Prepositional *his* and the development of morphological case in Northern Wakashan[1]

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This paper will present evidence for the historical development of "oblique" and "genitive" case-marking clitics in the Northern Wakashan language family from the Proto-North Wakashan preposition **his* and an associated set of person-marking enclitics. The three Upper Northern Wakashan languages (Haisla, Heiltsuk, Oowekyala) are at intermediate stages of a process whereby a remnant of the preposition *his/yis* together with its associated person-marking enclitics is becoming enclitic to the prosodic word prior to the noun phrase it introduces or replaces; this can be taken as evidence that these languages are moving towards developing case-marking such as that which exists in Kwak'wala. Correspondences between the synchronic distribution and phonology of the Kwak'wala oblique and third-person possessive clitics and that of *his/yis* prepositional constructions in the Upper Northern Wakashan languages provide additional evidence for an historical relationship. Prior to the development of morphological case, prepositions themselves seem to have been innovated in the Northern Wakashan language branch from verbal and demonstrative roots. This situation indicates a deep syntactic divide, and significant time depth, between the Northern and Southern branches of Wakashan.

1 Introduction

The aim of this paper is to develop an historical hypothesis to account for the innovation of two Northern Wakashan syntactic features which are conspicuously absent in the Southern Wakashan branch: the presence of prepositions, and the occurrence of varying degrees of morphological case-marking. More specifically, I will be presenting evidence for two historical

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innovations in Northern Wakashan: 1) the development of Northern Wakashan prepositions from verbal and demonstrative origins; and 2) the innovation of "oblique" and "genitive" case-markers from prepositional constructions involving Proto-Northern Wakashan *_his_. I will begin by briefly introducing the Wakashan language family and providing some background regarding the absence of prepositions and case-marking in the Southern branch of Wakashan; this discussion will serve to highlight the large degree to which the two branches of the family differ from each other syntactically (Section 2). I will then shift my focus onto the Northern branch, beginning with a presentation of two lines of evidence for the development of oblique and genitive case markers in the Northern languages from prepositional *_his_ constructions (Section 3). The first line of evidence will focus on data illustrating that the Upper Northern Wakashan languages are at an intermediate stage of developing case-marking like that which is already fully developed in Kwak'wala; the second line of evidence will focus on showing that the function and distribution of certain Kwak'wala case-markers both overlaps with that of *_his_ constructions in the Upper Northern Wakashan languages and is phonologically derived from these older constructions. Following this, I will attempt to trace the origins of Northern Wakashan prepositions back to verbal and demonstrative roots in Proto-Northern Wakashan and Proto-Wakashan (Section 4). In the final section of the paper (Section 5) I will summarize several implications of the data presented for the internal grouping of the Northern Wakashan branch and for the Wakashan language family as a whole. I will finish by highlighting several avenues for future research.

2 The Wakashan language family

The Wakashan language family consists of seven languages spoken along the central coast of British Columbia, the northern and western sections of Vancouver Island, and the northwestern tip of the Olympic Peninsula. The family is further divided into two branches, Northern and Southern, which are believed to have diverged very long ago, given the large degree of linguistic divergence between them (Fortescue 2007).

The Northern branch includes four languages: Haisla (Ha), Heiltsuk (He), Oowekyala (Oo), and Kwak'wala (Kw). In terms of internal similarity, this branch can be further subdivided into Upper Northern Wakashan including Haisla, Heiltsuk, and Oowekyala on the one hand, and Kwak'wala on the other. This distinction arises from the observation that the Upper Northern Wakashan languages are "structurally very similar and mutually intelligible" (Rath 1984: 318). Internal to this grouping, Oowekyala and Heiltsuk are considered to be very closely related, to the extent that their division into two languages was disputed until relatively recently; see Howe (2000: 4) for a discussion on differences between the two languages. Kwak'wala, on the other hand, is noted to have diverged more significantly from its Northern neighbours.

The Southern branch of the family consists of three languages: Nuu-Chah-Nulth (NCN), Ditidaht (Di), and Makah (Ma); within this branch, Ditidaht and Makah are generally considered to be somewhat more closely related (see

Jacobsen 2007 for a discussion of relations within Southern Wakashan and for lexical evidence supporting this sub-classification; also Nakayama 2001, Fortescue 2007).

One major syntactic difference between the Northern and Southern branches is that only the former branch possesses a distinct grammatical class that is straightforwardly labeled "preposition". In the Northern languages, prepositions can be identified on the basis of occupying particular syntactic configurations. More specifically, they head prepositional phrases at the right periphery of clauses, and modifier phrases at the right-periphery of noun-phrases (see Section 3.2). Semantically, prepositional constructions as a class carry a large functional load in these languages, introducing locative, benefactive, instrumental, and genitive DPs. Prepositional phrases are very frequently employed both in texts and speech.

Given the apparent importance of prepositions in the Northern Wakashan languages, one might wonder at how the Southern languages encode the same types of meaning. In fact, three construction types are used in the Southern languages to express prepositional concepts, the first two of which are also employed in the Northern languages: lexical suffixes, locative predicates, and preposition-like 'verbals'.

Lexical suffixes are used extensively throughout the Wakashan languages to convey various locative meanings; indeed, the existence of many cognate lexical suffixes is a major source of evidence for the Wakashan grouping. Lexical suffixes are affixes and thus cannot occur in the absence of a host root, though they carry semantic content which may influence the argument structure of the sentence.

Whether or not all lexical suffixes are capable of influencing argument structure has, however, been an issue of debate within the Wakashan literature. This debate concerns a division, originally proposed by Sapir & Swadesh (1939), between "governing" and "restrictive" lexical suffixes. According to this proposal, governing lexical suffixes are considered to be 'root-like' (i.e. predicative) while restrictive lexical suffixes are considered to be modificational but not predicative. On this analysis, only governing lexical suffixes are capable of influencing argument structure. Wojdak (2004) has argued against this distinction, arguing that all lexical suffixes are in fact predicative but differ with regards to their underlying argument structure. I will briefly touch upon these two types of analysis here.

Davidson (2002: 183) accepts that there is a basic division between governing (which he terms 'nuclear') suffixes and restrictive suffixes. Suffixes such as *–či* 'in' are nuclear suffixes, which become " the head of the resultant word" (ibid. 182). The majority of locative lexical suffixes are, however, of the restrictive variety, and serve only to modify "the meaning of its base without fundamentally altering its semantic category or word class." (ibid.) Davidson outlines three such classes of restrictive locative lexical suffixes in Nuu-Chah-Nulth and Makah: path-orientation suffixes, locale suffixes, and site suffixes. According to Davidson, path-orientation suffixes "express various notions of physical orientation and spatial relation, particularly the motion or location of an entity with respect to a certain path". These suffixes may specify such concepts

such as movement away from a speaker or movement in a certain direction, such as in the following Nuu-Chah-Nulth example, where the meaning of 'fly' is modified by a path-orientation suffix meaning 'move.down':[2]

(1)	matʕa`ʔataƛ	ma`ma`tiʔi	(Davidson 2002: 198)
	mat-ʕa`ʔatu='aƛ	ma`ma`ti=ʔi`	
	fly-**move.down.PERF**=TEMP	bird=ART	
	'The bird flew down.'		

Whereas path-orientation suffixes depict directional movement, other locative suffixes depict location on or at a place. The four "locale" suffixes and numerous "site" suffixes (which are differentiated formally from each other) encode various meanings such as location at a place (e.g. NCN/Ma *-iɬ* 'in the house, on the floor'), location at or on specific body parts (e.g. NCN *–(w)inɬ* and M *–adiɬ* [L] 'on the neck'), locations in nature, or abstract location-related notions like 'behind' (see Davidson 2002: 200). Though many lexical suffixes can attach to different roots, it is very common for all types of lexical suffixes to be attached to the semantically "empty" locative root *hita-, hina-, hin-* (NCN), *hita-, hida-* (M), *hit-, hida-* (Di) as in the following Makah example:

(2)	hidaɬc'	(Davidson 2002: 85)
	hida-aɬc'a	
	empty.root–**at.vertical.surface**	
	'on the wall'	

Wojdak (2004) rejects the underlying division between governing and restrictive suffixes and argues instead that all locative lexical affixes are predicative. A syntactic division then exists between 'locatum' and 'location' predicates. Locatum predicates (e.g. *–c̓u(u)* – 'inside container') are those which have as their direct object a locatum (theme) argument, while location predicates (e.g. *–či* –'in') have as their direct object a location argument. On this analysis, it is underlying differences in the argument structure of locative lexical predicates, and not a fundamental difference in word class, which accounts for the syntactic differences seen between two kinds of locative lexical suffixes (also see Wojdak & Woo 2004).

While all Wakashan languages utilize a large number of lexical suffixes, a greater number is employed in the languages of the Southern branch. In Kwak'wala, many concepts that can be conveyed with lexical suffixes can alternatively be conveyed using prepositions (see Boas 1947: 285), so that there is often a redundancy in expressive potential in this language. The Southern languages, in contrast, must make greater use of locative lexical suffixes.

In addition to lexical suffixes, a small number of locative predicates exist in all three Southern Wakashan languages. In many cases, locative lexical

[2] Vowels in examples from (Davidson 2002) have been represented with the diacritics '`' ('long') and ':' ('persistently long'). See Appendix I for a list of glossing abbreviations.

suffixes may attach to these locative predicate heads in order to further specify location. In Makah, for example, the locative verb *ʔiyaχa* '(be) at' (also present in Ditidaht, where Klokeid 1978: 213 names it a 'locative preposition') is transitive, such that the specified location is the direct object (Davidson 2002: 115). In the following example, the locative verb occurs without any lexical suffixes:

(3) ʔiyaχʔiɬ waʔač' (Davidson 2002: 115)
ʔiyaχa=°i=aɬ waʔač'
at=INDIC.3sg=3pl Waatch
'They are at Waatch.'

