Transitivity and lexical suffixes in Okanagan

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Salishan languages share with neighboring language families the areal feature of a closed set of suffixes with root-like meaning. Lexical suffixes, as they have come to be called, provide speakers a derivational resource which can color the semantic content of the stems to which they attach. While lexical suffixes may add to the semantic transitivity of a clause, grammatical transitivity is indicated by a separate set of derivational suffixes. Based on evidence from Okanagan, this paper will explore the interaction of lexical suffixes and transitivity and demonstrate that Noun Incorporation is the most probable source of lexical suffixing.

1 Introduction

Languages of the Pacific Northwest Sprachbund present an interesting typological feature in their suffixes with root-like meanings. The discussion for Salish 'substantival' suffixes was formalized in an academic debate by Kroeber 1909 and Sapir 1911. The dispute between Sapir and Kroeber was centered around the question of whether or not these interesting suffixes were to be considered a case of Noun Incorporation. Sapir unequivocally stated that they were not. His reasoning was based on the fact that incorporated nouns do not bear a phonological similarity to their independent nominal counterparts. More recent research has shown that lexical suffixing does share functional properties with noun incorporation. While there has been general agreement about the semantics of lexical suffixes, syntacticians have proposed a wide range of approaches. In particular, there seems to be great confusion surrounding the impact of lexical suffixes on transitivity. In this paper I will explore these two very important notions.

2 Transitivity

Laurence Thompson wrote that "the heart of the [Salish] predicate is a transitive or intransitive word." (1979:699) It is probably not by coincidence that he includes such a metaphor while discussing the issue of transitivity. Transitivity is certainly a central theme in the study of Salishan languages, and its importance is realized in several formal distinctions in the languages. Along with the rest of the Salishan languages, Okanagan has grammaticized a set of

transitivizers which mark transitive predicates. Intransitive predicates are either unmarked or suffixed with the pan-Salish marker of intransitivity, ***-m***. Okanagan has an additional formal distinction related to transitivity in its pronominal system. In transitive clauses, pronominal reference is indicated largely by suffixation; for intransitive clauses, person marking is accomplished with proclitics. For a more detailed discussion of Okanagan person-marking, see Barthmaier in press.

That Salishan languages pay such close attention to transitivity is not surprising. The central role that transitivity has in language is becoming even clearer, although not all languages treat the same types of events as transitive. Hopper and Thompson 1980 put forward ten semantic parameters as a heuristic for determining the components which contribute to the grammatical transitivity of clauses in a given language. A result of this approach is to view transitivity as a continuum with some clauses being higher in transitivity than others. In Okanagan, the morphological consequence of this proves to be the basis for the set of transitivizers.

Before considering the nature of lexical suffixes, I will present a discourse-based explanation for the four primary transitivizers in Okanagan, **-nt, -st, -xit,** and **-ɬt**. I will show that the transitivizers distinguish degrees of transitivity and that they are derivational morphemes which are employed for the purpose of creating lexical items with different argument structures for information-tracking purposes. That is, morphology serves as a resource with syntactic consequences in response to a discourse need.

2.1 High versus Low Transitivity

Two of the transitivizers, **-nt** and **-st,** involve two participants, typically an agent and a patient. As mentioned before grammatically transitive clauses will not only be marked with a transitivizer, but also pronominal marking will be from the suffixal set. In my analysis I will refer to the **-nt transitivizer**, found in (1a), as marking HIGH TRANSITIVITY and the **-st transitivizer** in (1b) as marking LOW TRANSITIVITY.

(1a) **uɬ iwà? səp' - ənt - ìs i? t qəxʷsqáx̌a?tn (gw34)**[1]
and to.no.avail hit - HTR - 3ERG ART OBL whip[2]
And he clubbed him with the whip

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[1] The majority of examples come from A. Mattina (1985) ***The Golden Woman***, an Okanagan narrative tale told by Peter J. Seymour to Anthony Mattina. Examples numbers correspond to the line number of the published text.

