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A grammar of space in Kwakwala

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Linguistics

by

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September 2015

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A Grammar of Space in K^wak^wala

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by

Daisy Rosenblum

For my parents.

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It is my hope that the description of K^wak^wala provided here can also contribute something of value to vigorous language revitalization efforts underway in many K^wak^wəkəw^w communities. While the scope of my analysis is here restricted to linguistic questions, I have also tried to maintain a continual awareness of the larger cultural, social, geographic, economic, and political contexts in which the K^wak^wala language is inextricably embedded. I ask my trusted friends, advisors, and teachers in K^wak^wəkəw^w communities for their forgiveness in advance of the errors, omissions and missteps contained here; they are my sole responsibility and I hope you will advise of me necessary corrections. The language content contained in the examples herein is part of K^wak^wəkəw^w heritage as well as belonging to individual speakers and must be treated with the greatest respect and responsibility.

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ABSTRACT

A Grammar of space in Kwákwála
by
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For all languages, concrete categories are the foundational units of metaphorical extension: from our bodies to the world around us, from physical space to mental space, from space to time. Spatial grammar therefore provides a unique window into linguistic and cultural diversity, as well as universal tendencies indicative of shared cognitive constraints. This dissertation presents a description of the morphological and syntactic linguistic resources in the grammar of Kwákwála (ISO KWK; Wakashan) for describing location, motion and direction in physical space. Kwákwála is an endangered language spoken by approximately one hundred and fifty first-language speakers on Northern Vancouver Island and the opposing mainland. First-hand documentation, gathered since 2008, is analyzed alongside legacy data recorded by Franz Boas, George Hunt, and others.

Kwákwála shares many of the typological features of languages in the Pacific Northwest Coast: it is highly polysynthetic, with a limited number of roots and a large set of derivational suffixes. A predicate word can stand alone as a grammatically complete, inflected utterance. Extensive locative information, about both static and kinetic events, can be expressed in the combination of a root and multiple suffixes in a complex predicate. In addition to providing descriptive information about how these roots and suffixes combine in locative expressions, the last chapter explores the broader question of what determines affix order in these predicates.

The structure of the dissertation is as follows: Chapter 1 and 2 provide background on the language and methodology; Chapter 3 contains a brief grammatical sketch. Chapters 4 and 5 focus on the morphology and syntax of basic static and kinetic spatial relationships in Kwakwala, as well as the ways in which Kwakwala informs our broader typological understanding about the cross-linguistic patterns expressed in spatial relationships. In Chapter 6, the structure of static and kinetic locative expression in Kwakwala predicate words provides a case-study in the multivalent principles which contribute to structure morphological complexity in a highly polysynthetic language.

TABLE OF CONTENTS

Chapter 1: Introduction and Background 1

 1.1 Overview 1

 1.2 Aim and scope of the study 3

 1.2.1 Documentation and Description 3

 1.2.2 Theoretical Questions: Affix-ordering 5

 1.3 Background: Social, Historical, Cultural, Ecological Context 6

 1.3.1 Culture and Community: Language and the Landscape 8

 1.4 Relevant Literature 13

 1.4.1 K^wak^wala Language 13

 1.4.2 Space and geography in K^wak^wəkəwak^w Culture and Territory 15

 1.4.3 Cross-linguistic Studies of Language and Space 16

 1.4.4 Cross-Linguistic studies of Affix-Ordering 20

 1.5 Conclusion 21

Chapter 2: Methods 22

 2.1 Overview 22

 2.2 Site 22

 2.3 New Documentation 25

 2.3.1 Equipment 25

 2.3.2 Ethics and Protocol 26

 2.3.3 Data Types 29

 2.3.4 Stimuli and prompts 31

 2.3.5 Oral annotation 37

2.3.6 Data-management	39
Chapter 3: Grammatical sketch of Kwakwala	40
3.1 Overview	40
3.2 Phonetics and Phonology	43
3.2.1 Phonological Inventory	44
3.2.2 Phonotactics	47
3.2.3 Orthographies	48
3.3.4 Morpho-phonology	51
3.2.5 Stress Pattern: Default-to-opposite	54
3.3 Form Classes	56
3.4 Morphology	57
3.4.1 Roots and the Question of Lexical Categories	58
3.4.2 Bound morphemes and the Derivational-Inflectional continuum	64
3.4.3 Derivational Suffixes	70
3.4.3.1 Locative suffixes	77
3.4.3.2 Directional Suffixes	88
3.4.4 Lexicalization	93
3.4.5 Word-Building: Zones and Affix-Ordering	98
3.5 Syntax: Clause-internal	100
3.5.1 Word Order	101
3.5.2 Case Marking	106
3.5.3 Ditransitive Alignment	113
3.5.4 Prepositions and Prepositional Phrases	118

3.5.4.1 Grammaticalization of prepositions	122
3.5.4.2 Deictic variation of the prepositional form	126
3.5.5 Possession	128
3.5.6 Passive Morphology	130
3.6 Clause-combining: Coordination and Subordination	133
3.6.1 Synchronous coordination	133
3.6.2 Subordination	135
3.7 Discourse	138
3.7.1. Auxiliaries	139
3.7.2. Discourse Connective Suffix	144
3.8 Conclusion	148
Chapter 4: Static Locative Expressions	149
4.1 Background: Terminology and Typology	149
4.1.1 Figure and Ground	150
4.1.2 Basic Locative Constructions	153
4.1.2 Topological Relations in cross-linguistic perspective	157
4.2 Locative Questions	160
4.3 Static locative expressions: Syntax	165
4.3.1 Reference to component part of Reference Object	170
4.4 Static locative expressions: Morphology	172
4.4.1 The internal structure of locative predicates	174
4.4.2 Roots: Parameters	175
4.4.2.1 Type I: Non-specific	177

4.4.2.2 Type II: Locative copula	184
4.4.2.3 Type III: Animate posture	187
4.4.2.4 Type IV: Shape, material and position of Figure	190
4.4.2.5 Type V: Attachment between Figure and Ground	197
4.4.3 Suffixes: Sequence	199
4.5 Summary and conclusions	204
Chapter 5: Kinetic Constructions	206
5.1 Overview	206
5.2 Background: Terminology and Context	208
5.2.1 Path	213
5.2.2 Direction	214
5.2.3 Telicity	216
5.2.4 Proximity, Distance and Deixis	217
5.2.5 Manner	217
5.2.6 Manner	218
5.3 Literature	221
5.4 Linguistic resources in Kwakwala for describing motion	231
5.4.1 Roots	231
5.4.2 Suffixes	241
5.5 Motion expressions: Syntax	249
5.5.1 Overview	250
5.5.2 Argument structure	256
5.5.3 Preferred Ground Structure	269

5.6 Motion expressions: Morphology.....	276
5.6.1 ‘Locative’ kinetic predicates.....	279
5.6.2 ‘Directional’ kinetic predicates.....	285
5.6.3 Directional suffixes.....	285
5.6.3.1 Directional suffixes and predicate roots.....	305
5.6.3.2 Directional suffixes and associated motion.....	312
5.7 Conclusion.....	313
Chapter 6: Affix ordering.....	314
6.1 Overview.....	314
6.2 Non-contributing factors.....	320
6.2.1 Phonological conditioning.....	320
6.2.2 Syntactic influence on morphological structure.....	321
6.3 Semantic effects.....	322
6.3.1 Iconicity.....	324
6.3.1.1 Spatial iconicity.....	325
6.3.1.2 Temporal iconicity and directional marking.....	335
6.3.1.3 Iconicity of quantity.....	340
6.3.2 Scope.....	341
6.3.3 Proximity and directionality.....	352
6.4 Conventionalization.....	359
6.4.1 Templatic ordering of affixes.....	361
6.4.2 Cohesion.....	365
6.4.2 Paradigms.....	367

6.4.4 Conventionalization	370
6.5 Conclusions	371
References	372
Appendices	381
I: Orthography Correspondences	381
II: Inflectional Clitics	382
III: Bibliographic Abbreviations	385
IV: Topological Relations Picture Series	386
V: Sample Consent Form	387

LIST OF FIGURES

Figure 1. Map of First Nations Peoples of British Columbia.....7

Figure 2. 5 dialects of Kwákwála.....11

Figure 3. Schema of the spatial domain.....19

Figure 4. Percy Lagis bringing his crab trap to a different location.....33

Figure 5. Throwing the re-baited trap back in the water.....34

Figure 6. After checking the crab apple tree.....34

Figure 7. Hazel and Beverly come down the stairs with their *hámyáci* ‘berry picking buckets’35

Figure 8. Beverly Lagis (Percy’s mother) watching the River Trip video with Lillian Johnny.....35

Figure 9. Lillian tells Beverly the word in her G^waʔsəla dialect for an unripe thimbleberry (*qámčək^w*).....36

Figure 10. Beverly and Spruce Wamiss make a map of Kingcome.....36

Figure 11. Figure and Ground in Rubin Vase.....151

Figure 12. Likelihood of BLC.....158

Figure 13. Order of elements in a static locative predicate.....174

Figure 14. Semantic generality of ʔəχ-182

Figure 15. Order of elements in a static locative predicate.....199

Figure 16. Order of elements in a static locative predicate279

Figure 17. Order of elements in kinetic locative predicate.....285

Figure 18. Semantics of directional suffixes.294

Figure 19. Northern Iroquoian verb template.....362

LIST OF TABLES

Table 1. Modern Kwakwala corpus: Data types.....	32
Table 2. Place and manner of articulation of the consonants in Kwakwala.....	44
Table 3. Phonological inventory.....	45
Table 4. Vowels in Kwakwala.	46
Table 5. Some correspondences among orthographic characters.....	50
Table 6. Effects of hardening and softening suffixes on coda consonants.....	51
Table 7. Directional suffixes.....	90
Table 8. Verbal enclitic pronouns and pre-nouns.....	111
Table 9. Prenominal demonstrative enclitics.....	126
Table 10. Passive suffixes.....	131
Table 11. Purposive constructions.....	135
Table 12. Classes of locative root in Kwakwala.....	176
Table 13. Posture roots for use with animate figures.....	188
Table 14. Inanimate classificatory roots.....	192
Table 15. Attachment roots.....	197
Table 16. Directions and form in Kwakwala.....	215
Table 17. Directional suffixes.	294
Table 18. Locative suffixes co-occurring with motion suffixes.....	296

LIST OF ABBREVIATIONS USED IN MORPHOLOGICAL GLOSSING

1	first person
2	second person
3	third person
A	agent-like argument of canonical transitive verb
ADJ	adjective
ADV	adverb(ial)
AUX	auxiliary
BUT	but
CAUS	causative
CONJ	conjunction
CONN	connective
CONT	continuative aspect
DEF	definite
DEM	demonstrative
DIM	diminutive
DIR.ATEL	atelic directional
DIR.REV	reverse directional
DIR.TEL	telic directional
DIST	distal deictic marker ('near 3 rd person')
DISTR	distributive
DOUBT	epistemic: speaker doubt
DSPP	tense marker indicating something that has been present and no longer is, or that existence and has gone out of existence
EMPH	emphatic
EXCL	exclusive
FUT	future
GEN	genitive
IMP	imperative
INCL	inclusive
INADV	inadvertent aspect marker: unintentional action or event
LOC	locative
LOC.NMLZ	locative nominalizer
MED	medial deictic marker ('near 2 nd person')
MOM	momentaneous aspect, momentary or inchoative
MOT.DIR	motion in a given direction
MOT.LIQ	motion on top of liquid (almost always water)
N	neuter
NEG	negation, negative
NMLZ	nominalizer/nominalization
N.VIS	non-visible
OI	old (known) information
OBJ1	primary-object
OBJ2	secondary object
OBL	oblique

P	patient-like argument of canonical transitive verb
PASS	passive
PL	plural
POS	positional aspect
POSS	possessive
PRED	predicative
PREP	preposition
PROG	progressive
PROX	proximate deictic marker ('near 1 st person')
PST	past
PURP	purposive
Q	question particle/marker
QUOT	quotative
RECP	reciprocal
RED	reduplicated
REFL	reflexive
REL	relative
RM.PST	remote past
RES	resultative
REV.DIR	reverse directional
S	single argument of canonical intransitive verb
S.DEM	subject-marking demonstrative
SEQ	sequential discourse marker
SOMETIMES	occasional, intermittent
SBJ	subject
SG	singular
STEADY	action or event proceeding with steady, incremental progress
SUB	subordinating marker
T	(word-)terminal marker
T.DEM	sentence-closing demonstrative
TOP	topic
TR	transitivizing suffix
VIS	visible

LIST OF SPECIAL ABBREVIATIONS: LOCATIVE AND BODY PART SUFFIXES¹

ABOVE	above reference object
AMONG	among, inside material
ARRIVE	extend toward, arrive at reference object
BOAT	at, in, on a boat (any kind of boat: canoe, ferry, raft, speedboat)
DOWN	down, downward from reference object
DOWN.BEACH	down to the beach
EACH.OTHER	each other
EYE	at, in, on eye (or other opening)
FACE	at, in, on face (or face-like part of object)
GROUND	to, on the ground outside
IN	in, inside, into a reference object
INDOOR	inside house or other built structure; in enclosed space; on floor
KNEE	at, in, on, knee
LIQUID	(in) any kind of liquid: water, mud, etc.
MIDDLE	at, in, on the middle of a reference object
NOSE	on, at nose
OPENING	at, in, on an opening
OUTDOOR	outside house or other built structure; on beach; in open space
SIDE	side of reference object
SIDE.RD	side of a round reference object
SHOULDER	on, at shoulder
THROUGH	through a reference object
TOP	on top of long object
UNDER	under, underneath reference object
UP	up, upward from reference object
UP.BEACH	up from the beach

¹ This list, and the one above, refer only to the grammatical forms, derivational suffixes, and inflectional clitics exemplified in the data contained here. There are many more suffixes; see Boas 1947 for a complete

Chapter 1: Introduction and background

1.1 Overview

The experience of having a body located in physical space, bound by gravity, is shared among all human beings, and yet languages approach this experience in diverse ways. Such concrete phenomena are expressed in linguistic categories, which become the building blocks of metaphorical expression: from physical space to mental space, from actual motion to fictive motion, from space to time. The grammar of space thus provides both a crucial window into linguistic and cultural diversity, and a glimpse into universal tendencies within language, indicative of shared cognitive constraints.

The Kwákwáala language presents a particularly rich site for the exploration of these themes in a polysynthetic framework. The structure of the language allows a single word to express the equivalent of a full clause in isolating languages. Kwákwáala has grammaticalized forms especially suited to describing location, direction, and motion in the rivers, mountains, islands and inlets of coastal British Columbia. Locative suffixes refer to the woods, the river, the beach, the sea, rocks, the hearth, canoes, and more. These suffixes attach to roots and combine with other suffixes to form compact expressions with finely detailed semantics regarding space. Some convey cross-linguistically common senses such as *-(g)usta* 'up', *-axa* 'down', *-(x)sa* 'through', *-q* 'among', and *-xsd* 'behind'. Others reflect specificities of the

coastal Pacific landscape and the Kwakwəkəwakw culture inhabiting it: *-əncis* 'down to beach', *-(x)ta* 'out to sea', *-yag* 'into woods', *-χs* 'into, with, by canoe', *-amala* 'along bank of river'.

The research presented here describes the principles governing the order of these suffixes within Kwakwala predicates of location, motion, and direction. As such, it is a case study in the mechanics of word-internal complexity. The forces ordering derivational affixes within Kwakwala words illustrate a constructive tension between sequential predictability and semantic relevance. This tension, between rigidity and flexibility, pattern and variation, diachrony and synchrony, gives rise to language as a communicative system. Kwakwala spatial grammar opens a window onto the interface between constraint and creativity. I hope this work contributes to our understanding of the typology of spatial grammar with insight from a language with a fascinating approach to expressing categories of spatial experience. More concretely, because Kwakwala is so endangered, this work seeks to contribute new knowledge about the grammar to current efforts to revitalize and maintain the language.

The structure of the dissertation as a whole is as follows: Chapter 2 discusses the methods I used to create an annotated digital corpus of modern Kwakwala speech, with an emphasis on bringing speakers together to record as much connected, spontaneous speech as possible. Chapter 3 provides a brief overview of Kwakwala grammar, intended to assist readers in following the argumentation exemplified by data from legacy and modern sources throughout the thesis. Chapter 4 describes the syntactic and morphological resources with which Kwakwala grammar constructs **static** locative expressions, and chapter 5 describes the syntax and morphology of **kinetic** locative expressions. Drawing on the data presented in these two chapters, Chapter 6 explores the principles and constraints that govern affix

ordering within the predicate, and draws conclusions about the forces structuring morphological complexity in a polysynthetic language.

I summarize the central aims of the thesis research in §1.2. Social, historical, ecological and linguistic context are addressed in §1.3. Relevant literature is discussed in §1.4.

1.2 Aim and scope of the study

This research has two goals. One is descriptive: to document and analyze the expression of spatial relations in K^wak^wala. The other goal is theoretical: to understand better the combinatorial principles which structure and sequence derivational affixes within a polysynthetic predicate. The descriptive goals of the study are summarized in the next section, §1.2.1. Broader theoretical aims are discussed in §1.2.2.

1.2.1 Documentation and description

Chapters 4 and 5 of this thesis document the linguistic resources with which K^wak^wala speakers describe motion and location, and explore how these resources work together to create meaning at the levels of both clause and the word. A primary goal for this research is to document K^wak^wala grammar of spatial relations for the purpose of maintenance and revitalization. At the level of syntactic structure, what kind of information about spatial relationships is located in the predicate, and what is located in arguments? How are they ordered and linked within a clause? At the level of morphological structure, what kind of information about spatial relationships is located in roots, and what is located in suffixes? What determines the sequence of suffixes in a K^wak^wala word? Most importantly, what do

learners and teachers of the language need to know in order to produce well-formed descriptions of location, motion, and direction in Kwákwála?

Two domains of spatial description are explored here: that of static locative relations between Figure and Ground, and that of kinetic relations between Figure and Ground. Two other domains have been put aside for future research: coordinate reference, and deixis. Languages rely of different systems of coordinate reference, also known as Frame of Reference (Levinson 2003) to orient Figures within the larger world. Frames of reference may be relative to a viewer, relative to a reference object, or absolute (referring to cardinal directions or to topographic features of the landscape) (Levinson 2003). Languages often employ more than one Frame of Reference, but also often reveal dominance by one type of system. Unlike other Wakashan languages that employ *either* a coastal or a riverine Frame of Reference, Kwákwála employs two orthogonal axes, coastal and riverine. The way in which coordinate reference works in Kwákwála, the ways it is mapped onto the varied landscapes and cardinal orientations of long-settled and newly-settled communities, and the ways it has changed over time — all are rich veins of inquiry which merit dedicated attention, but introduce questions beyond the scope of the current research.

In turn, Kwákwála also has a complex system of deictic reference reflected in omnipresent demonstrative enclitics that indicate a six-way contrast marking degrees of proximity and visibility for every third-person referent, whether pronominal or lexical. (see §3.5.4). To add complexity to the interpretation of these forms, although the third-person demonstrative deictic reference in Kwákwála is, in its most concrete sense, spatial (proximal, medial, distal), the same forms are used to reference temporal, discursive and emotional contrasts through metaphorical extension. Deictic reference is so automatic, so unconscious,

and so embedded in speech that speakers have trouble noticing which forms they have used and why. In contrast, speakers are often able to switch component locative suffixes within a locative predicate to illustrate contrasts in meaning. For these reasons, the broad topic of deixis in Kwakwala, like that of coordinate systems, deserves deeper study than I can give it here, and I set it aside for now.² Future analysis of deictic reference in Kwakwala will benefit from the groundwork laid in this work concerning non-deictic spatial reference.

1.2.2 Theoretical questions: Affix-ordering

Because so much information about spatial relationships is located in the Kwakwala predicate, a crucial theoretical question concerns the principles governing the internal structure of the predicate word. What determines the sequence of derivational suffixes and their relationship to each other? How do individual components of a word relate to the meaning constructed by the predicate as a whole?

I argue here that Kwakwala predicates reflect a productive tension between synchronic productivity and the diachronic emergence of structure, and that we see this clearly in predicates describing both locative and kinetic spatial relationships. Synchronically, the structure of the predicate reflects a strong influence of semantic compositionality in both scope (**hierarchical** semantic relationships) and sequence (**iconic** semantic relationships). At the same time, predicate words in Kwakwala also reflect the emergence of structure in two ways: the emergence of smaller paradigmatic sets of affixes within the larger set of derivational suffixes, and the emergence of some predictability regarding the ordering of suffixes within the predicate.

² Similarly, the MPI project on spatial cognition was accompanied by a parallel, but separate, research program attending to deixis. See Levinson 1999, Enfield 2001, *inter alia*.

The question of what principle governs affix order in polysynthetic languages has implications for questions about acquisition and production, and has been explored for several languages — in particular, American indigenous languages, and especially for the Dene family. The relevant literature is reviewed in Chapter 6, where I present an analysis of predicate structure and morphological complexity in K^wak^wala.

1.3 Background: Social, historical, cultural, ecological context

K^wak^wala (Wakashan, KWK³), formerly identified as Kwakiutl,⁴ is the language of the K^wak^wəkəw^w nation located on Northern Vancouver Island and the neighboring mainland of British Columbia. It is severely endangered, with 148 native speakers reported in the 2010 Report on the Status of BC First Nations Languages

(<http://www.fpcc.ca/files/PDF/2010-report-on-the-status-of-bc-first-nations-languages.pdf>).

It is spoken in the green area labeled Kwakwaka'wakw at the bottom of the map displayed in Figure 1, circled in red.

Efforts to teach, learn, and encourage the continued transmission of the language are widespread in many communities. Community motivation to maintain and revitalize the language is high. Immersion programs have been established at *cáxis* (Fort Rupert), *g^wáyí* (Kingcome Inlet) and '*Yalís* (Alert Bay).⁵ A weekly evening class for adult learners held in

³ The three letter code provided here, KWK, is an internationally recognized code, referred to as an 'ISO' code ('International Organization for Standardization') or ISO 639-3 code, used as a unique identifier for K^wak^wala. For more information see http://www.iso.org/iso/home/standards/language_codes.htm.

⁴ 'Kwakiutl' is an anglicized orthographic representation of the name *K^waguʔ*, which applies only to the band at Fort Rupert (*cáxis*) where Franz Boas and George Hunt did much of their documentation. Today there are 16 bands in the K^wak^wəkəw^w nations and 5 dialects, each with its own name. Some bands prefer the alternate language name *bák^wəmkala*. While I use *bák^wəmkala* to refer to the language when working in contexts where that is the preference, here I use K^wak^wala to refer to all dialects. The primary reason for this choice is to facilitate online searchability of this as a resource for community researchers and others.

⁵ Multiple orthographies are used to write k^wak^wala; these are described briefly in Chapter 3. I employ the NAPA orthography except where communities have chosen to use a different system; here, the spelling for

Fort Rupert drew over fifty participants (Willie, p.c.). The Kwakwaka language and Kwakwaka culture are part of the elementary school curriculum in the local district. An Integrated Resource Package was recently produced for Kwakwaka in grades 5 through 12 (SD 85 First Nations Education Council 2010).

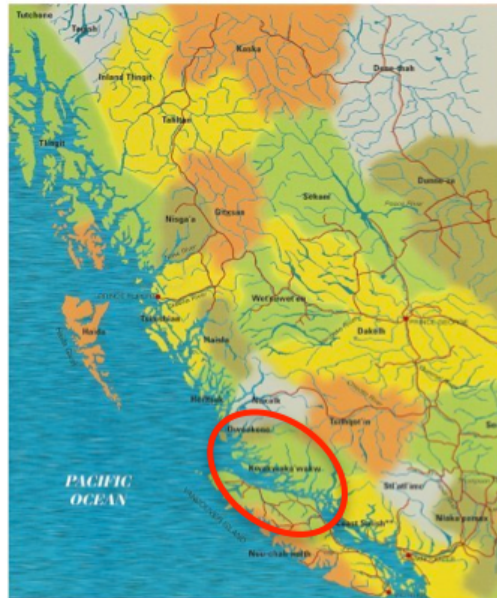


Figure 1 Map of First Nations Peoples of British Columbia, (<http://www.bced.gov.bc.ca/abed/map.htm>)

Kwakwaka villages are scattered along the rivers and coasts of northeastern Vancouver Island and the west coast of mainland British Columbia. Traditional Kwakwaka territories extend from Campbell River north to Rivers Inlet, and from the mountainous spine of Vancouver Island eastward to the Coast Range surrounding small settlements on the mainland. The recent history is domination by narratives of dislocation, dispossession, and migration. Some traditional settlements relocated voluntarily in the late 19th and early 20th century for economic reasons. Many more were forcibly relocated under federal policy in the mid-20th century, between 1950 and 1975. The geographic mobility

‘Yalis is provided in the U’mista orthography, while the other two place-hames are provided in NAPA orthography, which does not employ capital letters for proper names.

introduced following contact with settlers has contributed to the current of language shift among languages and dialect, impacting speakers of K^wak^wala and their ability to transmit traditional knowledge and language to younger generations.

Dense linguistic diversity is a feature of the Pacific Northwest extending from California to Alaska. K^wak^wak^wak^w communities share borders with several languages⁶, belonging to multiple language families. Cultural and economic exchange through potlatches, intermarriage, and trade among all of these groups was and still is a prominent feature of life in this area, and reinforce linguistic contact. Three Northern Wakashan languages border K^wak^wala to the north and east: Oowekyala, Heiltsuk and Haisla. Ts'ilqotin (Athabaskan) and Nuxalk (Salishan) are also spoken northeast of K^wak^wala on the continental mainland. Speakers of the linguistic isolate Haida and their descendants inhabit the Haida Gwaii islands to the north. The Nuu-chah-nulth (Southern Wakashan) dialect chain extends along the west coast of Vancouver Island. Three Salishan languages, Comox, Sechelt and the həlqəminəm/hənqəminəm/həlqəmeləm dialect chain, border K^wak^wak^wak^w communities at the south end of Vancouver Island and in the Gulf islands, and extend eastward on the mainland.

1.3.1 Culture and community: Language and the landscape

K^wak^wala is spoken in a landscape of steep mountains, glacier-fed rivers, forested islands, and shell-lined beaches. Natural resources are abundant. Orca whales, sea otters, seals,

⁶ As is the case with K^wak^wala (a.k.a. Kwakiutl), each language in this area — as well as each group, and each place — often has multiple names, each of which reflects the impact of historical, political and social forces before and since contact. In some cases, as is true for K^wak^wala, different communities, and different community members, prefer different names. In this section I employ the names referenced in the map in Figure 1, without evaluation about the legitimacy of these names. In the later discussion of group names, I use the official names as referenced in the most recent FPCC report on the Status of First Nations Languages.

salmon, herring, halibut, and other fish inhabit the oceans. Salmon, candlefish and trout runs fill the rivers in spring and summer. Bears, deer, and bald eagles are not uncommon sights, even in larger settlements such as Port Hardy.

Long-term cultivation of these natural resources for human needs is evident everywhere in the archaeological record, surrounding landscape, and oral history: shell middens cover the beaches, clam gardens are distributed among the Gulf Islands and Broughton archipelago, rocky outcroppings are named after the seagull eggs which were collected there, and culturally-modified cedar trees reveal hundreds of years of careful stripping of bark. Elders describe sophisticated methods for gathering and drying seaweed, setting cedar branches into the water to collect herring eggs in the spring, and cultivating, harvesting and cooking wild roots. Much transmission of this cultural knowledge has remained strong. While some practices have declined, others continue to be part of the annual cycle of traditional activities important to many community members. Alongside busy modern lives working as teachers, artists, scholars, bank employees, tribal officers, tour guides, and other professions, most Kwakwaka'wakw people maintain a vigorous involvement in the seasonal cycles of gathering natural materials for food and ceremony: fishing for salmon, gathering seaweed, picking berries, stripping cedar bark, gathering medicinal plants. Traplines are maintained and registrations renewed. The equally time-consuming task of processing these materials for storage is a time-sensitive and essential priority: smoking, drying, canning and barbecuing fish; drying seaweed; making jam. In Kingcome Inlet, the village where Beverly Lagis and Hazel Dawson live, the making of oolichan grease⁷ is a

⁷ Historically, the most highly valued consumable product traded throughout the Pacific Northwest was oolichan (aka eulachon, smelt or candlefish) grease, produced from pit-fermenting and boiling the small fish, then straining the resulting oil. Well-made oolichan oil, or *li'na*, has a light non-fishy flavor, somewhat like olive oil. A network of trade routes was known as the 'grease trail'. Production of grease is geographically

particularly important intergenerational skill. The oolichan run signals the start of spring; the village gathers together for the process of making grease, with off-reserve members returning home for a week or two. These traditional ecological practices are intertwined with ceremonial practice during potlatches and feasts. Jars of *łina* (oolichan grease), thimbleberry jam, and other preserves are a treasured gift received by attendees at these events.

At the same time, in a sad parallel to the endangerment of the Kwáwala language, the ecology of coastal British Columbia and the resources it has always provided are now endangered by the threats of industrial modes of production. Resource-extracting industries (logging, mining, and fish farming)⁸ have been repeatedly granted access to culturally significant land over local protest. The impact of extraction is visible everywhere in the area. On the other hand, local economies depend on these industries, and the jobs they provide are difficult to replace. Open pen fish farms scattered among the islands of the Broughton archipelago have radically impacted wild fisheries. The effects of climate change are felt in changes to migration patterns, vegetation, and weather. These changes are keenly felt by locals and add urgency to the shared desire to document and understand the knowledge of the landscape embedded in the language.

Alongside the impact of extractive economies on the landscape, brutal federal policies in the past century have radically interrupted transmission of the Kwáwala language. Such policies including forced relocation, forced removal of young children from their families, forced attendance at residential school, forced long-term hospitalization in tuberculosis wards. *Bálas* (Blunden Harbor) and *Takush* (Smith Inlet), two communities

restricted to the few rivers where the oolichan run. Residents of Kingcome Inlet trade their oolichan grease for salmon and other resources. A quart of grease was offered for \$100 recently on a North Island Facebook swap site. It is a treasured resource, eaten, used as medicine, and given as a featured gift at the finest potlatches.

⁸ The summer festival in Port Hardy is called Filomi Days, for Fishing, Logging, and Mining.

with historically distinct dialects, were relocated to a shared reserve near Port Hardy as recently as 1963. Residential schools in Fort Rupert and Alert Bay operated from 1882 until 1974. For many elders above the age of 65, Kwákwála was their first language, and upon arrival at school, four and five year olds were punished severely if they did not speak English (though they had no way of knowing English, having just arrived). Residential school survivors include several generations; for many, their relationship to the Kwákwála language is inextricable from the trauma of their experience in school. Policies of forced relocation and obligatory attendance at residential schools also combined speakers of different dialects and different languages into merged communities, resulting in the dilution and erasure of Kwákwála dialect diversity.

Several projects are underway to document remaining dialect diversity, including Siemens' work on *gu'ca* (Siemens, forthcoming), comparative work by Cadwallader and Rosenblum on *g'wáʔsəla*, *ʔak'wala* and *k'ák'wala* dialects (Cadwallader and Rosenblum 2013), and Shaw, Cadwallader and Alfred on multiple dialects (Shaw, Cadwallader, Alfred 2011). The map below illustrates the five Kwákwála dialects currently recognized.

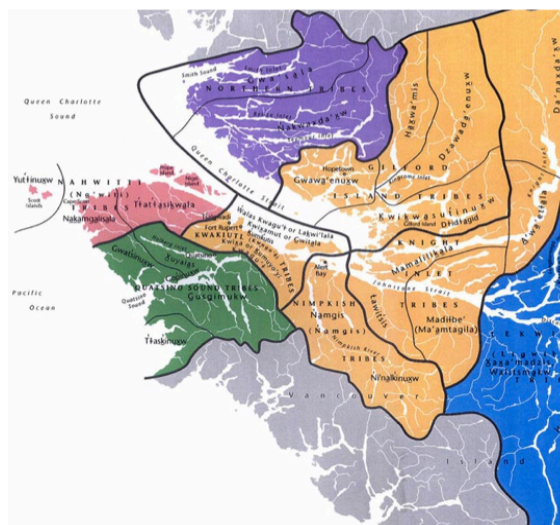


Figure 2: 5 dialects of Kwákwála (2003) (http://www.umista.org/masks_story/en/ht/introMap.html)

The 2014 First Peoples Cultural Council Report on the Status of Endangered Languages lists 15 K^wak^wəkəw^w communities (FPCC 2014). Their official designations vary: some are identified as Nations, some as Bands, and some as Tribes. These differing designations may indicate technical differences in their governance, but they are politically equivalent. Some historical relationships among groups, whether self-determined or resulting from outside interference, are also reflected in political allegiances among two or more groups with distinct territories (and sometimes different dialects). Here, I employ the name of the group as spelled in public sources (websites, paperwork, business cards) and I employ the terminology designated by official documentation. The speakers represented in the modern corpus upon which this research is based come from three communities: the Gwa'sala-'Nakwaxda'xw Nation (Tsulquate Reserve), the Dzawada'enuxw First Nation (Gwayi/Kingcome Inlet), and the Kwakiutl Band Council.

Many K^wak^wəkəw^w community members are committed to revitalization and reclamation of their language, which they see as inextricably connected to the maintenance of traditional cultural practices, spirituality, governance, and health (Willie, p.c.). A large group of educators and researchers are actively involved in the documentation, conservation and revitalization of K^wak^wala, through teaching and learning of language and culture in a wide range of contexts. Among these are Dorothy (Pewi) Alfred, Elizabeth Cadwallader, Sara Child, Laura Cranmer, Patricia Dawson Hunt, Marion Hunt, Lillian Johnny, Beverly Lagis, Carrie Mortimer, Deanna Nicolson, Marianne Nicolson, Ryan Nicolson, Gertrude Robertson (†), Patricia Rosborough, Joye Walkus, Spruce Wamiss, and Mikael Willie.

1.4 Relevant literature

This research benefits from a rich trove of resources in the domains of Kwakwaka documentation, description and analysis in both academic and non-academic contexts; cross-linguistic studies of spatial grammar and cognition; descriptions of the geography and ecology of landscape and natural resources of British Columbia; and most importantly, the knowledge of Kwakwaka people.

Several useful bibliographies of works on Wakashan languages exist, including Pilling 1894; Adler 1961; Mithun 1999: 549. Two comprehensive online bibliographies have been created as well, one by Emmon Bach for North Wakashan (Bach undated), and a pan-Wakashan list posted by Adam Werle and other students, hosted by the University of Washington (Werle 2009). This section reviews the relevant literature. §1.4.1 addresses the Kwakwaka language and analyses of the grammar; §1.4.2 focuses on literature describing the local landscape and related explorations of the language. §1.4.3 reviews the typological and cross-linguistic literature on language and space. §1.4.4 defers an in-depth review of the literature on affix-ordering to chapter 6.

1.4.1 Kwakwaka language

The first documentation of Kwakwaka is a 180-word list recorded in Nanaimo in 1857 by George Gibbs (Pilling 1894: 26). Early grammars were published by Alfred James Hall in 1888 (Pilling 1894: 29-30) and Franz Boas in 1893 (Pilling 1894:4-7).

Franz Boas' first trip to British Columbia began a lifelong engagement with the languages and cultures of the Pacific Northwest, and an enduring partnership with George Hunt, an ethnically Tlingit and Scottish resident of Fort Rupert who had been raised as a

speaker of Kwakwala. Together, Hunt and Boas produced the prototypical ‘Boasian trilogy’: a dictionary of roots and stems (never published, but available in manuscript form from the APS archive since 1948), a grammar and glossary of suffixes (1947), and many editions of texts (1895; 1910; 1925; 1930; 1935). Several publications explicitly acknowledged co-authorship with George Hunt (1902; 1905; 1921), although all of the works published under Boas’ name were the product of joint work. Almost all entries in both the dictionary and grammar are cross-referenced with the texts, allowing for analysis of lexical and grammatical function contextualized by discourse context. Despite the richness of this documentation, all of Boas and Hunt’s work was, by necessity, restricted, by the limitations of pre-digital technology, to documentation of monologic speech.⁹ My current research seeks to contribute a corpus of interactive speech to the documentary record created by Hunt and Boas.

Following Boas and Hunt’s linguistic and ethnographic work, many scholars have contributed to the documentary record on Kwakwala. Notable examples of grammatical analysis include work by Berman, writing primarily on discourse (1982, 1983, 1989, 1990, 1990, 1991, 1992, 1994, 1997); Grubb on phonology and the lexicon (1969; 1977); Wilson writing primarily on phonology and dialect (1977; 1978; 1990; 1993); Levine on morphosyntax and the lexicon (1977; 1978; 1980a; 1980b; 1984); Anderson on clitics and morphology (1984, 2005); and Nicolson and Werle on determiners (2009). Levine 1977 is a transcribed and annotated text in Kwakwala published in the *International Journal of American Linguistics*. Shaw’s published work focuses on phonology (1992 and 1999), but in addition she has taught several influential courses (2001; 2008; 2009; 2010), presented on

⁹ There is at least one — possibly more — unpublished manuscript written by George Hunt which is structured as a dialogue between husband and wife, but seems to be his own creation. (He was meticulous about citing sources of texts, and this manuscript cites no one.)

reduplication, stress, and dialect, and is engaged in ongoing documentation (2007-present). Rosenblum 2011 describes argument structure; Rosenblum 2013 describes the morphosyntax of passive expressions in K^wak^wala. Goodfellow 2005 contributed a sociolinguistic ethnography of modern K^wak^wala. Nicolson 2009 explores the topic of temporal expression in K^wak^wala language and culture. Nicolson 2013 addresses the linguistic and artistic expressions of Space in the K^wak^wala language and K^wak^wak^wak^w culture, extending from analysis of lexical forms to a culturally embedded analysis of the metaphors and symbolic systems shaping meaning in K^wak^wak^wak^w culture (Nicolson, 2013).

A set of instructional materials developed by Powell, Jensen, Cranmer and Cook was published by the U'mista Cultural Society (1981). An online database of words, phrases, songs and stories can be found at <http://www.firstvoices.com/en/Kwakwala/welcome>. The same organization (First Voices) released an app for iPhones, iPads and Droid devices at the end of 2011 (<https://itunes.apple.com/us/app/kwakwala/id490451367?mt=8>).

1.4.2 Space and geography in K^wak^wak^wak^w culture

Boas was particularly interested in the relationship between K^wak^wak^wak^w culture and the landscape. His 1934 volume contains 22 maps, including maps of fishing grounds, clam gardens, root gardens, and other areas of cultivation in particular territories, revealing the extent to which the land presumed 'wilderness' by European settlers had been carefully managed by residents long before contact with newcomers. Boas provides a discussion of the meanings and linguistic form of the place names, a list of place names in K^wak^wak^wak^w mythology, and morphological analysis of these forms.

Regarding Kwakwəkəwakw culture, Boas notes that:

“the geographical terminology of the Kwakiutl is that of a sea-faring people to whom the forms of land and water and the dangers of the sea are all-important and who obtain their subsistence both from the sea and from the land. Instead of the points of the compass they orient themselves according to the direction of the coastline and rivers. Down river and down along the coast (in the sense of northward or westward); inland, away from sea or river; and seaward, away from land; are the principal directions which appear commonly in geographical terms” (Boas 1934: 9).

(Galois 1994) is a useful summary of recorded history of early Kwakwəkəwakw settlement patterns and traditional territories, drawing together multiple unpublished archival sources to describe chronologies of different claims to particular places. This work is particularly relevant for the treaty process currently facing Kwakwəkəwakw nations. Oral histories in Kwakwəla according to their traditional territory, accompanied by English translations, are provided for each traditional settlement.

1.4.3 Cross-linguistic studies of language and space

As a fundamental cognitive category, Space has long drawn the interest of philosophers, mathematicians, geographers, and cartographers. The cross-linguistic study of spatial grammar has been the focus of intense interest in recent decades. Many languages draw on metaphors of form (surface, size, weight), relative position (height, distance), containment, movement and path to describe abstract temporal, emotional and social realities. Cognitive linguists, seeking universally shared concrete domains that form the basis for metaphorical extension, have also focused on the linguistic coding of spatial reality as a primary category of experience. Levinson 2003 contains an excellent summary of the literature (1-18). Early touchstones include Clark (1973), Bennett (1975), Herskovits (1986), Talmy (1975a, 1975b), Fillmore (1982); Jackendoff (1983); and Tversky (1981, 1991, 1996, 1998). Svorou

et. al (1990) is a working bibliography on “languages of Spatial Relations”. Matsumoto & Slobin (2004) is a bibliography of research on linguistic expressions of Motion Events.

Here I focus more narrowly on the work that has directly shaped my approach to the theme of Space, both in methodological and analytical terms. Much of this work emphasizes a typological perspective and a belief that language, culture and cognition are mutually constitutive.

Talmy 2000 outlines a framework for understanding schematic systems in language and cognition, using space and motion as two case-studies, and codifies a set of primary terms such as Figure and Ground borrowed from Gestalt psychology, along with Path, Point, Extent (Talmy 1985; Talmy 2000: 184), as well as a set of ‘geometric relations’ described in diagrams and formulas (Talmy 2000: 245-252). In several articles, Talmy has proposed that languages divide broadly into two types, one expressing the core of the event in the verb, one expressing the core in a satellite to the verb (Talmy 1985; Talmy 1991, *inter alia*). For motion events, Talmy considers the core event to be the expression of Path., and finds that languages exhibit broad tendencies, locating Path either in the verb (so-called ‘V-Frame languages’) or in a satellite (‘S-Frame languages’). This proposal and its amendments have been extremely influential in typologies of both Space and Motion.

The ‘Frog Story’ narrative task, first presented as a cross-linguistic study of temporality in five languages (English, German, Spanish, Hebrew and Turkish) by Slobin and Berman (1994), has also become a common elicitation tool for investigating descriptions of space and motion in many languages (cf. Strömquist and Verhoven 2004; Berez 2012). ‘Frog Stories’ from five Kwakwaka speakers contribute to the modern corpus

analyzed here (Mayer 1969). Additional work by Slobin on linguistic typologies of motion events includes Slobin 1996, 2004, 2005, 2006, and 2008.

Svorou 1993 reviews spatial grammar in 26 genetically unrelated languages. Adopting the typological method and diachronic stance developed by Bybee, Perkins and Pagliuca 1994, Svorou examines ‘spatial grams’ cross-linguistically. She finds that certain common schema, such as the front-back axis and its inherent asymmetry, are shared among many languages.

The Language and Space group at the Max Planck Institute for Psycholinguistics, Nijmegen, has produced a large body of work, both methodological and analytic. In *Space in Language and Cognition*, Levinson (2003) argues that spatial cognition mirrors the grammatical construction of space in a given language, differing from culture to culture. Fourteen studies of individual languages are drawn together in the companion volume *Grammars of Space* (Levinson and Wilkins 2006). The sample represents geographically and genetic diversity, including several word order types (SVO, SOV, VOS, and free), both head-marking and dependent-marking types, and morphology ranging from isolating to mildly polysynthetic (Levinson and Wilkins 2006: 7). K^wak^wala, as a highly polysynthetic VSO language, adds further range to the typological diversity of languages studied so far. The MPI researchers drew on much of the same terminology used by Talmy (Figure, Ground, Path, Source, Goal), although they found it necessary — as I have — to redefine some of these terms. They studied both static and kinetic expressions of spatial experience. Stasis was further subdivided between topological description of spatial coincidence (relations of proximity, contact and containment) and the description of spatial separation,

indicated through a coordinate system operating within one of three Frames of Reference. This is represented in Figure 3.

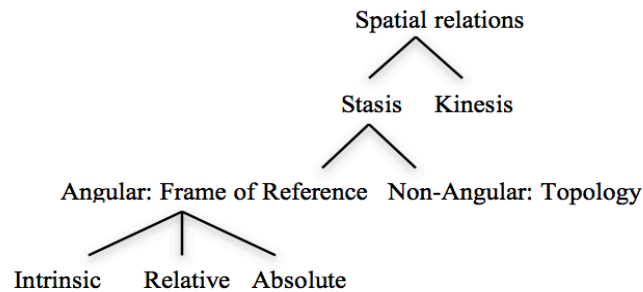


Figure 3: Schema of the spatial domain (adapted from Levinson and Wilkins 2006: 7)

The MPI Language and Space group developed several invaluable tools for studying spatial language, as well as a methodology for exploring the relationship between cognitive and linguistic structures. The Topological Relations Picture Series developed by Bowerman and Pederson (Bowerman & Pederson 1992) draws out cross-linguistic differences in the grammatical encoding of coincident figure and ground. A set of ‘Space Games’ asks pairs of speakers to direct each other in manipulating photographs or objects in space to allow matching. The Man and Tree photo-matching series investigates frame-of-reference choice for static description; the Route Directions task investigates frame-of-reference in motion description. Data from several of these stimuli (TRPS, the Man and Tree photos, the Toy Game, and frog stories) are included in the modern Kwakwala corpus, allowing comparative analysis of Kwakwala spatial grammar alongside other languages from the MPI sample.

Lastly, valuable insight comes from research conducted within the Americanist tradition. A profusion of derivational affixes referencing locative information seems to be an areal feature of the indigenous languages along the North Pacific Coast of North America. Mithun (1999) notes that while “(m)any of the distinctions found in North American

languages reflect universal categories of human experience and are common cross-linguistically(,) (i)n a number of languages, particularly in the Northwest and the North, spatial distinctions are elaborately developed. In some, they clearly reflect the topographic contexts in which the languages are spoken” (Mithun 1999:133). The languages extending from California through Oregon, Washington, British Columbia and up to Alaska provide elaborate resources for spatial and locative reference. The Wakashan (Boas 1947), Salishan (cf. Czaykowska(-Higgins) 1982; 1993), Chimakuan (Andrade 1933), and Eskimoan (Jacobson 1984) languages all have rich paradigms of deictic demonstrative marking. Pomoan (cf. McLendon 1974, Mithun), Chumashan (cf. Applegate 1966), Wakashan and Athabaskan families, Shasta (Silver 1966)), Karuk (Bright 1957; Macaulay 2004), Nishga (Tarpent 1987), and other languages of the Northwest American continent have also grammaticalized extensive locative and directional reference in clitics and affixes. The exuberant number of K^wak^wala suffixes identifying types of Ground, Path, Source, Goal, and Direction are thus not unique, and rather, reflect an areal phenomenon of grammaticalized spatial relations .

1.4.4 Cross-linguistic studies of affix-ordering

Underlying the description of spatial predicates in K^wak^wala is the broader question of what determines affix order in K^wak^wala. Scholars have proposed a range of answers to this question, and this literature is presented in depth in chapter 6, where I attempt to answer this question for K^wak^wala and explore possible cross-linguistic implications.

1.5 Conclusion

K^wak^wala is a language with exquisite resources for describing spatial relationships. An earlier dissertation has explored some of these resources in the context of K^wak^wəkə^wak^w cultural systems: the way the language, and its spatial metaphors, reveal conceptual and symbolic systems underpinning every aspect of culture, in artwork, ceremony and daily life (Nicolson 2013). The research presented here is more narrowly focused on the morphology and syntax of spatial constructions: the root and suffixes that compose such constructions, the syntax that orders them, the discourse context within which they occur, and the semantic constraints governing them. My research has two complementary goals: (1) to contribute to the base of knowledge about how K^wak^wala works so that it can be well-understood by teachers and learners, and (2) to add a study of K^wak^wala morphological complexity to our typology of polysynthetic structure. To this end, the thesis draws a basic contrast between **static** locative constructions, described in Chapter 4, and **kinetic** locative constructions, described in Chapter 5. Two additional parameters of spatial reference, coordinate orientation and deixis, are set aside for future inquiry. Nevertheless, by starting with the concrete elements of how to describe spatial relationships, whether static or kinetic, and by designing research that is, from inception, community-based and collaborative, I hope to lay a groundwork upon which many future discoveries can rest, especially for present and future speakers of the language.

Chapter 2: Methods

2.1 Overview

The research presented here emphasizes descriptive and qualitative, rather than quantitative analysis of the data. Since 2009, I have been working to develop a corpus of contemporary speech, with an emphasis on interaction. These data include over 50 hours of spontaneous conversation, elicited interaction, and elicitation sessions. In this section, I describe the methodological frame of the project. §2.2 describes the places where research took place; §2.3 and its subsections describe the collaborative workflow with which new data has been recorded and annotated in recent years.

2.2 Site

K^wak^wəkəw^w communities are dispersed among several distinct landscapes: traditional settlements were found on freshwater rivers, saltwater tidal flats, and island beaches. Groups moved between summer and winter settlements, following cycles of resource availability and seasonal protection. Since contact, new settlements have arisen or been imposed, some of them inland and away from water, or in urban settings. Each group has inherited rights to the resources associated with their traditional settlement, and different ecologies are also tied historically to different dialects. Extensive areal contact and diffusion were influences long

before the arrival of Europeans, but colonization imposed new trajectories of contact and change through forced relocation, resettlement and consolidation, further muddying the linguistic history. Despite disruptions, dialect diversity is still significant, apparent in different lexical items for many terms (even basic ones such as ‘salmon’, which is *məlik* in the dialect spoken at Tsulquate and *kutəla* in the dialect spoken in Kingcome) as well as in different phonological inventories, phonotactic patterns and morphophonological profiles (Rosenblum and Cadwallader 2013; Siemens forthcoming).

This research was conducted in two places. Several members of the Gwa’sala-‘Nakwaxda’xw Nation (living both on and off the Tsulquate Reserve) are represented in the corpus. Tsulquate was federally established in 1964 as a result of forced relocation of two traditional settlements from the mainland to an area just outside of Port Hardy. Two groups, and two dialects, were combined as a result: the Gwa’sala, originally from Takush (Smith Inlet), and the ‘Nakwala, originally from Bəʔas (Blunden Harbor).

The other site where I recorded is a small village (year-round population ~87) known as *gʷay̓i*, or Kingcome Inlet, 4 miles up the Kingcome River from the Broughton Archipelago in the Inland Passage. Kingcome is one of very few communities in the region that has never been relocated. Archaeological evidence dates the Wasali’s village site, at the head of the river, as 6000 years old, with evidence of continuous residency,¹⁰ aligning with oral testimony by elders identifying ancient village sites (Willie p.c.; Stafford and Christensen 2004).

¹⁰ The people of Gwa’y̓i strongly believe that their language originated *in situ*, and it is not my place here to question this belief. One reviewer asked whether Kʷakʷala or proto-Kʷakʷala has been spoken *in situ* and would thus be considered 6000 years old; I do not have the type of data from either comparative linguistic sources or from the archaeological record which would substantiate this claim in the context of a Western scientific worldview. Nevertheless, the oral testimony of the elders aligns with some aspects of the archaeological record. Archaeological work in other locations has supported oral testimony; see Martindale 2006, 2014 on Northern Tsimshian settlements.

Kingcome is remote and can only be accessed by boat or plane to the government dock at the mouth of the inlet, followed by a boat trip up the river. For many residents, a significant aspect of their attachment to the village is the maintenance of traditional ways and the sharing of this with other community members. Many residents hunt for waterfowl, seals and mountain goats. They set crab traps and fish for halibut and several species of salmon. They dig clams, pick berries and make jam and fruit leather (fruit mash which has been pounded flat and dried, something like a 'fruit roll-up'). A group of young residents have recently taken a trapping course in order to re-register their grandparents' traplines. Culturally modified trees reveal cedar bark stripping dating back several hundred years. Most importantly, the village as a whole benefits from their right to fish on a river where the oolichan run every spring. In years when there is a big run, the whole village spends a week or two fishing, digging fermentation pits, boiling grease, and bottling it. The population doubles as off-reservation family members take time off work and come home to join in the production, which is shared among registered band members. Grease is an exceedingly valuable commodity, traded with other communities for other regionally-specific seasonal commodities such as food fish and seaweed.

The village site includes several topographical features prominent in Kwakwaka'wakw grammar: an inlet, a river, woods. There are several published origin stories for Kingcome, some of which contributed data to the legacy corpus (Boas 1906:36; Boas 1934: 22; Galois 1994: 108-111). These narratives describe places in which many people still reside or visit frequently.

2.3 New documentation

Much of the data in the examples throughout this document are drawn from a corpus of the modern language initiated in 2009. In this section, I briefly describe relevant methodological details about the modern corpus: the ethical stance of the project, what equipment was used, what type of language was recorded, and how data has been managed. §2.3.1 addresses equipment; §2.3.2 covers ethics and protocol; §2.3.3 describes the types of data contained in the corpus; §2.3.4 describes the stimuli and prompts presented to speakers to encourage connected speech; §2.3.5 describes the method of oral annotation and collaborative transcription used post-recording, and §2.3.6 discusses data-management and archiving.

2.3.1 Equipment

Audio is recorded on a Zoom H4N; each text has several hours of associated transcription and translation sessions, also recorded. Audio is stored in WAV format, with a 44.1 Hz sample rate and depth of 16 bits. External lavalier microphones (Audiotechnica Pro70 cardioid condensers) record conversational dyads alongside the built-in stereo microphone on the Zoom H4N. The Zoom's 4-track setting records ambient sound as a stereo track on the internal microphone and two mono tracks from external microphones, allowing maximal potential for uninterrupted recording in natural settings.

Video documentation is recorded with a Canon XA-10. Video is also used to generate culturally relevant materials for a multi-phase documentation process described below. Multi-tier, time-aligned transcriptions are created in ELAN, a tool for multi-media linguistic annotation, developed at the Max Planck Institute for Psycholinguistics (Wittenburg, P. et al 2006; <http://tla.mpi.nl/tools/tla-tools/elan/>).

Fieldnotes are recorded with a Livescribe Echo pen (<http://www.livescribe.com/en-us/smartpen/echo/>) and Livescribe notebooks, which record audio and produce automatic PDFs of notebook pages with embedded time-aligned audio. Undergraduate research assistants helped with ELAN-based data-entry using audio-embedded PDFs of on-site transcription.

2.3.2 Ethics and protocol

An ethical approach to linguistic research in the North American context requires more than the approval of a university Institutional Review Board. The extreme endangerment of the language, the average age of the remaining speakers, and the interest of community members in the maintenance and transmission of language and culture, place a burden — and a privilege — of responsibility on any linguistic researcher engaged in language documentation with K^wak^wala.

In planning this research, I sought guidance on topic and methods from various community members who lead cultural and linguistic research and education efforts within and beyond their communities (Cadwallader p.c., Nicolson p.c., Rosborough p.c., Willie p.c.). A research proposal was presented before the Dzawadə'enuxw Tribal Council at Kingcome Inlet. Many K^wak^wəkəwak^w people are motivated by a strong sense of belonging to their traditional territory in coastal British Columbia, and a strong K^wak^wəkəwak^w sense of place is also reflected in the grammar of the K^wak^wala language. To a large degree, the focus of this study owes itself to a strong interest expressed by many community members in the connection between language, land, and traditional cultural practices. Understanding how K^wak^wala spatial expressions link speakers to the surrounding landscape has vital importance

for speakers engaged in the maintenance and recovery of their traditional culture. Priorities articulated by multiple educators include documentation of the annual cycle of traditional resource-gathering practices. Practices such as fishing, canning fish, and berry picking were recorded with video, edited for brevity, and employed as prompts for language documentation. The raw video will also provide material for use in educational contexts. More such videos are planned, to document seaweed harvesting and drying, cedar bark stripping and weaving, oolichan fishing and grease making, and other activities reflecting community interests. I hope that both the raw data and analysis contained in the dissertation contribute a new resource to teachers and learners of the language.

All speakers received and signed a consent form, a sample of which is included in Appendix V. We reviewed the consent form each year we worked together, and we talked extensively about the goals of the project and our work together each time.

The research also entailed many opportunities for community-based participation and training, mutually supportive of both documentation and revitalization. With teachers at the Gwa'sala-'Nakwaxda'xw school (Willie and Cadwallader), I organized luncheons and teas at the Elder Center to encourage elders to speak Kwakwaka with each other.¹¹ Elders came to the Gwa'sala-'Nakwaxda'xw school to record with students, who learned to use audio and video equipment for language documentation, and students went to elders' homes and recorded procedural videos with them. At a Kwakwaka class taught by Trish Rosborough for the University of Victoria Bachelors Degree in Aboriginal Language Revitalization, we held a workshop for adult students on immersion-based approaches to eliciting language focused on a specific semantic field, during which students learned to set up recording equipment with external microphones, use image-based prompts, and ask relevant questions

¹¹ These gatherings were unrecorded.

in Kwakwala (in this case, “Where is the ____?”). Students learned to elicit phrasal responses from speakers, to find patterns in the language, and to identify semantic threads connecting these patterns.

This work also aims to make methodological contributions to the field of language documentation and description. My approach to transcribing rapid connected speech combines the BOLD (Basic Oral Annotation) method with onsite written annotation in segmented ELAN files and field notes. Transcription in Kwakwala is then completed remotely, often distributed among assistants, increasing efficiency. Various iterations of this method have been used by other descriptive linguists (cf. Reiman 2010, Bird 2011). However, the BOLD method’s restriction to oral-only annotation has led in some cases to additional bottlenecks (a proliferation of additional ‘black boxes’ of unsegmented recordings) (Cox 2013). By including direct annotation in ELAN, the adapted workflow creates instantly accessible time-aligned transcription files that are immediately archivable upon return from the field.

Remote transcription was also conducted collaboratively in a team combining academic and community researchers. Different team members tackle phonetic transcription, free translation, morphosyntactic analysis, and other annotation. Training in ELAN and Audacity over Skype built additional capacity. For both advanced second-language learners and latent speakers, hours immersed aurally in the language have been the most meaningful benefit of this approach (Cadwallader, Nicolson, Rosenblum 2010).

Finally, local access to data and results is an essential component of ethical linguistic research in the North American context. The annotated corpus will be deposited in both local archives and ELAR, and will be the first corpus of data on Kwakwala that is digitized,

available online, and accessible to interested learners and teachers participating in current revitalization efforts, in addition to interested linguistic researchers. Although Kwakwaka has been well ‘documented’ both within and outside the community (and Kwakwaka is still frequently recorded), with a legacy corpus of materials created by George Hunt and Franz Boas and other researchers since, these materials are not centralized or widely accessible. This project will provide several hours of time-aligned transcriptions of Kwakwaka connected speech with morphemic analysis and glossing, emphasizing interactive speech, for both community and academic research. Eventually, a password-protected community-based server will provide a central location for the deposit of all materials, including previously-created resources. According to community interests, digital versions of privately-held recordings, legacy images, and published and unpublished manuscripts relating to Kwakwaka can be located or created and deposited on the server in preparation for archiving.

2.3.3 Data types

The modern corpus includes 59 hours of audio in Kwakwaka, recorded with six elders: Beverly Lagis, Hazel Dawson, Lillian Johnny, Gertrude Robertson, Spruce Wamiss and Ernest Scow. A detailed breakdown of the content of these recordings is provided here. The recorded material included in the audio corpus can be divided into 7 types: spontaneous monologic (SM), prompted monologic (PM), elicited monologic (EM), spontaneous interaction (SI), prompted interaction (PI), elicited interaction (EI), and oral annotation (OA). These are described below. The first 6 types are considered ‘primary’ data; OA recordings are considered ‘secondary’ data. Of the total corpus, 33 hours are primary text, and 26 hours are secondary text.

These 7 data types are divided according to two parameters:

Parameter 1 is a scale of ‘naturalness’ (accepting, and putting aside, the inherent lack of natural context in any recorded speech act). This parameter also reflects post-recording processing requirements.

- **SPONTANEOUS (S):** Connected speech, unprompted by any external stimulus other than, in some cases, a minimal suggestion of a theme. Untranslated within the recording, and requiring transcription and translation by Oral Annotation method. Sometimes includes code-switching.
- **PROMPTED (P):** Connected natural speech, prompted by external stimuli such as a video, a wordless picture book, or a task (aka ‘game’). Untranslated within the recording, and requiring translation and transcription with Oral Annotation method.
- **ELICITED (E):** Elicitation based on external stimuli, including (but not limited to) pictures, wordless narratives, videos, examples from legacy data, and English-based translation tasks. These sessions include phrasal translation as well as rapid and careful repetitions in K^wak^wala, and do not require Oral Annotation to complete transcription in ELAN.

Parameter 2 concerns participants, distinguishing between monologic speech and interaction between two or more speakers.

- **MONOLOGIC (M):** single speaker
- **INTERACTION (I):** two or more speakers

The corpus contains no examples of spontaneous monologic speech, but every other data type is represented. The table below represents the proportion of each data type in the corpus.

Table 1 MODERN K^wAK^wALA CORPUS: DATA TYPES

NATURALNESS	PARTICIPATION	TIME	GENRES
SPONTANEOUS	MONOLOGIC	Ø	N/A
	INTERACTION	3h 45m	Greetings and goodbyes Genealogical histories Conversation-embedded narratives of residential school and relocation
PROMPTED	MONOLOGIC	1h 37m	Frog stories Video-prompted narration Dream narration
	INTERACTION	7h 37m	Frog story Video-prompted conversation Prop-prompted conversation games 'Toy Game' recordings Local history
ELICITED	MONOLOGIC	19h 30m	Picture-based elicitation: TRPS Positional Verb Series Man and Tree Series Frog Story scenes, Legacy data translations Video-based elicitation: Motionland stimuli
	INTERACTION	0h 21m	Modeling immersion elicitation
ORAL ANNOTATION		27h	Transcription and translation of 5h15m primary recordings

The corpus contains video of several of the communicative events recorded above, including three frog stories, multiple picture-based elicitations, video-based elicitation of conversations, 'Toy Game' and other conversations prompted with props, and spontaneous interaction.

2.3.4 Stimuli and prompts

Communicative events prompted by visual 'stimuli' contribute a valuable source of discourse-level data to a corpus. Examples of such prompted events include narration of wordless picture books (such as 'frog story' recordings) or descriptions of videos (such as the 'Pear Story' recordings). 'Elicited' speech also includes speech prompted by images or video, but is generally designed to result in shorter non-connected utterances, such as

various picture series intended to elicit a single descriptive phrase (cf. Topological Picture Relations Series). This section describes the prompts I used to encourage speakers to produce connected speech in Kwakwala.