Intransitive deictic verbs are also used, such as Nuu-Chah-Nulth *hiɬ* 'there, at this place' (Note the resemblance between *hiɬ* and the 'empty locative root' *hita-, hina-, hin-*) and *yaɬ* 'yonder'. The following example from Nuu-Chah-Nulth includes a locative lexical suffix affixed to its host, a locative intransitive verb:

(4) hi'ya ħsʔaƛ č'apacʔi (Davidson 2002: 116)
hiɬ-'aħs=ʔaƛ č'apac=ʔi
there–in.vessel=TEMP canoe=ART
'They were in the canoe.'

Stonham (2004) additionally defines the previously mentioned semantically empty root *hita-* as a *locative root* in Nuu-Chah-Nulth. This stem is similar to but differentiated from the semantically empty root *ʔu-* which Stonham describes as a *referential root* (due to the fact that it occurs with affixal predicates that select for a referential argument).

It should be noted that forms which are analogous (and in some cases probably directly related) to these 'locative predicates' also exist in the Northern Wakashan languages, where they are more typically referred to as 'demonstrative predicates'.

In addition to locative lexical suffixes and locative predicates, a small number of what Nakayama (2004: 53) has termed 'verbals' have been examined in Nuu-Chah-Nulth. These are elements, which seem to serve some but not all of the same functions as English prepositions and resemble case-markers. For instance, the notorious Nuu-Chah-Nulth *ʔuukʷiɬ* 'do.to', which functions primarily to place an object in its own clause, has received numerous analyses – as an auxiliary element, a preposition, and as a light verb (Woo 2007) – in large part because its properties seem to cut across categories. Nakayama (2001: 54) comments on how constructions with this verbal (and similarly for constructions with *ʔuuʔatup* ' doing.for') may represent a "functional/structural focal point" with the "potential for grammaticalization" in this language; by this, he means that these 'verbals' may exist as a potential grammatical class ("prepositions") which has yet to fully develop.

What is most interesting about NCN constructions with *ʔuukʷiɬ* and *ʔuuʔatup* in relation to understanding the historical development of prepositions

in Wakashan, is that they seem to be satisfying a similar grammatical function as prepositions in Northern Wakashan. In Kwak'wala at least, there is a strong preference against having more than one direct internal argument per clause. In Kwak'wala ditransitives for instance, one subcategorized argument is placed in the main clause while the other argument is placed in a phrase headed by a preposition (e.g. see (5)); any additional arguments beyond these are placed in subordinate clauses or additional phrases headed by prepositions (see Boas 1947: 284; also my own data). Ditransitive sentences in which both internal arguments represented by DPs are positioned in the main clause, on the other hand, are judged to be marginally grammatical at best and are not spontaneously volunteered, a point which is illustrated by the following Kwak'wala examples.[3] With two internal arguments in the main clause, examples (6) (without a preposition) and (7) (with the order of arguments shifted) can be understood by a speaker but are not preferred forms.

(5) nusoχda GaGəmpesa nu'yəm laχʷa c'ic'uxƛəmeʔ
nusa=oχda GaGəmp=sa nu'yəm la=χʷa c'ic'uxƛəm=eʔ
tell.story=D2.D grandpa=**OBL** story **PREP=ACC** grandchildren=VIS
'Grandpa is telling a story to the grandchildren.'

(6) ? nusoχda GaGəmpesa nu'yəmeχʷa c'ic'uxƛəmeʔ
nusa=oχda GaGəmp=sa nu'yəme=χʷa c'ic'uxƛəm=eʔ
tell.story=D2.D grandpa=**OBL** story=**ACC** grandchildren=VIS
'Grandpa is telling a story to the grandchildren.'

(7) ? nusoχda GaGəmpeχʷa c'ic'uxƛəmeʔesa nu'yəm
nusa=oχda GaGəmpe=χʷa c'ic'uxƛəm=eʔ=sa nu'yəm
tell.story=D2.D grandpa=**ACC** grandchildren=VIS=**OBL** story
'Grandpa is telling a story to the grandchildren.'

Similar preferences exist in the Southern Wakashan languages for reducing the number of arguments in a clause (e.g. see Davidson 2002) and are common across the NW Coast sprachbund more generally.

Prepositional phrases, then, seem to be one major strategy for satisfying a preference in Kwak'wala (likely to be found in the other Northern languages) for having at most one direct internal argument per clause, and it appears that constructions like *ʔuukʷiɬ* (NCN), as well as similar and perhaps cognate constructions in Makah and Ditidaht, might represent a similar strategy in the Southern languages for reducing the number of direct internal arguments per clause. In turn, the development of Southern Wakashan 'verbals' might tell us something about the potential within Proto-Wakashan grammar to develop preposition-like constructions. In that case, we could say that this potential has

[3] Kwak'wala data presented in this paper have been obtained in elicitation with Ruby Dawson Cranmer, of the Gwa'i dialect, between Sept. 2009 and May. 2011.

been fully realized in the Northern languages, whereas it has only been partially realized in, for instance, in Nuu-Chah-Nulth *ʔuukʷiɬ* and similar constructions

In addition to the presence vs. absence of prepositions, a second grammatical feature that differentiates the Northern and Southern Wakashan branches is that only the former has developed a morphological case system to differentially mark arguments. Of the Northern languages, only Kwak'wala has developed this system fully – that is, to the point where all non-subject arguments in the sentence must be case-marked. In this language, case marking is achieved by a set of enclitics, which attach to the prosodic word preceding the argument they introduce. The other Northern Wakashan languages represent an intermediate stage of case marking (as discussed below in Section 3.2; also mentioned in Fortescue 2006: 306). In contrast, the Southern languages do not consistently differentiate arguments through overt morphological case. Instead they rely on devices such as word order, passive-inverse voice constructions, non-obligatory elements such as *ʔuukʷiɬ* and *ʔuuʔatup*, and context to disambiguate argument type (Davidson 2002).

The presence of prepositions and morphological case in the Northern branch compared with their absence in the Southern Wakashan languages thus highlights a significant syntactic rift in the family, and invites us to explore the origins of this difference. I will now go on to propose how these grammatical features were innovated in the Northern branch using internal evidence from the four Northern languages.

3 Prepositions and the development of case-marking in Upper Northern Wakashan

3.1 Prepositions: form and meaning

The basic forms of prepositions found in the Northern Wakashan languages and the proposed Proto-Northern Wakashan reconstructions are summarized in Table 1:

**Proto-Northern Wakashan*	*la-	*q-	*his-	____
Haisla	la-	q-	his-	____
Heiltsuk	la-	q-	yis-	____
Oowekyala	la-	q-	yis-	____
Kwak'wala[4]	la-	q-	____	ga-

Table 1: Northern Wakashan prepositions

[4] There is another preposition-like element in Kwak'wala, *λu* – 'with, accompanying', which behaves much like the other prepositions (e.g. occurs in adjunct phrases adjoined to the right clausal periphery in phrases such as 'λuwən' – 'with me', as in *The woman walked with me*.); it also plays a role in conjunction. Anderson (1984) questions whether it is a preposition or an independent verb, while Lincoln & Rath (1980: 179) analyze it as a proclitic. I have not included it in the analysis here, as more data are needed on it.

Correspondences hold in the basic meaning of the prepositions *la-* and *q-*, which occur in all four languages (Lincoln & Rath 1980). The preposition *la-* can be translated with a great variety of locative meanings in different contexts , such as *'at x', 'to x', 'in x', 'on x'*, and *'towards x'*. The preposition *q-* heads phrases that have a benefactive meaning and can be translated as *'for the benefit of x',* or *'concerning x'*.

The preposition *his-/yis-* , which is present in the three Upper Northern Wakashan languages but not in Kwak'wala, can have various meanings including *'with x'* and *'by x'* (instrumental), and *'of x'* (genitive). Note that genitive constructions with *his/yis* are not the only devices capable of expressing possession in these languages.

It is evident from Table 1 that Kwak'wala has diverged somewhat from the Upper Northern Wakashan languages in terms of its inventory of prepositions. The preposition *ga-* is uniquely used in this language, where it is most likely a relatively recent innovation. Its distribution is restricted to the first person singular and plural object forms *gaχən – 'to me', gaχəns – 'to us (incl)', gaχənox^{w} - 'to us (excl)'* while object forms in 2nd and 3rd person in this language are rendered by phrases introduced by prepositional *la-,* as in *laχa bəg^{w}anəm* – 'to the man'.

The basic meanings of these four prepositions are thus summarized in Table 2:

la-	'at x', 'to x', 'in x', 'on x', 'towards x'
q-	'for the benefit of x', 'concerning x'
his-/yis-	'with x', 'by x', 'of x'
ga-	'to (the speaker), towards (the speaker)'

Table 2: Basic meanings of Northern Wakashan prepositions

3.2 Intermediate case-marking in the Upper Northern Wakashan languages

In order to demonstrate that case-marking is at an intermediate stage of development in the Upper Northern Wakashan languages Haisla, Heiltsuk, and Oowekyala, it is important first to understand the syntactic configuration of prepositions in these languages. Because Heiltsuk is the only one of these languages for which a comprehensive syntactic description has been published (Rath 1981), I will rely most heavily on materials for this language, supplementing my exposition wherever possible with published materials on the other languages or with data taken from published texts. I will follow Rath (1981) in using the spelling of Heiltsuk *his-* with initial *h-*, even though phonemically this segment may be /*y*-/ (see Section 4 for related discussion).