[2] Abbreivations used are: ACC= accusative, APPL= transitive applicative, ASP= aspect, DET= determiner, DIR= directional, DITR= ditransitive applicative, DM= discourse marker, DST= distributive, EMPH= emphatic pronoun, ERG= ergative, EVID= evidential, INTR= intransitive, IMP= imperative, IRR= irrealis, LOC= locative, HTR= high transitivity, LTR= low transitivity, MUT= mutative, NC= non-control, NEG= negative, NM= nominative, NOM= nominalizer, OBL= oblique, POSS= possessive, RCP= reciprocal, RDP= reduplication, RES= resultative, STA= stative

(1b) **aɬì?** **c - laklí - st - n** **i?** **sənt'əwsqáx̌atn** (gw506)
because ASP -key-LTR -1ERG ART barn
I always lock the barn

Both clauses encode two core arguments: an agent and a patient. In (1a) the agent is referred to by the third person ergative suffix and the patient is unmarked. The instrument is therefore marked as oblique. In (1b) the agent is marked by the first ergative suffix and the patient is a full nominal. Although both clauses are transitive, (1a) is higher in transitivity because it describes a bounded punctual event. In contrast, (1b) is lower in transitivity because it encodes an ongoing or habitual event.

Although my labels may be new terminology, they do not represent a radical new approach to understanding these morphemes. Indeed, much discussion about these transitivizers can be found in the Salish literature. A. Mattina 1978 explains that **-nt** is the "basic" transitivizer and that "**-st** predicates always imply either purposeful or customary involvement" of the agent (1978:99). Hébert 1982 proposes that the distinction between the two might be one of aspect, with **-nt** marking perfective clauses and **-st** being the imperfective. A. Mattina 1987a confirms that aspect may be involved by describing a customary circumfix **c-...-st** (1987a:2). N. Mattina 1996 describes several types of perfective and imperfective marking. One type of perfective marking involves **-nt** clauses, and a type of imperfective marking in her analysis includes the aspect marker **c-** and the transitivizer **-st**. In the end, HIGH versus LOW TRANSITIVITY may provide a unifying solution for the various approaches taken by other scholars.

Further evidence for a HIGH versus LOW TRANSITIVITY distinction can be found in the person-marking paradigms associated with these transitivizers. In particular, an alternation exists in the second-person singular object forms which Mattina and Montler 1990 identify as transitivizer-dependent.

(2a) **way'** **cù - nt - s - ən** **lút** (gw292)
well tell-HTR-2ACC-1ERG no
I told you no

(2b) **way'** **ixì?** **qʷəl - qʷìl - st - m - ən** (cod160)[3]
well DEIC RDP - talk - LTR -2ACC-1ERG
That's what I'm telling you

Barthmaier (in press) argues that the **-s/-m** alternation seen above represents a diachronic stage in the language where the lower transitive **-st** clauses were marked as grammatically intransitive by the intransitive marker **-m**. Eventually the **-m** was reanalyzed as referring to a second-person object, and the clauses were inflected with the ergative markers.

[3] (cod160) = page 160 of A. Mattina 1987a, *Colville-Okanagan Dictionary*.

2.2 Applicatives

The second pair of Okanagan transitivizers, **-xit** and **-ɬt**, have received various labels in the literature, yet everyone agrees that they are associated with clauses which have three participants. Recently the term applicative has been used to describe constructions involving these transitivizers. Although both mark predicates with three participants, with **-ɬt** all three are core arguments, whereas with **-xit** only two participants are in the clause core.

(3a) **way' x^{w}ìc' - əxt - s i? sq^{w}sì? - s t sqlaw'** (gw477)
well give-APPL-3ERG ART son-3POSS OBL money
He gave his son some money

(3b) **məɬ n'ìn'w'i? k^{w}u_ x^{w}ìc' - əɬt - x^{w} i? laklí** (gw60)
and then me give-DITR-2ERG ART key
And then you'll give me the key

In (3a) the predicate is marked with **-xit,** the recipient is the applied object, and the semantic patient is in an oblique phrase. In (3b) the predicate is marked with **-ɬt** and all three participants are core. For this reason, I will call **-xit** the TRANSITIVE APPLICATIVE and **-ɬt**, the DITRANSITIVE APPLICATIVE.