Some of the prompts I employed were externally developed and allow for cross-linguistic comparison of Kwakwala with other languages. The corpus includes four versions of *Frog, Where are you?* (Mayer 1969, aka the ‘frog story’), a wordless picture book which has become a standard prompt for studying cross-linguistic expressions of motion, location and direction (Berman and Slobin 1994; Strömquist and Verhoeven 2004). The Toy Game task requires two participants who cannot see each other to achieve the same arrangement of a set of small objects placed on a ground (McDonough & Lachler 2010). Although designed to collect natural conversation and prosody, the content of the interaction necessarily featured spatial language and cognition (McDonough 2010). Elicitation materials employed include the Topological Picture Relations Series (Bowerman & Pederson 1993), the Positional Verbs Series (Ameka, deWitte, Wilkins 1999); and the Man and Tree Space Games (Levinson, Brown, Danziger, De León, Haviland, Pederson, and Senft 1992).

In addition, I created culturally situated video stimuli for the purpose of prompting conversation in Kwakwala. Videos show culturally-relevant scenes: canning fish, picking berries, traveling on the river to check crab traps, traveling through the islands in the traditional territory and identifying sites of clam gardens. Some of these journeys related explicitly to the documentation of spatial grammar: going away from the village and returning to the village, going upriver and downriver (on land and on water), going to and from the shore, going into and out of the woods.

Two videos filmed in Kingcome were particularly useful as prompts eliciting spatial language (1) “River Trip”, depicting Percy Lagis (Mrs. Lagis’ son) on the Kingcome river, traveling from the village down to the mouth of the river and back to the village (25m38s); and (2) “Berry Picking”, a journey away from and back to a house along a road leading into the woods, in order to pick thimbleberries for jam (10m53s). Detailed descriptions of each are below.

‘River Trip’ (00:25:38) shows Percy Lagis traveling down the Kingcome River in his boat. He checks his crab trap at the mouth of the river, stops at the flats to see if the wild crabapples are ripe on a particular tree, and then goes back up the river. The video is prompted descriptions of several kinds of motion (coming, going, walking, going up and down stairs, running (dogs), traveling by boat, passing other people, climbing up and down, etc.) in various paths and locations (into and out of a house, down to and up from the beach, along the beach, downriver, upriver, onto water and onto land, up onto a field, down from a field, and so on). The video features movement along the riverrine axis which is a primary element of Kwakwəkəkəwakw Frame of Reference. Stills from “River Trip” are provided in Figures 4, 5 and 6.



Figure 4: Percy Lagis bringing his crab trap to a different location.



Figure 5: Throwing the re-baited trap back in the water.



Figure 6: After checking the crab apple tree.

‘Berry picking’ (00:10:53) was also filmed in Kingcome. It follows Beverly Lagis and Hazel Dawson as they leave Beverly’s house to go pick thimbleberries. In contrast to the River Trip Video, the characters in this video follow the road behind Beverly’s house (away from the river) and back, along the landward/seaward axis. Figure 7 is a still from “Berry picking”.



Figure 7: Hazel and Beverly come down the stairs with their *hámya'ci* 'berry picking buckets'.

In working with these videos, I employed a range of documentation methodology. I recorded dyads watching together and commenting in the language, and also recorded dyads while one person watched the video and the other couldn't see it, with one person telling the other in Kwákwála what they were seeing. With one speaker, I recorded a monologic description of the events of each video. Figures 8 and 9 show speakers watching and responding to the video stimuli.



Figure 8: Beverly Lagis (Percy's mother) watching the River Trip video with Lillian Johnny



Figure 9: Lillian tells Beverly the word in her G^waʔsəla dialect for an unripe thimbleberry (*qámčək^w*).

I also brought two speakers together who grew up in the same village (Kingcome), gave them a set of blocks, legos, and other toys (trees, animals, vehicles, people) and asked them to construct a ‘map’ of their village as it was when they were growing up, talking to each other in Kwak^wala as they did so. This was video and audio-recorded.



Figure 10: Beverly and Spruce Wamiss make a map of Kingcome

Several Kwak^wəkəwak^w nations employ trained cartographers who use Geographic Information Systems (GIS) to document their traditional territories. Midori Nicolson (Land and Resources Director, Musagamagw Dzawada’enuxw Tribal Council) and Dusty Dawson (GIS Technician, Musagamagw Dzawada’enuxw Tribal Council aka MDTC) have created an online interactive Dzawada’enuxw atlas as part of the Aboriginal Mapping Network. I therefore tagged some recordings with latitude and longitude coordinates using a handheld

GPS tracker to enable integration with existing mapping projects. Dusty Dawson accompanied me and two speakers (Beverly Lagis and Ernest Scow) on Mikael Willie's boat as we travelled through the islands of the traditional Musgamagw-Dzawada'enuxw territory in the Broughton Archipelago. We met afterwards to cross-reference our GPS-tagged waypoints with a paper map and the audio recordings. I also recorded video of a boat trip with Percy Lagis from Kingcome village down to the mouth of the river, where we checked his crab traps before returning to the village. This journey was also GPS-tracked with waypoints marked. Pending approval by the MDTC, these coordinates and the associated audio and digital files can be added to the online atlas created by the Dzawada'enuxw First Nation (<http://atlas.kingcome.ca/>).

2.3.5 Oral annotation

As mentioned, recordings are transcribed using an adapted Basic Oral Language Documentation (BOLD) method (Reiman 2010; Bird et al. 2013; Cox and Rosenblum 2014). The BOLD approach seeks to reduce the transcription bottleneck inherent in language documentation. BOLD is described as “a methodology for documenting languages that minimizes the use of high-cost means of recording comments on recorded language data (written annotation), focusing instead on making low-cost means (oral annotation) more effective” (Reiman 2010). After the initial recordings of primary texts are first captured on audio or video, researchers work with consultants to listen again to the recording. As they listen to the recording, language consultants identify utterance boundaries and pause the recording in order to add three types of oral annotation, all of which are also recorded: (1) a slow and careful repetition of the utterance, (2) a phrasal translation, and (3) any analytical

commentary. The recorded ‘oral annotation’ provides a resource for transcription at a later date, and allows additional researchers aside from the original fieldworker to assist with transcription in or out of the field. The Aikuma app (<http://lp20.org/aikuma/>) is an exciting tool that has been recently developed by Bird and others to allow widespread collection, transcription and translation of texts in endangered languages using Android phones (Hanke & Bird 2013).

I have adapted the BOLD method to meet the needs of this project in several ways, some reflecting issues of privacy and accessibility relevant for conversational data in a North American context, and some reflecting the need to integrate a BOLD workflow with transcription in ELAN.

Recorded conversations were first scanned with a speaker for any material that should be marked as private; these sections were segmented and excluded from annotation. Prior to BOLD transcription sessions, primary recordings were segmented in ELAN to allow efficient navigation as speakers listened to segments, provided careful repetitions and phrasal translations. Written annotation was re-incorporated into the process in two ways: (1) phrasal translations in English were entered directly into the ELAN transcript file for the recording and (2) orthographic transcription in Kwakwala was written by hand in a Livescribe field notebook using a Livescribe pen, which records audio as well as automatically creating a searchable PDF of notebook pages. These additional steps made post-field transcription far more efficient than if the translation were only contained in a second audio file. The adapted BOLD method resulted in segmented free phrasal translations entered in ELAN, with written transcriptions of speakers’ careful enunciation of each phrase in Kwakwala, enabling collaborative transcription after I had returned to California.

2.3.6 Data-management

Data were transferred to hard drives immediately following recording sessions. Metadata regarding the project, sessions, personnel, equipment, and funding were maintained in a spreadsheet. Recordings were ‘chunked’ in ELAN. In cases of particularly sensitive material, an edited version was translated in ELAN; both recordings are archived, with restricted access to the raw original. Detailed annotation in ELAN, including phonemic transcription and morphological analysis, was carried out collaboratively with community-based and university-based researchers during the post-field season. In addition to being deposited in the Endangered Language Archive at SOAS/University of London (aka ELAR), recorded data is destined for local archives in both Tsulquate and Gʷaʷi.

Chapter 3: Grammatical sketch of K^wak^wala

3.1 Overview

The previous chapter provided some background on the K^wak^wala language and the history, society and territory of the K^wak^wəkəw^wak^w people, and provided context for this research.

The present chapter provides a brief overview of K^wak^wala grammar, proceeding from Phonology to Morphology, Syntax, and Discourse. An excellent grammar and multiple dictionaries exist for K^wak^wala, among them the prodigious contributions of Boas and Hunt. Therefore, this chapter not intended to be exhaustive but rather to provide enough relevant grammatical information to allow readers to follow the examples and argumentation in the following work. Charts and tables of several paradigms are also provided in the appendices, and relevant research with more complete descriptions of various grammatical phenomena are cited.

Along the way, I attend to some of the typological and areal features of K^wak^wala and neighboring languages that have sparked particular interest among linguists, challenged certain cross-linguistic generalizations, and raised intriguing theoretical questions. Where possible, I make clear the analytic stance grounding my own approach to K^wak^wala, presenting supporting evidence for my analysis.

The first of these theoretical questions concerns the universality of lexical categories, discussed in Section 3.4.1 on roots and the lexicon. As Jacobsen points out, several indigenous languages of the Pacific Northwest have been ‘cited in the linguistic literature as...language(s) with unusually weak differentiation between parts of speech’ (Jacobsen 1979:1). Noun and verb have often been claimed to be universal categories found in all languages, but the semantic and syntactic lability of roots in Wakashan, Salishan and Chimakuan languages has been offered as a counter-argument to this claim (cf. Bach 1968). Others, meanwhile, have argued that noun and verb can indeed be identified as lexical categories in the Wakashan and Salishan languages (Jacobsen 1979; Koch and Matthewson 2009).

I argue below that predicates and arguments are clearly distinguishable in syntactic context, within a clause. In many cases, such syntactic predicates overlap with the semantic category of ‘event’ and can be considered ‘verbs’, just as syntactic arguments overlap with the semantic category of ‘entity’ and can be considered ‘nouns’. On the other hand, within the lexicon, categories such as noun and verb are more elusive, though not necessarily absent completely. This is elaborated with some examples in Section 3.4.1, but is a larger question than I would attempt to settle here.

In Section 3.4.2 on bound morphemes and derivational suffixes, I discuss the difference between derivation and inflection in Kwakwaka. Cross-linguistically, there is strong evidence that derivation and inflection are best considered points along a gradient continuum, rather than sharply distinguished categories (Bybee 1985). Kwakwaka, however, presents a relatively strong structural distinction between derivation and inflection, aligning with a contrast between morphological structure (expressed as suffixes) and syntactic

structure (expressed as clitics). Also in Section 3.4.2, I address the related question of open- and closed-class categories and lexical versus grammatical forms.

Another theoretical question involves the definition of a word and the distinction between morphology and syntax. This is discussed in the introduction to Section 3.5 on syntax. Polysynthetic languages are often described as languages in which ‘a single word is a whole sentence.’ This folk definition is ambiguous. Cross-linguistically, a single word is a whole sentence if it requires translation with a full sentence in English or another language. From a language-internal perspective, however, a single prosodic word in a polysynthetic language is sometimes a fully grammatical sentence that can stand as an independent clause. Both possible interpretations of the definition of polysynthesis work in Kwákwála. The latter fact has been cited as evidence for the distributed morphology argument that polysynthetic predicates are ‘syntax all the way down’ (Halle and Marantz 1993), that is, single words in polysynthetic languages are shaped by syntactic, rather than morphological, forces, and that the extensive repertoire of semantically-rich bound affixes should thus be interpreted as incorporates or bound lexemes.

However, just because a single word can be a complete clause in Kwákwála, that does not mean that all sentences are single words, and that there are no multi-word clauses. One can identify significant structural differences between the morphology within a phonological word and the syntax across words within a clause; these differences of sequencing, categorization, and linkage are not adequately explained by a transformational or generative approach to morphological structure. Furthermore, there is counter-evidence to the claim that suffixes are incorporated independent lexemes, or some other special type of bound lexical material.

I assume here that Kwakwala morphology and syntax are distinct, and that speakers employ both options with sensitivity to discourse-pragmatic concerns. I argue that Kwakwala, and other polysynthetic languages, employ both syntactic and morphological systems, and that they can and should be distinguished from each other. Syntax in polysynthetic languages has often been overshadowed by morphology, but merits dedicated attention as a distinct level of structure interfacing with phonological, morphological, and prosodic discursive structures. Some evidence for the difference between morphological and syntactic systems in Kwakwala is presented throughout this work, as part of describing and analyzing the semantic domain of spatial expression in the language. However, as is true of the above question of lexical categories in languages of the Pacific Northwest, other questions occupy the central frame of this research. Last, but not least, animating much of this thesis is the question of how words are built and what governs the ordering of derivational affixes within a word. This question concerns the tension between synchronic and diachronic forces shaping linguistic constituents, especially in languages with complex morphology. I touch on it briefly in Section 3.4.5, but this issue receives further dedicated attention in Chapters 4 and 5, and is the subject of the final chapter of the thesis.

3.2 Phonetics and phonology

This section provides an overview of the sound system of Kwakwala, focusing on phonology. Many interesting phonetic questions await consideration, but they are beyond the scope of this present work.

3.2.1 Phonological inventory

K^wak^wala has large inventory of 42 consonantal segments. The consonants of K^wak^wala are represented in phonetic terms according to place and manner of articulation in the chart in Table 2. Segments are represented with Americanist, rather than International, phonetic symbols.

Table 2: PLACE AND MANNER OF ARTICULATION OF THE CONSONANTS IN K^wAK^wALA

	BILABIAL	ALVEOLAR	PALATAL	PALATALIZED VELAR	UVULAR	GLOTTAL
STOP	p b	t d		k ^y g ^y	q G	ʔ
EJECTIVE STOP	p̣	ṭ		ḳ	q̣	
LABIALIZED PLOSIVE				k ^w	q ^w G ^w	
LABIALIZED EJECTIVE STOP				ḳ ^w	q̣ ^w	
AFFRICATE		c d ^z				
GLOTTALIZED AFFRICATE		c̣				
NASAL	m	n				
GLOTTALIZED NASAL	ṃ	ṇ				
FRICATIVE		s		x ^y	χ	h
LABIALIZED FRICATIVE				x ^w	χ ^w	
LATERAL APPROXIMANT		l				
GLOTTALIZED LATERAL		ḷ				
LATERAL FRICATIVE		ɬ				
LATERAL AFFRICATE		ʎ λ				
EJECTIVE LATERAL AFFRICATE		ʎ̣				
APPROXIMANT	w		y			
GLOTTALIZED APPROXIMANT	ẉ		ỵ			

The phonological inventory can be more economically represented, and systematic contrasts between various segments better appreciated, in a table such as the one below, adapted from Shaw 2008a.

Table 3: PHONOLOGICAL INVENTORY

VOICELESS STOP	p	t	ʔ	c	k	k ^w	q	q ^w	ʔ
VOICED STOPS	b	d	ɬ	dʒ	g	g ^w	G	G ^w	
EJECTIVE STOPS	p̣	ṭ	ʔ̣	c̣	ḳ	ḳ ^w	q̣	q̣ ^w	
FRICATIVES			ɬ	s	x	x ^w	χ	χ ^w	h
RESONANTS	m	n	l	y		w			
GLOTTALIZED RESONANTS	ṃ	ṇ	ḷ	ỵ		ẉ			

This table highlights several of the typologically interesting qualities of the K^wak^wala consonant inventory. Many of these qualities are shared with other languages in the Pacific Northwest Sprachbund. The languages of the area tend to have rich consonantal inventories with many back segments; K^wak^wala has 42 consonants, twice as many as English. Ejectives exist at all places of articulation, and labials exist at many places of articulation. There are lateral fricatives, lateral affricates and glottalized lateral affricates. There are also contrastively glottalized sonorant consonants /m/ and /ṃ/, /n/ and /ṇ/, /l/ and /ḷ/, /y/ and /ỵ/ and /w/ and /ẉ/. More experimental research is needed to determine the phonetic quality of the glottalized sonorants, but glottalized sonorants can be described as intervocally pre-glottalized. Velar and uvular stops exhibit a three-way contrast between plain, ejective, and labialized; velar and uvular fricatives do not. There are no velar segments without secondary articulation: so-called ‘plain’ velar segments /k/, /g/ and /x/ have palatal off-glides and are

phonetically /kʸ/, /gʸ/ and /xʸ/, although the palatal off-glide is not perceptually salient when these segments are followed by a high-front vowel. The plain velars contrast with labialized /kʷ/, /gʷ/ and /xʷ/. The palatal and labial offglides, as well as the place of several consonants far back in the throat, strongly affect the pronunciation of surrounding vowels (with some exceptions depending on vowel height), and these cues are valuable to learners as guides to the status of consonants.

The vowel inventory of K^wak^wala appears to be quite small: there are just four phonemic vowels /i/, /a/, /u/, and /ə/. However, the phonetic quality of vowels is dramatically affected by surrounding consonantal context. Furthermore, vowel pronunciation also varies both dialectally, among speakers of different dialects, and idiolectally, with differences among speakers.

From stress patterns (see 3.2.5), it is evident that the mid-central vowel /ə/ patterns differently than the others. The first three vowels, /i/, /a/, /u/, are full vowels and can accept stress in a wide range of contexts; the mid-central vowel /ə/ can accept stress only in certain contexts with un-compromised sonorants. A chart of the phonemic vowels, as well as the various allophonic variants of these vowels in K^wak^wala speech, is provided in Table 4. The full vowels and schwa are provided in bold.

Table 4: VOWELS IN K^wAK^wALA

/i/				/u/
[ɪ]				[ʊ]
	[e]		[o]	
	[ɛ]	/ə/	[ɔ]	
		[æ]		
		/a/		

Full phonemic vowels are provided in boldface type in the table above, while allophonic variants are provided in plain type, within square brackets. The vowel /i/ has allophones [i], [ɪ], [e] and [ɛ]. The vowel /a/ has allophones [a] and [æ]. The vowel /u/ has allophones [u], [ʊ], [o], and [ɔ]. The central vowel schwa /ə/, now a phoneme, was likely predictably epenthetic in proto-Wakashan but is no longer so in the Kwakwala dialects with which I work. Schwa and syllables containing schwa nuclei are subject to the greatest dialectal variation, however, some epenthesis may still be a feature of certain dialects (cf. Siemens forthcoming).

3.2.2 Phonotactics

Kwakwala syllable phonotactics constrain onsets to a single consonantal phoneme. Syllable codas allow zero to three consonants (Wilson 1978; Shaw 2009).¹²

The type and sequence of the coda consonants is also subject to certain limitations described anecdotally here. For example, stops other than glottal stops are rare in coda clusters and seem to occur only when they are part of the root morpheme, while fricatives are abundant. Glottal stops and resonants seem to consistently precede fricatives. Fricatives can occur in variable order with respect to each other. However, these constraints have not been thoroughly documented and would welcome quantitative study.

Some examples of syllable structure are provided here. Relevant syllables are presented in bold type.

¹² ‘Consonant’ is used here as shorthand for consonantal phonemic segments; phonemic affricates such as /c/, /č/, /dʒ/, /ʃ/, /ʒ/ and stops with secondary articulation such as /kʷ/, /kʰ/, /gʷ/, /qʷ/, /qʰ/, and /Gʷ/ are considered single segments (even though in some orthographies they are written with digraphs, e.g. kw).

(1) K^wAK^wALA PHONOTACTICS

TWO CONSONANT CODAS

<i>λə. w̃álx.siʔs.ta.la</i>	‘to be a prince in every way (lit.all around)’	(B48: 418)
<i>ńá.ńáms.Gə.mo.la.q^wə.la</i>	‘to say one word’	(B48: 239)
<i>q̃^wámt.bə.táls</i>	‘to push digging stick into ground’	(B48: 364)
<i>cəʔs.tánd</i>	‘throw overboard’	(B48: 211)

THREE CONSONANT CODAS

<i>ńə.ʔánxs.ʔə.gi.la</i>	‘half tide’	(B48: 229)
<i>k̃álxʔs.to.lit</i>	‘fire extinguishing in house’	(B48: 280)
<i>čámx^{ws}.tənd</i>	‘to put a long thing (sea slugs) endwise into water’	(B48: 209)
<i>qí.təʔs.da.la</i>	‘to stop over’	(B48: 338)
<i>łámx.k^{wi}.ńaxst</i>	‘proud even to backside’	(B48: 426)
<i>díʔxs.dá.nu</i>	‘toilet paper’	(B48:151; Shaw 2008a)

3.2.3 Orthographies

As is true for many indigenous American languages, and indeed, for many languages around the world, there are several orthographies in use for K^wak^wala, and many speakers and researchers are literate in more than one orthography. The orthography used by Boas and Hunt changed over time, but stabilized into a clear system by the time Boas and Hunt published their Bureau of Ethnography texts in 1921. Because the surface pronunciation of the vowels is so highly variable and influenced by surrounding consonants, Boas overspecified the vowels of K^wak^wala, employing 8 symbols and several additional diacritics.

Two orthographies are used in the communities where I have worked the most; they are commonly called ‘U’mista’ and ‘NAPA’. The ‘U’mista orthography,’ largely based on the orthography previously created by David Grubb, was created by Jay Powell, Vickie Jensen, and the U’mista Cultural Society in 1980. The U’mista system uses few special characters and was originally created to allow ease of use on a typewriter. Di- and trigraphs

represent certain segments, such as the labialized ejective velar /kwʔ/, and underlined characters represent certain phonemic contrasts, such as the contrast between the plain velar stop /k/ and the plain uvular stop represented as /ḳ/, or the mid vowel /a/ and schwa, represented as /a̯/. Stress, which is predictable, is not represented orthographically in the U'mista system. Many speakers have learned the U'mista writing system and are comfortable with it.

Other communities employ orthographies drawing special characters from the International Phonetic Alphabet (IPA) or the North American Phonetic Alphabet. The 'SD72' orthography, created for a Liqwala curriculum by Daisy Sewid Smith, is one such orthography. The 'NAPA' orthography, developed by Patricia A. Shaw at the First Nations Languages Program at the University of British Columbia, also draws on characters derived from phonetic representations of segments. Stress is represented. The issue of usability has been resolved with the advent of digital computing. The font is available as a downloadable Unicode font from the First Nations Languages Program at the University of British Columbia: <http://fnlg.arts.ubc.ca/FNLGfont.htm>. Speakers who are familiar with U'mista sometimes find this orthography difficult to read because there are many additional characters employed to represent the sounds of the language. On the other hand, several communities prefer using this orthography, and several advanced second-language learners feel there are certain advantages to this orthography. First, the underlining used to distinguish important phonemic contrasts in U'mista is sometimes overlooked or omitted, and important segmental contrasts are then lost when language is transmitted from one written form to another. Schwas, represented as underlined /a̯/ in U'mista, are especially

vulnerable. In NAPA, schwas are represented as /ə/ in Kwakwala, and cannot be confused with /a/; velar stops are represented as /k/ and uvular stops are represented as /q/.

Second, while stress is predictable in Kwakwala, the system is complex. Many language learners feel they benefit from seeing stress written as a way to develop their automatic sense of where stress should be pronounced even in unfamiliar words. Because many of the languages in British Columbia and in the Pacific Northwest share phonological features and segmental contrasts, NAPA also allows a single orthography to represent multiple languages; this creates further possibility for cross-linguistic comprehension and recognition of shared features in a region where multilingualism was once the norm.

Finally, some speakers take pride and pleasure in the extravagance of the phonological inventory of consonants in Kwakwala, which employs twice as many phonemes as English, and enjoy representing these with as many distinct symbols as possible. Kwakwala sounds nothing like English, and when written in NAPA, it also looks very special and unlike English. Some comparisons between different systems can be seen in Table 5, adapted from Shaw 2008a.

Table 5: SOME CORRESPONDENCES AMONG CHARACTERS

Boas	q! ^u	ε	ts!	g	dl
NAPA	q ^w	ʔ	č	Ĝ	λ
SD 72	q ^w	ʔ	č	ğ	λ
U'mista	<u>k</u> 'w	'	tš	g	dł
Grubb	<u>kw</u> '	7	ts'	g	dl

(Shaw 2008a)

Because different speakers and community members choose to use different orthographies, during field research I often switch between orthographies depending on the preference of the consultant. However, in this and other written work, I employ NAPA.

Examples provided from Boas and Hunt have been re-transcribed in NAPA, with citations to

the original provided. Transcripts are also provided in NAPA, although publication of excerpts for community use will employ both NAPA and U'mista.

Full correspondence tables are provided in the appendix.

3.3.4 Morpho-phonology

A good deal of morphophonological fusion occurs at morpheme boundaries. Consonant coalescence is a significant source of fusion (Boas 1947:211-215). In addition, three classes of suffixes – ‘hardening’, ‘softening’ and ‘neutral’ – affect the coda consonant of the preceding morpheme in complex, but predictable, ways (Boas 1947: 226-232). Hardening suffixes are written, as Boas wrote them, with an initial exclamation point: *-!s* ON.GROUND. Boas wrote softening suffixes with an equality sign in the place of the hyphen representing the morpheme boundary: *=i!*. However, the equality symbol (=) is used here, following Leipzig conventions, to represent clitic boundaries. Instead, I adopt the use of a degree symbol from Werle 2012 to represent a softening boundary: *-°i!* INDOOR.

These effects are summarized in Table 6, adapted from Shaw 2009.

Table 6: EFFECTS OF HARDENING AND SOFTENING SUFFIXES ON CODA C

BOUNDARY EFFECTS OF K^wAK^wALA ‘HARDENING’ SUFFIXES (-!)

	Stops & Affricates	Fricatives	Resonants
C	p t c λ̣ k k ^w q q ^w	s ¹ s ² ʃ x x ^w χ χ ^w	m n l w y
C-!	p̣ ṭ c̣ λ̣̣ ḳ̣ ḳ̣ ^w q̣̣ q̣̣ ^w	ç̣ ỵ ḷ ṇ ẉ χ(?)̣ ẉ	ṃ ṇ ḷ ẉ ỵ

BOUNDARY EFFECTS OF K^wAK^wALA ‘SOFTENING’ SUFFIXES (-°)

	Stops & Affricates	Fricatives	Resonants
C	p t c λ̣ k k ^w q q ^w	s ¹ s ² ʃ x x ^w χ χ ^w	m n l w y
C-°	b d d ^z λ̣ g g ^w G G ^w	d ^z y l n w χ(?) w	ṃ ṇ ḷ ẉ ỵ

I have reproduced the examples provided in Shaw 2008b to illustrate the effects of these suffixes on morpheme codas. The examples here illustrate boundary effects on root codas, but coda consonants of suffixes are equally affected.

(2) EFFECTS OF HARDENING AND SOFTENING SUFFIXES

nəpχʔid (*nəp-* ‘throw’): ‘to throw a round thing’
 hardening : *-!ala* ‘to join in’
 weakening: *-°ala* ‘to do in return’

UNDERLYING	SURFACE	GLOSS
/REDUP- <i>nəp-</i>	<i>!ala/</i>	<i>nanəpʔala</i> ‘to join in throwing stones’
/REDUP- ¹³ <i>nəp-</i>	<i>°ala/</i>	<i>nanəbala</i> ‘to throw round thing back’

(3) HARDENING EFFECTS ON DIFFERENT CONSONANTS

-!xsd ‘behind, tail end’

UNDERLYING	SURFACE	GLOSS	CODA EFFECT
<i>čək^w-!xsd</i>	<i>čək^wʔxsd</i>	short person	/k ^w / < /k ^w /
<i>mex-!xsd</i>	<i>məŋ^wxsd</i>	to be hit behind	/ŋ/ < /x/
<i>walas-!xsd</i>	<i>wálačəxsde[?]</i>	one who has a big backside	/č/ < /s ₁ /

Hardening suffixes transform the coda consonant of the immediately preceding root or suffix in the following ways. (1) Hardening suffixes make voiceless stops and affricates ejective; (2) hardening suffixes transform plain resonants into glottal resonants. With fricatives, there is less of a uniform process of transformation, except to say that almost all fricatives become glottalized resonants. The lateral fricative /l/ becomes glottalized lateral resonant /l̥/; the (palatalized) velar fricative /x/ becomes the glottalized alveopalatal resonant /ŋ̥/, and both velar and uvular labialized fricatives /x^w/ and /χ^w/ become /w̥/. Uvular fricative /χ/ remains /χ/, although sometimes a glottal stop /ʔ/ follows the segment.

¹³ Both suffixes, *-!ala* and *-°ala* happen to trigger the same reduplication pattern, identified as ‘Reduplication 5’ by Boas, in the root.

Weakening suffixes produce voiced stops and affricates from voiceless stops and affricates. Meanwhile, they affect resonants in the same way the hardening suffixes do, transforming plain resonants into glottalized ones. Their effect on fricatives follows the same (relatively erratic) pattern as the hardening suffixes, except the resulting consonants are not glottalized.

Finally, both hardening and softening suffixes reveal evidence that there was historically a distinction between two segments which subsequently both neutralized to /s/; this history is otherwise obscured in the contemporary surface forms of the language, but reflected in the distinct effect of coda-changing suffixes on /s1/ and /s2/. . The first type of /s/ is transformed by a hardening suffix into /ç/ and by a softening suffix into /dʒ/, while the second type of /s/ is transformed by a hardening suffix into /y/ and by a softening suffix into /y/.

There are two types of reduplication in K^wak^wala. One type of reduplication is a relatively straightforward copying process indicating plurality of a subject or pluractionality in an action or event. The other type of reduplication is a strictly lexical property of certain individual suffixes, which fall into seven classes distinguished by their effect on the form of the stem. These effects include various combinations of reduplication and stem vowel changes (ablaut and lengthening) (Boas 1947:232-234). The reduplication patterns in K^wak^wala are summarized in Boas 1947 (220-223; 232-235). Some illustrative examples are provided below, drawn from Shaw's work on reduplication (Shaw 2008b).

(4) TRANSFORMATIVE EFFECTS OF STEM CLASSES ON ROOT

GLOSS	ROOT	SUFFIX	ROOT+SUFFIX	GLOSS	SOURCE
"smoke"	k ^w əmt	-m̄ut	k ^w əmk ^w atm̄ut	"cigarette butt:	Shaw07_22_124BL
"sleep"	miχ	-alaq ^w əla	mamiχ ^w əlaq ^w əla	"talk in one's sleep"	Shaw07_25_334DS
"seal fat"	χ ^w ec	-g	χ ^w əsg ^w əsgən	"I'm eating seal fat"	Shaw07_24_121BL
"war"	win	-lał	hawinalał	"war dance"	Shaw07_16_427DS

These patterns are of great interest to phonologists exploring cross-linguistic patterns of reduplication, suppletive stem changes, and interaction at the interface between morphology and phonology. Such investigation is decidedly beyond the scope of this study, but in addition to Boas 1947:232-235, one can consult Shaw 2008b for further analysis of the patterns of reduplication in K^wak^wala.

3.2.5 Stress pattern: Default-to-opposite

K^wak^wala has an unusual stress pattern, termed ‘default-to-opposite’ (Gordon et al. 2011). Stress placement depends on syllable weight: if a word has any heavy syllables, then primary stress falls on the leftmost heavy syllable. Otherwise, primary stress defaults to the right edge of the word, and falls on the rightmost (that is, final) syllable. A syllable is heavy if it has a full vowel or a moraic coda; otherwise, it is light. The properties of heavy and light syllables are described in more depth below.

Heavy syllables, which attract stress, can be (1) a full vowel (/a/, /o/, /i/) plus 0, 1, 2, or 3 consonants: CV(C₀), or (2) a schwa (/ə/) plus a resonant (/m/, /n/, /l/, /w/, /y/), with optional obstruent: CəR(O). Finally, syllables with full vowels and resonant codas are rare, but treated as heavy as well: CVR. **Light syllables** contain (1) a schwa plus 0, 1, 2 or 3 consonants: Cə(C₀), (2) a schwa plus glottalized resonant: CəR’ (/m̥/, /n̥/, /l̥/, /y̥/, /w̥/), or (3) V plus /ʔ/: CVʔ.

Some examples of this stress pattern are provided below.

(5) DEFAULT-TO-OPPOSITE STRESS IN K^wAK^wALA

<i>bə.g^wá.nəm</i>	'man'
<i>hə.bəx.ɣás.xeʔ</i>	'beard'
<i>G^wálx.səm</i>	'rain gear'

<i>gəl.ćud</i>	'crawl into'
<i>gəl.ńák^w.la</i>	'crawl along'
<i>gəl.dák^w</i>	'homemade'

In the first example, *bəg^wanəm* ‘man’, the second syllable from the left, *g^wa*, contains a full vowel /a/ which attracts stress. In the second example, the first heavy syllable in the word *həbəxłásxe?* ‘beard’ is the third syllable, *łas*, which attracts stress. In the third and fourth examples, *G^wəlxsəm* ‘rain gear’ and *gəlćud* ‘crawl into’, the leftmost syllable contains a schwa nucleus, but the plain resonant in the syllable coda adds weight to the syllable, so that these syllables attract primary stress. In contrast, the first syllable of the fifth example, *gəl.ńák^w.la* ‘crawl along’, does not attract stress, because the coda consonant is a glottalized resonant /l̥/, rather than a plain resonant. Although this word is derived from the same root *gəl-* ‘to crawl’ as the immediately preceding example, the hardening suffix *-ńák^w* has impacted the coda consonant of the root, leading the syllable to reject stress.

The stress pattern in K^wak^wala has been interpreted as reflecting a sonority hierarchy evident in the contrasting behavior of plain and glottalized resonants, and of most obstruents with glottal stops; plain resonants are treated as sufficiently sonorous to compensate for the lack of sonority in the schwa vowel. In contrast, glottalized resonants in the absence of a full vowel do not constitute moraic segments. Similarly, a glottal stop coda following a full vowel seems to reduce the sonority of a syllable sufficiently to cause stress to skip the syllable. This pattern was described for K^wak^wala by Shaw in 2009. Gordon et.al. (2011) explore the issue of phonetic correlates of sonority in relation to stress patterns in K^wak^wala and several other languages.

3.3 Form classes

K^wak^wala has four form classes: roots, suffixes, clitics, and exclamations.¹⁴ Boas identified three classes: stems, affixes, and exclamations (B47: 280), but didn't recognize a distinction between suffixes and clitics. In the four classes I have identified, **roots** appear at the left edge of the word; **suffixes** attach to roots and derive stems and words. Suffixes participate in the derivational morphology of word formation; their role in the language is further explored in Section 3.4.3. **Clitics** attach to derived words according to word order at the level of the clause. Clitics provide inflectional information about the syntactic role, person, number, possession, definiteness, and deixis (multiple types) of arguments within a clause. Speakers variably identify clitics as phonologically or prosodically bound to words, or alternatively identify them as separate words. Clitics participate in the inflectional syntax of K^wak^wala, attaching to words as part of the process of clause construction; their role in the language is further described in Section 3.5.2 on case marking. The nature of clitics in K^wak^wala was described thoroughly in Anderson 2005. Meanwhile, **exclamations** stand alone, express speaker stance, and do not fit into any of the above three categories.

In the interpretation I suggest here, the lexicon of K^wak^wala includes both roots and **stems**. The dictionary created by Boas is organized according to roots; each entry for a given root includes many lexicalized combinations of roots plus suffixes which have lexicalized meanings which are not predictable based on semantic compositionality of morphemes; these can be considered stems.

The way roots, suffixes, and clitics are glossed here follows Leipzig conventions: roots, as part of the lexicon (as well as stems, when derivations of roots have lexicalized),

¹⁴ Some might consider the reduplicative forms to be 'prefixes', and would add an additional form class to this list. I do not include these here as such. Rather, I identify reduplicative additions to a root (along with ablaut effects) as the result of derivation of a given root.

are written with lowercase type. Meanwhile, suffixes and clitics, as grammatical, or functional elements, are glossed with small caps. Suffix boundaries are indicated with a single hyphen, while clitic boundaries are indicated with a double hyphen (or equal sign).

3.4 Morphology

The definition of ‘word’ is not obvious, especially in the context of polysynthetic languages. One diagnostic involves stress; each word in K^wak^wala has a primary lexical stress. Beyond prosody, K^wak^wala words exist at two levels of structure, one morphological and one syntactic. At the morphological level, a word is a unit formed by the combination of a lexical root and one or more derivational suffixes. Such a word can then host reference-tracking clitics that identify syntactic relationships within a clause and bind syntactic elements together. In rapid speech, the addition of these clitics forms new phonological words,¹⁵ and also identifies constituents as predicates or arguments within the structure of a clause. As we know, in polysynthetic languages like K^wak^wala, a single word can sometimes (but not always) be a grammatically complete expression, containing a predicate and pronominal reference.

The term ‘polysynthetic’ applied to K^wak^wala refers to two structural features of the language: (1) the encoding of core arguments on the verb, allowing the possibility that a single phonologic word can serve as a complete clause (although, like all polysynthetic languages, multiword sentences, complex clauses, and periphrastic syntax are also part of the grammar!), and (2) the rich morphological resources of the language, which combine to

¹⁵ In slow or careful speech, clitics are sometimes pronounced after a pause, and speakers may identify them as separate words.

form words that are morphologically complex and semantically rich. Kwakwala is exclusively suffixing aside from patterns of reduplication and stem-expansion affecting stem shape.

The morphology of Kwakwala governs the formation of lexical words, as well as phonological words. The lexicon itself can be thought of as layered, including simple roots, lexicalized derived stems, and newly created derivations. As mentioned, the Boas dictionary (with enormous contribution by Hunt), contains a large closed set of morphologically simple roots, most of which are single morphemes with the shape CVC₀ (a single onset consonant, and between zero and three coda consonants.) Each entry for a root, however, often contains a much larger set of stems derived by combinations of roots with suffixes. In the clearest examples of lexicalization, the suffixes are no longer productive forms existing separately in the grammar; in other cases, the suffix is productive in the extant grammar but the meaning of the stem is not transparently derivable from the combination of root and stem. Finally, the last layer of the lexicon exists outside of any dictionary that one might write for Kwakwala, in the spontaneous and synchronic generation of innovative words through new combinations of roots or stems and derivational suffixes.

Words fit into sentences according to their intended function as a predicate or argument, which determines their place in the word order, and, in turn, the enclitic marking that reflects (and communicates to the listener) assigned syntactic roles within the clause. The placement of clitics is discussed in Section 3.5 on syntax.

3.4.1 Roots and the question of lexical categories

The Kwakwala lexicon includes less than 2000 roots. Aside from some rare exceptions, these forms have the shape CVC₀₋, with a single onset consonant and between zero and three

consonants in the coda. The Boas dictionary includes forms which have lexicalized as combinations of a root and one or more suffixes; in some cases these suffixes are no longer productive morphemes, but exist only in fossilized forms. Roots require, at minimum, one suffix to fill out the form and make a free word; this is usually an aspect marker. For example, the citation form of the root *duq^w-*, meaning, 'see, look at' is minimally *duq^wa* (+*-a* FORM "the most common formative suffix... which expresses the simplest statement of the meaning of the stem" B47: 308), *duq^wəla* (+*-əla* CONT continuous), *duq^w?id* (-*(x)?id* MOM momentaneous), or *duq^wala* (+*-ala* POS positional).

The languages of the Pacific Northwest have long been the focus of a debate among linguists about whether their lexica have classes such as noun and verb — and, by extension, whether noun and verb should be considered universal linguistic categories (cf. Bach 1969, Jacobsen 1979, Kinkade 1983; Demirdache & Matthewson 1995; Walde 2004; Koch & Matthewson 2009 *inter alia*). Wakashan, Salishan and Chimakuan languages do indeed seem to share a characteristic of having lexical categories that are either thinly differentiated or not differentiated at all. What one might consider a noun is often derived from a root that describes an event or is easily used to predicate an event. Below, we see examples of syntactic nouns meaning 'table' and 'room' which are derived from roots that can just as easily be used as predicate nuclei.

(6) SYNTACTIC LABILITY OF ROOTS

<i>Tik^waloχda</i>	<i>nig^waçiχ</i>	<i>laχ</i>	<i>?ik^wayasa</i>	<i>hémxdəmitiχ.</i>
tik ^w -ala=oxda	nig ^w açi=χ	la=χ	?ik-i?(a)sa	həm-xdəm-°il=iχ
hang-POS=S.DEM	light=DEM	PREP=DEM	up=NMLZ=GEN	eat-CUST-INDOOR=DEM
'The light is hanging above the (a) dining table.'				(2014jan24_SW_3)

In the example above, the noun phrase ‘above the table’ follows a preposition *laχ* which marks it as the reference object to which the location of the light relates. The word identifying ‘above’ is derived from a nominalized (and possessed) word derived from the root *ʔik-* ‘up’, which just as easily forms words signifying events as words signifying entities. See the range of meanings derivable from *ʔik-* ‘up, above’.

(7) SEMANTIC LABILITY OF ROOTS

ʔik- ‘above’, ‘up’ (B47:23-24)

<i>ʔikisʔsta</i>	‘to go up’
<i>ʔikəbaxʔid</i>	‘to raise end up’
<i>ʔəʔikəmala</i>	‘to walk up’
<i>ʔikəGəmaʔa</i>	‘to look up’
<i>ʔikolcənd</i>	‘to fill more than half’

<i>ʔikala</i>	‘something high’
<i>ʔikiʔ</i>	‘above’
<i>ʔikəbala</i>	‘slanting rafters of house’
<i>ʔəʔikəbaʔcanala</i>	‘hands up a little’
<i>ʔikəGəm</i>	‘high mountain’
<i>ʔikad=elis</i>	‘upper world’
<i>ʔikəʔəʔala</i>	‘just above the other’
<i>ʔikodəχsti</i>	‘upper lip’

While the semantics of *ʔik-* might lead one to consider this root an adverb (‘up, above’) or a noun (‘that which is up or above’), the root allows speakers to derive events, entities, and properties from a single root, with the addition of derivational suffixes.

The root *həm-* ‘eat’ or ‘food’, used above to form the word ‘table’ in (6), also allows categorial productivity in derived words.

(8) SEMANTIC LABILITY OF ROOTS

həm- ‘eat, food’ (B47:86)

<i>həmikəyala</i>	‘to go after food’
<i>həmaʔis</i>	‘to go out and have a picnic’
<i>həmanoma</i>	‘to come to eat’

<i>hámalgiwala</i>	‘to eat first’
<i>hámikala</i>	‘to eat with’
<i>hámixsila</i>	‘to cook’
<i>həmsGəmiʔ</i>	‘sitting on a round thing eating’
<i>hámǵəlis</i>	‘to eat on beach’
<i>hamgila</i>	‘to give to eat’
<i>həmkəniʔ</i>	‘sitting on log eating’

<i>həmiʔ</i>	‘food’
<i>həmił</i>	‘food in house’
<i>hámut</i>	‘one with whom one eats’
<i>haʔəmut</i>	‘remains of food’
<i>háməʔa</i>	‘monster’
<i>háməʔaci</i>	‘food dish’
<i>həməʔák^w</i>	‘eaten’
<i>həməʔis</i>	‘food boiling in bottom of kettle’
<i>həməʔayu</i>	‘fork, pincers of crab’
<i>həmcó</i>	‘edible inside’

Of course, semantic lability is not a unique property of Wakashan or Salishan roots, but is found easily in languages such as English (cf. ‘work’).

The place-holder root *ʔu-* (simply glossed ‘root’) is described by Boas as “a stem designating an action, state, or noun which receives its specific meaning from the attached suffix” B47: 27). In (9), this root forms the nucleus of a word meaning ‘room’.

(9) SEMANTIC LABILITY OF ROOTS

<i>Lida</i>	<i>bəg^wánəmbidawá</i>	<i>laʔolil</i>	<i>laχ^wa ʔúʔolitiχ.</i>
L=ida	bəg ^w anəm-bidu-a	la-ʔəw-əla-°il	laχ ^w a ʔu-ʔəw-əla-°il=iχ
AUX=SBJ	boy-DIM-DEM	go-IN-CONT-INDOOR	PREP root-IN-CONT-INDOOR=DEM
‘The boy went into the (next) room.’			(2013jul17_BL_1.22)

One of the derivational suffixes applied to the root is a continuous aspect marker, illustrating that even temporal modification of a root can apply in the context of a form used as a syntactic argument. Again, *ʔu-* illustrates the lack of commitment of lexical roots to status as **event** or **entity**.

(10) SYNTACTIC LABILITY OF ROOTS

<i>ɖu-</i>	place-holder root
<i>ɖuɖsta</i>	‘to go straight into water’
<i>ɖuwit</i>	‘to move right across’
<i>ɖəwənsala</i>	‘to go down into water from beach’
<i>ɖəwəncis</i>	‘to go down to beach’
<i>ɖəwimil</i>	‘to watch a sleeper in the house’
<i>ɖúɖdʼayɪ</i>	‘flat place’
<i>ɖəɖxáwiʔ</i>	‘neck’
<i>ɖəwənxɪʔ</i>	‘edge’
<i>ɖáwaxstiʔ</i>	‘mouth of vessel’
<i>ɖəwiʔsta</i>	‘around’
<i>ɖúyayɪ</i>	‘middle’

In his 1911 sketch of K^wak^wala, Boas said the following: “Although the formal distinction of noun and verb is quite sharp, the great freedom with which nouns may be transformed into verbs, and verbs into nouns, makes a classification difficult. All stems seem to be neutral, neither noun nor verb; and their nominal or verbal character seems to depend solely upon the suffix with which they are used, although some suffixes are also neutral” (Boas 1911:441). Later, Boas wrote: “[a]ny ‘verb’ preceded by an article (*case marker -DR*) is a noun ... and any noun with predicative endings is a verb ...” (Boas 1947:280). However, when Boas says that the formal distinction of noun and verb is sharp, he is referring to the distinction as it is made *within the context of a clause*. No categorial ambiguity exists about the **syntactic** role of a word within a sentence: **word order and case marking with clitics and prepositions** ensures communicative clarity. On the other hand, the categorial status of underived and uninflected root lexemes is far less clear.

In the following chapters, I adopt the provisional assumption that K^wa□^wala nouns and verbs do not exist as lexical classes determinable through phonotactic shapes or combinatorial patterns. In his work with Haisla, and other languages, Bach called these

undifferentiated roots *contentives* and proposed that contentives are a cross-linguistic category, while nouns and verbs are language-specific (Bach 1969:115). K^wak^wala distinguishes between events and entities, but these distinctions emerge most clearly in the application of syntactic structure, as syntactic roles of predicates and arguments are clearly defined by the joint mechanisms of word order and inflectional marking in the context of the clause (cf. Kinkade 1983 on Salishan languages). In some cases, derivational marking also contributes to categoriality, but it contributes less than one might expect. Any lexical root or derived stem, whether its semantic sense is ‘noun-like’ (i.e. entity) or ‘verb-like’ (i.e. event), can be used as the core of a syntactic predicate or syntactic argument. A few derivational suffixes, such as the transitivizing *-d* (applied after locative suffixes), and *-(g)il* (‘to make something’), or the directional suffix *-(g)əł*, tend to be found predicates, while others such as the nominalizing *-!ał*, *-°ən* (for animals) and *-am’* (for plants) tend to form arguments. However even so, form including any of the suffixes above are not *restricted* to use as syntactic predicates and syntactic arguments, so the question of such derived forms’ status in the lexicon is more complex and is set aside for now.

Careful work with K^wak^wala roots may yet draw out subtle but inherent categorial differences between classes of roots, according to combinatorial distribution of certain derivational suffixes, or by means of another contrast in distributional behavior. Another possibility offered by some researchers has been the idea that all the roots are inherently verbs, describing events, and that certain roots can be made into words that identify static entities. K^wak^wala and other languages in the region do seem very verb-centric in other ways as well. However, the best test of a theoretical framework is whether it works in practice, and the unified category of *contentives* facilitates analysis of K^wak^wala morphology and

syntax, without generating new questions that are difficult to answer. For the purposes of the analysis here, it is provisionally sufficient to consider K^wak^wala roots a unified group of contentives, without needing to decide whether they are underlyingly verbs, nouns, or something else.

3.4.2 Bound morphemes and the derivational-inflectional continuum

As mentioned earlier, not all polysynthetic languages restrict (or prefer) expression of full sentences in a single word, nor does every words in a polysynthetic language such as K^wak^wala serve as a stand-alone sentence; the boundary between morphological structures and syntactic structures is actually clearly defined in more than one way in K^wak^wala. Chief among these distinguishing mechanisms is the contrast between K^wak^wala suffixes and K^wak^wala enclitics. A large set of derivational suffixes is employed in building words, and a small set of inflectional enclitics attaches to these words in the context of a clause to derive finite utterance-specific meaning. Derivational suffixes are strictly the property of morphological operations. Meanwhile, although clitics participate in the formation of the phonological word, they serve to identify the syntactic role of a word.

K^wak^wala contains two types of bound morphemes that identify functional, rather than lexical, categories: SUFFIXES, and ENCLITICS. All K^wak^wala suffixes are derivational, and all clitics are inflectional. This discussion of suffixes thus begins with a discussion of derivation and inflection in K^wak^wala, and the differences between them. Even categories that are often inflectional in other languages, such as tense, aspect, and plurality, are derivational categories in K^wak^wala. Meanwhile, K^wak^wala enclitics identify person (first, second, third), number (singular, plural), case (subject, primary object, secondary object),

definiteness, and possession; deictic information about proximity to speaker is also included in inflectional enclitics. In rapid speech, clitics are phonologically bound, but in slow or careful speech, speakers often choose to place pause-breaks before clitics, demonstrating that they are more separable than suffixes. While section 3.4.3 concerns the description of suffixes, the description of clitics is located in section 3.5, on syntax, because the placement of clitics happens not only after words have been formed, but after they have been ordered into a syntactic sequence.

As Bybee observed, “(o)ne of the most persistent undefinables in morphology is the distinction between derivational and inflectional morphology” (Bybee 1985:81). Many proposals exist; the most recent summary of these various approaches can be found in Lieber & štekauer (2014); one distinction, stated briefly, is that “derivational morphology...constitutes the field of word formation which studies the creation of new lexemes.... (while) [i]nflexional morphology examines the (declensional or conjugational) variation in the form of existing lexemes” (Olsen 2014: 26). Ten Hacken considers a crucial element of derivation to be the modification of the argument structure or syntactic category of a lexeme (Ten Hancken 1994: 303).

Rather than viewing the contrast between derivation and inflection as a hard boundary, Bybee proposes framing the relationship between derivation and inflection as a continuum which includes lexical expression at one end, inflectional expression at the other, and derivation as transitional between the two, reflecting diachronic processes of language change over time: “derivational morphology is transitional between lexical and inflectional expression, and ... the differences that can be observed between inflectional and derivational expression are just more prominent instances of the differences identifiable among

inflectional categories” (Bybee 1985: 82). Building on the foundation laid by previous scholars, Bybee provides several useful criteria for identifying where on this lexical-derivational-inflectional continuum a non-root morpheme lies.

These criteria are listed here.

- **Obligatoriness:** Inflectional morphemes are obligatory, required by the syntax of the sentence, while derivational morphemes are not. (Greenberg 1954)
- **Creation of new lexemes:** “derivational processes create new lexical items, while inflectional processes do not.” (Bybee 1985, Kuryłowicz 1964)
- **Paradigmatic structure:** inflection tends to operate in structured paradigms, while derivation does not (Bloomfield 1933)
- **Proximity to root:** derivational morphemes tend to occur closer to the root than inflectional morphemes (Bloomfield 1933; Nida 1946)
- **Quantity:** derivational morphemes tend to be more numerous than inflectional morphemes (Nida 1946)
- **Syntactic role:** inflection marks grammatical relations
- **Category-changing:** derivational morphemes may or may not change the syntactic category of a word, but inflection tends not to (Bybee 1985:81-82)

As Bybee points out, many of these proposals are theory-dependent. They require consensus about what constitutes a lexical item, a paradigm, a syntactic category — and such definitional challenges that can be as thorny as the difference between derivation and inflection. Furthermore, cross-linguistic data sometimes contradicts these generalizations. Nevertheless, Bybee employs these criteria as a way of locating a linguistic form on the continuum between derivation and inflection.

She finds that some derivational morphemes change the syntactic category of the word they attach to, and others do not — and that these two types of derivational morpheme interact differently with the semantics of the stem. She argues that derivational morphemes which do not change syntactic categories tend to produce big changes in meaning, such as the effect of the English prefix *un-* on verbs: “*untie, unhook, unzip*”, which reverses an event, or the effect of the English agentive nominalizer *-er*: “*garden, gardener; auction, auctioneer*” (Bybee 1985: 83), which produces a new referent.

On the other hand, Bybee argues that derivational morphemes that change the syntactic category of the word are not always as likely to impact the semantics of the resulting word. For example, the English gerund-forming suffix *-ing* makes a noun from a verb, but doesn’t describe a different event (Bybee 1985: 83). Bybee also argues that “derivational processes are more likely than inflectional processes to have lexical restrictions on their applicability.... The more general a morphological process, the more it will resemble an inflectional process” (Bybee 1985:84).

Despite the cross-linguistic value of a lexical-derivational-inflectional continuum, it turns out that in Kwakwala, derivation and inflection are not so difficult to distinguish according to the criteria described above, and that these categories align with structural classes. Suffixes are *optional*, not obligatory, while enclitics are syntactically *obligatory*. Suffixes occur closer to the stem, while enclitics attach at the outer edge (and are mobile depending on the sequence of words in a clause). New lexical items are formed by adding suffixes, and the resulting derived words are fit into syntactic structure with enclitics which do not transform the sense of the word. The set of suffixes and their associated meanings in Kwakwala is large, while the set of enclitics, and their associated meanings, is small. Enclitics

are structured in highly patterned paradigmatic sets, while only a few paradigms have emerged among suffixes. Enclitics mark grammatical relations (case, person), while suffixes do not. And finally, although there is controversy surrounding lexical class in K^wak^wala, some suffixes in K^wak^wala can indeed *assign* syntactic category to words, by creating a form that is most likely to be used as verb, or to be used as a noun in the context of a sentence. The conclusion with respect to K^wak^wala is relatively straightforward, then, that suffixes show derivational distribution and enclitics show inflectional distribution.

Nevertheless, derivation in K^wak^wala holds some surprises. Many K^wak^wala derivational suffixes express cross-linguistically common categories of experience, such as locative information, plurality, causality, entity classification, and voice. But others are less common, such as the marking of certain entities or categories of entities (i.e. ‘nominal’ suffixes), and the marking of certain types of events (i.e. ‘verbal suffixes’). Still other derivational suffixes express categories, such as tense, which are cross-linguistically common, but very rarely marked with derivational morphology. Bybee identified K^wak^wala as the only language in her sample of fifty languages for which tense was marked as a derivational rather than an inflectional category (Bybee 1985:161). In K^wak^wala, Bybee found that both tense and aspect are optional rather than obligatory; examples throughout Chapters 4 and 5 confirm this. Both types of suffixes can contribute to the formation of new lexical items, sometimes with unpredictable semantics, and can participate in deriving either predicates or arguments. Multiple aspectual affixes can co-occur with each other, and with tense markers. Finally, aspectual markers are highly mobile with the predicate word, reflecting principles of semantic compositionality; the variability of aspect markers with respect to morphological sequence is addressed in Chapter 6.

In a related search for diagnostic criteria, a contrast between ‘open’ and ‘closed’ classes is often equated with a structural contrast between two linguistic systems: between lexicon and grammar, or between content and function. Linguistic systems are generally presumed to arise from the interaction between a large ‘open-class’ of lexemes and a smaller ‘closed-class’ of functional grammatical morphemes, resulting in an infinite number of possible expressions. Talmy describes the prototypical relationship between open and closed classes of morphemes as follows:

“(a) fundamental design feature of language is that it has two subsystems, which can be designated as the grammatical and the lexical.... Together, the grammatical elements of a sentence determine the majority of the structure of the C(ognitive) R(epresentation), while the lexical elements together contribute the majority of its content. The grammatical specifications in a sentence, thus, provide a conceptual framework, or, imagistically, a skeletal structure of scaffolding for the conceptual material that is lexically specified.... the grammatical elements that are encountered, taken together, specify a crucial set of concepts.... The terms lexical and grammatical (are distinguished)... in terms of the traditional linguistic distinction between ‘open-class’ and ‘closed-class.’ A class of morphemes is considered open if it is quite large and readily augmentable relative to other classes. A class is considered closed if it is relatively small and fixed in membership” (Talmy 2000a: 21-22).

K^wak^wala, like all linguistic systems, combines lexical material with functional material in order to allow speakers to express themselves within the constraints of mutual intelligibility. However, the set of K^wak^wala roots that comprises the core lexicon is numbers less than 2000, relatively small and closed. The set of grammatical suffixes, meanwhile, is relatively large, approximately 400¹⁶, and —as we will see throughout this thesis — includes many forms semantically rich in content.

Here, I interpret the lexicon as diachronically and synchronically layered, itself arising from the interaction between two large but closed sets. Leaving aside the question of content versus function, and focusing merely on quantity within a set, we can say that both the set of roots and the set of suffixes are limited and relatively-closed form classes. At the

¹⁶ The issue of how fixed or open membership is in the class of grammatical suffixes is problematized by the introduction of new functional forms through grammaticalization, but neither this fact nor the rate at which new grams are created is unique to K^wak^wala, so I leave this matter aside.

same time, a large and relatively open class of lexical forms exists in the derived stems of the language. This lexical stratum of derived stems is itself a linguistic palimpsest, with deeper, older layers underlying newly generated forms.

As recognized by Haas for Nuuh-Chah-Nulth and Dididaht (1969) and by Bach for Haisla (1990), three other Wakashan languages, a small set of CV roots accepts ‘stem-extendors’ whose derivational function is not always transparent, giving rise to a larger set of minimal CVC stems which create ‘stem-families’ of semantically-related forms. These stems then accept further derivation proceeding in a more semantically transparent way; although it is important to recognize that such derived stems also include highly-lexicalized forms which appear in the lexicon.

To summarize, it is unproblematic to identify structural distinctions between derivation and inflection, and between morphology and syntax, in Kwakwala. On the other hand, the distinctions between lexicon and grammar, and (relatedly) between closed and open classes, are gradient in Kwakwala.

This section, 3.4.2., focused on the derivational-inflectional continuum. The next section, 3.4.3, provides an overview of the types of semantic categories marked in the language and the ways in which they contribute to the meaning of a Kwakwala word, with a focus on two sub-types of suffix: locative and directional.

3.4.3 Derivational Suffixes

The character of Kwakwala suffixes — their sheer number (nearing 400) and their inclusion of highly specific semantic categories — led early researchers such as Boas and Sapir to call suffixes such as these, found in Wakashan, Salishan and Chimakuan languages of the Pacific

Northwest, ‘lexical suffixes’. Kwakwala suffixes express a range of semantic categories, from typologically common meanings such as *-λ* FUTURE (future tense) and *-xənt* EVID ‘evidently’, to less common meanings such as *-^oalisəm* ‘to die of inner troubles’, *-λi?*, ‘moving on water’, and *-ama* ‘old and useless’.

Boas 1947 identifies 19 semantic categories of suffixes, including three types of locatives (general, specific, referring to body parts), limitations of form, actor, instrument, adverbs and adjectives, source of information, degree of certainty, conjunctions, and emotional attitudes. The locative suffixes are especially numerous; together, they constitute a quarter of the total of all suffixes in the language. Kwakwala suffixes are synchronically productive and compositional in some combinations, and lexicalized and idiomatic in others. See the combinations of *-!xsd* rear (‘behind’, ‘tail end’) with a range of lexical roots.

(11) PRODUCTIVITY OF SUFFIXES

-!xsd HIND ‘behind, tail end’

- a) *mənxsd*
məx- ‘hit’ + *-!xsd* HIND
 to be hit behind
- b) *mənxsdənd*
məx- ‘hit’ + *-!xsd* HIND + *-ənd* TR
 to hit behind
- c) *si?óx^wsde?*
sex^w- + *-!xsd* HIND + *-i?*
 to be paddling behind
- d) *si?óx^wsdentso?*
sex^w- ‘paddle’ + *-!xsd* HIND + *-ənd* TR + *-su?* PASS
 to be pushed from behind paddling
- e) *hətçaxsdé?*
həs- ‘wash in wolf’s dung’ + *-!xsd* HIND + *-i?* NMLZ
 tail of quadruped
- f) *dəmpaxsdeyasde*

dəm- ‘salt’ + *pá-* TASTE + *!xsd* HIND + *-asde* DRIED.MEAT.OF
halibut tail

- g) *wálaçəxsde?*
wálas ‘big’- + *-!xsd* HIND
one who has a big backside
- h) *sésaxsde?*
REDUP *sa-* ‘stretch out, measure’ + *-!xsd* HIND
skirt
- i) *ʔátə!xsdala*
ʔat- ‘recent’ *-!xsd* HIND + *ala* CONT
finally, afterwards

Analyses of semantically ‘contentful’ affixes in the syntax and morphology of polysynthetic languages range widely. Within a generative framework informed by the Mirror Principle (Baker 1985), where morphology considered a surface product of syntactic operations and ‘lexical suffixes’ are underlyingly lexical material that is output as phonologically-bound. Affixes are thus identified with a syntactic category (such as noun, verb or preposition) partly on the basis of a translation of their semantic content. Hence, Wojdak 2005 refers to suffixes in Nuuh-Chah-Nulth with verbal meaning as ‘affixal predicates’. Similarly, Baker considers locative affixes in Mohawk to be adpositions (Baker 1996: 399-400). Rice treats all Dene prefixes (or preverbs) as lexical items (Rice 2000). In some cases, such affixes are considered incorporates, even in the absence of cognate independent lexemes. Either way, they are assigned syntactic roles and the difference between syntax and morphology is discounted.

