Mosan III: A problem of remote common proximity*

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1 Divergent languages, converging typologies

The Pacific Coast of North America is well-known as the home of one of the most geographically extensive Sprachbunds in the world, stretching from the north of California to southern Alaska (see Map 1). Within this area is found a remarkably diverse yet in many respects homogeneous set of languages belonging to a wide range of families and phyla; the job of sorting and classifying these languages into genetic groupings has been, and continues to be, a difficult and contentious problem. One of the principal difficulties in the reconstruction of Northwest Coast (NWC) language families is the tremendous time-depth that must be posited to make any kind of case for genetic relationships between languages of the various families, time-depths which rival or even exceed those proposed for the more familiar examples of Indo-European and Afro-Asiatic. In the absence of written historical records, however, the task of reconstruction on the Northwest Coast has been much more problematical than the reconstruction of Indo-European, which was aided by diverse and extensive attestation of lexical material and grammatical patterns from the intermediate ancestors of the modern PIE daughter languages. Without such aids, establishing deep genetic affiliations on the NWC by means of the traditional historical comparative method is a slow and arduous task, and, rather than relying on historical reconstruction, a number of investigators have attempted to create genetic groupings based on typological similarities between languages of the different families—which, after all, were the original sources of the intuition that such relationships might exist. One of the most famous of these attempts is Edward Sapir's Na-Dene hypothesis—linking Haida, Tlingit, Eyak, and Athapaskan, largely on the basis morphological similarities—and this hypothesis, in turn, sparked one of the most famous debates in Amerindian historical linguistics between Sapir and Franz Boas, who argued that such typological similarities could as well be attributed to diffusion as to common descent.[1]

Another of Sapir's controversial genetic groupings was the Mosan phylum, under which he tried to subsume three well-established stocks found in southern British Columbia and northern Washington State—Salishan, Chimakuan, and Wakashan. Like the Na-Dene phylum, the Mosan grouping was based largely on intuition and a smattering of lexical borrowings observed in languages of the three families; Sapir himself did little to defend Mosan, that task being undertaken most thoroughly by his student Morris Swadesh (1953a, 1953b, 1953c). Swadesh's (1953a) most impassioned defense of the Mosan hypothesis is highly similar to Sapir's case for Na-Dene in that it relies more heavily on typological data and instances of phonological and morphosyntactic similarities than it does on lexical comparison and reconstruction, the normal grist for the historical comparative mill, and Swadesh's argument hinges crucially on the assumption that, unlike lexical material, at least some types of morphosyntax are impervious to cross-linguistic borrowing. However, recent studies of the transmission and spread of typological and grammatical features in situations of language contact, particularly Thomason & Kaufman (1988) and Nichols (1992), cast serious doubt on Swadesh's contention that the similarities he has drawn among the Mosan languages are, in fact, evidence of "remote common origin", and careful exam-

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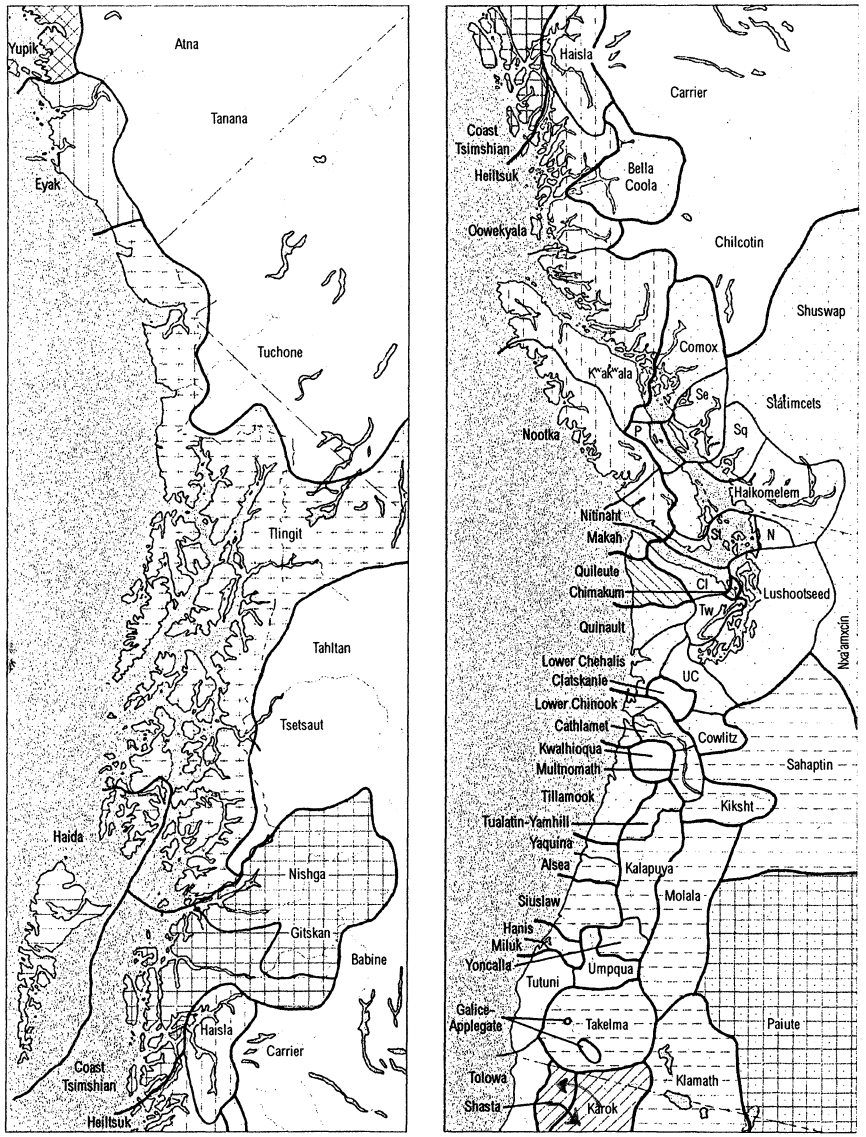
[1] For two very different takes on the debate see (*pro* Sapir) Swadesh (1951) and (*pro* Boas) Thomason & Kaufman (1988: 5*ff*).

Map 1: The Northwest Coast Sprachbund



Cl = Clallam; N = Nooksack; P = Pentlatch; Se = Sechelt; Sq = Squamish; St = Straits; Tw = Twana; UC = Upper Chehalis

Sources: Thompson & Kinkade 1990; Suttles & Suttles 1985

ination of the similarities that he documents in the Mosan languages reveals that these features appear in other languages of the NWC as well—languages that are clearly not genetically linked to the languages of the putative Mosan family at any reconstructable time-depth.

That said, the fact remains that the languages of the Salish, Wakashan, and Chimakuan families do present a picture of remarkable grammatical similarity, even within the context of the NWC Coast as a whole, which in itself shows the extensive signs of transmission of phonological, morphological, and syntactic patterns typical of a Sprachbund. In this paper, I will examine Swadesh's evidence for the Mosan hypothesis and argue that these similarities and other grammatical patterns common to the languages of the Central Coast running from north-western Washington to the central coast of British Columbia are evidence, not for a genetic grouping, but for an areal-typological grouping of languages that unites the members of the three families.

