

TRANSITIVITY-RELATED MORPHOLOGICAL ALTERNATIONS IN MONTANA SALISH

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In this paper I propose to investigate the complex phenomenon of transitivity and valency in Montana Salish (Flathead). My starting point is a preliminary paper on Montana Salish transitivity by S. Thomason and D. Everett (1993); I will also be building on the work of S. Thomason, et al. (1994), which describes the different root (or valency) classes for Montana Salish.

Conventional wisdom tells us that all transitive verbs in Salishan languages are derived morphologically from intransitive roots. In Montana Salish, as in other Salishan languages, it is in fact the case that the transitive object and subject markers never attach to bare roots; one of several transitive suffixes must be added to a root before it can take transitive inflection. However, as Thomason and Everett (1993) and Thomason, et al. (1994) demonstrate, the situation is complicated by the fact that Montana Salish roots divide neatly into naturally intransitive (agent-oriented "monovalent") and naturally transitive (patient-oriented or "bivalent") classes; monovalent roots appear to be pre-associated with an agentive argument, and bivalent roots appear to be pre-associated with a patient argument (and semantically, but NOT syntactically, with an agentive argument as well). There exists a third (small but regular) class of "ambivalent" roots which are agent-oriented but bivalent (that is, they are pre-associated with an agent argument AND a (semantic) patient argument). These three classes of roots, and the monovalent or bivalent stems which can be derived from them, participate in systematic morphological alternations which can be accounted for in a unified way.

Thomason and Everett (1993) examined nine different types of constructions in Montana Salish: regular intransitives, regular transitives, ditransitives in the benefactive suffix *-sit* or the

(neutral) relative suffix *-it*, "antipassives"¹ in *-(e)m*, "backgrounded agent"² constructions in *-(e)m*, derived transitives in *-m*, transitive continuatives in *-(e)m*, transitives detransitivized by the lexical suffixes *-sqé* 'person' and *-sqá* 'animal', and transitives detransitivized by the reflexive suffix *-cut*. They concluded (1) that while "the common view of transitivity in which the prototypical transitive construction involves a completed transfer of action from a definite agent to a definite patient" holds for Montana Salish as well as for other Salishan languages, Montana Salish transitivity alternations involve focus on the agent versus focus on the patient, and imperfective versus perfective aspect, with definiteness playing only a minor role in the morphology and syntax of the verbal complex; and (2) that the suffixes for the indefinite (or "antipassive"), backgrounded agent, transitive continuative, and derived transitive are in Montana Salish allomorphs of a single morpheme, one which derives different types of constructions that deviate from the prototypical transitive construction as defined above. In their analysis *-m/-em* derives an "antipassive" verb from a transitive verb by replacing the transitive apparatus and removing the patient argument altogether, thus highlighting the agent; it derives a backgrounded agent verb from a transitive verb by replacing the subject marker of the verb, highlighting the patient; it derives a transitive continuative verb from a transitive verb by replacing the transitive apparatus without affecting the argument structure; and it derives a transitive stem from an intransitive stem by adding a patient to the verb's argument structure.

Thomason, et al. (1994), working with data collected in the field and with the 644-page Flathead-English dictionary compiled by Mengarini, et al. and published in 1879, identified and examined the different behavior of monovalent, bivalent, and ambivalent Montana Salish roots in

¹The usual term for this type of construction in the Salishan literature is "middle". The Montana Salish "antipassive" or "middle" is a verb with one definite agentive argument, and one or more indefinite non-agentive arguments. I will refer to these as "indefinite" constructions in what follows, identifying them by subtype as "transitive indefinite" (i.e., a verb with a definite agent and an indefinite patient), "ditransitive indefinite" (i.e., a verb with a definite agent and two indefinite non-agents), "causative indefinite", etc. when necessary.

²This type of construction is usually referred to in the Salishan literature as "passive" or "indefinite agent". In Montana Salish it is a construction which differs semantically from an ordinary transitive verb only in that it highlights the patient at the expense of the agent; this device is used in narrative when the patient is a more prominent or sympathetic character than the agent (cf. Thomason and Everett, 1993: pp.8-9).

simple intransitive and transitive constructions. They found that: (1) in intransitive (intransitive subject marker + bare root) constructions, monovalent and ambivalent roots have an intransitive reading, but bivalent roots have a passive reading; (2) in transitive (root + transitive marker + transitive object marker + transitive subject marker) constructions, forms based on bivalent and ambivalent roots have a plain transitive reading, but forms based on monovalent roots have a causative reading; (3) in indefinite (intransitive subject marker + root + *-(e)m*) constructions, forms based on monovalent roots have a causative indefinite reading, while forms based on bivalent and ambivalent roots have a plain transitive indefinite reading.

Thomason and Everett (1993) did not take root classes into account, and Thomason, et al. (1994) considered only bare roots. I propose to modify and develop the predictions presented in these papers in light of the results of an intensive study of the morphological variations which complex stems of Montana Salish participate in.

My data are drawn exclusively from Mengarini, et al.'s dictionary, extremely difficult material which presents certain problems of interpretation—the chief of these is that they give only citation forms for the vast majority of verb forms (that is, principal parts, with all subjects in the 1st person singular (except for the 1st plural of the reciprocal) and all non-subjects in the 3rd person, and with only occasional supplementation by illustrative sentences), so that most of the syntactic consequences of my findings will have to wait for an opportunity for further fieldwork before they can be confirmed. Forms and translations on which successful identification of stem class critically depends are frequently omitted, especially in the case of the most complex or rare forms, and the orthography, which does not distinguish glottalized and plain consonants or the vowels [e] and schwa, can be unreliable in some more important (for purposes of this paper) respects as well. However, the patterns that do emerge inspire enormous confidence in Mengarini, et al.'s control of the data: they are intricate but regular.