In contrast, Anderson 1992 argues for the necessity of a distinction between morphology and syntax, including languages with polysynthetic structure, and happens to draw evidence from Kwákwála to support this argument. Anderson points out that the incorporation hypothesis is unsupported in Kwákwála. First of all, there is no independent

evidence for a syntactic process of incorporation in K^wak^wala. Anderson observes that affixal material ‘incorporated’ into a word frequently *also* appears within the same sentence in syntactically independent non-cognate words, as we see in the three examples reprinted from Anderson 1992¹⁷ below.

(12) LOCATIVE SUFFIXES AND PREPOSITIONAL PHRASES

- a. *k^wi-čəw-əla=is* *laχis* *ḵáčəʔas*
 spit-IN-CONT-3.POSS PREP=DEM **kat-!as**
 paint-ROCK
 ‘He spits it (into it) into his paintdish.’
- b. *laʔi* *ʔəχd^oux^wčandəs* *laχis* *helkučanayi*
 la-i ʔəχ-^od^u-(x)čano-d=əs la=χis **hel-kut-(x)čano-i?**
 AUX-Q FOOT-FLAT-HAND-TR-DEM PREP=DEM right-SIDE-HAND-TERM
 ‘She puts it (on a flat thing, her hand) on the palm of her right hand.’
- c. *laʔi* *d^əəd^əəkəmc* *laχis* *GuG^wəmayi*
 la-i d^əək-(G)əm=as la=χis **GuG^wəma-i?**
 AUX-Q RED-rub-FACE=OBJ.2 PREP=DEM face-TERM
 ‘She rubs it (all over on face) on her face.’

Anderson also points out that while Baker identifies locative affixes as a type of preposition, there is also a syntactically separate preposition in K^wak^wala, *la*=DEM. However, all specific locative content derives from the verb-internal suffix (Anderson 1992:31). Anderson thus argues that the formation of morphologically complex words results from the rules of derivational morphology, rather than syntactic incorporation (Anderson 1992:34). The ‘lexical affixes’ in K^wak^wala, from this perspective, are not underlyingly lexical constituents such as prepositions, adverbs, nouns or verbs, but functional morphemes, albeit morphemes with highly specific semantic content.

¹⁷ The examples have been retranscribed in NAPA orthography, and slightly reanalyzed morphologically to align with other analyses throughout the thesis.

Looking at the behavior of the clitics in K^wak^wala, Anderson notes that the order of constituents in K^wak^wala is rather rigidly predicate-initial, usually followed by subject, objects (primary and secondary) and oblique. Clitics apply inflection to the constituents according to the order of elements: “the inflectional markers for case, deictic status, and possessor of every NP are found not within that NP itself but rather on the preceding element of the sentence —whatever that may be, and regardless of its grammatical relation to the NP in question” (Anderson 1992: 19).

Anderson concludes:

“In K^wak^wala, there is a richly detailed set of principles governing the internal structure of words, as well as an equally detailed set of principles governing the structure of phrases; and more importantly, ...the two sets of rules are distinct. It follows that in this language morphotactics cannot be reduced to syntax. Such a language would appear to pose problems for a program which treats the placement of individual morphemes as the responsibility of the syntax regardless of their organization into words, where syntactic and morphological structure are imposed as two parallel but independent organizations of the same surface material. On such a theory, the syntax does not respect (or even know about) the boundaries of words, but in K^wak^wala at least, it is clear that the syntax must organize exactly the independent words of the language into phrases, with quite a different system being responsible for the internal structure of words” (Anderson 1992: 37, ~ital DR).

There is no evidence of any pattern of syntactic incorporation whatsoever in K^wak^wala documentation, and no reason to identify these affixes as incorporated. Furthermore, as Boas notes, there is almost no trace of historical or cognate relationship between bound suffixes and lexical material with the same (type of) referent:

“There is no proof that the numerous suffixes were originally independent words. I have found only one case in which an independent word appears also as a suffix. This is -q̄əs to eat, which occurs independently as q̄əsə- ‘to eat meat’. We may also suspect that the suffix -p̄a to.taste and the stem p̄aq- to taste’, are related. It seems hardly justifiable to infer from these two cases that all suffixes must have originate from independent words; since the independence of these two stems may be a recent one, or their subordination may have been made according to analagous forms” (Boas 1911:446).

I draw on the following framework proposed by both Anderson and Boas: K^wak^wala suffixes are functional components of the grammar which combine with roots, other suffixes, and clitics, according to the rules of word formation or ‘morphotactics’ in K^wak^wala. Even in cases where these suffixes seem to have highly specific semantic

referents, they serve to identify a *category* of experience (whether entity, event, property or otherwise) rather than a specific referent. For this reason, it does not violate Grice's maxim of Quantity¹⁸ (Levinson 1983: 101) when a clause includes both the word-forming suffixes -*°dʷu* FLAT and -(*x*)*ćano* HAND and the prepositional phrase *laχis helkućanaγi* 'on (generic preposition) the palm of the right hand' in a sentence, or the suffix -*Gəm* face and the independent word *GuGʷəmaγi* 'face'. We can see examples of this in several sentences drawn from the modern corpus.

(13) MORPHOLOGICAL AND SYNTACTIC REFERENCE

- a. *ləmóχ* *típstəwoχda* *gíngənanəməχ* *láχʷa* *wápiχ.*
 læ-ʔəm=οχ típ-(ʔ)sta=οχda gíngənanəmə=χ la=χʷa wáp=iχ.
 AUX-OI-DEM STEP-LIQUID=DEM children=DEM PREP=DEM water=DEM
 'The children stepped (in liquid) in the water.' (2013jul17_LJ_1)
- b. *hónstəsoχda* *batl* *láχοχda* *pədl.*
 hón-(ʔ)sta-əls=οχda bátil la=χοχda pədl
 up.ves'-LIQUID-OUTSIDE=DEM bottle PREP=DEM puddle
 'The bottle is in the puddle.' (2013jan23_LJ)
- c. *típstəlsən* *laχοχda* *qʷasiχ.*
 típ-(ʔ)sta-əls=ən la=χοχda qʷas=iχ
 step-LIQUID-OUTSIDE=1.SBJ PREP=DEM dirt
 'The mud is on my feet. (I stepped (in liquid) in mud.)' (2014jan21_LJ_1)
- d. *ʔəχsəmóχda* *bal* *laχοχda* *lékəʔaχ.*
 ʔəχ-s(G)əm=οχda bal la=χοχda leka=aχ
 root-ROUND=DEM ball PREP=DEM rock=DEM
 'The ball is on the rock.' (2014jan23_LJ_1)
- e. *giʔəχsala* *laχοχ* *botiχ*
 gəy-χs-əla=Ø la=χοχ bot=iχ
 loc.cop-BOAT-CONT=3.SBJ PREP=DEM boat=DEM
 'It is/They are (on a boat) on the boat.' (2014jan23_LJ_1)

As is apparent in the first three examples, all of which contain the derivational suffix -(ʔ)sta

LIQUID attached to the predicate root, the lexically-specified referent following the syntactic

¹⁸ "(i) make your contribution as informative as is required for the current purposes of the exchange; (ii) do not make your contribution more informative than is required" (Levinson 1983: 101).

preposition distinguishes among different types of materials which all share the quality of being liquid: water, a puddle, mud. Mrs. Johnny noted that anything that was liquid — even jello — is an allowable referent accompanying a predicate with this suffix: “*hənstəls* means it’s in the water or whatever kind of liquid” (2014jan23_LJ_1). Similarly, she said about the suffix *-s(G)əm* ROUND, “it’s on something like a rock or lump or something” (2013jan22_LJ_1), indicating the categorial generality inherent in the use of this suffix. The last example, in which the derivational suffix *-χs* BOAT co-occurs with the prepositional phrase *laχa botiχ* ‘in the boat’, would seem to surely violate Grice’s maxim of Quantity, but it does not. If we understand that *-χs* BOAT identifies a category of entity (boats) and links it to the event described by the predicate root, while the phrase *laχa botiχ* identifies a specific boat in the world in which the things (potatoes, in this case) are sitting, we can understand that these two referents are not redundant. Rather, the derivational affix indicates a particular category, or type, of locative relationship — in liquid, on a round thing, on a face, on a hand, on a flat thing, on a boat — and the syntactic phrase allows the speaker to identify the actual referent, the ‘token’. The prepositional phrase in (13e.) could refer to any boat — a ferry, a cruiseship, Joe’s jetboat, Perry’s launch, a canoe on the beach. Derivational suffixes in K^wak^wala thus define a large set within which a specific referent occurs.

In her article on incorporation in Onondaga, Woodbury identified a similar process by which incorporating nouns into a predicate also served to indicate broad categories, such as ‘liquid’, in order to “make overt the membership of a given noun or noun phrase in a more inclusive class” (Woodbury 1975:11).¹⁹ An example is below.

(14) ONONDAGA INCORPORATION

hatihnekaéts *oe:tá:ki?*

¹⁹ Thanks to Andrew Garrett for this reference.

they/it-liquid-gather-asp it-tree-be.soup-asp(= maplesyrup)
'They gather maple syrup.' (Woodbury 1975:11)

As Woodbury says, "it is true for a majority of concrete, inanimate nouns, that when they are incorporated, the semantic component *be a kind or sort* is added to their lexical meaning....Noun incorporation narrows the sense of the lexical items by adding the semantic component *be a kind or sort*" (Woodbury 1975:12). Shaw et al. found similar categorial semantics for lexical suffixes in hənqəmīnəm Salish (Shaw et al. 2002).

This analytic stance also has a typographic consequence: because Kwak^ˈwala derivational suffixes are analyzed as strictly functional elements, they are glossed with small caps, following Leipzig conventions, even when they are extremely contentful, and even if this means the gloss is sometimes rather long.

Below I provide brief introductions to two subcategories of derivational suffix that are particularly relevant to the research presented here, concerning space: locative suffixes and directional suffixes.

3.4.3.1 Locative suffixes

This section describes the subset of derivational suffixes identified by Boas as locative suffixes, according to their semantic content. Boas grouped together affixes according to semantic categories that make intuitive sense. However, more detailed study of the internal structure of the predicate allows for the identification of some paradigmatic subclasses of affix according to their distribution and combinatorial constraints. The directional suffixes described in the next section are an example one such subclass.

Locative suffixes can attach to any lexical root in the language to provide information about the Ground and the relationship between Figure and Ground. These suffixes form a large class in the language; 108 suffixes, more than a quarter of the 400 suffixes employed in Kwakwala, are identified as ‘locative’ by Boas. Boas grouped them into three long lists: (1) general locatives, (2) special locatives, and (3) body-part locatives (Boas 1947: 237-240). The contents of these lists are described below.

The list of ‘general locatives’ includes 41 forms, some with familiar locative meanings that would be expressed with prepositions in English: *-χsu* THROUGH, *-[g]u* BETWEEN, *-^ouxsa* AWAY, *-k^ut* OPPOSITE, *-!χλα* HIND ‘behind, bottom, stern’, *-^ooy^o* MIDDLE, *-(g)usta* UP, *-axa* DOWN, *-(gə)λala* ABOVE, *-^oabo* UNDER, *-c^uw* IN, *-(s)iλsta* AROUND.

Other ‘general locative’ suffixes in Kwakwala classify the world with more specificity than English or many other languages might allow. Some indicate the attention of the language to shape and orientation of reference objects within the Ground: *-^onu* SIDE.ROUND ‘side of a round object’, *-^onus* SIDE.LONG ‘side of a long object’, *-s(G)əm* ROUND ‘on a round object’, *-^od^zu* FLAT ‘on a flat object’, *-^oχtu* TOP.LONG ‘on top of a long standing object’, *-ba* END.LONG ‘at the end of a long horizontal object’. Note that some of the suffixes contain an inherent relational sense, such as *-s(G)əm* ROUND and *-^od^zu* FLAT, which are only used when the Figure is **supported by** an object with the configuration described (such support is not necessarily horizontal; it can also be vertical such as a wall or window).

Others, such as *-(x)λα* FIRE ‘on (a) fire’ are examples of grammaticalization of culturally-relevant types of Ground. Some of the suffixes express concepts that are phrasal in English and might require more than one locative preposition in translation:

-beta DOWN.INTO ‘down into’, *-aǵəʂ* BACK.FORTH ‘back and forth’. At the other end of the spectrum, there are four suffixes distinguishing different events which are all captured by the single English preposition/adverb ‘across’: *-siq^wa* ACROSS.LAND ‘across, on land’, as in *nəpsiq^wil* (*nep-* ‘throw’, *-siq^w* ‘across, land’, *-^oil* indoor) ‘to throw across in house’; *-a^wil* ACROSS.WATER ‘across water’, as in *ǵəlqawiləla* ‘to swim across’; *-(x)səχλa* ACROSS.HILL ‘across a hill’ as in *lāxsəχλa* ‘to go across a hill’; and *-(x)sʔ* ACROSS.OBJ ‘across a handleable object’, as in *súpsʔənd* ‘to chop across’.

Also included in the category of ‘general locatives’ is an affix which behaves differently from many of the locatives mentioned above, *-wä* REV.LOC (i.e. reverse locative) with meanings such as ‘off, away from, out of’. The distribution of this suffix is broader than many of the other members of Boas’ ‘general locative’ list. With a root such as *tús-* ‘to cut any way with knife’, *-wä* REV.LOC combines with a momentaneous aspect marker *-(x)ʔid* to form *túsud* ‘to cut off’. When this morpheme occurs with a verb of locomotion or caused motion, however, it reverses the direction of the preceding root as in example (15).

(15) REVERSE LOCATIVE SUFFIX

<i>daχʔid</i>	‘to take with hand, to hold’	(Boas 1948: 155)
<i>dawala</i>	‘to let go of’	(Boas 1947: 331)

The suffix *-wä* also very often occurs with other locative suffixes in semantically transparent combinations, and has the effect of reversing the direction of the relationship between the Figure and Ground.

(16) REVERSE LOCATIVE WITH LOCATIVE

<i>-wəls</i> OUT.HOUSE	<i>-wä</i> REV.LOC + <i>-əls</i> OUTSIDE
<i>-wəsta</i> OUT.LIQUID	<i>-wä</i> REV.LOC + <i>-ʔsta</i> LIQUID
<i>-wəqo</i> OUT.HOLE (out from among)	<i>-wä</i> REV.LOC + <i>-!q</i> AMONG
<i>-wəsdis</i> UP.FROM.BEACH	<i>-wä</i> REV.LOC + <i>-əsdis</i> DOWN.BEACH

(B47: 331)

The reverse locative very often combines with an atelic directional motion suffix, *-(g)əʔ* that can add a sense of motion even to an inherently static root, followed by a locative representing Source rather than Goal:

(17) REVERSE LOCATIVE WITH DIRECTIONAL

<i>-wəʔcəw</i> ‘out of’	<i>-wä</i> REV.LOC + <i>-(g)əʔ</i> DIR.ATEL + <i>-cəw</i> IN
<i>-wəʔdʔu</i> ‘off flat’	<i>-wä</i> REV.LOC + <i>-(g)əʔ</i> DIR.ATEL + <i>-dʔu</i> FLAT

These forms are also discussed in Chapter 4 as part of the description of motion expressions and caused motion expressions.

A second list of ‘special locatives’ provided by Boas includes a set of 35 semantically diverse suffixes. Some, much like some of the ‘general locatives’, further specify a region or smaller part of a reference object: *-^o(g)əga* IN.HOLLOW ‘inside a hollow object’, *-(k)əya* TOP.SURFACE ‘top of surface’. Others classify types of reference objects, with the relationship between Figure and Ground determined by the type of object and the pragmatic context; the most stereotypical relationship is one of support, although containment or submersion are also possible interpretations: *-(ʔs)to* OPENING ‘round opening, eye, door’, *-!a* ROCK ‘(on) rock’, *-^oχs* BOAT ‘(in, on) canoe’, *-^oχlu* EXTENSION ‘branches, leaves, body hair’, *-(g)as* ROOF, *-ayak* SURFACE.WATER, *-(ʔs)ta* LIQUID (often interpreted as water). Finally, Boas considered all locative suffixes with geospatial meanings to be examples of ‘special’ locatives: *-əncis* DOWN.BEACH ‘down to beach’, *-wəsdis* UP.BEACH ‘up from beach’, *-atus* DOWN.RIVER ‘down river, down inlet’, *-ʔusta* UP.RIVER, ‘up river’, *-(x)tá* SEAWARD ‘out to sea’, *-yag* LANDWARD ‘into woods’, *-^oamala* RIVER.BANK ‘along bank of river’, *-(x)siu* RIVER.MOUTH ‘mouth of river’, *-(x)iu* RIVER.RIDGE ‘top of hill, bank of river’.

Among the list of ‘special locatives’ are two locatives which, as we will see below, form a subclass among locatives: (1) -^o*il* INDOOR ‘in house, floor of house’, which contrasts with (2) -^o*is* OUTDOOR ‘open space, world, beach, bottom of sea, in body’. The suffixes -^o*il* and -^o*is* provide information about the event context. I gloss these as indoor and outdoor to reflect the way in which these contrasts are paired, and also to connote the way ‘indoors’ is used colloquially in English: inside a human-built structure, like a house or hall, as opposed to outside a human-built structure, on the land and under the sky.

Speakers often spontaneously provided sets of alternatives comparing situations ‘inside’ and ‘outside’, as in example (18).

(18) -^o*il* INDOOR AND -^o*is* OUTDOOR

- | | | |
|----|--|---|
| a. | <i>tig^wiloχda</i>
tiq- ^o il=οχ=da
hang-INDOOR=S.DEM=DEF
‘The lamp is hanging (inside).’ | <i>nig^waciχ.</i>
nig ^w aci=χ
lamp=T.DEM |
| b. | <i>tig^wisoχda</i>
tiq- ^o is=οχ=da
hang-OUTDOOR=S.DEM=DEF
‘The lamp is hanging (outside).’ | <i>nig^waciχ.</i>
nig ^w aci=χ
lamp=T.DEM |

(20140122_LJ_3)

Nicolson identifies these two suffixes as referring to a culturally salient contrast between the space inside the house and the space outside the house. She says:

“(t)he experience of ‘the house’ as intermediary between the body and the land has linguistically marked significance. Just as the world is divided into regions of the land and sea, the house divides space into inside and outside, interior and exterior. These are given expression in the often-applied suffixes -^oil ‘in house’ and -^ois ‘on beach or land....The division between the inside and the outside is a significant division in K^wak^wəkəw^wak^w spatial conceptualization that is marked by (these) locatives....” (Nicolson 2013:195-198).

It is not uncommon for two locative suffixes to occur together within a predicate. However, the INDOOR/OUTDOOR suffixes are unusual because they occur both in the standard position that other locatives suffixes occur, close to the root, and also as the last derivational

suffix before a word is inflected, following many other types of derivational suffixes. In this position, they inform the interpretation of other locative suffixes which precede them, as is the case with *-(ʔs)to* OPENING in (19), which is interpreted as a door or window, rather than an eye or mouth.

(19) CONTEXTUAL INTERPRETATION OF *-(ʔs)to* OPENING

paqʔstogaʔliʔ

paq-ʔsto-gaʔʔ-°iʔ

flat-OPENING-DIR.TEL-INDOOR

‘to lay something flat toward the door on the floor’

(2014jan31_SW_1)

The two suffixes *-°iʔ* INDOOR and *-°is* OUTDOOR and two others, *-əʔs* OUTSIDE and *-χs* BOAT, co-occur frequently with other locative suffixes to indicate the broader setting of an event.

While these four suffixes can occur immediately after a root to indicate immediate location, they also form a small subset of suffixes that can follow aspect markers and directional suffixes to provide the broader setting of an event.

(20) SUFFIXES IDENTIFYING BROADER LOCATIVE CONTEXT

<i>-°iʔ</i>	INDOOR	inside a built structure: in house, on floor	
<i>-°is</i>	OUTDOOR	outside; in the world; in open space; sea, river, lake bottom	
<i>-əχs</i>	BOAT	in or on any type of boat	
<i>-əʔs</i>	OUTSIDE.GROUND	outside on the ground	(B47: 328)

As described earlier, these suffixes reflect a broad dichotomy expressed in K^wak^wəkəw^w culture and the K^wak^wala language between the activities that take place inside a built space, and the activities that take place outside a built space. Sometimes, these general location suffixes immediately follow roots.

(21) *k^wəʔl-* ‘lie.down’ FOLLOWED BY *-°iʔ* INDOOR

Ləmóχ

k^wəʔlitoχda

čáčadaGəmbidoʔχ^w

qás mixʔidageʔ

Ləʔəm=oy kʷəl-°il=oyda çə-çədaGəm-bido=ʔχʷ qəs mix-(x)ʔid-ageʔ
 AUX-OI-DEM lie_down-INDOOR=S.DEM RED-female-DIM=DEM PURP sleep-mom-?
 ‘The little girl is lying on her bed so she can go to sleep.’ (2013jul14_BL_1_12)

Sometimes, as we have already seen, they follow directional suffixes.

That these suffixes can co-occur with other locative affixes is also evident in the following grammaticalized affixal combinations, with varying degrees of semantic transparency. Two so-called ‘special locative’ forms meaning ‘down to the beach’ and ‘up from the beach’ contain the suffix -°is.

(22) -°is OUTDOOR IN OTHER SUFFIXES

-wəsdis UP.BEACH ‘up from beach’

ʔuxʎusdisəla
 ʔuxʎ-wəsdis-əla
 carry_back- UP.BEACH-CONT
 ‘to carry up from beach’

-əncis DOWN.BEACH ‘down to beach’

ʎitəncisəla
 ʎit-əncis-əla
 invite-DOWN.BEACH-CONT
 ‘to call down to beach’

Boas notes that -wəsdis UP.BEACH may have originated as a combination of the reverse locative -wä with -(ʔs)ta LIQUID (glossed by Boas as ‘water, air’) and -°is outdoor, providing the compositional meaning ‘away from liquid outside’, with this outside liquid pragmatically inferred to be water. Boas provides no hypothesis about the morphemes which combined to form the opposing suffix -əncis DOWN.BEACH, and we can only hypothesize about what suffixes may have combined with -°is OUTDOOR to form -əncis: perhaps a combination of -°əns(a) SUBMERGE ‘under water, in throat’ and -°(x)t(a) SEAWARD ‘out to

sea'.²⁰ Nevertheless, each of these two suffixes now has a conventionalized interpretation which indicates fusion of two or three suffixes to become a single form. Interestingly, although these are grammatical affixes, the process by which they have formed does not conform to our expectations of grammaticalization that forms will move along a cline from concrete to abstract reference. Rather, with the conventionalization of the interpretation of *-°is* outdoor as 'beach', these forms have become more semantically specific rather than less.

Boas speculates that *-awit* across, includes the suffix *-°it* INDOOR, although the form as he recorded it no longer had any association with this meaning, and is used in many outdoor situations, including expressions of crossing water.

(23) *-awit* ACROSS

-awit across

gəlqawitəla
gəlq-²¹awit-əla
 swim-ACROSS-CONT
 'to swim across'

tawitəla
ta-awit-əla
 wade-ACROSS-CONT
 'to wade across'

nəmsawitəla
nəms-awit-əla
 sail.close.haul-ACROSS-ƏLA
 'canoe goes across'

Aside from a formal similarity, Boas points out that in Heiltsuq (Bella Bella), another Northern Wakashan language, there are additional suffixes *-awis* 'across on the ground' and *-awilala* 'across on rock' (B47: 313). The suffix *-°it* INDOOR is often pragmatically interpreted as meaning 'on the floor'; in this case, the suffix *-awit* may retain just the sense

²⁰ Where the consonants s meets t, a process of metathesis fuses these two into a single phoneme, /ç/.

²¹ *gəlq-* 'to pull with hands, to swim' (Boas 1948: 315)

of moving across in relation to a horizontal surface like a floor. (There is also the chance that it contains a homophonous but unrelated combination of segments.) In any case, as will be clear in the section below and in Chapter 4, the suffixes *-^oil* INDOOR and *-^ois* OUTDOOR are treated separately within the grammar of Kwakwala, especially in terms of affix ordering, and they should be considered a subclass of locative suffix.

The final category of locatives provided by Boas in his grammar is that of 32 ‘body part locatives’. These include forms such as *-(G)əm* FACE, *-(g)u* FOREHEAD, *-^oato* EAR, *-(ʔs)to* EYE, *-^oilba* NOSE, *-(^o)əχsta* MOUTH, *-(s)χa* TOOTH, *-(x)ʔcana* HAND, *-(x)sis* FOOT, *-!pela* CHEST, *-^oikəla* BACK, and *-!(k)ən* BODY. Additional suffixes are clearly compositional, such as the three below.

(24) BODY PART LOCATIVES

<i>-nuλəm</i> TEMPLE	<i>-nuλ</i> SIDE + <i>-(G)əm</i> FACE
<i>-^oiλχo</i> MOUTH	<i>-iλ</i> INTO.CLOSED ‘into enclosure with one open end, into house, into inlet’ + <i>-!χo</i> NECK
<i>-^oəndʔəm</i> THROAT	<i>-^oəns</i> SUBMERGE + <i>-[G]əm</i> HEAD

Many body part suffixes, such as *-(ʔs)to* EYE, *-(^o)əχsta* MOUTH, *-(s)χa* TOOTH, and *-!(k)ən* BODY, are used in non-human body contexts. Depending on pragmatic context, *-(ʔs)to* EYE can have a more abstract interpretation (i.e. ‘round opening’) or a more specific one (i.e. ‘door’, ‘window’ and ‘hole’). The locative suffix *-(x)ʔsto* OPENING is clearly related and also used in diverse contexts to identify a round opening as the Ground; this suffix too can serve to indicate an eye, a window, a door, or even the opening in a path through the woods. As we see in (25), the appropriate interpretation is clarified through additional suffixes and pragmatic context. In this case, the suffix *-[x]ʔsto* OPENING refers to the windowsill.

(25) *-(x)ʔsto* OPENING

giʔstuwəlaχiʔ *laχa* *windu*

gəy-(x)ʔsto-ʔawaleχ=iʔ laχa windu
 loc.cop-OPENING-LEFT=S.DEM PREP=DEM window
 ‘It’s on the windowsill.’ (20140122_LJ_1)

As is also true in English *-(°)əχsta* MOUTH has extended metaphorical function and can mean ‘opening of a bag’ or ‘opening of a vessel’.

(26) *-(°)əχsta* MOUTH

dʷúbəχsteʔida *dʷúbəχsti* *láχa* *lácam.*
 dʷub-əχsti-(?)i=da dʷubəχsti la=χa lacəm
 plug-MOUTH=SBJ=DEF cork PREP=DEM glass.bottle
 ‘The cork is plugged into the glass bottle.’ (20140124_SW_3)

The meaning of the suffix *-°ika* BACK (also with allomorphs *-°ikəla* and *-°igiʔ*) had, even by the time of Boas and Hunt’s documentation, also extended from concrete spatial reference to abstract temporal senses (Boas 1947:240):

(27) EXTENSION FROM CONCRETE TO ABSTRACT MEANING

SPATIAL *ʔədigiʔ*
 ʔat-°igiʔ
 sinew-BACK
 ‘back sinew’

mənígənd
 məχ-°igiʔ-ənd
 hit-BACK-MOM
 ‘to strike back’

TEMPORAL *ʔúbiga*
 ʔup-°igi
 roast-BACK
 ‘to roast afterwards’

nágikəla
 nak-°ika-əla
 drink-BACK-CONT
 ‘to drink afterwards’

Other forms are historically related but have diverged, as is the case with *-(G)əm* FACE and *-s(G)əm* ROUND.

(28) DIVERGENCE OF SUFFIXES

ʔəχəməla
ʔəχ-[G]əm-əla
root-FACE-CONT
'to have on face'

(B47: 239)

ʔəχsəməoxda *bol* *laχoxda* *ləkaχ*
ʔəχ-səm=oxda bol la=χoxda ləka=χ
stem-ROUND=S.DEM ball PREP=DEM rock=DEM
'The ball is on the rock.'

(2014jan23_LJ_1)

Body-part suffixes do not have a strictly locative function. They can also derive an attributive meaning from a root, as in the examples below (Boas 1947: 240).

(29) ATTRIBUTIVE FUNCTION OF BODY PART SUFFIXES

LOCATIVE *ʔəχćánənd*
ʔəχ-(x)ćana-ənd
root-HAND-MOM
'to put on hand'

ATTRIBUTIVE *tísəməćana*
tísəm-(x)ćana
stone-HAND
'stone-handed' III131.32

LOCATIVE *ʔáq^wilbənd*
ʔaq^w-^oilba-ənd
push-NOSE-MOM
'to shove against nose' III 349.20

ATTRIBUTIVE *g^wáwilbi?*
g^waχ^w-^oilba-i?
raven-NOSE-NMLZ
'raven nose'

ləmkaxi?
ləm-kaxi?
scab-KNEE
'with scabby knees'

məl'os
məl-!os
white-CHEEK
'white-cheeked'

As is apparent from the above description of the affixes identified as 'general', 'special' and 'body-part' locative suffixes by Boas, these categories are based on semantic association rather than grammatical distribution. In many cases, they are categories in translation from English or another European language. However, as described above, subcategories based on grammatical features of these affixes are discernible in many cases, especially as a result of examining the combinatorial constraints governing the ordering of affixes. A large set of true locatives does indeed exist, as well as a large set of body-part affixes. But Boas also included in his lists other affixes that should not be considered true locatives. The reverse locative *-wā* REV.LOC precedes many locative morphemes to transform the interpretation of the locative from source to goal. The pair *-°it* INDOOR and *-°is* OUTDOOR can follow locative morphemes in both static and kinetic constructions to indicate the broader context surrounding an event, and to provide pragmatic information which permits a listener to infer further information. Importantly, these suffixes can follow aspect markers, while other locative suffixes cannot. Another subclass of suffixes relating to spatial expressions, the set of directional suffixes, is introduced in the next section.

3.4.3.2 Directional Suffixes

This section introduces a subclass of suffixes that I call DIRECTIONAL suffixes. Cross-linguistically, a hybrid and varied set of morphemes have been identified as 'directional'

morphemes. There seems to be little agreement and consistency about what type of morpheme should be considered ‘directional’, and what should not. In ‘On the Karuk Directional Suffixes’, Macaulay 2004 revisits the suffixes identified as ‘directional’ by Bright, but begins by acknowledging: “the set of suffixes considered here actually marks more than just direction — in fact, they mark a variety of semantic categories, but I will call them directionals here just for ease of reference” (Macaulay 2004: 85). Mithun 1999 identifies several indigenous languages of the Pacific Northwest with rich affixal repertoires of locative and directional marking, and like the Karuk suffixes, these affixes include a wide variety of locative morphemes very similar to those found in Kwakwala and other languages of the Northwest, indicating a broad variety of relationships between Figure and Ground, such as support or attachment, and types of reference objects, including body parts, landscape features, and built structures. A subset of these suffixes indicates vector of motion, or direction.

The term ‘directional’ is thus commonly used in a broad sense that includes both Path semantics and Vector semantics. The grammar of Kwakwala includes many types of locative suffixes, indicating Support, Path, Direction, Location on the Body, and so on. However, the semantic value of Direction — the vector-based description of an object in motion, along with the presence or absence of an endpoint to that trajectory — has grammaticalized in a distinct paradigm of three morphemes described in this section, with wide distribution and a narrow functional application. In Kwakwala, these morphemes have contrastive distribution with each other and co-occur with other locative morphemes. While their presence is not obligatory in motion expressions, this paradigm is prominent in

K^wak^wala grammar. It is thus necessary, in K^wak^wala, to distinguish DIRECTIONAL morphemes from other types of locative morphemes. The directional forms are presented in Table 7.

Table 7: DIRECTIONAL SUFFIXES

FORM	MEANING	GLOSS
-(g)əł	motion without identified endpoint	DIR.ATEL
-(g)ał	motion toward goal	DIR.TEL
-wəł	motion away, off, out of; reversal of direction	DIR.REV

A metric of spatial telicity is employed in defining the function of these three forms. The first, -(g)əł, identified as ‘atelic directional’, expresses motion in any direction without indication of an endpoint (or starting point). The second, -(g)ał, identified as ‘telic directional’, expresses motion toward an endpoint. The third suffix, -wəł, expresses reversed direction — motion away, off from, out of a starting point. Some examples are presented below to illustrate the contrast among these forms

(30) ATELIC DIRECTIONAL SUFFIX -gəł

hənámgalil
 hən-(g)əł-°il
 upright.cont-DIR.ATEL-INDOOR
 ‘to take vessel from floor’ (B47:349)

(31) TELIC DIRECTIONAL SUFFIX -gał

hənámgalil
 hən-əm-(g)ał-°il
 upright.cont-PL.LOC-DIR.TEL-INDOOR
 ‘to put dishes down in house’ (B48:90)

These forms continue to be used today, as in (32).

(32) TELIC DIRECTIONAL SUFFIX -gał

<i>Ləmox</i>	<i>hənámgalilox</i>	<i>Palomaxa</i>	<i>nəʔənGaxix</i>
Lə-ʔəm=ox	hən-əm-gał-°il=ox	Paloma=xaxa	nəʔənGax=iχ
AUX-OI=DEM	upright.ves-PL.LOC-DIR.TEL-INDOOR=DEM	Paloma=OBJ1	basket=DEM
‘Paloma puts the baskets			

laχ^wa *wálqid^zilasix.*
 la=χ^wa walqid^zilas=iχ
 PREP=OBJ1 comfy.couch=DEM
 on the comfy couch.’

(2013aug13_BL)

In the examples with the telic directional *-(g)al*, the locative suffix following the directional suffix indicates the endpoint of motion. In these examples, a default interpretation for *-^oil* INDOOR is often ‘floor’, as in (30) and (31), but when accompanied by a prepositional phrase further specifying the Ground, it can also be any other type of surface within a house, as in (32), where the destination is a comfy couch above the floor. In (30), with atelic directional *-(g)al*, the locative suffix following the directional suffix identifies the starting point of motion, rather than the endpoint. This is not always the case with the atelic directional suffix; the locative can also identify the Ground against which movement takes place.

As mentioned in the previous section, the reverse directional form *-wəl* derives from the reverse locative *-wä* combined with the atelic directional *-(g)al*. Although the resulting suffix is transparently compositional, Boas included it separately in his list of these directional forms, defining it as “to reverse a motion in a certain direction” (B47: 246). Like Boas, I believe that these two forms co-occur often enough to merit entry as a single suffix. The example below illustrates the use of this form.

(33) REVERSE DIRECTIONAL SUFFIX *-wəl*

laʔəmóχ *ʔəpwəlčəwoχda* *wəqésix*
 la-ʔəm=óχ ʔəp-wəl-čəw=óχda wəqés=iχ
 AUX-OI-S.DEM climb-REV.DIR-IN-DEMfrog=DEM
 ‘The frog is climbing out of the jar.’

láχ^wa *dámxisGəmx*
 la=χ^wa dámxisGəm=χ
 PREP=DEM jar=DEM
 (2013jul15_BL_1)

Following the reverse directional suffix *-wəl*, the locative suffix *-cəw* IN indicates the enclosed space *out of which* the frog is climbing.

In his 1947 glossary of suffixes, where Boas provides a list of suffixes grouped according to semantic categories, the directional suffixes are grouped together as ‘auxiliary’. The three directional suffixes above were included, because they influence the interpretation of the locative suffixes following them. As Boas, noted, these forms “modify the meaning of the following suffixes” (B47: 246). The locative plural suffix *-əm*, apparent in (32), was included by Boas, because it occurs preceding locative suffixes to indicate a plural Figure.

The semantic functions of directional markers might be compared to case markers in other languages with a rich set of locative markers; *-wəl* can be thought of as an ABLATIVE, describing motion from a place, and *-(g)aʔl* can be thought of as an ALLATIVE, describing motion to or onto a place.. The most general directional suffix, *-(g)əʔl* might be thought of as an ANDATIVE, describing motion without an identified Source of Goal. (As mentioned earlier, *-wəl* is derived from the combination of the reverse locative suffix *-wa* ‘out of, away from, off’ with the directional suffix *-(g)əʔl*.) However, these terms are usually associated with case markers used to encode spatial relations in noun phrases. Finnish is a classic example.

(34) FINNISH CASE MARKING

NOMINATIVE	<i>talo</i>	‘house’
INESSIVE	<i>talossa</i>	‘in a/the house’
ILLATIVE	<i>taloon</i>	‘into the house’
ABLATIVE	<i>talolta</i>	‘from a/the house’
ALLATIVE	<i>talolle</i>	‘(on)to the house’

(Holmberg, Anders & Urpo Nikanne 1993:7)

However, unlike Finnish case markers, K^wak^wala directional suffixes (and other locative suffixes) attach to the **predicate**, not the **argument**. Case marking enclitics and prepositions comprise a separate set of forms in K^wak^wala that mark syntactic roles in every clause

without specifying semantic roles. These belong to an entirely separate inflectional repertoire of clitics which structure syntactic clauses in Kwakwala, linking predicates and arguments to create a meaningful sequence of words. Meanwhile, directional suffixes, along with locative suffixes, contribute to the holistic meaning of a predicate stem as part of the morphological system of word-formation. While they impact the argument structure (which is a property of the verb stem), directionals provide no syntactic link between a predicate and its arguments. The function and distribution of directional suffixes are described in further detail in Section 5.6.2.

3.4.4 Lexicalization

Adding Kwakwala suffixes to roots allows a single word to be packed with information. While these derivational suffixes are productive, they also fuse with stems in lexicalized combinations, and with other suffixes in grammaticalized combinations. Kwakwala, like many polysynthetic languages, seems to allow a gradient productivity for these grammatical forms; they are productive in some contexts and fused in others. Like grammaticalization, lexicalization is a gradient process, and it can be difficult to determine when a derived stem should be considered lexicalized, in the sense that it forms a unified base for additional derivation. Among the indications of lexicalization are (1) a lack of semantic transparency in the compositional meaning of combined root and stem(s); (2) frequent co-occurrence of certain combinations; (3) redundant application of certain derivational suffixes, such as aspect markers, that are already included in the lexicalized forms; and (4) phonological reduction or lack of transparency in morphophonological processes. None of these features is criterial, however, and some lexicalized forms show no phonological reduction, or are

semantically compositional, and yet lexicalization is apparent because the same aspect marker is applied twice, close to the root and at the outer edge of the word.

It is not only the combination of stem and suffix that can lexicalize; suffixes also fuse with each other. The suffix *-áci* CONTAINER ‘receptacle’ (i.e. box, dish, house, canoe) is a combination of two suffixes: *-°as* LOC.NMLZ (also a locative passive suffix) and *-li* or *-i?* NMLZ. It is found in *haməʔáci* ‘food dish’ (*ham-* ‘eat’); *nágaáci* ‘drinking vessel’ (*naq-* ‘drink’); *gáyaáci* ‘receptacle into which to put something’ (*gəy-* ‘be somewhere’); *baáci* ‘womb’ (*bəχ-* ‘to be pregnant’); *náq^wáci* ‘window’ (*náq^wəla* ‘moonlight’); *wáχáci* ‘pipe’ (*wáχ-* ‘smoke’); *dənd^wáci* ‘dance hall’ (from English dance). The grammaticalized suffix *-bala* ON.THE.WAY is also easily added to roots to derive new words.

(35) PRODUCTIVITY OF *-bala* ON.THE.WAY

<i>láλαχ^wbala</i>	‘to stand a little while and go on’	(<i>la-</i> ‘stand’)
<i>nánobala</i>	‘to aim while going along’	(<i>nəw-</i> ‘aim’)
<i>háʔəmsbala</i>	‘to pick berries while going along’	(<i>háms-</i> ‘to pick berries’)
<i>dádənx^wbala</i>	‘to sing while going along’	(<i>dənx-</i> ‘to sing’)
<i>dádabala</i>	‘to take while going along’	(<i>da-</i> ‘to handle’)
<i>yáyaqəntbala</i>	‘to talk while going along’	(<i>yaqənt-</i> ‘to talk’)
<i>q^wisabala</i>	‘to go away’	(<i>q^wis-</i> ‘dir. away, thither, far’)
<i>G^wásabala</i>	‘to come towards, approach’	(<i>G^was-</i> ‘dir. towards, hither, near’)

Note that *-bala* triggers class 5 reduplication of the stem, which locates a full vowel (of shape /a/) in the first syllable and a schwa or shortened vowel in the second syllable. As we can see, all of the examples above (and all available examples with the suffix *-bala*) combine only *-bala* and the lexical root, suggesting that this suffix does not combine easily with additional derivational suffixes within a word.

The suffix *-bala* ON.THE.WAY (‘on the way, while going along’, REDUP 5) is itself a grammaticalized combination of two suffixes: *-ba* END.LONG ‘at end of a long horizontal object’) and the continuous aspect marker *-əla* (*~əla*) CONT. Although this combined form is

not phonologically reduced, it has acquired a reduplication and stem expansion pattern which is a property of neither *-ba* nor *-əla*; in this sense, it has lost some transparency, and become transformed from the mere predictable composition of two suffixes.

While the examples above suggest a highly productive suffix, some semantic pairs exist where the only explanation for functional contrast is lexicalized differentiation of words with identical underlying morphemes. In the examples below, the grammaticalized suffix *-bala* combines with root to create lexicalized combination; In the three pairs below, the semantic contrast in the output is not predictable, it must simply be memorized by speakers.

(36) LEXICALIZED COMBINATIONS WITH *-bala*

<i>q^wisabala</i>	‘to go away’	(<i>q^wis-</i> ‘dir.away, thither, far’)
<i>q^wisbala</i>	‘tide, wind move away’	(<i>q^wis-</i> ‘dir.away, thither, far’)
<i>ʔáʔabala</i>	‘to walk in the woods’	(<i>ʔaʔ-</i> ‘landward’)
<i>ʔaʔəbala</i>	‘wind blowing inland’	(<i>ʔaʔ-</i> ‘landward’)
<i>ʕásabala</i>	‘to go along far at sea’	(<i>ʕas-</i> ‘seaward’)
<i>ʕásbala</i>	‘southwest wind’	(<i>ʕas-</i> ‘seaward’)

(B47: 338)

Other forms have transparent compositionality but are used so frequently that it is hard to imagine speakers compose the word each time they speak it. The word in (37) is used frequently in modern speech, even in English-dominant contexts.

(37) *halábala* ‘quickly’

<i>halábala</i>	‘(go/come along) quickly’	(<i>haʔ-</i> ‘quickly’)
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In many cases the semantics are not transparently derived from combinations of individual morphemes, indicating lexicalization. From *lá-* ‘to stand’ derives the forms *lawayu* ‘salmon weir’ (+ *-ayu* INST.NMLZ); *lapíq* ‘mast’ (+ *-píq* STICK ‘stick, tree’), and

lásławála ‘to say that you are willing’ (reduplication, suffix probably *-!ala* JOIN.IN ‘to join in’, REDUP5).

The instrumental nominalizer suffix *-ayu* is present in many lexicalized forms. The combination of *-ayu* INSTR.NMLZ and the root *q’an-* ‘sew’ has produced both *q’anýu* ‘thread’ and *q’anáyu* ‘needle’ (B47: 312). It may be that in its function as a nominalizer,²² *-ayu* is more likely to name entities and perhaps thus more likely to participate in stable combinations which persist, such as *dəGəmyú* ‘towel’ (*dəy-* ‘wipe’ + *-(G)əm* FACE + *-ayu* INSTR.NMLZ) (B47:312).

Boas’ dictionary entry for the root *la-* ‘go’ spans 5 pages, and includes 97 entries derived from the addition of one or more suffixes. The derivations are a mixture of transparent semantic compositionality and lexicalized forms. Some of these are provided here.

(38) *la-* DERIVATIONS

<i>lánsa</i>	‘to sink’	(+ <i>-əns</i>)	SUBMERGE ‘under.water, into.throat’
<i>lán’ca</i>	‘to go down to beach’	(+ <i>-enc’</i>)	DOWN.BEACH ‘down.to.beach’
<i>lába</i>	‘to finish’	(+ <i>-ba</i>)	END.LONG ‘end of long horizontal object’
<i>lábeta</i>	‘to penetrate’	(+ <i>-beta</i>)	DOWN.INTO ‘down.into, into.hole’

(B48: 395)

Some of these combinations are semantically transparent. In other cases, although we can see how given morphemes contribute to the semantic output of the derived word, it is not necessarily predictable, as with *lába* ‘to finish’ and *lábeta* ‘to penetrate.’

Multiple suffixes can stack onto a stem.

(39) *la-* DERIVATIONS

<i>láwəls</i>	‘to go out of house’	(-wā REV.LOC + -əls OUTSIDE)
<i>lálgəʔa</i>	‘to arrive’	(+ -gəʔa ARRIVE)

²² When attached to a predicate, *-ayu* also functions as a passive suffix, promoting secondary objects to subject position. This is described in Section 3.5.6.

<i>lágəʔaʔas</i>	‘a place where something arrives’	(+ -gəʔa + -!as LOC.NMLZ)
<i>lágəʔáʔəla</i>	‘to go on top, reach above’	(+ -gəʔa + -ʔəla ABOVE)

The combinations above are semantically accessible. Others are more difficult to parse and likely dependent on cultural context not accessible to outsiders. In some cases, the meanings of suffixes were not documented.

(40) NON-TRANSPARENT *la-* DERIVATIONS

<i>láyapa</i>	‘to take each other’s name, change places’	(+ -ap’ EACH.OTHER)
<i>lágusta</i>	‘to go on and sing (at the front of the bighouse)’	(+ -(g)usta UP)
<i>lámkaɣal</i>	‘to promise X as marriage present’	(+ -(k)əɣal NOISE’ to begin to make noise)

The modern corpus recorded with fluent first-language speakers of K^wak^wala suggests that many of the roots, suffixes, and derived stems recorded by Boas are still accessible in on-line production, even for speakers who live most of their daily lives in English. In an elicitation session, Mrs. Lagis easily substituted different locative suffixes for each other on a root *típ-* ‘step’, producing K^wak^wala forms meaning ‘put your feet on the floor’, ‘... on the beach’, ‘... on a rock’, ‘... on the ground’, ‘... on a canoe or any boat’, ‘use your feet like an agitator (i.e. in washing clothing)’, ‘step into a hole in the ground’, ‘...on the heel of someone’s shoe’, ‘...in the stern of the boat’, ‘walk on water’, ‘...along the branch’, ‘...off the edge (by accident)’, ‘...in water’, ‘...into the house’, ‘...(climb) up the ladder’, ‘lift your feet’.²³ She was also able to identify meanings of many derived predicates, taken from Boas and Hunt’s documentation, when presented to her, even though they were forms that she said she had never heard before or thought were old-fashioned.

In this section, we saw some examples of lexicalized combinations of stem and suffix, and grammaticalized combinations of suffixes with each other. The next section

²³ The K^wak^wala for these examples is provided in Chapter 5 on kinetic locatives.

begins to explore the question of how words are built, laying the foundation for further analysis in subsequent chapters.

3.4.5 Word-building: Zones and affix-ordering

This section begins to address the theme threaded through the thesis as a whole: the question of how predicates are formed in Kwakwaka. Chapter 6 focuses in more depth on the ordering of derivational affixes within a predicate. In this section, I introduce word-formation at a basic level and address the structural building blocks that combine to form a word in Kwakwaka. The Kwakwaka word exists at more than one level of structure. While Kwakwaka lacks compounding as a strategy of word formation (štekauer et al 2012), in the context of a phrase, a phonologically unified word includes both derivational and inflectional material.

What determines the sequence and placement of derivational affixes is a complex question, explored in detail in the concluding chapter. On the other hand, the sequence and placement of inflectional clitics is determined by constituent order within a phrase, and as constituent order is largely fixed, clitic placement is thus a relatively straightforward syntactic operation.

Word-formation can be understood as the product of both synchronic and diachronic processes that result in competing pressures. A relatively limited number of roots provide the basis for generation of a much larger lexicon of stems with the addition of derivational suffixes. Some of these combinations of roots and suffixes lexicalize and become automatized for speakers. Both roots and derived stems also form the nuclei for spontaneous innovations of words, produced online with the further addition of derivational morphemes. Morphologically complex words are strongly shaped by forces of semantic compositionality,

as will be shown in Chapter 6. At the same time, efficient production and processing by speakers and hearers is likely facilitated by subclasses of derivational suffixes, grammaticalized combinations of suffixes, and emergent sequencing ‘rules’. These ‘rules’ can also be used pedagogically, as ways of teaching the process of word building to language learners.

In order to understand how words are constructed in K^wak^wala, the fullest form of the word in K^wak^wala, the phonological word, can be thought of as having three structural ‘zones’. In its most limited incarnation, the base zone consists of a single morpheme, the ROOT, the nucleus of the K^wak^wala word. According to the morphotactic rules of K^wak^wala grammar (Anderson 1992), these roots form a class: there can only be one root in a word, and it comes first, at the left edge of the word. These roots are modified through two types of processes that expand and alter the root: reduplication and/or changes to the nuclear vowel of the root. These processes are briefly described in section 3.3.4 on morphophonology.

Derivational suffixes attach to the root. As described in the last section, in some cases, combinations of root and one or more suffixes lexicalize and form new stems; these stems also form a basic zone, a nucleus around which a new word can be generated.

At the rightmost edge of the word, inflectional enclitics anchor words within K^wak^wala phrasal syntax, flagging the role of a word as predicate or argument, and cross-referencing other elements of the clause for case, person, and deixis. In their prenominal form, clitics attach to the end of a word, but communicate syntactic information about the following constituent, linking elements in a syntactic matrix. In their pronominal form,

clitics are anaphoric. K^wak^wala also has a set of ‘postnominal’ suffixes that accompany certain prenominal forms, framing constituents.

Motivating much of the research presented here is a more limited question about how derivational affixes are ordered. With a huge inventory of suffixes, how do speakers of polysynthetic languages select and sequence the suffixes they need? How are words built in K^wak^wala, how are they produced by speakers, and how are they processed by listeners? Is the order simply determined in the moment of speaking? To what degree is the sequence determined by synchronic semantic considerations? Are there morphological (‘morphotactic’) rules as well, and if so, what is the nature of these rules? These questions are explored in Chapter 6.

3.5 Syntax: Clause-internal

This section describes the clause-internal syntax of K^wak^wala: the formal structure linking predicates, arguments, and adjuncts to create meaningful expression within a simple clause. Section 3.5.1 addresses constituent order in K^wak^wala. Section 3.5.2 addresses alignment, case-marking, and argument structure. Section 3.5.3 discusses ditransitive alignment. Section 3.5.4 covers prepositions and prepositional phrases, and section 3.5.5 describes the marking of possession, particularly where both possessor and possessed are expressed lexically. Section 3.5.6 introduces the multiple suffixes that passivize predicates in K^wak^wala and promote non-subjects to syntactic subject position in a K^wak^wala sentence. There are many aspects of K^wak^wala syntax not addressed here. One notable omission is an analysis of noun phrases; readers can read a detailed description of the internal structure of K^wak^wala nominal phrases in Chung 2008.

3.5.1 Word order

Pragmatically neutral phrases are predicate-initial, with so-called ‘VSO’ word order.

Predicates are distinguishable by their position at the front of the clause, the encliticized flagging of core pronominal arguments, and/or the adnominal marking of lexical subjects, and in some (few) cases the use of derivational suffixes specific to predicate forms.

There are three core arguments: SUBJECT, PRIMARY OBJECT, and SECONDARY OBJECT.

Adjuncts are all labelled OBLIQUE. The general order of constituents is thus V-SBJ-OBJ₁OBJ₂-OBL, although it is extremely rare to encounter examples with all three core arguments and an oblique expressed lexically, especially in spontaneous speech. The elicited example (41), illustrates the co-occurrence of three lexically expressed core arguments.

(41) ORDER OF LEXICAL CONSTITUENTS

PREDICATE	SUBJECT	PRIMARY OBJECT	SECONDARY OBJECT
<i>hənłʔidida</i>	<i>bəg^wánəmaχa</i>	<i>łáyisa</i>	<i>hənłəmi.</i>
hənł-(x)ʔid=i=da	bəg ^w anəma=χa	łayi=sa	hənłəm=i
shoot-MOM=SBJ=DEF	man=OBJ1	black.bear=OBJ2	gun=T.DEM
‘The man shot the black bear with a gun.’		(Shaw: 2008_07_21_003DS)	

In spontaneous speech, some sentences begin with a single predicate.

(42) SINGLE PREDICATE

<i>dəχ^wstá=Ø</i>	<i>laχa</i>	<i>wápiχ.</i>
dəχ ^w -(?)sta=Ø	la=χa	wáp=iχ
jump-liquid=3.SBJ	PREP=DEM	water=DEM
‘He/they jumped in the water.’		

(2013jul15_BL_frogstory)

However, in connected speech, and even in certain elicitation contexts, K^wak^wala sentences rarely begin with a single predicate. It is much more common for clauses to begin with complex predicates; first, a connective discourse marker, often called an AUXILIARY,

followed by a second CONTENT predicate that actually describes the event. The examples below illustrate this pattern; the auxiliary and content predicates are presented in bold.

(43) COMPLEX PREDICATES: AUXILIARIES AND CONTENT PREDICATES

- | | | | | |
|----|---|----------------------------------|----------------------------|---|
| a. | AUXILIARY | PREDICATE | SUBJECT | PRIMARY OBJECT |
| | <i>lámóχ</i> | <i>χómdikiloχda</i> | <i>gótaχ^wa</i> | <i>gənanəmχ.</i> |
| | <i>lə-ʔəm=οχ</i> | <i>χəms-°ikəla=οχda</i> | <i>got=aχ^wa</i> | <i>gənanəm=χ</i> |
| | AUX-OI=S.DEM | throw.down-BACK=S.DEM | goat=OBJ.1 | boy=T.DEM |
| | ‘The goat is piggy-backing the little boy.’ | | (2013jul15_BL_frogstory) | |
| | | | | |
| b. | AUXILIARY | PREDICATE | SUBJECT | OBLIQUE |
| | <i>lámox</i> | <i>ḗtəməyuxda</i> | <i>dəxdəxəlīṭ</i> | <i>láχ^wa babaG^wəmχ.</i> |
| | <i>lə-ʔəm=οχ</i> | <i>ḗλ-s(G)əm-ayu=οχda</i> | <i>dəxdəxəlīl</i> | <i>láχ^wa babaG^wəmχ</i> |
| | AUX-OI=S.DEM | fly-FACE-PASS.O2=S.DEM | owl=DEM | PREP boy |
| | ‘The owl was flying after the little boy.’ | | (2013aug8_BL) | |
| | | | | |
| c. | AUXILIARY | PREDICATE | SUBJECT | OBLIQUE |
| | <i>ləʔámóχ</i> | <i>ḗpəwəlcəwoχda</i> | <i>wəqəsiχ</i> | <i>láχ^wa dəmxisGəmχ</i> |
| | <i>lə-ʔəm=οχ</i> | <i>ḗp-wəl-čəw=οχda</i> | <i>wəqəsiχ</i> | <i>láχ^wa dəmxisGəmχ</i> |
| | AUX-OI=S.DEM | climb-REV.DIR-IN-S.DEM | frog | PREP jar |
| | ‘The frog is climbing out of the jar.’ | | (20130jul15_BL_3) | |

Note that in all three examples, the subject enclitic appears on both the auxiliary and the content predicate, although the definite form =*da* is reserved for the position immediately preceding the lexical subject. All three auxiliary discourse markers in the examples above contain what I have called an ‘old information’ suffix, -*ʔəm*, with allomorph -*m̄*, which links the current sentence to previously established topics. Berman 1982 and 1983 provides an excellent description of auxiliary markers, and the auxiliaries are briefly addressed as well in section 3.7 on discourse.

K^wak^wala does not limit the number of initial predicates to two, however; more than one content predicate can combine to describe a complex event, as in (44).

(44) COMPLEX PREDICATES: AUXILIARY AND TWO CONTENT PREDICATES

<i>Lámox</i>	<i>kʷálgaliť</i>	<i>méχʔidoχda</i>	<i>gənanəm ləwós wáciχ.</i>
Lə-ʔəm=ox	kʷəl-gaʔi-ʔiť	mex-(x)ʔid=oxda	gənanəm ləwós wáciχ.
AUX-OI=S.DEM	lie.down-DIR.TEL-INDOOR	sleep-MOM=S.DEM	boy CONJ dog
‘The little boy lay down with his dog to sleep.’			(2013jul15_BL_3)

Anderson pointed out that when two content predicates combine to form a complex predicate, only the second is marked with clitics indicating the complement.

(45) ARGUMENT MARKING ON SECOND OF TWO CONTENT PREDICATES

<i>láʔi</i>	<i>ʔəχʷʔáləχsa</i>	<i>dáləχis</i>	<i>nəbáyu.</i>
la=i	ʔəχ-wəl-əχsa	da-ala=χ=is	nəbayu
AUX=SBJ	root-REV.DIR-BOAT	hold-POS=OBJ2=3.POSS	warclub
‘He arose in the boat holding his warclub.’			(Anderson 1992:30)

While K^wak^wala is considered a predicate-initial language, it is very common for subjects to follow the auxiliary predicate and precede the content predicate. The modern corpus is full of such examples, and in fact, it seems to be the dominant pattern in connected speech. The examples below in (46) illustrate the frequency of this pattern, with subjects indicated in bold type.

(46) SUBJECT PRECEDING CONTENT PREDICATE

a.	<i>ləmán</i>	<i>ʔúmpa tíʔəqələχa</i>	<i>mámi</i>
	lə-ʔəm=ən	ʔumpa típ-!q-əla=χa	mami
	AUX-OI-1.POSS	father step-AMONG-CONT=OBJ.1	blankets
	<i>ləχa</i>	<i>ləməyis.</i>	
	la=χa	ləməyis.	
	PREP=DEM	beach	
	‘My dad is down the beach using his feet like an agitator, washing our blankets.’		
	(2013jul17_BL_1.8)		

b.	<i>Lida</i>	<i>bəgʷánəmbidawá</i>	<i>laćolit</i>	<i>laχʷa</i>	<i>ʔúćolitiχ.</i>
	La=idá	bəgʷanəm-bidu-a	la-ćəw-əla-ʔiť	la=χʷa	ʔúćoliti=ix.
	AUX=SBJ	boy-DIM=DEM	go-IN-CONT-INDOOR	PREP=DEM	room=DEM
	‘The boy went into the next room.’				
	(2013jul17_BL_1.22)				

c. *ləməoxda babaG^wəmbidux λəp^uustolax^wa nəyəʔaxənc.*
 lə-ʔəm=oxda **babaG^wəm-bidu=χ** λəp-(g)usto-əla=χ^wa nəyəʔa-χənc
 AUX-OI=S.DEM **boy-DIM=DEM** climb-UP-CONT=OBJ1 snow-EVID
 ‘The **little boy** climbed up what I think is (what must be) snow.’
 (2013jul15_BL_frogstory)

d. *ləməoxda w^uaciχ dəχusto*
 lə-ʔəm=oxda **w^uaci=χ** dəχ^w-(g)usto
 AUX-OI=S.DEM **dog=DEM** jump-UP
 ‘The dog jumped up

qəsle k^waksəy^apiχ^wa babaG^wəmχ
 qəsle k^wa-(x)səy^api=χ^wa babaG^wəm=χ
 PURP sit-SHOULDER=OBJ.1 boy=T.DEM
 and sat on the little boy’s shoulder.’ (2013jul15_BL_frogstory)

f. *ləməoxda w^uaciχ wəl lawələχus xumsiχ*
 lə-ʔəm=ox **w^uaci=χ** wəl la-wä-əla=χus xums=iχ
 AUX-OI=S.DEM **dog=dem** in.vain go-REV.LOC-CONT=3.POSS head=DEM

laχa dəmxisGəmx.
 la=χa dəmxisGəm=χ.
 PREP=DEM jar=T.DEM
 ‘The dog is trying to get his head out of the bottle.’ (2013jul15_BL_3.13)

g. *ləməoxda bəg^wanəmbidux dagustolaxus gəmbuca*
 lə-ʔəm=oxda **bəg^wanəm-bidu=χ** da-gusto-ala=χus gəmbuc-a
 AUX-OI=S.DEM **boy-DIM=DEM** hold-UP-POS=3.POSS boot-DEM

qəs dúcole laχ^w.
 qəs dúq^w-čəw-əla-i la=χ^w.
 PURP see-IN-CONT-3.SBJ PREP=3.OBJ2.
 ‘The little boy is holding up his gumboots so that he can look into it (them).’
 (2013jul15_BL_3)

There are some (rare) examples where quantified noun phrases seem to appear at the beginning of a sentence. However, in each of these cases, the first (quantifier) predicate can be analyzed as a predicate root with subject enclitic marking, preceding the argument that should be considered the true subject of the clause.

(47) QUANTIFIER PREDICATES

- a. *qínəmoχ* *həmdʷalə́ciχʷ* *gáχəlólə́o*
qin-ʔəm=ox **həmdʷalə́c=ixʷ** *gax-(g)ət-°ot-čəw*
 many-OI=S.DEM bees=DEM come-DIR.ATEL-MOT.DIR-IN
- laχʷa* *həmdʷaleciχ.*
 la=χʷa həmdʷaleci=χ
 PREP-DEM beehive=DEM
 ‘Lots of bees came out of the beehive.’ (2013aug16_LJSW_frogstory)

- b. *ńəmúχ* *guGʷəyúwása* *wəqəsiχ* *ʔəχʷətčóta*
ńəm=ox **guGʷəyú=(a)sa** **wəqes=iχ** *ʔəχ-wət-čəw-ała*
 one=S.DEM foot/leg=POSS frog=DEM root-REV.DIR-IN-POS
- láχʷa dəmxisGəmχ*
 laχʷa dəmxisGəm=χ
 PREP jar=DEM
 ‘One of the frog’s legs is out of the jar,
- lída* *ńəm* *gúGʷəyú* *ʔəχčóta* *láχʷa dəmxisGəmχ.*
 la=ida ńəm guGʷəyú ʔəχ-čəw-ała laχʷa dəmxisGəm=χ
 AUX=SBJ one foot/leg root-IN-POS PREP jar=DEM
 and one leg is in the jar.’ (2013jul15_BL_3)

In example (47a), the root *qin-* ‘many’ receives the connective discourse marker *-ʔəm* OI and the subject-marking enclitic *=ox* preceding the subject *həmdʷalə́ci* ‘bees’. In example (47b), the root *ńəm-* ‘one’ again takes the subject marking enclitic preceding the noun phrase *guGʷəyúwása wəqés* ‘frog’s foot’, which is the subject of the clause. These clauses are thus not so different from previous examples, except that instead of an initial auxiliary predicate, the sentence begins with a quantifier predicate.