1.1 The Northwest Coast Sprachbund

At its most extensive, the term "Northwest Coast Sprachbund" is used to designate those languages spoken in the area ranging from the north of California up to the panhandle of Alaska and encompasses languages from a variety of linguistic phyla. A rough breakdown of these is given in Table 1, which shows the division of the languages in the area shown on the map, broken down into their largest (and most hypothetical) genetic groupings: setting the controversial phyletic divisions aside, the languages listed here comprise eleven well-accepted stocks.[2] In spite of the tremendous genetic diversity shown by the languages of the area, however, linguists have long recognized that they are linked, both linguistically and culturally, by a long and striking list of common features. In anthropological terms, the peoples of the NWC represent a cultural continuum of societies characterized by high levels of population density, social complexity, and material wealth. The cultures of the area had elaborate systems of social rank, ritualized gift-giving ceremonies (the potlatch), wooden-plank longhouses, and a littoral or maritime pattern of subsistence based on the exploitation of sea-mammals and fish, particularly the annual runs of salmon (Driver 1969; for a complete survey of the many cultures of the Pacific Northwest, see Suttles 1990). In linguistic terms, the languages of the area are linked by a wide variety of features such as a typologically marked phonemic inventory, form-shape numeral classifiers, and evidential markers in verbs. A comprehensive review of the phonological and grammatical features shared by these languages is contained in Sherzer (1976) and in Thompson & Kinkade (1990). What is especially interesting about the NWC in linguistic terms is the fact that so many languages of so many different phyla share such a large number of grammatical features, making it one of the most geographically extensive and genetically diverse Sprachbunds in the world.

The Sprachbund pattern, according to Thomason & Kaufman (1988), is seen most commonly in situations where there is extensive contact between groups that maintain their own linguistic identity but at least some of whose members are bilingual or multilingual, resulting in the "gradual development of isomorphism (equivalence of form) in all areas of structure except the phonological shapes of morphemes" (p. 96). A logical outcome of this characterization of Sprachbund would appear to be that, with the passage of time, languages in these regions come to resemble each other so much—in terms of both structural features and the inevitable lexical borrowings that take place in such an area—that they become similar enough to be mistaken for genetically, rather than areally, related languages. Judging from the uncertainty of many of the phyla attributed to the languages in Table 1, it appears that this is precisely what has taken place on the NWC, resulting in the creation of a number of uncertain genetic groupings, most notably Na-Dene, Penutian, and the topic of the present paper, the Mosan phylum.

[2]Haas (1969a) includes an eighth group in her count, Ritwan, a small family of languages from Central California which I have excluded here because they are otherwise unmentioned in my data. Note also that while Haida was originally included in Na-Dene by Sapir, it is now generally excluded from that phylum (Leer 1991) and is thus listed as an isolate in Table 1.

- *NA-DENE
  - Tlingit
  - Athapaskan-Eyak
    - Eyak
    - Athapaskan
      - Canadian
        - Babine
        - Carrier
        - Chilcotin
      - Tutchone
      - Pacific Coast
        - Tolowa-Galice (Oregon)
          - Coquille
          - Kwalhioqua
          - Galice-Applegate
          - Tolowa
          - Tututni
          - (Upper) Umpqua
      - Tahltan-Kaska
        - Tsetsaut
        - Tahltan
      - Tanaina-Ahtna
        - Atna
      - Tanana-Upper Kuskokwim
        - Tanana
- HAIDA (isolate)
- *HOKAN (Karok, Shasta)
- *PENUTIAN
  - Chinookan
    - Lower Chinook
    - Kiksht
    - Cathlamet
    - Multnomath
  - Oregon Penutian
    - Coos
      - Hanis
      - Miluk
    - Takelman
      - Takelma
      - Kalapuya
      - Yoncalla
      - Tualatin-Yamhill
    - Yakonan
      - Siuslaw (Lower Umpqua)
  - Plateau Penutian
    - Klamath-Modoc
      - Klamath
      - Sahaptin
  - ?Tsimshian
    - Nass-Gitskan (Nisgha)
    - Coast Tsimshian
- *MOSAN
  - ?Chimakuan
    - Quileute
    - Chimakum
  - ?Wakashan
    - Northern
      - Haisla
      - Heiltsuk (Bella Bella)
      - Oowekyala
    - Kʷakʷala (Kwakiutl)
  - Southern
    - Nootka
      - *–Kyuquot, etc.*
    - Makah
    - Nitinaht
- ?Salish
  - Bella Coola
  - Coast Salish
    - Central Salish
      - Squamish
      - Comox
        - *–Mainland (Sliammon)*
        - *–Vancouver Island*
      - Pentlatch
      - Sechelt
      - Lushootseed
      - Nooksack
      - Twana
      - Halkomelem
      - Straits
        - *–Lummi*
        - *–Samish*
        - *–Saanich, etc.*
      - Clallam
    - Tillamook
  - Tsamosan
    - Inland
      - Upper Chehalis
      - Cowlitz
    - Maritime
      - Lower Chehalis
      - Quinault
  - Interior Salish
    - Northern
      - Shuswap (Secwepemctsin)
      - Stʼatʼimcets (Lillooet)
      - [Thompson (Nɬeʔkepmex)]
    - Southern
      - Nxaʼamcín (Moses-Columbian)
      - [Coeur d'Alene]
      - [Colville-Okanagan]
      - [Kalispel (Flathead)]

Table 1—NWC language families: For the most part, only languages shown in Map 1 are included in this table. Alternate and dialect names are given where these are frequently encountered in the literature; the former are enclosed in parentheses, the latter introduced with a dash. Italicized names indicate languages located in the map area but not shown for reasons of space; names in square brackets are family-members outside the map area. * indicates a hypothetical phyletic grouping; ? indicates a family whose inclusion in a given phylum is uncertain. (Sources: Grimes 1992; Thompson & Kinkade 1990; Suttles & Suttles 1985; Kroeber 1991; Jacobsen 1979a, 1979b; Leer 1991.)

1.2 Mosan as a genetic grouping

Within the NWC Sprachbund, the Central Coast area—running from just south of the U.S.–Canada border about 1000 km north along the Pacific Coast—occupied by the Salishan (S), Wakashan (W), and Chimakuan (C) languages seems to be one of the most cohesive zones in terms of common phonological and grammatical traits. As noted earlier, the very notable similarities among these three groups has led some researchers, beginning around the turn of the century with Edward Sapir, to argue for their descent from a common ancestral stock, a view commonly referred to as the "Mosan Hypothesis", **moos* being the putative proto-form of the number "four" in these languages.[3] Morris Swadesh's articles in IJAL (1953a, 1953b, 1953c) remain the most thorough and comprehensive compilation of the evidence in favour of Salish-Wakashan-Chimakuan common origins; the most interesting of Swadesh's arguments are found in his list of sixteen "structural" similarities linking some or all of the languages of the three families (Swadesh 1953a). These are given below, grouped into four categories (which are mine rather than Swadesh's):

(1) Phonological:

stem-vowel mutation (vowel-lengthening , i-mutation, and epenthesis)
spirantization, labial/non-labial, velar/uvular alternations

Morphonological:

reduplication (expressing distribution, continuation, diminutive)
glottal stop insertion (expressing distribution, continuation, diminutive)

Morphological:

extensive suffixation
near-absence of prefixes
aspectual system (momentaneous vs. durative)
lack of tense or tense as an optional category
distributive plural
deictic distinction between absent/present, invisible/visible
gender in demonstratives (Salish and Chimakuan only)

Syntactic:

use of demonstratives to substantivize verbs
predicative use of nouns

Lexical:

numeral classifiers
suppletive stems for numerals
lexical suffixes

In addition, Swadesh offers ten examples of cognate "structural elements", wordforms or morphemes which he considers to be parts of the "fundamental features" (*cf.* Swadesh 1951) of the languages and, hence, impervious to borrowing. Finally, we can add two other syntactic features overlooked by Swadesh: the use of a common dominant word-order (Predicate–Subject–Object–Circonstantial), and the occurrence of sentence-second person clitics—a trait which appears to be

[3]Although the term "Mosan" is commonly attributed to Sapir, the earliest citation quoted in Swadesh (1953a) is from Frachtenberg ("... I would suggest the term *Mosan* for this group of languages, ..." (1920: 295)); Swadesh attributes the original idea to Sapir on the basis of a comparative list compiled in 1910.

attested, to one extent or another, in all of the Wakashan languages which I have data on as well as in Chimakuan (Boas 1940) and the entire Salishan family with the exception of the Southern Interior languages (Kroeber 1991).