The morphology and syntax of the Salishan languages are notoriously complicated, and according to Dale Kinkade (personal communication, 1994) very little work has been done on the interaction of transitivity and morphology in these languages—especially in the case of complex

stems. My own feeling is that attempts at a unified analysis of the transitivity alternations exhibited by Mengarini, et al.'s data have a good chance of ultimately reducing the seeming complexity of Montana Salish morphology to a manageable level by presenting a coherent picture of cyclical stem-building with predictable effects on the argument structure of the verbal complex.

There are five categories of grammatical suffixes in Montana Salish which have a direct effect on the transitivity of a stem. These are: (i) the (regular) transitive markers, *-nt* and *-st*; (ii) the ditransitive markers, *-is*, *-sit*, and *-lt*; (iii) the reflexive and reciprocal markers, *-cut* and *-wex^w*; (iv) the derived intransitive markers, including inchoative *-p* ('become') and stative *-t* ('be'); and (v) *-m*. I will follow Thomason and Everett (1993) in taking the indefinite, backgrounded agent, derived transitive, and transitive continuative markers to be allomorphs of a single morpheme (which for convenience I will refer to as *-m*) in (synchronic) Montana Salish. In addition, I will argue that the "instrumental" marker *-min*, which is analyzed as a distinct morpheme in other Salishan languages, is in Montana Salish best analyzed as *-mi* + *-n*, where *-mi* is an allomorph of *-m*, and *-n* is an allomorph of the transitive marker *-nt*.

This classification permits the following functionally-oriented characterization of the five classes of transitivity-altering suffixes:³

- (i) The transitive markers, *-nt* and *-st*,⁴ make a stem they attach to **fully transitive**.

They do this by adding a definite non-agentive argument to the verbal complex: for bivalent stems, the completed transfer of action is from an agent to a patient; for monovalent stems, the completed transfer of action is from a "higher" agent to a "lower" agent in a causative construction.

³I will describe the characteristic patterns for monovalent and bivalent stems only in what follows, discussing the ambivalent stems separately in light of my conclusions.

⁴Thomason and Everett note that "These two suffixes differ functionally in some Salishan languages, such that the former is noncausative and the latter causative...in Flathead, however,...we have not found a systematic functional difference between the two suffixes." (Thomason and Everett (1993), pp. 18-19).

- (ii) The ditransitive markers, *-iš*, *-šit*, and *-it*, make a stem they attach to **ditransitive**.

They do this by adding both a definite non-agentive argument (a patient or "lower agent" in the case of *-iš*, a beneficiary or "lower agent" in the case of *-šit*, and a relative or "lower agent" in the case of *-it*) and an indefinite non-agentive argument (a beneficiary in the case of *-iš*, and a patient in the case of *-šit* and *-it*).

- (iii) The reflexive and reciprocal markers, *-cut* and *-wex^w*, make a **bivalent stem intransitive**. (Since they can only attach to fully transitive stems, the combination of a transitive marker with a reflexive or reciprocal has the effect of deriving a monovalent stem from a bivalent stem).

They do this by equating the agent argument with the patient argument, reducing the number of definite arguments associated with the verbal complex by one.

- (iv) The derived intransitive markers, such as *-p* and *-t*, make a stem they attach to **intransitive**. (The suffixes in this class apparently affect the *aspect* as well as the valency of the stem).

- (v) The suffix *-m* makes a stem it attaches to **potentially transitive**, effectively:

- (1) raising a preassociated patient argument to agent status and adding an indefinite non-agentive argument (applies to bivalent roots and stems, in e.g. "antipassive" constructions);

2 2 → 1

- (2) raising a preassociated agent argument to "higher agent" status (agent of a causative construction) and adding an indefinite "lower agent" argument (applies to monovalent roots and stems, in cases where *-m* is the final suffix of a verbal complex (i.e. in "antipassive" constructions));
- (3) deriving a bivalent stem (applies to monovalent roots and stems, in cases where *-m* is not the final suffix of the verbal complex);
- (4) **reducing** the transitivity of an already fully transitive construction (that is, a bivalent stem combined with *-nt*, *-st*, *-iš*, *-it*, or *-šit*), by demoting the agent: this is the "backgrounded" agent case discussed in Thomason and Everett (1993).
- (5) **increasing** the transitivity of a construction, but not to full transitivity. This is accomplished by adding a definite non-agentive argument to create a transitive continuative construction (with necessarily incomplete transfer of action).
- (a) For forms already combined with *-m*, this produces a regular transitive continuative if the root or stem is monovalent, and a ditransitive instrumental continuative if the root or stem is bivalent (see pattern 6 below).
- (b) For monovalent roots and stems, as an alternative to interpretation (2) just in case *-m* is the final suffix of the verbal complex, this creates a causative continuative verb.
- (c) For bivalent and multi-valent roots and stems, as an alternative to interpretation (1) just in case *-m* is the final suffix of the verbal complex, this gives a regular transitive continuative verb.