Heiltsuk prepositional phrases, as described in Rath (1981), occur in two types of syntactic configurations, as illustrated in (8) and (9). Thus in (8) the PP is attached at the level of the VP, whereas in (9) the PP is inside the

subject DP.[5]

(8) p'ala p'ac'uayas wisəmχi la ux^{w}ƛiasaχ (p. 90)
p'ala p'ac'ua-ya-s wisəm-χi la ux^{w}ƛias-a-χi
work diligent-D1-LHAS[6] man-D2 **PREP** roof-D1-D2
With the following meaning: [[The diligent man works][on the roof]]

(9) p'ala p'ac'uas wisəm la ux^{w}ƛiasaχi (p. 89)
p'ala p'ac'ua-s wisəm la ux^{w}ƛias-a-χi
work diligent-LHAS man **PREP** roof-D1-D2
With the following meaning: [[The diligent man on the roof][works]]

This rest of this paper will deal exclusively with VP-level constructions (such as that in (8)), which are most relevant for the argument being developed.[7]

As the heads of prepositional phrases attached to at the level of the VP (e.g. (8)), prepositions introduce prepositional phrases at the right periphery of the sentence that encode various types of meanings, as described previously (e.g. '*to* the man', '*for* the kids', '*with* his hands'). Where multiple prepositional phrases occur in a single sentence, they are re-orderable in relation to each other. In regard to prepositional phrases specifically introduced by *la-* and *q-*, these phrases can have the following two types of structures:

(S.1) [PREP + NP] e.g. *la ux^{w}ƛiasaχi* – 'on the roof'
e.g. *qən him'asaχi* – 'for the chief'

(S.2) [√PREP + person enclitic] e.g. *la=χi* – 'to him/her/it/they' (vis)
e.g. *q=ənn'i* – 'for him/her/it/they' (vis)

In S.2 type structures there exists a distinct set of person-marking enclitics (also described as "personal deictics") for each preposition. These sets are referred to as *"la"-Suffixes*, and *"q"-Suffixes* in Rath (1981), though they are acknowledged to be enclitics so I will refer to them as *"la"-enclitics*, and *"q"-enclitics*. There are also sets of pronominal *subject enclitics* and *object enclitics*, as well as a set of *"his"- enclitics* which will be discussed in what

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[5] *Note:* The two types of phrases in (8) and (9) are disambiguated from each other by different usages of primary (D1) and secondary (D2) deictic enclitics referring to 'wisəm' ('man'), as outlined in the following examples (Rath 1981: 89-90):

- With both D1 and D2 referring to 'wisəm' – [[The diligent man works][on the roof]] (as in (8))
- With neither D1 nor D2 referring to 'wisəm' – [[The diligent man on the roof][works]] (as in (9))
- With only D1 referring to 'wisəm' – ambiguous between the two meanings (as in (8) if D2 was removed)

[6] LHAS – 'left-hand-adjunct suffix'; occurs on most pre-nominal modifiers

[7] See Rath (1981) and (1984) for data regarding the unique properties of PPs that are located within the DP (as in (9)).

follows. Below I have included a table adapted from Rath (1981: 77-78) which shows these five sets of person-marking enclitics. Phonological alternations have been placed in brackets, and some simplifications have been made for expository purposes:[8]

Table 3: Heiltsuk "Personal Deictics" from Rath (1981)

	Subject Enclitics	**Object Enclitics**	**"his" - Enclitics**	**"la" - Enclitics**	**"q"- Enclitics**
1 sg.	=nug^{w}(a)	=ənƛ(a)	----	=ənƛ(a)	=ənńug^{w}(a)
1 pl. incl.	=ənc	=ənƛənc	----	=ənƛənc	=a'aənc
1 pl. excl.	=əntk^{w} (=əntx^{w})	=ənƛəntk^{w} (=ənƛəntx^{w})	----	=ənƛəntk^{w} (=ənƛəntx^{w})	=a'aəntk^{w} (=a'aəntx^{w})
2 sg./pl.	=su (=cu)	=uƛ(a)	=us	=uƛ(a)	=əncu
3I[9] sg./pl.	=k(^{w}) (=x(^{w}))	=qk (=qx)	=sk (=sx)	=χk (=χx)	=a'aənk (=a'aənx)
3II sg./pl.	=k(^{w})c (=x(^{w})c)	=qkc (=qxc)	=skc (=sxc)	=χkc (=χxc)	=a'aənkc (=a'aənxc)
3III sg./pl.	=uq^{w} (=uχ^{w}) (=u)	=q^{w}	=sq^{w} (=sχ^{w})	=χ^{w}	=ənńuq^{w} (=ənńuχ^{w}) (=ənńu)
3IV sg./pl.	(=uχ^{w}c)	=q^{w}c	(=sχ^{w}c)	=χcχ^{w}	=ənnuχ^{w}c
3V sg./pl.	=i	=qi	=si	=χi	=ənńi
3VI sg./pl.	=ic	=qic	=sic	=χic	=ənńic
3VII (absent)	=k(^{w})i	=qki	=ski	=χki	=a'aənki

So, for example, the *"la" – enclitics* in Table 3 are those which may attach to the preposition *la-* in place of a noun (i.e. in S.2 type structures). Notice how this series appears to be a spiranticized version of the pronominal object forms, the *object enclitics*. The *"q"- enclitics* can be used similarly to stand in for noun phrases in S.2-type prepositional phrases headed by prepositional *q-*.

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[8] In particular, I have not marked contrastive tone and have not included a phonological alternation where s- initial "his" – enclitics become c- initial when they attach to a final ɬ- segment.

[9] The Roman numerals in the third person indicate degrees of distance from the speaker and visibility/invisibility as follows: I (near speaker, visible); II (near speaker, invisible); III (middle distance from speaker, visible); IV (middle distance from speaker, invisible); V (distanced from speaker, visible); VI (distanced from speaker, invisible); VII (absent).

The preposition *his-* patterns in the same way as *la-* and *q-* when a preposition introduces an overt noun phrase (S.1-type structure). An example from Haisla shows this configuration:

(10) [PREP + NP]: (Lincoln, Rath, & Windsor 1986: 21-2, line 89)

…his qi baxʷbakʷalanusiwayaχi
…his qi baxʷbakʷalanusiwa=ya=χi
…PREP DEM.3 Baxʷbakʷalanusiwa=D1=D2
[who had been spoken to]…by Baxʷbakʷalanusiwa

In S.2-type constructions in the third person where pronominal *"his" – enclitics* replace overt noun phrases, constructions with *his-* differ from analogous S.2-type structures with the prepositions *la-* and *q-*. Rather than attaching to the right periphery of the preposition *his-* itself, the *"his" – enclitics* in these constructions attach directly to the prosodic word immediately preceding the argument they replace or introduce, regardless of whether or not the preceding argument they attach to is an object or a subject (note that in sentences with both subject and object, the object will be the second argument). The first two segments of the preposition, namely *hi-*, drop out entirely in these constructions. For example:

(11) Structure with a *"his"- enclitic*:

daduqʷəla wisəmaχi wac'iaχisi (Rath 1981: 94)
daduqʷəla wisəm-a-χi wac'i-a-χi-si
watch man-D1-D2 dog-D1-D2-**"his" – enclitic[3rd, vis]**
'The man watched the dog with him/her/it/they'

Note that we do not get the form that we would expect by analogy with the S.2. structures for *la-* and *q-*, namely **daduqʷəla wisəmaχi wac'iaχi hisi*.

For second-person constructions (shown in examples (12) and (13) below), speakers have the option of using either type of *his-* construction already illustrated in (10) and (11). These second-person examples are interesting because they show that second-person pronouns do not need to be encoded by *"his" – enclitics;* it is possible for the pronominal elements to exist as noun phrases in full [PREP + NP] constructions:

(12) wausi his qəsu (Rath 1981: 96)
waus=i his qəsu
afraid=3V **PREP you**
'He/She is afraid of you'

(13) wausius (ibid.)
waus=i=us
afraid=3V= **"his" – enclitic[2nd]**
'He/She is afraid of you'

Thus, (12) and (13) show that in the second person, constructions with *"his" – enclitics* are in free variation with full [PREP + NP] constructions.

For first person constructions there are no *"his"- enclitics* presented in Table 3; in these cases one may only use a full [PREP + NP] construction, such as in *his nug^{w}a* – 'with/of/by me'. *his nug^{w}aənc* – 'with/of/by us (incl)' and *his nug^{w}aəntk^{w}/nug^{w}aəntx^{w}* - 'with/of/by us (excl)'.

Looking back at the third-person *"his" – enclitic* forms in Table 3, we can see that these forms are very nearly the same as the *subject enclitics* plus an initial *=s*. I would like to argue that this initial segment is a remnant from *his-*. Thus, we can imagine the following process existing within the past or present mental grammars of Heiltsuk speakers:

(i) …*wac'iaχi hisi* → (ii) …*wac'iaχi ~~hi~~si* → (iii) …*wac'iaχi=si*

The idea that this process may represent an ongoing change in the grammar of speakers and not just a stable, distributional difference among speakers is suggested by Rath (1981: 202-3) in his dictionary definition of Heiltsuk *his-*. He writes: "[*his*] Can be used as a proclitic, i.e., run together with the word directly following. Very frequently, however, initial 'hi' is dropped while remaining 's' is attached to the word directly preceding to the effect that it is phonetically indistinguishable from the left-hand adjunct suffix.". Whether or not forms like *hisi* with a [PREP + enclitic] ((i) above) are ever used in the modern-day language in free distribution with *"his" – enclitics*, I do not know. While no such forms are attested in Rath (1981), his comment on *his-* seems to suggest that this form may in fact be a possibility for speakers.