However, there are other examples of subject-initial clauses, such as the following.

(48) SUBJECT-INITIAL CLAUSES

- dʷuńuqʷadʷa* *qalʔidi* *gaxən*
 dʷuńuqʷa-dʷa qal-(x)ʔidi gax=ən
 Dzunuqwa-EMPH carry PREP=1.OBL
 ‘Really the Dzunuqwa carried me away.’ (Boas 1947: 281)

The emphasis on the subject suggests that this would have been a pragmatically marked sentence, but more work needs to be done on the pragmatic conditions which permit subject-initial sentences. Recordings will be particularly helpful in determining whether variations in syntactic sequences are marked with intonation or distinctive prosodic patterns.

This section briefly introduced some of the patterns of constituent order in Kwakwala. The patterns of spontaneous speech and the pragmatic constraints governing constituent order remain to be explored in depth, with both qualitative and quantitative approaches. The clitics used to mark core arguments are described in section 3.5.2.

3.5.2 Case marking

As mentioned in the last section, Kwakwala employs three core argument cases and one oblique case. Alignment of both lexical and pronominal arguments is thoroughly nominative-accusative. For this reason, I use the terms ‘subject’ and ‘object’ in a syntactically-constrained sense, to describe the grouping of single arguments of intransitive predicates (‘S’ in the sense used by Comrie 1978 and Dixon 1979) with the ‘A’ (actor or agent) argument of a transitive or ditransitive predicate, as opposed to the ‘P’ (most patient-like argument) of a transitive predicate²⁴.

The three core argument types are identified here as SUBJECT (S), PRIMARY OBJECT (O₁), and SECONDARY OBJECT (O₂). These terms correspond with the terms ‘subject’, ‘object’, and ‘instrumental’ employed by Boas (B47) and with the terms ‘subject’, ‘object’, and ‘oblique’ employed by Levine (Levine 1980). My use of the terms ‘primary’ and ‘secondary’ for Kwakwala objects departs from previous traditions in order to emphasize the

²⁴ I follow here the tradition of labeling the primary agent or actor of a transitive verb with ‘A’ and the object argument of the transitive as ‘P’ (Comrie 1978).

core status of secondary objects and avoid the use of the term ‘oblique’ for what must be seen as a third core argument (Rosenblum 2013). Boas and Levine refer to prepositionally marked adjuncts as ‘indirect’ (Boas 1947:206), but I reserve the term ‘oblique’ (OBL) for non-core arguments. The terms ‘indirective’ and ‘secundative’ have been adopted to designate contrasting patterns of ditransitive alignment (Malchukov, Haspelmath and Comrie 2010:3), and Kwakwala displays strong secundative patterns. ‘Indirect’ is thus a misleading term when applied to the behavior and distribution of obliques in Kwakwala, which do not display ‘indirective’ alignment.

Paradigms of pronominal and adnominal enclitics exist for each of the three core arguments while non-core arguments occur in prepositional phrases at the end of a clause. Boas distinguishes between PRENOMINAL and POSTNOMINAL types of adnominal case marking of lexical arguments; both describe the position of adnominal clitics that co-occur with the lexical constituents which they modify. I adopt these terms here. Anderson 2005 also contains an extensive description of the distribution and function of clitics in Kwakwala, as part of a cross-linguistic exploration of characteristics of clitics.

Arguments are case-marked with enclitics that attach phonologically to the constituent immediately preceding the element they modify; the clitic leans left and attaches to the preceding word, but the domain of the clitic is to the right. Kwakwala has several paradigms of clitic forms, including pronominal forms, adnominal forms, and possessive forms. The example sentence below illustrates the behavior of these clitics in a sentence with maximal lexical specification of core arguments.

(49) PRONOMINAL ARGUMENT MARKING

<i>hənʔʔidi</i> da	<i>bəgʷánəma</i> χa	<i>ʎáyisa</i>	<i>hənλəmi</i> .
hənʎ-(x)ʔid= i=da	bəgʷanəma= χa	ʎáyí= sa	hənλəm=i
shoot-MOM= SBJ=DEF	man= OBJ1	black_bear= OBJ2	gun=T.DEM
V	S	O ₁	O ₂
‘The man shot the black bear with a gun.’		(Shaw: 2008_07_21_003DS)	

Arrows direct attention to the marking of lexical arguments on the preceding constituent with enclitics. The subject, *bəgʷanəm* ‘man’ is marked with the pronominal case marker =*i* attached to the predicate *hənʔʔid* ‘shoot’, the primary object *ʎáyí* ‘black bear’ is marked with the pronominal case marker =*χa* attached to the word *bəgʷánəm*, and the secondary object, *hənλəm* ‘gun’, is marked with a pronominal case marker =*sa*.

If the subject is a pronoun, it cliticizes to the initial constituent. The sequence of pronominal arguments echoes the SBJ-OBJ₁-OBJ₂ sequence of lexically expressed arguments. Thus one can form a complete transitive or ditransitive clause with a single prosodic word as in (50).

(50) PRONOMINAL ARGUMENT MARKING

- a. *χʷəsʔidəqs*
 χʷəs-(x)ʔid=**∅=q=s**
 strike-MOM=**3.SBJ=3.OBJ1=3.OBJ2**
 ‘He struck him with it.’ (B1947:281)
- b. *ńíkənλaq*
 ńík=ən(λ)=aq
 say=1S.SBJ=3.OBJ1
 ‘I said to him.’ (B47: 281, CX12.9)

In (50a), the third-person subject ‘He’ is marked with a zero-morpheme =*∅*, while both third-person primary (O₁) ‘him’ and secondary (O₂) ‘it’ arguments are encoded on the verb with =*q* and =*s*, respectively. In (50b), the predicate *ńík-* ‘to say’ encodes both the first-person singular subject =*ən(λ)* ‘I’ and the third-person primary object (O₁) =*aq* ‘him’ (the

recipient of communication). The domain of attachment for pronominal enclitics is the predicate, but in cases with multiply-expressed predicates, pronominal clitics can be distributed; the subject pronominal enclitic attaches to the first (auxiliary) predicate, and the object pronominals or pronominals attach to the second predicate. □

Oblique arguments are indicated in a prepositional phrase, constructed from a small set of grammaticalized predicates including *la-* ‘go’ and *gaχ-* ‘come’, combined with deictically-appropriate demonstratives indicating proximity, visibility, and (sometimes) possession, as in (51).

(51) OBLIQUE ARGUMENT MARKING

- | | | | | |
|----|---|--------------------------------------|--|--|
| a. | <i>kʷəʔilələʔi</i>
kʷa-°il-əla=i
sit-INDOOR-CONT=SBJ
‘Xaticən was sitting in his house.’ | <i>Xaticən</i>
Xaticən
Xaticən | <i>laχis</i>
la-χ=is
PREP=DEM =3.POSS | <i>gukʷ</i>
gukʷ
house
(B47:282, CII 2.1) |
| b. | <i>dəqʷsuwoχda</i>
dəqʷ-xsu=οχda
jump-THROUGH=S.DEMdog=DEM
‘The dog jumped out of the window.’ | <i>waciχ</i>
waci=χ
dog=DEM | <i>laχʷa</i>
la=χʷa
PREP=DEM | <i>winduχ.</i>
windu=χ
window=DEM
(2013jul15_BL_3.20) |

In (51a), the medial visible demonstrative =χ and third person distal possessive =*is* precede *gukʷ* ‘house’; in (51b), the medial invisible demonstrative =χʷa precedes *windu* ‘window’.

Prepositions are further described in section 3.5.4.

Prepositions are also used to avoid the cumbersome stacking of more than two adnominal or pronominal clitics on a predicate. When both primary and secondary objects occur in a sentence and both are marked on the predicate, speakers tend to extrapose the primary object to a prepositional phrase, leaving the secondary object marker in place. Boas notes that while subject, primary and secondary arguments can coalesce with the verb and can be expressed in a single predicate form as in (50b), “such cumbersome combinations are

avoided.” In such cases, the primary object is extraposed to a prepositional phrase (B1947: 251). Boas says, “Since Kwakiutl transforms the direct object *-q* into the indirect object *laq* whenever the verb takes an instrumental *s*, these forms *must be considered as a substitute for the direct object*, or as a direct object attached to the coordinate verb *la*” (B1947: 283, ital. DR). Later he says: “Sometimes we find forms in which, instead of the object *q*, the indirect object *laq* (i.e. the oblique-marking preposition ~DR) is used. While often accepted, the direct object is considered the proper form” (B47: 285). An example is below.

(52) EXTRAPOSITION OF PRIMARY OBJECT TO PREPOSITIONAL PHRASE

<i>laláʔi</i>	<i>ćósa</i>	<i>χəGámi</i>	<i>laq.</i>	
la-láʔi	ćəw=sa	χəGámi	laq	
AUX-Q	give=OBJ2	comb	OBJ1	
‘It is said she gave him a comb.’				(B47:285 CII 386.2)

In Kwákwála, the root *ćəw-* ‘give’ typically marks two semantic roles, the recipient and the theme (the thing given). As shown below in the discussion of ditransitive alignment and primary and secondary objects, Kwákwála marks recipients as primary object and themes as secondary object; in this case, the comb is the object given, and is marked as a secondary object. The recipient of the comb would normally be marked as a primary object, but is extraposed to a prepositional phrase *laq* ‘to him’.

Adnominal demonstrative forms are especially elaborate, reflecting a six-way contrast structured by intersecting axes of speaker-centered proximity and visibility. Pronominal and pronominal flagging on the predicate and adnominal case-marking on arguments allow reference-tracking at a high level of detail. With lexical arguments, the *pronominal* demonstrative forms occur attached to the predicate or preceding element and specify deictic information about the following lexical arguments. We, as well as Kwákwála

speakers themselves, can thus confidently interpret the argument structure of most predicates. Table 8 provides a table of pronominal and prenominal paradigms. Both sets of enclitics express an almost complete set of distinctions between subject (S), primary object (O₁) and secondary object (O₂), with the exception of the first-person forms, as discussed below.

Table 8: VERBAL ENCLITIC PRONOUNS AND PRENOUNS

	PRONOMINAL			PRENOMINAL		
	SBJ	OBJ1	OBJ2	SBJ	OBJ1	OBJ2
1.SG	=ən(λ)	---*	=ən(λ)	=i	=χ	=s
1.INCL	=ənʔs	---*	=ənʔs			
1.EXCL	=ənuχ ^w	---*	=ənuχ ^w			
2	=əs	=uλ	=us			
3	=∅	=q	=s			

(Adapted from Boas 1947:252)

The third-person subject pronominal is a morpheme with the shape -∅; when third-person subject pronominals are tagged on the verb, there is no ambiguity about the intended referent, because all other types of marking occur. Number is only marked in first-person, which also makes a distinction between inclusive and exclusive forms. Aside from marking number, the first-person forms in Kwakwala are unusual in other ways. S and O₂ marking are identical for first-person. Meanwhile the cells marking first-person O₁ are ‘empty’, reflecting the fact that first-person primary objects are not indexed on the verb, but are instead expressed using a clause-final prepositional phrase derived from the verb *gaχ*- ‘come’. As Boas noted, “(s)ince the objectives of the first person, the inclusive and exclusive, are missing, these forms always have indirect objects” (B47: 281). In other words, when an argument that is habitually marked as primary object of a predicate is in the first-

person, it will be expressed with a prepositional phrase beginning with *gaχ-*. The speaker-oriented prepositional phrase derived from *gaχ-* ‘come’ echoes other-directed prepositional phrases marked with the allative preposition *la-* derived from *la-* ‘go’, as seen above in (51).

The examples below illustrate the encoding of the first-person primary object with the prepositional phrase *gaχən* ‘to me’.

(53) FIRST PERSON PRIMARY OBJECT

- | | | | | |
|----|--|--|---|--|
| a. | <i>lamísə̄s</i>
la-ʔəm-is=əs
AUX-OI-Q=2.SBJ
‘And so you will name me (with) wolf.’ [□] | <i>liqalaλəs</i>
liqala-λ=(ə)s
name-FUT=OBJ2 | <i>ʔalañəm</i>
ʔalañəm
wolf | <i>gáχən</i>
gaχ=ən
PREP=1
(Anderson 2005:17) |
| b. | <i>dʷuñuqʷadʷa</i>
dʷuñuqʷa-dʷa
Dzunuqwa-EMPH
‘Really the Dzunuqwa carried me away.’ | <i>qalʔidi</i>
qal-(x)ʔidi
carry | <i>gaxən</i>
gax=ən
PREP=1
(Boas 1947: 281 CII 120.15) | |

Table 8 reflects another feature of the first person clitics: in transitive and ditransitive constructions with first person pronominals, a ‘phantom’ /λ/ segment surfaces between the subject marker and primary or secondary object marker.²⁵

(54) TRANSITIVE PREDICATE WITH 1.SG PRONOMINAL SUBJECT

- | | | | | |
|---|----------------------------------|--|---|--------------------|
| <i>lóλənλaxa</i>
loλ=ənλ=(a)xa
catch=1.SBJ=OBJ1
‘I got a very big fish yesterday.’ | <i>wáladʷi</i>
wáladʷi
big | <i>kútəlaχ</i>
kútəla=χ
fish=DEM | <i>tənswət.</i>
tənswət
yesterday | (2008_07_17_003BL) |
|---|----------------------------------|--|---|--------------------|

In addition to the pronominal and pronominal paradigms presented above, detailed paradigms of obligatory third-person demonstrative forms express a six-way deictic contrast: third-person demonstrative enclitics distinguish proximal, medial and distal relationships between a referent and the speaker, and the referent is also marked as visible or invisible. These distinctions are also fully expressed in a paradigm of possessive suffixes

²⁵ In Heiltsuq, the first person pronominal markers preserve the /λ/ coda (B47: 255).

encoding the distinction between subject and non-subject possessor, as well as in forms used for embedded purpose clauses. Every third-person referent is thus marked for visibility and proximity, as well as (in some cases) definiteness. In the interest of intelligibility of examples and economy of glossing, all demonstratives are here marked simply as DEM, although in some cases they are marked as S.DEM (subject) or T.DEM (terminal demonstrative). Interested readers can find additional tables identifying several paradigms of demonstrative, possessive and other types of marking in Appendix II: (i) third-person ‘verbal’ (marked on predicate) demonstrative enclitics for subjects and pronominal forms; (ii) third-person pronominal demonstrative enclitics for subjects, primary and secondary objects; (iii) subject/primary object combinations; (iv) subject/secondary object combinations; (v) possessive forms; (vi) purposive clause forms and (vii) special possessive marking in pronominal predicate clauses.

3.5.3 Ditransitive Alignment

Because K^wak^wala has a dual object system, with primary and secondary objects marked as core-arguments, it is relevant to consider typologies of ditransitive alignment. The labelling of objects as ‘primary’ and ‘secondary’ reflects the typological profile of ditransitive constructions in K^wak^wala, and acknowledges some resonance with the systems discussed for other languages by Dryer (1986) and Genetti (1997).²⁶ In contrast with transitive predicates, which are most typically two-argument constructions, ditransitive predicates are most typically three-argument constructions, with two objects. These objects tend to align with two semantic roles: that of *recipient* and that of *theme*, and the three arguments of a

²⁶ ‘Primary object’ and ‘secondary object’ are used here to refer only to morphosyntactic alignment in K^wak^wala grammar, not to the cross-linguistic generalizations proposed by Dryer in comparing direct/indirect object systems with primary/secondary object systems (Dryer 1986).

ditransitive construction can be schematized as A (AGENT), R (RECIPIENT) and T (THEME) (Malchukov, Haspelmath and Comrie 2010). Examples of typical ditransitive expressions in English are presented below, with corresponding semantic roles marked on brackets.

(55) ENGLISH DITRANSITIVE CONSTRUCTIONS

- a. [I]_A paid [the money]_T [to Pearl]_R.
[I]_A paid [Pearl]_R [the money]_T.
- b. [He]_A gave [the fish]_T [to Mike]_R.
[He]_A gave [Mike]_R [the fish]_T.

As is apparent from these English examples, languages, and verbs within languages, may display both types of patterns: the first sentences of each pair represent indirective alignment, and the second sentences represent secundative alignment. ‘Dative shift’ in English allows either themes or recipients to be marked as ‘direct objects’, in the same way as the single object of a transitive verb. The verbs ‘pay’ and ‘give’ in English both allow dative shift.²⁷

Alignment patterns of ditransitive verbs can be a property of individual lexemes or classes of verbs, rather than a rigid language-wide pattern. Nevertheless, different languages have different tendencies. In their discussion of typologies of ditransitive alignment, Malchukov, Haspelmath, and Comrie 2010 identified two patterns of ditransitive alignment of semantic roles and syntactic marking: INDIRECTIVE and SECUNDATIVE. The most typical ditransitive verbs are those of physical TRANSFER: ‘give’, ‘take’, ‘pay’, ‘sell’, ‘return’. Languages for which the **theme** of a ditransitive predicate is consistently marked in the same way as the single object of a transitive verb display **indirective alignment**. Languages

²⁷ Many analyses exist, from various theoretical stances, of dative shift/dative alternation/double object constructions. Cf. Dryer 1986; Givon 1984; and Thompson 1984 for discourse-functional perspectives.

for which the **recipient** of a ditransitive predicate tends to be marked in the same way as the single object of a transitive verb display **secundative** alignment.

Kʷakʷala displays a strong tendency toward SECUNDATIVE alignment of ditransitive predicates, with RECIPIENT marked as PRIMARY OBJECT and THEME marked as SECONDARY OBJECT. Although broad typological patterns of ditransitive alignment had not been identified at the time he wrote his grammar, Boas noted the pattern as well: “In many cases the object used for a purpose is expressed by the instrumental (‘secondary object’-DR) where our concept is rather that something is done to the object” (B47: 285).

Many of Kʷakʷala’s ditransitive predicates of physical transfer such as *čəw-* ‘to give’, *həlaq-* ‘to pay’, *ka-* ‘to put down dish’, *Gʷəq-* ‘pour’ follow a secundative pattern. The examples below illustrate some aspects of secundative marking in Kʷakʷala, according to which recipients are marked as primary objects and themes are marked as secondary objects.

(56) SECUNDATIVE ALIGNMENT OF TRANSFER VERBS

- a. *čəwí* *Maykasa* *kutəla* *gaxən.*
 čəw=i Mayk=(**a**)sa kutəla *gax=ən*
 give=SBJ Mike=OBJ2 fish 1SG.OBJ1
 ‘Mike gave me fish.’ (2012jul23_BL)
- b. *hətəxʔidami* *Pearl* *gəxənuʔxʷ.*
 həlaq-(x)ʔid-ʔəm=i Pearl *gəxənuʔxʷ*
 pay-MOM-OI=SBJ Pearl 1EXCL.OBJ1
 ‘Pearl paid us.’ (2012jul23_BL)
- c. *čos.*
 čəw=(**a**)s
 give=3.OBJ2
 ‘He gives it.’ (B47: 285)
- d. *Gʷeqas.*
Gʷeq=as.
 pour=3.OBJ2
 ‘He poured it.’ (B47:285 C26:151.134)

- e. *káGəmlilas* *laq.*
ká-(s)Gəm-lil=**as** **laq**
put.down.dish-FACE=INDOOR=**3.OBJ2** **3.OBJ1**
‘He placed it (the dish) in front of him.’ (B47:285 C26:151.135)
- f. *hetaxʔidami* *Pearl laqʷ.*
he₁laq-(x)ʔid-ʔəm=i *Pearl laqʷ*
pay-MOM-OI=SBJ *Pearl OBJ1*
‘Pearl paid him.’ (2012jul23_BL)
- g. *laláʔi cósə* *χəGəmi laq.*
la-láʔi cəw=**sa** *χəGəmi laq*
AUX-Q give=**OBJ2** *comb OBJ1*
‘It is said she gave him a comb.’ (B47:285 CII 386.2)

In (56a), the theme *kutəla* ‘fish’, is marked as a secondary object, while the first-person recipient is marked as a primary object, as it also is in (56b). In (56c), the theme is marked as a secondary object. In the last three sentences, we see examples of the extraposition of primary object recipients to prepositional phrases at the right edge of the phrase, as described in section 3.5.2 on case marking. These prepositional phrases are deceptively reminiscent of prepositional phrases in English, but the argument they mark is actually a primary object, extraposed because of a soft constraint against locating both primary and secondary object marking on the predicate.

K^wak^wala verbs of COMMUNICATION (say, sing, whisper, name) — *ník-* ‘say’ or ‘tell’, *wəʔ-* ‘ask’ and *li₁la-* ‘invite, call’ — also show a pattern of secundative alignment, in which the hearer (‘recipient’) is marked as primary object and the thing-said, sung, whispered or the name itself is marked as a secondary object.

(57) SECUNDATIVE ALIGNMENT OF COMMUNICATION VERBS

- a. *níkənlaq*
ník=ən₁laq
say=1SG.SBJ=3.OBJ1
‘I told him/I said to him.’ (B1947:281, CX12.19)

b.	<i>lamísəs</i>	<i>liqalaλəs</i>	<i>ʔalañəm</i>	<i>gáχən</i>
	la-ʔəm-is=əs	liq-ala-λ=(ə)s	ʔalañəm	gaχ=ən
	AUX-OI-Q=2.SBJ	name-CONT-FUT=OBJ2	wolf	PREP=1
	‘And so you will name me (with) wolf.’			(B47:285 C26:24.17)

liq- ‘to name’, like the verb *ñik-* ‘to say/tell’, marks the recipient (R) of a name (‘me’) as the primary object, and the name being bestowed upon the recipient (T) as the secondary object. Comparing the secondary object marking of the theme *ʔalañəm* ‘wolf’ in (57b.) with the first-person primary object marking, If the person (or object) [□] being named were second- or third-person, the primary-object status of the speaker would be encoded on the verb with *-uλ* (2.OBJ1) or *-(a)q* (3.OBJ1); but for a first-person argument, the primary-object status becomes clear through the use of the phrase *gaχən*.

Yet another class of predicates, those expressing MOTION events such as *qas-* ‘to walk’ and *siχ^w*- ‘to paddle’ are ditransitive in K^wak^wala, in the sense that they are dual object predicates, although the objects represent different semantic roles. With motion predicates, DESTINATION is marked as primary object and a CO-ACTOR or animate being coerced to move in the same way (such as a dog who is walked) is marked as secondary object.

(58) SECUNDATIVE ALIGNMENT OF MOTION VERBS

DESTINATION MARKED AS PRIMARY OBJECT

a.	<i>Wə,</i>	<i>lálaʔi qástuwixə[□]</i>	<i>ñaq^wala.</i>
	Wə,	la-láʔi qas-(ʔs)to=(i)χa	ñaq^wal-a
	Well	AUX-Q walk-MOM-OPENING=OBJ1	light-T.DEM
	‘Well, then it is said, he walked toward the light.’		
			(B1906, III1.4)

CO-ACTOR MARKED AS SECONDARY OBJECT

b.	<i>gaχsa</i>	<i>qasa</i>	
	gaχ=sa	qasa	
	come=OBJ2	sea.otter	
	‘He came with sea otters.’		
			(B47: 285)

Finally, as will become apparent in section 3.5.6 on passive morphosyntax., recognizing the secundative pattern of alignment in ditransitive verbs in K^wak^wala exposes

the syntactic properties of some of language's passive suffixes: the passive suffix *-su?* consistently promotes primary objects, and the suffixes *-ayu*, *-ano*, and *-əm*, which promote secondary objects. These are described briefly in Section 3.5.6 and in further detail in Rosenblum 2013.

3.5.4 Prepositions and prepositional phrases

A bit of an introduction to the analytic traditions regarding prepositions, prepositional phrases and the syntax of locative expressions is necessary to frame the discussion of prepositions in Kwakwaka'waka. For some syntacticians, the categories P (for preposition) and PP (for prepositional phrase) are considered fundamental universal grammatical categories. Even so, prepositions, and their criterial features, are the focus of considerable debate. Definitions of 'P' are variable and problematic. One debate concerns whether prepositions should be classed with the lexicon along with other basic categories considered to be universal, such as Nouns (N), Verbs (V), and Adjectives (A), or with functional items such as (D) and complementizers (C) (Asbury 2008). Prepositions (or adpositions more generally) are sometimes defined as a closed grammatical class of syntactic elements (usually free words, sometimes inflected roots) which link a noun or noun phrase to a verb and mark case, specifying its syntactic and/or semantic role (Thompson, p.c.). In a system with both morphological and syntactic case-markers, adpositions will often mark 'secondary' arguments (that is, not subjects but objects or obliques, not absolutes but ergatives). Finally, because semantic roles such as AGENT, PATIENT, THEME, RECIPIENT, GOAL and LOCATION correlate with and overlap with grammatical relations, syntactic forms are sometimes defined as inextricable from their (dominant) semantic role within syntax.

Because it is very common, cross-linguistically, for LOCATION to be marked as oblique with adpositional forms, and furthermore, in many well-studied languages, for these adpositions to reflect finer-grained *spatial* distinctions, some scholars consider the core function of a prepositional phrase to be marking location. For some syntacticians, the most common association between form and function for a prepositional phrase is, indeed, a locative prepositional phrase. Baker (1996), for example, identifies a set of Mohawk affixes with locative function as prepositions:

“Indeed, Mohawk has no clear and uncontroversial instances of the category P. It has no dative or benefactive adposition, no instrumental or comitative adposition, nothing corresponding to about or of in English....*There are, however, certain locative morphemes that might plausibly be analyzed as Ps: these are the four locative suffixes: ‘ke/hne ‘at, on, general location’, ku ‘in’, oku ‘under’, and akta ‘near’(emphasis DR).*...Some Iroquoianists have treated these morphemes as stative verb roots; others have considered them noun suffixes...In fact, these locative expressions typically display mixed behavior, acting in certain superficial ways like nouns or verbs, but showing subtle differences from both. This unique behavior suggests that there is a category P in these languages, after all....Thus, I assume that these are Ps without argument at this point; the properties that distinguish them as Ps from other categories will become clear....” (Baker 399-400).

However, as Mithun points out, the forms identified as prepositions by Baker are actually part of a long continuum of forms, beyond the four identified by Baker, “descended from stative verbs which incorporate nouns, but...now derivational nominalizers that create terms for places, at varying stages of grammaticalization....The full derived forms themselves can designate a location, but in the larger scheme of things, they are not relational for the syntax. Thus you can have a term for a place formed with -’*ke*, but syntactically it can be used for a source, goal, location at, etc. You can say Kahnawà:’*ke* is lovely’, or ‘I came from (all in the verb) Kahnawà:’*ke*’, or ‘I love Kahnawà:’*ke*’ etc. (kahná:wa’ is ‘rapids’, so Kahnawà:ke is ‘rapids place’; kahná:wakon would be ‘place under the rapids’, kahnawákta’ would be ‘place next to the rapids’). Any ‘mixed’ behavior is because of a grammaticalization trajectory. In fact, as in many languages, relations like ‘dative’, ‘benefactive’, ‘instrumental’ are expressed with verbal applicatives....these Mohawk affixes might be seen to function as

prepositions only if you're looking at the full English sentence translations you've given speakers to put into Mohawk. 'I'm going to Kahnawake' would be 'rapids-place away-I-go'" (Mithun, p.c.).

Similarly, Kwakwala offers strong evidence for distinguishing between a large class of locative suffixes and a small class of prepositions. Locative suffixes and prepositions co-occur and work together within the syntax. Formally, Kwakwala prepositions are distinct from suffixes in the following ways: they are full bi- or tri-morphemic words grammaticalized from verb roots, inflected with demonstrative enclitics. Locative suffixes, on the other hand, are monomorphemic and obligatorily-bound. Functionally, prepositions in Kwakwala indicate oblique status of an argument or adjunct, while Kwakwala locative suffixes derive stems from roots in the process of word-formation before inflecting enclitics are added. Finally, they differ significantly in terms of semantic role in a locative context: Kwakwala prepositions are highly bleached of semantics and merely link a locative predicate to the lexical mention of a specific Ground context, while Kwakwala locative suffixes provide fine-grained categorization of types of Ground.

As mentioned briefly in the discussion of case marking, Kwakwala has three prepositions mark OBLIQUE arguments. Section 3.5.2 also described the use of *gaχ-* as a case-marking strategy to indicate primary objects in response to gap in the paradigm for first-person primary object marking, and the use of *la-* to mark third-person primary objects in contexts where secondary objects are also marked on the predicate.

Kwakwala prepositions have grammaticalized from three motion verbs, *la-* 'go', *gaχ-* 'come' and *gayuλ-* 'come.from', and retain some of the deictic contrast deriving from their lexical origins as roots describing spatial motion, although they have become relatively

semantically abstract. As a preposition, *gaχ-* is speaker-oriented, used to indicate first-person primary objects. Note that occurrences of *gaχ-* in non-case marking functions (for example, with a locative function) are very rare, and did not surface in the modern corpus. *gayuλ-* focuses on the point of origin (‘from’, ‘by’). *la-* is by far the most frequent preposition and the most semantically-bleached form, employed in many locative and motion expressions. In its function as a preposition, *la-* is maximally generic; it can be interpreted as ‘to’, ‘towards’, ‘in’, ‘on’, ‘into’ ‘at’, ‘near’, ‘next to’, and so on. Semantic specificity results from the predicate, its derivational suffixes and its lexically determined argument structure.

Some, including Boas, have analyzed prepositional phrases as embedded predicates, or serial verb constructions, but the example below, drawn from a narration of a dream in the modern corpus, offers evidence against this analysis and illustrates the functional contrast between different forms grammaticalized from *la-*. Every word in the sentence is historically related to the root *la-*, but three different grammaticalized functions are represented. The first constituent *laqalam’ano?χ*, is an auxiliary discourse marker (further described in section 3.7); the third, *laχano?χ*, is a preposition. Meanwhile, the second and last words are derivations of the lexical predicate *la-* expressing a motion event: the first *lagə?a*, is a content predicate, and the last word *lá?as* marked by the preposition, is a locative nominalization of the root *la-*.

(59) GRAMMATICALIZED FORMS OF *la-*

<i>laqalam’ano?χ</i>	<i>lagə?a</i>	<i>laχano?χ</i>	<i>lá?as</i> .
la-qala-?əm=əno?χ	la-gə?a	la=χano?χ	lá-?as.
AUX-EMPH-OI-1PL.SBJ	go-ARRIVE	PREP-1PL.POSS	go-LOC.NMLZ
‘We’re (really) almost there where we’re headed to/where we’re going.’			
(2014jan30_SW_1)			

In subsequent chapters it will become clear just how grammaticalized and semantically generic the preposition *la-* has become, and how little use of *la-* as a preposition entails a sense of ‘going’.

Some examples of prepositional phrases are presented below.

(60) PREPOSITIONS: *la-*, *gaχ-*, *gayuλ-*

- a. *dəχ^wstá* *laχa* *wápiχ.*
dəχ^w-(?)sta=Ø **la=χa** *wápi=iχ*
 jump-LIQUID=3.SBJ **PREP=DEM** water
 ‘He/they jumped in the water.’ (2013jul15_BL_frogstory)
- b. *lawəla* *wəł* *xumsix* *laq.*
la-wä-əla *wəł* *xums=iχ* **la=q**
 go-REV.LOC-CONT in_vain head=DEM **PREP=3.PRON**
 ‘He’s trying to get his head out of it.’ (2013jul15_BL_frogstory)
- c. *d^zuñuq^wad^za* *qalʔidi* *gaxən*
d^zuñuq^wa-d^za *qal-(x)ʔidi* **gax=ən**
 Dzunuqwa-EMPH carry-MOM **PREP=1**
 ‘Really the Dzunuqwa carried me away.’ (Boas 1947: 281 CII 120.15)
- c. *həłaqasuwí* *Perlasa* *dala* *gáyulaχ* *Mayk.*
həłaqas-suʔ=i *Perl=(a)sa* *dala* **gayuλ=aχ** *Mayk*
 pay-PASS=SBJ Pearl=OBJ2 money **PREP=DEM** *Mike*
 ‘Pearl was paid by Mike.’
 (Pearl was paid the money from Mike.) (2012jul23_BL)

Many more examples of prepositional phrases will be found throughout Chapters 4, 5, and 6, with some dedicated discussion of K^wak^wala prepositions in typological context in Chapter 5, Section 5.5.3 on ‘Preferred Ground Structure’.

3.5.4.1 Grammaticalization of prepositions

As mentioned earlier, K^wak^wala prepositions are historically-related to three motion roots: *la-* ‘go’, *gaχ-* ‘come’ and *gayuλ-* meaning ‘come from’; they have grammaticalized into

prepositions with, in some cases, corresponding meanings: *gaχ-* has a venitive meaning (deictically linked to the speaker), and *gayuλ-* has an ablative meaning. The preposition *la-* has the greatest distribution and the highest frequency, and hence the grammaticalization of *la-* has progressed the farthest; it is the most semantically-bleached and syntactically-fixed of the three prepositions. In certain contexts *la-* has an allative meaning, but in other contexts it is just a syntactic linker, identifying an oblique argument. In both static and kinetic locative contexts, *la-* serves to link a location with a subject or a predicate.

Examples (61) through (64) below illustrate the semantic generality of Kwakwala prepositions.

(61) SEMANTIC GENERALITY OF PREPOSITION

<i>gi'cuwida</i>	<i>ʔábəls láχa</i>	<i>χəlq^wa.</i>
gəy-čew=i=da	ʔabəls la=χa	χəlq ^w a
be_at-IN=3.SBJ=DEF	apple	bowl
	PREP=DEM.VIS	
'The apple is in the bowl.'		
		(20140122_LJ_1)

(62) SEMANTIC GENERALITY OF PREPOSITION

<i>giʔstuwálaχiʔ</i>	<i>laχa</i>	<i>windu</i>
gəy-(x)ʔsto-ʔawale=χiʔ	la=χa	windu
be_at-OPENING-INADV-S.DEM	PREP=DEM.VIS	window
'It's on the windowsill.'		
		(20140122_LJ_1)

(63) SEMANTIC GENERALITY OF PREPOSITION

<i>k^wəʔábolitoxda</i>	<i>búsiχ</i>	<i>láχ^wa</i>	<i>hámad^wuχ.</i>
k ^w a-°abo-əla-°il=oxda	busi=χ	la=χ^wa	hámad ^w u=χ
sit-UNDER-CONT-INDOOR=S.DEM	cat=DEM	PREP=DEM.NVIS	table=DEM
'The cat is sitting under the table.'			
			(20140122_LJ_1)

(64) SEMANTIC GENERALITY OF PREPOSITION

<i>qəpəlsóχda</i>	<i>hənχlánoχ</i>	<i>laχa</i>	<i>ʔəwínag^wis.</i>
qəp-(g)əł-!s=oxda	hənχlan=ox	la=χa	ʔəwínag ^w is
container_down-MOT-GROUND=S.DEM	pot=DEM	PREP=DEM	ground=DEM
'The pot fell down to the ground.'			
			(20140122_LJ_1)

The English translations of these examples require the prepositions ‘in’, ‘on’, ‘under’, and ‘down to’. Yet in all of these sentences, the preposition is a variation of *la-*, with variation in demonstratives marking the visibility of the object, but nothing more about spatial relations. (As we see in section, these demonstratives can also mark proximity of object in three degrees.)

K^wak^wala certainly allows prepositional phrases, but, as is evident above, they offer no indication of containment (such as ‘in’), support (such as ‘on’) or contiguity (such as ‘at’). Instead, a large set of locative suffixes in K^wak^wala contributes these meanings to the predicate (and thus to the clause as a whole), but they cannot be considered prepositions in form or function. They are derivational morphemes that contribute to the formation of the lexical word. Like other derivational morphemes, they influence the argument structure of the derived word. Revisiting the examples above, we can see the semantic contribution that locative suffixes make to the word.

(65) SEMANTIC SPECIFICITY OF LOCATIVE SUFFIX

<i>gícuwida</i>	<i>ʔábəls láχa</i>	<i>χə́lq^wa</i>	
gəy- čew =i=da	ʔabəls la=χa	χə́lq ^w a	
be_at-IN=3.SBJ=DEF	apple PREP=DEM.VIS	bowl	
‘The apple is in the bowl.’			(20140122_LJ_1)

In the example above, the sense of containment is carried by the suffix *-čəw* IN, attached to the locative copula *gəy-*. Similarly, in the example below, the suffix *-^oabo* under corresponds neatly to the meaning of the English preposition ‘under’ in the translation sentence.

(66) SEMANTIC SPECIFICITY OF LOCATIVE SUFFIX

<i>k^wəʔábolítoχda</i>	<i>búsiχ</i>	<i>láχ^wa</i>	<i>hámad^zuχ</i>
k ^w a- ^oabo -əla- ^o il=oχda	busi=χ	la=χ ^w a	hamad ^z u=χ
sit-UNDER-CONT-INDOOR=S.DEM	cat=DEM	PREP=DEM.NVIS	table=DEM
‘The cat is sitting under the table.’			(20140122_LJ_1)

However, the other locative suffixes do not offer tidy correspondence between the semantics of English prepositions and underlying spatial concepts.

(67) SEMANTIC SPECIFICITY OF LOCATIVE SUFFIX

<i>giʔsturwalaçiʔ</i>	<i>laça</i>	<i>windu</i>	
<i>gəy-(x)ʔsto-ʔawale=çiʔ</i>	<i>la=ça</i>	<i>windu</i>	
be_at-OPENING-INADV-S.DEM	PREP=DEM.VIS	window	
‘It’s on the windowsill.’			(20140122_LJ_1)

In (67), the same locative copula *gəy-* ‘be_at’ takes a different locative suffix, *-(x)ʔsto* OPENING, used for any type of Ground which is a round opening – an eye, a window, a door. The semantic sense of support crucial to the English preposition ‘on’ is not necessarily communicated by the suffix *-(x)ʔsto*, but rather understood through other means to be discussed below. Similarly, the English prepositions employed in a translation of example (68) below are not neatly contained in the single locative suffix *-!s* GROUND (in the sense of the earthen floor outside), but in the sequence of affixes following the root *qəp-* ‘upside down open-mouthed container’, combining a directional motion suffix *-(g)əʔ* MOT.ATEL²⁸ with *-!s* GROUND, indicating the endpoint of motion.

(68) SEMANTIC SPECIFICITY OF LOCATIVE SUFFIX

<i>qəpəʔ!sóçda</i>	<i>hənxʔánoç</i>	<i>laça</i>	<i>ʔəwinaç^{wis}</i>
<i>qəp-(g)əʔ!s=oxda</i>	<i>hənxʔan=ox</i>	<i>la=ça</i>	<i>ʔəwinaç^{wis}</i>
down_vessel-MOT.ATEL-GROUND=S.DEM	pot=DEM	PREP=DEM	ground=DEM
‘The pot fell down to the ground.’			

In these predicates, roots and suffixes work together to communicate spatial relations between Figure and Ground. The sections below illustrate the grammatical processes by which these meanings are constructed.

²⁸ It is curious that the ‘atelic’ directional suffix *-(g)əʔ* is used here, when the pot is falling to the ground. It may have something to do with the root, which refers to a vessel that is overturned. See Section 5.6.3 for further discussion of these directional suffixes.

3.5.4.2 Deictic variation of the prepositional form

While the preposition in a locative construction is always some form of the allative *la-* form, readers may have noticed that the enclitic demonstrative forms attached to *la-* vary.

Although they occur within the context of a prepositional phrase, and thus mark an oblique argument, this set of forms is homophonous with the paradigm of primary-object-marking enclitic demonstratives, reflecting the preposition's historical origins as a predicate.

Demonstratives reflect a six-way deictic distinction, between proximate, medial and distal and visible and invisible. Boas' chart of pronominal demonstrative markers is reproduced here, from his 1947 grammar.

Table 9: PRENOMINAL DEMONSTRATIVE ENCLITICS

	SUBJECT		PRIMARY OBJECT		SECONDARY OBJECT	
	DEF	N.DEF	DEF	N.DEF	DEF	N.DEF
PROX (NEAR 1P)	= <i>gada</i>	= <i>ga</i>	= <i>χgada</i>	= <i>χga</i>	= <i>sgada</i>	= <i>sga</i>
MED (NEAR 2P)	= <i>oχda</i>	= <i>oχ</i>	VIS = <i>χoχda</i>	VIS = <i>χoχ</i>	VIS = <i>soχda</i>	VIS = <i>soχ</i>
			N.VIS = <i>χ^wa</i>	N.VIS = <i>χ^w</i>	N.VIS = <i>sa</i>	N.VIS = <i>sa</i>
DIS (NEAR 3P)	= <i>ida</i> , = <i>a</i>	= <i>i</i>	= <i>χα</i>	= <i>χ</i>	= <i>sa</i>	= <i>sa</i>

The shaded cells are the set of demonstratives used for primary object reference; the same set occur attached to prepositions to mark oblique arguments. Among the examples we have seen so far, in (6), *tíg^wałoχda níg^waćiχ **laχ** ρíkayasa hémxdámiliχ* 'the light is hanging above the (a) table', the preposition *la-* takes the nondefinite distal enclitic =*χ*. In (28), *ρəχsəmoχda bol **laχoχda** ləkəχ*, 'the ball is on the rock', the demonstrative enclitic preceding the rock is the definite medial visible form =*χoχda*. The nondefinite medial form appear in (13e) *giρəχsala **laχoχ** botiχ* 'it is/they are on the (a) boat.' And in (25), *giρstuwálaχi **laχa** windu* 'it is on the windowsill', the preposition *la-* marks the window with the distal definite

demonstrative = χa . Notably, the speaker of the last example was referring to an actual window in the room we were in, as opposed to an abstract picture of some window some place. As mentioned earlier, the distribution of so-called ‘definite’ forms (or as Boas called them, ‘vocalic’ forms) is not well understood, although we know it relates to information structure. It seems that these forms may refer to items that are both definite and specific. More work is needed here.

The enclitics attaching to the prepositions mark the relationship between the speaker (viewer) and the Ground or reference object, as opposed to the relationship between the Figure and the reference object. In (25), *gi?stuw’alaxi? laxa windu* ‘it is on the windowsill’, the distal form is used because the window was at some distance from where we were sitting in the room, and the ‘definite’ form is used because the speaker was referring to a known, actual window; the demonstrative third-person pronominal form *-i?* on the predicate is also the distal form. In the example below, from a frog story, the preposition takes the medial, non-visible, definite form *la $\chi^w a$* .

(69) MEDIAL DEFINITE NON-VISIBLE PREPOSITION

<i>Ləm’isa</i>	<i>bábaG^wəmyχ</i>	<i>dúq^waχəla</i>	<i>láχ^wa</i>	<i>χ^wəpəsíχ.</i>
La- η m=isa	babaG ^w ə η m= χ	duq ^w -a χ -əla	la= $\chi^w a$	χ^w əpəs=i χ
AUX	boy=DEM	see-DOWN=CONT	PREP=MED.NVIS	hole=T.DEM
‘The little boy is looking down the hole.’				(20130714_BL_1)

In this case, the actual hole (beyond the surface evidence of the opening on the Ground) is not visible to the narrator, and she uses the non-visible form attached to the preposition *la-*. The hole is a specific, unique one, however, so she uses the definite form.

Although deixis is employed here to define the space of interaction and identify spatial relations between the speaker and the objects of discourse, the description of these deictic forms and the analysis of their distribution are not attended to here. Clearly, the

selection of forms reflects a delicate interplay between the speakers' perception of the immediate context and of the discourse context; in many cases, speakers are describing still or video images, which makes the contrast between deictic properties of the moment of interaction and those belonging to the narrative contained in the movie more difficult to evaluate. Because deictic reference in Kwakwala is complex, in the interests of space and efficiency, I gloss prenominal, pronominal, and postnominal enclitic demonstratives all as *dem*, with the exception of *s.dem* to distinguish subject reference and *t.dem* to indicate a clause-terminal 'postnominal' demonstrative (referring to the noun to which it is attached, rather than the following form). For readers interested in exploring the distribution and variation of deictic reference in the examples, the necessary tables are provided and in the appendix to make the detail of deictic reference accessible. A corollary study of deictic reference based on this corpus is anticipated to follow.

3.5.5 Possession

As mentioned in 3.5.2, a full paradigm of deictically sensitive possessive clitics exists for first person, second person, and third-person subject and non-subject possessors. These forms are glossed as *POSS* wherever they appear; the full paradigm is provided in Appendix II, and. Genitive noun phrases for which both possessor and possessed are lexically-expressed were not addressed by Boas 1947; I describe them in this section. In such constructions, *POSSESSED* precedes *POSSESSOR*. A genitive marker *=(a)sa*, identical to the third-person secondary object pronominal marker, attaches to the possessed argument, linking the two words in the following way: *POSSESSED-GEN POSSESSOR*.

Some examples of genitive phrases are provided in (70) below.

(70) GENITIVE CONSTRUCTIONS IN K^wAK^wALA

- a. *ʔixməʔəs wáldəmasa giGəmayi.*
ʔik-ʔəm=əʔəs waldəm=(a)sa giGəma-iʔ
 good-OI=DEM word=GEN chief-NOM
 ‘Good is the chief’s word.’ (B47: 222 CIII204.222)
- b. *kíʔusliʔata ɣ^wák^wənas ɣaxamala.*
kí-ʔus-l-ata ɣ^wák^wən=as(a) ɣa-ɣamala
 neg-DOUBT-Q-BUT canoe=GEN RED-orphan
 ‘None was, it is said, however, the canoe of the orphans.’ (B47:256)
- c. *k^wáləbiduɣda gənanemɣ láɣ xúməsasa təkúsiɣ.*
k^wa-ala=bidu=ɣda gənanem-ɣ la=ɣ xúməs=(a)sa təkús-iɣ
 sit-POS-DIM=S.DEM boy-DEM PREP head-GEN deer-T.DEM
 ‘The boy is stuck on the head of the deer’ (2014jan20_LJ)

Genitive phrases are employed in locative expressions to identify subregions of reference objects within the Ground.

(71) SUBREGION OF REFERENCE OBJECT

- a. *tig^waloɣda nig^waciɣ laɣ ʔíkayasa hémxdəmiliɣ.*
tik^w-ala=ɔɣda nig^waci=ɣ la=ɣ ʔika-iʔ=(a)sa həmxdəmíl=iɣ
 hang-POS=S.DEM light=DEM PREP=DEM up=NMLZ=GEN table=DEM
 ‘The light is hanging above the (a) dining table.’ (20140124_SW_3)
- b. *k^wásʔida bəg^wənəm laɣ ʔúnoyasa ləq^wás.*
k^wa-!s-ida bəg^wənəm la=ɣ ʔu-no-iʔ=(a)sa ləq^was
 sit-GROUND=S.DEM man PREP=DEM root-SIDE.RD-NOM=GEN fire
 ‘The man is sitting on the ground next to the campfire.’ (20140124_SW_3)
- c. *ʔəxálida səndayu laɣ ʔúxtoyasa loʔs.*
ʔəx-ala=ida səndayu la=ɣ ʔu-xto-iʔ=(a)sa loʔs
 root-POS=S.DEM flag PREP=DEM root-TOP-NMLZ=GEN pole
 ‘The flag is on top of the pole.’ (20140124_SW_3)
- d. *ʔəxálida səndayu laɣ nuguyoyasa loʔs.*
ʔəx-ala=ida səndayu la=ɣ nug-oʔo-ayu=sa loʔs
 root-POS=S.DEM flag PREP=DEM straight-MIDDLE-NMLZ=GEN pole
 ‘The flag is in the middle of the pole.’ (i.e. at half staff) (20140124_SW_3)

- e. *wənáliɬoχ^wda* *babaG^wəməχ* *laχoχ* *ʔálayusa* *k^ʔasiχ.*
wənaɬ-iɬ=oχ^wda *babaG^wəm=χ* *la=χoχ* **ʔaɬ-iʔ-asa** **k^was=iχ**
 hide-INDOOR=S.DEM boy=DEM PREP=DEM **back-NMLZ=OBJ2** **chair=DEM**
 The young boy is hiding behind the chair. (20140124_SW_1)

In the examples above, the subregion of a reference object is identified with a genitive phrase. The possessed noun is also analyzable as a nominalized root (B47: 276). The use of genitive constructions to express the subregion or component part of a locative Ground is explored further in Section 4.3.1.

3.5.6 Passive morphology

K^wak^wala grammar has six passivizing suffixes with different functions. Nakayama 1997 described passive morphology for another Wakashan language, Nuu-chah-nulth, but the Nuu-chah-nulth passive is limited to a single form with broad functional scope (Nakayama 1997). In K^wak^wala, multiple forms promote various syntactic and semantic roles to subject position.

The passive forms of K^wak^wala are presented in Table 10.

Table 10: PASSIVE SUFFIXES

PRIMARY OBJECT	<i>-suʔ</i>
SECONDARY OBJECT	<i>-ayu, -əm, -ano</i>
EXPERIENTIAL	<i>-ɬ</i>
LOCATIVE	<i>-ʔas</i>

These suffixes occur in contrastive distribution. The first two rows of the table list passive forms governed by SYNTACTIC ROLE of the promoted object, determined by the argument marking of semantic roles in an active construction. The primary object passive *-suʔ* promotes PRIMARY OBJECTS of an active transitive or ditransitive predicate to SUBJECT status. The secondary object passives *-ayu, -əm, and -ano* promote SECONDARY OBJECTS to subject

status. As mentioned in section 3.5.2 on Case Marking, many Kwakwala ditransitive predicates display secundative alignment, for which verbs meaning ‘give’, ‘say’, or ‘pay’ mark the recipient as a primary object and the theme -- the item said, given, or paid, for example -- as a secondary object. This pattern of secundative alignment in Kwakwala is confirmed by the consistently syntactic distribution of Kwakwala passive suffixes promoting primary and secondary objects, as can be seen in the examples below. In (72a), *beg^wanəm* the man being asked by *Gixdən*, is marked as a primary object. In (72b), the addition of the primary object passive *-su?* promotes the recipient of a question to subject.

(72) PRIMARY OBJECT PROMOTION WITH *-su?* PASSIVE

a. ACTIVE *wəλ(a)*-‘ask’

<i>łála?i</i>	wəłi	<i>Gixdənaxa</i>	<i>bəgwañəmi:</i>	“ <i>Mə?inoxo?as?</i> ”
<i>łá-la?i</i>	wəł=i	<i>Gixdən=xa</i>	<i>bəgwañəm=i:</i>	“ <i>Mə?inoxo?as?</i> ”
SEQ-QUOT	ask=SBJ	(name)=OBJ1	man=T.DEM	“Of.what.tribe.are.you?”
‘Then <i>Gixdən</i> asked the man, “What tribe are you from?”’				(B1895: M665.10)

b. PASSIVE *wəλ(a)*- ‘ask’ WITH PRIMARY OBJECT PASSIVE *-su?*

<i>łála?i</i>	wəłásuwá:	“ <i>Másus</i>	<i>yálagilisax?</i> ”	
<i>łá-la?i</i>	wəłá-su?-a	<i>Más=us</i>	<i>yála-gil-is=ax</i>	
SEQ-QUOT	ask-PASS-T.DEM	Q=2.SBJ	do-TR-OUTDOOR=T.DEM	
‘Then he was asked: “What are you making on the beach?”’				(B1895: M666.23)

The syntactic status of *Gixdən* as subject is clear from the prenominal subject-marking clitic *=i* preceding his name. The man he asks the question is marked as a primary object with the prenominal enclitic *=xa*. Later in the story, a question is asked of *Gixdən*; as the recipient of a question, *Gixdən* would be the primary object of the active predicate *wəλ(a)*- ‘ask’.

Instead, the primary object passive suffix *-su?* in example (72b) allows *Gixdən*, as the protagonist of the story, to remain in subject position.

The examples below, from the same story, illustrate the contrasting use of the secondary object passive morpheme *-ayu* to promote secondary object **theme** rather than

primary object **recipient** to subject. At the moment excerpted below, the protagonist *Gixdən* has finally found the final magical treasure he has been seeking, the decapitated heads of his rival chiefs; the decapitated heads (also in bold) are the subjects of these sentences.

(73) *čəw*- ‘give’ and *tik^w*- ‘hang.onto’ with SECONDARY OBJECT PASSIVE *-ayu*

- a. *gáχlaʔi* ***čáyida*** *qágukw laχ* *Gixdən*.
gaχ-laʔi ***čəw-ayu=ida*** *qágukw laχ* *Gixdən*
 come-QUOT **give-PASS=S.DEM** heads PREP *Gixdən* (name)
 ‘Now it is said the heads were given to *Gixdən*.’
- b. *Laʔám* ***tíkwiṭidayu*** *laχ* *Gixdən*
La-ʔəm ***tik^w-it^ʔ(x)ʔid-ayu=Ø*** *la=χ* *Gixdən*
 SEQ-OI **hang.on-BODY-MOM-PASS=3.SBJ** PREP=DEM *Gixdən* (name)
 ‘Then they (the heads) were hung onto *Gixdən*’s body.’ (B1895, M667.6-667.7)

The argument structures of these two predicates, *čəw*- ‘give’ and *tik^w*- ‘hang.onto’, specify that the heads, as themes, will be marked as secondary objects. In both sentences, *Gixdən*, the recipient, would otherwise be marked as a primary object, but is extraposed to a prepositional phrase. Thus the secondary object passive *-ayu* rather than the primary object *-suʔ* promotes the heads to subject position. In the first clause, the lexically expressed subject is preceded by the subject enclitic *=i*; in the second clause, the third-person subject is represented with a zero pronominal enclitic.

The third and fourth types of passive suffix are governed by semantically selected passive forms. Boas identifies *-l* is “(the) passive of verbs expressing sensations and mental actions; also sensations produced by some outer action” (Boas 1947:270), and Levine identifies *-l* as a focus morpheme referring to ‘lack of control’, and *-ʔas* as a ‘location focus’ morpheme, suggesting a semantically-grounded interpretation of these forms.

Both syntactic and semantic criteria are necessary for a complete description of the *K^wak^wala* passive paradigm. The data show the primary object and secondary object passives

to be syntactically selected, based on the argument structure of an active predicate stem. Meanwhile, one must look beyond syntax to explain the distribution of the remaining passives. Kwakwala passive morphology is further described in Rosenblum 2013.

Section 3.6, following this one, addresses mechanisms of clause-combining: the coordination and subordination of clauses.

3.6 Clause-combining: Coordination and subordination

Kwakwala has multiple strategies for coordination and subordination. I summarize them briefly here. See Boas 1947 pp. 273-274; 287 for further detail.

3.6.1 Synchronous coordination

Several predicates can combine to express synchronous events; no conjunctions are needed. These may be considered a type of serial verb construction. In the examples below, multiple predicate constructions are highlighted in boldface.

(74) COMPOUND PREDICATION

<i>ləmox</i>	<i>nálxila</i>	<i>gʷəyútəla</i>	<i>laχənoʔχ</i>	<i>ʔəχʔás,</i>
lə-ʔəm=ox	nəl-gil-Ø-a	gʷəy-ul-əla	la=χənoʔχ	ʔəχ-ʔas
AUX-OI=S.DEM	upriver-TR-3.SBJ-T	towards-MOT.DIR-CONT	PREP=1PL.POSS	root-LOC.NOM

‘He’s going up the river towards where we are (towards our place)

qʷisalaʔmox.
 qʷis-ała-ʔəm=ox
 far-POS-OI=S.DEM
 and it’s kind of far.’ (2014jan27_LJBL_2.20)

In (74) the subject enclitic attaches to the very first ‘auxiliary’ predicate. Following this, two predicates, *nálxila* ‘go upriver’ and *gʷəyútəla* ‘moving towards’ combine to indicate the motion upriver of the person they are describing. The second clause following the oblique

phrase *laχənoʔχ ʔəχʔas* ‘to our place’, *q^wʔsataʔmox* ‘and it’s kind of far’ is a separate clause, as indicated by the discourse connective suffix *-ʔəm* OI (a.k.a. ‘old, or given, information’ marker) and the third-person subject demonstrative *-Ø*.

In the sentence below, the speaker employs three separate predicates within a single clause; unlike the English translation, she only needs to mark herself as subject once, on the first predicate.

(75) COMPOUND PREDICATION

<i>híwaxən</i>	<i>ńikʔiqəla</i>	<i>lagəʔaxəlaχa</i>	80.
híwax=ən	ńikʔiq-əla	la-gəʔa-xəla=χa	80
never=1.SBJ	think-CONT	go-ARRIVE-STEADY=OBJ.1	80
‘I never thought I’d reach eighty.’			(2013aug13_15)

As mentioned in Section 3.5, the first predicate is flagged with a subject-marking enclitic, and other case-marking appears on the last constituent of a compound predicate. In this case, the primary object marker *=χa* attaches to the last predicate *lagəʔaxəla* ‘arrive at’.

Boas also provided examples of compound predicates expressing synchronous event structure.

(76) COMPOUND PREDICATION

<i>laʔi</i>	<i>λάχ^wəlaχsa</i>	<i>dəlaχis</i>	<i>nəbayu.</i>
la=i	λαχ^w-(g)əf=əχsa	da-əla=χis	nəbayu
AUX=DEM	stand-DIR.ATEL=BOAT	hold-CONT=3.POSS	warclub
‘He arose in the canoe holding his war club.’			(B47: 287 C26:41.107)

Note that in contexts of connected speech, almost every sentence, in the legacy corpus and in the modern documentation, begins with a connective discourse marker, glossed AUX.

Most frequently, these begin with a segment *la-* or *lə-*, grammaticalized from the root *la-* ‘go’. Although these forms are historically predicates and still participate syntactically by accepting subject-marking, I do not consider them part of the compound predicate which

provides information about an event, and for this reason they are not in boldface in the examples above. These auxiliary particles are described further in Section 3.7.

3.6.2 Subordination

The subordinate marker *qa-*, analyzed as a root by Boas (B47: 273), is a flexible resource which can be used by speakers in many ways. *qa-* can be translated roughly as ‘because’, or ‘on account of’ or even ‘for’. It combines with possessive prenominal and postnominal clitics to create a paradigm provided in Table (11).

Table 11: PURPOSIVE CONSTRUCTIONS

	PURPOSIVE FRAME
1.SG	<i>qən ----- a(ən)</i>
1.INCL	<i>qənc-----a(ənc)</i>
1.EXCL	<i>qənuʔχ^w -----a(ənuʔχ^w)</i>
2	<i>qaʔs-----əʔos</i>
3 (POSSR NOT SBJ)	<i>qaʔ-----is</i>
3 (POSSR SAME AS SBJ)	<i>qaʔs-----a</i>

The pairs of markers presented in the table above frame the purposive target, whether it is a single word or a full predicate phrase. The first element in the sequence above precedes the subordinated purposive clause (or entity) within a sentence, and the second element following the dashes signals the end of the clause. Together, they frame a subordinated clause.

Very frequently, purposive markers precede a fully separate predication, linking two separate events in a purposive relationship.

(77) CONNECTIVE *qa-*

- a. *siχ^wa* *qən* *sika* *ʔoʔəmχ.*
siχ^wa *qən* *sika* *ʔo-ʔəm=χ*
ride.boat **PURP** **spear** **AUX-OI=T.DEM**
'We used to ride and go spear them.'
(2014jan27_LJBL)

- b. *ləmoxda* *bəg^wanəmbidux* *dagustolaχus* *gəmbuca*
lə-ʔəm=oxda *bəg^wanəm-bidu=χ* *da-gusto-ala=χus* *gəmbuc-a*
AUX-OI=S.DEM **boy-DIM=DEM** **hold-UP-POS=3.POSS** **boot-DEM**
'The little boy is holding up his gumboots

qəs *dúcole* *laχ^w.*
qəs *dúq^w-cəw-əla-i* *la=χ^w*
PURP **see-IN-CONT-3.SBJ** **PREP=DEM**
so that he can look into it (them).'
(2013jul15_BL)

In many examples, the purposive *qəs* is followed by a grammaticalized form of *la-*, likely related to the auxiliary connective with the sense 'then', but here used within the context of a subordinate clause.

(78) *qəs le* SUBORDINATE CLAUSES

- a. *ləmox* *ləncisəla* *qəs-le?* *laxis* *bot.*
lə-ʔəm=ox *lə-ənčis-əla* *qəs-le?* *la=χis* *bot*
AUX-OI=S.DEM **go-DOWN.BEACH-CONT** **PURP-SUB** **go=3.POSS** **boat**
'He's walking (going) down to the beach in order to go to his boat.'
(2014jan27_LJBL_1.10)

- b. *ləmisgada* *waciχ* *ʔəpusto* *qəsle* *dələ*
lə-ʔəm-is=gada *waci=χ* *ʔəp-(g)usto* *qəs-le* *da-ala*
AUX-OI-QUOT=S.DEM **dog=DEM** **climb-UP** **PURP-SUB** **hold-POS**
'The dog jumped up and held

laxox *xumsasa* *babaG^wəmχ.*
la=χox *xums=asa* *babaG^wəm=χ*
PREP=DEM **head=GEN** **boy=DEM**
onto the little boy's head.'
(2013jul15_BL_frogstory)

- c. *ləmoxda* *waciχ* *dəχusto*
lə-ʔəm=oxda *waci=χ* *dəχ^w-(g)usto*
AUX-OI=S.DEM **dog=DEM** **jump-UP**
'The dog jumped up

<i>qasle</i>	<i>kʷaksəyʔapʷiχʷa</i>	<i>babaGʷəmχ</i>	
qasle	kʷa-(x)səyʔapʷi=χʷa	babaGʷəm=χ	
PURP-SUB	sit-SHOULDER=OBJ1	boy=DEM	

and sat on the little boy's shoulder.' (2013jul15_BL_frogstory)

The purposive can also be used within a simple clause, marking an entity, such as (in this case) someone's father.