The semantic and syntactic interpretation of *-m*, then, is entirely determined by its morphological environment, except when it occurs verb-finally and is not preceded by a transitive or ditransitive suffix. In the latter case, there is a choice as to how to realize the "potential

transitivity" of this suffix: it can be interpreted as completed transfer of action onto an oblique agent (if the stem is monovalent: interpretation (2)) or an oblique patient (if the stem is bivalent: interpretation (1)), or it can be interpreted as incomplete transfer of action onto a non-oblique patient (interpretations (5b) and (5c)). Montana Salish morphologically distinguishes these two possibilities from each other and from fully transitive constructions at the basic level of verbal subject marking.

The three mechanisms for indexing verbal subjects in Montana Salish are distributed as follows:

- (1) Verbs with a single definite argument (interpreted as a subject) index that argument with proclitic particles that occur at the left edge of the verbal complex. This category includes intransitives, passives, causative indefinites, and the various plain transitive indefinites.
- (2) Verbs with two definite arguments, but an incomplete transfer of action (i.e., continuatives), are realized as nominalized constructions which index their subjects with possessive affixes.
- (3) Verbs with two definite arguments and completed transfer of action (i.e., full transitives) index the subject by means of a suffixed subject marker at the right edge of the verbal complex.

Representative examples of some of the possible combinations of transitivity-altering morphology with monovalent and bivalent roots are given below. The forms cited in this paper are all from Mengarini, et al., transcribed into a more modern orthography: I have inserted glottalization and glottal stops where appropriate, but have not attempted to disentangle [e] from schwa—as in Mengarini, et al., <e> stands for either. The stress marking is as in Mengarini, et al. [χ^w] represents a voiceless labio-uvular fricative; [l̥] represents a voiceless lateral; [c] is an alveolar affricate, [tʂ] is a palatal affricate, [ʔ] is a glottalized lateral affricate. In general, [ʔ] indicates glottalization when it follows a stop or affricate; otherwise, it represents a glottal stop.

tʂen is the 1st person singular, and *qe'* the 1st person plural, intransitive proclitic particle (*S_{itr}*).
 Prefixed *i-* is the 1st person singular possessive marker (Poss).
 Prefixed *es-* is a verbal nominalizer (Nom).

The 3rd person transitive object marker is a null pronoun (*O_{tr}*).
 The 1st person transitive subject marker (the final suffix of the verbal complex) is *-en* (*S_{tr}*);
 the transitive complex *-nt-Ø-en*, when unstressed, reduces to *-en* by a regular phonological rule.

Morphological Pattern	...gives...	Monovalent	Bivalent
BASIC CONSTRUCTIONS:			
0 <i>S_{itr}</i> (Nom-)	ROOT	Intransitive	Passive
1 <i>S_{itr}</i>	ROOT -m	Causative Indefinite	Transitive Indefinite
2 Poss-Nom-	ROOT -m	Causative Continuative	Transitive Continuative
3	ROOT -nt/st- <i>O_{tr}</i> - <i>S_{tr}</i>	Causative	Transitive
4	ROOT -nt/st- <i>O_{tr}</i> -m	—	Backgrounded Agent
5 <i>S_{itr}</i>	ROOT -m-nt-m	Transitive Indefinite	Instr. Ditr. Indefinite
6 Poss-Nom-	ROOT -m-nt-m	Transitive Cont.	Instr. Ditr. Continuative
7	ROOT -m-nt- <i>O_{tr}</i> - <i>S_{tr}</i>	Transitive	Instrumental Ditransitive
MULTI-VALENT CONSTRUCTIONS:			
8 <i>S_{itr}</i>	ROOT -iʂ-m	(Ben.) Caus. Indef.	(Ben.) Ditr. Indef.
9 Poss-Nom-	ROOT -iʂ-m-m	(Ben.) Caus. Cont.	(Ben.) Ditr. Cont.
10	ROOT -iʂ-m-nt- <i>O_{tr}</i> - <i>S_{tr}</i>	(Ben.) Causative	(Ben.) Ditransitive
11 Poss-Nom-	ROOT -ʂit-m	Ben. Caus. Cont.	Ben. Ditr. Cont.
12	ROOT -ʂit- <i>O_{tr}</i> - <i>S_{tr}</i>	Benefactory Causative	Benefactory Ditransitive
13 Poss-Nom-	ROOT -lt-m	Relative Caus. Cont.	Relative Ditr. Cont.
14	ROOT -lt- <i>O_{tr}</i> - <i>S_{tr}</i>	Relative Causative	Relative Ditransitive
15 Poss-Nom-	ROOT -m-lt-m	Rel. Ditr. Cont.	"Tritransitive" Cont.
16	ROOT -m-lt- <i>O_{tr}</i> - <i>S_{tr}</i>	Relative Ditransitive	"Tritransitive"
REFLEXIVES AND RECIPROCALLS:			
17 <i>S_{itr}</i>	ROOT -n-cut	Causative Reflexive	Reflexive
18	ROOT -n-cut-st- <i>O_{tr}</i> - <i>S_{tr}</i>	—	Causative Transitive Refl.
19	ROOT -n-cut-m- <i>O_{tr}</i> - <i>S_{tr}</i>	—	Transitive Refl.
20 <i>S_{itr}</i>	ROOT -me-n-cut	Reflexive	—
21	ROOT -me-n-cut-st- <i>O_{tr}</i> - <i>S_{tr}</i>	Caus. Trans. Refl.	—
22	ROOT -me-n-cut-em- <i>O_{tr}</i> - <i>S_{tr}</i>	Transitive Reflexive	—
23 <i>S_{itr}</i>	ROOT -nt/st-wex ^w	Causative Reciprocal	Reciprocal
24 <i>S_{itr}</i>	ROOT -em-en-wex ^w	Reciprocal	—