Applicatives in Okanagan also exhibit a high/low transitivity distinction by showing the same sensitivity to the second person accusative suffix.

(4a) **mi x^{w}ìc' - əxt - m - n t a - k - sənɬq^{w}útn** (gw62)
FUT give - APPL-2ACC-1ERG OBL 2POSS-IRR-bed
I will give you a bed

(4b) **mi sic ɬ - x^{w}ìc' - əɬt - s- ən an - laklí** (gw861)
FUT then back-give-DITR-2ACC-1ERG 2POSS-key
Then I'll give you back your key

In both examples above the agent and the recipient are pronominal. Clauses with **-ɬt** have three core arguments and the second accusative suffix is **-s**. In the two-place **-xt** predicate with an oblique patient, the suffix is **-m**.

It seems clear that the transitivizers and applicatives are derivational morphemes which are used to create predicates with different argument structures. In naturally occurring speech we see their selection is based on discourse function.

(5a) **n - cíx̌ - xt - m - n** (gw858)
LOC-hot-APPL-2ACC-1ERG
I will warm something up for you

(5b) **cìx - ɬt - s - ən y a - k - sc?íɬən** (gw874)
warm-DITR-2ACC-1ERG ART 2POSS-IRR-food
I will warm for you something to eat (lit. I will warm some food for you)

Consistently in texts we find **-xt** predicates selected when a speaker chooses to focus on the recipient, as in (5a). Predicates with **-ɬt** allow speakers to include

the patient in the core, in addition to the recipient, to signify its worthiness of attention, as in (5b).

2.3 Intransitives

On the other side of transitivity, grammatical intransitivity is an equally important notion. Okanagan has grammaticized a set of pronominal markers that is formally distinct from those used in transitive clauses. Intransitive predicates can be monomorphemic bare roots or inflected stems.

(6a) **n'ìn'w'i? k^{w}_ x^{w}úy i? k'əl sənt'əwscqàxa?tn** (gw59)
when 2NOM go ART to barn
When you go to the barn

(6b) **məɬ way' p_ ƛ'x^{w}ù - p i? t sqlaw'** (gw17)
and well 2pNOM win - NC ART OBL money
And then you will get some money

(6c) **nìkxna? lìm - t axà? i? tə - tw'ít** (gw28)
gee happy -STA DEIC ART RDP-boy
Gee, the little boy was tickled

The examples in (6) show that the pronominal marking for intransitive clauses is different than in transitive clauses. First and second persons are indicated by a proclitic and third person is unmarked. Examples (6a) and (6b) show that for intransitive clauses only one argument is allowed in the clause core and other arguments must be in oblique phrases. In (6c) we see that for third person a full lexical nominal can be in the core.

In addition, the language has a powerful derivational force for creating intransitive stems with the morpheme **-m**. This morpheme allows speakers to derive intransitive predicates with argument structures that are equal to the monomorphemic intransitive roots.

(7) **kən_ tìx^{w} - əm i? t sx̌^{w}úsəm** (cod208)
1NOM gather-INTR ART OBL foamberry
I gathered foam berries

The predicate in (7) is treated by the grammar just like any other intransitive predicate: pronominal marking is from the proclitic series and additional arguments are necessarily marked as oblique.

The morpheme **-m** is employed in Okanagan grammar for a variety of functions. While some scholars have discussed the antipassive function of the morpheme **-m**, others have recognized its passive use. However, we find that **-m** may occur on either transitive or intransitive roots for the purpose of creating intransitive predicates.

(8a) **way' ixì? wt - xít - əm t k - sqlaw' - s** (gw28)
well DEIC put.in- APPL-INTR OBL IRR-money-3POSS
He gave him some money

(8b) **way' kən - xít - əm i? t l?íw' - s** (gw30)
well help- APPL-INTR ART OBL father-3POSS
His father helped him (lit. he was helped by his father)

The clauses in (8) show that **-m** is used to derive intransitive predicates which structurally may resemble either passive (8b) or antipassive (8a) constructions. On intransitive roots, the function of **-m** is to derive another intransitive predicate.