(79) INTRACLASAL *qaʔ-*

<i>lʔngəʔa</i>	<i>qaʔən</i>	<i>ʔúmpaʔən</i>	
lʔn-gəʔa	qaʔ-ən	ʔúmpaʔən	
be_lost-ARRIVE (long.for)	PURP=1.POSS	father=1.PURP	

I long for my father. (B47: 274 CII 74.1)

In other contexts, however, the purposive *qa-* can be used to begin a new clause in a context of continuing intonation, as in (80).

(80) CLAUSE-INITIAL *qaʔ-*

<i>ləmoχda</i>	<i>wʔaciχ</i>	<i>dəχústola</i>	<i>laχa</i>	<i>beehiviχ,</i>
lə-ʔəm=οχda	wʔaci=χ	dəqʷ-(g)usto-əla	la=χα	beehiv=iχ
AUX-OI=S.DEM	dog=DEM	jump-UP-CONT	PREP=DEM	beehive=T.DEM

'The dog is jumping up to the beehive,

<i>qəʔoχda</i>	<i>beehiviχ.</i>	
qəʔ=οχda	beehiv=iχ	
PURP=S.DEM	beehive=T.DEM	

for the beehive.' (2013jul16_BL_14)

In (80) above, the purposive clause *qəʔoχda beehiviχ* 'for the beehive' is a bit of an afterthought, an speaker's alternate way of expressing the motivation of the dog in jumping up: he is trying to get to the beehive. Although the clause relies on anaphoric reference to the event described in the preceding clause (the dog jumping up) the presence of the subject-marking pronominal demonstrative clitic =οχda identifies this as a separate clause.

In the final example, the subordinate marker is used following an auxiliary derived from the third-person independent pronoun *he-*, now very commonly used on its own as an

expression of affirmation or emphasis. This is a fully separate sentence, with a subordinate marker immediately following the affirmative marker. The first-person subordinate marker *qən* reflects the direct involvement of the speaker and spatial proximity to the event being described: the cougars and wolves are coming into her yard.

(81) SUBORDINATE CLAUSE

<i>ʔúma ʔaqsamənoʔχ</i>	<i>wəʔoq^wis,</i>
ʔuma ʔaqsam=ənoʔχ	wəʔoq ^w is
really bad=1PL.SBJ	neighbor

‘Our neighbors are bad,

<i>ʔomas</i>	<i>qəpəlsaxisas</i>
ʔo-ʔəm=Ø=as	qəp-(g)əʔ-!s=aχ=is=as
AUX-OI=3.SBJ=OBJ2	overturn.vessel-DIR.ATEL-GROUND=OBJ1=3.POSS=OBJ2

they just dump their garbage in the yard. (They dump it out on the ground)

<i>heʔəm qən</i>	<i>gaxənax^wasa</i>	<i>bədi</i>	<i>ləw^a ʔuligən.</i>
he-ʔəm qən	gax-nax ^w a=sa	bədi	ləw ^a ʔuligən
AUX-OI PURP	come-SOMETIMES=OBJ2	cougar	CONJ wolf

That’s when the cougar and the wolves come around.’ (2014jan27_LJBL)

3.7 Discourse

Much remains to be understood about the structure of discourse in K^wak^wala: how topics are introduced and maintained, how sentences are connected to each other, how continuity is maintained in interaction. In this section, I address just two aspects of the K^wak^wala system of discourse continuity. In section 3.7.1, I briefly describe the so-called ‘auxiliary’ discourse markers that appear clause-initially in connected speech. In section 3.7.2, I describe the suffix *-ʔəm*, glossed OI for ‘old information’, which links an utterance to the preceding stream of speech, indicating discourse continuity.

3.7.1. Auxiliaries

The system of discourse markers which structure connected speech features prominently in both legacy and modern corpora, in multiple genres. Berman (1982; 1983) described the function and distribution in two articles and termed them ‘auxiliaries’. Berman says “in K^wak^wala narrative...deictic words — these deictic auxiliaries — related predications in the discourse, events in the narration, to *each other*, temporally, spatially, topically....(And) variation in the initial members of these constructions, the class of words I am calling auxiliaries...actually shape(s) and regulate(s) discourse ” (Berman 1982: 357).

The auxiliaries were not described in much detail by Boas, however, who did not consider these distinct from lexical roots. At the same time, these auxiliaries were a prominent feature of discourse even in the documentation Hunt and Boas recorded; they initiate almost every sentence, and yet they didn’t have an obvious translation equivalent in English. In early publications, discourse markers were simply excised from translations. In later published work, Boas inserted a ‘q’ for ‘quotative’ where they appear. However, the forms of these auxiliary discourse markers vary considerably, in both root and suffixes, and, as Berman notes, their variation is meaningful. I will briefly introduce and exemplify them here to allow readers to recognize auxiliaries and their function in later examples, and recommend Berman 1982 and 1983 for further description.

There are three roots employed most frequently in both the legacy and modern corpora. One is grammaticalized from *la-* ‘go’, another is grammaticalized from *gaχ-* ‘come’, and the third is grammaticalized from *he-*, the distal third person pronominal predicate root (B47: 258).²⁹ Occasionally, these auxiliaries occur bare, but they usually have

²⁹ In addition to two paradigms of nominal independent pronouns — for subject and object — K^wak^wala also has a set of pronominal predicate roots which can serve as the nucleus of a predicate.

a range of evidential and discourse marking suffixes which attach to them, and they also usually take the subject marking clitic for the sentence. An example of a bare root auxiliary is below.

(82) DISCOURSE MARKING AUXILIARY *la-*

la	<i>həmdʰaʰigada</i>	<i>tíqʷata</i>	<i>láχgada</i>	<i>q̣ʷáχix.</i>
la	<i>həmdʰaʰi=gada</i>	<i>tiqʷ-ała</i>	<i>la=χgada</i>	<i>q̣ʷaχ=iχ</i>
AUX	beehive=DEM	drop-POS	PREP=DEM	tree=DEM
‘The beehive was hanging down from the tree.’				(2013aug9_ESBL)

Each root has a deictic component which contributes to their function in structuring discourse: *la-*, the most frequent and least marked form, is usually translated as ‘and then’ or ‘then’ and indicates general progression of the narrative or interaction forward. Berman suggests that the inherently spatial motion-related senses of *la-* and *gaχ-* have extended metaphorically to “ongoingness” and “sequentiality” (Berman 1982: 380).

An excerpt from a narration of a dream by Mr. Wamiss is presented below to illustrate how these forms work in the context of connected speech. Auxiliaries appear in bold type. Detailed morpheme glossing is omitted to foreground the overall narrative structure and the role of auxiliaries in that structure.

(83) AUXILIARIES IN CONNECTED SPEECH

miχalənləχ Gánuł
‘I dreamt last night

qásʔanoʔχ ləwənl Gənləm.
I was walking with my wife. (We were walking.)

ləχa ʔáli,
Through the forest,

láəʔa ləχa dəndəmut.
up to the logged out area.

gaxʔida ʔulíGən níx qəs múmasʔideʔ gaxənoʔxʷ.
Then the wolves came meaning to tear us up.

ləmən dágexa wálas qʷáxʔoʔ.
I picked up a big stick.

ləmən xʷəsʔikas laq, yəxada maʔl ʔulígən.
And I hit really hard at them, the two wolves

ʔəlʔəmtʷis.
They both died.

láqalamənoʔxʷ lágəʔa láxanoʔxʷ lá ləʔas.
We're almost there where we're headed to.

ləmən níqəxa lax nitaʔsuʔ gónlex ʔálaχ ʔixʔidaʔ.
I just think someone was telling me that I'm almost better.

máʔpatʔəmlida cəqoləm kíyoχʷiʔ.
There's only two sicknesses left to go.

ləmisen ʔólakala ʔixʔida.
I'm almost better.'

(2014jan31_SW_1)

Because these auxiliary discourse markers are so common in connected speech, sentences without them are pragmatically marked: “(a)uxiliaries are obligatory in connected discourse; it is their absence, rather than their presence which must be explained....” (Berman 1983: 5). In the narrative above, the first few utterances introduce new information and establish the participants in the event, and their location and activity. After Mr. Wamiss has set the scene and the wolves arrive, he begins to employ the discourse marker *ləmən*, with *la-* meaning something like ‘then’, *-ʔəm* (allomorph *-m*) linking the information this sentence to the previous one, and *=ən* marking him as the first person subject.

One of the sentences from the dream is presented below with morphemic glossing.

(84) AUXILIARY DISCOURSE MARKER *la-*

<i>laqalamənoʔχ</i>	<i>lagəʔa</i>	<i>laχanoʔχ</i>	<i>láʔas.</i> ³⁰
la-qála-ʔəm=ənoʔχ.	la-gəʔa	la=χanoʔχ	lá-ʔas.
AUX-EMPH-OI-1PL.SBJ	go-ARRIVE	PREP-1PL.POSS	go-LOC.NMLZ

‘We’re (really) almost there where we’re headed to/where we’re going.’
 (2014jan30_SW_1)

In this example, the auxiliary discourse marker *la-* has two suffixes and a clitic. The emphatic marker *-qála* is followed by the given information discourse connective suffix *-ʔəm* (described in more detail in the next section), followed by the first person exclusive plural *=ənoʔχ* clitic.

On the other hand, *gaχ-* retains some of the speaker-directed semantics from the original predicate root meaning ‘come’. Berman argues that *gaχ-* is also used to indicate changes in topic (Berman 1982: 378).

(85) AUXILIARY DISCOURSE MARKER *gaχ-*

a. *laʔəm tiqaxagadaχ babagʷəmχ laχa qʷaχ.*
 ‘Then the little boy fell off the tree.’

<i>gaχʔəmχəʔegada</i>	<i>dəxdəχəliti</i>	<i>dúqʷataχ.</i>
gaχ-ʔəm=χaʔe=gada	dəxdəχəliti=i	dúqʷ-ata=χ
AUX-OI=?=DEM	owl=DEM	see-POS=DEM

‘And the owl is there watching him,

<i>gaχmisuχda</i>	<i>dəxdəχəlite</i>	<i>pəʔala</i>	<i>laχʷa</i>	<i>qʷaχix.</i>
gaχ-ʔəm-is=oxda	dəxdəχəliti-e	pəʔ-ala	la=χʷa	qʷaχ=iχ.
come-OI-QUOT=S.DEM	owl-DEM	fly-POS	PREP=DEM	tree=T.DEM

Along came an owl he flew on the tree.’
 (2013jul15_BL_frogstory)

b. *ləmoχ həd-əχstala laχʷa ʔálix*
 ‘He’s hollering into the woods,

³⁰ This example was also presented in section 2.5.3 on Prepositions. Every word begins with *la-*, but each serves a different syntactic function: as an auxiliary discourse marker, as a content verb, as a preposition, and as a nominalized oblique argument.

<i>gax'nox</i>	<i>pətwəlqəwoχda</i>	<i>həmd=alaciχ</i>
gax-?əm=ox	<i>pəł-wət-!q=oxda</i>	<i>həmd'alaci=χ</i>
AUX-OI=S.DEM	fly-REV.DIR-INSIDE=S.DEM	bees=DEM
The bees are all flying out		

<i>laχ^{wa}</i>	<i>beehiviχ.</i>
la=χ^{wa}	<i>beehiv=iχ</i>
PREP=DEM	beehive=DEM
of their hive.'	

(2013jul16_BL)

Berman argues that *he-*, which is otherwise a pronominal predicate marking distal third-person participants, is used to juxtapose two spatially separate events that are occurring at the same moment in time (Berman 1982: 384). In the modern corpus, *he-* auxiliaries also elaborate or explain an event.

(86) AUXILIARY DISCOURSE MARKER *he-*

tíqaxa laxox láχ^watə?asasa məło.
 'They fell off where that goat is standing.'

helə?əm	<i>dəχ^wstáɡada</i>	<i>babaG^wəmyχ</i>	<i>ləwá wáciχ.</i>
he-lə-?əm	<i>dəχ^w-(?)sta=ɡada</i>	<i>babaG^wəm=χ</i>	<i>ləwá wáci=χ.</i>
AUX-Q-OI	jump-LIQUID=S.DEM	boy=DEM	CONJ dog=T.DEM
The little boy jumped in and the dog also jumped in the water.'			

(2013jul15_BL_frogstory)

The auxiliary *helə?əm* links the second sentence to the previous sentence, providing further explanation without indicating sequentiality.

The system of discourse markers which structure connected speech are a rich vein of inquiry and have been primarily explored in the context of monologic narration; their function in interactive contexts will be a fruitful area of inquiry in the future.

The next section introduces the discourse connective suffix *{-?əm}* that appears in many (but not all) discourse-marking auxiliaries.

3.7.2. Discourse connective suffix

In the 1947 glossary of suffixes, Boas includes a suffix *-m̐*, defined as “a verbal suffix indicating that the subject has been referred to or thought of before” (B47: 338). This suffix has two allomorphs, likely phonologically conditioned; in some contexts, it surfaces as the glottalized m, */-m̐/*, and in other contexts, the suffix surfaces as a syllable, */-ʔəm/*. I have chosen *{-ʔəm}* as the citation form.³¹ In an attempt to capture the function of this very frequent suffix in a gloss that is not cumbersome, I provisionally gloss the suffix as OI, abbreviated for ‘old information’.

The distributive properties of this suffix remain to be thoroughly understood, and will benefit from quantitative study in both monologic and dialogic speech, in spontaneous and elicited contexts — and most importantly, of distribution in expanded discourse context, rather than in decontextualized individual sentences. Nevertheless, some generalizations emerge in the corpora. The given information suffix is not obligatory, but it is highly frequent. When *{-ʔəm}* occurs, it occurs once per independent clause, and it occurs in the first word, so is frequently appearing in the auxiliary discourse markers which mark the beginning of so many sentences in connected speech. Like the auxiliary discourse markers, where the given information marker occurs, it can be used to identify an independent utterance. Two examples are below.

(87) GIVEN INFORMATION SUFFIX

- a. *ləm̐ox* *n̐əlxila* *g̐wəyúləla*
lə-ʔəm=ox *n̐əl-gil-Ø-a* *g̐wəy-ul-əla*
 AUX-OI=S.DEM upriver-TR-3.SBJ-T towards-MOT.DIR-CONT
 ‘He’s going up the river towards

³¹ This does not, however, indicate any kind of assumption about which allomorph is older or underlying.

laχənoʔχ ʔəχʔás,
la=χənoʔχ ʔəχ-ʔas
 PREP=1PL.POSS ROOT-LOC.NMLZ
 where we are (our place)

q^wisalaʔmox.
q^wis-ala-ʔəm=ox
far-POS-OI=S.DEM
 and it's kind of far.'

(2014jan27_LJBL)

Note that in the example above, the first independent clause ends at *ʔəχʔas*, ‘place’, and a new clause begins with the next word, *q^wisalaʔmox* ‘and it’s kind of far’. The speaker translated the phrase as a complete sentence. The word *q^wisala* ‘to be far’ does not, on its own, constitute a complete sentence, but the addition of both the suffix *-ʔəm* and the subject demonstrative clitic *=ox* signal that this word stands on its own as a sentence — and the translation of the speaker, which also includes a continuing conjunction ‘and’ and an impersonal copula phrase ‘it is’, also reflects this fact. Finally, note that although the most frequent location for the given information suffix *-ʔəm* is within the auxiliary discourse markers, it can also appear suffixed in other contexts, such as the root *q^wis-* in this case.

Additional examples of {*-ʔəm*} suffixed to non-auxiliary roots are below.

(88) GIVEN INFORMATION MORPHEME SUFFIXED TO NON-AUXILIARY

a. *ʔixʔəm* *ləʔe lawəʔida* *ləqaʔla.*
ʔix-ʔəm=Ø *ləʔe la-wəʔ=ida* *ləqaʔla*
 good-OI=3.SBJ SUB go=REV.DIR=SBJ congestion
 ‘It’s good that my congestion came out.’ (2014jan24_SW_1)

b. *ləʔəmʔwis.*
ləʔ-ʔəm-ʔwis
 die-OI-PST-QUOT
 ‘They (both) died.’ (2014jan31_SW_1)

c. *lágəʔamasa* *ʔəwínag^wik.* 3 feet *laχən* floor.
la-gəʔa-ʔəm=(a)sa *ʔəwínag^wik.* 3 feet *la=χ^w=ən* floor
 go-ARRIVE-OI=OBJ.2 floor. 3 feet PREP=DEM-1SG.POSS floor
 ‘It reached the floor. 3 feet above my floor.’ (2014jan27_LJBL_2)

The given information suffix is often found in auxiliaries.

(89) GIVEN INFORMATION MORPHEME SUFFIXED TO AUXILIARY

<i>gaxmox</i>	<i>pətwəlqəwoχda</i>	<i>həmdʷalaçiχ</i>	<i>laχ^wa</i>	<i>beehiviχ.</i>
gax-ʔəm=ox	pəʔ-wəʔ-lqa=oxda	həmdʷalaçi=χ	la=χ^wa	beehiv=iχ.
AUX-OI=S.DEM	fly-REV.DIR-AMONG=S.DEM	bees=DEM	PREP=DEM	beehive=DEM

‘The bees come flying out of their hive.’ (2013jul16_BL)

The given information suffix, like the discourse marking auxiliaries, occurs so frequently that when it does *not* occur, sentences are pragmatically marked in some way: either they are the very first statement that someone makes; or they are completely de-contextualized utterances spoken in an elicitation context; or, in the context of a narrative, they introduce a new topic, new information or indicate some kind of dynamic peak — a moment of climax, conflict, or transition, as in the first clause of the conversational excerpt below.

(90) ABSENCE OF GIVEN INFORMATION MARKERS

<i>ʔuma ʔaqsamənoʔχ</i>	<i>wəʔoq^wis,</i>
ʔuma ʔaqsam=ənoʔχ	wəʔoq^wis
really bad=1PL.SBJ	neighbor

‘Our neighbors are bad,

<i>ʔomas</i>	<i>qəpəlsaxisas</i>
ʔo-ʔəm=Ø=as	qəp-(g)əʔ-ls=aχ=is=as
AUX-OI=3.SBJ=OBJ2	overturn_vessel-DIR.ATEL-GROUND=OBJ1=3.POSS=OBJ2

They just dump their garbage in the yard.’ (They dump it out on the ground)

<i>həʔəm qən</i>	<i>gəχənaχ^wasa</i>	<i>bədi</i>	<i>ləwá ʔuligən.</i>
he-ʔəm qən	gəχ-naχ^wa=sa	bədi	ləwá ʔuligən
AUX-OI PURP	come-SOMETIMES=OBJ2	cougar	CONJ wolf

That’s when the cougar and the wolves come around.

<i>gəχʔəm</i>	<i>χəʔədəχ</i>	<i>ʔáyi.</i>
gəχ-ʔəm	χəʔədəχ	ʔáyi.
come-OI	too	black_bear

The black bear comes too.’ (2014jan27_LJBL_2)

The use of the given information suffix $\{-\rho am\}$ is not restricted to spontaneous speech. When Mrs. Johnny first produced the example below, we had been discussing various possible places where a bag of potatoes could be: on the Ground, roasting on a fire, in a boat waiting to be unloaded. The locative suffix $-\alpha\chi s$ tells speakers that the potatoes are on a boat. Lillian initially volunteered the sentence in (90), which expresses the location of the potatoes in a prepositional phrase as well as in a suffix in the predicate. Alternating the locative suffix immediately following the root expressed a different Ground, but Mrs. Johnny also reinforced the change of location with a lexical mention in an oblique argument.

(91) STATIC LOCATIVE EXPRESSION

<i>gi?αχsala</i>	<i>λαχοχ</i>	<i>botiχ.</i>	
gəy-əχs-əla=∅	la=χoχ	bot=iχ	
be_at-BOAT-CONT=3.SBJ	PREP=DEM	boat=DEM	
‘It is/They are on the boat.’			(20140123_LJ_1)

However, Mrs. Johnny omitted the prepositional phrase and employed the given information suffix when she produced the sentence again a few moments later.

(92) USE OF GIVEN INFORMATION SUFFIX IN ELICITATION CONTEXTS

<i>gi?αχsalamoχ</i>	
gəy-əχs-əla=?əm=oχ	
be_at-BOAT-CONT-OI-S.DEM	
‘It is/They are on the boat.’	(20140123_LJ_1)

Although the translations are identical for the two sentences above, (92) was produced after (91), and Mrs. Johnny indicates continuity of topic with the marker $\{-\rho am\}$. The Figure had already been established and did not require lexical mention.

This section provided a brief introduction to the given information continuity marker $\{-\rho am\}$ which contributes to discourse structure beyond individual sentence. Much remains

to be understood about the structure of discourse in K^wak^wala, and how these forms track information.

3.8 Conclusion

The description of K^wak^wala provided in this chapter is not intended to be comprehensive; wonderful, detailed resources exist for understanding how the language works, and I do not wish to reinvent the wheel. However, the grammar of K^wak^wala — like that of any language — is complex and may be difficult to absorb without an introduction. I hope that the brief description offered here gives readers who are new to the language enough of an introduction to K^wak^wala grammar, and to the way in which I see the grammar, that they will be able to follow the argumentation through the examples provided in the next three chapters, beginning with Chapter 4, a description of static locative expressions.

Chapter 4: Static locative expressions

4.1 Background: Terminology and typology

As mentioned earlier, this research divides locative expressions between two domains of spatial relations: **static** events and **kinetic** events. This chapter provides descriptions of the syntax and morphology of **static locative constructions** in K^wak^wala. The term Basic Locative Construction is first defined, and the use of this terminology is explained within a typological framework. The clausal syntax of these constructions is then described. Finally, morphological structure of the predicate is analyzed, as a whole and in terms of the component parts of the predicate: the roots and suffixes that combine to form the whole word.

Relevant terminology is introduced in §4.1. Typologies of topological relations are also reviewed in this section. The structure of locative questions is addressed in §4.2. The syntax of static locative expressions is described in §4.3, and the morphology of static locatives in §4.4. As will be clear to the reader of this chapter and later chapters, the grammar of K^wak^wala concentrates semantic detail within the predicate, rather than at the level of the clause. The section on morphology begins to address the complexity of word structure in K^wak^wala predicates, and describes five classes of root lexemes used to express static location.

4.1.1 Figure and Ground

Spatial experience, as a concrete domain with a limited set of semantic components, provides an excellent case study in the ways a particular language categorizes meaningful components and locates them in grammatical structure, and how this might differ from the way other languages approach a universal experience. Here, FIGURE and GROUND are defined as two components of a spatial event which can be applied cross-linguistically, allowing comparison of linguistic typologies of spatial grammar and more broadly, grammatical principles.

In order to describe the location of an entity, whether static or in motion, one must describe the entity in relationship to something else: we may think of this ‘something else’ as the background, context or setting within which the entity exists. Artists speak of positive space and negative space. Positive space is the thing a painter tries to represent on their canvas: the person in a portrait, the objects in a still life, the features of a landscape. Negative space is the space around it: the room a person is in, the table on which a still life sits, the sky against which a mountain rises. Similarly, linguists and other scholars studying spatial representation distinguish FIGURE and GROUND, “where the thing to be located is the Figure and the thing with respect to which something is located is the Ground” (Levinson 2003:65).³² Talmy drew these terms from the Gestalt tradition of psychological inquiries into the nature of perception (Talmy 1985:61) and redefined them for the purpose of linguistic inquiry as follows:

“the Figure is a moving or conceptually movable entity whose site, path, or orientation is conceived as a variable the particular value of which is the relevant issue. The Ground is a reference entity, one that has a

³² Note also that, although Talmy wrote about themes of spatial relationships in his 1972 dissertation, he introduced these terms later, in his 1985 paper on Lexicalization Patterns.

stationary setting relevant to a reference frame, with respect to which the Figure's site, path or orientation is characterized" (Talmy 2000:184).

Levinson notes that "this Gestalt terminology was introduced by Talmy 1985, but is equivalent to the older terminology of theme and relatum, or the more recent trajector and landmark, introduced by Langacker 1987" (Levinson 2003). The 'reference frame' to which Talmy refers is also known as a spatial FRAME OF REFERENCE, and refers to the points of reference against which Figure and Ground are identified. Three types of spatial frame exist: viewer-centered ('relative'), object-centered ('intrinsic'), and environment-centered ('absolute') (Levinson 2003).

The image below, an optical illusion known as 'the Rubin vase', illustrates the role of Figure and Ground in the process of perception.



Figure 11: Figure and Ground in Rubin Vase

Our interpretation of the picture depends on which part of the picture we identify as *Figure*, or as positive space. If we interpret the white as positive space, we see a white vase against a black background. If we interpret the black as positive space, we see two silhouettes of faces in profile, looking at each other against a white background. And consequently, in whatever language we might use to describe this image, the structure of what we say about it depends

on what we identify as Figure, and what we identify as Ground, and how the language frames the relationship between these two elements.

Crucially, whatever the terminology, our perception of space involves these objects in relation to each other. Representation requires close examination of the place where positive and negative space meet. Different artists focus their attention on different aspects of this relationship, and emphasize different qualities of foreground and background. Similarly, a linguistic expression of a spatial event reflects individual perception of the relationship between Figure and Ground, and the assignment of regular grammatical patterns to the linguistic expression of what we perceive. About the image in Figure 11, one speaker might say: “A white vase is in a black room,” while another would say “two people are facing each other.” In the first sentence, the subject is the vase, a prepositional phrase identifies the location as a room, a copula links the subject and the oblique location. In the second sentence, the two people are a collective subject; there is no description of the ‘Ground’, and yet their relationship to each other is captured in the verb ‘(are) facing’. The structure of the expression in English depends on what is perceived as Figure, what is perceived as Ground, and how a given language locates Figure and Ground within morphological and syntactic structure.

Languages differ greatly in how they capture and express these relationships. In some languages, like English or Ewe (ISO ewe, Niger-Congo), adpositions carry a great deal of information about the relationship between Figure and Ground: is something on a table, or in a bowl? Next to a house, or behind it? Other languages, such as Tzotzil (ISO tzo, Maya) or K^wak^wala, do not rely as heavily on adpositions to distinguish spatial relations. K^wak^wala uses only one preposition in the description of static location. This preposition thus

carries little information about spatial relationships between Figure and Ground. Instead, Kwakwala employs a range of roots and a profusion of suffixes within the predicate word to detail information about Figure and Ground relationships.

4.1.2 Basic locative constructions

The work of the Language and Space group at the Max Planck Institute of Psycholinguistics introduced the idea of a BASIC LOCATIVE CONSTRUCTION (BLC) as a baseline for descriptions of spatial grammar (Levinson and Wilkins 2006:514). The BLC is proposed as the linguistic expression that serves a Basic Locative Function in the language. Their concepts of a ‘Basic Locative Function’ and ‘Basic Locative Construction’ are described below:

“(s)ince all languages appear to have Where-questions, we can use this as a functional frame: we will call the predominant construction that occurs in response to a Where-question (of the kind ‘Where is the X?’) the basic locative construction or BLC for short. (Note that this expression is a shorthand for ‘the construction used in the basic locative function’)...For English...the BLC is of the form NP BE³³ PP, where the first NP (noun phrase) is the Figure, and the PP (prepositional phrase) expresses the Ground, as in The apple is in the bowl.” (Levinson and Wilkins 2006: 15)

The structure of Basic Locative Constructions differs cross-linguistically. In all languages, locative and spatial information is encoded in both lexicon and grammar, in different ways. At the same time, some broad patterns can be identified. As noted by Levinson and Wilkins above, in many languages (English serving as an example of this type), the Figure is expressed with a subject noun or noun phrase, the Ground is expressed in an adpositional phrase, and the two are linked with a single existential or (in some cases) locative copula. In another type of language, such as Yélf Dnye (ISO yle, Isolate Wilkins and Levinson 2006:16), Esse Ejja (ISO ese Takanan, Vuillermet 2012.), and Karuk (ISO kyh, Bright 1957) no copula is employed. Rather, Yélf Dnye and Esse Ejja encode crucial information about the Figure in a set of postural verbs (often called ‘positional verbs’)

³³ ‘NP’= Noun Phrase, ‘BE’ = existential copula, ‘PP’= Prepositional Phrase

related to posture verbs meaning ‘sit’, ‘stand’, ‘lie’, or ‘hang’. Yet other languages such as Tzeltal (ISO tzh Maya) rely on an even larger set of so-called dispositional predicates to specify the orientation, shape, and position of the Figure. (Brown 2006: 241). Similarly, classificatory verb roots in the Dene (Athabaskan) family identify Figures in terms of their the shape, structure and texture: long and thin, hard and flat; lumpy and soft (Mithun 1999).

As we will see below, K^wak^wala combines several of the strategies mentioned above. Information about Figure is concentrated in the predicate. There are five classes of root employed to express static location of a Figure. Speakers can (1) employ a ‘place-holder’ semantically-null root which derives its meaning from locative suffixes; (2) employ a locative copula root with or without locative suffixes; (3) employ postural roots for animate Figures; (4) draw on an extensive set of roots which provide dispositional or classificatory information about the shape, orientation, and posture of the Figure or (5) draw from an even larger set of predicate roots which provide information about the nature of attachment (and non-attachment) between Figure and Ground, and the materiality of the Ground.³⁴ These categories of root are described in §4.4.2. The Figure is optionally specified with a lexical subject NP, but as will be apparent in examples provided, lexical mention of the Figure is more likely to be omitted in non-elicited speech. The Ground can optionally be specified with a prepositional phrase, but this too is optional and omitted when the information about the Ground is evident in locative suffixes provided in the predicate.

Languages encode Ground in equally diverse ways. Some languages, such as Arrernte, present information about location in elaborate case-marking systems (Wilkins 2006). Another strategy, widespread in Meso-American languages (cf. Lillehaugen 2006)

³⁴ These ‘attachment’ roots are sometimes grouped with dispositional roots, as in Brown’s analysis of Tzeltal (Brown 2003), but differences in argument structure between these two types in K^wak^wala motivates a separation here.

and in other linguistic areas, employs relational nouns. Very often, these nominals are transparently related to body part names, and equally often, the most frequently occurring relator nouns have grammaticalized and become adpositions, or are in the process of doing so (cf. Rosenblum 2009; Svorou 1994). Many languages, of course, rely on adpositions and adpositional phrases to differentiate locative relationships between Figure and Ground.

K^wak^wala employs both syntactic and morphological resources to encode information about the Ground. The Ground can optionally be identified in a syntactic noun (or noun phrase) within a prepositional phrase. However, only one preposition is used to link Figure to Ground, and thus the prepositional phrase does not specify anything about the type of relationship between Figure and Ground. Furthermore, these phrases are not grammatically obligatory. Meanwhile, within the word, certain K^wak^wala postural, classificatory and attachment roots can imply information, pragmatically understood or encoded in the lexeme itself, about the Ground and the relation between Figure and Ground. But the most important resource is the repertoire of locative suffixes in K^wak^wala, which attach to the predicate root providing highly specific information about the Ground and the nature of the topological relation between Figure and Ground. This structural strategy, of including information about the Ground using locative affixes within a polysynthetic predicate, is familiar to many linguists working with Native North American languages. In his thesis on Atsugewi (ISO atw, Hokan) Talmy listed 53 affixes attached to roots within predicates to identify features of the Ground and its relationship to the Figure (Talmy 1972: 407-427). Similarly detailed locative affixes are widely found in other languages of California, such as Eastern Pomo (McLendon 1966: 218), and in many other languages of Native North America. Two

illustrative examples are presented below, formed around the Atsugewi root *-swal*

‘limp_material’

(93) ATSUGEWI LOCATIVE AFFIXES

č^waswálmic̣

Ø-ʔ-w-ca-swal-mic̣

3.SBJ-3.OBJ-FACT-WIND-limp_material-DOWN.TO.GROUND

‘the clothes blew down from the clothesline’

stúswalic̣

s-ʔ-w-tu-swal-ic̣

1.SBJ-3.OBJ-FACT-PERSON.CAUS-limp.material-UP

‘I picked up the rag’

(Talmy 1972:433-434)

Following the root, we see two examples of locative affixes, *-mic̣* DOWN.TO.GROUND and *-ic̣* UP, communicating information about the relation between Figure and Ground³⁵.

While many grammars of North American languages include extensive sections on derivational locative affixes and their contribution to the morphology of the word, there is little work focusing on spatial constructions in polysynthetic languages and the broader question of how these languages structure and communicate spatial relations. The cross-linguistic survey produced by the Language and Space group (Levinson & Wilkins: 2006) did not include highly polysynthetic languages such as K^wak^wala. This description of the morphology and syntax of spatial relations in K^wak^wala thus helps fill in the current typological picture.

³⁵ The morphological strategy of marking location with affixes is not entirely unique to ‘exotic’ indigenous languages; as one reviewer pointed out. German separable prefixes and other affixes are not dissimilar. Polysynthetic American languages are unusual for the extensive repertoire of bound locative affixes found in the grammar, their high degree of semantic detail compared to locative categories in larger more widely-spoken languages, and their ability to combine with each other and other derivational suffixes in a semantically-compositional construction.

4.1.3 Topological relations in cross-linguistic perspective

One way to categorize spatial relations depends on whether the Figure is moving, or not. A Figure in motion is KINETIC. When the Figure is not moving, on the other hand, the relationship between Figure and Ground can be described as STATIC. When Figure and Ground are spatially coincident within a relatively close frame, their relation can also be described as TOPOLOGICAL.³⁶ The linguistic sense of ‘topology’ originates with the work of Piaget on childhood cognitive development of spatial concepts, which focused on the early acquisition of concepts of containment, support and proximity in very young children. In many languages, these relationships are captured with prepositions such as ‘in’, ‘on’ and ‘at’. Although Kwakwala does have a preposition, *la-*, followed by a demonstrative clitic, which links Figure and Ground, this prepositional phrase alone cannot indicate a contrast between relationships of containment or support the way that ‘in’ and ‘on’ do. As we will see below, in Kwakwala, such contrasts are instead expressed through use of locative suffixes and their effect on the root to which they attach.

Research by the Language and Space group at the Max Planck Institute for Psycholinguistics identified many cross-cultural tendencies – both similarities and differences – regarding topological relations. They found that each language in their sample (n=14) had a Basic Locative Construction (BLC). This BLC was identified as the most frequently-occurring construction answering a Basic Locative Question (i.e. ‘Where is it?’ in English) (Levinson & Wilkins 2006). Broad cross-linguistic patterns emerged among these basic locative constructions.

³⁶ This use of the term topological to describe relationships of containment, contiguity, and support between Figure and Ground departs significantly from the mathematical sense of the term, which is the study of shape and properties of space preserved under deformations such as stretching or bending, while excluding processes of tearing or breaking.

While converging in some ways, languages also vary in which types of spatial relationships are treated as canonical relations between Figure and Ground. The relationship between a given Figure and Ground can thus affect the likelihood of expression with a BLC. A cross-linguistic picture thus emerges of more and less prototypical relations between Figure and Ground. More prototypical relations include those for which Figure and Ground are in **close contact**, the Figure is **smaller** than the Ground, and the Figure is **contained**, **manipulable** and **inanimate**. Some languages describe clothing and adornment -- a hat on a head or a watch on a wrist -- with a BLC, while others do not; some languages employ a BLC to capture damage to a Figure, such as a hole in a towel or a crack in a cup, while others do not. Figure 12 displays this gradient nature of the relationship between more and less prototypical topological relationships and the cross-linguistic likelihood of their expression in a BLC.

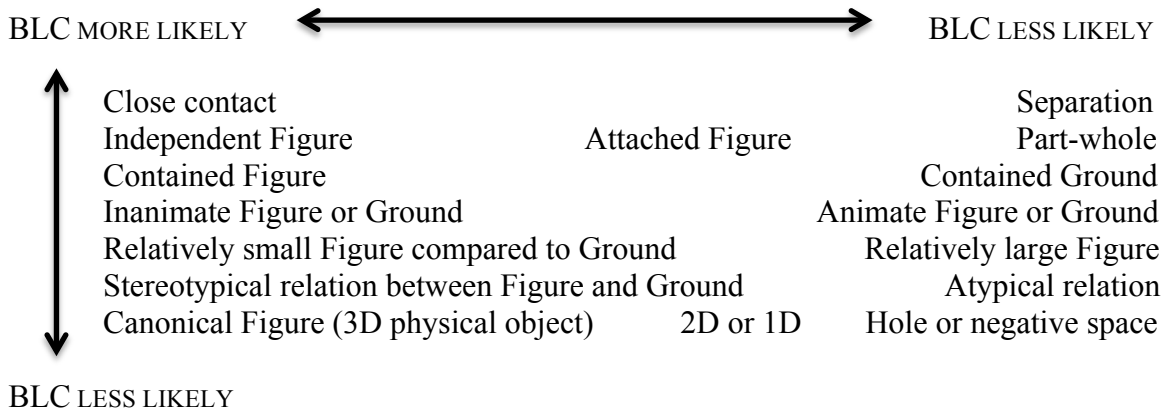


Figure 12: Likelihood OF BLC (Levinson & Wilkins 2006: 515)

The left periphery of the figure indicates that topological relationships more likely to be expressed with a BLC when Figure and Ground are in close contact, the Figure is independent, contained, inanimate, smaller than the Ground, and a three-dimensional object with mass and materiality and clear boundaries. This suggests that, cross-linguistically, certain Figure-Ground relationships are treated as prototypical, whatever the underlying

cognitive reality may be. Meanwhile, other relationships are expressed with non-typical constructions and treated as atypical and marked.

K^wak^wala conforms to many of these predictions. In K^wak^wala, a basic locative construction has the structure PREDICATE FIGURE GROUND, with certain classes of roots and suffixes employed to identify location; these classes of root are identified in §4.4.2. An example of a typical K^wak^wala BLC is provided here.

(94) PROTOTYPICAL K^wAK^wALA BLC

PREDICATE	FIGURE	PREP	GROUND
<i>gíçəwəχda</i>	<i>G^wəχ^wsən</i>	<i>laχa</i>	<i>dálaçíχ.</i>
gəy-çəw=əχda	G ^w əχ ^w sən	la=χa	dálaçi=χ
be_at-IN=S.DEM	box	PREP=DEM	purse=DEM
‘The box is in the purse.’			(2014jan24_SW_1)

In the example above, the box is an independent, inanimate object, smaller than the purse, in close contact with the purse (contained by it, in fact), and thus a canonical manipulable object in an entirely unsurprising spatial relationship to a purse.

However, like all languages, K^wak^wala spatial expression splits the semantic domain of space, expressing certain types of relationships with a prototypical BLC, and others with grammatical patterns that diverge from the BLC pattern. A picture of a cloud over a mountain (where the cloud is identified as the Figure), elicited an unpredictable — and even uncertain — response from speakers. Both examples below were provided as possible summaries of what the picture shows. (See Appendix IV for image of the TRPS series.)

(95) NON-TYPICAL SPATIAL RELATIONSHIPS IN K^wAK^wALA

<i>dóχ^wa</i>	<i>ʔənwayi</i>	<i>laχ</i>	<i>ʔíkayás(a)</i>	<i>nəgé.</i>
dəχ ^w =a	ʔənwayi	la=χ	ʔík-iʔ=(a)sa	nəge
see=IMP	cloud	PREP=DEM	up=NMLZ=GEN	mountain
‘See the cloud over the mountain’				(2014jan24_SW_1)

<i>hédelida</i>	<i>ʔənwayi</i>	<i>laχa</i>	<i>ʔikáʔasa</i>	<i>nəgé.</i>
he-d-ela=ida	ʔənwayi	la=χa	ʔik-iʔ=(a)sa	nəgé.
3.pron.ost-?-CONT=SBJcloud		PREP=DEM	up-NMLZ=GEN	mountain

‘There’s a cloud over the mountain.’ (as if pointing) (2014jan24_SW_1)

The syntax of these constructions is unlike a typical ‘BLC’ in Kwakwala. The first is a command, an instruction given to someone else: ‘See the cloud over the mountain’. The second is an ostensive clause, ‘pointing’ to the cloud over the mountain. The roots in the predicates in these sentences are also unlike the typical roots found in Kwakwala locative constructions. Incidentally, every speaker (of four) responded similarly to this picture of a cloud; none employed even the ‘place-holder’ empty root *ʔəχ-*, which has a wide distribution in both locative and non-locative contexts (see §4.4.2.1). Other types of spatial relationships were also treated differently by Kwakwala speakers. The picture of a cigarette in a mouth produced an unusual description, as did many of the pictures of items of clothing (belts, hats, bracelets).

The expression of static spatial relations in Kwakwala thus confirms some of the typological predictions made about what types of spatial relationships are cross-linguistically ‘basic’. The rest of this chapter focuses on the morphology and syntax of very typical Basic Locative Constructions in Kwakwala.

4.2 Locative questions

This section describes the syntax and morphology of basic locative questions in Kwakwala.

How does one ask where something is in Kwakwala?

In Kwakwala, locative interrogatives are formed with the root *wi-* (allomorph *wəy-*) translated by Boas as ‘where, which, when’ (Boas 1947: 265). Speakers say:

(96) BASIC LOCATIVE QUESTION IN K^wAK^wALA: INDEFINITE REFERENT

wídi lé?
'Where is it?'

(2014jan24_SW_3)

If one wants to ask where something definite is, such as an apple, one can say:

(97) BASIC LOCATIVE QUESTION IN K^wAK^wALA: DEFINITE REFERENT

wídi léda ɔábəlsix?
where PREP=DEF apple
'Where is the apple?'

(2014jan24_SW_3)

The structure of this question is unchanged from the time of Hunt and Boas' documentation. In the example below, from Boas' 1947 grammar, the definite marker =*da* is omitted, presumably because the speaker is referring to a relative with a term that is being used as a proper name.

(98) BASIC LOCATIVE QUESTION IN K^wAK^wALA: KNOWN PERSON

wídi le cáya?
'Where is younger brother?'

(B47: 265, III 365.25; 366.15)

The root *wí-* belongs to a set of content-question forming interrogative roots including *ɔənG^wa-* 'who', *más-* 'what' and *gən-* 'how many'. These K^wak^wala interrogatives belong to the larger class of lexical roots.

Boas struggled to interpret the forms *-di* and *le* following *wí-* 'where'. About these constructions, he wrote:

"*wí-* occurs generally with endings the meaning of which has not been determined with certainty. It would seem that *di* is demonstrative, referring to the object to which the question refers; *le* is a form of the verb *la* ('go' -DR) and must be considered a separate word, and seems to indicate the region in which the object is supposed to be...." (Boas 1947:266).

Boas calls *-di* a demonstrative in the quote above, but the paradigms for K^wak^wala demonstrative enclitics do not include this form and it is also not listed elsewhere in the grammar³⁷, so it is not clear why Boas identifies *-di* as a demonstrative if none of the

³⁷ See appendix.

demonstratives he identified for K^wak^wala have this form. In example (97) the definite marker =*da*, which has the closest form and might have been considered a type of demonstrative by Boas, also occurs in the locative interrogative context, following *le-*, when definite reference is necessary, but example (98) shows that =*da* is omitted in a context of non-definite reference.

The *-di* morpheme, on the other hand, is not optional in a locative question. To what does it refer, then? In 1947 Boas grammar, one of the forms marking tense, *-xdi*, “indicates (the) transition from existence to non-existence” (B47: 290). Example (99) illustrates the use of *-xdi* to mark this transition to non-existence when attached to a predicate. I have glossed this suffix DSPP because it describes something that was present but disappears.

(99) *-xdi* DSPP MODIFYING PREDICATE

q̣^wáχəm̄gustax̄lixdi
 q̣^waχ-əm̄-gusta-χ̄i(?)-x̄di
 grow-PL-UP-MOT.WATER-DSPP
 ‘they had been rising up out of the water (and disappeared)’ (B47: 241, CII 36.6)

Like all K^wak^wala temporal suffixes, *-xdi* can also modify nominal arguments. In (100), the suffix *-xdi* attached to the word *bəg^wanəm* ‘man’ indicates that the men are no longer living; they did not survive the spearing. (For this reason, the verb *səka* ‘spear’ below is understood to also mean ‘kill’.)

(100) *-xdi* DSPP MODIFYING ARGUMENT

səkáχa *bəg^wanəmx̄di*
 səka=χ̄a bəg^wanəm-x̄di
 spear-OBJ1 man-DSPP
 ‘they speared (and killed) those who had been men’ (B47: 241)

The origins of this form can be discerned in a neighboring related language, Bella Bella (a.k.a. Heiltsuk, ISO hei). Boas describes *-xdi* as “by origin a demonstrative which

expresses that something was present and has just gone out of sight.” (Boas 1947:288, 296). This suggests a plausible interpretation of the form *-xdi* in the Kwakwala locative context.

The morpheme *-xdi* thus seems to have originated with a concrete spatial sense linked to visibility, which then gave rise to the closely-related temporal meaning in Kwakwala. In spontaneous contexts, the question ‘where is it?’ would naturally refer to something that had been present and is now no longer visible. During image-based elicitation, however, when pointing to a line-drawing or photograph of an object, speakers still provided the question *widi le?*, suggesting that the use of this demonstrative suffix has generalized to contexts for which the location of a referent is simply the focus of interrogation, even if that object (albeit a two-dimensional representation of it) is visible to the speaker. Perhaps *widi le?* contains a grammaticalized form *-di* which functions only as a locative demonstrative in interrogative contexts. This might be glossed LOC.Q. The form from which *-di* grammaticalized may have been either (1) the demonstrative form as it still exists in Heiltsuk, with a spatial sense, or (2) the Kwakwala tense marker *-xdi*. In either case, the form *-di* has dropped the initial velar fricative.³⁸ Perhaps the demonstrative meaning of the suffix has been preserved in the context of the locative question, while in other contexts its function has shifted from demonstrative to tense marking.

Boas interprets *le* as a form of the predicate *la-* ‘go’. I analyze it instead as a form related to the preposition *la-*, which has also grammaticalized from the predicate lexeme *la-* ‘go’ but now shows different syntactic and semantic distribution,³⁹ and should be considered a separate morpheme from the lexical root. Examples (96) and (97) would thus be glossed as follows.

³⁸ This segment is frequently elided when followed by an obstruent in rapid speech.

³⁹ The prepositions of Kwakwala are described in detail in chapter 3.

(101) BASIC LOCATIVE QUESTION IN K^wAK^wALA: INDEFINITE REFERENT

<i>wídi</i>	<i>lé?</i>
wi-di	le
where-LOC.Q	PREP
‘Where is it?’	

(102) BASIC LOCATIVE QUESTION IN K^wAK^wALA: DEFINITE REFERENT

<i>wídi</i>	<i>léda</i>	<i>ʔábəlsix?</i>
wi-di	le=da	ʔábəls-(i)χ
where-LOC.Q	PREP=DEF	apple-DEM
‘Where is the apple?’		

In this interrogative context, deictic determiner enclitics marking proximity and visibility are semantically inappropriate, and they do not occur. Because the preposition *la-* is utterance-final in this context, one might guess that the utterance is closed with a final *-e*. (B47: 257) describes phonological operations at the close of the sentence). However, as we saw above in examples (96) and (97), this form is pronounced as *le* even in non-word final and non-utterance final contexts. It may just be that this is special form of the preposition only used in interrogative contexts. More work is needed to explore this form.

Interrogative roots in K^wak^wala occur in the same utterance-initial position as syntactic predicates, and can take a range of derivational and inflectional suffixes including a body part locative, a motion directional, tense, and person marking, as in example (98).

(103) DERIVATIONAL SUFFIXES ATTACHED TO INTERROGATIVE ROOT

<i>wíGəmlɪʔλas</i>	
wi-Gəm-λiʔ-λ=as	
where-FACE-MOT.WATER-FUT=2.SBJ	
‘Which way will you go?’ (directed at someone in a boat)	
	(B47:377)

In this example, the suffix *-Gəm* FACE refers to the direction the subject is facing or turned toward, the suffix *-λiʔ* refers to motion on water, future tense is marked with *-λ* and the

second person subject indexed with =*as*. We will return to this example in Chapter 5, in exploring the expression of kinetic meaning.

This section provided a description of the structure of locative questions in K^wak^wala. Next, in §4.3, I describe the syntactic structure of static locative expressions in K^wak^wala; the morphological structure of static locative expressions is addressed in §4.4.

4.3 Static locative expressions: Syntax

As described in Chapter 3, the order of unmarked expressions in K^wak^wala is PREDICATE – SUBJECT – PRIMARY OBJECT – SECONDARY OBJECT – OBLIQUE. In a K^wak^wala static locative expression, the predicate can contain sufficient information about both the Figure and the Ground to be a grammatically complete clause.

The minimal sufficient syntax for a BLC is the predicate alone, as illustrated in the example below.

(104) MINIMAL STATIC LOCATIVE EXPRESSION

giʔəχsalamoχ

gəy-əχs-əla-ʔəm=oχ

be_at-BOAT-CONT-OI-S.DEM

‘It is/They are on the boat.’

(2014jan23_LJ_1)

In a minimal locative expression, information about the Figure is concentrated in the root, while information about the Ground is located in suffixes. In sentences with full lexical specification of both Figure and Ground, as illustrated in the example below, the Figure is marked as subject, and the Ground is marked as an oblique in a prepositional phrase with the preposition *la-* (and a deictically-appropriate demonstrative marker).

(105) MAXIMAL STATIC LOCATIVE EXPRESSION

PREDICATE	FIGURE	PREP	SUBPART.OBJ	GROUND
<i>Tig^waloχda</i>	<i>nig^waciχ</i>	<i>laχ</i>	<i>ʔikaya^sa</i>	<i>həmxdəmi^liχ.</i>
tik ^w -a ^l a=oxda	nig ^w aci=χ	la=χ	ʔikaya=sa	həmxdəmi ^l =iχ
hang-POS=S.DEM	light=DEM	PREP=DEM	above=GEN	table=DEM
‘The light is hanging above the (a) dining table.’				(2014jan24_SW_3)

The prepositional phrase in the sentence above also specifies a subregion of the reference object — the area above the table. A static locative expression with lexical specification of both Figure and Ground and the specification of a subpart or region of a reference object thus presents the semantic content in the following order:

PREDICATE (FIGURE) (PREP (SUBREGION.REFOBJ) REF.OBJ)

As we saw in (104), the only grammatically obligatory element of this sentence is the predicate itself. As described in §4.4 on Morphology, a predicate can be grammatically complete clause because the predicate can contain information about both Figure and Ground in the root and suffixes. Speakers are more likely to provide the fullest example of a BLC, with lexical reference to Figure, Ground, and intrinsic region of Ground, in elicitation contexts, for example when responding to picture stimuli such as the Topological Relations Picture Series (Bowerman and Pederson 1992) or the Picture Series for Positional Verbs (Ameke, de Witte, and Wilkins 1999). Example (105), for example, was elicited in this way. However, this type of sentence would be overly specified and pragmatically marked in the context of a conversation. Discourse factors such as information structure, knowledge status (shared common knowledge, given or previously mentioned information, first mention, and so on) correlate, as always, with the conscious and unconscious choices speakers make in their syntax and morphology.

Many examples do not require identification of a region or subpart of a reference object in the Ground. In example (106), the Ground is described within the prepositional phrase *laχoχ ləkáχ* ‘PREP the rock’.

(106) STATIC LOCATIVE EXPRESSION

<i>hənsɣəmoχda</i>	<i>dəmsisɣəməχ</i>	<i>láχoχ</i>	<i>ləkákáχ.</i>
hən-sɣəm=oxda	dəmsisɣəm=χ	la=χoχ	ləka=χ
upright_vessel-ROUND=S.DEM	bottle=DEM	PREP=DEM	rock=DEM
‘The bottle is on the rock.’			(20140jan22_LJ_3)

Notice, as well, that the type of Ground on which the bottle sits is also identified in the predicate, with the locative suffix *-sɣəm* ROUND, identifying the Ground as a round object on which the bottle sits.

In connected, relatively spontaneous discourse, even when prompted by external stimuli such as the ‘frog story’ picture book (*Frog, Where are you?* Mayer 1969), lexical specification of Figure or Ground is optional. In (107), from one speaker’s telling of the frog story, the Figures are lexically specified but the Ground is only interpretable from information provided in suffixes within the predicate.

(107) STATIC LOCATIVE EXPRESSION

PREDICATE	FIGURE	FIGURE
<i>kʷáʔstəlsoχda</i>	<i>ɣənánəməχ</i>	<i>ləwá wáçíχ.</i>
kʷa-ʔsta-əls=oxda	ɣənənəm=χ	ləwá wáçi=χ
sit-LIQUID-OUTSIDE=S.DEM	boy=DEM	CONJ dog=DEM
‘The boy and the dog are sitting in (the) water.’		(2014jan20_LJ_1)

The predicate root, *kʷa-* ‘sit’, refers to the animate Figures, the boy and the dog, who have fallen into a pond or river. The two suffixes immediately following the root, *-ʔsta* LIQUID and *-əls* OUTSIDE, together refer to the context, the water where the boy and the dog are sitting. The subjects of the sentence, marked with the subject demonstrative clitic *=oxda*, lexically specify the Figures with the noun phrase *ɣənənəməχ ləwá wáçíχ* ‘the boy and the dog’. Note

that although there is no prepositional phrase in (106), the predicate communicates both the posture of the boy and dog (sitting) and where they are sitting: in liquid, outside. For pragmatic reasons – shared knowledge of the context of the story, shared ability to see the pictures which include the swimming hole where the boy and dog are sitting, and awareness that liquid outside is often some body of water such as a pond or a river – the speaker translates this as water. While translating this sentence, Lillian added that ‘it doesn’t say it’s water, it could be any liquid, but we know...’ (2014jan20_LJ_1).

In many languages, periphrastic mention of the Ground would be the only available strategy for specifying location. Hence less surprising, but also worth mention: there are many examples where a locative construction does not include lexical mention of the Figure, but only specifies the Ground, as in (108).

(108) STATIC LOCATIVE EXPRESSION: NO FIGURE

<i>giʔstuʷalaχi</i>	<i>laχa</i>	<i>windu.</i>	
gəy-(x)ʔsto-ʔawaleχ=iʔ	la=χa	windu	
be_at-OPENING-LEFT-SBJ	PREP=DEM	window	
‘It’s on the windowsill.’			(2014jan22_LJ_1)

The locative copula *gəy-* indicates that the speaker is referring to something located somewhere. Whatever is on the windowsill is unidentified in this sentence, although it would be common knowledge to interactants in context. The prepositional phrase *laχa windu* ‘PREP window’, identifies a particular window in the room as the Ground. The locative suffix *-(x)ʔsto* ‘opening’ attaches to the locative root to identify the type of Ground as a round opening of some sort. The affix *-ʔawale(χ)* expresses a lack of intention in the placement of this object; it has been ‘left’ on the windowsill, not placed there.

Recall from the pair of examples (91) and (92), reprinted below, that neither Figure nor Ground need be mentioned lexically in a K^{wak}wala locative construction for it to be grammatically complete.

(109) STATIC LOCATIVE EXPRESSION

<i>giʔəχsala</i>	<i>laχoχ</i>	<i>botiχ</i>	
gəy-əχs-əla=∅	la=χoχ	bot=iχ	
be_at-BOAT-CONT=3.SBJ	PREP=DEM	boat=DEM	
‘It is/They are on the boat.’			(2014jan23_LJ_1)

(110) MINIMAL STATIC LOCATIVE EXPRESSION

<i>giʔəχsalamoχ</i>		
gəy-əχs-əla=ʔəm=oχ		
be_at-BOAT-CONT-OI-S.DEM		
‘It is/They are on the boat.’		(2014jan23_LJ_1)

However, although a single predicate can stand alone syntactically in K^{wak}wala, but discursively, such a predicate only makes sense as part of a stream of interaction in which participants share sufficient common knowledge. In this case, both Figure and Ground are known by both participants.

As mentioned in chapter 3, the co-occurrence of the locative suffix *-əχs* BOAT and the lexical identification of a particular boat does not violate the Gricean maxim of quantity because they entail different referents: the lexical suffix *-əχs* identifies a category of object, ‘BOATS’, while the prepositional phrase *laχa bot* identifies a specific boat. In this case, the affix identifies that the immediate location of the potatoes is an object of the type ‘boat’, but it could be any type of boat, belonging to anyone – a canoe, a powerboat, a sailboat, Joe’s Jet Boat, and so on. The suffix is sufficient to tell us that the potatoes are located in (or on) a boat, but does not communicate more than that. Lexical reference in this context provides referential specificity.

4.3.1 Reference to component part of Reference Object

As is true in very many languages (Svorou 1993), K^wak^wala employs a genitive phrase to identify subregions of reference objects. In example (111), the prepositional phrase *laχ ʔikayasa hɛmxdəmit* contains a noun phrase identifying the ground as ‘the area above the table’. The example is repeated below, with the prepositional phrase in bold type.

(111) SUBREGION OF REFERENCE OBJECT

PREDICATE	FIGURE	PREP	SUB.REFOBJ	REF.OBJ
<i>Tig^waloχda</i>	<i>nig^waciχ</i>	<i>laχ</i>	<i>ʔikayasa</i>	<i>hɛmxdəmitiχ.</i>
tik ^w -a!a=oxda	nig ^w aci=χ	la=χ	ʔik-iʔ=(a)sa	həmxdəmit=iχ
hang-POS=S.DEM	light=DEM	PREP=DEM	up=NMLZ=GEN	table=DEM
‘The light is hanging above the (a) dining table.’				(2014jan24_SW_3)

The table is the Ground, or reference object, and the relevant region of the table is the space above it. The reference object, *həmxdəmit* ‘table’, is the POSSESSOR, and the subarea defined in relation to the reference object, *ʔikayasa* ‘area above’ (a nominalized form of the root *ʔik-* ‘up, above’) is POSSESSED. The two constituents are linked by a GENITIVE enclitic *=(a)sa*, identical to the case marker for secondary objects.

In (112), the area next to the campfire is identified with the phrase *laχ ʔinoyasa ləq^wás* ‘next to the campfire’.

(112) SUBREGION OF REFERENCE OBJECT

<i>k^wásʔida</i>	<i>bəg^wánəm</i>	<i>laχ</i>	<i>ʔinoyasa</i>	<i>ləq^wás.</i>
k ^w a-!s-ida	bəg ^w anəm	la=χ	ʔu-no-iʔ=(a)sa	ləq^was
sit-GROUND=S.DEM	man	PREP=DEM	root-SIDE.RD-NMLZ=GEN	fire
‘The man is sitting on the ground next to the campfire.’				(2014jan24_SW_3)

The subregion, the area next to the fire, is a nominalized form constructed with a place-holder root *ʔu-* which takes on the meaning of the suffixes it receives. In this case, a suffix – *nu* SIDE.RD ‘side of a round object’ derives the meaning ‘by the side of (a round object, the fire)’.

Two more examples of specification of descriptions of subareas of a reference object are provided below.

(113) SUBREGION OF REFERENCE OBJECT

<i>ʔəχáʔida</i>	<i>sóndayu</i>	<i>laχ</i>	<i>ʔúχtoýasa</i>	<i>ʔoʔs.</i>
ʔəχ-aʔa=ida	sóndayu	la=χ	ʔu-χto-ayu=(a)sa	ʔoʔs
root-POS=S.DEM	flag	PREP=DEM	root-TOP-NMLZ=GEN	pole
‘The flag is on top of the pole. ’				(2014jan24_SW_3)

<i>ʔəχáʔida</i>	<i>sóndayu</i>	<i>laχ</i>	<i>nuguýoýasa</i>	<i>ʔoʔs.</i>
ʔəχ-aʔa=ida	sóndayu	la=χ	nug-uýo-ayu=(a)sa	ʔoʔs
root-POS=S.DEM	flag	PREP=DEM	straight-MIDDLE-NMLZ=GEN	pole
‘The flag is in the middle of the pole. ’ (i.e. at half staff)				(2014jan24_SW_3)

In these relational noun constructions, the suffix *-iʔ* attaches to nominalize a root, which can then be possessed via a genitive enclitic *=(a)sa*.

To summarize: the syntax of the K^wak^wala BLC is straightforward and shares properties with many languages with verbs which express postural or dispositional information about the Figure in a locative expression. K^wak^wala employs one semantically empty preposition in locative constructions, and specific semantic content about spatial relations between Figure and Ground is found in the predicate. In unusual contexts, such as picture-based elicitation, speakers may provide lexical specification of Figure and Ground; in that case, Figure is marked as subject while Ground appears in an oblique noun phrase marked with the allative preposition *la*=DEM. Specification of smaller parts or regions of the Ground reference object can occur within the prepositional phrase; these complex noun phrases are genitive constructions. Unlike languages that rely on prepositional phrases to specify location, a single predicate is grammatically sufficient to specify location and answer a basic locative question.

I now turn from the structure of static locative clauses to the structure of a static locative predicate word, addressed in §4.4.

4.4 Static locative expressions: Morphology

A feature of polysynthetic languages is that a single predicate can serve as a grammatically complete independent clause; a single Kwakwala predicate word is thus both a complete independent clause and sufficient to specify location. However, the response to a question (a locative question or any other question) does not need to be a grammatically complete sentence; ellipsis is, of course, completely acceptable and pragmatically appropriate. A fragment can satisfy Grice's Maxim of Quantity (Grice 1975). Nevertheless, the shape of the fragment that provides minimal sufficient information is different from language to language. In English, the minimum answer requires a prepositional phrase, but might omit a verb phrase. If one asks, "Where are the plums I left in the icebox yesterday?," one might respond by saying "In my stomach", but not 'stomach'. In English, a minimal locative expression requires a prepositional phrase to identify the location of a Figure:

Where are the potatoes?	In the boat.
Where is your mother?	At a conference.
Where is the cat?	Under the table.
Where are all the spoons?	In the dishwasher.
Where is her house?	Behind the minimart.

The construction that provides minimal sufficient information is thus different from language to language. In English, the verb phrase is omissible, as is the lexical identification of the Figure, but the prepositional phrase is necessary to provide location. In Kwakwala, one can also answer with a prepositional phrase in order to specify the Ground and identify it with precision.