In summary of what has been discussed so far, prepositional *his-* constructions in the second person in Heiltsuk occur in free variation between full [PREP + NP] adjuncts and a series of enclitics which are phonologically derived from these full adjuncts. In the third person, a set of *"his" – enclitics* exists which appears to be phonologically related to an older set of [*his* + person enclitic] constructions but which has since replaced these constructions entirely; evidence for the existence of these now obsolete constructions rests in the fact that analogous constructions do exist for the prepositions *la-* and *q-* (i.e. examples in S.2.). In the first person, there has been no development of enclitic forms, and only the full [his + NP] forms are in use. On the whole, this pattern can be taken as evidence that Heiltsuk is at an intermediate stage of developing case-marking such as that which is realized by the oblique case in Kwak'wala (to be shown in Section 3.3). This case-marking originates from the preposition *his-* and its associated person-marking enclitics (Table 3). More specifically, by analogy with the prepositions *la-* and *q-*, it can be hypothesized that [√PREP + person enclitic] constructions were once used with the preposition *his-* as well, so that constructions like *hisi* in (i) above were attested. Then, speakers began dropping out initial *hi-* and attaching the *=s* and its person enclitic to the previous prosodic word. The change has gone to completion in the third person, where the *"his" – enclitics* are identical to the

subject enclitics with the initial =*s*, derived from *his-* itself. A summary of this process in the third person is presented here:

Table 4: Development of case in Heiltsuk from *his* constructions in the third-person

Prep + Subject Enclitics (Unattested but hypothesized to be present historically)	Deletion of initial segments of preposition	"his" Enclitics in use today
hisk	~~hi~~ sk	=sk (=sx)
hiskc	~~hi~~ skc	=skc (=sxc)
hisq^{w}	~~hi~~ sq^{w}	=sq^{w} (=sχ^{w})
hisq^{w}c	~~hi~~ sq^{w}c	=sq^{w}c (=sχ^{w}c)
hisi	~~hi~~ si	=si
hisic	~~hi~~ sic	=sic
hiski	~~hi~~ ski	=ski

In the second person, the *"his" – enclitic =us* contrasts with the second person *subject enclitic =su* (Table 3). These two forms do not correspond as they do in third person; however, =*su* may derive from second person forms elsewhere in the language, such as the independent pronoun *qəsu* 'you' as illustrated in (12) (in which the initial *qə-* may be a proclitic demonstrative). It also stands to be mentioned that *=us* is used analogously in Haisla, and that Kwak'wala has a second person possessive clitic =*us*. In the first person, on the other hand, there is no indication that case-marking is under development in Heiltsuk. This situation is comparable to Kwak'wala, where the oblique case is used to encode a possessor in the third person but not in the first or second person, and where a different set of clitics exists for this latter purpose. The fact that the development of case-marking for possessive constructions in Heiltsuk exists only in the third person, a fact which mirrors the use of the oblique case in Kwak'wala, is another piece of evidence for an historical relationship between these constructions.

Though this exposition has been based almost entirely on data from Heiltsuk, it appears from the fragmentary evidence available for Oowekyala that the same case-development process is ongoing in this language as in closely-related Heiltsuk. Thus in a discussion on Boas' *Bella Bella Texts* by Rath & Windsor (1989: vii), it is noted that Boas knew about the idiosyncratic initial [h^{y}i] sound ("strongly voiced and strongly palatalized, so that it closely resembles the phonetic palatal glide [y]") at the beginning of *his,* a sound which distinguished Heiltsuk and Oowekyala from neighbouring languages. When

Boas includes a short section on "the Bella Bella dialect" in his 1947 grammar, he is actually referring to generalizations made about Oowekyala, Heiltsuk, and Haisla[10] which he considered at the time to be dialects of the same language (Rath & Windsor 1989: ii-iii). Thus, Boas reports about the "Bella Bella dialect", including Oowekyala, that "the instrumental is generally expressed by [yis] or by a suffixed [s]…when the object is a pronoun the instrumental is generally expressed by the suffix [s]." (1947: 298-9). The instrumental pronominal suffixes that he gives for this language are also described as consisting of =s followed by attached independent pronouns (Boas, 1947: 296). These, of course, correspond to the *"his" – enclitics* we have already seen described for Heiltsuk. Lastly, Rath (1984: 321) lists Oowekyala *yis* forms in a table alongside those of the Upper Northern Wakashan languages; the Oowekyala forms provided in the table are identical to those provided for Heiltsuk.

Interestingly, the process of case development at work in Heiltsuk and Oowekyala also appears to be occurring in the Haisla language. Lincoln & Rath (1986) describe how the Haisla prepositional elements *la-*, *qən-*, and *his-* are able to occur as the heads of right-hand adjuncts of the form [la + NP], [qən + NP] and [his + NP]. Nonetheless, only the former two prepositions can occur in a configuration in which "short personal forms" (enclitics) attach to the preposition in place of an overt NP. In Haisla as in Heiltsuk, constructions with *his-* phrases can be substituted by a series of *"oblique enclitics"* (analogous to the "*his" – enclitics* of Heiltsuk) in place of *hi-* and overt NPs, as shown in the following table (Lincoln & Rath 1986: 50):

1 sg.	{ =ńd.s } / his nug^{w}a
1 pl. (incl.)	{ =nis, =ńis } / his nug^{w}anis
1 pl. (excl.)	{ =nik^{w}, -ńuk^{w} } / his nug^{w}anuk^{w}
2 sg./pl.	{ =us }
3I sg./pl.	{ =sik }
3II sg./pl.	{ =su }
3III sg./pl.	{ =si }
3(absent)	{ = sgi }

Table 5: Oblique Enclitics (Kitlope Dialect)

As Table 5 shows, Haisla has actually progressed further than Heiltsuk/Oowekyala towards having a full case system in that it has developed a full set of "oblique enclitics" in the first person which are in free variation with the (older) full *his-* phrases. While the 1.sg. form *=ńd.s* does not itself appear to be clearly phonologically related to the corresponding full *his-* phrase *his nug^{w}a*, the 1 pl. (incl) *=nis/=ńis* does match the final segments in the corresponding phrase *his nug^{w}anis*, and the 1.pl. (excl) *=nik^{w}/-ńuk^{w}* similarly matches its final

[10] Boas is probably referring less to Haisla here than to the other two languages, given that he was relatively less experienced with this language.

segments with the corresponding phrase *his nug^{w}anuk^{w}*. Similarly in the second person, Haisla exclusively uses enclitics rather than constructions with [*his* + 2nd person overt NP]. The situation with third person forms is the same as already seen in Heiltsuk.

Additional data for Haisla can be found in Bach, Robinson & Robinson's (2010) online Haisla lessons, wherein "*-s*" is described as being "best thought of as a short form of the word *his*, a little word with many uses". One of the uses of *his/-s* is in "connecting a word referring to a thing possessed and a word for a possessor", such as in: *gux^{w} s 'wi'wialhisi* – 'house of her parents'. It is also used as a connective in phrases such as *wisəm s x^{w}ənux^{w}* - 'son' (lit. male child), a use which seems to parallel that of the LHAS (left-hand adjunct suffix) seen in Heiltsuk examples (8) and (9) above, described more fully in Rath (1981). As well, Haisla *his/-s* is also used in by-phrases, such as in *Gu'atlasui his/-s qi guk^{w}əlatsi* – 'he was helped by his fellow villagers'. The interchangeability of *his/-s* implied by the lessons provides additional evidence for the ongoing development of oblique case in Haisla.

Thus in all three Upper Northern Wakashan languages we find some degree of alternation between full prepositional *his-* phrases with overt NPs, and enclitics which are derived from *his-* and an associated set of person-marking enclitics; significantly, these enclitics closely resemble the grammatical case constructions of Kwak'wala (to be shown in Section 3.3). The fact that full prepositional phrases and case-marked forms are in free variation with each other (for particular person paradigms) thus constitutes one piece of evidence that these languages are moving towards a Kwak'wala-like case marking system. I will now turn to Kwak'wala data in order to show that the distribution and function of oblique case and the third person possessive clitic in this language corresponds to that of the *his-* constructions in the Upper Northern Wakashan languages phonologically, distributionally, and semantically; this correspondence is significant because it shows that these Kwak'wala case constructions can be understood as being historically derived from formerly present *his-* constructions.

3.3 The development of case-marking in Kwak'wala

In order to argue that Kwak'wala's oblique and third-person possessive case-markers originated from *his* constructions, it will be necessary to demonstrate that the distribution and function of the Kwak'wala case marking and possessive enclitics we are concerned with overlap with that of *his* constructions in the Upper Northern Wakashan languages. The syntax of Kwak'wala differs from the other Northern languages in a few notable ways. The first of these is that case marking on arguments is obligatory in Kwak'wala. There are two cases, both consisting of enclitics that attach to the prosodic word immediately preceding the argument they introduce.[11] Thus in example (14),

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[11] A case-marked argument need not be expressed as an overt nominal if it is known from context. For example, cf. (14) with the sentence *təp'ídida bábaG^{w}əmeχ* - 'The man

the phrase [*=χa qʷəʔsta*] forms a syntactic (though not a prosodic) unit. The *accusative* case takes the form *=χ(a)* (or sometimes *=χʷ(a)*) and introduces an argument which is usually a direct object, as in the following example:

(14) təp'idida babaGʷəmeχa qʷəʔsta
təp'-xʔid=ida babaGʷəme=χa qʷəʔsta
break-INCH=D3.D boy=**ACC** cup
'The boy broke the cup'

The *oblique* case-marker takes the form of *=s(a)*. It introduces various types of phrases that correspond closely with the types of phrases *his* constructions introduce in the Upper Northern Wakashan languages. In the following examples, the oblique case-marker introduces an oblique agent phrase ((15) 'by x') and an instrumental phrase ((16), 'with x'):

(15) təp'idsuwida qʷəstesa c'ədaq
təp-xʔid-suʔ=ida qʷəste=sa c'ədaq
break-INCH-PASS=D3.D cup=**OBL** woman
'The cup was broken by the woman.'