(9a) **n - c'x^{w} - áx^{w}** (cod20)
LOC-spill-RDP
It leaks

(9b) **n - c'x^{w}á - m** (cod20)
LOC-spill-INTR
(He) poured liquid in

Mattina 1987a provides this intransitive pair which shares a core semantic meaning, yet differs in the semantic role of the argument. While both predicates are intransitive, the morpheme **-m** provides the grammatical resource to derive an intransitive predicate from an intransitive predicate.

Grammatical transitivity is especially useful in discourse for helping interlocutors keep track of the essential referents, and it is perhaps most important when third persons are involved. Speakers adjust the transitivity of predicates to suit the pragmatics of a clause. Core arguments denote referents worthy of attention.

(10) **nt'k^{w}ìki? - łt - x^{w} i - st?əwtílt** (gw26-30)
saddle - DITR - 2ERG 1POSS- youngest.boy
Saddle it up for my youngest boy (ABSOLUTIVE)

[...]

He's going to ride it, around here he's going to ride it. He went out and went, and

łckícx - łt - əm
arrive.back-DITR-INTR
He (ABSOLUTIVE) came back with it

way' ixì? wt - xít - əm t k - sqlaw' - s
well DEIC put.in-APPL-INTR OBL IRR-money-3POSS
He gave him (ABSOLUTIVE) some money

[...]

maybe pennies

nìkxna? lìm - t axà? i? tə - tw'ít
gee happy -STA DEIC ART RDP-boy
Gee, the little boy (ABSOLUTIVE) was tickled

way' **n - pkʷ - ɬ - ƛ'àqnaʔ - əm** **iʔ t sqláw- s**
DM LOC- put-CONN-pocket-INTR ART OBL money-3POSS
He put his money in his pocket

way' **kən - xít - əm** **iʔ** **t** **lʔíw' - s**
well help- APPL-INTR ART OBL father-3POSS
His father helped him (ABSOLUTIVE)

k - t'kʷ =íws - ənt - əm
RES-mount=center-TR-INTR
get on the horse

Although this example is a bit long, its length is warranted by the importance of the point. The above passage shows that the speaker selects predicates whose argument structure is appropriate for the pragmatic context. In the first line the ditransitive applicative construction is used because it allows the central figure, the young boy, to be the applied object. With his mention in the absolutive role, we understand the necessity to track this individual in the upcoming discourse. In the next two clauses in (10), there is no overt mention of the boy, but the detransitivized predicates are selected to keep him as the argument to be focused on. In the fourth clause the boy is overtly mentioned and still occupies the absolutive role.

3 Noun Incorporation and Salish

Kinkade 1998 presents a comprehensive look at the history of the literature concerning Salish lexical suffixes beginning with Kroeber and Sapir and continuing up to the end of the century. He recounts debates over whether lexical suffixing is a type of incorporation, attempts at reconstructing proto-forms of lexical suffixes, their combinatory processes as well as attempts to show that lexical suffixes originated in compounding and grammaticization. He concludes his paper by agreeing with Sapir explaining that since compounding cannot synchronically account for all lexical suffixes in any given language, they should not be considered instances of noun incorporation. Kinkade writes:

> Mithun, in a thorough study of noun incorporation, does not consider Salishan lexical suffixes to be incorporated nouns, although they function like them, because "a derivational relationship between the affixes and independent N's is not now discernable" (Mithun 1984:887). Questions remain, however (1998:284).

In what follows, I will explore how lexical suffixes share functional properties with noun incorporation and offer some motivations which may explain the differences in shape of lexical suffixes and independent nominals.

