languages of the Northwest coast, belonging to the Wakashan, Chimakuan, and Salishan families, show remarkable similarities in this respect. Mithun: "All three show hierarchical structure. In most transitive clauses, only one participant is represented pronominally. The choice of which participant to represent does not depend on grammatical role, but on person." The details of the hierarchies differ for the three families. Hierarchical systems are rare outside the Northwest coast, but Algonquian shares not only the presence of a hierarchy with Northwest coast languages, but also some of the specific features, such as the predominance  $2 > 1 > 3$ . Both NWC languages and Algonquian make use of suffixes to indicate the grammatical roles. In all language families, discourse features play a role in marking of the persons: persons may gain or lose prominence in discourse, leading to differential marking. In fact, several authors have mentioned (see Mithun in press a) similarities between these hierarchical systems.

As all these features are widespread along the Northwest coast but rare elsewhere, it may very well be that Algonquian inherited it from the time Proto-Algonquian was spoken closer to the Pacific coast.

## 8 Conclusions

The similarities between Algonquian and Salishan are striking, suggesting a genetic origin. Several of the shared properties have been argued to be quite resistant to borrowing, such as alignment, bound morphemes, and probably morpheme ordering patterns. This contrasts with the rarity of lexical similarities, let alone sound correspondences between the two families. The case described here makes (and in other cases, such as some in Fortescue 1998, Mithun in press) no clear distinction between inherited from an ancestor language and diffused from a past neighboring language.

In only a few cases, the similarities between the families only cover parts of the families, e.g. diminutive/iterative verbal reduplication only found in Plains Cree. In those cases it is often but not always the westernmost Algonquian languages or the easternmost (interior) Salishan languages that share traits. This may suggest diffusion, but in my view this is not necessarily the case.

Despite differences especially in phonological aspects, Salishan and

Kutenai share a number of traits with Algonquian. Algonquian was originally spoken adjacent to Mosan languages and Kutenai, probably on the Plateau. Ritwan was also spoken there. Similarities are either due to diffusion (suggesting prehistorical contacts), or to genetic unity (split-offs from one ancestor language).

There are archaeological indications that speakers Algonquian and Ritwan languages moved from the Columbia River area, where Salishan languages have been spoken for a long time.

I have not investigated the molecular genetic literature, but Fortescue (1998: 219) mentions an "albumin mutation" found in a high percentage of Athabaskan, Algonquian, Wakashan and Salishan populations.

This suggests a deep genetic connection between Salishan and Algonquian, with a partly shared history, as corroborated by nonlinguistic evidence.

Let us now go back to the quote from Goddard in section 3 of this paper:

"There are, logically, two stages in such a demonstration [that languages have descended from a common ancestor, P.B.]. It is necessary to show not only that the resemblances are so numerous and detailed as to exclude the possibility of chance as an explanation but also that they are so tightly woven into the basic fabric of the languages that they cannot be explained away as borrowings."

In my opinion the resemblances are numerous and detailed enough, and also constitute the tightest part of the grammars of these languages (namely morphology, the area of languages often supposed to be least prone to borrowing), that a genetic relationship between Salishan and Algonquian must be accepted - even if some of the similarities appear to be spurious. However, acceptance ultimately remains dependent on the weight one assigns to the type and quantity of evidence demanded.

# Appendix 1: Template for Cree verbal morphemes (based on Bakker 2006a)

Conj. (or) Person	Tense	Mood	Aspect 1	Aspect 2	Aspect 3	Aktionsart	Situation	Noun-inc
1	2	3	4	5	6	7	8	9
Π4	Π2	Π2,	Π1	Π1?	Π2			
TRA-DITIO- NAL TERMS	class 1 pre-verb	class 1 + 2 pre-verb	class 2 pre-verb	light redupl: durative	heavy redupl: iterative	class 2 preverb???	initial	medial

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Means, manner	Possed obj.	Direction/ theme	Valence	Voice	Possessed subj.	Person	Plural "abs"	condit- ional
10	11	12	13	14 or 17	18	19	20	21
								Π 5?
final	obviative	theme	??	??	Obviative	person	plural	sub junctive

## Appendix 2: Comparative table of morpheme orders Salishan-Algonquian

	person	aspect	locative	redupl	ROOT	redupl.	PA	Lexical Suffixes	Trans/ intrans/ control	Object	Subject	Aspect
Salish	-4	-3	-2	-1	0	1	2	3	4	5	6	7
Algon- quian	1	4-5-6	2-4	5-6	8	-		9	10	11+19	18+19	21
	person	pre- verb	pre- verb	redupl.	Initial			medial	final	obv. Theme	obv. Theme	itera- tive

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