(16) təp'idsuwida qʷəstesada dzigayu
təp-xʔid-suʔ=ida qʷəste=sada dzigayu
break-INCH-PASS=D3.D cup=**OBL.D** digging.stick
'The cup was broken with the digging stick'

Another place where the oblique marker *=s(a)* occurs is in a group of ditransitive verbs (e.g. *c'o* – 'give', *nəp'a* – 'throw at', *ʔəχʔátɬəla* – 'to put down (on)') which take an oblique-marked argument where in English we might expect an accusative-marked argument. Boas (1947: 285) remarks that it is very common for the "object used in an action" to be marked in the oblique case rather than in the accusative case. This type of marking occurs in the example (17) with the verb *laχala* – 'to sell':

(17) laχalida bəgʷanəmesa kʷənikʷ laχa c'ədaq
laχala=ida bəgʷanəme=sa kʷənikʷ la=χa c'ədaq
sell=D3.D man=**OBL** bread PREP=ACC woman
'The man is selling bread to the woman.'

I assume that the particular case with which an arguments is marked in a clause is determined by verbal subcategorization.

In addition to its use introducing instrumental phrases and certain subcategorized arguments, the oblique case marker *=s* is also used to introduce certain arguments with possessive meaning. Thus when a possessor is third

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broke it' (where *=χ* is the accusative case marker and the nature of 'it' is known from context).

person and is not coreferential with the subject of its clause, this possessor appears after the possessed NP and is expressed using the oblique case (Anderson, 1984):

(18) gəldiɤəla wənaɬdəmsa gʷaʔsəla (Anderson 1984: 29)
gəldiɤəla wənaɬdəm=sa gʷaʔsəla
long inlet=**OBL** gʷaʔsəla
'…the long inlet of the Gwa'sila [tribe]'

If the possessor is known from context, the oblique case *=s* may appear on its own. Anderson describes the difference between postnominal possessor phrases as in (18) and oblique phrases as in (16) as being "that ordinary instrumental marking is assigned by reference to the properties of a governing verb (taking instrumental complements), whereas possessor marking is assigned simply by virtue of the structural configuration" (1984: 30).

In cases where a third-person possessor is coreferential with the subject of its clause, the enclitic element *=is* "replaces the deictic part of the determiner of the possessed NP, and there is no overt expression of the possessor" (ibid: 30). In the following example, the accusative case is used together with this third-person possessive clitic:

(19) Gəlsoχda bəgʷanəmeχis gukʷ
Gəls=oχda bəgʷanəme=χ=is gukʷ
paint=D2.D man=**ACC**=**POSS.3** house
'The man is painting his house.'

It is also possible to combine the third-person possessive clitic *=is* with the oblique *=s* in instrumental phrases involving a third-person possessor that is coreferential with the subject (e.g. (20)), or with the oblique *=s* in phrases containing a subcategorized oblique argument and a third-person possessor who is coreferential with the subject (e.g. (21)):

(20) təp'idida babaGʷəmeχa qʷəʔsta ʔəχalasis dzigayu
təp'-xʔid=ida babaGʷəm=χa qʷəʔsta ʔəχ-ala=s=is dzigayu
break-INCH=D3.D boy=**ACC** cup ø-use=**OBL**=**POSS.3** d.stick
'The boy broke the cup with his digging stick'

(21) lə'misida gənanəm c'əχisis ləχa
lə-'mis=ida gənanəm c'əχ-xʔid=s=is ləχa
AUX-DISC=D3.D boy throw-INCH=**OBL**=**POSS.3** basket
"So then the boy threw his basket…

laχa 'wac'i
la=χa 'wac'i
PREP=ACC dog
…at the dog"

When the possessor is in first or second person, special determiners take the place of the deictic marking that normally precedes the noun phrase referring to the thing possessed. This set of "special determiners" includes the first person singular possessive *=ən*, the first person plural (inclusive) possessive *=ənsˀ*, the first person plural (exclusive) possessive *=ənuxʷ*, and the second person possessive *=us*. These first and second person possessive clitics are identical to the first and second personal pronouns in this language and are not easily relatable to *his* constructions. With regard to the second person possessive clitic, Kwak'wala *=us* is also identical to the second person *"his" – enclitic* in Heiltsuk (and the analogous form in the Bella Bella dialect including Oowekyala, Boas 1947: 297) as well as the analogous *oblique enclitic* in Haisla. The fact that this *=us* form is common across all four Northern Wakashan languages means that it was likely present at some stage in Proto-Northern Wakashan.

In addition to immediately preceding overt (or assumed but unexpressed) noun phrases, Kwak'wala case-markers may have pronominal enclitics attached at their right edge. These *deictic enclitics*, which are related to Heiltsuk primary deictics (Rath 1981: 77), encode information about where a referent exists in terms of three degrees of distance from the speaker: that is, near the speaker, at an intermediate distance from the speaker (or within the immediate discourse context), or distant (or outside of the discourse context). Thus, for instance, the oblique case marker may combine with a deictic enclitic (*=oχ*) in order to refer to a man who is within the immediate discourse context, making *=s=oχ* – 'by him' (as in 'the blanket was made by him [the man is nearby, within discourse context]'). This is just to say that the oblique case marker has been fully re-analyzed as an enclitic in Kwak'wala; thus, as a bona fide enclitic it may pattern along with other clitics, within the limits of particular ordering constraints.

What the above data have shown is that arguments introduced by oblique *=s* in Kwak'wala correspond in terms of meaning with the phrases introduced by *his* or by *"his" – enclitics* in the Upper Northern Wakashan languages. That is, phrases which can be represented using *his* constructions in the Upper Northern Wakashan languages and can be translated as 'by x' (oblique agent phrases), 'with x' (instrumental phrases), and 'of x' (genitive/possessive phrases) can be expressed in Kwak'wala using the oblique marker *=s*, the third person coferential-with-subject possessive marker *=is,* or a combination of these two markers. What remains to be shown is that the distribution of these constructions overlaps between the Upper Northern Wakashan languages and Kwak'wala, as well as the phonological plausibility of these constructions being historically related to each other.

With regard to the syntax of its prepositions, Kwak'wala operates very similarly to the Upper North Wakashan languages; it too permits both VP-level attachment of PPs and constructions where prepositions are embedded within DPs. The use of prepositions in Kwak'wala does nonetheless display some differences from the other Northern Wakashan languages. Notably, the preposition *la* is used much more frequently in Kwak'wala than in the other Northern Wakashan languages, acting as a sort of default construction for carrying extra arguments in a sentence. Recall that there is a preference

throughout Wakashan for not including more than one internal argument within a clause, and that any extra arguments become positioned in additional phrases of various types. In Kwak'wala, this tendency is manifested as a strong preference against having two case-marked internal arguments in the same clause (Boas 1947: 281). If more than one argument is subcategorized for, one of the arguments becomes positioned in a *la-* headed prepositional phrase (or less frequently in a *q-* headed phrase when this is semantically appropriate). Therefore, *la-* phrases end up having a large functional load in this language. Note the following examples:

(22) c'owida c'edaqesa ƛatəmɬ laχa bəgʷanəm
c'əw=ida c'edaqe=sa ƛatəmɬ la=χa bəgʷanəm
give=D3.D woman=OBL hat PREP=ACC man
'The woman gave a hat to the man'

(23) giluɬida c'edaqeχa ƛatəmɬ laχa bəgʷanəm
giluɬi=ida c'edaqe=χa ƛatəmɬ la=χa bəgʷanəm
steal=D3.D woman=ACC hat PREP=ACC man
'The woman stole a hat from the man'

(24) Gəlsida c'ədaqesa ƛi'na laχis GuGaʔme
Gəls=ida c'ədaqe=sa ƛi'na la=χ=is GuGaʔme
Paint=D3.D woman=OBL eulachon.grease PREP=ACC=3.POSS face
'The lady is painting her face with eulachon grease'

Comparing the prepositional phrases in these three examples, we can see that the semantic interpretation of each *la-* headed phrase is determined by the subcategorization frame of the predicate and that the range of interpretations these phrases can acquire is quite broad: in (22) the *la-* phrase indicates movement towards an argument; in (23) it implies movement away from an argument; and in (24) it implies movement onto a possessed argument. Sentence (24) is particularly interesting as it shows a *la-* phrase carrying two meanings: the meaning of 'on', and the possessive clitic *=is.* Notice that this clitic is doing the semantic work of *his* in the other Northern Wakashan languages, apparently without any help, other than purely structural, from prepositional *la-*.