3.1 Prototypical Noun Incorporation

Putting aside the issue of the dissimilarity in form of lexical suffixes and their independent nominal counterpart, let us explore the functions of noun incorporation to see if they do in fact apply to lexical suffixes. Mithun 1984 outlines four main types of noun incorporation:

(11) **Type I – Lexeme Creation**
Type II – Manipulation of Case
Type III – Manipulation of Discourse Structure
Type IV - Classificatory

Incorporating languages may have one or more type in accordance with the implicational hierarchy in (12):

(12) **IV > III > II > I**

That is, if a language has Type IV, this implies it has Types III, II and I, and if a language has Type III, it also has Types II and I, but not Type IV, and so on. This type of hierarchy suggests a historical path of development of the four types of incorporation.

3.2 Functions of Noun Incorporation/Lexical Suffixes

Mithun abundantly shows Noun Incorporation to be a morphological process of lexeme creation which fulfills a semantic, syntactic or discourse need. New words are created from syntactic constituents which, through language use, have come to be so closely intertwined, either semantically or syntactically, that a lexical item is formed which designates a unitary concept. In this way, noun incorporation is the most syntactic of morphological processes, yet it is also the most functional. That is, noun incorporation is not associated with any structural requirement; rather it comes about through discourse pressures external to grammar. In addition, the coalescence of syntactic structure, semantic cohesion, and discourse function heightens the susceptibility of lexicalization of incorporated structures. In what follows, I hope to show that lexical suffixes share the same functional properties as noun incorporation and that Okanagan exhibits all four types outlined by Mithun, a fact which points to a very old system.

3.2.1 Lexeme Creation

In Type I Noun Incorporation, non-referential objects are incorporated into the stem to create a new lexical item which describes a single unitary event. In Okanagan, incorporation of lexical meaning into a stem is accomplished by lexical suffixes.

(13) kʷ= ka²m =ísəlp - m (cod33)
you take =wood - INTR
You carry wood

The example in (13) shows several significant features relevant to a discussion of noun incorporation. The first is that the clause is grammatically intransitive, although the English gloss looks transitive. However, as was shown in section 2, a clause of this type is understood to be intransitive because the pronominal marker is a proclitic and the predicate is suffixed with the intransitive morpheme **-m**. A second point of interest is that the event named in the clause is just the type of concept that is often associated with incorporation. It is reasonable to expect the creation of a lexical item which expresses such a culturally important event as 'wood-carrying,' whereas we would not expect 'chair-carrying' or 'horse-carrying' to be expressed in this way. Finally, the incorporated element is non-referential; referential nouns are expressed in a syntactic expression, as in (14).

(14) ɬ - km' - ənt - íp i² kəw²áp - əmp (cod33)
DIR-take-HTR-2pERG ART horse - 2pPOSS
You can pick up your horses

Lexical suffixes, like incorporated nouns, provide a resource for slipping meaning into the predicate. Although lexical suffixes may function semantically as patients, they do not alter the grammatical transitivity of the predicate.

3.2.2 Manipulation of case

Lexical suffixes are also used for Mithun's Type II incorporation. Type II resembles Type I in that lexical meaning with the potential to be a syntactic argument is integrated into the predicate without altering the syntax.

(15a) kən q'íl =qən (cod154)
I sick=head
I have a headache

(15b) k'át' =qən - əm (gw39)
raise =head-INTR
He raised his head

Although it may be possible to deduce the identity of the element from the construction as a whole, the lexical suffix, like Type II incorporated nouns, does not itself distinguish specificity or referentiality.

Lexical suffixes allow speakers to package information in a textured way while creating a discourse. The following passage about a central character in the Golden Woman, the horse, shows how the case relation is incorporated into the predicate.

(16) ixì² ɬ - t - xùy - m - s i² kəwáp - s (gw303)
DEIC DIR-RES-go-INTR-3ERG ART horse-3POSS
He went to his horse

ixì? **s - kʷnì - m - s** **i? t sx̌əx̌əcí?**
DEIC NOM-take-INTR-3POSS ART OBL stick
He took a stick

k - sp' =ìc'a? - s **i?** **kəwáp - s**
RES-hit-body-3ERG ART horse-3POSS
He hit the horse on the body

la?ɬ **k - sp' =qí(n)- s**
even RES-hit-head-3ERG
He even hit him on the head

In the first line the horse is mentioned as a core absolutive argument. The horse is again absolutive in the third line and a lexical suffix is used to characterize the location of the hitting. In the final line of this passage the lexical suffix again is employed to slip meaning into the predicate by specifying the location.