<i>Widi leda qu?siχ?</i> Where are the potatoes?	<i>Laχa botiχ.</i> On the boat.
<i>Widi leda ?abəsiχ?</i> Where are the apples?	<i>Laχa boliχ.</i> In the bowl.
<i>Widi leda dənəm?</i> Where is the rope?	<i>Laχoχ ləkəχ.</i> On the rock.

At the same time, the K^wak^wala preposition *la*-DEM is unlike English prepositions, in that it expresses nothing specific about the nature of the relationship between Figure and Ground. It only serves to link them. For example, a rope could be (variously) coiled on top of a rock, next to a rock, wrapped around a rock, or underneath a rock, and the prepositional phrase in all circumstances would be the same, *laχoχ ləkəχ* “on top of/next to/around/underneath a rock.” Variation in the form of the preposition reflects whether the rock is visible or invisible, close to the speaker, at a middle distance, or far, but nothing about the spatial relationship between the rope and rock.

However, in order to express sufficient semantic content about Figure-Ground relations with a single word, K^wak^wala speakers must construct a predicate with a root that refers to the Figure as subject and add suffixes that say something about the Ground. This section explores the internal morphological complexity of the predicate as a word: the roots and suffixes that, in K^wak^wala, can provide sufficient information, without a prepositional phrase, to answer a question about where something is. The roots in locative constructions can be separated into five classes, which are each described in §4.4.2.1 to §4.4.2.5, presented in order of increasing referential specificity. Each type refers to the Figure (whether pronominally or lexically) as subject, and can combine with locative suffixes to provide greater information about the type of Ground in which a Figure is located. The section below provides an overview of the structure of the locative predicate as a whole. The

sequencing and function of locative suffixes in static locative predicates is described in more detail in §4.4.3.

4.4.1 The internal structure of locative predicates

This section introduces the internal structure of the static locative predicate. As is true of any K^wak^wala predicate, a single root at the left edge combines with one or more derivational affixes. The functional interpretation of locative suffixes differs depending on their position in relation to the root and each other, and whether the context is static or kinetic. The order of these locative suffixes in a static locative construction — in relation to the root, to each other, and to other derivational suffixes, is depicted in Figure 13.



Figure 13: Order of elements in a static locative predicate

Teachers and learners of the language can use this structure to build and modify locative expressions in K^wak^wala. In the diagram above, the root is leftmost. There are three positions for locative suffixes, and two additional suffixes that only co-occur with locative suffixes. K^wak^wala predicates can include more than one locative suffix. However, these locative suffixes do not combine indiscriminately, nor can they stack up infinitely in a predicate word. For example, I have not yet encountered a word that identifies both the region of a reference object and the broader context. It may be that there is a limit to the functional load a word can carry, and two locative suffixes are the maximum in K^wak^wala. It may also be that it is possible for speakers to include three locative suffixes in a word, but they just do not do so in everyday speech.

4.4.2 Roots: Parameters

K^wak^wala roots provide the nucleus around which a predicate word forms, through the accretion of suffixes and, in some cases, reduplication of the root and suppletive changes to the root vowel. In a predicate describing a spatial event, this nucleus refers, minimally, to the Figure as subject.

In many languages, specialized verb roots provide information about the Figure in a Figure-Ground relationship. In some cases, the structure of a language also provides information about the orientation or ‘disposition’ of a Figure in relation to the Ground. Languages of this type tend to have few prepositions; some have just one preposition. (Levinson and Wilkins 2006: XX) In Tzeltal (Mayan), the preposition is a semantically neutral form *ta*, glossed ‘at’ by Brown.

(114) TZELTAL PREPOSITION *ta*

DISPOSITIONAL	TA	GROUND NP	FIGURE NP	
<i>waxal-Ø</i>	<i>ta</i>	<i>lum</i>	<i>p'in</i>	
vertically_standing-3A	AT	ground	pot	
‘(The) pot (is) vertically-standing on the ground.’				(Brown 2006:241)

Meanwhile, a relationship of containment of the Figure by Ground can be expressed in the dispositional verb root itself, in contrast to K^wak^wala, which requires a suffix.

(115) CONTAINMENT IN TZELTAL

<i>tik'il-Ø</i>	<i>ta</i>	<i>bojch</i>	<i>(mantzana)</i>	
inserted_in-3A	AT	gourd-bowl	apple	
‘It (the apple) is inserted into the gourdbowl.’				(Brown 2006:241)

In K^wak^wala spatial grammar, many strategies can express static locative relations, combining patterns found in a wide typology of languages. The ‘place-holder’ root *ʔəχ-* takes its locative meaning from a continued positional aspect marker *-ala* or a dedicated locative suffix. A locative copula root *gəy-*, glossed as ‘be_at’, has inherently locative

semantics, but also receives semantic specificity from suffixes and aspect markers. Animate figures require one of a small set of postural roots. A larger set of classificatory roots (similar to ‘dispositional’ roots in Tzeltal) encodes the shape and orientation of an inanimate figure, and an even larger set of roots indicate attachment between figure and ground.

These five types of root are presented below, progressing from maximally general to maximally specific.

Table 12: CLASSES OF LOCATIVE ROOT IN K^wAK^wALA

TYPE	ROOT	FUNCTION
I	<i>ʔəχ-</i>	Maximally unspecified
II	<i>gəy-</i>	Locative copula
III	POSTURE: ANIMATE	Animate Figure
IV	CLASSIFICATORY	Shape classification of Figure
V	POSITIONAL: ATTACHMENT	Event classification: attachment or support between Figure and Ground.

Types I and II each include just a single root. Types III, IV and V are progressively larger classes of roots. All types of root can combine with any locative suffix, provided there are otherwise no semantic constraints against their combination.

Roots can also be reduplicated. In some cases, reduplication indicates event plurality; in static locative constructions, however, reduplication of the root often indicates plurality of a Figure. In the examples below, the locative copula *gəy-* is reduplicated to indicate plurality of the Figure.

(116) PLURALITY OF FIGURE EXPRESSED IN REDUPLICATION OF ROOT

<i>gígicʉʔəχda</i>	<i>dám̄sisGəm</i>	<i>láχəχ</i>	<i>básketiχ.</i>
gi-gəy-čəw=əχda	dám̄sisGəm	la=χəχ	basket=iχ
RED-be_at-IN=S.DEM	bottle	PREP=DEM	basket=DEM
‘The bottles are in the basket.’			(2014jan23_LJ_3)

<i>gígicúɔoχda</i>	<i>quíɔsiχ</i>	<i>láχoχ</i>	<i>básketiχ.</i>
gi-gəy-čəw=ɔχda	quɔs=iχ	la=χoχ	basket=iχ
RED-be_at-IN=S.DEM	potato=DEM	PREP=DEM	basket=DEM
‘The potatoes are in the basket.’			(2014jan23_LJ_1)

However, this reduplication is optional; the example below was produced by the same speaker in response to the same image.

(117) OPTIONAL REDUPLICATION OF ROOT

<i>gícoχda</i>	<i>quíɔsiχ</i>	<i>láχoχ</i>	<i>básketiχ.</i>
gəy-čəw=ɔχda	quɔs=iχ	la=χoχ	basket=iχ
RED-be_at-IN=S.DEM	potato=DEM	PREP=DEM	basket=DEM
‘The potatoes are in the basket.’			(2014jan23_LJ)

Note that there is no pluralization encoded on the lexical argument meaning ‘potatoes’, as would be obligatory in English. (The postnominal demonstrative =iχ identifies a medial visible third person object, but does not mark number.)

4.4.2.1 Type I: Non-specific

The root *ɔəχ-* is a maximally abstract ‘place-holder’ root which takes meaning from the suffixes which attach to it. *ɔəχ-* is found in many non-locative expressions as well as locative constructions. Speakers can use this root with any type of Figure, animate or inanimate, with any shape, in any position. The use of *ɔəχ-* in a locative context is versatile and unrestricted, including the most non-stereotypical and uncanonical types of Figure and Ground relations such as lack of contact, damage or absence, and humans as Ground rather than Figure.

ɔəχ- is glossed by Boas as ‘to do, to handle (more indefinite than *da-* to take in hand)’ (B48: 11). Here, however, I gloss it as ‘root’, to reflect the semantic generality of its function. Combined with the positional suffix *-ála*, the form *ɔəχála* means ‘to be at a place’. With the continuous suffix *-əla* CONT, the stem *ɔəχələ-* means ‘to use as a tool’, while the

reduplicated pluractional form *ʔiʔəχəla* (i.e. ‘to use as a tool repeatedly’) means ‘to work’.

Some derivations of *ʔəχ-* are transitive, meaning ‘to take, put’, while others are intransitive, meaning ‘to be in a certain position’.

(118) ASPECTUAL CONTRASTS IN DERIVATIONS OF *ʔəχ-*

ʔəχála
ʔəχ-ála
root-POS
‘to be at a place’

ʔəχəlá
ʔəχ-əla
root-CONT
‘to use as a tool’

ʔiʔəχəla
ʔi-ʔəχ-əla
RED-root-CONT
‘to work’

(B48:11)

In the examples above, the addition of aspectual suffixes changes the valence and argument structure of the resulting stem. The positional suffix *-ála* derives an intransitive locative predicate from the root *ʔəχ-*. The CONTINUOUS suffix *-əla* creates yet a different type of transitive, meaning ‘to use (something) as a tool’, and *ʔəχ-* reduplicated with the same continuous event adds another type of plurality, and continuity, to this event, creating the meaning ‘to work’ (B48:11).

Meanwhile, as Boas notes, the addition of locative suffixes along with contrasting aspect markers produces still more semantic variety (B48:11). Again, a contrast between different aspect markers leads to contrasting minimal pairs. See below, where the transitivity momentaneous aspect marker *-nd* MOM and the continuative aspect marker *- (ə)la* CONT combine with the same roots and suffixes to derive two very different events.

(119) ASPECTUAL CONTRASTS IN LOCATIVE DERIVATIONS OF ʔəχ-

ʔəχstənd
ʔəχ-(ʔs)ta-nd
root-LIQUID-MOM
'to put in water'

ʔəχstála
ʔəχ-(ʔs)ta-əla
root-LIQUID-CONT
'to be in water'

(B48:11)

The combination of the root ʔəχ- with a locative suffix and the transitivizing momentaneous marker *-nd* creates a (di)transitive stem meaning 'put (something somewhere)', while the combination of ʔəχ- with a locative suffix and the continuous marker creates an intransitive stem meaning 'to be somewhere'. It is likely that for speakers, these changes in *aktionsart* produced by aspectual derivation are highly lexicalized; nevertheless, these distinct aspectual suffixes are recognizable in the form.

Derived stems from this root incorporate a great deal of meaning from the suffixes that attach to it. This root is maximally general and abstract in its use, permissive of all types of locative construction, even the least stereotypical or canonical Figure-Ground relations. In this sense, ʔəχ- contrasts with the true locative copula root *gəy-* glossed 'be_at', which, as we will see, is reserved for the most canonical⁴⁰ Figure-Ground relationships. In the absence of locative suffixes, a locative meaning results from the addition of *-əla*, the positional aspect suffix.

In example (120), ʔəχ- is used with the positional aspect marker *-əla* to describe damage to a cup.

⁴⁰ That is, canonical for K^wak^wala in a language-internal sense, rather than a cross-linguistic sense. These two types of canonical Figure-Ground relationships overlap, but not completely.

(120) *ʔəχ-* IN A BASIC LOCATIVE EXPRESSION

<i>ʔəχátoχda</i>	<i>təpáχ</i>	<i>laχ^wa</i>	<i>k^wáʔstaχ</i>
<i>ʔəχ-ala=οχda</i>	<i>təpa=χ</i>	<i>la=χ^wa</i>	<i>k^waʔsta=χ</i>
root-pos=s.dem	crack=dem	prep=dem	cup=dem
‘The crack is on ⁴¹ (in) the cup.’			

(2014jan24_SW_3)

Recall from Figure 12 (§4.1.3), describing cross-linguistic tendencies for Basic Locative Constructions, that a hole or damage in something was the least likely type of ‘Figure’ to be expressed with a BLC.

When the root *ʔəχ-* is followed by locative suffixes, the positional aspect marker *-ala* is often dropped, suggesting that the combination with a locative suffix is sufficient to allow the root to provide a locative meaning. In example (121), the suffix *-s(G)əm* ROUND indicates the ball is supported by a round object, in this case, a rock. The positional aspect marker *-ala* is omitted.

(121) *ʔəχ-* WITH LOCATIVE SUFFIX *-s(G)əm*

<i>ʔəχsəmóχda</i>	<i>bol</i>	<i>láχoχda</i>	<i>ləkáχ.</i>
<i>ʔəχ-s(G)əm=οχda</i>	<i>bol</i>	<i>la=χoχda</i>	<i>ləka=χ</i>
root-ROUND=S.DEM	ball	PREP=DEM	rock=DEM
‘The ball is on the rock.’			

(2014jan20_LJ_1)

The immediate Ground support and the sub-region of a reference object can both be identified with locative suffixes.

(122) *ʔəχ-* WITH TWO LOCATIVE SUFFIXES

<i>ʔəχád^zu^oyo^w</i>	<i>xúmsas</i>	<i>láχ^wa</i>	<i>ləqəd^zu^yiχ</i>
<i>ʔəχ-d^zu-^oyo^w=οχ^w</i>	<i>xúms-as</i>	<i>la=χ^wa</i>	<i>ləqəd^zu^y=iχ</i>
root-FLAT-MIDDLE=S.DEM	head=POSS	PREP=DEM	stamp=DEM
‘The head is (centered on) the stamp.’			

(2014jan28_BL_1)

⁴¹ Verbatim speakers’ translations are provided throughout. In this case, all speakers used the preposition ‘on’ in English, although this is non-standard (at least for my dialect; I am more likely to say that the crack is ‘in’ the cup). This might tell us something about what type of spatial relationship K^wak^wala speakers might consider to be most canonical or stereotypical.

The suffix *-d^zu* FLAT classifies the supporting Ground as a flat horizontal surface, while the suffix *-^ooy^o* MIDDLE identifies the area of the stamp on which the (image of a) head is placed.

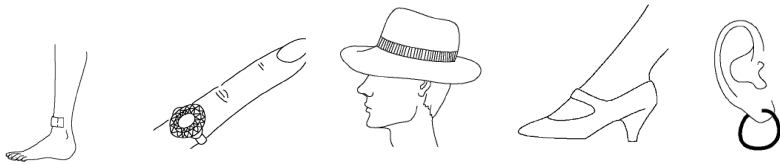
ʔəχ- was the most frequently used root in image-based elicitation, volunteered by different speakers as a way to describe 58 of the 71 TRPS images. When speakers had trouble remembering a semantically specific root in response to a given picture, the root *ʔəχ-* was always readily available. It could be modified by locative suffixes to classify the Ground, or if not, the positional *-ata* was a grammatically acceptable option to construct a generally applicable locative word. The figure below illustrates the wide range of situations to which *ʔəχ-* was applied.

PROTOTYPICAL FIGURE AND GROUND

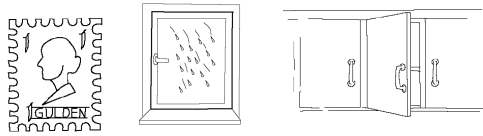


NON-PROTOTYPICAL FIGURE OR GROUND

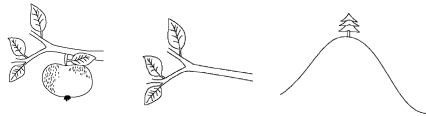
Human Ground: Clothing and adornment



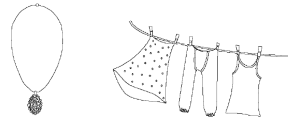
On surface



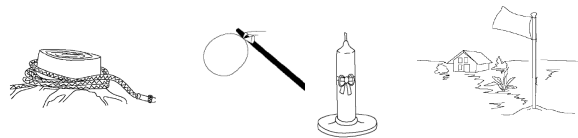
Plant life



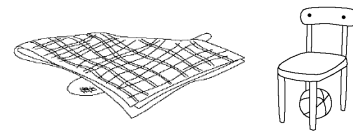
Hanging objects



Tied on or around



Under



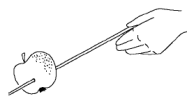
Medium



Damage



Pierced



Plugged

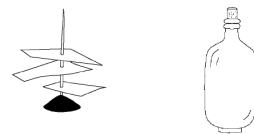


Figure 14: Semantic generality of ʔəχ-

As depicted here, *ʔəχ-* is used for prototypical Figure and Ground situations, such as the ball on a rock in (120). But it is also used widely for non-stereotypical Figure and Ground relationships, including clothing and adornment on a human Ground, growing plant life, situations of damage, and situations in which the Figure pierces the Ground, or is plugged in to the Ground.

The Language and Space group hypothesizes that a cross-linguistic tendency for languages to separate human beings from other types of ‘Ground’ leads to a low likelihood of basic locative constructions to be used for situations of clothing and adornment. K^wak^wala speakers did tend to seek alternative strategies for expressing the TRPS images of a hat on a head, a belt around a waist, a watch around a wrist, or a necklace around a neck. However, all of these images could also be expressed using *ʔəχ-* in a K^wak^wala BLC.

(123) *ʔəχ-* EXPRESSING LOCATION OF CLOTHING

<i>ʔəχátoχ</i>	<i>láχoχ</i>	<i>xúməsasa</i>	<i>bəg^wánəm.</i>
<i>ʔəχ-ala=oχ</i>	<i>la=χoχ</i>	<i>xuməs=(a)sa</i>	<i>bəg^wanəm</i>
root-POS=S.DEM	PREP=DEM	head=GEN	man

‘It (the hat) is on the man’s head.’ (2014jan22_LJ_3)

The generality of the root *ʔəχ-* allows it to be used freely and often, for all types of Figure-Ground relationships. Example (124) was produced to describe the location of an animate fish, also an example of a non-prototypical Figure.

(124) *ʔəχ-* EXPRESSING LOCATION OF ANIMATE FIGURE

<i>ʔəχʔstálda</i>	<i>kútəla</i>	<i>láχa</i>	<i>wápcəwaq^w</i>	<i>lád^zəm.</i>
<i>ʔəχ-ʔsta-əla-ida</i>	<i>kutəla</i>	<i>la=χa</i>	<i>wápcəwaq^w</i>	<i>lad^zəm</i>
root-LIQUID-CONT=SBJ	fish	PREP=DEM	water	bowl

‘The fish is in the water bowl.’ (2014jan24_SW_3)

In contrast to *ʔəχ-*, the root *gəy-* is restricted to use as a locative copula, and also tends to apply to maximally canonical Figure Ground relationships. It is described below in §4.4.2.2.

4.4.2.2 Type II: Locative copula

The root *gəy-* is translated by Boas as ‘to be somewhere’ (B48: 246), but it is more accurately described as a locative copula. *gəy-* is only used for static locative situations, and is more likely to be used for canonical or stereotypical relations between Figure and Ground.

As is true of *ʔəχ-*, contrasting aspect markers create semantic contrasts in valence and argument structure. With the positional suffix *-ala*, the stem *gəχála* is intransitive, meaning ‘to be in a place’. With the transitivity momentaneous aspect suffix *-xʔid* MOM (one of several allomorphs for this suffix), the stem *gəxʔid* means ‘to put (something somewhere)’. In predicates formed with this root, locative suffixes identify the location of a Figure. Many suffixes, locative and otherwise, combine with this root to create a wide range of meanings.

(125) DERIVATIONS OF THE LOCATIVE COPULA *gəy-*

- a. *gəyá*
gəy-!a
be_at-ROCK
‘to be on a rock’ (also ‘to stay in a paved town’)
- b. *gəyánsəla*
gəy-°ənsa-əla
be_at-SUBMERGE-CONT
‘to be under water’

- c. *gáʔgiwala*
 gəy-°giw-əla
 be_at-BOW.CANOE-⁴²CONT
 ‘to have in bow of canoe’
- d. *gálaʔəla*
 gəy-ala-(gə)ʔəla
 be_at-?-⁴³UP
 ‘to put up’
- e. *giʔs*
 gəy-!s
 be_at-GROUND
 ‘to be on the ground’ (also ‘to stay on a visit’)
- f. *gəʔis*
 gəy-°is
 be_at-OUTDOOR
 ‘to be on the beach’ (also ‘to stay in an Indian village’)
- g. *gəʔil*
 gəy-°il
 be_at-INDOOR
 ‘to be on floor, to be in a house’
- h. *gáʔaʔi*
 gəy-!aʔi
 be_at-CONTAINER
 ‘receptacle where to put a thing’
- i. *giʔakəla*
 gəy-(xs)ʔakəla
 be_at-IN.WOODS-CONT
 ‘novice’ (lit. staying in woods)
- j. *gićəwas*
 gəy-ćəw-ʔas
 be_at-IN-LOC.PASS
 ‘place of being inside’ (also ‘grave box’)

(B48: 246)

⁴² Related to body part suffix -°(g)iw FOREHEAD

⁴³ The meaning of this suffix is not clear. It may be a continuous marker -əla, which as we saw in §3.4.2.1 can add transitivity to a locative root. The sequence is surprising, because in the examples with root ʔəχ-, the locative suffix preceded the aspect marker.

Some of these combinations, such as those in (124a), (124e), (124f), (124i), and (124j), have conventionalized meanings which indicate lexicalization.

With a positional aspect marker, the root *gəy-* conveys locative meaning, as in the examples below.

(126) LOCATIVE COPULA *gəy-* with *-ała* POSITIONAL

<i>gétoχda</i>	<i>ʔábəlsiχ</i>	<i>láχ^wa</i>	<i>kilxsəmaləχ.</i>
<i>gəy-ała=οχda</i>	<i>ʔábəls=iχ</i>	<i>la=χ^wa</i>	<i>kilxsəmal=aχ</i>
be_at-POS=S.DEM	apple=DEM	PREP=DEM	ring=DEM
‘The apple is in/at the ring.’			
			(2014jan28_BL_1)

Other speakers also offered the same construction without further specification of the relationship between Figure and Ground via root or suffixes, suggesting that this is not considered a type of ‘containment’ for speakers of K^wak^wala.

A basic locative construction formed with *gəy-* often includes locative suffixes. The example below employs the suffix *-!s* ground.

(127) *gəy-* WITH LOCATIVE SUFFIX

<i>giʔsoχda</i>	<i>bal</i>	<i>(laχoχda</i>	<i>ʔásanoχ^w.)</i>
<i>gəy-!s=οχda</i>	<i>bal</i>	<i>la=χoχda</i>	<i>ʔásan=οχ</i>
be_at-GROUND=S.DEM	ball	PREP=DEM	ground.outside=T.DEM
‘The ball is on the ground.’			
			(2014jan22_LJ_3)

If the ground is a table instead, one would substitute the locative suffix *-(ʔ)d^zu* flat.

(128) *gəy-* WITH LOCATIVE SUFFIX

<i>gid^zuwaletoχda</i>	<i>bálsiχ</i>	<i>(láχoχda</i>	<i>tébəl.)</i>
<i>gəy-(ʔ)d^zu=(ʔa)wale-ała=οχda</i>	<i>bals=iχ</i>	<i>la=χoχ</i>	<i>tebəl</i>
be_at-FLAT=INADV-POS=DEM	balls=DEM	PREP=DEM	table
‘The balls are on the table.’ ⁴⁴			
			(2014jan22_LJ_3)

⁴⁴ This example is interesting with respect to bilingual individuals and code-switching. The image shows many balls on a table. The grammar of K^wak^wala does not obligatorily mark plurality. However, note that the speaker chose to use a plural lexical item in English (as opposed to the non-plural word ‘ball’ which she used in (126) during the same session.

A ‘containment’ relationship between the bottles and the basket is represented with the suffix *-čəw* IN. Note that the plurality of the bottles is marked with reduplication on the predicate.

(129) REDUPLICATED LOCATIVE COPULA

<i>gígicúʔoxda</i>	<i>dámsisGəm</i>	<i>láxoχ</i>	<i>básketiχ.</i>
gi-gəy-čəw=oxda	dámsisGəm	la=χoχ	basket=iχ
RED-be_at-IN=S.DEM	bottle	PREP=DEM	basket=DEM
‘The bottles are in the basket.’			(2014jan23_LJ_3)

In contrast to the very general root *ʔəχ-*, the locative copula *gəy-* is used primarily for the most stereotypical Figure Ground relationships: manipulable inanimate Figures, in close contact with the Ground but not attached to it. The third type of root, a class of postural roots employed to describe animate Figures with two or four legs, is described in the next section.

4.4.2.3 Type III: Animate posture

An animate Figure triggers the use of one of the posture roots in Table 13. Some languages have a very small set of positional verb roots with similar meanings – ‘sit’, ‘stand’, ‘lie’ – used widely to describe the posture of any type of Figure, whether animate or inanimate; in many languages, these posture roots also grammaticalize and become temporal markers for verbs (cf. Esse Ejjja, Vuillermet 2012). In K^wak^wala, however, these roots have a restricted function. They are only used for animate Figures such as humans, cats, and dogs.

Table 13: POSTURE ROOTS FOR USE WITH ANIMATE FIGURES

<i>kʷa-</i>	‘sit’ (person, dog, owl)
<i>λαχʷ-</i>	‘stand’ (animate)
<i>kʷəl-</i>	‘lie down’
<i>ḡəλ-</i>	‘lie flat on back’
<i>qəlkw-</i>	‘lie on one side’ (also ‘lie curled up’)
<i>səq-</i>	‘lean forward’
<i>wənaλ-</i>	‘hide’

In (130), the cat is sitting under a table; the posture of the cat is described with the root *kʷa-* ‘sit’.

(130) POSTURE ROOT: *kʷa-* ‘sit’

<i>kʷəʔəbəlitoχda</i>	<i>búsiχ</i>	<i>láχʷa</i>	<i>hámadʷuχ.</i>
<i>kʷa-°abo-əla-°il=oxda</i>	<i>busi=χ</i>	<i>la=χʷa</i>	<i>hámadʷu=</i> ⁴⁵ <i>χ</i>
sit-UNDER-CONT-INDOOR=S.DEM	cat=DEM	PREP=DEM	table=DEM
‘The cat is sitting under the table.’			(20140128_SW_3)

The cat’s location is captured by the combination of two locative suffixes, *-°abo* UNDER, identifying the relationship between the cat and the table, and the ‘special’ contextual suffix *-°il* INDOOR which locates the cat inside a house. Because the location of the cat is an event resulting from the cat’s choice to stay in a spot, rather than a result of external placement by an outside agent, this locative construction includes a continuous aspect marker *-əla* CONT rather than a positional marker *-ala* POS or the ‘inadvertent’ marker *-ʔawale* INADV, indicating that something has been left somewhere rather than placed there deliberately.

In the example below, an owl is sitting inside a hole.

(131) POSTURE ROOT: *kʷa-* ‘sit’

<i>kʷačəlsəχda</i>	<i>dəxdəxiniχ</i>	<i>láχoχda</i>	<i>lawus.</i>
<i>kʷa-čəw-əls=oxda</i>	<i>dəxdəxini=χ</i>	<i>la=χoχda</i>	<i>lawus</i>
sit-IN-OUTSIDE=S.DEM	owl=DEM	PREP=DEM	tree=DEM
‘The owl is sitting in the tree.’			(2014jan22_LJ_3)

⁴⁵ This word for ‘table’, *hámadʷu*, is in the Gʷaʔsala dialect, and combines the root *həm-* with the locative suffix *-(ʔ)dʷu*. The word *hámxdəmil*, ‘table’ in the Kʷakʷala dialect, combines *həm-* ‘eat’ with *-°xdəm* CUST.LOC ‘customary place or time for doing something’ and *-°il* INDOOR.

The hole is in a tree outside, reflected in the locative suffix *-əls* OUTSIDE.

Standing animate figures are distinguished from standing inanimate figures (lightposts, trees, flagpoles etc.). The inanimate dispositional root *la-* ‘stand’ would seem to be historically related to the animate posture root *laχ^w-*.

(132) POSTURE ROOT: *laχ^w-* ‘stand’

<i>laχ^wəsɪda</i>	<i>bəg^wənəm</i>	<i>laχ^w</i>	<i>ɪug^wesa</i>	<i>guk^w</i>
<i>laχ^w-əs=ida</i>	<i>bəg^wənəm</i>	<i>la=χ^w</i>	<i>ɪug^we=sa</i>	<i>guk^w</i>
stand-ROOF=SBJ	man	PREP=DEM	roof=GEN	house
‘The man is standing on the roof (of the house).’				(2014jan24_SW_3)

Mr. Wamiss produced a series of contrasting predicates to describe different postures of a dog inside a doghouse. These constructions vary according to selection of contrasting posture roots.

(133) CONTRASTING POSTURE ROOTS

- a. *k^wáçəweyoχda* *waci* *laχus* *guk^wiχ*.
k^wa-çəw-ɪawale=οχda dog la=χus *guk^w=iχ*
sit-IN-INADV=S.DEM dog PREP=3.POSS house=DEM
‘The dog is sitting in his house.’ (2014jan28_SW_3)
- b. *k^wəlçəweyoχda* *waciχ*.
k^wəl-çəw-ɪawale=οχda *waç=iχ*
lie_down-IN-INADV=S.DEM dog=DEM
‘The dog is lying down inside (his house).’ (2014jan24_SW_3)
- c. *qəl^wçəweyoχda* *waciχ*.
qəl^w-çəw-ɪawale=οχda *waç=iχ*
lie_side-IN-INADV=DEM house-DEM
‘The dog is curled up inside (his house).’ (2014jan24_SW_3)
- d. *laχ^wçəwoχda* *waciχ* (*laχus* *guk^wiχ*).
laχ^w-çəw-οχda *waç=iχ* *laχ=us* *guk^w=iχ*
stand_anim-IN=DEM house-DEM PREP=3.POSS house=DEM
‘The dog is standing up inside (his house).’ (2014jan24_SW_3)

The root *gəl-* ‘crawl’ (walk on more than two legs) describes motion, and so I do not include it in this list of static posture roots. However, it was produced by all three speakers in

response to the TRPS images of insects, spiders, moths and other small crawling animals, with the same locative constructions as for other images.

(134) *gəl-* ‘crawl’ LOCATION OF ANIMATE FIGURE

<i>gəlátoχda</i>	<i>spider</i>	<i>laχ^{wa}</i>	<i>ʔíkutiliχ.</i>
<i>gəl-ala=οχda</i>	<i>spider</i>	<i>la=χ^{wa}</i>	<i>ʔíkutil=iχ</i>
<i>crawl-POS=S.DEM</i>	<i>spider</i>	<i>PREP=DEM</i>	<i>ceiling=DEM</i>

‘The spider is crawling on the ceiling.’ (2014jan24_SW_3)

When a ladybug showed up while Mr. Wamiss and I recorded the TRPS series of images, he produced the following sentences to describe the location of the ladybug.

(135) *gəl-* ‘crawl’ LOCATION OF ANIMATE FIGURE

a.	<i>gəld^zuweyoχda</i>	<i>ladybug</i>	<i>láχ^{wa}</i>	<i>həmxdəmiləχ.</i>
	<i>gəl-d^zu-ʔawale=οχda</i>	<i>ladybug</i>	<i>la=χ^{wa}</i>	<i>həmxdəmiləχ</i>
	<i>crawl-FLAT-LEFT=S.DEM</i>	<i>ladybug</i>	<i>PREP=DEM</i>	<i>table</i>

‘The ladybug is crawling on the table.’ (2014jan24_SW_3)

b.	<i>gəlxćanoχda</i>	<i>ladybug</i>	<i>láχa</i>	<i>ʔáyasuχ.</i>
	<i>gəl-xćano=οχda</i>	<i>ladybug</i>	<i>la=χ^{wa}</i>	<i>ʔáyasu=χ</i>
	<i>crawl-HAND=S.DEM</i>	<i>ladybug</i>	<i>PREP=DEM</i>	<i>hand=DEM</i>

‘The ladybug is crawling on my hand.’ (2014jan24_SW_3)

These examples illustrate that locative suffixes contribute the same meaning, of immediate context and support, even with kinetic roots.

4.4.2.4 Type IV: Shape, material and position of Figure

The fourth type of root comprises the type called ‘dispositional’ by Brown in her work on the language Tzeltal (Mayan), spoken in Chiapas (Brown 2006). Tzeltal and other Mayan languages include “several hundred dispositional roots with highly specific meanings conveying shape, configuration, orientation, size, angle, and other spatial properties” (Brown 2006:246). A similar type of lexeme is traditionally called a ‘classificatory verb’ by scholars of Dene languages (Mithun 1999: 106). Here, I call the analog forms in Kwakwala

‘classificatory roots’. More than one form may be employed to describe the position or ‘disposition’ of an object for objects that are not completely symmetrical along all three axes. For example, Kwakwala employs a single classificatory root meaning *mekw-* ‘loc_round’ but there are two different classificatory roots for a long object, depending on whether it is lying down: *kat-*, or standing up (*la-*).

Like Tzeltal, Kwakwala dispositional roots are not grammatically obligatory, but also like Tzeltal, with “only one semantically vacuous preposition, some relational information – about exactly how the Figure is configured in relation to the Ground – is usually carried in the predicate” (Brown 2006: 246). In my work with speakers, these roots were produced far more readily in response to the Positional Verb Picture Series as opposed to the Topological Relations Picture Series. These roots are used only with inanimate Figures; the root *la-* ‘stand’ refers to a long thin object standing, and contrasts with the historically related but distinct root *laχw-* used for animate beings. The repertoire of classificatory roots in Kwakwala is provided in Table 14.

Table 14: INANIMATE CLASSIFICATORY ROOTS

<i>hən-</i>	upright open-top container
<i>qəp-</i>	overturned open-top container
<i>paq-</i>	flat object against surface (paper, etc.)
<i>kut-</i>	flat narrow object on edge
<i>kuk^w-</i>	wide object on edge
<i>ləp-</i>	flexible (cloth) covering
<i>kat-</i>	long object lying
<i>ka-</i>	loose objects lying
<i>gən(k)-</i>	blob
<i>la-</i>	long inanimate object standing
<i>mək^w-</i>	round object
<i>q^wəw-</i>	standing water
<i>təχ-</i>	many loose string-like objects
<i>ləχ-</i>	long flexible object stretched out
<i>luχ^w-</i>	small oblong objects (bones, small sticks)
<i>tək-</i>	soft materials
<i>q^wəlχ-</i>	many long pliable things
<i>q^wəχ-</i>	powder (dust, flour)
<i>q^wəł-</i>	hanging strips (tassels, flags)
<i>q^wa-</i>	standing objects, plural

The rows with grey shading are roots represented in the modern corpus; the entire list displays classificatory roots drawn as well from the Boas dictionary.

These roots have an inherently locative associated meaning. The entries in the Boas dictionary for several, although not all, of these classificatory roots include a locative sense.

(136) DICTIONARY ENTRIES FOR CLASSIFICATORY ROOTS

<i>hən-</i>	‘a hollow vessel is somewhere hollow side up’	(B48:90)
<i>mək^w-</i>	‘a round thing is somewhere’	(B48:145)
<i>ka-</i>	‘loose objects are somewhere, to handle loose objects’	(B48:280)
<i>təχ-</i>	‘loose things are somewhere, string-like things are somewhere’	(B48:411)
<i>tək-</i>	‘soft material is somewhere’	(B48:175)

Boas includes some of the additional semantic senses that are associated with a given root; for example, with *mək^w-*, which I gloss as ‘round_loc’, Boas also offers the additional definitions “to put stone down; to iron with heavy object; to swallow something dry and

hard”, although presumably these are meanings resulting from the addition of suffixes along with pragmatic inference in discourse context.

Other entries in the Boas dictionary do not recognize these as belonging to a subclass of roots which serve the same function in locative contexts.

(137) DICTIONARY ENTRIES FOR CLASSIFICATORY ROOTS

<i>qəp-</i>	‘a hollow vessel is upside down’	(B48:330)
<i>paq-</i>	‘to lay down flat things’	(B48:123)
<i>kut-</i>	‘a flat narrow object is on edge’	(B48: 286)
<i>ləp-</i>	‘to spread apart, give blankets’	(B48: 425)
<i>kat-</i>	‘to put long things somewhere’	(B48: 267)
<i>gənk-</i>	‘thick (fog, paste), mushy’	(B48: 313)
<i>la-</i>	‘to stand...for inanimate long objects’	(B48: 420)
<i>qʷəł-</i>	‘tassel, to hang down in strips’	(B48: 341)
<i>laχ-</i>	‘a long stiff thing is stretched out’	(B48: 431)
<i>luχʷa-</i>	‘small long things lie’ (bones, sticks, roots)	(B48: 435)

With positional aspect *-ała* POS, these forms are intransitive locative roots; the subject of these constructions is the type of object described by the root.

(138) CLASSIFICATORY ROOTS WITH POSITIONAL ASPECT

a.	<i>ləpátoχ</i> ləp-ała=οχ drape-POS=S.DEM ‘The cloth is draped over the basket.’	(<i>lodʷiχ</i>) (<i>lodʷ=iχ</i>) cloth	<i>laχoχda</i> la=χoχda PREP=DEM	<i>basketiχ.</i> basket=iχ basket=T.DEM (2014jan23_LJ_3)
b.	<i>hənátoχ</i> hən-ała=οχ up_vessel-POS=S.DEM ‘The pot is sitting in the tree.’	<i>laχoχ</i> la=χoχ PREP=DEM	<i>lawʷusiχ.</i> lawʷus=iχ tree=T.DEM	(2014jan23_LJ_3)

As is true for other roots, the positional aspect marker *-ała* can combine with locative suffixes (and other suffixes).

(139) DERIVATION OF CLASSIFICATORY ROOTS

<i>həndʷawaleloχ</i>	<i>laχoχ</i>	<i>tebl.</i>
<i>hən-dʷa-ʔawale-aʔa=oχ</i>	<i>la=χoχ</i>	<i>tebl</i>
<i>up_vessel-FLAT-INADV-POS=S.DEM</i>	<i>PREP=DEM</i>	<i>table</i>
‘The cup is on the table.’		

(2014jan23_LJ_3)

In this example, the figure, a cup, is not identified lexically, but the shape and orientation of the cup are described by the classificatory root *hən-* ‘upright vessel’.

A locative suffix can attach to a root without any aspect marker.

(140) DERIVATION OF CLASSIFICATORY ROOTS

a.	<i>hənʔsoχda</i>	<i>básketiχ;</i>		
	<i>hən-!s=oχda</i>	<i>basket=iχ</i>		
	<i>up_vessel-GROUND-S.DEM</i>	<i>basket=DEM</i>		
	‘The basket is on the ground;			
	<i>gi'coχda</i>	<i>quʔsiχ</i>	<i>laq.</i>	
	<i>gəy-čəw=oχda</i>	<i>quʔsi=χ</i>	<i>la=q.</i>	
	<i>be_at-IN=S.DEM</i>	<i>potato=DEM</i>	<i>PREP=3.OBJ1</i>	
	the potatoes are in it (the basket).’			
			(2014jan22_LJ_3)	
b.	<i>hənsɡəmoχda</i>	<i>dəmsisɡəmiχ</i>	<i>laχoχ</i>	<i>ləkáχ.</i>
	<i>hən-s(G)əm=oχda</i>	<i>dəmsisɡəm=χ</i>	<i>la=χoχ</i>	<i>ləka=χ</i>
	<i>up_vessel-ROUND-S.DEM</i>	<i>jar=DEM</i>	<i>PREP=DEM</i>	<i>rock=DEM</i>
	‘The bottle is on the rock.’			
				(2014jan22_LJ_3)

With a momentaneous aspect marker *-(xʔi)d MOM*, classificatory roots refer to a caused positional event. Example (141) illustrates the contrast introduced with the use of different aspect markers.

(141) CAUSED POSITIONAL DERIVATIONS

a.	<i>páxʔid</i>
	<i>paq-xʔid</i>
	<i>flat_horiz-MOM</i>
	‘to lay board down’

- b. *katala*
 kat-ala
 long_horiz-POS
 ‘long thing is somewhere’
- c. *kakatod*
 ka-kat-od
 RED-long_horiz-MOM
 ‘to put long things together’
- d. *katatod*
 kat-(ət)od
 long_horiz-MOM
 ‘to put long thing somewhere’
- e. *lala*
 la-ala
 stand_inan-POS
 ‘thing stands’
- f. *laʔdʔod*
 la-(ʔ)dʔu-od
 stand_inan-FLAT-MOM
 ‘to place upright object on flat surface’ (B48:420)

Although not all of the classificatory roots identified in the Boas dictionary emerged in the modern texts and elicitation, many of them are still in use. Additional examples of different types of classificatory roots found in the modern corpus are provided below.

(142) CLASSIFICATORY ROOTS IN MODERN USE

- a. *kadəʔuwoχda* *qʷaʔχʔu* *laχoχ* *tebl.*
 kat-ʔdʔu=oxda qʷaʔχʔu la=χoχ tebl
 long_horiz-FLAT=S.DEM stick PREP=DEM table
 ‘The stick is on the table.’ (2014jan22_LJ_3)
- b. *kaʔsoχda* *beansix* *laχoχ* *ʔasanoʔχ.*
 ka-!s=oxda beans=iχ la=χoχ ʔasanoʔ=χ
 loose_obj_pl-GROUND=DEM beans=DEM PREP=DEM ground=DEM
 ‘The beans are spread on the ground.’ (2014jan22_LJ_3)

c.	<i>gənλaλoχda</i>	<i>bada</i>	<i>láχ^wa</i>	<i>badaγ^yu.</i> ⁴⁶
	gənλ-aλa=oxda	bada	la=χ ^w a	badaγ ^y u
	blob-POS-S.DEM	butter	PREP=DEM	butter.knife

‘The blob of butter is on the butter knife.’ (2014jan24_SW_3)

The sentence below was produced to describe a picture of a spoon underneath a dishtowel.

(143) CLASSIFICATORY ROOTS IN MODERN USE

<i>kádaboweyoχda</i>	<i>kád^zənaq^wiχ⁴⁷</i>	<i>láχ^wa</i>	<i>dídənG^wayaχ^w.</i>
kat- ^o abo-?aw(al)e?= ^o χda	kad ^z ənaq ^w =iχ	la=χ ^w a	didənG ^w ay= ^a χ ^w .
long_horiz-UNDER-INADV-S.DEM	spoon=DEM	PREP=DEM	tea.towel=DEM

‘The spoon is underneath the tea-towel.’ (2014jan24_SW_3)

The root *kat-* refers to the long thin shape and horizontal orientation of the the spoon. The suffix *-^oabo* UNDER refers to the relationship between the spoon and the dish towel. An allomorph of the suffix *-?awale?* refers to the lack of intention in the placement of the spoon – reflecting an assumption by the speaker that the spoon must have been left under the dishtowel.

The roots in Table 14 show us the relevant parameters by which Figures are measured in K^wak^wala. Both topology and orientation are salient for K^wak^wala dispositional/classificatory roots. Shape is relevant, but so are intrinsic differentials in height and width of an object, and the ensuing difference in orientation measured in a gravitational context. Only one root is necessary for truly round objects, because they always have the same disposition, no matter how they lie. Rectangular objects, however, can be distinguished in several ways: are they standing, lying horizontal on their largest surface, or lying horizontal on an edge? In terms of width: are they flat like paper, or chunky and block-like? If objects are long and thin, are they stiff or pliant? If an object is a vessel, with an interior and an open mouth, is it upright or upside-down? Another salient parameter

⁴⁶ The word *badaγ^yu* ‘butter knife’ combines the English loan *bada* ‘butter’ with the instrumental nominalizing suffix *-ayu*.

⁴⁷ Note that the word for spoon also incorporates the root *kat-*.

concerns plurality of the Figure; several roots are available for different types of objects in groups.

4.4.2.5 Type V: Attachment between Figure and Ground

The final type of root found in Kwakwala static locative constructions is one that describes the spatial relationship *between* Figure and Ground, most often in terms of attachment: ‘sewn on’, ‘glued to’, ‘screwed in’, ‘plugging’, ‘wedged’, ‘hanging from horizontal surface’, ‘hanging on vertical surface’, and so on. This ‘class’ of roots is the most open set of the five types identified in this chapter. These roots are the least inherently locative of the roots which emerged in the modern corpus, and describe change of state events rather than static situations. Table 15 provides some examples of roots that emerged in the modern corpus, but there are surely many more roots that would be used in static locative contexts with appropriate derivations.

Table 15: ATTACHMENT ROOTS

<i>kʷəl-</i>	glue, stick (on)
<i>muqʷ-</i>	tie (on)
<i>qʷən-</i>	sew (on)
<i>məlχʷ-</i>	turn, screw (in)
<i>tikʷ-</i>	hang from horizontal surface (i.e. ceiling)
<i>gal-</i>	hang on vertical surface (i.e. wall)
<i>gixʷ-</i>	hang from multiple points (i.e. clothes on line)
<i>λənq-</i>	poke, punch, push through
<i>səp-</i>	a long object moves forward
<i>dʷup-</i>	plug in, push soft object (cork into bottle)
<i>gəp-</i>	tuck hard object in
<i>cit-</i>	lean (on)
<i>kis-</i>	hang over (touching but not attached)
<i>qəx-</i>	encircle, around, in a ring
<i>xəlp-</i>	revolve

In some cases, the attachment between Figure and Ground is a crucial piece of information, necessary for a speaker to construct an appropriate sentence. In response to an image of a handle on a purse, for which the Figure was the handle, Mrs. Johnny asked: “Well, is it glued on or sewed on? I need to know that to answer the question.” The sentence below described the handle as sewed on.

(144) ATTACHMENT ROOTS: *q̇ən-* ‘sew’

<i>q̇ənáloχ</i>	<i>láχoχ</i>	<i>dálaçiχ</i> . ⁴⁸	
q̇ən-ała-oχ	la=χoχ	dalaçi=χ	
sew-POS-S.DEM	PREP=DEM	purse=DEM	
‘It’s sewn on the purse.’			(2014jan22_LJ_3)

Note that the root *q̇ən-* ‘sew’ describes an event can take the positional aspect suffix *-ála*, to derive something that is syntactically like a past participle or adjectival predicate.

Below, the root *qəχ-* ‘encircle’ describes a ring encircling a finger. The suffix *-(x)ćano* HAND specifies that the location of the ring is a hand. Lexical reference to the fingers specifies the Ground further.

(145) ATTACHMENT ROOTS: *qəχ-* ‘encircle’

<i>qəχćanoχda</i>	<i>kixkədʷəχli</i>	<i>láχ^wa</i>	<i>q̇^wáq̇^waχćəmxćanaẏiχ</i>
qəχ-(x)ćano=οχda	kixkədʷəχli	la=χ ^w a	q̇ ^w áq̇ ^w aχćəmxćanaẏ=iχ
encircle-HAND=S.DEM	ring	PREP=DEM	fingers=DEM
‘The ring is on the fingers.’			(2014jan24_SW_3)

Several roots include the materiality or texture of the Figure or Ground in their semantics. In (146), the root *dʷub-* ‘plug’ refers to something with a soft texture, like a cork, being used to plug a hole. The suffix *-əχsti* mouth locates the Figure in the (metaphorical) mouth of the bottle.

⁴⁸ *dalaçi* ‘purse’: *dala-* ‘dollar’ *-aci* CONTAINER

(146) ATTACHMENT ROOTS: *dʷub-* ‘plug’

<i>dʷubəχsteʔida</i>	<i>dʷubəχsti</i>	<i>láχa</i>	<i>lácam.</i>
<i>dʷub-əχsti-ida</i>	<i>dʷubəχsti</i>	<i>la=χa</i>	<i>lacəm</i>
plug-MOUTH=SBJ	cork	PREP=DEM	glass.bottle
‘The cork is plugged into the glass bottle.’			(2014jan24_SW_3)

Note that the word for ‘cork’ is transparently derived from the same combination of root and suffix.

Attachment roots are active, rather than static, descriptions of events; as such, they are not specifically locative in their semantics. An associated locative meaning is inherently resultative.

The next section, §4.4.3, briefly addresses the question of how locative suffixes are ordered within a static locative predicate.

4.4.3 Suffixes: Sequence

Figure 13, depicting the order of derivational suffixes in a static locative predicate, is reprinted below.

ROOT	(PL.LOC)	(REV.LOC)	(LOC.IMMED)	(LOC.REFOBJ)	(ASPECT)	(LOC.CONTEXT)
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Figure 15: Order of locative affixes in a static locative predicate

Figure 15 identifies three possible positions for locative suffixes in a static predicate; they appear in cells with thicker borders. These locative suffixes serve different functions, as indicated above and described below. However, I have not yet encountered a word in either the legacy data or modern recordings with all three types of locative suffix. If there is one locative suffix, it fulfills the function of identifying the immediate Ground and the relationship between Figure and Ground. It may be that there is a limit to the functional load that a word can carry, and two locative suffixes are the maximum in Kwakwala.

Alternatively, it may be possible for speakers to include three locative suffixes in a single word, but they do not do it often, and such a form is thus unlikely to appear.

Although Kwákwála predicates are sometimes morphologically complex, they can also be relatively simple. A minimal clausal predicate includes a root, one derivational suffix, and a person-marking pronominal or adnominal enclitic. Aspect and tense are both optional categories. In static locative constructions, a minimally specific static locative construction includes the positional suffix *-ala* POS. The predicate is shown in bold type.

(147) MINIMAL STATIC LOCATIVE CONSTRUCTION

<i>gəʔétoχda</i> ⁴⁹	<i>(dənəmχ)</i>	<i>láχoχ(da)</i>	<i>'trənk'</i> .
<i>gəy-ala=οχda</i>	<i>(dənəm=χ)</i>	<i>lá=χoχ(=da)</i>	<i>'trənk'</i>
<i>be_at-POS=S.DEM</i>	<i>(rope=DEM)</i>	<i>PREP=DEM=DEF</i>	<i>trunk</i>
<i>'It/the rope is on the trunk.'</i>			(2014jan23_LJ)

With the addition of a locative suffix, the aspect marker is optional, as one can see below in (148), which omits an aspect marker. Lexical mention of the Figure is also optional, as is the definite marking of the trunk; Mrs. Johnny offered both options. Moments after providing the sentence above, she provided a more specific construction including the locative suffix – *(s)(G)əm* ROUND ‘on a round object’ to refer to the tree trunk on which the coiled length of rope is sitting.

(148) STATIC LOCATIVE CONSTRUCTION WITH IMMED.LOC

<i>gisGəmoχ</i>	<i>láχoχ(da)</i>	<i>'trənk'</i> .
<i>gəy-(s)(G)əm=οχ</i>	<i>la=χoχ(=da)</i>	<i>'trənk'</i>
<i>be_at-ROUND=S.DEM</i>	<i>PREP=DEM(=DEF)</i>	<i>trunk</i>
<i>'The rope is on a/the trunk.'</i>		(2014jan23_LJ)

Mrs. Johnny felt the latter example was ‘better’ Kwákwála, in the sense that it reflects more complete knowledge of the grammar.

⁴⁹ The pronunciation of the *gəy-* combined with the positional aspect marker *-ala* varies according to dialect. Lillian Johnny speaks the Gwaʔsəla dialect, while Beverly Lagis speaks the Kingcome dialect.

The first locative suffix to appear following the root indicates the immediate Ground, represented as LOC.IMMED in the Figure. In the example below, the immediate locative suffix *-(?)dʷu* FLAT ‘on a flat surface’ is followed by the positional aspect marker *-ala* POS, showing that the locative suffix and aspect marker can co-occur.

(149) STATIC LOCATIVE CONSTRUCTION WITH IMMED.LOC AND ASPECT

<i>gíḏʷuwaletox</i>	<i>lodʷo</i>	<i>láχox(da)</i>	<i>tebl.</i>
<i>gəy-(?)ḏʷu-(?a)wale-ala=ox</i>	<i>lodʷo</i>	<i>lá=χox(=da)</i>	<i>tebl</i>
<i>be_at-FLAT-INADV=S.DEM</i>	<i>cloth</i>	<i>PREP=DEM(=DEF)</i>	<i>table</i>
‘The cloth is on a/the table.’			(2014jan23_LJ)

The positional aspect marker *-ala* is also preceded here by a suffix *-(?a)wale* INADV (‘inadvertent’), used to indicate that something has been left in a place unintentionally, or without deliberation. This morpheme has a basic form *-?awale*, but many allomorphs for which the conditioning factors are still obscure. It is used for such things as a spoon underneath a dishtowel, a stick on a table, an unidentified object on a windowsill – objects whose position is not the result of a deliberate action of an outside agent, but seem to have been left inadvertently or otherwise come to occupy a place.

With a locative suffix *-°abo* UNDER, the predicate in (150) identifies the location of the ball as underneath the chair. In this example, the reference object is a table, and the immediate location of the ball in relation to the table is underneath.

(150) LOCATIVE SUFFIX INDICATING SUBREGION OF REFERENCE OBJECT

<i>ʔəχábəweyoxda</i>	<i>bol</i>	<i>laχa</i>	<i>kʷaɫdəmiɫa.</i>
<i>ʔəχ-abo-ʔawe(la)=oxda</i>	<i>bol</i>	<i>la=χa</i>	<i>kʷaɫdəmiɫa</i>
<i>root-UNDER-INADV=S.DEM</i>	<i>ball</i>	<i>PREP=DEM</i>	<i>chair=T.DEM</i>
‘The ball is underneath the chair.’			(2014jan24_SW_3)

The ‘inadvertent’ marker *-?awe(la)* follows the locative suffix and indicates that the ball was not placed deliberately under the chair.

The semantic reference for some locative suffixes includes a support relationship. In (148), the ‘round’ reference object on which the coiled rope sits, a tree stump, is identified in the predicate by the suffix $-s(G)\partial m$ ROUND, but it turns out that this suffix is only appropriate when something is sitting *on* a round object. Another image in this series shows a rope wrapped around a tree stump, rather than sitting on top of it. When prompted by this image, speakers instead offered $q\partial x$ - ‘encircle’ (‘to put/have ring on/around something’ B48: 332) and added the suffix $-(s)i?sta$ AROUND.

(151) STATIC LOCATIVE CONSTRUCTION

<i>q\partial xsi?stalo\chi da</i>	<i>d\partial n\acute{o}m\chi lá\chi o\chi da</i>		‘ <i>st\acute{o}mp</i> ’.
q\partial x-(s)i?sta-\acute{o}la=\acute{o}\chi	d\partial n\acute{o}m=\chi	la=\chi o\chi=(da)	st\acute{o}mp
encircle-AROUND=CONT=S.DEM	rope=DEM	PREP=DEM=DEF	stump
‘The rope is going around the stump.’			(2014jan23_LJ)

The root $q\partial x$ - ‘encircle’ describes an event or type of attachment, rather than a dispositional quality of the Figure. In this context, the root takes a continuous aspect marker $-\acute{o}la$ CONT, rather than a ‘positional’ aspect marker $-\acute{a}la$ POS.

(152) SUPPORT RELATIONSHIP INHERENT IN SOME LOCATIVE SUFFIXES

* <i>q\partial x sG\acute{a}mala</i>	<i>d\partial n\acute{o}m\chi</i>	<i>la\chi o\chi da</i>	‘ <i>st\acute{o}mp</i> ’.
q\partial x-sG\acute{a}m-\acute{o}la	d\partial n\acute{o}m=\chi	la=\chi o\chi=da	st\acute{o}mp
encircle-ROUND=CONT=S.DEM	rope=DEM	PREP=DEM=DEF	stump
*The rope is going around the stump			(2014jan23_LJ)

Mrs. Johnny indicated that $q\partial x sG\acute{a}mala$, with root $q\partial x$ - ‘encircle’ combined with locative suffix $-s(G)\partial m$ ROUND, would not be correct, because $-s(G)\partial m$ implies that the Figure is ON a round thing, not just in any relationship to it.

It may be the case that the canonical spatial relationship in K^wak^wala is a SUPPORT relationship. K^wak^wala speakers, who are fluently bilingual in K^wak^wala and English, tend to translate their K^wak^wala locative constructions with the English preposition ‘on’ even in

cases where this is not a common use of the preposition in English. In describing a cracked cup and a towel with a hole, all speakers translated their K^wak^wala phrases as ‘the crack is *on* the cup’ and ‘the hole is *on* the towel’ when discussing these images.

An additional locative suffix can be added to the predicate between the immediate locative suffix and the aspect marker in order to indicate the region or subpart of a reference object: the middle, side, top, underside, and so on. This semantic function is abbreviated above as LOC.REFOBJ. Example (153) contains two consecutive locative suffixes, *-(?)d^zu* FLAT and *-^oyo* MIDDLE. The first suffix refers to the flat surface of the stamp; the second refers to the region of the stamp where the Figure is located.

(153) LOCATIVE SUFFIX INDICATING SUBREGION OF REFERENCE OBJECT

<i>ʔəχád^zu^oyoχ^w</i>	<i>xúmsas</i>	<i>laχ^wa</i>	<i>ləqəd^zúy^oix.</i>
<i>ʔəχ-(?)d^zu-^oyo=ox^w</i>	<i>xums-as</i>	<i>la=χ^wa</i>	<i>ləqəd^zuy^o=ix</i>
root-FLAT-MIDDLE=S.DEM	head=POSS	PREP=DEM	stamp=T.DEM
‘The head is (centered on) the stamp.’			(2014jan28_BL_1)

In this example, the root is the ‘place-holder’ root *ʔəχ-*. The suffix *-(?)d^zu* FLAT refers to the immediate support, the flat surface of the stamp. The following suffix *-^oyo* MIDDLE refers to the region of the reference object: the picture of the head is centered on the stamp.

In the example below, a third type of locative suffix appears at the right edge of the derived word, preceding inflectional enclitics. These ‘contextual’ locative suffixes comprise a limited subset of the locative suffixes; most often, they are one of two suffixes that identify the broader context or setting of a location as inside a human-built structure (*-^oit* INDOOR) or outside, beyond the house (*-^ois* OUTDOOR). There are also rare examples in the modern corpus where they precede the aspect marker, but these suffixes usually follow the aspect marker as in (154).

(154) LOCATIVE SUFFIX INDICATING BROADER SETTING

<i>kʷəʔábolítoχda</i>	<i>búsiχ</i>	<i>láχʷa</i>	<i>hámadʷuχ.</i>
kʷa-°abo-əla-°il=οχda	busi=χ	la=χʷa	hamadʷu=χ
sit-UNDER-CONT-INDOOR=S.DEM	cat=DEM	PREP=DEM	table=T.DEM
‘The cat is sitting under the table.’			(2014jan28_SW_3)

In (154), the animate posture root *kʷa*-‘sit’ is followed by two locatives, -°*abo* UNDER and -°*il* HOUSE; separated by the continuous aspect marker -*əla* CONT. The locative immediately following the root refers to the relationship between Figure and Ground, and identifies the area underneath the table as the space occupied by the cat. The locative -°*il* identifies the broader setting of the locative event as inside a human-built structure, in contrast to outside. Two additional suffixes identifying context also appear, indicating broader setting: -*əls* OUTSIDE and -*χs* BOAT.

In Chapter 6, I revisit the broader question of what principles governing affix-ordering in Kʷakʷala.

4.5 Summary and conclusions

This chapter described the grammar of static locative constructions in Kʷakʷala. A minimal expression of location in Kʷakʷala requires either a prepositional phrase or a predicate. A single preposition links Figure and Ground in locative constructions but provides no information about the nature of the relationship. Semantic specificity about Figure-Ground relations is provided via roots and suffixes. Five classes of roots allow speakers a range of communicative strategies. Locative suffixes follow the root identifying three different types of Figure-Ground relationship: immediate location, subregion of reference object, and broader setting, in that order.

The next chapter describes the grammar of kinetic constructions in Kwakwaka'waka, in much the same way, proceeding from syntax to morphology.

Chapter 5: Kinetic constructions

5.1 Overview

The previous chapter addressed static locative constructions: locative expressions for which no motion is involved. This chapter focuses on the expression of motion in K^{wak}wala, of events in which a figure is displaced from one location to another. Analyses of spatial grammar have not always distinguished static events from kinetic ones. Talmy and others working within the tradition of a typology of event schematicization identified static and kinetic events as two facets of a unified framework, arising from a proposal that the linguistic expression of static events was inherently related to, and perhaps derived from, the expression of kinetic events (Talmy 2000:101)

However, it is not clear that cross-linguistic evidence supports such an *a priori* assumption of a unified and directional association between linguistic expressions of kinesis and those of stasis. Languages may not rely on the same strategies for both types of events. Indeed, some languages express static locative events with an entirely different set of linguistic resources than those employed for kinetic events, even employing a different frame of reference for static events than kinetic ones (cf. Tzeltal, Levinson and Wilkins 2006:19). In this chapter, we will explore ways in which the structure of K^{wak}wala kinetic

expressions aligns with that of static expressions, and also ways in which static and kinetic expressions differ.

Aside from the descriptive information about how Kwakwala grammar expresses motion events, this chapter examines motion constructions in contrast with location expressions in order to begin to see the principles governing affix-ordering in each, and how they are neither purely semantically compositional nor rigidly templatic and arbitrary. Drawing on the data presented in Chapters 4 and 5, Chapter 6 then addresses the question of affix-ordering and morphological complexity in Kwakwala.

Before making this argument, however, §5.2 addresses the diverse interdisciplinary tradition of inquiry surrounding the cross-linguistic expression of motion events. The words PATH, DIRECTION, ENDPOINT, SOURCE, and GOAL are seemingly simple terms with complicated histories of usage within the study of language and space. I define these core terms as they are used here, also distinguishing between two types of motion: SPONTANEOUS MOTION and CAUSED MOTION. In §5.3, I orient this work in relation to the literature on Motion, Direction, Path and Event Structure.

In §5.4, I provide an overview of the linguistic resources in the language for describing motion. Based on similarities in distribution and behavior, I include fictive motion morphemes as well, namely lexical roots of sight. §5.5 describes the syntax of motion expressions in Kwakwala, and §5.6 turns to the morphology of motion predicates. Within this section, I describe a special set of suffixes, here termed DIRECTIONAL suffixes, focusing on their crucial contribution to the semantic output of the predicate word in Kwakwala expressions of location and motion. The presence of these suffixes in a predicate determines the interpretation of preceding and following locative suffixes. The data reveals

that locative suffixes that precede directional morphemes identify *PATH* of motion, while locative suffixes following directional morphemes indicate the *LOCATION* of a point at which motion begins or ends — the origin or destination.