Interestingly, a conspicuous distributional overlap exists between *his* constructions in the θern Wakashan languages and oblique-case marked phrases in Kwak'wala at the site of arguments which are subcategorized by ditransitive verbs as obliques (recall (21); also see (22) and (24)). Indeed, Boas (1947) notes difficulties with respect to the semantic difference between accusative and oblique marked arguments, noting that while the accusative case most regularly introduces semantic objects, the oblique case also seems to introduce many arguments that are intuitively (at least in terms of English) direct objects themselves. Thus in (22), the verb *c'əw* – 'to give' subcategorizes for a *=χ* marked object corresponding to what in English would be the indirect object, while the *=s* marked argument corresponds to what in English would be the

direct object. Considering this pattern, the following note in Lincoln, Rath, & Windsor (1986) regarding Haisla provides additional evidence for the overlapping distribution of *his* constructions in this language and oblique-subcategorized arguments in Kwak'wala:

> "If the predicate of the sentence has ditransitive meaning, the Haisla grammatical object corresponds to an English indirect object while a Haisla right-hand adjunct beginning in /hs-/ corresponds to the English direct object." (p. 255)

Thus, there seems to be a distributional correspondence between arguments subcategorized as oblique and assigned oblique case in Kwak'wala (e.g. *χatəmɬ - 'hat'* in (22)) and right-hand *his* adjuncts in Haisla; likewise a correspondence occurs between the accusative-marked recipient argument in Kwak'wala *la-* phrases and Haisla direct objects. That is, the distribution of *his* constructions in Haisla ditransitives correspond to that of oblique case-marked arguments in certain Kwak'wala ditransitives, and the distribution of Haisla direct objects corresponds with Kwak'wala direct objects positioned in *la-* headed phrases, even while the linear and syntactic placement of these arguments (within the clause vs. in a prepositional phrase) has been reversed. This correspondence constitutes a convincing piece of evidence that these constructions are related to each other historically. Considered historically, the rather opaque semantics of oblique-marked subcategorized arguments in Kwak'wala also makes more sense when we see that this oblique marking derives from an older set of prepositional constructions involving *his*.

To summarize the distributional evidence for a historical connection between *his* constructions and the Kwak'wala oblique case/third-person possessive enclitics, note that in the places that we find preposition *his* constructions in the Upper Northern Wakashan languages, we find in Kwak'wala one of the following constructions:

1. A noun phrase introduced by the oblique case-marker *=s*, which is interpreted as an oblique agent phrase (e.g. (15))
2. A noun phrase introduced by the oblique case-marker *=s*, which gets an instrumental meaning (e.g. (16), (20), (24))
3. A noun phrase introduced by the oblique case-marker *=s* denoting a possessor (when the possessor is not coreferential with the subject of its clause) (e.g. (17))
4. A noun phrase introduced by the possessive clitic *=is* (when the possessor is coferential with the subject of its clause) (e.g. (19)), possibly contained within a prepositional phrase introduced with *la-* (e.g. (24))
5. An instrumental phrase involving a third person possessor that is coreferential with the subject (e.g. (20)) or a phrase containing a subcategorized oblique argument and third-person possessor who is coreferential with the subject of the clause, in either case involving a

combination of the oblique case-marker *=s* and an attached possessive clitic to make *=s=is* (e.g. (20), (21))

6. In ditransitives, an argument subcategorized as an oblique and case-marked with *=s,* often corresponding to a direct object in English (e.g. (17), (20), (21), (22), (24))

Thus, the distribution and function of "oblique case" and the third-person possessive clitic corresponds with distribution and function of *his* constructions in the three Upper Northern Wakashan languages.

The hypothesis that Kwak'wala oblique case and third person possessive enclitics are historically derived from *his* constructions is, moreover, phonologically as well as distributionally plausible. The Kwak'wala oblique-case marker *=s* should be seen as a remnant from the Proto-Northern Wakashan preposition **his* which was lost in this language through a process that is similar to what is happening in the other Northern Wakashan languages today. Thus we can imagine a process whereby the phonologically-weak initial segments of *his* started being dropped and speakers began encliticizing the final *=s* to the preceding word. Over time, *=s* became re-analyzed as an enclitic in its own right, and thus took on the capacity to pattern with other enclitics. Arguments that previously had been subcategorized to occur in *his* prepositional phrases became oblique-case marked; due to the constraint on more than one argument in the main clause, Kwak'wala *la* phrases have became default carriers of extra arguments where these existed. Instrumental and oblique agent phrases, which also used to be expressed with *his* constructions, became oblique-marked adjunct phrases when the initial segments of the preposition *his* dropped out. The third-person possessive use of oblique *=s* developed on the same line from *his* constructions which previously carried a genitive meaning. This historical hypothesis helps us to account for the many ways in which the Kwak'wala oblique marker is used synchronically. Though the oblique marker seems to be doing a lot at once by introducing a wide array of argument and adjunct phrases, this situation is accounted for by its origins out of a prepositional construction which encoded a fairly wide range of instrumental, genitive, and oblique meanings and which in fact continues to encode these types of meanings in the other Northern Wakashan languages today.

With regard to the third-person possessive clitic *=is* in Kwak'wala, it is possible that this form derives directly from the final segments of *his* itself being re-analyzed as an enclitic. The process by which this re-analysis would have occurred is in need of more investigation.

In summary, Kwak'wala oblique case and third-person possessive clitics correspond in distribution and function with *his* constructions in the Upper Northern Wakashan languages. This observation, combined with the fact that the Upper Northern Wakashan languages are in an intermediate stage of developing Kwak'wala-like case marking, constitutes evidence for the hypothesis that Northern Wakashan case developed (and is developing) out of constructions involving the Proto-Northern Wakashan preposition **his*.

4 Northern Wakashan prepositions: verbal and demonstrative origins

Given the evidence for the innovation of case from prepositional constructions in the Northern Wakashan language branch, we can begin to explain one of two major syntactic differences between the Northern and Southern Wakashan language branches – namely, the presence vs. absence of grammatical case. The second major difference between the Northern and Southern branches – the presence of prepositions in the Northern languages – brings up the question of where these prepositions themselves came from. I will now discuss the hypothesis that prepositions were innovated in the Northern Wakashan language branch prior to the types of innovations I have explored with relation to case-marking. The idea that Northern Wakashan prepositions are related to or derived from verbs has been discussed in the literature previously (e.g. Boas 1947, Anderson 1984, Fortescue 2006). Although an attempt at explaining the exact stages of this grammaticalization process is beyond the scope of this paper, evidence for verbal and demonstrative origins of the prepositions listed in Table 1will be presented.

4.1 Prepositional *la*

The preposition *la* appears to be historically derived from the Proto-Northern Wakashan verbal root **la/ɬə* - 'to be in a position', 'to change position', 'to go', 'to move towards' (Lincoln & Rath 1980: 218). In addition to being used as a preposition, this root also functions as an independent verb and as an auxiliary element in these languages. As an independent verb, the root *la* takes on the meaning 'to go', as in the following Kwak'wala examples:

(25) lalaʔoχ laχa səkul
lala[12]=oχ la=χa səkul
going=D2 PREP=ACC school
'He is going to school'

(26) lə'moχ dalaχʷada bukʷ lala ʔəχ laχ səkuʔlac'i
lə-'m=oχ dala=χʷada bukʷ lala ʔəχ la=χ səkuʔlac'i
AUX-DISC=D2 carry=ACC.D book **going** ø PREP=ACC school
'She is carrying the books to school'

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[12] The form *lala* – 'going' in (25) and (26) includes either a reduplicated form or a continuative suffix (-(a)la) attached to the root. The context in which (25) and (26) were elicited (where a specific boy/specific girl is heading to school on one particular day) favors the continuative suffix reading. Levine (1980: 243) glosses *lala* as including a reduplicated form, but this is in a context of going to a place more generally (i.e. *lalaʔoχda bəgʷanəmχ laχʷa ʔəwiɬagʷis* – 'The man goes to this village').

The verb root *la* occurs also occurs with a multitude of lexical suffixes that help to constrain the meaning of the predicate (e.g. Haisla: *làatus* – 'to go downstream to go down to a place', *làatusa* – 'to take downstream' (Lincoln & Rath 1986: 242)). Its behaviour is thus comparable to the 'empty locative roots' we have already discussed in relation to Southern Wakashan, even though *la* may be less 'empty' than these roots by contributing its own meaning, 'to go' in many instances. When used as an auxiliary, however, *la-* is meaningless.

Example (26) also shows one use of *la* as an auxiliary element; here, the discourse particle *–'m* and the middle-distance locative deictic *=oχ* referring to the subject are attached to the auxiliary instead of the main verb 'dala' – 'to carry' which follows it. Auxiliary constructions like this one function in tying discourses together and are extremely common in connected speech and texts. Such constructions, if they are to be translated, can be read as 'and then…' or 'and so…'.

The root in question is listed as *la-* in Haisla, *ɬ-* Heiltsuk and Oowekyala, and *la-* in Kwak'wala, though in a prepositional context, all four languages use the form *la-* (Lincoln & Rath 1980: 218). As an example, the following shapes are given for the meaning 'down, to go down, etc.': *laaχa* (Ha), *laχa* (Heiltsuk), *laaχa* (Oowekyala), and *laχa* (Kwak'wala) (ibid.). As prepositional *la* is common to all four languages, **la* can be taken to be the Proto-Northern Wakashan form. Interestingly, this form does not appear to correspond with any particular Southern Wakashan roots (Fortescue 2007). Concepts of 'going' in Nuu-Chah-Nulth are expressed in a great many ways using various roots (e.g. (27)) and lexical suffixes either attached to an empty root (e.g. (28)) or to a content-carrying root (e.g. (29)):

(27) waha`k'aχaħ (Davidson 2002: 99)
waha`k$^{w}$='aχ=(m)a`=aħ
go.PERF=TEMP=INDIC=1sg
'I went.'