Parentheses in the argument structure descriptions below mark an indefinite argument; square brackets mark a "backgrounded" argument; a hyphen marks completed transfer of action, and a tilde marks incomplete transfer of action.

x^wúy 'go' is a monovalent root; *ac* 'tie' is a bivalent root; *tʂ-x^wúy* 'go to, visit' is a monovalent stem.

monovalent arguments:	MONOVALENT	BIVALENT	bivalent arguments:
0 Intransitive 1 definite Agent	tšen x ^w üy 'I go'	tšen es-ác 'I am caught, tied, trapped'	Passive 1 definite Patient
1 Causative Indefinite 1 definite 1 indefinite Agent-(2Agent)	tšen x ^w üy-em 'I make someone go'	tšen ac-im 'I catch, tie, trap something'	Transitive Indefinite 1 definite 1 indefinite Agent-(Patient)
2 Causative Continuative 2 definite Agent-[2Agent]	ies-x ^w üy-em 'I am making him go'	ies-ac-im 'I am catching, tying him'	Transitive Continuative 2 definite Agent-[Patient]
3 Causative 2 definite Agent-2Agent	x ^w üy-en x ^w üy-st-en 'I make him go'	ac-nt-én es-ac-st-én 'I catch, tie, trap him'	Transitive 2 definite Agent-Patient
4		ac-nt-ém '(I) catch, trap, him'	Backgrounded Agent 1 definite 1 definite oblique [Agent]-Patient
5 Transitive Indefinite 1 definite 1 indefinite Agent-(Patient)	tšen x ^w üy-me-n-em 'I am travelling something'	tšen ac-mi-n-em 'I use something to catch, tie, trap someone'	Instr. Ditransitive Indefinite 1 definite 2 indefinite Agent-(Instrument),(Patient)
6 Transitive Continuative 2 definite Agent-[Patient]	ies-x ^w üy-me-n-em 'I am travelling it'	ies-ac-mi-n-em 'I am using it to catch, tie, trap someone'	Instr. Ditr. Continuative 2 definite 1 indefinite Agent-[Instrument),(Patient)
7 Transitive 2 definite Agent-Patient	x ^w üy-me-n, tš-x ^w üy-me-n 'I travel it', 'I visit him'	ac-mi-n 'I use it to catch, tie, trap someone'	Instrumental Ditransitive 2 definite 1 indefinite Agent-Instrument,(Patient)

8 Patient-Oriented Benefactory Causative Indefinite 1 definite 2 indefinite Agent-(2Agent),(Benefic)	tšen x ^w üy-š-em 'I make something go for someone'	tšen ac-iš-em 'I catch something for someone'	Patient-Oriented Benefactory Ditr. Indefinite 1 definite 2 indefinite Agent-(Patient),(Beneficiary)
9 Patient-Oriented Benefactory Causative Continuative 2 definite 1 indefinite Agent-[2Agent),(Benefic)	ies-x ^w üy-š-em-em 'I am making it go for someone'	ies-ac-iš-em-em 'I am catching it for someone'	Patient-Oriented Ben. Ditransitive Continuative 2 definite 1 indefinite Agent-[Patient),(Beneficiary)
10 Patient-Oriented Benefactory Causative 2 definite 1 indefinite Agent-2Agent,(Benefic)	x ^w üy-š-eme-n 'I make it go for someone'	ac-iš-eme-n 'I catch it for someone'	Patient-Oriented Ben. Ditr. 2 definite 1 indefinite Agent-Patient,(Beneficiary)
11 Benefactory Causative Continuative 2 definite 1 indefinite Agent-(2Agent),(Benefic)	ies-x ^w üy-št-em 'I am making something go for his sake'	ies-ac-šit-em 'I am catching something for him'	Benefactory Ditransitive Continuative 2 definite 1 indefinite Agent-(Patient),(Beneficiary)
12 Benefactory Causative 2 definite 1 indefinite Agent-(2Agent),Benefic	x ^w üy-št-en 'I make something go for his sake'	ac-šit-en 'I catch something for him'	Benefactory Ditransitive 2 definite 1 indefinite Agent-(Patient),Beneficiary
13 Relative Causative Continuative 2 definite 1 indefinite Agent-Relative-(2Agent)	ies-x ^w üy-št-em 'I am making something of his go'	ies-ac-št-ém 'I am tying something of his'	Relative Ditransitive Continuative 2 definite 1 indefinite Agent-Relative,(Patient)
14 Relative Causative 2 definite 1 indefinite Agent-Relative-(2Agent)	x ^w üy-št-en 'I make something of his go'	ac-št-én 'I tie something of his'	Relative Ditransitive 2 definite 1 indefinite Agent-Relative,(Patient)
15 Relative Ditransitive Continuative 2 definite 1 indefinite Agent-[Relative),(Patient)	ies-tš-x ^w üy-m-št-em 'I am visiting something of his'	ies-ac-mi-št-em 'I am using something to tie something of his'	Tritransitive Continuative 2 definite 2 indefinite Agent-[Relative),(Instrument)

x^wúy 'go', tóχ^w 'straight', q'way 'black' are monovalent roots; ac 'tie', wits 'see', and qep 'stick as a friend to the death' are bivalent roots; 'ayχ^w-t 'be tired' and qem-p 'become calm' are monovalent stems.