Within this section, I also address the expression of caused positional events in K^{wak}wala. In some languages, expressions of caused positional share linguistic patterns with static locative expressions. For example, I can say that the coffee cup is **on the table, near the windowsill, in the sink**, and so on, thus distinguishing among different positions of the cup through variation in locative prepositions. I can also say that someone **put** a coffee cup **on the table, near the windowsill, in the sink**, and the verb *put* identifies this as an event of caused position. However, in K^{wak}wala, the expression of a caused positional event shares important structural features with expressions of kinetic events. These predicates expressing caused position very often rely on directional suffixes. For this reason, I identify these events as ‘caused motion’ events rather than ‘caused positional’ events. The paradigm of directional suffixes in K^{wak}wala reinforces a theme of direction and telicity found elsewhere in the grammar of the language, and K^{wak}wala predicates expressing **caused motion** events allow speakers to identify *PATH*, *DIRECTION*, and *LOCATION* of origin or destination with separate morphemes.

5.2 Background: Terminology and context

Motion events can be subdivided into various types, and different classes of motion emerge in the grammars of different languages. Here, I identify and describe two types of motion: *SPONTANEOUS MOTION* and *CAUSED MOTION*. Spontaneous Motion entails a the ability of a Figure to generate its own displacement from one place to another, through walking,

running, flying, driving, paddling, or any other self-propelled activity. Alternatively, with Caused Motion, the displacement of a figure is caused by an external agent: objects being put or taken from a place are the Figures in a Caused Motion event, as is a dog being walked or any other Figure induced to move by an external agent. An additional term, FICTIVE MOTION, introduced by Talmy, is described as “motion with no physical occurrence” (Talmy 2000:99). In many languages, certain types of events are represented with the linguistic resources usually employed to describe motion events. Talmy gives various examples in English of what he means by fictive motion: “*This fence goes from the plateau to the valley; The cliff wall faces toward/away from the island; I looked out past the steeple; The vacuum cleaner is down around behind the clothes hamper; The scenery rushed past us as we drove along*” (Talmy 2000:99). In such sentences, Talmy points out, “the literal meaning of the sentence ascribes motion a referent that one otherwise normally believes to be stationary” (Talmy 2000:101). Events of visual perception are a cross-linguistically common example of such Fictive Motion events. Indeed, Kwakwala expressions of visual perception often draw on the same syntactic and morphological resources used to express motion events. In this chapter, I include some examples of predicates which treat the act of perception as a motion event, but I do not treat fictive motion in any detail. The extent to which the Talmyan notion of fictive motion applies in Kwakwala expression of non-motion events is an interesting topic for later investigation.

In addition to Figure and Ground, defined in the previous chapter, the following terms relevant to motion events are defined here: PATH, DIRECTION, DISTANCE, ENDPOINT, SOURCE, and GOAL. All of these terms have been used extensively in the study of language and space, with a range of meanings and associated assumptions. Here I clarify the scope

and sense of these terms as I use them with reference to Kwakwala expressions of motion, and orient my approach in relation to the diverse tradition of inquiry on this topic. The basic elements of geometry — points, lines, planes and solids — are also employed in graphic abstractions and metaphorical descriptions of these spatial configurations, relationships, and events. Points, lines, and planes are distinguished from one another in terms of their dimension: points have **position**, but **zero dimension**; lines exist in one dimension, **length**; planes in two dimensions, **length** and **width**, and solids in three dimensions, **length**, **height** and **width**. Differences in scale, orientation and other relational aspects are described with the addition of features such as **Direction** and **Distance**.

Talmy pioneered the typological inquiry of expressions of motion, and hence, also established terminological traditions that have also persisted within the field. Basic non-technical terms such as Path, Motion, and Direction have been defined and used in highly specific ways within Talmy's work and others who followed his lead. As is always true, however, terminological choices can reflect — or encourage — analytical and/or theoretical choices, draw categorical boundaries, and imply unspoken assumptions. The terms Path, Motion, Direction, and others are necessary to a grammar of space and yet the spatial grammar in Kwakwala does not support some of the boundaries drawn by Talmy's definitions of Path, Motion, Direction. Therefore, after a brief introduction to Talmy's terminology, I define these terms as they are used here. I briefly address the features of Kwakwala grammar motivating my terminological choices. Detailed evidence follows in the descriptive content of the chapter.

In his linguistic and cognitive analyses, Talmy is more of a 'lumper' than a 'splitter' with regard to semantic categories. Talmy identifies Location as a subcomponent of Motion,

and Direction as a subcomponent of Path. He writes: “[The motion event] is analyzed as having four components: besides ‘Figure’ and ‘Ground’, there are ‘Path’ and ‘Motion’. The ‘Path’ (with a capital P) is the course followed or *site occupied* by the Figure object with respect to the Ground object. ‘Motion’ (with a capital M) refers to the presence per se in the event of motion *or location*” (Talmy 1985:60; ital. added -DR) A Talmyan definition of Motion event thus includes events of static location, and his notion of Path includes the *static location* of a Figure, such that Path is a universal element in all events involving spatial relations, encompassing component parts such as Vector, Deixis, and Earth-grid Displacement (Talmy 2000b: 201-203).

However, as noted by Frawley (1992), there is also a strong tradition among semanticists of distinguishing *static position in space* from *dynamic movement through space*. In this tradition, “motion entails the *displacement* of some entity, or *positional change*....”(Frawley 1992:171). Bowerman and other members of the Space and Language Group at Nijmegen also distinguish Motion events from Static events on the basis of cross-linguistic differences in how languages encode these two types of events. Bowerman notes that “in many languages, the formal systems for encoding static and dynamic Path are far more distinct than in English and typologically similar languages. For example, in Korean, dynamic Path is encoded in the verb...(and) Static Location is with a set of locative nouns....static and dynamic location descriptions are thus both formally and semantically much more distinct than in English” (Bowerman 1992:3). In Korean, then, the grammatical encoding of ‘Path’ and ‘Location’ supports the separation between static and kinetic domains of spatial language. This is true of Kwakwala as well.

Frawley identifies eight components of the semantic structure of motion, or of a motion event. These components are as follows (with bold formatting added):

- “1. the thing displaced: the **theme** or **figure**
2. the **origin** of the motion: **source**
3. the **destination** of the motion: **goal**
4. the **trajectory** of the motion: **path**, including **direction**
5. the **location** of the motion: **site** and **medium**
6. the means by which the motion is carried out: **instrument** or **conveyance**
7. the way the motion is carried out: **manner**
8. the cause of the motion: **agent**” (Frawley 1992:172).

Below I present the terminology employed here in the discussion of motion events in K^wak^wala. I retain the terms Figure, Source, and Goal, and in caused-motion events, Agent, as Frawley uses them. One interesting property of K^wak^wala, as mentioned below, is the finely grained lexical differentiation of motion by different types of Figures: people, fish, birds, animals, whales, and so on. I distinguish, as also explained below, between Path and Direction, which are both included under the broader term ‘Trajectory’ in Frawley’s glossary, and also grouped together in Talmy’s terminology. The term Manner, on the other hand, is used in a less rigorous way than proposed by Frawley, here encompassing a range of semantic components of a motion event— including ‘Conveyance’, ‘Instrument’, ‘Medium’ and ‘Site’.

5.2.1 Path

I apply the term Path only to motion (kinetic) events. The term Location, on the other hand, is used to describe where non-motion (static) events occur, static elements of the Ground, or the broader setting in which an entire event takes place. Path, here, describes the *shape* of a trajectory. Path can thus be identified exclusive of SOURCE, GOAL, or DIRECTION, referring only to the line that a Figure in motion would trace in space, and its relation to reference objects in (or composing) the GROUND. A Path can be straight, curved, circular, jagged, winding, interrupted, or have many other shapes; at times, this shape is defined in relationship between the Figure and a given Reference Object. It can go *past* an object, *through* an object, *into* or *out of* an object. While a linguistic encoding of Path may reference a point of origin or destination, or a point along its trajectory, the linguistic encoding does not *necessarily* do so. Hence, Path is identified separately from the terminal points of origin or destination, which are termed Source and Goal when identified separately, and termed ENDPOINTS when identified together. WAYPOINTS along a Path can also be identified. As we will see in Kwakwala, these points are often, though not always, identified separately from Path. Some of the Path shapes corresponding to suffixes in Kwakwala are identified in (155).

(155) PATH SHAPES

-(x)sâ	THROUGH
-(s)i?sta	AROUND
-o?s	FROM ONE TO THE OTHER
-aqa	PAST

In casual speech, it is not uncommon to include measures of DISTANCE (a short or long path) or DIRECTION (a steep uphill path or gentle path sloping downward) as features of a given path in descriptions, but these types of reference are excluded here and identified separately

as features which may or may not be integral to the description of a Path. Finally, Paths can be **actual**, representing real motion of a figure in space, or **virtual**, representing the fictive motion created by, for example, a visual line of sight (Talmy 2000a: 99).

5.2.2 Direction

DIRECTION is identified here as a separate feature of a motion event, rather than (as in Talmy's definition) a feature of Path. As it is used here, Direction refers to the relative position of one object or point (the Figure) in relation to another object or point (the REFERENCE OBJECT) expressed as a straight vector; in its most basic sense, Direction also implies motion. The graphic representation of a Direction is a straight line, in contrast with Path, for which the representation can be a line of any shape. Direction can be vertical, horizontal, or angular. The linguistic expression of Direction can be lexical or morphological; in Kwakwala, both exist. How direction is expressed also tells us something about the dominant frames of reference within the language: Direction can be relative to the viewer or relative to the object (Left of Reference Object or Left of Speaker, Right of Reference Object or Right of Speaker); it can be measured in absolute terms with cardinal terms (North, South, East, West) or geospatial terms (Upriver, Downriver, Inland, Out-to-Sea, Uphill, Downhill). Like Path, Direction can be actual, representing concrete movement in the world — or fictional, representing metaphorical movement, such as that of a line of sight or other imagined trajectory of time.

All vector-based features of a motion event are included as types of Direction, including movement relative to the **Earth** (a.k.a. 'Earth-based displacement' in Talmy's terminology) and **deictic** movement relative to other event-components including **event-**

participants, discourse-participants, and reference objects. In Table 16, we see that non-cognate roots and suffixes exist in Kwakwala to express several types of direction. Speakers can choose whether to express directions with roots or suffixes; we will see examples of both choices.

Table 16: DIRECTIONS AND FORM IN KWAKWALA

TYPE OF DIRECTION	MEANING	ROOTS	SUFFIXES
GEOCENTRIC	UP	<i>ʔik-</i>	<i>-(g)usto</i>
	DOWN	<i>bəñ-</i>	<i>-axa</i>
	UPRIVER	<i>ñala-</i>	<i>-ʔusta</i>
	DOWNRIVER	<i>g^wa-</i>	<i>-atus</i>
	SEAWARD	<i>ʔas-</i>	<i>-^o(x)ta</i>
	LANDWARD	<i>ʔaʔ-</i>	<i>-yag</i>
RELATIVE TO REFERENCE OBJECT	AWAY FROM	<i>gayuʔ-</i>	<i>-^oaxsa</i>

Two directions expressing position relative to a reference object exist only as a suffix, as in the case of *-cəw*, which can mean INTO or INSIDE; or combinations of suffixes, as in the case of *-wəlcəw*, which means OUT.OF and is a combination of three suffixes: the reverse locative *-wä*, the atelic directional *-(g)əł* and *-cəw*. There are no roots that mean ‘in’, ‘into’, or ‘inside’ or ‘out’, or ‘out of’. Another direction expressed relative to a reference object, ‘towards’, requires a combination of roots and suffixes: *G^wəyuləla* (*G^wəy-* ‘in the direction of’, *-^oul* MOT.DIR, *-əla* CONT). Finally, the concepts of ‘left’ and ‘right’ relative to the viewer exist in Kwakwala, but only in stems (apparent in the phonotactics of the stem shape) for which the original semantic components are no longer evident: *χulxčis-* means ‘left’ (possibly *χul* ‘to be matted, tangled’, *x-čis* ?) and *hiłkut-* means ‘right’ (*hił-* ‘to make right, to be right’, *-kut* OPPOSITE).

5.2.3 Telicity

Linguistic expressions of spatial relations differ according to the dominant patterns of a grammar, because different languages lexicalize and grammaticalize different features of motion events. In Kwakwala, a spatial sense of TELICITY (cf. Greek *telos* ‘end’)⁵⁰ is a salient feature of the description of motion. For this reason, ENDPOINT, SOURCE and GOAL are also frequently necessary terms in the description of spatial expressions in Kwakwala. The point of **origin** for a motion event is the Source, the point of **destination** or arrival is the Goal; both Source and Goal can be considered Endpoints to a Trajectory in a motion event. A three-way opposition between motion *without* a goal, motion *towards* a goal, and motion *originating from* a source occurs in more than one place in the grammar of Kwakwala. The three basic motion verbs in Kwakwala present this contrast.

(156) ROOTS AND SPATIAL TELICITY

<i>la-</i>	‘go’	motion without destination
<i>gaχ-</i>	‘come’	motion towards speaker
<i>gayuλ-</i>	‘go.from’	motion from source

The directional suffixes described below in Section 5.6.3 also mirror this contrast:

(157) DIRECTIONAL SUFFIXES AND SPATIAL TELICITY

<i>-(g)əł-</i>	DIR.ATEL	atelic direction (neither Goal nor Source identified)
<i>-(g)ałł-</i>	DIR.TEL	telic direction towards Goal
<i>-(w)əł-</i>	DIR.REV	reverse direction, direction away from Source

In addition to endpoints, WAYPOINTS, or reference points along a trajectory (points which are neither Source nor Goal) are also sometimes encoded in a linguistic construction. A reference object *passed* by a Figure is an example of a waypoint. Not all motion events

⁵⁰ This use of ‘telicity’ and ‘telos’ with reference to a spatial end (rather than “fulfillment, realization, culmination”) is somewhat controversial. In some sources, the meaning of *telos* in Ancient Greek is described as ‘end’ or ‘endpoint’ in spatial, temporal, and other (i.e. purposive) senses (Purves 2014). Others feel that the spatial sense is not part of the original definition.

identify or include reference endpoints or waypoints. Points of origin or destination, and references to other points along a trajectory, are only sometimes included in K^wak^wala motion constructions, and are identified with locative suffixes separately from Directional suffixes, supporting the terminological distinction between Direction and Endpoints/Waypoints.

5.2.4 Proximity, Distance and Deixis

DISTANCE, also called ‘proximity’, refers to the numerical description or measurement (in any unit or degree, even maximally abstract ‘units’ such as ‘near speaker’ and ‘near hearer’) of how near or far apart objects are (usually a Figure and a Reference Object). One way in which K^wak^wala grammar has grammaticalized reference to distance or proximity is in its system of demonstrative enclitics which mark three levels of proximity: near speaker, near hearer, and near neither. The same paradigm also encodes a contrast between visible and invisible. These forms were introduced in Chapter 3 and are also provided in Appendix II. K^wak^wala also marks distance in other ways as well, through roots and suffixes, as well as through nominal reference. Deictic reference, while a fascinating and prominent feature of the grammar, exists in the system of inflecting clitics in the language, rather than in derivational suffixes. As our focus here is the ordering of derivational affixes in word formation, deictic reference is not explored in depth but rather left for future inquiry.

5.2.5 Manner

MANNER of movement, in a strict sense, specifies a Figure’s position or posture or way of moving. In English, we have many verbs that express specific types of movement. We might

say that a snake ‘slithered’, that a child ‘hopped’, that a coyote ‘skulked’, that a man ‘tiptoed’. These verbs describe how a Figure uses their body in the act of locomotion. However, the concept of Manner has been applied widely, and some so-called manner verbs actually describe other aspects of motion. Such verbs may actually describe Conveyance: ‘paddle’, ‘drive’, or Medium: ‘swim’, ‘fly’. They may describe the speed or style of motion: ‘zip’ or ‘glide’. And some describe Path in the sense of a shape traced by the Figure in relation to the Ground: ‘zig-zag’, ‘circle’, ‘wind’, ‘climb’, ‘fall’.

In Kwakwaka, as we will see below, there are also roots which express motion concepts not lexicalized in English. Kwakwaka grammar distinguishes between different types of motion depending on whether the Figure is a person or an animal: there is one root for the type of swimming done with the arms (*Gəlq-*), and a different root for swimming done by fish (*ma-*). Similarly, Kwakwaka distinguishes between a root for ‘dive’ as done by people (*das-*), and a root for ‘dive’ as done by whales (*λal-*). The language allows distinction between rapid motion of a person (*həmx^{w-}*) and rapid motion of inanimate objects such as rocks or water (*q^wəmx-*). If one wants to emphasize motion of a plural figure, one can use the root *hoq^{w-}* ‘go_plural’; the unmarked form meaning ‘go’ is *la-*, which can be used for either singular or plural motion. For the sake of convenience, these are all considered types of ‘Manner’ verbs, although the underlying semantic senses are considerably varied with respect to the componential semantic features of a Motion event.

5.2.6 Relationship between semantic categories and morphemes

As noted by Talmy, while these semantic components of a motion event can be decomposed into separate semantic elements for analytical purposes, there is not necessarily a one-to-one

relationship between a single semantic element and a single linguistic form. Multiple semantic elements may be expressed by one morpheme (for example, Path and Source, or Path and Goal) or a single semantic element may be expressed with more than one structural element of a linguistic construction. The English words ‘enter’ and ‘exit’, for example, have been described as ‘Path’ verbs by Talmy. However, they might also be analyzed as verbs which combine Path and Endpoint: ‘enter’ combines a Path APPROACHING a place with an endpoint INSIDE OR AT that place, ‘exit’ combines a starting point INSIDE a place with a Path AWAY FROM that place. In Kwakwala, with so many lexical suffixes and so few lexical roots, meaning is quite decomposed. However, suffixes do combine and fuse over time. Some of these combinations are provided in below in example (158).

(158) FUSED COMBINATIONS OF SUFFIXES

- a. -*əncis* DOWN.BEACH ‘down to beach’
 (? -*ənsa* SUBMERGE ‘under water’ + -(*ʔs*)*ta* LIQUID ‘in water, air’ + -*is* OUTDOOR
 ‘outdoor, on beach’)
- b. -*wəsdis* UP.BEACH ‘up from beach’
 (-*wá* REV.LOC ‘off, away from’ + -(*ʔs*)*ta* LIQUID ‘in water, air’ + -*is* OUTDOOR
 ‘outdoor, on beach’)
- c. -*wəls* OUTSIDE.HOUSE ‘outside house’
 (-*wá* REV.LOC ‘off, away from’ + -(*g*)*əł* DIR.ATEL ‘directional, atelic’ + -*!s* GROUND
 ‘on ground’)
- d. -*ilis* SHOREWARD ‘from the sea’
 (-*ił* IN.HORIZ ‘into house, into inlet’ + -*is* OUTDOOR ‘outdoor, on beach’)
- e. -*iłχo* INTO.MOUTH
 (-*ił* IN.HORIZ ‘into house, into inlet’ + -*!χo* NECK) (B47:238)

The morphophonological effects of certain suffixes on the preceding coda consonant follow predictable patterns. One might argue that these are synchronically produced combinations. On the other hand, the meanings associated with some of these combinations, such as (158c)

are conventionalized and not transparently compositional. In some cases, such as (158a), the proposed derivational origin is a mere hypothesis on my part. If a speaker were to spontaneously combine morphemes to create the meaning ‘down to the beach’, there are additional, different forms they might also choose. In all cases, these fused forms were listed in the Boas glossary as independent suffixes; at minimum this reflects their frequent synchronic co-occurrence.

In addition, as mentioned, a single form can have a broad functional range. Some locative suffixes can be used in either static or dynamic contexts, depending on their position in a construction. As noted by Mithun in her discussion of Kwakwaka, “some suffixes specify location, some direction, and some either” (1999:149). Mithun noted that the suffix -*čəw*, for example, is one such suffix in Kwakwaka. It can mean INSIDE in some contexts, representing Endpoint, and INTO in others, representing Path. Some examples of each type of use are presented below. Additional examples can also be found in Mithun 1999:149.

(159) SUFFIX -*čəw* MEANING BOTH DIRECTION (PATH) AND LOCATION

Path: -*čəw* ‘into’

gaχčəw ‘to come in’
gaχ-čəw
 come-IN

čəmčod ‘to point in’
čəm-čəw-d
 point-IN-MOM.TR

kačola ‘to drive a person into’
kaχ-čəw-əla
 drive.away-IN-CONT

Location: -*čəw* ‘inside’

wabəčola ‘to have water inside’
wap-čəw-əla
 water-IN-CONT

ʔəχwətʰcola
ʔəχ-wä-(g)ət-čəw-əla
root-REV-DIR.ATEL-IN-CONT

‘to take out (from inside)’

(B47:346)

As we will see, only a limited number of suffixes can be used in this way, to represent either Direction or Location, and -čəw IN has the widest distribution among these. I argue in Chapter 6 that the semantic function of such ‘labile’ suffixes is not merely a result of pragmatic inference, but also communicated by their position in the sequence of affixes in a construction, as well as their relationship with aspectual derivations.

5.3 Literature

Rich systems of spatial reference have been noted in the grammars of several indigenous languages of Northwest North America. As noted by Mithun (1999), the languages of the Western region of North America, including the Pacific Northwest area where Kwakwaka is spoken, share elaborate grammatical systems for identifying both **location** and **direction**. Among these, the directional marking of Karuk is well documented in both Bright (1957) and in Macaulay (2005). Macaulay examines the properties of directional suffixes in Karuk, identifying a subset of suffixes as applicatives. Many parallels exist between the languages of California and the languages of the Pacific Northwest, and some of this structural congruence is explored further in the next chapter.

Beyond descriptions of spatial grammar, the linguistic expression of motion in language has long provided a site for the examination of **event structure** in different languages. In a seminal article, Talmy proposed a typology categorizing languages

according to their dominant patterns framing expression of motion events, and in particular how they encode ‘Path’⁵¹ (Talmy 1985).

Motion events, in Talmy’s proposal, are merely representative of all event complexes conceptualized and expressed in the grammar of a language, fitting into a larger hypothesis about the cognitive and linguistic expression of event structure. Talmy proposes five basic types of ‘framing events;’ together, these compose a single event ‘complex’. Motion is one. (The others are ‘change of state’, ‘temporal contouring’, ‘action correlating’ and ‘realization’.) (Talmy 1991:481) Within this proposal, each event has a schematic ‘core’. Recall that in Talmy’s definition, Motion events include both static and kinetic relations. For Talmy, the schematic core of such Motion events is the expression of Path (which includes Location in the case of a static event).

Talmy’s typology proposes, ultimately, that languages cluster according to how they divide semantic function and event structure between ‘open class’ items from the lexicon (the verb) and ‘closed class’ grammatical items (the satellites) (Talmy 2000:178). V-frame languages locate the schematic core of the event in the verb, while S-frame languages locate the schematic core of the event outside the verb. ‘Verb-framed languages’ (or ‘V-frame languages’) express Path (and Location) within the motion verb and locate information about Manner and Cause in a satellite. Spanish and French are prototypical examples of this type. On the other hand, ‘Satellite-framed languages’ (or ‘S-frame languages’), locate information about Path (and Location) outside the verb, in what Talmy calls ‘satellites.’ English is a prototypical examples of an ‘S-frame’ language, but so is Atsugewi, the indigenous California language about which Talmy wrote his thesis (Talmy 1972). Satellites in English are fully separate prepositions, while in Atsugewi, they are affixes bound to the

⁵¹ ‘Path’, here, is defined in the broad Talmyan sense, including static location, direction, and source/goal.

verb. We can see the contrast between languages defined as verb-frame vs. satellite-frame in the examples below, from Talmy 1991.

(160) TALMYAN TYPOLOGY OF EVENT-FRAMING

S-FRAME Eng: The bottle floated out.

V-FRAME Spn: La botella salió flotando.
(‘The bottle exited, floating’)

S-FRAME Eng: I rolled the keg out of the storeroom.

V-FRAME Spn: Saqué el barril de la bodega rodándolo.
(‘I removed the keg from the storeroom, rolling it’)

S-FRAME Eng: I kicked the ball into the box.

V-FRAME Spn: Metí la pelota a la caja de una petada.
(‘I put-in the ball to the box with a kick.’) (Talmy 1991:488-489)

Talmy notes that (as is obvious from the translations), the lexica of English and other S-frame languages include Path verbs such as *enter*, *exit*, *ascend*, *cross* and so on, but says “their use is generally less colloquial and they are largely borrowed from Romance languages, where they are the characteristic type” (Talmy 1991:489). Berman and Slobin pointed out that S-frame languages tend, unlike V-frame languages, to have rich repertoires of manner verbs (Berman & Slobin 1994:118-119). English is a prototypical example, with many manner verbs like *sway*, *creak*, *mosey*, *idle*, and *sneak*. The contrast between ‘S-frame’ and ‘V-frame’ modes of event representation is not, then, a contrast between two types of grammatical systems, but between general tendencies which seem to unify groups of languages around one pattern of usage or another.

With this paper and subsequent work, Talmy opened a rich and productive vein of inquiry. The proposals remain an influential touchstone in discussions of spatial grammar and event structure, even as other scholars have added to, modified and challenged the original claims. What exactly is a ‘verb’, in Talmy’s typology, and what is a ‘satellite’?

These questions have been asked for many languages. Some scholars, like Slobin, have proposed a third type of language, ‘Equipollent’ (or E-framed), for which expression of Path and Manner are split between two verbs, usually in a serial verb construction; Mandarin Chinese is the prototypical example of an equipollent language.

By these measures, K^wak^wala — with a profusion of monomorphemic roots describing manner of motion — might also be considered an S-frame language. But applying Talmy’s typology to K^wak^wala poses some immediate, familiar challenges. First, in a language such as K^wak^wala, for which it is difficult to identify lexical classes such as ‘noun’ and ‘verb’, how shall we map Talmy’s structure onto K^wak^wala clauses? What would we consider the ‘verb’ in a K^wak^wala clause? Is it the syntactic predicate, where events are described? If so, as we will see, the predicate includes information about Path, and K^wak^wala would then be defined as a V-frame language. Alternatively, is the verb the derived morphological word before inflection with person and case-marking enclitics? Or, finally, is the verb just the root, before suffixes are added? In turn, what would we consider a ‘satellite’? If the suffixes are satellites, we might group K^wak^wala with S-framing languages.

We can take some cues from Talmy’s work with Atsugewi, an indigenous language of California. Atsugewi is also suffixing and, like K^wak^wala, marks many fine-grained semantic spatial distinctions with these suffixes. For Atsugewi, Talmy considers the suffixes to be satellites, and identifies just the root as the ‘verb’. With K^wak^wala then, I identify the monomorphemic lexical root as the equivalent of Talmy’s verb, and I consider the suffixes to be satellites.

Glancing briefly at the 1948 dictionary produced by Boas, we can see that, like English, K^wak^wala has many monomorphemic roots describing manner of motion in detailed

ways. In addition to the basic form *qas-* ‘walk’, there are different forms meaning ‘to walk or dance with fast, short steps’ (*caχ-*) or ‘to crawl or walk on four legs’ (*gəl-*). Single morpheme roots describe motion in terms of how fast or slow it is: *məχ-* ‘to move quickly’, *ya-* ‘to trail along’, or even whether motion is occurring while someone sleeps: *q^wənq^w-* ‘to move in sleep’. The shape of movement can be described with a root such as *sil-* ‘to move winding’, *wəlyχ-* ‘to curve back, circle’, *woliq-* ‘to circle’, *pis-* ‘to wobble’, among others. There is a rich vocabulary for describing motion *in* water, and these forms are distinct from terms identifying motion *on* water. The form *six^w-* meaning ‘to paddle’, contrasts with *nəχ-* ‘to paddle against the wind’, *yul-* ‘to drift down river in canoe, paddling’, *tin-* ‘to pole a canoe’ (i.e. to move a canoe using a long pole), and *cit-* ‘to use a raft’ among others. The root *pəλ-* means ‘fly’ while the root *q’an-* means ‘soar’. These forms suggest a rich vocabulary for describing manner of motion, and little reliance on a small set of ‘Path’ lexemes (defined in a Talmyan sense, with meanings such as ‘enter’ and ‘exit’). In fact, K^wak^wala constructs the a predicate meaning ‘enter’ with a root *la-* ‘go’ and a suffix *-cəw IN*, and the lexeme meaning ‘exit’ is also compositional, derived from the root *la-* ‘go’ with suffixes *-wəl* and *-cəw*. Having seen the extensive locative suffixes in K^wak^wala grammar, we might then conclude that K^wak^wala is an S-frame language: it has a rich vocabulary of manner verbs, as other S-frame languages often do (such as English) and identifies Path, Location, and other elements of the Ground in suffixes.

On the other hand, there is also rich vocabulary of roots which describe Direction, Orientation, and Path in K^wak^wala. Roots such as *n’a-* ‘upriver, south, east’, *g^wa-* ‘downriver, north, west’, *liχ-* ‘to approach’, *las-* ‘seaward’, *paλ-* ‘landward’ and so on can become motion predicates with the addition of suffixes which add motion to the root. A full list of

motion roots is provided in the next section, illustrating the range of resources in the grammar.

As discussed in Chapter 3, lexicalization is an active and emergent process in Kwakwala.⁵² While it may be possible to analyze the component morphemes of a morphologically complex word, the semantic meaning of the word as a whole is not always transparent or predictable. Suffixes have fused with stems and also with other suffixes: combinations of roots and suffixes have become routinized, just as combination of suffixes with each other have also become routinized. The language is always in the process of adding new, unanalyzable forms to the lexicon. These forms might ultimately be seen, by Talmy, as ‘verbs’ which encode Path information; Kwakwala, then, might be interpreted within this framework as an S-frame language in the process of becoming a V-frame language. However, such an analysis further erodes the diachronic relevance of the two grammatical and usage-based tendencies, V-frame and S-frame, initially proposed by Talmy.

It is difficult to fit Kwakwala neatly into a Talmyan dichotomy proposing two types of event structure, one locating Path within the lexical ‘verb’, the other locating Path in a satellite. The next section explores in more depth whether Kwakwala grammar can be shown to exhibit a strong tendency to locate Path in the root or the suffix. Talmy also proposes a cross-linguistic tendency for “[the] Ground notion to be expressed by a noun-root...and the Directional notions by closed-class elements such as noun affixes or adpositions” (Talmy

⁵² ‘Lexicalization’ is used here with the assumption that it is a process always taking place in a living language. As such, one can observe forms in the process of becoming lexicalized, with discernible internal morphological structure, but with some loss of predictability in the combinatorial semantics. This is a broader sense than Talmy attributed to the term, which he applied only to solidly monomorphemic, unanalyzable forms.

2000: 185). As we will see, Kwákwála expresses both Ground and Directional concepts in both ‘open class’ lexical roots and ‘closed-class’ grammatical suffixes.

The Language and Space project at the Max Planck Institute at Nijmegen identified the expression of motion as a principal domain for comparative research in the fourteen languages included in the study. They explored the following topics in the domain of kinetic description:

- “(a) the typology of semantic packaging in the verb;
- (b) the underlying semantical notions of path and motion itself;
- (c) the form classes in which such concepts are coded, both verb subclasses and other form classes;
- (d) the way in which source and goal are coded;
- (e) the way in which all these resources are globally deployed in the clause or beyond to construct an overall depiction of a ‘journey’ or complex motion path” (Levinson and Wilkins 2006:527).

The Nijmegen group identified several patterns in the way languages express motion. While the Space Group found the typology of verb-framed and satellite-framed languages useful as an initial heuristic tool, they also found it did not apply well to several languages in their sample. The Nijmegen group identified ways in which the influential terminology used by Talmy, especially ‘Path’ and ‘Manner’, conflated semantic elements which some languages treat quite differently. For example, manner of motion (running, walking, jumping, sliding) is not the same as conveyance (by boat or vehicle) or medium (float, swim, fly). The Nijmegen group also defines the notion of motion they are investigating

differently than Talmy did: in terms of *displacement* of the Figure. A similar approach to motion is applied here.

Examining the packaging of event structure in the verb, the Nijmegen group found that while some languages, such as English and Dutch, fit the Talmyan typology well as ‘satellite-framed’ languages, others did not. In some cases, the structure of the language does not mesh well with the assumptions built in to Talmy’s typology about verbs as a large open lexical class and ‘satellites’ as a small closed (functional) class; the Australian language Jaminjung has a small set of verbs and a larger set of ‘coverbs’ which work together to define path and manner information. Other languages, like Austronesian Kilivila, encode both path and manner in verbs, and employ serial verb constructions in motion descriptions. Kwakwala also does not fit easily into the verb-framed or satellite-framed typology, although it is still instructive to consider where it lies in relation to these polar contrasts. Kwakwala lexical roots encompass many categories of motion event structure, including Manner, Conveyance, Medium, Path, and Direction as well as basic locomotion. Meanwhile, many of these categories are also available in the repertoire of lexical suffixes which derive predicates from roots. Source and Goal are marked in locative suffixes, but so is Path; and both can also be marked in prepositional phrases.

Kwakwala shares several of the form-classes of motion verbs which the Nijmegen Group identified cross-linguistically: a restricted core class of ‘basic’ motion verbs which include deictic verbs (‘go’, ‘come’, ‘return here’); a set of oriented motion verbs such as ‘fall’; and a group of manner verbs. They found that within ‘(t)he core class of motion verbs...deictic coding is usually one way: languages typically encode motion towards the deictic centre, but leave the ‘away from deictic centre’ meaning to pragmatic contrast’. This

is true of the contrast between *la-* ‘go’ and *gaχ-* ‘come’ in Kwakwala: *la-* is not inherently deictic with relation to the speaker or another discourse-relevant reference object, as can be seen partly in the grammaticalized preposition of *la-* in example (161), which translates as ‘towards where we are’.

(161) LACK OF DEICTIC CODING IN *la-* ‘go’

<i>ləmox</i>	<i>nəlxila</i>	<i>gʷəyútala</i>	<i>laχənoʔχ</i>	<i>ʔəχʔás</i>
lə-ʔəm=ox	nəl-gil-Ø-a	gʷəy-ut-əla	la=χənoʔχ	ʔəχ-ʔas
AUX-OI=S.DEM	upriver-TR-3.SBJ-T	towards-MOT.DIR-CONT	PREP=1PL.POSS	root-LOC.NMLZ

‘He’s going up the river towards where we are (our place)’

qʷisalaʔmox.

qʷis-a-la-ʔəm=ox

far-POS-OI=S.DEM

and it’s kind of far.’

(2014jan27_LJBL_2.20)

Further examples in section 5.4.2 illustrate the range of derivations of *la-*, which include meanings such as *laʔiʔ* ‘to enter’ (location can be speaker-associated or not), *lagəʔa* ‘to arrive’, *lawä* ‘to come off’, *lawakəla* ‘to come off from rock’, but also *lagaʔəls* ‘to go out, to arrive at village’, *lāwala* ‘to go out of inlet’, *lolco* ‘to go out of’, *lawəls* ‘to go out of house’. On the other hand, *gaχ-* ‘come’ is inherently deictic, as illustrated by its grammaticalization as a first-person primary object marker, and the pragmatic contrast between these two does indeed often have a deictic interpretation.

Argument structure is another way in which form-classes of verbs can differ. In Arrernte (Arandic, Pama-Nyungan) a dialect cluster⁵³ spoken in Australia, different classes of verb have different argument structure, with core motion verbs having three argument slots, for Subject, Source, and Goal. In contrast, oriented motion verbs have two argument slots and manner verbs only one. In Kwakwala, argument structure is also relevant for a class of motion verbs: several basic motion roots are similarly ditransitive, although the three

⁵³ ISO 639-3: amx, aly, adg, aer, are, axe

argument slots are for Subject (Figure), Goal *or* Source, and Co-actor. As was found in Arrernte and Yélf Dnye, Kwákʷala grammar also encodes motion in grammatical form classes, including directional suffixes and other suffixes which indicate displacement of the figure when attached to a non-motion (stative) root.

The Nijmegen group identified three cross-linguistic patterns for coding Source, Goal and other aspects of the Ground: with zero-marking on the noun phrase (no adposition or case-marker), as is the case in Yélf Dnye; with a single semantically general marker, such as an adposition which does not distinguish between source and goal, as in Tzeltal and Yucatec; or with clear marking on noun phrases, as in English where prepositions distinguish different types of Ground. Kwákʷala is of the second type: a single preposition is employed to provide a syntactic link between a Source, Goal or other Ground and the predicate. As in Mayan languages, where Ground is marked on the verb, the specification of Source or Goal is provided in a derivational suffix within the Kwákʷala predicate (Levinson and Wilkins 2006:536).

Finally, in the description of complex motion events with subpaths, or what Slobin calls a ‘journey’, languages differ in whether they allow both Source and Goal (or more than one aspect of the Ground) to occur within a clause, or whether they require more than one clause. As demonstrated in section 5.5.3 on Preferred Ground Structure, spontaneous speech in Kwákʷala, like that of Yélf Dnye and Yucatec, does not locate both Source and Goal in a single clause. Levinson and Wilkins dubbed this discourse-tendency ‘the Preferred Ground Structure’: ‘mention only one major ground, source or goal, at a time’ (Levinson and Wilkins 2006:539).

I now proceed to a description of the linguistic resources employed in Kwakwala to express motion, followed by an examination of the syntactic and morphological patterns of motion expressions in Kwakwala.

5.4 Linguistic resources in Kwakwala for describing motion

Rich linguistic resources for describing motion exist in both lexical and functional domains of Kwakwala. Because ‘verb’ and ‘noun’ are primarily defined in Kwakwala by their syntactic context, a very wide range of roots, with a variety of senses, can form the nucleus of either a predicate or an argument. Kwakwala exhibits a high degree of semantic heterogeneity in both lexical and grammatical classes, and with respect to the grammar of space, spatial semantics of all kinds are distributed across the language, in roots and suffixes. There are dedicated roots which express motion events as traditionally understood: events of displacement of a Figure in relation to a Ground. However, motion predicates can also be derived from roots that, in their simplest form, do not indicate motion at all. Below, I describe first the roots expressing motion in their monomorphemic form, then roots which allow motion semantics through derivational processes. Finally, I describe suffixes. This section consists primarily in lists of forms that introduce the reader to the rich range of possibilities in the language.

5.4.1 Roots

Several forms describe basic self-directed motion of a figure through space: *la-* ‘go’ and *gaχ-* ‘come’ (toward speaker), and *gayuλ-* ‘come out of/away from somewhere’. These three stems are extremely frequent and have also grammaticalized in multiple directions⁵⁴; their

⁵⁴ A detailed review of the grammaticalization of these forms is beyond the scope of the thesis, but I summarize them here: (1) *la-*, *gaχ-*, and *gayuλ-* have become prepositions marking oblique arguments, with

frequency in connected discourse is notable. In addition to their lexical meanings, these three forms have become prepositions employed to mark obliques, as described in section 3.5.4 and illustrated with many examples in Chapters 4 and 5. In addition, two of these forms *la-* ‘go’ and *gaχ-* ‘come’, along with a third-person independent pronoun root *hi-*⁵⁵, have also become clause-initial discourse markers, also called ‘auxiliary predicates’ by Berman (1982). This grammaticalization was discussed in Chapter 3. Among these three forms, *gaχ-* ‘come’ expresses a deictic direction toward the location of the speaker; in contrast, *la-* ‘go’ does not obligatorily imply movement away from the speaker. Although they are among the most general and basic lexemes in the language, *la-* ‘go’, *gaχ-* ‘come’ and *gayuλ-* ‘come’ can also become highly specific with the addition of locative suffixes. Some examples of these are provided below.

(162) BASIC MOTION ROOTS

la- ‘go’

lá-dʷa-λ-ən

lá-dʷa-λ-ən

go-EMPH-FUT-1.SBJ

‘I will go (indeed).’

(III 146.7)

lágalis

la-gaʔl-°is

go-DIR.TEL-OUTDOOR

‘to arrive at beach’

(R179.4)

gaχ- obligatory for use with oblique first person referent; (2) *gaχən* and related forms, occurring clause-finally in prepositional phrases, also fill a gap in the pronominal paradigm for first person primary object reference (in contrast with first person subject and secondary object reference, which are, like all of the other person markers, enclitics); (3) *la-* ‘go’ and *gaχ-* ‘come’ have also become connective discourse markers, sometimes called ‘auxiliaries’ by Boas, which are a frequent feature of narrative discourse. Their use in discourse is well-described in Berman 1982.

⁵⁵ This form *hi-* is the distal third-person pronominal root. The set of pronominal ‘predicate’ roots includes first, second and third person forms, and a three-way distinction of third-person forms according to proximity; these forms are used in emphatic contexts and are usually translated in English with a cleft construction: “It was I who..., You are the one who...”. In its use as a predicate, the third-person form thus often has a demonstrative or presentative function: “That was where...”. As a discourse marker, this form tends to be translated as ‘Then...’.

láʔagalit
 la-čəw-gaʔt-iʔ
 go-IN-DIR.TEL-INDOOR
 'to go into house'

gaχ- 'come'

<i>gaχʔa</i>	<i>gəngənanəmi</i>
gaχ-ʔ-(id)a	gəngənanəmə=i
come-FUT=1.SBJ	children-T.DEM
'The children will come'	

(X 17.8)

gáχʔalis
 gaχ-(g)aʔt-is
 come-DIR.TEL-INDOOR
 'to come to beach'

gásgəχʔa
 gas-gaχ-!a
 RED-come-EAR
 'to hear, to come into ear'

In addition to simple motion forms such as *la-* 'go', and *gaχ-* 'come', K^wak^wala grammar offers an extensive repertoire of monomorphemic forms describing movement, manner, posture, conveyance, different types of figures, path direction and so on.

(163) MOTION ROOTS

Basic motion

<i>la-</i>	'to go (non-specific)'
<i>hoq^w-</i>	'to go (plural figures)'
<i>gaχ-</i>	'to come'
<i>yawix-</i>	'to move, be in motion' (rare)

Manner (characteristic of Figure, including number of Figures)

<i>qas-</i>	'to walk'
<i>cáχ-</i>	'to walk, dance, with fast, short steps; bird runs'
<i>gəl-</i>	'to walk on four feet, to crawl'
<i>d^əəlχ^w</i>	'to run'
<i>típ-</i>	'to step'
<i>yəχ^w-</i>	'to dance'
<i>dəq^w</i>	'to jump'
<i>ʔawabala-</i>	'to be slow, move slow'

<i>ya-</i>	‘to hang down, trail along’
<i>məχ-</i>	‘to move, act quickly’
<i>həmχ^w-</i>	‘to rush forward (person)’
<i>yəχ-</i>	‘to be quick (movement)’
<i>pis-</i>	‘to wobble’
<i>lix-</i>	‘to turn over’
<i>ʔayak-</i>	‘to use an adze sideways, seesaw, balance’
<i>čásdaq-</i>	‘to somersault, turn a long thing over and over’
<i>məlχ^w-</i>	‘to move a bit (person), the motion of a bird scratching for food’
<i>q^wənq^w-</i>	‘to move in sleep, toss and turn’
<i>čaq-</i>	‘to drift’
<i>dənχ^w-</i>	‘to stand or move in a row’
<i>ləmt-</i>	‘to explode, blast, burst’
<i>čəlχ-</i>	‘to go head first’

Path (and relation to Reference Object)

<i>sit-</i>	‘to move winding’
<i>ʔut-</i>	‘to be inclined to one side, lean over, or go out of straight path’
<i>wəlχ-</i>	‘to curve back, circle’
<i>wóliq-</i>	‘to zigzag’
<i>wən-</i>	‘to hide’
<i>həl-</i>	‘to return’
<i>təw-</i>	‘to go forward, closer’
<i>čiq^w-</i>	‘to travel on long trail over land’
<i>ləp-</i>	‘to climb a smooth pole’
<i>həχ^w-</i>	‘to climb a tree’
<i>nap-</i>	‘to fall into hole’
<i>g^wən-</i>	‘to all fall in the same direction’
<i>bəw-</i>	‘to leave’
<i>ʔix-a-</i>	‘to approach’
<i>ka-</i>	‘to move backward’
<i>wal-</i>	‘as far as a thing can go, motion stops’

Conveyance: Boats (Manner included)

<i>siχ^w-</i>	‘to paddle’
<i>nəχ-</i>	‘to paddle against the wind’
<i>yas-</i>	‘to travel by canoe’
<i>yúl-</i>	‘to drift down river in canoe, paddling’
<i>tin-</i>	‘to pole canoe’
<i>wat-</i>	‘to lead, to drag, to pull up canoe’
<i>cit-</i>	‘to use a raft’
<i>ʔaliχ^w-</i>	‘to go hunting sea mammals’

Medium: Air

<i>ʔəl-</i>	‘to fly’
<i>qan-</i>	‘to soar’

Medium: Water

<i>gəlq-</i>	‘to swim (person), to pull with hands’
<i>ma-</i>	‘to swim (fish, seal, whale), crawl (serpent)’
<i>wəq̣-</i>	‘salmon go down stream, fish all swim one way’
<i>čəlx-</i>	‘to go up river, against tide (fish)’
<i>das-</i>	‘to dive’
<i>łat-</i>	‘to dive along, spouting (whales)’
<i>wəns-</i>	‘to sink’
<i>pəχ^w-</i>	‘to float’
<i>wəŋq-</i>	‘to be deep’
<i>táχ^wa-</i>	‘to wade in water up to knees’
<i>hap-</i>	‘to dip, to duck, to dye something’

Specification of figure: inanimate, shape, etc.

<i>ča-</i>	‘moving liquid, usually tide’
<i>q̣^waχ-</i>	‘to grow’ (plants)
<i>q̣^wəmx-</i>	‘to rush down, pl. (rockslide, stones)’
<i>luχ^w-</i>	‘to roll round thing’

(B48)

There is a subset of roots which are more strictly directional than the ones provided above. These roots do not inherently express motion events, but they are often used to do so; they inherently express Orientation, which easily extends to become Direction or a Vector in a motion event. This set of directional roots is also unified because they accept a particular directional suffix *-ut* MOT.DIR, which does not occur with other non-directional roots. These forms are listed below. Derived forms are provided in the discussion of suffixes. The directional roots include deictic lexemes, roots which relate to gravity, and forms referring to the Earth-based coordinate axes of the Kwakwala frame of reference, which combines a riverine (upstream-downstream) axis with an orthogonal maritime (land-sea) axis.

(164) DIRECTIONAL ROOTS

<i>ṇal-</i>	‘upstream, upriver, south, east’ (<i>ṇal-</i> before consonants)
<i>g^wa-</i>	‘downriver, north, west’

<i>ʔaλ-</i>	‘landward, inland, behind, back’	
<i>λas-</i>	‘seaward, towards middle of house’	
<i>G^was-</i>	‘direction approaching something, near’	
<i>q^wis-</i>	‘direction away from something, far in space or time’	
<i>ʔik-</i>	‘above, up’	
<i>bə́n-</i>	‘underneath, below’	
<i>gáγ-</i>	‘to move from a certain place, to come from’	
<i>nəχ^w-</i>	‘near’	
<i>ʔix-</i>	‘to approach’	
<i>nəq-</i>	‘straight, direct’	
<i>G^wəγ-</i>	‘turning direction’	(B48)

Directional roots do not, unlike the motion and manner roots provided above, express motion unless additional suffixes are added to derive a motion predicate; the transitivizing suffix *-gil*, or the directional motion suffix *-ul* can both derive motion stems from directional roots. Example (165) contains first, a derived motion event with the directional root *nəl-* ‘upriver’ and the transitivizing suffix *-gil*, second, another directional predicate derived from *g^wəγ-* ‘towards’ and the directed motion suffix *-ul*, and finally, a stative derivation formed with the directional root *q^wis-* ‘far’ and the positional suffix *-ala*.

(165) DERIVATIONS OF DIRECTIONAL ROOTS

<i>ləmox</i>	<i>nəlxila</i>	<i>g^wəyútala</i>	<i>laχənoʔχ</i>	<i>ʔəχʔás</i>
lə-ʔəm=ox	nəl-gil-Ø-a	g ^w əy-ul-əla	la=χənoʔχ	ʔəχ-ʔas
AUX-OI=S.DEM	upriver-TR-3.SBJ-T	towards-MOT.DIR-CONT	PREP=1PL.POSS	root-LOC.NMLZ
‘He’s going up the river towards where we are (our place)’				

q^wisalaʔmox.

q^wis-ala-ʔəm=ox

far-POS-OI=S.DEM

and it’s kind of far.’

(2014jan27_LJBL_2.20)

Additional examples of directional roots in combination with the directed motion suffix are provided in Section 5.4.2 on suffixes.

Both *G^was-* ‘direction towards reference object’ and *q^wis-* ‘direction away from reference object’ isolate the directional relationship between a figure and a reference object.

Some examples below give a sense of the many derivations of these roots, some of which refer to events of displacement of a figure, others of which refer to static entities or situations.

(166) *G^was-* DERIVATIONS

KINETIC

<i>G^wásxəla</i>	'to approach' (<i>-xəla</i> MOVE)
<i>G^wásuələ</i>	'to come towards'
<i>G^wásabala</i>	'to come near this way'
<i>G^wáG^wasəaqa</i>	'to pass this way'
<i>G^wásəʔatox^wʔid</i>	'to turn ear this way' (<i>-ato</i> EAR; <i>-xʔid</i> MOM)
<i>G^wásikaələ</i>	'to turn back'

STATIC

<i>G^wásəʔa</i>	'this side of rock' (<i>-!a</i> ROCK)
<i>G^wásaʔd^uulis</i>	'flat thing on beach this way' (<i>-d^u</i> FLAT, <i>-lis</i> OUTDOOR)
<i>G^wasigaliʔ</i>	'to be in house this way'

(Boas 1947: 228)

(167) *q^wis-* DERIVATIONS

KINETIC

<i>q^wisgila</i>	'to go far away, to go to far side'
<i>q^wisagəʔə</i>	'to arrive at a distant point (<i>-gəʔə</i> ARRIVE)

STATIC

<i>q^wisənxəlis GaGəmp</i>	'father of great-great grandfather (‘far edge of world grandfather’)
<i>q^wisəyənχ</i>	'next winter'
<i>q^wisaʔd^uəlis</i>	'other side of beach'
<i>q^wisina^kw</i>	'far side'
<i>q^wisigiʔ</i>	'long after'

(Boas 1947: 228)

Boas translates *G^was-* and *q^wis-* as ‘direction towards here’ (Boas 1947: 228) and ‘to be close to you, near by, to approach, to turn to, to turn this way, to come this way’ (Boas 1948: 326). *q^wis-* is translated as ‘direction towards there’ (Boas 1947: 228), and as ‘far in space or time’ (Boas 1948: 343). Looking at the examples below, however, we can see that the use of ‘here’ and ‘there’ in the translation is slightly misleading; these forms are sometimes employed with deictic reference to the position of the speaker, but in contrast to

gaχ- ‘come toward (speaker)’, which is always with reference to the position of a speaker, *G^{was-}* and *q^{wis-}* more broadly refer to elements referred to in discourse context, not speech act participants (speaker and hearer).

(168) *G^{was-}* ‘toward reference object’

<i>náχ^{wa}ʔəmlaʔi</i>	<i>g^{was-}ústəʔida</i>	<i>ʔoyi</i>
náχ ^{wa} -ʔəml-laʔi	g^{was-}a-(g)usto-(g)əʔ=ida	ʔoyi
all-OI-QUOT	toward_ref.obj-UP-DIR.ATEL=SBJ	halibut

‘All the halibut had their heads (turned up)

<i>laχ</i>	<i>ʔúʔbana.</i>
laχ	ʔuʔban=a
PREP	cormorant=T.DEM

toward Cormorant.’

(III:293.18)

(169) *q^{wis-}* ‘away from reference object’

<i>Wa,</i>	<i>láχaʔa</i>	<i>ʔəχʔidχa</i>	<i>múq^{wə}la</i>
wa	laχaʔa	ʔəχ-(x)ʔid=χa	muq ^{wə} la
now	AUX.DISC	take-MOM=OBJ1	stomach

‘And she takes the stomachs

<i>qa</i>	<i>gaχis</i>	<i>gaʔis</i>
qa	ga=χis	gay-ís
sbd	AUX=3.SBJ>3.OBJ2	motion.from.place-OUTDOOR

and puts them down on the beach,

<i>laχa</i>	<i>ʔis</i>	<i>q^{wis-}isala</i>	<i>laχa</i>	<i>tíq^{wə}apayí⁵⁶</i>
la=χa	ʔis	q^{wis-}is-ala	la=χa	tíq ^{wə} apayí
PREP=DEM	neg	away-POS	PREP-DEM	stones.in.fire

not far from the stones in the fire.’

In (168), the reference object is *ʔúʔbana*, the cormorant, and in (169), the reference object is *tíq^{wə}apayí* ‘the stones in the fire’. These examples exemplify the difference between *gaχ-* ‘come’, for which the reference object is invariably the speaker, and *g^{was-}* and *q^{wis-}*, for which the reference object is another object mentioned in the discourse.

⁵⁶ As is true of all of K^wak^wala stems, *g^{was-}* and *q^{wis-}* serve equally well as the nucleus for an argument in a syntactic noun phrase as they do for a predicate. While *g^{was-}* is the predicate in example , *q^{wis-}* in a noun phrase in the prepositional phrase at the end of example .

Like many languages in the area, Kwakwaka grammar has an extensive subset of ‘handling’ roots, many of which differ depending on the shape or materiality of the object as well as the instrument of handling, which is sometimes a body part (B48; Mithun 1999:111). These forms express caused motion, rather than spontaneous motion. The argument structure of these predicates implies a Causer or Agent of the motion (usually expressed a Subject) and a Theme. Some examples are provided below.

(170) HANDLING ROOTS

<i>tix-</i>		‘to carry round thing on shoulder’
	<i>tinod</i>	‘to bring carrying’
<i>hamt-</i>		‘to carry a person (deer, child) on back’
<i>ɬuxʃ-</i>		‘to carry on back with pack strap’
<i>yənk-</i>		‘to throw with sling’
<i>wik-</i>		‘to carry long stiff thing on shoulder’
	<i>wigiʃ</i>	‘to carry into house’
	<i>wikəlʔsa</i>	‘to lift from ground and put on shoulder’
<i>wiχ^w-</i>		‘to lift up anything entirely’
<i>yəlkw-</i>		‘to carry a flat object on shoulders’

There are very many of these forms and just a few are provided here.

Finally, we can see that by adding the right suffixes to almost any root⁵⁷, a speaker can derive a predicate expressing spontaneous motion. These include some roots with adverbial or adjectival senses (property roots), a demonstrative root, and a negative root. The derivations are provided in the list below. The relevant suffixes which derive motion events from non-motion roots include suffixes with locative meanings (i.e. *haʔ-* ‘quickly’ + *-axa* DOWN: *halaxa* ‘to go down quickly’), body part meanings (*ʔot-* ‘to handle roughly’ + *-(x)sis* FOOT + *-əla* CONT > *ʔultcisəla* ‘to walk with rapid feet’), and verbal meanings (*wil-* ‘entirely, all to the end’ + *-mola* ‘to move in company’ > *wiləmola* ‘to all go together’). In

⁵⁷ There are a few roots which do not seem to derive motion predicates. These form an interesting subclass, and perhaps might form the basis for an argument in favor of (subtly-defined) classes within the lexicon. However, this is a matter for further study.

some cases, the meanings are highly idiomatic and not necessarily predictable based on the component morphemes. Such derived forms also reflect culturally specific metaphorical extension.

(171) DERIVED MOTION PREDICATES

<i>wəł-</i>		‘in vain, to no purpose, merely’
	<i>wəłił</i>	‘to come into house uninvited’
	<i>wəłd^oyⁱ</i>	‘to go in vain’
<i>wil’-</i>		‘entirely, all to the end’
	<i>wilámola</i>	‘to all go together’
<i>haʔ-</i>		‘quickly’
	<i>haláxa</i>	‘to go down quickly’
<i>gəłt-</i>		‘long’
	<i>gəłdək^wəla</i>	‘to take long steps, move slowly’
<i>həm’-</i>		‘to eat’
	<i>hamikəyala</i>	‘to go after food’
<i>duq^w-</i>		‘to see, to look at’
	<i>dúđəG^wəliʔ</i>	‘to go about visiting on water’
<i>tik^w-</i>		‘to hang’
	<i>tik^wəχsdəliʔ</i>	‘to tow’ (lit. ‘to hang behind on water’)
<i>p’a-</i>		‘to put down palm of hand, stretch out hand’
	<i>p’ayakəla</i>	‘to feel one’s way into the woods’
	<i>p’əp’áχdəq</i>	‘to feel one’s way in the dark’
<i>kəq-</i>		‘to strike with hand, butt, canoe strikes something, be end to end’
	<i>kəχʔalis</i>	‘canoe strikes beach with bow’
	<i>kəqəlGiʔ</i>	‘to paddle along among drifting objects’
<i>d^oik^w-</i>		‘to stretch out leg’
	<i>d^oig^wəńak^wəla</i>	‘sea otter swims along’
<i>mak-</i>		‘close by, next to’
	<i>mágapⁱʔ</i>	‘to follow close behind (next to nape of neck)’
<i>ʔot-</i>		‘to handle roughly’
	<i>ʔút^bala</i>	‘to be quick’

	<i>ɖəwátilála</i>	‘to go about lively’
	<i>ɖútcisəla</i>	‘to walk with rapid feet’
	<i>ɖúlcók^wəla</i>	‘to walk a little lively’
<i>q̣^wəly-</i>		‘oneself, on one’s own accord’
	<i>q̣^wəlyəɖábod</i>	‘to go under by oneself’
	<i>q̣^wəlyəɖiɺ</i>	‘to enter on one’s own accord’
	<i>q̣^wəlyəɖsta</i>	‘to fall into water by oneself’
	<i>q̣^wəlyultá</i>	‘comes out by itself, out of woods by itself’
	<i>q̣^wəliwəls</i>	‘goes out of house by itself’
<i>wáxs-</i>		‘towards both ends, both sides’
	<i>wáxsənk^wəla</i>	‘to carry in each hand’
<i>ɖit-</i>		‘again’
	<i>ɖidəɖaqa</i>	‘to go back’
	<i>ɖidəlćəχsta</i>	‘to go again to invite’
	<i>ɖitaχa</i>	‘to go down again’
<i>hi-</i>		‘that 3.DEM, in a straight direction to a distant point’
	<i>həyánsəla</i>	‘to sink straight down’
	<i>háyoɖsəla</i>	‘to go right from one to another’
	<i>həyúttala</i>	‘to go straight out of woods’
	<i>hiɖstala</i>	‘to go right into water’
	<i>higustala</i>	‘to go right up stairs, pole’
	<i>hiq̣ənχ^wəla</i>	‘to step right up to a person’

Several of the suffixes employed in these derivations are discussed in more detail in the next section, on suffixes.

5.4.2 Suffixes

As we have also seen, many suffixes exist in K^wak^wala to add path and directional information, specify details of ground geometry or reference objects, topographic information, forms such as *-(g)ustá* UP, *-aχa* DOWN, *-(x)səq^wa* OVER, *-^oabo* UNDER, *-ćəw* IN, *-(x)sa* THROUGH, *ńu-* SIDE.ROUND’, *-aqa* PAST (in space), *-siq^wa* ACROSS, and so on. Additional suffixes also express a range of verbal semantics: *-(ge)yála* ‘to go to look for...’, *-anuma* ‘to come to...’, *-təwi* ‘to do...while’, *-mála* ‘to walk, to move in company’, *-!ud* ‘to bring’, -

gaʔa ‘to reach’, *-sdənaq* ‘to work while...’. Aspectual suffixes can also affect the semantic sense of a derived stem.

The list presented in (171) provides the reader with an overview of and introduction to the variety of ways suffixes can add information to motion roots. Readers will recognize many forms introduced in both Chapter 3 and Chapter 4. For the sake of brevity, this list is presented without detailed information about the suffixes that derive these forms. However, several of the forms presented below are analyzed further in section 5.6 on the internal structure of the predicate.