(28) hina`čiχ (Davidson 2002: 38)
hina-a`-čiχ
empty.root-**go.out.to.sea-PERF**
'go out to sea'

(29) haɬi`ɬʔas (Davidson 2002: 57)
haɬi`ɬ-ʔas
invite.to.participate-**go.in.order.to**
'go to invite'

While Northern and Southern Wakashan do not share the form *la*, the fact that both branches possess a class of elements (e.g. semantically-empty roots in both branches, *la* in the Northern branch) that is used in both preposition-like ways and auxiliary-like ways is striking. This similarity invites further investigation.

4.2 Prepositional *q-*

The preposition *q-* occurring in all four Northern Wakashan languages appears to be historically derived from the Proto-Northern Wakashan root **q-* which is listed as meaning "for, for the benefit of, for the sake of, about, pertaining to, because, etc." (Lincoln & Rath 1980: 350). The segments following the initial [q] of this preposition vary somewhat even within a single language (e.g. *qa-, qən-* in Heiltsuk; see Table 3 above), so I have not included these segments in Table 1 or in the Proto form.

Going back further to Proto-Wakashan, Fortescue (2007: 96) reconstructs Proto-Wakashan **qa* 'because or for (that)' and remarks that this form was "perhaps originally a (subordinate) demonstrative". For the Southern Wakashan languages, he lists a group of cognate suffixes beginning with *-q* acting as subordinative mood markers in all three languages. For the Northern Wakashan languages, the forms given are *q-* initial roots which are said to introduce benefactive and subordinate clauses and to be the basis of various demonstratives (in Oo, He, Ha) and object-marking forms (in Kw, Oo, He, Ha). A reconstruction of how these Northern and Southern forms are related to each other would have to account for how suffixes in the Southern branch are related to roots in the Northern branch. In general, Wakashan lexical suffixes are known for having no necessary resemblances with independent morphemes of the same meaning (Davis 2010). On the other hand, the *–q* mood markers in Southern Wakashan are 'peripheral suffixes' (Davidson 2002: 169) which only attach to bases that can also occur as words (i.e. free roots or bases with suffixes), and thus are different from 'core lexical suffixes' which attach to bound roots, free roots, and bases with suffixes. It is possible that peripheral suffixes are more likely to be historically related to independent morphemes than core lexical suffixes are; however, this can only be speculated upon.

In the Northern Wakashan languages there is additionally a *q-* initial complementizer (frequently spirantized to *χ-* in natural speech) that introduces various types of subordinate clauses such as conditional clauses and complement clauses in raising constructions. This complementizer is likely to have derived from preposition *q-* constructions, a very common cross-linguistic development (e.g. consider English 'for'). See Bach, Robinson & Robinson (2010: lesson 9) for a discussion of these forms and their relationship in Haisla, and Rath (1981: 103) for a discussion of these forms in Heiltsuk.

I suspect that the 'demonstrative' *q-* initial forms in the Upper Northern Wakashan languages are distinct from the *q-* initial preposition and/or complementizer. These demonstratives may even be the origin of Kwak'wala accusative case marking in much the same way as I have argued that *his* constructions are the origin of the oblique case forms. Thus, note the following description of *qi=* and *q=-* demonstratives in Haisla in Lincoln & Rath (1986: 49):

"…/qi=/ and /qu=/ seem to contribute immediacy or vividness in the same way that English 'this' can do. Note that /qi-/ and /qu-/ are proclitics in dictations, but that often in conversation they behave like enclitics attached to the word

directly preceding. In the Kitlope dialect this can sometimes be confusing because there are also object enclitics /=qi/ and /=qu/."

Thus we see that a set of proclitic demonstratives exists which is phonologically indistinguishable from third-person object enclitics in the Kitlope dialect (in the Kitimaat dialect, the corresponding object enclitics are /='hi/ and /='hu/). These demonstratives occur in the same linear position as the object enclitics, and are only distinguished prosodically from the object enclitics by the fact that they are (often, though not always) proclitics. Given that they attach to the left border of noun phrases, /qi=/ and /qu=/ demonstratives probably occur in complementary distribution with object enclitics (which replace noun phrases), though this remains to be confirmed by actual data. Ultimately, more work is needed to examine this accusative-case hypothesis.

For our purposes here, I will reconstruct a Proto-Northern Wakashan preposition **q-*, and leave open the question whether this form is ultimately relatable to forms in the Southern Wakashan languages.

4.3 Prepositional *ga*

The preposition *ga* is unique to Kwak'wala and probably represents a relatively recent innovation within this language. As stated earlier, its distribution is restricted to the first person singular and plural object forms *gaχən – 'to me', gaχəns – 'to us (incl)', gaχənox^{w} - 'to us (excl)'.* This form appears to be historically derived from the Proto-North Wakashan root **gaχ* – 'to come', 'to move towards the speaker' (Lincoln & Rath 1980: pg. 229). It is likely that this verbal root is itself historically related to the Northern Wakashan demonstrative root **ga* 'this (near speaker)', a deictic root common to all Northern Wakashan languages (ibid: 228) with which it shares a core deictic aspect of its meaning. The question of whether the verbal root developed from the demonstrative root or vice versa is an interesting one, but one I cannot at this time answer. Moreover, the form *ga* does not appear to be related to any particular forms in Southern Wakashan (Fortescue 2007).

4.4 Prepositional *his*

In order to reconstruct the Proto-Northern Wakashan form of the preposition *his* discussed at length in this paper, we will need to account for phonetic variation in the preposition's initial segment, a topic of some complication in the literature. The following alternation between initial *h-* and initial *y-* exists in the three Upper Northern Wakashan languages:

Haisla:	*his*
Heiltsuk:	*yis*
Oowekyala:	*yis*

For Haisla, the form *his* shows up uncontroversially in published materials. In Heiltsuk and Oowekyala on the other hand, determining the initial

segment of the preposition even synchronically is a more complicated matter. For Heiltsuk, Rath (1981: 23-26) posits the form *yis* at the phonemic level with a phonetic realization of *hʸis*: this pronunciation is arrived at through a rule whereby phonemic /y-/ followed by a high vowel /-i-/ is realized as the combination [h ʲ i-] when occurring before a consonant. Thus, for instance, all words with initial *y-* that undergo reduplication in the plural (where the word-initial C is reduplicated along with a high-front vowel) end up with an initial *h-* and glottalization of the *y* (i.e. *'ya..'* → *'hiý'a*…'). This rule appears to be strictly followed as there no words listed in Rath's Heiltsuk dictionary (ibid.) beginning with the combination *yi-*. Rath orthographically represents the preposition as *his* in his (1981) work to reflect the form's phonetic character, whereas in Rath (1984) it is represents as *yis*. A similar situation in regards to the phonetics of the preposition's initial segment apparently occurs in Boas' "Bella Bella dialect" (including Oowekyala), as Boas (1947: 298) writes of initial *y-* as having "strong aspiration and slight sonancy" in this language. Thus, the Heiltsuk and Oowekyala forms of this preposition, while being represented as *yis* in Rath (1984), may be more accurately described phonetically as *hʸis*.

Since the segment *h* is restricted in Northern Wakashan languages to word-initial environments (where it is pronounced [hʸ] prior to a high front vowels), this is the only phonetic environment where this segment interacts with the segment *y*. The question then becomes: what is the nature of the phonetic interaction between these two segments, taking a historical view? Considering the logic of sound changes and internal evidence from these languages, the most likely historical scenario to account for the synchronic distribution of this initial segment of the preposition under discussion is to posit the existence of a Proto-Northern Wakashan segment **h,* thus allowing us to reconstruct the preposition as **his*. That the segment **h* goes back to Proto-Wakashan is evidenced by the existence of pan-Wakashan correspondences which have *h-* as an initial segment (see Fortescue 2007). In the Southern Wakashan languages, however, this segment is not limited to word-initial position. The limited distribution of this segment (word-initially) in the Northern branch is thus likely to be due to the segment's loss or change in non-word-initial environments.

To account for the presence of word-initial *y* in Heiltsuk and Oowekyala, consider that the segment *h*, when pronounced before a high vowel, has a tendency to be palatalized and to take on a phonetic character of [hʸi]. Given a pan-Wakashan constraint against complex onsets, we might expect this word-initial combination of [h + y] to be relatively unstable. In Heiltsuk and Oowekyala, we could say that this instability has given way to a situation whereby the initial segment derived from **h* and occurring prior to a high-front vowel is pronounced roughly as [hʸi], though it has in at least in some cases (with some speakers) been phonemically simplified to /yi/. The distinctively voiced/sonant [hʸi] sound characteristic of these languages is thus due to a sound change from **h* → hʸ/_i with [hʸi] being potentially reanalyzed as /yi/. This scenario explains how the *h/y* alternation can exist between Haisla (which has conserved initial *h* before a high-front vowel) on the one hand and

Heiltsuk/Oowekyala (where initial *h* has become a distinct flavour of *y* before a high-front vowel) on the other.

Evidence supporting the alternate hypothesis is lacking: that is, the hypothesis wherein we posit Proto-Northern Wakashan **y* and show that this segment has been preserved in Heiltsuk/Oowekyala while a **y* → *h* sound change has occurred in Haisla. There do not appear to be *y*- initial words in Heiltsuk corresponding to *h*- initial cognates in Haisla; indeed, it is possible to locate many cognates in Haisla and Heiltsuk which share the same initial segment whether it be *h* or *y*, thus suggesting that no systematic sound changes have taken place (Rath 1981, Lincoln & Rath 1986). The only exception to this statement is that the initial combination *yi*- is absent in Heiltsuk entries (Rath 1981), which is just to repeat the fact that [hʸi] is always phonetically realized in this particular environment. In conclusion, then, there is no evidence to support this counter-hypothesis.