3.2.2 Manipulation of discourse structure

Whereas Type I comes about through a blurring of the separability of the noun and verb, and Type II extends this word-level device to the clause for the purpose of highlighting an independent nominal, Type III further exploits this strategy by employing it for discourse purposes. Again we find lexical suffixes being used for the same reasons as Type III noun incorporation: to background old or less important information.

(17) **ixì?** **kʷəƛ' - ɬt -ìxʷ** **i?** **qʷác=qən-s** **(gw79-80)**
DEIC take.off-DITR-2ERG ART hat=head-3POSS
Then take off her bonnet

məɬ **anwi?** **kʷ‿** **kɬ-əɬ-qʷác=qn-a?x**
and 2EMPH 2NM IRR-LOC-hat=head-INCH
And you put it on

məɬ **itli?** **t-xʷùy-m-ənt-xʷ** **i?** **k-naqs**
and then RES-go-INTR-TR-2ERG ART person-one
And then you go to the next

ixì? **nixʷ** **kʷəƛ'=qìn-nt-xʷ** **i?** **tkɬmílxʷ**
DEIC also take.off=head-TR-2ERG ART woman
Then also take the cap of the woman

In the first line of this example, the speaker introduces an argument, **qʷácqən** 'bonnet', whose importance is fleeting to the discourse being created. In the second line, it is not an argument of a predicate, rather it is the predicate. By the fourth clause of the above example, a lexical suffix on the predicate is all that is necessary to keep the semantic notion of bonnet around.

3.2.4 Classificatory

Type IV noun incorporation arises when a noun is incorporated to qualify the meaning of a general verb. It appears that Okanagan lexical suffixes also have this classificatory function. In this example the lexical suffix functions to narrow the scope of the predicate.

(18) way' ilí? t'ək'ʷ-k'ʷ=ula?xʷ l təmxʷ=ula?xʷ (gw277)
well LOC put-RDP-earth LOC ground
He landed on the ground

It is interesting to note that both the predicate and its argument have the same lexical suffix. With Type IV incorporation, it is almost like there is coreference between the incorporated element and another argument in the clause, but these are actually separate instances of lexeme creation. The lexical suffix on the predicate serves to restrict the general root **t'ək'ʷ** 'put', to create a predicate which in English can be glossed as the verb 'to land.'

3.3 Summary

In the end, Okanagan appears to have examples similar to all four type of noun incorporation outlined by Mithun 1984, and in each case lexical suffixes are employed for the same discourse functions as incorporated nouns. Lexical suffixes are used like Type I incorporated nouns for naming unitary activities; this strategy can be extended to Type II where lexical suffixes are employed to alter the case structure of a clause by incorporating a patient or a location; the system has progressed to Type III uses where lexical suffixes help to manipulate the flow of information in discourse by backgrounding less salient information; until finally a Type IV classificatory system emerges.

4 Lexical suffixing as advanced-stage incorporation

With lexical suffixes sharing the same discourse functions as noun incorporation, it is reasonable to question the relationship between the two. We are well aware that many of the lexical suffixes cannot be shown to be derived from independent nominals, yet some of the lexical suffixes are, in fact, identical or nearly identical to the independent nominals. Kinkade 1998 proposes a range of lexical suffixing from "pure compounding ... to pure grammaticization and derivation." (1998:287) Yet, he concludes that "since many LS (lexical suffixes) cannot be shown synchronically, in any one language to derive from [C+LS] (independent) forms, we ought to consider them all the same category," i.e. not noun incorporation.

The problem here is that noun incorporation fundamentally implies diachrony. As we have seen, noun incorporation evolves along an implicational hierarchy, and this evolution can only happen across time. Further, we also know lexical suffixes to be a very old system because they exist in each of the daughter languages and they have been shown to be reconstructable for Proto-Salish. With lexical suffixes and noun incorporation sharing the same functions,

it seems reasonable that they may be related, but one wonders why the form of independent nominals does not look similar to the corresponding lexical suffix.