When confronted with such an extensive list of comparisons between the grammars of the three language families, it might seem that the case for a single common origin was well on its way to being made; however, along with grammatical and typological similarities, the traditional comparative method also requires fairly large and extensive sets of cognates, sets which can be related not only in terms of the modern wordforms but which can also be reconstructed as the result of consistent and systematic processes of phonological change. Swadesh—drawing on his own work as well as correspondences noted by Sapir and Boas—is able in the end to come up with 280 sets of cognate words; unfortunately, only 21 of these appear in all three language families.[4] Faced with this dearth of cognates, Swadesh is forced to posit a genetic relationship between the languages at a very great time depth; using his own method of glottochronology Swadesh puts the dates of dispersal of the three Mosan families at 5500 (Salish), 2900 (Wakashan), and 2100 (Chimakuan) years BP. To the extent that this method yields valid results, the youngest feasible age for Mosan as a whole is then around 9000 years.

Such a great time-depth is methodologically problematical and seems to be well outside the generally-accepted upper limits of the comparative method (issues of deep-reconstruction aside), set at around 8000 years by Nichols (1992: 2*ff*) who cites the absence of any universally-recognized genetic grouping older than Afro-Asiatic, which is commonly believed to be of about this age. At greater time depths the reconstruction of extensive sets of cognates becomes virtually impossible due in part to lexical erosion and in part to the difficulty of distinguishing between cognate words whose modern reflexes are the result of millennia of family-specific historical change of a single native form and those which are the result of the same phonological processes operating on an ancient borrowing. Thus, based on the comparative method alone, the etymological evidence presented by Swadesh is, at best, ambivalent: in order to provide a definitive answer to the Mosan question we need to apply different tools to the analysis of the lexical and structural parallels in these language groups. As we shall see in the section that follows, this type of examination provides a radically different view of the relationship between the "Mosan" families and argues strongly for Mosan as an areal rather than a genetic grouping.

2 The Northwest Coast as a residual zone

Given the extraordinary time-depth proposed for the Mosan phylum by even its most ardent proponent, the rather tepid results provided by Swadesh's application of traditional comparative methods of historical reconstruction are hardly surprising. What is surprising about the NWC situation, however, is the fact that, even in the absence of thorough-going, convincing sets of cognate vocabulary, the languages of this area, and in particular the languages of the Salish-Chimakuan-Wakashan cluster—genetically related or not—show such striking affinities in their grammars. This situation is, in fact, precisely the opposite of what we might expect if we were to judge by the best-known successes of the comparative method. In Indo-European, for example, where we have a time depth roughly two-thirds that posited for Mosan, the languages of the various families and sub-groups show a healthy percentage of cognate vocabulary that has allowed the reconstruction of an impressive lexicon of proto-forms, and yet they display a range of typo-

[4]Jacobsen (1979b) also notes that many of Swadesh's comparisons between Wakashan and Chimakuan—which by Swadesh's own arguments should be the most robust—are not "completely convincing ... partly because of some considerable semantic shifts assumed, and partly because the sound changes recognized are not as thoroughgoing as they perhaps should be ...." (p. 797). See also Kuipers (1967: 401*ff*), which compares Swadesh's Mosan similarities to thirty or so resemblances between Squamish and Indo-European; according to Kuipers, Swadesh's lexical reconstructions are about as convincing evidence for Salish-Wakashan-Chimakuan relatedness as Kuipers' "reconstructions" are for the common origin of Salish and Indo-European.

logical and grammatical variation that, at least superficially, far exceeds the variety found within the Mosan group. Indeed, where the Indo-European situation represents the classic picture of the divergence of many languages from a common source, Mosan appears more to resemble the convergence of many languages towards a set of common features.

Thomason & Kaufman (1988) point out that patterns like the Mosan one—moderate numbers of lexical cognates coupled with heavy syntactic convergence—are seen most commonly in situations where there is extensive contact between groups that maintain their own linguistic identity but at least some of whose members are bilingual or multilingual. When such situations encompass a number of languages and persist over long periods of time—as is almost certainly the case both in the Mosan area and in the Pacific Northwest as a whole—the result is a Sprachbund, the most famous case of this phenomenon being the Balkans. According to Nichols (1992), such areas, which she refers to as "residual zones", are characterized by the presence of a number of languages of diverse genetic origins which have existed in contact for long periods of time in a state of cultural and political equilibrium in which no one language group attains ascendancy over another. Residual zones, she points out, are a "hallmark" of the Pacific Rim and most typically arise in mountainous areas and other geographical regions in which numerically smaller individual languages can remain sheltered and relatively autonomous.

Residual zones are typified by the internal diversity of the languages that exist within them, yet they are nevertheless conducive to certain types of diffusion and tend towards a certain typological profile as those traits which are prone to spreading pass from language to language within the region. At the same time, Nichols identifies a number of features of languages in residual zones that are genetically stable and do not seem to be subject to diffusion through the type of contact that prevails in such areas; these features can often be used to help identify languages of distinct genetic origins. As a net result, languages within residual zones tend very strongly to resemble one another in certain typological features while maintaining their distinctiveness in others, resulting in a kind of typological "fingerprint" that can be applied to groups of languages known to have been in contact for long periods of time. Among the Mosan languages, a close examination of the common characteristics of the three families enumerated above, coupled with scrutiny of at least one feature that these languages do not share, reveals a typological profile of the type predicted by Nichols for a typical residual zone.

2.1 Common features that are prone to spreading

As noted by Klokeid (1969), Swadesh, in making his list of Mosan grammatical convergences, fails to make careful distinctions between similarities due to universal traits of human language, common traits which are attributable to typological similarities in non-related languages, and traits which can only be shared or are only likely to be shared by languages of common genetic origin. While Klokeid's specific arguments rely on assumptions about typology, universals, and syntactic theory that were current at the time but are not as widely accepted today, his larger point is well-taken: the fact that languages resemble each other on a given point or a set of features is not in itself evidence that these languages are related. Certain grammatical features, for instance, have been shown to occur in clusters or to be related in implicational hierarchies (Greenberg 1963), while others have been shown more recently to be prone to spreading. By far the majority of Swadesh's observations fall into the latter category and in some cases represent not only similarities linking the three Mosan languages but in fact constitute shared features characteristic of the NWC language area as a whole.

2.1.1 Phonological features

Many of the arguments put forward by Swadesh in favour of a Mosan genetic phylum—including his reconstruction of the Proto-Mosan sound system—rely, at least implicitly, on the fact that the three modern language families share highly similar phonemic inventories containing a number of typologically unusual sounds. Consider, for example, the consonantal inventories for Bella Coola (S), K^{w}aƛ^{w}ala (W), and Quileute (C) given in (2). Note the series of glottalized phonemes in all three languages, as well as the presence of uvulars and a distinction between rounded/unrounded dorsal consonants. The presence of the glottalized lateral affricate /ƛ̓/ and the voiceless lateral fricative /ɬ/ is also distinctive, as is the lack of a voiced/voiceless distinction among the stops. The voiced stops /b/ and /d/ in Quileute are derived from the homorganic nasals, as they are in the neighbouring Twana and Lushootseed (Salish) and the Wakashan languages Nitinaht and Makah (Thompson & Kinkade 1990). Thompson & Kinkade also note that the non-glottalized /ƛ/ in Quileute is a Wakashan borrowing; this phoneme is absent from the Salishan family as whole (except for Comox, which also borrowed it from Wakashan), as it is from Nass-Gitskan and Alsean, although all of these have its glottalized counterpart /ƛ̓/.