Adopting the Proto-Northern Wakashan form **his* as a solid hypothesis, we can begin to investigate this form's origin from a Proto-Wakashan demonstrative root **hi*. Indeed, the form *hi*- (*yi*- in Heiltsuk and Oowekyala) exists in all four of the Northern Wakashan languages as a demonstrative root and also appears to relate to semantically-empty "locative" roots in the Southern Wakashan languages, mentioned in Section 2. Across the Wakashan family, basic examples of this form are listed in Fortescue's (2007: 43) dictionary as follows: *hita-, hida-* 'empty root' (Ma and Di); *hita, hin(a)*- 'empty root' (NCN); *hi*- 'that yonder' (demonstrative) (Kw); *yi*- 'be the case, exist' (Oo); *yi*- 'be the one that (focal)' (He); *hi*- 'be the case, exist, that' (Ha). Fortescue (2007) reconstructs a Proto-Wakashan candidate form **hi:* 'that (empty root)' and mentions that there is possibly "conflation" with the form **yi:* 'that yonder' in Ha, He, and Oo. Given the alternation between word-initial *h/y* already discussed, the forms **hi:* and **yi:* are likely derived from a single form, Proto-Wakashan **hi:*, which has a tendency to become palatalized and therefore unstable in light of a constraint against complex onsets. As argued above for Proto-Northern Wakashan, the Proto-Wakashan form is thus likely *h* initial, becoming **hi:*.

Determining the most likely origin of *-s* in Proto-Northern Wakashan **his* is especially difficult given that *s* is a common segment, making the probability of finding chance resemblances very high. Fortescue (2007: 405) proposes the Proto-Wakashan lexical suffix **-ay(c)s/-ayzs* 'belonging to or with' as a potential candidate. The data given to support this reconstruction include *–i:c* 'belonging to' (Ma), *-ac, -i:c* 'belonging to' (NCN), *-s* 'with, by, belonging to' (Kw), and *–s* 'with, by, belonging to' (He). Yet the two Northern Wakashan examples differ from the Southern Wakashan examples in that they are clitics, while the Southern Wakashan forms are lexical suffixes. As there is little or no evidence historically linking lexical suffixes and clitics elsewhere in the language, the plausibility of this correspondence is weakened. A more likely candidate for the historical antecedent of *–s* in *his* is the attributive marker *–s* in the Upper Northern Wakashan languages; this marker appears on most adjectives that precede and modify nouns; it is the "left-hand adjunct suffix" (LHAS) mentioned in Rath (1981) and seen in examples (8) and (9) above. An

analogous attributive use of *–s* is mentioned with regards to Haisla by Bach, Robinson & Robinson (2010). In Heiltsuk at least, *-s* is not a lexical suffix, but rather falls into a class of suffixes including mood and tense suffixes. It is also possible, of course, that the antecedent of the *–s* in *his* has itself disappeared or been transformed, and I can do little more than speculate on its whereabouts at this time.

In summary, prepositions in Northern Wakashan can plausibly be derived from verbal and demonstrative forms present in Proto-Northern Wakashan. In the case of *his*, the form can probably be taken back further and derived from a Proto-Wakashan demonstrative root. Altogether, this evidence thus suggests that prepositions were innovated in the Northern Wakashan languages. With regard to *his* constructions, the innovation of prepositions ultimately paved the way for the development of case as is seen today in the Northern Wakashan languages.

5 Conclusion

This paper has explored a historical hypothesis to account for the presence of prepositions and morphological case in the Northern Wakashan languages as compared with the Southern branch of the Wakashan family, in which these syntactic features are lacking. This historical hypothesis has centered on the presentation of two types of evidence: 1) the development of morphological case marking from a particular prepositional construction; and 2) evidence for the earlier innovation of prepositions from verbal and demonstrative roots in Proto-Northern Wakashan and beyond. The development of an oblique case from constructions involving the preposition *his* is an ongoing process in the Upper Northern Wakashan languages, where it has continued to completion only in Kwak'wala, the relative outlier of the Northern Wakashan language branch. These findings have implications for the Wakashan language family as a whole, and help to raise several important questions regarding language change more generally.

Regarding the internal classification of the Northern branch of the Wakashan language family, the evidence presented in this paper provides one qualification to a common assumption about Haisla. Thus we have seen how Haisla, which is generally assumed to be the most conservative language of the Northern branch, has in fact progressed farther towards developing morphological oblique case than has Heiltsuk and Oowekyala by developing a set of forms in the first person where none exists in Heiltsuk/Oowekyala; this is even true despite the geographical discontinuity between Haisla and Kwak'wala. Heiltsuk and Oowekyala, which have been more conservative with regard to this change, are as expected extremely similar to each other and have both undergone the same sound change – namely, *hi* → $h^{y}i$ in word-initial environments. Kwak'wala is, as expected, the outlier of the bunch. Given this situation and the fact that the Upper Northern Wakashan languages are otherwise quite similar to each other (Rath 1984), we could imagine an historical scenario where Kwak'wala split off from Proto-Northern Wakashan

first, followed by a split between Haisla and Heiltsuk/Oowekyala. In this case, Haisla's first-person forms could be explained as language-internal innovations. Evidence for this language-internal innovation in Haisla comes from the fact that Haisla's first-person oblique-enclitic forms (see Table 5) are not themselves found in Kwak'wala. As mentioned previously, the first-person plural forms in Haisla do in fact appear to be phonologically related to, and are in fact in free variation with, *his* constructions still present in that language. Therefore, their language-internal innovation is likely. This historical scenario would thus explain the closeness of the Upper Northern Wakashan languages while still allowing for the development of first-person oblique forms in Haisla.

Regarding the issue of time depth for the Wakashan language family, the development of both prepositions and case marking in Northern Wakashan provides some additional evidence that the Northern and Southern branches of Wakashan diverged a very long time ago. This is not surprising give what we already know about these languages. Nevertheless, it is interesting to consider why, given the time depth between the two branches, the Northern branch has innovated so much while the Southern branch has been conservative by comparison. Indeed, much of the inflectional material of the Northern branch, including its elaborate system of deictic reference, has been innovated (Fortescue 2006); this, combined with the innovation of prepositions, has made the Northern languages notoriously complex in terms of the way they represent concepts of space and location. Why, then, have the Northern languages innovated so much in this regard?

One possible answer to this question relates to the role that argument structure plays in language change. Thus in Wakashan, preferences for reducing the number of (non oblique) internal arguments per clause seem to have provided an important impetus for grammatical innovation throughout the family. In the Northern languages, the problem of where to put extra arguments has been largely resolved by the innovation of prepositional constructions. In the Southern languages, various puzzling 'verbal' constructions (e.g. those involving *ʔuukʷiɬ* and *ʔuuʔatup*) accomplish the same goal. Thus, it is interesting from a historical point of view to ask questions such as the following: how have argument structure constraints influenced the historical trajectory of the Wakashan languages? More generally, to what extent are these types of constraints important in terms of language change?

In addition to these more general questions, many more specific questions remain to be answered. I will raise several such questions here, as topics for future research:

1. What is the origin of the accusative case marker =*χ* in Kwak'wala? Is this marker related to the *object enclitics* of Heiltsuk? How about to the set of "optional demonstrative clitics" in Haisla, *qu-* and *qi-* (Lincoln & Rath 1986: 49) that were mentioned in Section 4.2?

2. What are the details surrounding prepositional phrases occurring within DPs in the Northern languages?

3. Why has the preposition *hi-* been subject to loss while the other Proto-Northern Wakashan prepositions have retained their form and function in all of the Northern languages? Is this an accident of history, or does the phonological instability of this form's initial segments make it particularly vulnerable to being lost? Does the fact that a root may have little or no semantic content of its own make it particularly vulnerable?

4. Does the "*connective –s*" on attributive adjectives in Haisla (Bach 1970: 6; Bach, Robinson & Robinson 2010), Heiltsuk (Rath 1981), and Oowekyala (Boas 1947: 299) relate to the *=s* in *his* and thus to the oblique case marker in Kwak'wala?

5. How can we account historically for the fact that there are certain elements in these languages (e.g. *la-* in the Northern Wakashan branch) which serve as both as auxiliaries and as prepositions?

Answering these questions will contribute to an understanding of the syntactic history of the Wakashan language family, while also contributing to a fuller understanding of how language change occurs at the level of syntax.

Appendix I: Glossing

The following glossing abbreviations are used for data in Kwak'wala:

ACC	accusative	DISC	discourse particle
ACC.D	accusative (definite)	INCH	inchoative
AUX	auxiliary	OBL	oblique case
D1	here	OBL.D	oblique case (definite)
D2	around	PASS	passive
D3	not around	POSS.3	3rd-person possessive
D1.D	here (definite)	PREP	preposition
D2.D	around (definite)	VIS	visibility marker
D3.D	not around (definite)	ø	empty root

Glosses for the examples from published works in languages other than Kwak'wala have been kept consistent with the original published works; refer to original works for conventions regarding specific segments and diacritics (also see footnote 1). The following glossing abbreviations are used for Nuu-Chah-Nulth and Makah data obtained from Davidson (2002):

ART	article	PERF	perfective
INDIC	indicative	TEMP	temporal specifier

The following glossing abbreviations are used for Haisla (Lincoln, Rath, & Windsor 1986) and Heiltsuk (Rath 1981):

3V	3rd person, visible	DEM.3	demonstrative, over there
D1	primary deictic	LHAS	left-hand adjunct suffix
D2	secondary deictic	PREP	preposition

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