17	Causative Reflexive Agent=2Agent	tšen q'way-n-cüt 'I make myself (be) black'	tšen ac-n-cüt 'I tie myself'	Reflexive 1 definite Agent=Patient
18			ac-n-cüt-st-en 'I make him tie himself'	Caus. Transitive Reflexive 2 definite Agent=2Agent=Patient
19			utš-en-cüt-em-en 'I appear to him'	Transitive Reflexive 2 definite Agent=2Agent=Patient
20	Reflexive 1 definite Agent=Patient	tšen x ^w uy-me-n-cüt 'I go by myself'		
21	Causative Transitive Reflexive 2 definite Agent=2Agent=Patient	toχ ^w -me-n-cüt-st-en 'I make him walk straight'		
22	Transitive Reflexive 2 definite Agent=2Agent=Patient	tš-toχ ^w -me-n-cüt-eme-n 'I walk straight to him'		
23	Causative Reciprocal 1 definite Agent=2Agent	qe' es-x ^w uy-en-wéx ^w 'We make one another go' qe' es-qem-p-st-wéx ^w 'We make one another become calm'	qe' es-qep-n-wéx ^w qe' es-qep-st-wéx ^w 'We are friends to death'	Reciprocal 1 definite Agent=Patient
24	Reciprocal 1 definite Agent=Patient	qe' es-äyχ ^w -t-em-en-wéx 'We are tired of one another'		

It can be seen that in patterns 0–3 the number and distribution of arguments for monovalent and bivalent constructions are the same; they differ only in the thematic interpretations of their arguments (that is, as agent or agent acting on agent for monovalent constructions, and as patient or agent acting on patient for bivalent constructions). *-m* here adds a fully transitive but indefinite, or alternatively definite but not fully transitive, argument to the construction; *-nt* or *-st* adds a definite and fully transitive argument to the construction.

The backgrounded agent pattern, 4, applies only to bivalent stems: *-nt* adds a definite argument, and *-m* reduces the transitive force of the construction by demoting the agent.

In 5–7 there is a consistent disparity in the argument structures for monovalent and bivalent constructions: the potential for transitivity that *-m* adds to a monovalent, inherently intransitive stem is here realized by the transitive suffix *-nt*, deriving a bivalent stem. The monovalent-based stem can now be taken through bivalent steps 1–3 by the same morphological combinations that continue to act as before on the bivalent-based stem: *-m* adds an indefinite and fully transitive argument or a definite but not fully transitive argument (depending on position and choice of imperfectly-transitive construction), and *-nt* adds a definite and fully transitive argument. This results in variations on a ditransitive (trivalent) instrumental construction in (bivalent) 5–7.

Thomason and Everett did not include the instrumental suffix, generally held to be unanalyzable *-min*, in their reanalysis of the various *-(e)m* suffixes of Montana Salish as allomorphs of "a single morpheme, with one general function and with specific interpretations linked to the various morphological environments in which it occurs" (1993: p. 15). There is strong evidence, however, that *-min* should be treated as a combination of two morphemes: *-m(i)* (the allomorph of *-m* that also functions as the derived transitive marker: cf. Thomason and Everett (1993) n.10, and below) and *-n*, an allomorph of transitive *-nt*.

The argument for analyzing "instrumental" *-min* as *-m(i)- + -nt* runs as follows:

- (1) The instrumental construction of Montana Salish consists of a bivalent stem combined with *-min* and appropriate inflection (as in the bivalent examples in 5–7 above). However, as the monovalent examples in 5–7 are intended to suggest, this construction is formally an exact parallel to the derived transitive construction for monovalent stems. Compare also:

MONOVALENT (causative)	BIVALENT (transitive)
telq ^w -st-èn 'I make him flee'	xa-nt-èn es-xa-st-èn 'I fan it, I breathe, blow on it'
q ^w éw-n es-q ^w éw-st-en 'I made him drunk, wicked'	witš-en es-witš-st-en 'I see it'
MONOVALENT (derived transitive)	BIVALENT (instrumental)
telq ^w -min 'I run away from him'	xa-min 'I use that to fan'
q ^w éw-men 'I find it inebriating'	witš-emen 'I see with it, I use it to see'

Note that the systematic differences in semantic and syntactic behavior of the monovalent and bivalent stem classes are sufficient to account for the distinction between derived transitive and instrumental constructions in Montana Salish, if we assume as above that they are predictably derived from an appropriate stem type (monovalent and bivalent respectively) by the addition of the potential transitive *-m* and a transitive suffix.

- (2) Instrumental *-min* and derived transitive *-mi* have the same peculiar distribution in Mengarini, et al.'s data: they attach exclusively to monosyllabic stems (that is, monosyllabic roots with or without a locative prefix, and with or without an inchoative (*-p*) or stative (*-t*) suffix), whereas

the instrumental and derived transitive allomorphs *-m(e)n* and *-m(e)* (respectively) attach to all other stem types, as well as to certain monosyllabic stems.⁵

- (3) Derived transitive *-m(i)* combines predictably with ditransitive as well as transitive markers: see for instance monovalent example 16 above. The bivalent example for 16 demonstrates clearly that "instrumental" *-min* combines with ditransitive suffixes in exactly the same way: yet when it does so, it loses its final *-n*. The only coherent explanation for this would be that the *-n* is in fact NOT an unanalyzable part of this morpheme, but is rather, as in the derived transitive constructions, an allomorph of the transitive suffix *-nt*.

The suffix *-min*, then, does not behave like an unanalyzable morpheme in Montana Salish; and it does behave exactly like derived transitive *-mi* (functionally as well as in terms of its morphological distribution, if my account of the general force of *-m* as a potential transitive suffix is accepted).