(2) Mosan consonantal inventories[5]

Bella Coola

p	p̓		w	w̓	m	m̓
t	t̓				n	n̓
	ƛ̓	ɬ	l	l̓		
c	c̓	s				
			y	y̓		
k	k̓	x				
k^{w}	k̓^{w}	x^{w}				
q	q̓	χ̌				
q^{w}	q̓^{w}	χ̌^{w}				
ʔ		(h)				

K^{w}aƛ^{w}ala

p	p^{h}	p̓		w	w̓	m	m̓
t	t^{h}	t̓				n	n̓
ƛ	ƛ^{h}	ƛ̓	ɬ	l	l̓		
c	c^{h}	c̓	s				
				y	y̓		
k	k^{h}	k̓	x				
k^{w}	k^{wh}	k̓^{w}	x^{w}				
q	q^{h}	q̓	χ̌				
q^{w}	q^{wh}	q̓^{w}	χ̌^{w}				
ʔ			h,ʕ				

Quileute

p	p̓	b	s^{w}	w
t	t̓	d		
ƛ	ƛ̓		ɬ	l
c	c̓		s	
č	č̓		š	y
k	k̓		x	
k^{w}	k̓^{w}		x^{w}	
q	q̓		χ̌	
q^{w}	q̓^{w}		χ̌^{w}	
ʔ			h	

As similar as these three inventories are, however, Sherzer (1976) points out that the phonemic inventory of the Mosan group is also very similar to the inventories of other neighbouring languages, particularly those belonging to the Penutian and Na-Dene phyla, and the distribution of the cross-linguistically marked sounds in these inventories extends far beyond the immediate Mosan area, as shown in examples given in (3) from the extreme north (Tlingit—Na-Dene) and south (Klamath—Penutian) of the language area. Similarities in the sound systems of the area are charted by Haas (1969a) as extending over the entire NWC Sprachbund as defined here and, in terms of some features, even farther south to include Ritwan in North-Central California.

Of course, phonological borrowing, even of typologically unusual or marked sounds, is a well-known and well-documented phenomenon both within and across language families and phyla (Emeneau 1956; Jakobson 1972), and Swadesh by no means bases his explicit arguments for common origin on phonemic inventories alone. Instead, his two examples of Mosan parallels that I have categorized in (1) as purely phonological are, in fact, phonological rules or processes. Many linguists have claimed that the borrowing of phonological rules between languages is impossible or that it is possible only between languages that have highly convergent phonological systems (*e.g.* Meillet 1921; Bybee Hooper 1973); Thomason & Kaufman (1988: 16), however, present a

[5]The Bella Coola and K^{w}aƛ^{w}ala inventories are adapted from Haas (1969a: 86 – 87). The Quileute inventory is based on Andrade (1931, 1938) and comments in Thompson & Kinkade (1990); Powell & Woodruff (1976) report that the phoneme /g/ which is found in some of the neighbouring Coast Salish languages, also appears in one or two Quileute forms

number of counter-examples to this claim, citing the acquisition of foreign rules of phonology by Mayan, Czech, Serbo-Croatian, and Sri Lankan Portuguese Creole. Such borrowings typically occur in situations of close or prolonged contact, but they do not, as Swadesh suggests, provide robust evidence for genetic relationships between languages.

(3) Tlingit and Klamath consonantal inventories[6]

Tlingit								Klamath							
					w			p	pʰ	p̓		w	w̓	m	m̓
t	tʰ	t̓				n		t	tʰ	t̓				n	n̓
ƛ	ƛʰ	ƛ̓	ɬ	ɬ̓								l	l̓		
c	cʰ	c̓	s	s̓							s				
č	čʰ	č̓	š					č	čʰ	č̓		y	y̓		
k	kʰ	k̓	x	x̓	y			k	kʰ	k̓	x				
kʷ	kʷʰ	k̓ʷ	xʷ	x̓ʷ	y̓										
q	qʰ	q̓	χ	χ̓				q	qʰ	q̓					
qʷ	qʷʰ	q̓ʷ	χʷ	χ̓ʷ											
ʔ			h					ʔ			ʔ				
ʔʷ			hʷ												

Much the same type of argument can be made against Swadesh's pair of morphonological borrowings: morphonological borrowing is attested in a variety of contact situations around the world (Thomason & Kaufman 1988), and therefore does not constitute strong evidence of genetic relationship. The value of one of Swadesh's shared morphonological processes, reduplication signifying plurality, is also weakened by the fact that the same process is also found in the Tsimshian languages (Dunn 1979) and (at least residually) in Chinook (Sherzer 1976).

2.1.2 Morphological features

Somewhat more impressive is the list of morphological similarities which link the three Mosan families. In addition to the seven common morphological traits listed in (1), Swadesh (1953a) also offers a list of ten apparently cognate "structural" morphemes which I have grouped together in (4) into five related categories:

(4) (a) first-person *-n* in Wakashan and Salish, *-l* in Salish and Chimakuan; first-person plural *maa* in Salish and Chimakuan; second-person **-awa, *-awa̓* added to pronominal bases (*e.g.* Salish, *ʔn-wi, tn-w, kʷu-wa̓* 'you'; Quileute *s-ʔu u* 'that near you'; Wakashan *a-uwa, s-uwa̓* 'that near you');[7]

(b) *s-* as nominalizer and third-person ending *-s* in Salish, as base for demonstratives and an oblique indefinite article in Chimakuan, as pronominal base and the third-person instrumental in Wakashan;

(c) demonstrative article **ya(x̌)* reconstructable for all three stocks; deictic elements ending in *-x̌* (*e.g.* Bella Coola *ɬax̌* 'that', Chehalis *tax̌* 'that', Quileute *yix̌* 'the', Kʷakʷala *yx̌* '[3s-object]', Nootka *ʔuʕ, ʔaʕ* 'that'); various other apparently cognate demonstratives and interrogatives;

[6] The Tlingit inventory is taken from Leer (1991: 10); the Klamath is based on Haas (1969a: 87).

[7] *Cf.* Nichols & Peterson (1996), who argue that the statistical significance for genetic relatedness of sharing a single consonantal element of a pronominal paradigm (particularly a nasal, which is preferred in pronominals on a global scale) is nil. It should also be pointed out that although both Salish and Wakashan show a high frequency of *n-* (or a cognate *d-*) in first person pronominals, the second half of Nichols & Peterson's paradgim, *m-*, is absent in both families, effectively removing all three of the Mosan languages from that group of Pacific Rim languages whose historical connection is shown by patterns in their pronominal systems.

(d) locative stems in *ʔaw-* (Chimakuan and Wakashan) and *hi-, hina-* (all three families);

(e) *-la* '[continuative]'; *-ƛ̓* '[future]'

While no single example in this list is in itself definitive evidence of genetic relationship—morphological borrowing being, once again, a well-documented phenomenon—the sheer number, and nature, of parallels does seem to carry some weight.

It is on the latter of these counts, the apparently "fundamental" nature of many of the borrowings, that Swadesh bases much of his case for the Mosan phylum and for the more general claim that it is possible to distinguish between structural elements shared between languages as a result of borrowing versus those that represent a common genetic origin (Swadesh 1951). The original idea that there are potentially borrowable or "superficial" versus protected or "fundamental" features of a language is attributed by Swadesh to Sapir, and he attempts to substantiate Sapir's claim by examining a single, well-documented case—the structural similarities between French and English, some of which we know to be inherited and others we know to be borrowed. Unfortunately, Swadesh is able to do little more than draw up a list of half a dozen cognate structural elements and half a dozen borrowings and declare the former to be more essentially part of the core grammar of the languages than the latter. Even granting him this distinction between the two types of common element, which is itself far from clear, it is interesting to note that Thomason & Kaufman (1988) examine a number of similar claims that one or another type of morphology or morphological category is unborrowable or impervious to influence from borrowing, and for every case that they examine they are able provide counterexamples. In addition, they offer examples of the transmission of many of the morphological categories that Swadesh identifies as fundamental, including the diffusion of relational prepositions (p. 67), of personal pronouns (p. 81, p. 321*ff*), of singular/ plural inflection (p. 15), of a distinctive future tense (p. 29), and so on. Indeed, Thomason & Kaufman (1988: Chapter 9) cite at least two cases, Ma'a (Mbutu) and Mednyj Aleut, where languages have borrowed entire inflectional systems under intensive contact.