A. Mattina 1987b proposes a diachronic explanation of how independent nominals and lexical suffixes may have come to develop derivationally unrelatable forms. In his approach lexical suffixes find their origins in independent nominals in a historical evolution with at least three stages. He begins his analysis at an intermediate stage of Lushootseed in which an independent nominal is incorporated into a predicate with "attendant ablaut and morphophonemic changes." He suggests:

(19)	**Independent stem**	**Incorporated stem**
	Lu qə́dx^{w} '*head'	**Lu qid 'head'**

At this stage of the development of Lushootseed, the incorporated nominal is still derivable from independent nominal. Along the course of development the forms reaches a second stage, at which, through language use and perhaps because of its productivity, "the incorporated stem becomes a bound form retaining the original meaning." Ultimately, the evolution of the incorporated nominal reaches a third stage where "the independent stem shifts its meaning occasionally adding the shifted meaning to the bound form," and a new independent nominal is adopted.

(20)	**Independent stem**	**Incorporated stem**
	Lu sx̌əyús 'head'	**Lu =qid 'head'**
	Lu qə́dx^{w} 'mouth'	

The scenario proposed by A. Mattina 1987b seems quite reasonable given what we know about language change. Independent elements in a language are more vulnerable to adaptation and replacement than bound elements. A quick comparison of the above independent nominal and its corresponding lexical suffix in other Salish languages supports this position.

(21)

Nominal 'head'	Suffix 'head'	Language
sx̌əyús	=qid	Lushootseed
q̓^{w}omq̓^{w}omqən	=qən	Coeur d'Alene
c'aʔsiqən	=qən	Okanagan
sk'épqən	=qən	Shuswap
spɬqin	=qin	Kalispel
matn	=is 'round object'	Upper Chehalis
q̓^{w}úmqn	=qin	Moses-Columbia
č'mqin	=qin	Spokane

None of the independent nominal forms in (21) are identical, although some forms are similar, and many have the lexical suffix as part of the morphological structure of the independent form. Bound forms, on the other hand, exhibit quite a bit of formal resemblance. The frequency of use and the productivity of the

bound suffix help to preserve its structure, whereas the independent forms are more flexible. In fact, the independent forms in each language most likely have their own etymological story.

In the end, it seems quite logical to view lexical suffixing to have come about after a long and productive period of noun incorporation in Salish. It is not by coincidence that they have the same functions because set of lexical suffixes in Okanagan came to be from incorporated nouns. The productivity of noun incorporation has provided the pathway for independent nominals to grammaticize into the derivational morphology of the language. Although the form of the nominals reduced in size, something to be expected during grammaticization, the functions of noun incorporation persist unchanged as they developed into lexical suffixes. This is not to say that lexical suffixing equals noun incorporation, rather lexical suffixes evolved from a system of noun incorporation. This advance stage noun incorporation has wormed its way into the derivational morphology which provides a new twist on productivity. Whereas noun incorporation potentially has as its input all roots in a language, Salish languages have developed a closed, yet perhaps not impermeable, set of derivational suffixes to perform the functions of noun incorporation.

5 Conclusions

Transitivizers and lexical suffixes provide important grammatical resources in a language like Okanagan. They are both valuable pieces of morphology which create lexical items which in turn have impact on the syntax of the language. That is, they are both about word formation. Lexical suffixes incorporate meaning into the stem, which may add to the semantic transitivity of a clause by alluding to an additional participant, but they do not affect grammatical transitivity. The system of lexical suffixes appears to have arisen from an older stage of noun incorporation, and lexical suffixes are employed for the same discourse functions as incorporated nouns. Transitivity, on the other hand, is equally worthy of attention. Okanagan has grammaticized a set of transitivizers which allow speakers to alter the grammatical argument structure of predicates. In addition the division between transitive and intransitive is quite distinct, and the transitivizers interact with the intransitive morpheme **-m** to create predicates which reflect the pragmatic need of speakers.

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