Examples of some of the possible variations involving ditransitive suffixes are given in 8–16. In Montana Salish, a verb can have at most two definite arguments; the ditransitive suffixes introduce two arguments into the verbal complex and promote one of the two to definite status: a different thematic role is promoted in each case. In these examples the monovalent and bivalent constructions are again in step in terms of argument structure until, in 15 and 16, an allomorph of *-m* is added directly to the root. In the case of the monovalent stems, this again derives a potentially transitive stem; the suffix *-t* makes that stem a ditransitive, with the monovalent readings of 15 and 16 mirroring those of earlier bivalent 13 and 14. In the bivalent constructions for 15 and 16, arguments meanwhile continue to pile up: *-m* adds an indefinite argument and *-t*

⁵ The basis for this distribution is not clear to me: if it is not lexically governed, then it must be determined by the stress system, which in Montana Salish is only partially predictable and hence not easy to sort out. If it turns out to be lexically governed, it could conceivably yield some insight into the historical development of the synchronic Montana Salish situation.

one definite and one indefinite argument to the original argument of the root, giving a tetra-valent stem.

The reflexives and reciprocals in 17–24 show complementary distribution for monovalent- and bivalent-based stems except in their simplest forms, represented by 17 for the reflexive pattern, and 23 for the reciprocal. Reflexives and reciprocals (as described above in (iii)) are added to a fully transitivized stem from which they derive an intransitive. The combination of transitive and reflexive or reciprocal markers, when attached to a bare monovalent root, derives the expected causative reading; attached to a bare bivalent root, it derives the expected (straightforward) reflexive or reciprocal reading. The bivalent-based stem then patterns like any intransitive stem, with a causative reading when it occurs with a transitive suffix (as in 18), and a transitive reading when it occurs with *-m* and a transitive suffix (as in 19). A monovalent root, in order to participate in reflexive, causative transitive reflexive, and transitive reflexive constructions, must first be made bivalent by the potential transitive *-m*; it then behaves like any other bivalent stem. The monovalent-based constructions in 20, 21, and 22 have the same argument structures and interpretations as bivalent-based 17, 18, and 19; they differ from the latter only in root valency and the addition of *-m*. (Note that in 22 the morphology first derives a transitive from a monovalent root, then intransitivizes the result with *-cut*, and then derives a transitive again. This type of cyclical stem-derivation, with up to three successive cycles in Mengarini, et al.'s data, is typical of the more complex constructions they cite; its effects on semantic and syntactic interpretation, given the valency class of the original stem, appear to be entirely predictable in the terms outlined above).

The reciprocals illustrated in 23 and 24 show a similar development; a monovalent root combined with the transitive and reciprocal markers has a causative reading where a bivalent root in the same morphological context has a regular intransitive reciprocal reading. This reading can be derived from a monovalent root by the addition of *-m*. (And so on: causative transitive and transitive reciprocal constructions, and ditransitive constructions for both reciprocals and reflexives, are omitted: they pattern exactly as expected).

Notice that the causative transitive reflexive forms in 18 and 19 have *-st* as their transitive marker, while all the other reflexive forms given have the transitive marker *-nt*. The reciprocal forms in 23 appear to take either transitive marker, but in fact causative reciprocal forms in *-nt* are vanishingly rare in Mengarini, et al. (*qe' es-x^wuy-en-wéx^w* may well be the only instance of this pattern in the dictionary), and (plain intransitive) reciprocal forms in *-st* are equally rare: *qe' es-qep-n-wéx^w* and *qe' es-qep-st-wéx^w* are presented in Mengarini, et al. as irregular alternatives, not (as is the case for variants in *-nt* and *-st* of the bivalent transitive forms) as members of a paradigm. These observations, taken together with the suggestion of Thomason, et al. (1994) that monovalent stems combine with *-st* but not *-nt* to form the (simple) causative,⁶ and the fact that *-nt* but not *-st* and occurs in the instrumental, derived transitive, and ditransitive constructions,⁷ are strong indications in Montana Salish that point to a (somewhat obscured) connection between *-st* and causative transfer of action and *-nt* and non-causative transfer of action. This would agree with the observed pattern in other Salishan languages (cf. note 4). Whether this connection is archaic or innovated in Montana Salish remains to be determined.

I will now treat the "ambivalent" root class. Only a handful of roots in Mengarini, et al. fall into this class, and they are difficult to identify positively: in likely-looking cases Mengarini, et al. frequently omit, or gloss ambiguously, the crucial intransitive form. The typical pattern for ambivalent roots (if it can be so called) is however as follows:

⁶This is not precisely accurate: occasionally causatives in *-nt* turn up, as for instance the regular paradigmatic alternative *x^wúy-en* given in 3 above. However, it is a striking general tendency.

⁷It may also be the case that *-nt* but not *-st* derives the transitive stem to which reflexive and reciprocal markers attach? However, one reflexive construction which is not treated above is possibly derived with *-st*. It is sometimes glossed in "causative-ish" opposition to the more common forms in *-n* (< *-nt*): so, for instance, *tšen tšinil-en-cút* 'I poison myself' vs. *tšen tšinil-is-cút* 'I poison myself purposely'.