In addition to such evidence from other parts of the world, an examination of some of the other languages in the NWC Sprachbund itself reveals virtually all of Swadesh's shared morphological traits from (1) to be present in languages outside of Swadesh's Mosan phylum (see Table 2 on the next page). Short of claiming deep genetic relationship for all of the languages of the NWC—or arguing for the improbable scenario of independent development of common traits in each of the individual languages or language families—there seems little alternative but to claim that these traits, as a set, are evidence of the widespread transmission of morphological categories. The type of borrowing that would have to be posited if the Mosan languages are genetically unrelated is not, in fact, unattested, nor does it appear to violate any demonstrable constraints on grammatical borrowing. While the number of borrowings may be impressive, given the great time-depth proposed by Swadesh himself and its implication of several millennia of language contact, the number of morphological convergences is not so remarkable, the sharing of transmissible ("genetically unstable") elements being characteristic of Nichols' residual zones.

2.1.3 Syntactic features

Even more typical of a residual zone than the spreading of morphology, apparently, is the sharing of certain features of syntax. The best-known cases of syntactic borrowing are documented in the Balkans (Bynon 1977; Thomason & Kaufman 1988) and the Indian village of Kupwar (Gumperz 1971). In both of these situations, what seems to happen is that languages in prolonged and intimate contact begin to make use of a common phrase-structure in at least some communicative situations. In the Balkans, this is seen in at least two instances—the use of a periphrastic

Mosan convergence	shared by other NWC languages
extensive suffixation	all
near-absence of prefixes	Tsimshian, Nass-Gitskan, Haida, Kalapuya, Hanis
aspectual system (momentaneous vs. durative)	Tsimshian, Nass-Gitskan, Lower Chinook, Kalapuya
lack of tense or tense as an optional category	Tlingit, Haida
optional distributive plural	Eyak, Haida, Takelma, Kwalhioqua-Clatskanie, Alsea, Coquille-Tolowa
deictics mark absent/present, invisible/visible	Tsimshian, Nass-Gitskan, Lower Chinook, Coquille-Tolowa
gender in demonstratives (Salish/Chimakuan)	Chinook (Boas 1940)

Table 2: Morphological convergences between Mosan and other NWC languages[8]

future tense in the various languages based on the indigenous verb "to want", and the use of a finite construction in place of a morphological infinitive in the formation of various types of subordinated clauses (Thomason & Kaufman 1988; Comrie 1989). In the East Indian village of Kupwar, however, the process of syntactic convergence appears to have gone much further and has resulted in the creation of a common set of surface-syntactic templates which are made use of by speakers of local varieties of three distinct languages.

In Kupwar, as described by Gumperz (1991), speakers of four languages—Urdu, Marathi (distantly related Indo-European languages), Kannada, and Telegu (Dravidian languages)—have lived and worked in close proximity for three or four centuries; within the village each of the languages has developed a local dialect which differs, in some cases markedly, from the standard varieties in that the local variants have adapted grammatical and syntactic patterns that mimic the patterns and structures of the local varieties of the other languages. According to Gumperz, the grammatical approximation shown by the four languages of Kupwar is driven by the principle of "intertranslatability", the tendency of the speakers—whose daily lives involve frequent and often rapid code-switching—to favour or adopt syntactic patterns which allow them to translate from one language into another via direct morpheme-for-morpheme substitution or the slotting of lexical material into a common syntactic template. Consider Gumperz' example (13), reproduced here in (5).

(5) Standard Urdu : kya ghoṛii dii
what the horse gave(it)
Kupwar Urdu : ghoḍi di ya kya
Kupwar Marathi : ghodi dil əs kay
Kupwar Kannada : kudri kwaṭṭ i yan
the horse gave(you) what
'Did you sell the horse?'

In (5), Kupwar Urdu is seen to depart from the standard language in two respects. The first is in its word-order, the question-word being sentence-final in Standard Urdu, but sentence-initial in Kupwar Urdu, following the Marathi and Dravidian pattern. The second deviation is found in the inflection of the verb, which in Standard Urdu (and Standard Marathi) agrees with a non-human object (the horse) rather than with the agentive human subject (you) as it does in Kannada, Telegu, and the Kupwar varieties of Urdu and Marathi. In total, Gumperz cites sixteen cases of grammatical and morphological convergences among three of the four languages of Kupwar (of the fourth, Telegu, he says almost nothing) and states that he was able to

> analyze an extensive corpus of bilingual texts involving all three local varieties without having to postulate syntactic categories or rules for one language which were not present in the other language. We may say, therefore, that the codes used in code-switching situations in Kupwar have *a single surface syntactic structure.* (Gumperz 1971: 256)

While the extent to which such claims can be made will depend to a large degree on the type of syntactic analysis used, the fact remains that the Kupwar languages have over time come to approximate each other closely in a number of quite fundamental features of their grammatical structure, often crossing what are commonly believed to be highly discrete typological lines.

While situations such as that in Kupwar may seem bizarre or counter-intuitive to linguists who believe in the primacy or fundamentality of word-order and syntactic structures, the transmission of grammatical patterns and syntax, even between languages of highly distinct typological casts, is not an unusual phenomenon in situations of intimate contact. In addition to the Kupwar case, Thomason & Kaufman (1988) cite the wholesale borrowing of the inflectional system of Russian into Mednyj Aleut (p. 233*ff*), the superimposition of Bantu grammar (morphology along with many features of the syntax) on the originally Cushitic Ma'a (p. 223*ff*), and the adoption of Turkish morphology and syntax into Asia Minor Greek (p. 215*ff*); in all of these examples the borrowed features cross typological lines, leading Thomason & Kaufman to conclude that typological differences may only be impediments to borrowing in situations of "light to moderate" contact, while typological similarities may promote borrowing under the same circumstances. In cases of more intense language contact, however, it appears that social and sociolinguistic factors play a dominant role, the more extensive and prolonged the contact and the higher the degree of bilingualism, the greater the rate of transmission and the tendency for grammatical convergence towards a common syntactic template (or set of templates).

The notion of syntactic templates appears to be borne out by Nichols' (1992) observation that a distinctive characteristic of residual zones is their tendency to converge on a single predominant (unmarked) word-order pattern. According to her survey, residual zones tend to show less internal diversity with respect to word-order than spread zones (*i.e.* extensive areas occupied by a single language family or phylum), whereas spread zones—particularly on their peripheries—tend towards a great deal of variation both within and between given areas, making word-order overall the least genetically stable, most areal typological feature. This observation is also consistent with Thomason & Kaufman's (1988) characterization of word order as "the easiest sort of syntactic feature to borrow or to acquire via language shift" (p. 55), and seems to be borne out by the data from the NWC as well.

Among the Mosan languages, the predominant word-order is VSO—or, more accurately, given the penchant of these languages for non-verbal syntactic predicates, P(redicate)SO. The VSO pattern is also the dominant one in neighbouring Nass-Gitskan, Coast Tsimshian, and Sahaptin (Nichols 1992), and patterns which are at least verb-initial are found in Chinookan, Siuslaw, and perhaps Hanis (Thompson & Kinkade 1990).[9] While Nichols argues that the preferred word-order for residual zones is, in fact, SOV—a pattern shown further to the north in Haida and Tlingit and to the south beginning with Takelma and the Athapaskan languages of Oregon and extending down into California—it is not clear if is this a deterministic outcome of

[8]Data in this table is drawn largely from Thompson & Kinkade (1990). Thompson & Kinkade qualify the deictic marking of absent/present, visible/invisible, one of Swadesh's 16, as "superficial" in Chimakuan. According to Powell & Woodruff (1976), the distinction in Quileute seems to be more one of "directly/indirectly experienced".

[9]Thompson & Kinkade do not specify the order of subject and object in these languages; Nichols (1991) reports Hanis as OVS/VOS.

prolonged language contact in residual zones or if it is in some way conditioned by the initial word-order typologies of the various languages when they come into contact. As Nichols (1992: 94) herself observes, VSO is a statistically more (although still not the most) common word-order in the New World than in other macroareas. It may be that some or all of the Mosan group and the neighbouring languages were VSO when they first came into contact and were able to form an internally-stable dialect area.