Monovalent Parallels	AMBIVALENT ROOTS (tšilp 'hunt')	Bivalent Parallels
Intransitive	tšen tšilip 'I am hunting for something'	
	tšilp-nt-én es-tšilp-st-én 'I hunt it'	Transitive
	tšilp-mi-n 'I use it for hunting'	Instrumental Ditransitive
	tšilp-šit-en 'I hunt something for him'	Benefactory Ditransitive
	etc. (other ditransitives)	(etc.)
Reciprocal	tšilp-m-en-wəx ^w 'We hunt one another'	

Ambivalent roots, then, pattern like monovalent roots in constructions with a single argument (intransitives and reciprocals), but like bivalent roots in constructions with more than one argument (transitives and ditransitives). This suggests that they are *agent-oriented* but *bivalent* roots. The morphological subject of an ambivalent verb is *always* the active participant in the action. The roots that can be at least fairly definitely identified as ambivalent do not form an obvious semantic class; however, they appear to have in common involvement in a transformation of mental or physical state. Mengarini, et al. gloss them as follows: 'I change, become a different person', 'I behave as/like', 'I grant, yield', 'I am disturbed', 'I recover', 'I melt', 'I lie down', 'I hunt', 'I eat', 'I drink', 'I break asunder', 'I withdraw', 'I stop', 'I fall from on high'. *Change of state* perhaps correlates with perfective aspect: many of these can be identified as point-of-time achievements. If aspect is in fact the unifying factor in this class of roots, their unusual patterning could be explained: a root with inherent perfective aspect might well require an agent-oriented bivalent treatment in a language so well-equipped morphologically to distinguish different gradations of transitivity. Monovalent roots would then be marked as least-transitive and ambivalent roots as most-transitive, and they would pattern

accordingly. As continuative forms are in fact often listed for ambivalent roots, however, the explanation for this class may well lie elsewhere.

Ambivalent roots participate in one construction that sheds further light on the treatment of bivalent stems in Montana Salish. The grammatical suffix *-éls* 'feelings, thinking' derives a monovalent construction which Mengarini, et al. call the "volitional." The typical intransitive reading of a monovalent stem combined with *-éls* is 'I feel STEM'; the typical causative reading (with *-éls-st*) is 'I make someone feel STEM', and the typical derived transitive reading (with *-éls-m-nt*) is 'I think/feel him STEM'; with the locative prefix *n-* 'in' these readings change to 'I wish to STEM', etc.

Bivalent stems almost never combine directly with *-éls*; instead they combine with *-m-éls* and locative *n-* to derive such forms as *tšen n-xaq'-m-éls* 'I wish to pay' and *n-utš-em-éls-em-en* 'I wish to see him'. The explanation for the intervention of this *-m* is provided by a small number of bivalent volitional constructions which lack the *-m*, and by the behavior of the ambivalent roots in volitional constructions. Compare:

MONOVALENT	AMBIVALENT	BIVALENT	BIVALENT + <i>-m</i>
tšen tš'uw-p-éls 'I feel lonesome'	tšen n-elin-éls 'I like to eat, I feel an appetite'	tšen n-puls-éls 'I wish to be killed'	n-pols-t-em-éls-em-en 'I wish to kill him'

The rare bivalent stems in unmediated *-éls* have a passive reading, whereas monovalent and ambivalent stems in unmediated *-éls*, and bivalent stems in *-m-éls*, have an active reading. This is another instance, then, of the effect of the potential transitive, as predicted for this morphological context: it raises the preassociated patient argument of a bivalent stem to agent status and adds an indefinite non-agentive argument, which is subsequently removed by the intransitivizing suffix *-éls*. This ensures an active reading of the entire construction.

I demonstrated previously that the transitive potential suffix *-m* (occurring non-finally, and followed by transitive or ditransitive suffixes) derives a bivalent (transferring action onto a patient) stem from a monovalent stem; and the data presented above indicate that the transitive

potential suffix *-m* (occurring non-finally, and followed by intransitive suffixes) also derives a monovalent (agent-oriented) stem from a bivalent stem. This helps to explain the otherwise puzzling distribution of such forms as Mengarini, et al.'s "frequentative" (iterative) constructions, almost always un glossed, where the typical pattern is for monovalent stems to combine directly with the iterative morpheme *-lwis*, and bivalent stems to combine with *-m-lwis*; but where a large minority of monovalent stems also occur in *-m + -lwis* and a large minority of bivalent stems combine directly with *-lwis*. This can be explained if the class of monovalent exceptions to the general pattern is comprised of those that take a transitive reading, and the class of bivalent exceptions to the general pattern is comprised of those that take a passive reading. Where the glosses can be checked, this characterization in fact appears to hold. Compare for instance *x^wúy-lwis-en* 'I make him go often' with *tš-x^wúy-m-lwis-em-en* 'I often go to see him'.

Locative prefixes (such as *tš-* 'to, towards, at' and *n-* 'in'), contrary to an early hypothesis of Thomason and Everett (1993: p. 2), do not change the valency of a stem. So, for instance:

	<i>tš'- + MONOVALENT x^wúy</i>	<i>tš'- + BIVALENT c'éw'</i>	
Intransitive	tšen tš'-x ^w úy 'I go to some place'	tšen es-tš'-c'éw' 'I am washed on'	Passive
Causative	tš'-x ^w úy-st-en 'I make him go to some place'	tš'-c'éw'-n es-cèu-st-en 'I wash it on'	Transitive
Transitive	tš'-x ^w úy-m-en 'I go to see him, I pay him a visit'	tš'-c'éw'-m-en 'I use it to wash on'	Instrumental

Monovalent *tš'-x^wúy* is derived from monovalent *x^wúy*, and bivalent *tš'-c'éw'* from bivalent *c'éw'*. The motivation for interpreting the locative prefixes as bivalent-izers of monovalent roots arises from the fact that in their various transitivized incarnations monovalent stems frequently add a locative prefix in order to derive an appropriate transitive reading: so, for instance, *x^wúy* → derived transitive

tš-x^wúy-m-en, above. Many monovalent stems can form a derived transitive without the assistance of a locative prefix, however; Mengarini, et al. typically gloss these forms as 'I feel him to be STEM', or 'I find him to be STEM'. So, for instance, *au-p* 'drip' → *au-p-min* 'I feel it dripping'; *q^wéw* 'drunk, crazy' → *q^wéw-m-en* 'I find it inebriating'.