Beyond the order of nuclear sentences elements, the Mosan languages also seem to adhere with varying degrees to the general template for the unmarked matrix clause given in (6):

(6)

(Adverb Particle)	Predicate	Subject NP	DO	PP-IO	Adjunct(s)

Of all of these sentence elements, only the predicate—which can be a member of any lexical category—is obligatory and sentences with only a predicate in Salish are not uncommon, nor apparently are they in at least some Wakashan languages (Rath 1981; Rose 1981). Naturally, the rigidity with which the template shown in (6) is followed varies from language to language and within the Salishan family at least there is also some intra-language variation allowed, most commonly in the direction of VOS when both actants are third-person NPs. At least occasional VSO/VOS alternation, and the consequent potential ambiguity in meaning, is reported for Shuswap (Kuipers 1974), Squamish (Kuipers 1967), Kalispel (Vogt 1940), Halkomelem (Hukari *et al.* 1977), and Sl̓á̓limcets (Roberts 1994)—in fact, in Sl̓á̓limcets there is some debate as to what the unmarked word-order is, with van Eijk (1995) claiming VOS and Davis (1996) reporting the predominance of VSO in at least one dialect as well as the emergence (possibly under English influence) of SVO. However, in all languages of this family, and in Wakashan, sentences with overt NP subject and object are rare, the preference being for clauses with only a predicate and at most a single actant.

One feature of the template in (6) characteristic of the NWC is the appearance of adverb particles pre-verbally. This is shown in (7) for Salish (syntactic predicates are underlined):

(7) Lushootseed (S)

(a) cic̓ʷ xʷuʔələʔ həlaʔb ʔəs+x̌əɬ tiʔiɬ
very maybe really [stat]+sick this
'he is really very sick, I guess'

(Hess 1993: 115)

(b) day̓+əxʷ čəd cic̓ʷ ʔəs+laq+il
indeed+now 1s very [stat]+late+[trm]
'now I am very late indeed'

(Hess 1993: 116)

Halkomelem (S)

(c) yaθ ceep ʔəwʔ+k̓ʷu+k̓ʷəyʔək̓ʷ
always 2p hypothetical+imperfect(rdp)+be·fishing
'you [will] always fish'

(Hukari *et al* 1977: 65, line 7)

Squamish (S)

(d) c̓umɬ čn ʔi huj·+n+əxʷ
just 1s here be·finished+1s+now
'I just finished it'

(Kuipers 1967: 280)

Sentences such as these begin with a particle or particles (the Lushootseed example in (7a) has three) which function as adverbs, modifying the meaning of the sentence predicate. Adverbial particles are syntactically distinct from adverbs in that the latter, when sentence-initial, become syntactic predicates and take on predicative morphosyntactic properties (Beck 1995a). The same pattern is apparently found in Kalispel (Vogt 1940); in Shuswap particles seem to either precede or follow the predicate, but are not suffixes or clitics (Kuipers 1974). Note that when more than one of these particles appear in a sentence, they are all fronted (the leftmost, at least in Lushootseed, being considered the most salient—Hess 1993). When these particles appear in sentences with pronominal subject-clitics, as in examples (b) through (d), the clitic obligatorily appears following the first adverbial particle, occupying sentence-second position. This contrasts with the more usual position of the subject-clitic immediately after an unmodified verbal predicate, as (8):

(8) Lushootseed (S)
ʔu+təlawi+s+əb čəd ʔə ti sqʷəbayʔ
[pnt]+run+[appl]+[md] 1s P D dog
'the dog ran after me'

(Hess 1993: 32)

Both Southern and Northern Wakashan languages also seem to make some use of pre-verbal adverbials and show a pattern much like that illustrated for Salish in (7), as in (9):

(9) Makah (W)

(a) huuʔaxi+ø+sii+cux daac
still+[indicative]+1s+2s see
'I can still see you'[10]

(Jacobsen 1979c: 132)

Heiltsuk (W)

(b) wa̓ɬ+i+s aix+s tátuqʷla wåsm+a+x̌i wa̓c̓+iá+x̌i
really+3s+[adjunct] well+[adjunct] watch man+D_1+D_2 dog+D_1+D_2
'the man watches the dog really well'

(Rath 1981: 101)

In the Makah example in (a) the adverbial *huuʔaxi* 'still' appears to be a predicate in that it is marked for aspect and person, but Jacobsen (1979c: 132*ff*) analyzes *huuʔaxisiicux* as an adverbial modifier associated with a sentence second clitic and draws a distinction between adverbs and truly predicative auxiliaries based on their syntactic behaviour and distribution. The subordinate status of the Heiltsuk *wa̓ɬ* 'really' in (b) is more obviously marked by the adjunct suffix *-s*.. Note, however, that while the use of pre-verbal particles to express at least some adverbial meanings is also attested in Kʷak̓ʷala, this pattern does not seem as robust here as it is in some of the other languages of the area,[11] as shown in the example in (10):

(10) Kʷak̓ʷala (W)
ƛ̓uma la ʔoqʷəqʰ+aɬ+ən qʷiksʔas yawix+l+ən ɬək̓ʰix
really now different+[stat]+1s feeling move+[cont]+1po stomach
'now I really feel something moving in my belly'

(Levine 1977: 120, line 23)

[10] The parsing of this sentence is mine, based on other examples in the text, which does not provide interlinear glosses, and the Nootka-Nitinaht paradigms provided in Haas (1969b).

[11] According to Boas' 1911 grammar (here, Boas 1969), "The only independent adverbs that do not take verbal forms ... are *Elâ'q* ALMOST, and the numeral adverbs with with the suffix *-p!En*" (p. 550). While (10) includes an additional example, *ƛ̓uma* "really", Boas' observation suggests that the number of such abverbs is limited and that the areal adverb-fronting pattern may be in the process of disappearing in this language.

In this sentence, the person-marker here appears on the verb rather than cliticized to the adverbial particle as it does in Makah and Salish, or in the following example from the final group of Mosan languages, Chimakuan, shown in (11):

(11) Quileute (C)
qáaxayot+la wisáa? xabàa ǩe? béc+ƚoqʷ óo+ǩo?ó ǩáǩe
very+1p happy all D all+1p.po be+proximate now
'we are very glad that so many of us are here now'[12]

(Andrade 1931: 13)

This sentence resembles more the pattern seen in the examples in (7) – (9) than it does Kʷaƛ̓ʷala, suggesting that the latter represents a departure from the prevalent areal pattern.

In addition to sharing the same unmarked word-order for the ordinary matrix clause, the Mosan languages also share a number of more specific syntactic patterns, two of which are singled out by Swadesh and appear in the list in (1). The first of these is the frequent occurrence of sentences in which a non-verbal element occupies the sentence-initial position reserved for the syntactic predicate. Consider the examples in (12):

(12) Lushootseed (S)
(a) s?uladxʷ ti?iɬ
salmon D
'that [is] a salmon'

(Hess and Hilbert 1976: I, 7)

Bella Coola (S)
(b) mna+ɬ
child+1p
'we [are] children'[13]

(Nater 1984: 36)

Makah (W)
(c) ɬaaǩuu babuyaw+iq
man·indicative·3s work+D
'the one working [is] a man'

(Jacobsen 1979c: 110)

Quileute (C)
(d) ɬáwaa+taš+as ɬabuúqʷ
two+day+3s rain
'it was two days that it rained'
(lit. 'the raining [was] two days')

(Jacobsen 1979c: 96)

In each of the sentences in (12) above, predicate-position is occupied by a noun which acts as a nominal predicate would in languages like English, with the crucial difference that English—like many languages—requires a copular verb in such a construction. In Salishan, Wakashan, and Chimakuan, however, copulas are rare and, when they exist at all, tend to be restricted to special—usually emphatic—constructions. Facts such as this have led a number of researchers (*e.g.* Kuipers 1968; Kinkade 1983; Jelinek & Demers 1994) to propose that the Mosan languages lack an underlying distinction between nouns and verbs. While this position has been argued against elsewhere (van Eijk & Hess 1986; Davis & Matthewson 1995; Beck 1995b), it is nevertheless true that in the Mosan languages as a group, members of almost any lexical category can serve as syntactic predicate and appear directly associated with the subject-person markers.

[12]The interlinear gloss of this example is mine, based on the notes in Andrade (1931) and supplementary information drawn from Powell & Woodruff (1976).
[13]In Bella Coola, the intransitive person-suffixes have collapsed into a single paradigm with the possessives; the same phrase headed by a deictic—wa+mna+ɬ—would be glossed as 'our children'.

It is difficult to show, as we have with a number of Swadesh's other convergent features, that this pattern is potentially borrowable, although it is in and of itself not a typological rarity, being attested in such diverse languages as Tagalog (Schachter 1985), Arabic (McGuirk 1986), Beja (Hudson 1974), Mongolian (Poppe 1970), Buriat (Bertagaev & Cudendambaev 1962), Kalmyk, Even, Nanay, Ul'ch, Udeg, Aleut, Nivkh, and Ket (Skorik 1968). It is interesting to note that of the last ten of these, nine are geographically contiguous and belong to at least three language phyla—Altaic, Paleo-Asiatic, and Eskimo-Aleut—widely-recognized as being distinct (Comrie 1981).[14] Boas (1940) pointed to the commonplace nature of the "verbless" copular sentence in Arabic and Russian, although such constructions are found in these languages (as in Mongolian—Poppe 1970) only in the present tense, leading many to the analysis that there is a zero copula in such sentences which surfaces in overt form when it is required to carry tense-morphology (*e.g.* Mel'čuk 1988). Because tense-marking in the Mosan languages is generally absent or optional (Thompson & Kinkade 1990), however, such arguments are difficult to make for the languages of this group and it seems just as plausible that nominal-predicate constructions came into use through convergence on a single common grammatical template much as the presence of a copula in the Indo-European languages of Kupwar triggered its adoption by the otherwise copula-less Dravidian Kannada (Gumperz 1971: 262).

Another common syntactic feature of the Mosan group noted by Swadesh is the nominalization of finite clauses through the use of a deictic or determiner-like element. This can be seen in the data in the Makah example in (12c) above and is more apparent in the more analytical examples from Lushootseed and Quileute given in (13):

(13) Lushootseed (S)
(a) wiẇsu ti ?u+čalad ti?ə? sqʷəbay?
children D [pnt]+chase D dog
'those chasing the dog [are] children'

(Hess 1993: 127)

(b) xʷi? kʷi gʷ+ad+s+?ələd
1s D [sbj]+your+nom+eat
'you didn't eat'
(lit. 'your eating [was] not')

(Hess 1993: 125)

Quileute (C)
(c) éeš yiǩ kuléeyuƚ čaƛ̌éeyo+t
many D Quileute chat+nom
'many of the Quileute were chatting'
(lit. 'the chatting Quileute [were] many')

(Andrade 1938: 249)

[14] See also Nichols (1993) *contra* Altaic as a phyletic grouping, which would further subdivide the list between Mongolian (Mongolian, Buriat, Kalmyk) and Tungusic (Even, Nanay, Ul'ch, and Udeg).

In the sentence in (a), the sentence predicate is the noun *wiwsu* 'children', while in (b) it is an adverbial of negation and in (c) it is a quantificational adverbial. The first two sentences take syntactically nominalized finite clauses as their subjects—in other words, they take relative clauses headed by the deictic element, which is structurally parallel to the anaphoric "those" or "the one" in the English glosses (for further discussion see Beck 1995a). The same structure can be found in Quileute (Andrade 1938), although in the particular case in (c) the intransitive verb *čačé eyo* 'chat' has been nominalized to become a participle-like modifier of its erstwhile syntactic subject. Constructions of the type illustrated in (13)—notably those as in (b) involving negation or adverbial quantification—are common to the three Mosan families.

While the constructions represented in (13) and (12c) are not necessarily identical in every respect across the three language families, the fact remains that, at the very least, they represent the use of a common strategy of deictic-marking by which finite clauses can take a subordinate role in a sentence. The borrowing of subordination patterns is reported by Thomason & Kaufman (1988) in certain literary Dravidian languages which have replaced native participial-modifier constructions with Indo-European style finite relative clauses under influence from Sanskrit (p. 38); a similar shift appears to have been undergone by the Dravidian Gondi under influence from modern Hindi (p. 55) and by Uzbek under Tadzhik influence (p. 91). In terms of complementization, a comparable example of convergence has taken place in some of the Balkan languages that moved from a VERB + INFINITIVE construction to an areal VERB + COMPLEMENTIZER + FINITE CLAUSE pattern, thereby creating a structural parallel between "I want [it]" and "I want [that ...]" (Comrie 1989). This shift is reminiscent of the Salish-Wakashan case, where syntactically nominalized clauses (DEICTIC + FINITE CLAUSE) are frequently used as syntactic objects. The parallel is clearer when it is kept in mind that demonstratives are also the source of a common complementizer in English, one which is often used to convert a finite clause into a syntactic nominal, as in "[That he snores so loudly] bothers me no end".

Thomason & Kaufman (1988) provide examples of the borrowing of other types of templates for specialized constructions including, among others, the (optional) replacement or combination of a comitative (conjunctive) case in Siberian Eskimo with a Chukchi lexical conjunction (pp. 55 – 56), and the genesis of a periphrastic future in the Balkan languages based on the various native verbs for "want" (p. 88). For the larger NWC itself, Thomason (1983) notes the prevalence of yes/no question markers and periphrastic imperatives—both attested in some or all of the Mosan languages—and Boas (1940) points to the aforementioned encliticization of subject-pronominals to sentence-initial adverbs, a trait he reports to be centred in the Mosan area but also present, at least incipiently, in the neighbouring Tsimshian.[15] Cliticization has already been illustrated in conjunction with sentence-initial adverbial particles (see (7) – (11) above); the areal prevalence of this pattern is particularly significant in that the sentence-second clitic is shown by Nichols (1992) to be a characteristic feature of the residual zone, a development apparently triggered by areal genetic diversity.

A final issue revolving around the spread of word-order templates among languages may also be linked to two of Swadesh's morphological observations, namely that Mosan languages have a great deal of suffixation and very little prefixation, traits which these share with other languages of the area including Tsimshian and Nass-Gitskan (which have no prefixes), Haida, Kalapuyan, and Hanis (Thompson & Kinkade 1990). Although the spread of affixation-type is not dealt with directly in either Nichols (1992) or Thomason & Kaufman (1988), the latter offer a number of

[15] In actual fact, the trait appears from Dunn's (1979) grammar to be more robust in Coast Tsimshian than Boas reports, with ergative subject pronominals in transitive clauses appearing consistently as enclitics associated with sentence-initial "temporal" particles, most likely auxiliaries expressing tense/aspect distinctions. Note also the similarity this pattern (Aux+SUBJ Verb) bears to the Mosan Adv+SUBJ Verb pattern, indicating that this particular syntactic template may have spread (or been in the process of spreading) further afield than the Mosan languages themselves.

examples of the borrowing of affixes of "unlike" type from one language into another, the end result often being the replacement of the native morpheme by the borrowed one. It is not inconceivable that a shift towards suffixation over prefixation could be the result of the long-term borrowing of suffixes, although in such cases we might expect a greater number of cognates than are actually found. What seems more likely is that the prevalence of suffixation came about in a manner analogous to the spread of the common word-order—that is, by the spreading of a common, albeit highly generalized, morphological template. Whether this is the result of the transmission of an actual synchronic morphological pattern or the spread of a templatic order of independent or semi-independent morphemes which then became grammaticalized along the word > clitic > affix cline awaits further investigation.