The most fruitful area for further investigation into the interaction of complex stems with transitivity in Montana Salish, then, would involve not prefixes but suffixes. As Thomason and Everett (1993: p. 13) noted, lexical suffixes can alter the valency class of a stem. As a preliminary step in the direction of tackling this aspect of Montana Salish stem derivation, I examined the patterning of the lexical suffixes for 'hand/work', 'foot', 'heart', 'house', 'eye/face/head/neck/fire', 'mouth/talk/eat', and 'half/middle/body' in Mengarini, et al.. There are a few seemingly irregular alternations involving these suffixes that I have yet to explain, but in general it appears that all but the last two have NO effect on the valency of the stem they attach to. The behavior of *-ew*'s 'half/middle/body' and of *-cin* 'mouth/talk/eat' is more interesting. The suffix *-ew*'s appears to derive a trivalent stem from whatever stem it attaches to (so that the agent, if any, of a construction in *-ew*'s acts on two equal halves, parts, or people). The distribution of *-cin* is by far the most suggestive: this suffix can derive a monovalent OR a bivalent stem, depending on its semantics. In contexts where it is interpreted as 'mouth/talk' (i.e., interpretable as semantically agent-oriented!), it derives a monovalent stem; in contexts where it is interpreted as 'mouth/eat' (i.e., interpretable as semantically patient-oriented!), it derives a bivalent stem. Examples of these two valency-changing lexical suffixes are given below:

		-ac-ew's		
arguments:	TRIVALENT STEM			
1 definite argument 1 indefinite argument	tšen ac-êw's 'I am tied with another'			Double-Passive
1 definite argument 2 indefinite arguments	tšen ac-êw's-em 'I tie two things together'			Ditransitive Indefinite
2 definite arguments (one complex)	ac-êw's-en es-ac-êw's-st-en 'I bind them together'			Ditransitive
2 definite arguments 1 indefinite oblique	ac-êw's-em-en 'I bind him with another'			Unequal Ditransitive
2 definite arguments 2 indefinite arguments	ac-êw'-lt-en 'I tie together (two things) of his'			Relative Tritransitive
2 definite arguments 1 indefinite 1 indefinite oblique	ics-ac-êw's-em-lt-em 'I tie something of his with another'			Unequal Relative Tritransitive

Stems in *-cin*

		MONOVALENT (bivalent laq ^w 'appear')	BIVALENT (bivalent qwèl 'cook')		
Intransitive	tšen laq ^w -cin 'I speak clear, e.g. a bell'				
			qwèl-cin 'I feast him'		Transitive
Transitive	laq ^w -cin-em-en 'I speak clear, plainly to him'				
			qwèl-ci-lt-en 'I feast his --'		Relative Ditransitive

The development of a coherent picture of the possibilities inherent in the elaborate transitive-related morphological apparatus of the Salishan languages is necessary to a complete understanding of the principles at work in these languages. Mengarini, et al.'s dictionary provides an enormous and hitherto unexploited quantity of data about the Montana Salish morphological system, and the majority of this data appears to be consistent with a fairly simple set of multiply applicable principles involving distinctions in valency, argument-ranking and preference, and degrees of transitivity (including information about *aspect*). The functions of many of the grammatical and lexical affixes of Montana Salish can be defined succinctly in terms of the effect they have on the valency and argument structure of a stem; in particular, Thomason and Everett's ubiquitous *-m* morpheme can be shown to have a single general function with different contextually-conditioned consequences for valency, argument structure, and transitivity; and additional allomorphs of this morpheme can be identified and coordinated in terms of a logically complete pattern of alternations for the different stem classes.

Further investigation of the behavior of lexical suffixes in Montana Salish is clearly indicated, as is an exploration of the behavior of ambivalent stems in a fuller syntactic context: the above characterization of these stems as agent-oriented bivalents predicts among other things that in transitive constructions for this class the *agent* rather than the patient should actually receive non-oblique "secondary" argument marking.

Finally, if an analysis of the interaction of valency and transitive-related morphology can be made for other Salishan languages, comparison of the different interpretations and distributions of cognate morphemes in terms of these variables could provide new insights into the historical differentiation of the language family.

BIBLIOGRAPHY

- Mengarini, et al.: published as: Giorda, Reverend J. 1887-1889. *Dictionary of the Kalispel or Flat-head Indian Language, compiled by the Missionaries of the Society of Jesus, Part I (Kalispel-English)*. St. Ignatius Print, MT.
- Thomason, Sarah and Daniel Everett. 1993. "Transitivity in Flathead." William Seaburg, ed. *Working Papers of the 28th International Conference on Salish and Neighboring Languages*. Seattle: University of Washington Press.
- Thomason, Sarah, Dorothea Berney, Gail Coelho, Jeffrey Micher, and Daniel Everett. 1994. "Montana Salish root classes." University of Pittsburgh manuscript.