2.1.4 Lexical features

The final set of convergences offered by Swadesh, those that I have grouped under the heading "lexical", are the least problematic and, like most of the evidence discussed so far, provide no more evidence for genetic affiliation than they do for extensive contact among the Mosan languages and between the Mosan group and the languages of the NWC as a whole. The first of these lexical traits, numeral classifiers, is attributed by Swadesh to Mosan but is also found in the neighbouring Tsimshian and Tlingit—and possibly in the Na-Dene languages Eyak and Haida as well (Sherzer 1976); Thompson & Kinkade (1990) report them to also be present in Kalapuyan, but claim that they are absent in the Chimakuan languages. On a global scale, Nichols (1992) identifies the existence of numeral classifiers as a non-genetic "hotbed" phenomenon—a grammatical trait which tends to be distributed among languages grouped into geographical clusters—typical of the Pacific Rim as a whole. Likewise, the famous Salishan lexical (locative, field) suffixes (affixes with substantive meanings, often referring to body parts or botanical items) are not only found in the other two Mosan groups but are reported by Dunn (1976) to be present in Coast Tsimshian and by Sherzer (1976) to occur in Nass-Gitskan and the southern Penutian (Siuslaw, Coos, and maybe Kalapuya and Alsea) languages, as well as in Oregon Athapaskan (Chasta Costa, Galice, and Tolowa).

The final category of lexical features offered in Swadesh's initial list of structural similarities is the presence of cognate suppletive stems for numerals, which he then goes on to support with reconstructions of putatively cognate forms for the numerals one through four—although only the last of these is attested in all three families, hence the naming of the phylum (1953a: 33 – 34; p. 5 above). According to Thomason & Kaufman (1988), however, the borrowing of numerals, particularly the lower numerals, is not only common but is typical of moderately intense contact situations, and they cite several instances of transmission of number systems ranging from the borrowing from Chinese into Japanese of an entire set of numerals (p. 79), to Asia Minor Greek (p. 216) and English (p. 294)—which both borrowed only a few numbers from Turkish and Old Norse, respectively—and Michif (p. 230), which has borrowed only the number "one" from Cree (its other numerals being borrowed from French). Thus, it seems that once again Swadesh's examples of similarities within the Mosan languages could just as well be attributed to proximity and language-contact as to common origin, and the evidence of linguistic similarity, while impressive, falls far short of making the case for Mosan as a genetic phylum.

2.2 Differences that are genetically and temporally stable

To this point the discussion has centred on features that the Mosan languages have in common that might serve to link them genetically to a common ancestor. However, there is at least one feature whose distribution serves to differentiate these languages and points to the likelihood of distinct, rather than common, historical origins. As noted earlier, Nichols (1992) enumerates a number of typological features of languages and, on the basis of the statistical analysis

of a world-wide representative sample, ranks them according to their genetic and temporal stability and the statistical properties of their distribution between and within geographic areas. Of these features, word order was found to be the least genetically stable, most areally consistent feature, while the typological feature "alignment" was found both to be genetically the most stable feature and to have certain distinctive areal-distributional properties as well.[16] Alignment, roughly speaking, refers to the dominant organizing principle of a language, the four possibilities being "accusative", "ergative", "stative-active", and "hierarchical". Among the Mosan languages, the sole alignment type in Chimakuan and Wakashan is accusative, but in the Salishan family there seems to be a split between those languages which are accusative and those which show split-ergative alignment. Given the fact that alignment is a highly stable genetic feature—that is, resistant to transmission, change, or borrowing over long periods of time—this result is not what we would have expected if the three language families had evolved from a common ancestor.

Even more significant than the actual discrepancy in alignment within the Salishan family, however, is the distribution of the languages showing the two types of alignment. According to Nichols, ergativity shows a hotbed/outlier type of distribution in that its areal distribution seems to pattern in clusters, ergative languages being most frequent when they are surrounded by or in contact with other ergative languages (related or not); this seems to suggest that the stability of the ergative alignment pattern depends at least to some extent on proximity to other ergative languages and that, under such conditions, it will tend to persist rather than to decline. Among the Salishan languages, the strongest tendencies towards ergativity are found in the Interior (Shuswap, Stʼátʼimcets), particularly the Southern Interior (Kalispel, Nxaʼamcín), whereas languages on the Coast—the closest neighbours of the accusative Wakashan and Chimakuan families—are at best weakly ergative (Halkomelem, Straits) or are not at all (Lushootseed, Bella Coola).[17] Given Nichols' findings that ergativity is a genetically stable feature when it appears in hot-beds or clusters, this distribution is surprising if we assume a common ergative ancestor for all three Mosan languages: what we would expect instead is the persistence of the ergative feature in the central Mosan territory and its (erratic) fading away in outlying areas, particularly where the Mosan languages came into contact with accusative or stative-active neighbours. What we do find, however, is that it is in the periphery of the Mosan range—in particular in the Southeast, where the languages come into contact with the ergative Sahaptin—that ergativity is strongest, and ergativity fades as we move seawards towards Wakashan and Chimakuan. Similarly, if Proto-Wakashan had been ergative, then we might also have expected the persistence of ergativity at the northern extreme of the Mosan range where the Wakashan languages Haisla and Heiltsuk come into contact with the ergative Tsimshian languages.

The actual pattern that we find is the one we would expect when an accusative language comes into contact with an ergative language and its alignment remains unaffected. On the other hand, positing an accusative Proto-Mosan language leaves the problem of explaining the emergence of ergativity in the Salishan family. If Proto-Wakashan and Proto-Chimakuan were accusative, then the distribution of ergativity argues for an ergative pattern in Proto-Salish, this alignment fading on the Coast as a result of prolonged contact with accusative languages and persisting most strongly in the centre of the Salishan range, particularly in the south where the languages came into in contact with ergative neighbours. Thus, the ergative alignment found in some Salish languages seems to set this group off from the other two Mosan families and provides some positive evidence for the distinct ancestry of at least one division of the Mosan group.

[16] For definitions of these Nichols' alignment types, see Nichols (1992: 65 – 66). The two that we are concerned with here, "ergative" and "accusative", correspond closely to the common understanding of these terms in the literature.

[17] Jelinek & Demers (1983) have argued that Lushootseed is, in fact, an ergative language. While I do not agree with their interpretation of the data, it remains the case that even if their analysis is correct, Lushootseed would be even less strongly ergative than Straits or Halkomelem. Note also that Jelinek & Demers classify Squamish as ergative whereas Nichols, who includes it in her sample, calls it accusative, a characterization with which I concur.

3 Conclusion

Close investigation of the typological data available to us on the grammatical features of Northwest languages casts some serious doubt on the likelihood of Mosan as a genetic phylum. The principle arguments for Mosan as a genetic division have rested largely on typological, particularly morphological, similarities that have been shown on the one hand to be potentially borrowable—and, indeed, in many cases attested borrowings in other parts of the world—and on the other to represent grammatical features that extend to a number of other languages of the area as well. Barring the hypothesis that all of the languages of the NWC language area are genetically related, or the extreme improbability of independent development of so many common features is so many languages, there seems no way to use such evidence to support claims of genetic affiliation. In addition to evidence from linguistic borrowings, some positive evidence for the Mosan languages as members of a geographically-defined language area or Sprachbund can also be found in the data, most significantly the sentence-second clitic pattern (reported by Nichols 1992 to be diagnostic of residual zones) and the pattern of split ergativity peculiar to members of the Salish family. In spite of the arguments against Mosan as a genetic division, however, it remains the case that the sheer number of similarities and shared grammatical features in Salish, Wakashan, and Chimakuan argues for "Mosan" as an areal term, designating a grouping of three contiguous language families that show a remarkable degree of linguistic similarity and convergence, thus in many respects sharing a common typological profile.

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List of abbreviations

1	first person	nom	nominalizer
2	second person	obj	(direct) object
3	third person	p	plural
appl	applicative	perf	perfective
c-c	contrastive-conjunctive	pnt	punctual
caus	causative	po	possessive
cont	continuous	qtv	quotative
D	deictic	rdp	reduplication
dp	derivational prefix	refl	reflexive
dub	dubitative	s	singular
inch	inchoative	sbj	subjunctive
int	interrogative	subj	subject
irr	irrealis	stat	stative
md	middle	trm	transmutative

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