(172) DERIVATIONS OF MOTION ROOTS

<i>la-</i>	‘to go’	
	<i>laʔiʃ</i>	‘to enter’
	<i>lagəʔa</i>	‘to arrive’
	<i>loʔco</i>	‘to go out of’
	<i>lálaʔa</i>	‘to reach’
	<i>lálənxənd</i>	‘to reach edges’
	<i>láləniq^wa</i>	‘to reach corners’
	<i>lálaGod</i>	‘to reach between’
	<i>lənsa</i>	‘to sink’
	<i>ləncə</i>	‘to go down on rocky shore, beach’
	<i>láʔstaliʔəla</i>	‘to go around in house’
	<i>ləlbənd</i>	‘to go from end to end’
	<i>layo</i>	‘to be taken, made to go’ (<i>-ayu</i> PASS.OBJ2)
	<i>láləʔayo</i>	‘to try to go with; to die without’
	<i>layəpəlagəʔis</i>	‘people going this way and that; to change places’
	<i>layəpəxʔid</i>	‘to pass each other; to change each others’ place’
	<i>lawəʔs</i>	‘to go out of house’
	<i>lagaʔəʔs</i>	‘to go out; to arrive at village’
	<i>lawä</i>	‘to come off’
	<i>lawala</i>	‘to go out of inlet’
	<i>lawakəʔa</i>	‘to come off from rock’
	<i>labəta</i>	‘to penetrate’
	<i>labəʔs</i>	‘to go from one end of village to the other’
	<i>láləbalisəla</i>	‘to walk back and forth’
	<i>látusəlagəʔis</i>	‘walking down river’
	<i>lāsGəmiʔ</i>	‘to follow’
	<i>lágəʔalá</i>	‘to arrive (go ashore) on rock’
	<i>lagəʔaləxʔəʔəm</i>	‘to be put aboard’

	<i>lagəʔaʎala</i>	‘to go on top of, to reach’
	<i>lágaliʂ</i>	‘to arrive at beach’
	<i>lósdis</i>	‘to go up from beach’
	<i>lágəyoliʎa</i>	‘to go to rear of house’
	<i>lágusta</i>	‘to go up; to go on and sing in big house’
	<i>laʎa</i>	‘to go down’
	<i>lákənd</i>	‘to reach a body, a line, trail’
	<i>lakodiʎ</i>	‘to pass middle (chopping down tree)’
	<i>lákotəʎod</i>	‘to go to other side of neck (chopping down tree)’
	<i>láGod</i>	‘to shift to the other side’
	<i>laʔqá</i>	‘to go among’
	<i>láxiyols</i>	‘to go to top’
	<i>láxsʔ</i>	‘to go through, so that it is in pieces; to wound, to break’
	<i>laxsá</i>	‘to go through; to initiate; to purify’
	<i>laxstəʔəlis</i>	‘to fall to ground’
	<i>laʎlakala</i>	‘to go often’
	<i>lalaxʎala</i>	‘to be able to make headway (against tide)’
	<i>laxd=amoliʎ</i>	‘to go in front’
	<i>lalaʎtəwa</i>	‘to go to every one’
	<i>laxʎolsəla</i>	‘to go to each in house’
	<i>lalaqa</i>	‘(water) enters inside between’
	<i>laloʔsəla</i>	‘to go over to’
	<i>laʔstálayo</i>	‘to be led around’
	<i>lálálas</i>	‘to go anywhere; to go here and there’
	<i>láləsəla</i>	‘to go into all the houses’
	<i>láʔs</i>	‘to go or give from one to the other’
	<i>loqá</i>	‘to go out from among’
	<i>loʎ</i>	‘to get, to obtain’
<i>gaʎ-</i>	‘to come’	
	<i>gáʎʔala</i>	‘to come to rocky place’
	<i>gáʎʔalis</i>	‘to come to rocky place on beach’
	<i>gáʎaməŋqʷəla</i>	‘some begin to come’
<i>hoqʷ-</i>	‘to go (plural)’	
	<i>hóqawəls</i>	‘to go out (pl)’
	<i>hóGʷabod</i>	‘to go under (pl)’
<i>qas-</i>	‘to walk’	
	<i>qəyáʔənd</i>	‘to walk across behind’
	<i>qásəmd</i>	‘to walk across in front’
	<i>qástod</i>	‘to walk on trail’
	<i>qad=əltod</i>	‘to walk in tracks of somebody’
	<i>qáciʔstala</i>	‘to walk around; to go and ask for something to eat’
<i>cáʎ-</i>	‘to walk, dance, with fast, short steps; bird runs’	
	<i>cáʎoʔiyoliʎəla</i>	‘to walk with quick steps in middle of house’
<i>gəl-</i>	‘to walk on four feet, to crawl’	
	<i>gəlʎakʷəla</i>	‘to crawl along’

	<i>gǎlgils</i>	‘to crawl on ground’
	<i>gǎlkǎyǎlis</i>	‘to crawl all over world’
	<i>gǎlgǎǎmi</i>	‘to walk in front’
<i>dʷǎlxʷ</i>	‘to run’	
	<i>dʷǎloqa</i>	‘to run into a crowd’
	<i>dʷǎlxʷǎyolǎta</i>	‘to run to rear of house’
	<i>dʷǎlxʷsǎmiʔ</i>	‘to run after’
	<i>dʷǎlxʷǎlnodʷi</i>	‘to run alongside’
	<i>dʷǎlxʷǎlgǎnd</i>	‘to run amongst’
	<i>dʷǎlǎlxʷilǎla</i>	‘to run about’
<i>dǎqʷ</i>	‘to jump’	
	<i>dǎxʷsisǎla</i>	‘to hop along’
	<i>dúudʷud</i>	‘to jump on flat’
<i>ya-</i>	‘to hang down, trail along’	
	<i>yǎmgǎtǎla</i>	‘to trail along on water’
<i>mǎx-</i>	‘to move, act quickly’	
	<i>mǎxʷǎlǎl</i>	‘to rush out of room’
<i>hǎmxʷ-</i>	‘to rush forward (person)’	
	<i>hǎmxʷǎmgǎtǎla</i>	‘pl. to jump about in water’
	<i>hǎmxʷsǎmiʔ</i>	‘to urge, to jump in after somebody’
	<i>hǎmxʷsta</i>	‘to rush into water’
	<i>hǎmxʷǎttusǎla</i>	‘to rush downhill’
<i>ǎa-</i>	‘moving liquid, usually tide’	
	<i>ǎǎqǎxʔǎlis</i>	‘to drift ashore’
<i>pǎǎ-</i>	‘to fly’	
	<i>pǎlǎǎ</i>	‘to fly around’
<i>ǎǎnʷ-</i>	‘to soar’	
	<i>ǎǎnʷǎxǎla</i>	‘to soar down’
<i>ma-</i>	‘to swim (fish, seal, whale), crawl (serpent)’	
	<i>mǎlǎla</i>	‘(fish) swim about’
	<i>mǎǎlǎla</i>	‘(seal) swims on rocky shore’
<i>pǎxʷ-</i>	‘to float’	
	<i>pǎxǎla</i>	‘to float on water’
	<i>pǎxʷǎtǎnd</i>	‘to float out to sea’
	<i>pǎxʷsʔǎnd</i>	‘to float shoreward’
	<i>puxʷsdǎla</i>	‘to float backside out of water’
<i>wǎnq-</i>	‘to be deep’	
	<i>wǎnGǎgila</i>	‘to go in deep’
<i>hap-</i>	‘to dip, to duck, to dye something’	
	<i>hǎpstǎnd</i>	‘to duck into water’
<i>wǎn-</i>	‘to hide’	
	<i>wǎnwǎls</i>	‘to go out secretly’
<i>tǎw-</i>	‘to go forward, closer’	
	<i>tǎwóʔstǎlisǎla</i>	‘to walk around the world’ (poetic)
	<i>tóǎw</i>	‘to step into, to begin winter ceremonial’
	<i>tóyǎga</i>	‘to go into the woods, to commit suicide’

	<i>tayug^walisəla</i>	‘to go very far’
	<i>tóyo lapəlayu</i>	‘to be taken below’
<i>q^waχ-</i>	‘to grow’	
	<i>q^waχəmgustołi?</i>	‘pl. to grow up out of water’
<i>cəλχ-</i>	‘to go head first’	
	<i>cəλχsa</i>	‘to go through a hole head first’

As was shown in section 5.4.1 on roots, suffixes can derive motion predicates from roots which do not inherently express motion events.

(173) DERIVATION OF NON-MOTION ROOTS

<i>yəχ-</i>	‘to be quick (movement)’	
	<i>yáyaxəxsala</i>	‘to walk, run fast’
<i>haʔ-</i>	‘quickly’	
	<i>haləχa</i>	‘to go down quickly’
<i>həm-</i>	‘to eat’	
	<i>hamikəyala</i>	‘to go after food’
<i>pə-</i>	‘to put down palm of hand, stretch out hand’	
	<i>pəyəkəla</i>	‘to feel one’s way into the woods’
	<i>pəpəχdəq</i>	‘to feel one’s way in the dark’
<i>kəq-</i>	‘to strike with hand, butt, canoe strikes something, be end to end’	
	<i>kəχʔalis</i>	‘canoe strikes beach with bow’
	<i>kəqəlGi?</i>	‘to paddle along among drifting objects’
<i>q^wəly-</i>	‘oneself, on one’s own accord’	
	<i>q^wəlyəʔábod</i>	‘to go under by oneself’
	<i>q^wəlyəʔił</i>	‘to enter on one’s own accord’
	<i>q^wəlyəʔsta</i>	‘to fall into water by oneself’
	<i>q^wəlyultá</i>	‘comes out by itself, out of woods by itself’
	<i>q^wəliwəls</i>	‘goes out of house by itself’
<i>ka-</i>	‘backward’	
	<i>kaʔχ-</i>	‘to go backward’
	<i>kañiłəla</i>	‘to walk backward into house’
	<i>kaʔxəls</i>	‘to step back’
	<i>kaʔxəʔəlis</i>	‘to back canoe to beach’
<i>yəχ-</i>	‘to be quick (movement)’	
	<i>yáyaxəxsala</i>	‘to walk, run fast’
<i>nəł-</i>	‘to lie on back, flat’	
	<i>nəłəχa</i>	‘to fall down on back’
	<i>nəłá</i>	‘to come off and lie on back’
<i>wík-</i>	‘to carry long stiff thing on shoulder’	
	<i>wígił</i>	‘to carry into house’
	<i>wíkəłʔsa</i>	‘to lift from ground and put on shoulder’
<i>luχ^w-</i>	‘to roll round thing’	
	<i>luχ^wmala</i>	‘groups of people go together’

This is also true of roots that express directional vectors.

(174) DERIVATION OF DIRECTIONAL ROOTS

<i>n̄al-</i>	‘upstream, upriver, south, east, world’
	<i>n̄əlgila</i> ‘to go upriver, south’
	<i>n̄əlbənd</i> ‘to go up river, to go south’
	<i>n̄ən̄ələʔaqa</i> ‘to pass upstream’
	<i>n̄əluləla</i> ‘to go south (east), up river’
	<i>n̄ələləla</i> ‘to go along rocky shore up river or south’
<i>g^wa-</i>	‘downriver, north, west’
	<i>g^watəla</i> ‘to go down stream’
	<i>g^wəgəʔaqa</i> ‘to pass northward’
	<i>g^wəbelsala</i> ‘to start from down river end of village and go to north end’
	<i>g^wəgaxʔid</i> ‘to turn down river’
<i>ʔaʎ-</i>	‘landward, inland, behind, back’
	<i>ʔəʎəgila</i> ‘to go into woods’
	<i>ʔəʎəxələ</i> ‘to go ashore, landward’
	<i>ʔaʎəxsə</i> ‘to go through the back door’
	<i>ʔəʔəʎəʔaqa</i> ‘to pass inland’
	<i>ʔəʎənxiʔ</i> ‘to land edge of canoe’
	<i>ʔəʎitúG^walis</i> ‘to put head landward’
	<i>ʔəʎabala</i> ‘to walk in woods’
	<i>ʔəʎaxləxʔid</i> ‘to land stern first’
	<i>ʔəʎaləls</i> ‘to go back into woods’
	<i>ʔəʎiʔsta</i> ‘to go inland’
	<i>ʔaʎulisəla</i> ‘coming up beach’
	<i>ʔaʎədʔəs</i> ‘coming from the woods’
	<i>ʔəʎələ</i> ‘to go ashore’
<i>ʎas-</i>	‘seaward, towards middle of house’
	<i>ʎəʎasəʔaqa</i> ‘to go seaward’
	<i>ʎasgəls</i> ‘to move seaward’
	<i>ʎasgila</i> ‘to travel way out seaward’
	<i>ʎasaxʔid</i> ‘to go to beach’
	<i>ʎasabala</i> ‘paddling way out at sea’
	<i>ʎasulisəla</i> ‘to come from woods going towards beach’
	<i>ʎasuləla</i> ‘to go towards beach’
	<i>ʎasGəmxʔid</i> ‘to look seaward’
<i>G^was-</i>	‘direction approaching something, near’
	<i>G^wasgila</i> ‘to go towards’
	<i>G^wəG^wasəʔaqa</i> ‘to pass this way’
	<i>G^wəsabala</i> ‘to come near this way’
	<i>G^wasuləla</i> ‘to come towards’
<i>q^wis-</i>	‘direction away from something, far in space or time’
	<i>q^wisgila</i> ‘to go far away’

<i>ʔik-</i>	‘above, up’	
	<i>ʔikəgila</i>	‘to go high’
	<i>ʔəʔikəməla</i>	‘to walk up (mountain)’
	<i>ʔikəGəmaʔa</i>	‘to look up’
	<i>ʔikiʔsta</i>	‘to go up’
<i>bəñ-</i>	‘underneath, below’	
	<i>bəñgila</i>	‘to walk downward’
	<i>bəñáxʔid</i>	‘to walk downhill’
<i>gáy-</i>	‘to move from a certain place, to come from’	
	<i>gayabala</i>	‘to start from’
	<i>gayəñak^wəla</i>	‘to begin, come from gradually’
	<i>gáyaxsdənd</i>	‘to begin at end’
	<i>gayoqa</i>	‘to come out from among’
	<i>gágəlis</i>	‘to start from beach’
	<i>gágiləla</i>	‘to go along from beginning to end’
	<i>gáyutəla</i>	‘to move from’
<i>ñəx^w-</i>	‘near’	
	<i>ñəx^wábala</i>	‘to come near’
	<i>ñəx^wáxstəxʔid</i>	‘sound comes near, approaches’
<i>ʔix-</i>	‘to approach’	
	<i>ʔixəñak^wəla</i>	‘to approach’
	<i>ʔixaxləyó</i>	‘to be overtaken’
	<i>ʔixaxləlabənd</i>	‘to approach from behind’
<i>nəq-</i>	‘straight, direct’	
	<i>nəGula</i>	‘to move in a straight direction’
	<i>nəqamala</i>	‘to travel straight in middle of river or inlet (up or down)’
	<i>nəʔGəxləod</i>	‘to come straight upon at sea’
	<i>nəqágiwəla</i>	‘to have bow of canoe straight ahead’
	<i>nəGamala</i>	‘to go right along bank of river’
<i>G^wəy-</i>	‘turning direction’	
	<i>G^wəyútəla</i>	‘to turn towards’
	<i>G^wəgustala</i>	‘to go upward’
	<i>G^wəʔsta</i>	‘to turn around in a circle’
<i>hě-</i>	‘in a straight direction to a distant point, completely’	
	<i>həyótəla</i>	‘to keep right on’
	<i>həyənsəla</i>	‘to sink straight down’
	<i>hämənsəla</i>	‘to sink straight down. pl.’
	<i>hayábodala</i>	‘to do right under’
	<i>hayáqa</i>	‘to pass, surpass, exceed’
	<i>hayuʔsəla</i>	‘to go right from one to another’
	<i>hayosta(la)</i>	‘to go up river’ (see <i>hígustála</i>)
	<i>hayoqod</i>	‘to select, pick out from among’
	<i>hayólis</i>	‘to continue’
	<i>hayútəla</i>	‘straight out of woods’
	<i>haʔstala</i>	‘to go all around a thing’
	<i>hibənd</i>	‘to put straight on end’

<i>higiyolitəla</i>	‘walk right up to (rear of) in house’
<i>higətʔaniʔ</i>	‘to follow straight on a line’

It is important to note as well, that motion roots, those which inherently mark motion events in their most basic form, can also form the nucleus for non-motion events and non-predicates. In some cases, this may be the effect of an aspect marker, such as positional *-ala*, or of a nominalizer, such as INSTRUMENTAL *-ayu* or LOCATIVE *-ʔas*. Some examples of non-motion senses derived from *la-* ‘to go’ and *gaχ-* ‘to come’ are provided here.

(175) STATIC STEMS DERIVED FROM MOTION ROOTS

<i>ləlxʂʔa</i>	‘broken (to go to pieces)’
<i>ləlGo</i>	‘mixed’
<i>ləlGogwila</i>	‘two ends of year meet, child one year old’
<i>ləlGálas</i>	‘place of fighting’
<i>layəpa</i>	‘to take each others’ name, to change places’
<i>laʔstəxʔid</i>	‘to bathe’
<i>laʔdʷáləʔas</i>	‘at last’
<i>laxlagas</i>	‘place you go every once in a while (euph: toilet)’
<i>lagit</i>	‘reason’
<i>lákəsəla</i>	‘to eat’
<i>lállakołʔanəndala</i>	‘to change from one hand to the other’
<i>laqədʷənd</i>	‘to put into mouth’
<i>laxlənd</i>	‘to put on fire’
<i>lólaqʷa</i>	‘to start singing, talking’
<i>lóʔila</i>	‘brought in’
<i>gaχʷalodala</i>	‘to bring many things successively’
<i>gáχanəm</i>	‘caught’ (obtained by coming)
<i>gásgəχʔa</i>	‘to hear, come into ear’

In Section 5.6 on morphology, I focus further on the internal structure of the predicate. The section on morphology also focuses on a particularly important subclass of directional suffixes that add motion and direction semantics to roots, the trio *-(g)əł*, *-gaʔł*, and *-wəł*. First, however, I explore the syntax of motion expressions, and the argument structure of motion predicates in Section 5.5.

5.5 Motion expressions: Syntax

Languages differ in their framing of motion events and the encoding of these semantic roles. In many languages, the majority of relevant encoding of spatial information happens at the syntactic level: in some languages, such as Yélf Dnye or English, a repertoire of **prepositions** identify spatial relationships; in others, such as Finnish, **case-marking** specifies a particular figure-ground relationship; in still others, such as Jaminjung, preverbs and verbs work together to specify these relationships. These are all examples of different ways in which syntax and the lexicon work together to identify spatial meaning through grammatical encoding.

In other languages, a description of syntax alone (or syntax and the lexicon) does not offer a sufficient explanation of how spatial relationships are encoded. In Kwakwala, event dynamics are encoded in syntax, morphology, and the lexicon and close descriptions of each type are necessary to understand and produce grammatical expressions.

This section, 5.5, focuses on the syntax of motion expressions in Kwakwala, and describes how these forms relate to each other within the clause. After an overview of the sequence of syntactic elements, I discuss how the grammatical roles are assigned to particular semantic roles in a motion event, and I address the significance of variation in argument structure. I also discuss the constraints in Kwakwala against encoding more than one Ground element in a clause (Levinson & Wilkins 2006: 539), which is shared with many other languages.

5.5.1 Overview

As mentioned in Chapter 3, the boundaries between syntax and morphology in Kwakwala are quite clear. Selections from a large class of derivational suffixes attach to a root in order to

build a word which can become a constituent in a clause, either a predicate or argument. A very small class of inflectional case-marking, person-marking and demonstrative enclitics then attach to these words **in the context of a clause**, in a sequence **determined by the order of constituents** in the clause, resulting in a finite sentence with a clearly interpretable meaning. This meaning results from the interplay between syntax and morphology, and relies on both for successful communication; neither one alone is sufficient.

Motion expressions in K^wak^wala follow the relatively rigid predicate-initial word order visible throughout the grammar. A prototypical example of a pragmatically unmarked simple sentence expressing a motion event, with both Figure and Goal identified lexically, is provided in example (176).

(176) SYNTACTIC ROLES

PRED	SUBJECT	OBLIQUE	
<i>ləʔəm t̪ibili</i>	<i>Mike</i>	<i>laχa</i>	<i>guk^w</i>
lə-ʔəm t̪ip- ^o il=i	Mike	la=χa	guk ^w
AUX-OI step-INDOOR=3.SBJ	Mike	PREP=DEM	house
‘Mike stepped into the house.’			(2013jul17_BL_1.20)

In the example above, the syntactic role of each constituent (or constituent phrase) is identified above the sentence. As mentioned, in spontaneous speech and connected discourse (even in the context of an elicitation session), speakers tend to begin sentences with an ‘auxiliary’ discourse marker. (See §2.7.1 for more information about these discourse markers). At the left edge is the predicate, in two parts: an ‘auxiliary’ or discourse marker *ləʔəm* (often translated as ‘then’), and a content predicate *t̪ibil* ‘step in house/on floor’ following. The full form *t̪ibili* combines three morphemes: the root *t̪ip-* ‘step’ (also ‘foot’), the derivational morpheme-^o*il*, glossed as INDOOR, meaning ‘in a house or built structure, on the floor inside’ and the third-person prenominal enclitic =*i*, indicating that the following

constituent (‘Mike’) is the subject of the sentence. The generic preposition *la-* (*laχa*) marks the house *guk^w* as an oblique argument.

I repeat the example below, this time identifying the semantic components of the motion event.

(177) SEMANTIC ROLES

MANNER & GROUND	FIGURE	GOAL	
<i>ləʔəm tibi</i>	<i>Mike</i>	<i>laχa</i>	<i>guk^w</i> .
<i>lə-ʔəm tɪp-^oil=i</i>	Mike	<i>la=χa</i>	<i>guk^w</i>
AUX-OI step-INDOOR=3.SBJ	Mike	PREP=DEM	house
‘Mike stepped into the house.’			(2013jul17_BL_1.20)

Looking at the correlation between semantic roles and argument structure, it is apparent that the Figure in motion, Mike, is marked as a Subject, as would be expected cross-linguistically. In this example and the one below, the Goal of the motion (here *guk^w*-‘house’) appears as an oblique within a prepositional phrase. While this syntax recalls familiar structures from English, I demonstrate in section 4.5.2 on Argument Structure that Goal is not always marked as oblique in *K^wak^wala*.

The *la*-DEM preposition is a semantically vacuous linking particle, indicating nothing about the particular relationship between the Figure and the Goal. Instead the details of this relationship are communicated in the predicate, which, in this case, expresses both Manner of motion (‘stepping’) in the root *tɪp-* ‘to step, foot’ and Location (or perhaps Goal) of motion in the suffix *-^oil* INDOOR.

As we have seen in previous examples, a lexical subject can intervene between the discourse marking ‘auxiliary’ predicate and the content predicate, as in (178).

(178) MOTION EXPRESSION WITH SUBJECT PRECEDING CONTENT PREDICATE

<i>Lída</i>	<i>bəgʷánəmbidawá</i>	<i>laʕolil</i>	<i>laχʷa</i>	<i>ʔucʕolitiχ</i> ⁵⁸ .
La=ida	bəgʷanəm-bidu=a	la-čəw-lił	la=χʷa	ʔu-čəw-lił=iχ
AUX=SBJ	boy-DIM=DEM	go-IN-INDOOR	PREP=DEM	room=T.DEM

‘The (little) boy went into the next room.’ (2013jul17_BL_1.22)

The definite third-person subject-marking enclitic =*ida* attaches directly to the discourse marker *la-*, marking the following argument *bəgʷánəmbidu* ‘little boy’ as the subject of the clause (and as the Figure in the motion event). The content predicate *laʕolil*, roughly meaning ‘to go inside house’ is next, followed by the prepositional phrase including the oblique-marked Goal *ʔucʕolil* ‘room’.

The semantic generality of the *la-DEM* preposition is confirmed in looking at further examples, all taken from Frog Story retellings. All four examples share the general preposition *la-*, which is additionally marked with deictically appropriate demonstratives such as =*χa*, =*χʷa*, and =*χoχda* indicating proximity and visibility of the oblique referent (=χa 3.DEM.DIST.DEF, =χʷa 3.DEM.MED.INVIS.DEF, =χoχda 3.DEM.MED.VIS.DEF). But the preposition does not distinguish between Source and Goal in the way that English prepositions *to* and *from* do, nor does it identify distinct relationships of containment (‘in’), attachment (‘on’, ‘at’), or support (‘on’). The examples above are both translated with ‘into’. However, in (179) below, the frog is jumping **out of** the jar, not into it.

(179) SEMANTIC GENERALITY OF PREPOSITION

<i>ləmóχda</i>	<i>wəqésix</i>	<i>dəχʷətʕól</i>	<i>laχóχda</i>	<i>dəmsisGəmχ</i>
lə-ʔəm=oxda	wəqes=iχ	dəqʷ-wət-čəw-əla	la=χoχda	dəmsisGəm=χ
AUX-OI=S.DEM	frog=T.DEM	jump-REV.DIR-IN-CONT	PREP=DEM	jar=T.DEM

‘Frog jumped out of the jar.’ (2013jul15_BL_3)

The Figure (and Subject) is the frog, *wəqés*, appearing between the discourse marker *ləmóχda* (which includes the subject-marking enclitic =*oxda*) and the morphologically

⁵⁸ This word for ‘room’ is morphologically complex: combining the place-holder root ʔu- with the suffix -čəw IN, the CONTINUOUS aspect marker -əla and the suffix -ol meaning INDOOR. A terminal deictic enclitic inflects the word.

complex predicate *dax^wəlcól* ‘jump out of’. The starting point of the motion, *dámsisGəm*, the jar, is marked within the clause-final prepositional phrase.

In (180), the boy is falling off of a small hill.

(180) SEMANTIC GENERALITY OF PREPOSITION

<i>lámox tíqaxəlsəxda</i>	<i>gənanəmx</i>	<i>láxoxda</i>	<i>mək^wəʔsíχ.</i>
lámox tíq-axə-əls=oxda	gənanəm=χ	la=χoxda	mək ^w -!s=iχ.
AUX fall-DOWN-OUTSIDE=S.DEM	boy=DEM	PREP=DEM	round.thing-GROUND-T.DEM

‘Then the little boy fell off the hill (i.e.lump on the ground).’ (2013jul15_BL_3)

The same preposition *la-DEM* occurs here, this time meaning ‘off of’. Again, the predicate *tíqaxəls* ‘fall down outside (on the ground)’ encodes a semantically specific relationship between displaced Figure and Reference Object. Here again, the same prepositional phrase encodes the starting point (‘Source’) of the motion, rather than the destination, but the specificity of the relation between Figure and Ground is encoded within the predicate, rather than indicated with a preposition.

Finally, note that the prepositional phrase is not always identifying the Ground. In the sentence below, the preposition is marking the needle that pierces the paper, not the paper.

(181) PREPOSITION MARKING THE FIGURE

<i>ʔənxəwəqox</i>	<i>láχ^wa</i>	<i>ʔənxGayu.</i>
ʔən-χsâ-!q=ox	la=χ ^w a	ʔənxGayu
poke-THROUGH-AMONG=S.DEM	PREP=DEM	needle

‘It’s pierced through (by) the needle. (the paper).’ (2014jan24_SW_1.26)

This sentence is a rare exception, however. In most cases, the prepositional phrase marks an element of the Ground.

As described in Chapter 3, *K^wak^wala* does have two other prepositions. One, derived from the root *gaχ-* ‘come’ (*gaχən* 1SG.OBJ1, *gaχənc* 1INCL.OBJ1, *gaχənoʔχ* 1EXCL.OBJ1) now

seems to be restricted in function as a first person primary object marker; I was unable to find examples of its use in motion expressions in either the modern corpus or in the legacy data.

(182) SPEAKER-ORIENTED PREPOSITION

<i>hə́laqi</i>	<i>Pearl</i>	gayən.	
hə́laq=i	Pearl	gay=ən	
pay=SBJ	Pearl	PREP=1SG	
‘Pearl paid me.’			(2012jul23_BL)

(183) SPEAKER ORIENTED PREPOSITION

<i>gáχida</i>	<i>ʔuligən niχ</i>	<i>qəs</i>	<i>múmasʔideʔ</i>	gayənoʔχ.
gay=ida	ʔuligən niχ	qəs	múmas-(x)ʔid=eʔ	gay=ənoʔχ.
come-S.DEM	wolves think	PURP	tear_up-MOM=DEM	PREP=1EXCL
‘Then the wolves came meaning to tear us up.’				(2014jan30_SW)

One other preposition, *gayuλ-* is derived from the root *gay-* ‘come from a place’, and is only used to identify the Source or starting point of motion. But this form is used very infrequently as a preposition. I have not found any examples in motion expressions. However, a few examples exist in the modern corpus of combinations of *gayala* ‘from’ with *la*-DEM. In example (184) below, there is no indication in the recording of a phrasal boundary (no pause or boundary tone) to suggest that *gayala* should be analyzed as a predicate rather than a preposition. It is not unlikely that the syntax might have entailed two clauses at some point, but in this example I would interpret the combination of *gayala* and *laχ^{wa}* as compound preposition.

(184) *gayala* COMBINED WITH *la*-dem

<i>lə́moχ</i>	<i>χə́mχasoloχda</i>	<i>láχʔaʔačíχ</i>
lə-ʔəm=οχ	χə́ms-°ol=οχda	láχʔaʔačí=χ

AUX-OI=S.DEM RED-hit.side-EXCL=S.DEM basket=DEM
 ‘The baskets are banging together

gayala *laχ^wa níniniχ*
gayala **la=χ^wa nínini=χ**
 PREP PREP earthquake=T.DEM
 from the earthquake.’

(2013aug13_BL_1)

Levinson and Wilkins identified three broad typological patterns of encoding motion: one type of language, exemplified by Tzeltal (Mayan) and Yucatec (Mayan) in the Nijmegen sample, has a single semantically empty preposition and instead, encodes information about spatial relations in the verb (Levinson and Wilkins 2006:535). As I have shown above that although K^wak^wala has three prepositions, one is used far more frequently than the others. A single preposition, *la*-DEM, expresses the greatest range of relationships between Figure and Ground in both static and kinetic events, made possible by predicates which contain detailed morphology which identifies the specificity in the spatial relationship between Figure and Ground — relationships of support, containment, type of Ground, and so on. This morphology is explored in greater detail in Section 5.6.

The next section explores the relationship between syntactic and semantic roles as expressed in argument structure. Following that, a section describes the ‘Preferred Ground Structure’ in K^wak^wala discourse, which tends to limit expression of Ground elements to one per clause.

5.5.2 Argument structure

In this section, I describe the **argument structure** of motion expressions; in particular, the variable syntactic marking of semantic roles such as Destination and Source. In several examples provided below, elements of the Ground such as Destination are marked as **oblique** in prepositional phrases, which recalls the syntax of English and other languages that rely on prepositions to link Figure and Ground.

On the other hand, for predicates derived from a particular subset of motion roots, the semantic role of Destination can be case-marked instead as a **primary object**, although this pattern is variable. In the latter part of this section, I explore various explanations for this pattern and the variability of the pattern. Based on the argument structure and morphosyntax of passivized motion predicates, as well as the inflection of prepositions, I argue that the primary object marking of Destination with motion roots was historically a strong pattern.

K^wak^wala prepositional phrases are often used to frame elements of the Ground (Source, Goal, and so on) and when they do, the structure of a locative expression looks quite familiar to speakers of English and other languages which rely on adpositional marking of Ground elements in a motion event, as in (185).

(185) PREPOSITION MARKING GROUND

<i>típ'còwən</i>	<i>ʔump</i>	<i>laɣa</i>	<i>x^wəpəs.</i>
típ'-cəw=ən	ʔump	laɣa	x ^w əpəs
step-IN=1.POSS	father	PREP=DEM	hole

‘My dad stepped **in a hole** in the ground.’

(2013jul17_BL_1.9)

In the example above, the relation of containment between Figure and Ground is marked with the suffix *-cəw* IN, attached to the predicate root *típ'* ‘step’. Another example of the same root *típ'* ‘step’ marks a different Goal as oblique: the water. In the English translation, the same preposition ‘in’ is used. In K^wak^wala, the preposition *la-* is used again, but the

predicate differs, with the suffix *-(?)sta* LIQUID attached to *típ-*, indicating a different medium.

(186) PREPOSITION MARKING GROUND

<i>lámox</i>	<i>típstəwoχda</i>	<i>gingənanəməχ</i>	<i>laχ^wa</i>	<i>wápiχ.</i>
lə-ʔəm=ox	típ-(?)sta=oxda	gin-gənanəm=χ	la=χ ^w a	wápi=ix
AUX-OI=3.SBJ	step-LIQUID=3.SBJ	RED-children=DEM	PREP=DEM	water=T.DEM
‘The children stepped in the water.’			(2013jul17_BL_1.11)	

In both cases, the Ground element — a hole in (185), the water in (186), is identified with a locative suffix within the predicate but is also identified lexically in a prepositional phrase.⁵⁹

The prepositional phrase can also be excluded, as we see — even when the translation sentence requires a prepositional phrase.

(187) OMISSION OF PREPOSITIONAL PHRASE

<i>lámox</i>	<i>pʰə́lʰsuχ^wda.</i>	
lámox	pʰə́l-(g)ə́t-!s=uχ ^w da	
AUX	fly-DIR.ATEL-GROUND=S.DEM	
‘It (the owl) flew up from the ground.’		(2013aug16_LJSW_frogstory_71)

This is possible because the Ground (in this case, the literal ground, the outside dirt surface of the Earth), is marked with a suffix *-!s* GROUND attached to the root *pʰə́l-* ‘fly’.

Recall this example from Chapter 3, which is not a motion construction but nevertheless shows that locative prepositional phrases are not required to communicate information about Ground location. The locative suffixes *-(?)sta* LIQUID and *-əls* OUTSIDE are sufficient to express that the boy and dog are sitting in water; the suffix *-(?)sta* indicates that they are sitting in liquid, which could be any type of liquid, and the suffix *-əls* OUTSIDE adds pragmatic information leading the speaker to interpret the liquid as water.

(188) OMISSION OF PREPOSITIONAL PHRASE

⁵⁹ Note, as well, that in this clause the subject is marked twice, on the auxiliary *lámox* and on the content predicate *típstəwoχda*.

<i>kʷáʔstəlsoχda</i>	<i>gənanəməχ</i>	<i>ləwá</i>	<i>wáciχ</i>
kʷa-ʔsta-əls=oxda	gənanəm=χ	ləwá	wáci=χ
sit-LIQUID-OUTSIDE=S.DEM	boy=DEM	CONJ	dog=DEM
‘The boy and the dog are sitting in (the) water.’			(2014jan20_LJ_1)

However, it is not just that Kʷakʷala can include or omit a prepositional phrase identifying the Ground element lexically. The argument marking on a lexically expressed element of the Ground also varies: Kʷakʷala does not always mark Ground elements as obliques in a prepositional phrase. In some cases the Goal or Destination is case-marked as a **primary object**, rather than an **oblique**. One might wonder if perhaps argument-marking is lexically determined by the root; however, the same speaker, using the same root *típ-* ‘step’, marks the Goal ‘holes’ with the primary object enclitic *=(a)χa* rather than in a prepositional phrase in the example below.

(189) DESTINATION MARKED AS PRIMARY OBJECT

<i>tátípstuwóχaχa</i>	<i>xʷixʷəpəs</i>	
tá-típ-(?)stu=ox=aχa	xʷi-xʷəpəs	
RED-step-OPENING=3.SBJ=OBJ.1	RED-hole	
‘He keeps stepping in all the holes.’		(2013jul17_BL_1.10)

In (190), the root *dəχʷ-* ‘jump’ is followed by the suffix *-oɪlba* NOSE. However, the predicate *dəwɪlbənd* ‘jump on nose’ also bears the **primary object marking enclitic** *=(a)χʷa*, marking the constituent *babaGʷəm* ‘boy’ (the owner of the nose), the Goal of the squirrel’s motion, as a **primary object**, rather than an oblique marked with a preposition.

(190) DESTINATION MARKED AS PRIMARY OBJECT

<i>ləmɪsuxda</i>	<i>təminasiχ</i>	<i>dəwɪlbəndaχʷa</i>	<i>babaGʷəm</i>
la-ʔəm-is=oxda	təminas=iχ	dəχʷ-oɪlba-nd=(a)χʷa	babaGʷəm
AUX-OI-Q=S.DEM	squirrel	jump-NOSE-MOM=OBJ.1	boy
‘The squirrel ⁶⁰ jumped on the boy’s nose.’			(2013aug8_BL) ⁶¹

⁶⁰ Note that here again, as in example (178), the subject *təminas* ‘squirrel’ appears after the discourse marker, and before the content predicate; the prenominal subject marker *=uxda* attaches to the discourse marker.

With other motion roots as well, destination can be marked as a primary object.

In example (191), drawn from the Boas/Hunt text corpus, the light (*ḥaqʷala*) which is the destination of *qas-* ‘walk’, is marked as a primary object with the enclitic =*χa*.

(191) DESTINATION MARKED AS PRIMARY OBJECT

<i>Wə,</i>	<i>lálaʔi</i>	<i>qástuwixa</i>	<i>ḥaqʷala</i>	
Wə,	la-lá-ʔi	qas-(ʔ)sto=(i)χa	ḥaqʷ-ała	
DISC	AUX	walk-OPENING=OBJ1	light=POS	
‘Well, then it is said, he walked away toward the light.’				(B1906, III11.4)

I first encountered these examples in the older corpus, and hypothesized that Kʷakʷala had changed as a result of contact; the vast majority of motion expressions I had recorded in modern speech marked Ground in prepositional phrases. However, as we saw in (189) and (190), there are many examples of variability in argument marking in the modern corpus as well. Speakers provided examples of both types of argument marking, in connected speech as well as in elicitation. At one point, Mrs. Lagis provided a set of three sentences with closely related meaning and varying argument structure, presented below. The translations provided are in her own words. In (192), she marked *ḥaqʷala* ‘the window’, as the primary object of the motion; the relevant morpheme is presented in boldface type.

(192) MODERN CORPUS: DESTINATION AS PRIMARY OBJECT

<i>laʔəm</i>	<i>qástuwixa</i>	<i>ḥaqʷala.</i>	
la-ʔəm	qas-(ʔ)sto=Ø=(i)χa	ḥaqʷ-ała	
AUX-OI	walk-OPENING=3.SBJ=OBJ1	light-POS	
‘He’s walked to where the light is.’			(2013aug12_BL_37)

In (193), Mrs. Lagis offered a near minimal pair, with the Goal marked in a prepositional phrase instead, with a subtly different translation.

⁶¹ There is some ambiguity in this example, raised by the fact that the *nose* is the site of the squirrel’s jumping, but the owner of the nose is provided lexically as the primary object. Nevertheless, the root *dəχʷ-* ‘jump’ is marking the Ground as a primary object, rather than an oblique in a prepositional phrase.

(193) MODERN CORPUS: DESTINATION AS OBLIQUE

<i>lə̀mi</i>	<i>qástuwi</i>	<i>laxa</i>	<i>ńáq^wala.</i>
lə-ʔəm-i	qas-(ʔ)sto-i	la=χa	ńaq ^w -ala
AUX-OI-TD	walk-OPENING-TD	PREP=DEM	light-POS
‘He’s walked on the — where there’s light. [sic]’			
			(2013aug12_BL_38)

In this example, Mrs. Lagis seems to draw on the resource of a prepositional contrast in English, between *to* in the first example and *on* in the second. It is not entirely clear how to interpret the contrast between these two formulations; if one assumes that there is some kind of iconicity in the argument marking, by which a core argument (primary object) represents more telicity or achievement in an event than an oblique argument (representing an object moved towards but not arrived at), these two translations do not support that assumption.

Mrs. Lagis initially offered another way of saying the sentence ‘he walked to where the light is’, this time using the word for window, *ńiG^waći*. In this example, the NP *ʔax(álə)ʔasasa ńiG^waći* ‘the place where the light is’ is marked as an oblique with *lax*.

(194) MODERN CORPUS: DESTINATION AS OBLIQUE

<i>Lə</i>	<i>qási</i>	<i>lax</i>	<i>ʔax(álə)ʔasasa</i>	<i>ńiG^waći.</i>
Le	qási	la=χ	ʔax-(ála)ʔas=(a)sa	ńaq ^w - ^o aći
AUX	walk	PREP=DEM	root-POS-LOC.NMLZ=POSS	window
‘He walked to where the light is.’				(2013aug12_BL_36)

The oblique argument marked in the prepositional phrase is a complex noun phrase meaning ‘the place of the light’; the first word *ʔax(álə)ʔasasa* contains a locative nominalizer *-ʔas*; the secondary object marker *=(a)sa* is functioning here as a genitive marker indicating that *ʔax(álə)ʔas*⁶² ‘the place’ is possessed by the noun *ńiG^waći* ‘window’: the window’s place, or the place of the window. This is a relatively heavy noun phrase but we have seen plenty of examples of single lexical items which can be marked either as primary objects or obliques, so I do not believe that the weight of the noun phrase triggers use of a preposition. There are

⁶² Mrs. Lagis offered both versions, with and without the positional aspect marker *-ála* in the word.

some structural differences between this sentence and the previous two, aside from the difference in argument structure. In (192), the predicate contains a locative suffix *-(?)sto* OPENING, which indicates any kind of opening: a door, a window, an eye, a clearing in the woods indicating a path. The type of opening is often determined by context; when followed by *-°ił*, the suffix *-(?)sto* is pragmatically understood as referring to a door or window. In this case, however, while we do not know what kind of opening this is, it likely also refers to the window; as such, it contributes to the ultimate meaning of the expression. Note, however, that the same suffix occurs in example (194), where the window is marked as an oblique.

Although the translations are identical for (192) and (193), the lexical referent for the Ground differs between the two sentences, with important consequences: in the first example, the word is *ńaq^wala* (*ńaq^w*- ‘daylight’ + *-ala* POS), a common term for ‘light’ as a general, abstract phenomenon. In the second sentence, the word is *ńiG^wa’ci*, which is a commonly used word for ‘window’ (*ńaq^w*- ‘daylight’ + *-a’ci* CONTAINER); the second translation might be better phrased ‘he walked to where the window is’. The contrast between these two items could be important: the first, *ńaq^wala* is diffuse and unbounded; the second *ńiG^wa’ci* ‘window’, is a discrete and bounded entity. The relationship between Figure and Ground in a motion expression would likely be quite different, as would the discourse transitivity of these two predicates (Hopper and Thompson 1980). Nevertheless, it is difficult to say exactly how this would determine argument structure. Furthermore, the process of elicitation, and the high degree of bilingualism among speakers, makes it difficult to draw conclusions about discourse motivations for variations in argument structure in modern motion expressions.

The modern picture is clouded by language change and contact. However, it is possible to hypothesize a historical trajectory for argument structure in motion roots. Recalling that K^wak^wala has secundative alignment in several subclasses of ditransitive verbs, and that K^wak^wala passive morphosyntax distinguishes between promotion of primary and secondary objects, illuminates the argument structure of motion roots. As described briefly in Chapter 3 (and in more detail in Rosenblum 2013) the PRIMARY OBJECT PASSIVE form *-suʔ* promotes primary objects to subject position, while the SECONDARY OBJECT PASSIVE forms *-ayu*, *-əm* and *-ano* promote secondary objects to subject position. The promotion of lexical argument to subject in a passive clause results in two changes that indicate subject status: (1) prenominal or pronominal subject inflection on the predicate, and (2) the immediate post-predicate position of a lexical argument (when it appears) in the syntax of the clause. K^wak^wala demoted subjects, when they appear, take secondary object marking.

Chapter 3 showed that certain subclasses of roots, including roots of TRANSFER (give, pay) and COMMUNICATION (tell, whisper, sing) have consistently secundative alignment, marking recipients as primary objects and themes as secondary objects; analysis of argument structure was illuminated by analysis of passivized clauses of both primary and secondary types.

For the subclass of roots expressing MOTION, a salient pattern of argument marking emerges as well, especially in examining passivized predicates as well as active predicates. Noting that K^wak^wala has both primary and secondary objects, and that several classes of verbs have consistently-patterned argument marking, can one identify a consistent semantic role assigned to secondary objects in motion verbs? In fact, there does seem to be such a

pattern: co-actors, engaging in the same motion, and led to do so by the primary Figure, are marked as secondary objects.⁶³ An example of this is presented here in (195).

(195) MOTION: CO-ACTOR MARKED AS SECONDARY OBJECT

<i>gaxsa</i>	<i>q'asa</i>	<i>lawá</i>	<i>q'áq'ako.</i>	
gay=sa	qasa	lawá	q'áq'ako	
come=OBJ2	sea.otter	CONJ	RED-slave	

'They came with sea otters and slaves.'

(CII 102.25)

A more quotidian example of secondary object 'comitative' marking emerged in the modern corpus.

(196) MOTION: CO-ACTOR MARKED AS SECONDARY OBJECT

<i>lamán</i>	<i>qasasa</i>	<i>wáci.</i>	
la-ʔəm=ən	qas=(a)sa	wáci	
AUX-OI=1.SBJ	walk-OBJ2	dog	

'I walked the dog.'

(2013aug12_BL_41)

The alternative sentence in (197), with the dog marked as a primary object rather than a secondary object, was declared ungrammatical by several speakers. (One specific example is provided here.)

(197) UNGRAMMATICAL: *CO-ACTOR MARKED AS PRIMARY OBJECT

<i>*lamán</i>	<i>qasaxa</i>	<i>wáci.</i>	
la-ʔəm=ən	qas=(a)xa	wáci	
AUX-OI=1.SBJ	walk-OBJ1	dog	

'I walked the dog.'

(2013aug12_BL_41)

Examining passive constructions alongside active constructions is instructive. When the primary object passive marker *-suʔ* is added to a motion root, the resulting predicate indicates following or pursuit; in these cases, the Destination (often a person being pursued) has been promoted to subject position, as we can see in (198).

⁶³ Rosenblum 2013 shows that the distribution of passive forms corresponds with syntactic argument roles, which are in turn linked to lexical semantics of different classes of predicates. Stems of transfer, such as *čəw-* 'give', mark the recipient as primary object with *=xa* and the theme (i.e. the object transferred) as secondary object with *=sa*.

(198) PASSIVE: PRIMARY OBJECT PASSIVE *-suʔ*

<i>Laʔám-lá-wis</i>	<i>qásʔidsawáʔ</i>	
La-ʔám-lá-wis	qás-(χ)ʔid- suʔ =Ø-aʔ	
AUX-OI-QUOT-AND.SO	walk-INCH-PASS.O1-3.SBJ=T.DEM	
‘He was started for (I.e. they went to get him)’		
‘(Then, it is said, he was pursued by them. - DR) (B1895, M727.17)		

When *qas-* ‘walk’ is passivized with primary object passive morpheme *-suʔ*, the protagonist is being pursued. He is the target or destination of those ‘walking towards’ him. Here the protagonist is expressed as a third-person **subject**, marked with -Ø, rather than the pronominal *-q* used to mark a **primary object** referent. The derived meaning of a root *qas-* ‘walk’ passivized with primary object passive is ‘he was walked after’; the promoted primary object, in this case, was the Goal or target of the motion.

When the derived stem *laʔiʔ-* ‘enter’ (*la-* ‘go’ + *-ʔiʔ* INTO.ENCLOSED.SPACE) is passivized with primary object *-suʔ* and the speaker is promoted to subject, the sentence expresses that the speaker was ‘entered upon’.

(199) PASSIVE: PRIMARY OBJECT PASSIVE *-suʔ*

<i>ləʔiʔcəwənλaxgən</i>	<i>Gʷəʔiʔcik</i>	
ləʔiʔ- suʔ =ənλax=gən	Gʷəy-°iʔ-cəw=ik	
enter-PASS.O1=1.SBJ>3.OBJ.=1.POSS	thus-INDOOR-IN-DEM	
‘I was the object of entering when I was in the house here.[sic]’ (i.e. someone entered and came to me)		
‘(‘I was entered upon in my house; I was followed into my house.’ - DR) (B47:270)		

As one might then expect based on the argument structure of motion roots in active constructions, the secondary object passive forms *-ayu*, *-əm* and *-ano* attached to motion roots are used to promote co-actors; these expressions take on a comitative meaning.

Contrast (199) above with (200) below.

(200) PASSIVE: SECONDARY OBJECT PASSIVE *-su?*

<i>ləʔiləmən</i>	<i>laχa</i>	<i>Guk^w</i>	
ləʔil-əm=ən	la=χa	Guk ^w	
enter-PASS.O2=1.SBJ	PREP=DEM	house.	
‘I was taken into the house.’			(B47:270)

The root *qas-* ‘walk’, passivized with a secondary object passive, also implies a subject moving in the manner of, or guided by, another agentive Figure.

(201) PASSIVE: SECONDARY OBJECT PASSIVE *-ayu*

<i>Lálaʔi qásʔidayusa</i>		<i>wíwaʔok^w</i>	
Lálaʔi qas-(x)ʔid- ayu =sa ⁶⁴		wíwaʔok ^w	
Then walk-MOM-PASS.O2=OBJ2		wolf	
‘Then he was walked by the wolf (sic: wolves) ⁶⁵ .’			(B1895: M 666.21)

In (201), the wolves walking the boy home are marked as secondary objects. Other motion roots, such as *síχ^w-* ‘paddle’ also conform to this pattern. (Note that the root ‘paddle’ is also derived here, with a suffix *-!od* meaning ‘to bring or lead’.)

(202) PASSIVE: *síχ^w-* ‘paddle’ WITH *-ayu*

<i>Wä!</i>	<i>Ləʔám</i>	<i>gax</i>	<i>síwodayusis</i>
wä	lə-ʔəm	gax	síχ ^w -!od- ayu =Ø=s=is
EXCL	AUX-OI	come	paddle-MOM-PASS.O2=3.SBJ=OBJ2=3.POSS
‘Wa! Then they came, they took him home			

<i>nəg^wəmp</i>	<i>láwis</i>	<i>gókulot</i>	
nəg ^w əmp	láw=is	gókulot	
father-in-law	CONJ=3.POSS	tribe	
his father-in-law and his tribe.’			
(‘Then he came paddled home by his father-in-law and his tribe.’ - DR)			(B1895 M679.17)

The father-in-law and tribe who paddle the third-person subject home, *nəg^wəmp láwis gókulot*, are, like the wolves, also marked as secondary objects with the pronominal enclitic *=s* following the passive suffix. The pronominal subject, the protagonist of this story, is

⁶⁴ Note that the wolves, the demoted agents of this event, the erstwhile subjects, are marked with secondary object case marker *=sa*.

⁶⁵ The word *wíwaʔok^w*, though translated as singular ‘wolf’, is reduplicated and indicates more than one wolf.

marked with the third-person pronominal zero morpheme on the predicate, as we would expect.

The possessive markers in the example above also help us track referents and identify syntactic roles. K^wak^wala third-person possessors distinguish between subject and non-subject possessors, and =*is* marks a subject possessor, as opposed to =*a*~=*Ø* for the corresponding non-subject possessor. Thus, we know that =*is* refers to the syntactic subject — the protagonist being paddled home — and not *nag^wəmp*, his father-in-law. (See Appendix II for the full paradigms of third-person possessors.)

These contrasting patterns of primary and secondary object passivation with motion roots are again attested in the modern corpus .

(203) PASSIVE: PRIMARY OBJECT PASSIVE -*suʔ*

<i>la miʔ</i>	<i>qasʔidsəwá</i>	
la-ʔəm-iʔ	qas-(x)ʔid- suʔ -a	
AUX-OI-DEM	walk-MOM-PASS.O1=T.DEM	
‘They went to call him.’ (They went after him; They went to get him.’ -DR)		
(2013aug12_BL_39)		

(204) PASSIVE: SECONDARY OBJECT PASSIVE -*ayu*

<i>qasidayusasis</i>	<i>ʔump.</i>	
qas-(x)ʔid-ayu=sə=sis	ʔump	
walk-MOM-PASS.O2-POSS	father	
‘His father took him for a walk.’		
(2013aug12_BL_40)		

This strongly consistent pattern, still evident today, of using the primary-object passive marker -*suʔ* to promote destinations/Goals of motion to subject position — very often, a person being followed or pursued — and the secondary-object passive marker -*ayu* to promote a co-actor to subject position, suggests that although contemporary constructions may mark Destination with a prepositional phrase, historically, **active** constructs of motion

roots more consistently marked destination as primary object and co(-erced)-actors as secondary objects.

Yet another piece of evidence for a historical pattern with motion verbs marking Destination as primary object lies in the preposition itself, derived from the root *la-* meaning ‘to go’. As mentioned earlier, *la-* takes the deictically appropriate demonstrative marker indicating the oblique referent, with forms such as $\text{=}\chi a$, $\text{=}\chi^w a$, and $\text{=}\chi o\chi da$. Returning to the chart of demonstrative markers provided in Chapter 3, one can see that these enclitic markers are identical to, and clearly derived from, demonstratives marking primary objects.

In the modern language, however, and even in the language recorded over a hundred years ago by George Hunt and Franz Boas, the subclass of motion roots have variable argument structure in active constructions. As is apparent from the examples, the semantic role of Goal is sometimes marked as a primary object, sometimes with a preposition. This variation may reflect sensitivity to discourse transitivity or another subtle factor; the contrast between the two translations in (192) and (193) suggests that there is some difference, although more data is needed to make a strong claim about the factors determining these alternations. Contact with English is another factor likely to increase the use of prepositions to mark locative Goals. The example below, in which a speaker seems to calque some elements of an English sentence, illustrates the risks of English-based elicitation frameworks, as well as the effect of contact.

(205) SYNTAX INFLUENCED BY ENGLISH

<i>lámən</i>	<i>qasax</i>	<i>bənuləla</i>	<i>laygada</i>	<i>ləməyix.</i>
la-ʔəm=ən	qas-ax	bən-ul-əla	la=χgada	ləməyi=χ
AUX-OI=1.SBJ	walk-DOWN	down-MOT.DIR-CONT	PREP=DEM	beach-T.DEM
‘I’m walking down to the beach.’				(2013aug12_BL_38)

The direction ‘down’ is expressed twice, once in the suffix *-aχ* DOWN, attached to the root *qas-* ‘walk’, and again in a separate word *bənūtəla*, ‘to move downward’. However, there is a single suffix *-əncis* also meaning DOWN.TO.BEACH, which allows the event of walking down to the beach to be encoded morphologically. In spontaneous speech, the more compact expression was quite common among three of the speakers represented in the modern corpus; one instance is provided below. (This was provided as speakers talked about a video they were watching of someone they knew, walking from his house down to the beach in order to take his boat out on the river.)

(206) SPONTANEOUS SPEECH

<i>ləmóχ</i>	<i>ləncisəla</i>	<i>qəs</i>	<i>le?</i>	<i>láχis</i>	<i>bot.</i>
la-ʔəm=οχ	la-əncis-əla	qəs	le?	la=χis	bot
AUX-OI=S.DEM	go-DOWN.TO.BEACH-CONT	PURP	SUB	go=3.POSS	boat
‘He’s walking (going) down to the beach in order to go to his boat.’					
(2014jan27_LJBL_1.10)					

The cumulative database of modern and legacy data in K^wak^wala reminds us, again and again, that there are many ways to say the same thing in many languages. A polysynthetic language such as K^wak^wala allows the same concepts to be expressed with syntactic structures, as in (205), and morphological structures, as in (206). Neither one is more or less correct or grammatical; at the same time, only the latter example reveals the unique possibilities inherent in the structure of K^wak^wala. There are likely to be many contextual factors — not all having to do with priming or translation — affecting speakers’ choices. The question of argument structure in motion expressions is similar: it is not more grammatical to mark Goals as primary objects rather than in a prepositional phrase. At the same time, it is important to note that both structures are possible, and that the choice of one or another may be sensitive to discourse factors which are difficult to draw out except

through the detailed examination of a very large corpus of data, larger than the corpus I have developed to this point.

As noted by Talmy, it is common for events of visual perception to follow the grammatical patterns established by actual motion events. However, this is not true of the argument structure of the K^wak^wala root *duq^w*- ‘look, see’. While the argument structure of certain motion predicates is variable, the ‘fictive motion’ described by the root *duq^w*- is consistent: the thing being looked at is marked syntactically as a **primary object**, while the location where the gaze falls marked as an **oblique** with a prepositional phrase.

(207) PRIMARY OBJECT OF *duq^w*- ‘look, see’

<i>dúq^wustolóχda</i>	<i>wáqésəχa</i>	<i>wáciχ.</i>	
duq ^w -(g)usto-ała=οχda	wáqés=əχa	waç=iχ	
look-UP-POS=S.DEM	frog= OBJ.1	dog=T.DEM	
‘The frog is looking up at the dog.’			(2013jul15_BL_3)

(208) OBLIQUE OF *duq^w*- ‘look, see’

<i>ləməοχ</i>	<i>dúχćoχ</i>	<i>wáciχ</i>	<i>laχa</i>	<i>dəmxisGəməχ.</i>
lə-ṛəm=οχ	dúq ^w -ćəw-χ	wáç=iχ	la=χa	dəmxisGəm=χ
AUX-OI=S.DEM	look-IN- OBJ.1	dog=T.DEM	PREP=DEM	jar=DEM
‘The dog is looking into the jar.’				(2013jul15_BL_3)

The K^wak^wala root *duq^w*- has similar argument structure to the English verb ‘see’: the thing being looked at is marked as a direct object, and a prepositional phrase is necessary to indicate the location where the gaze falls.

5.5.3 Preferred Ground Structure

In their summary of the results of their cross-linguistic study of motion expressions, Levinson and Wilkins noted that some languages, like English and Dutch, allow complex

subdivisions of motion events within a single clause. In one Dutch example in their sample, both source and goal of the motion event are mentioned in the same clause:

(209) DUTCH: SOURCE AND GOAL IN SAME CLAUSE

gooit het jongetje van een klein afgrondje het water in
throws the boy from a small cliff the water into
'(It) throws the boy from a small cliff into the water.'

(Levinson and Wilkins 2006:539)

In English, it is also possible to find (or create) sentences that stack prepositional phrases to identify **more than one element** of the Ground. The sentence '*the frog jumped out of the jar onto the floor,*' identifies both Source and Goal.

However, it is also very common for languages to restrict mention to a single Ground element per clause. Levinson and Wilkins note that this "is partly a function of the type of source/goal coding — where this is coded in the verb, usually only source or goal is subsumed." (Levinson and Wilkins 2006:539). They dub this tendency the 'Preferred Ground Structure' tendency: "to mention only one major ground, source or goal, at a time." (Levinson and Wilkins 2006:539). Although they do not say so explicitly, the labelling of 'Preferred Ground Structure' indicates that Levinson and Wilkins consider this to be a usage-based tendency, rather than a grammatical rule; in Kwakwala, there is certainly a strong tendency in spontaneous connected speech to identify only one Ground element per clause.⁶⁶

Kwakwala conforms to this tendency. Clauses mention only one major element of the Ground (often Source or Goal, but not exclusively so), often in a prepositional phrase. While there is no syntactic restriction on the number of prepositions or prepositional phrases in a

⁶⁶ Because I did not construct elicitation tasks specifically aimed at testing the grammaticality of including more than one Ground element in a clause, I can not make claims here about grammaticality. However, without a single exception, a very strong pattern of limited reference to a single Ground element emerges in both the legacy data and the modern corpus.

clause, it turns out that these prepositions can only refer to *one* Ground element.⁶⁷ Recall example (186), a very typical example of a clause mentioning an element of the ground in a prepositional phrase;

(210) PREFERRED GROUND STRUCTURE

<i>lə̀mox</i>	<i>típ'stəwoχda</i>	<i>gingənanəmyχ</i>	<i>laχ^wa</i>	<i>ẉapix.</i>
lə-ʔəm=ox	típ-(ʔ)sta=oxda	gin-gənanəm=χ	la=χ ^w a	ẉap=iχ
AUX-OI=3.SBJ	step-LIQUID=3.SBJ	RED-children=DEM	PREP=OBJ.1	water=T.DEM
‘The children stepped in the water.’				(2013jul17_BL_1.11)

In the example above we see that inclusion of the Goal in the predicate (here, with *-(ʔ)sta* LIQUID) does not preclude lexical specification of the actual type of liquid in an external oblique, *laχ^wa ẉap* ‘PREP the water’. In Chapter 2 we saw that the function of locative suffixes is to *categorize* objects in the Ground, to identify categories or types of objects with respect to the predicate, rather than to *incorporate* specific objects (Woodbury 1975). Specific objects are identified lexically outside the predicate.

Nevertheless, we have also seen that a ground element need not be mentioned in a prepositional phrase if it is marked on the verb, given that the form contains sufficient contextual information to allow a listener to understand.

(211) GROUND CONTAINED IN PREDICATE

<i>laʔəmx</i>	<i>típ'stəlsɡən</i>	<i>gúgeG^wəyux.</i>
la-ʔəm=x	típ-(ʔ)sta-əls-ɡən	gugeG ^w əyux.
AUX-OI-DEM	step-LIQUID-OUTSIDE-1.POSS	feet
‘My feet are soaking in the water.’		
(2013jul17_BL_1.18)		

This supports one of the Levinson and Wilkins hypotheses about the Preferred Ground Structure constraint, that marking of information about Ground in the verb leads a language to limit reference to Ground in a clause.

⁶⁷ Incidentally, as we have seen, while Goals can also be marked as primary objects, there is already a syntactic restriction to one primary object per clause, rendering the question of a Preferred Ground Structure irrelevant in those cases.

In the modern corpus, which includes four frog narratives (with complex motion events) and two conversations, there are no examples of clauses mentioning more than one distinct element of the ground in a single clause. Instead, multiple clauses are linked together to create multi-part descriptions of complex motion events. The sequence of clauses below was taken from a story told within the context of a conversation between two women about their experiences with residential schools; the speaker is describing how she and her friends escaped capture by an Indian Agent when he came to her village to bring her and her peers to residential school. The componential structure of the narrative, with each piece of the motion receiving a dedicated clause, is very typical of the narratives and conversations throughout the corpus. (Morphological glossing is not provided here, to allow readers to focus on the sequence of clauses rather than the composition of each word.)

(212) MULTI-PART MOTION EVENT

ləmənnoʔχ dʷilxʷʔi laχa ʔaʔi.
 ‘We ran into the woods.

ləwənóʔχ ʔégas malúqʷida bibəGʷanəm.
 With our girlfriends and two boys.

ləmənnoʔχ λəpi laχa qʷaχ.
 We climbed on (up) a tree.

giltáʔida qʷaχ.
 A really tall tree.

ləmisənnoʔχda laχ ʔolakala maxbiʔsa qʷaχ.
 We went to the very top of the tree.

λəpátəlaχ.
 Stood there (where we had climbed to) still and quiet.’

(2012jul25_LJBL_5)

Each clause describes a particular Figure-Ground relationship and identifies a singular element of the Ground. While an English speaker might say ‘We climbed up to the top of a tree and stayed there,’ a K^wak^wala speaker strings together several individual clauses.

At the same time, there is no prohibition against more than one prepositional phrase in a single clause. Additional prepositions can further specify a region of the same Ground element, as illustrated in the examples below

(213) TWO PP SAME GROUND

gəlnák^wəloχda *dəxdəxəlɪtə*
 gəl-nak^w-əla=οχda dəxdəxəlɪt=e
 crawl-GRAD-CONT=S.DEM owl=DEM

laχοχda *x^wəp^ˈəχ* *laχ^wa* *q̣^waxiχ.*
la=χοχda **x^wəp-čəw=χ** **la=χ^wa** **q̣^wax=iχ.**
 PREP=DEM hole-IN=DEM PREP=DEM tree=T.DEM

‘The owl came out of the hole in the tree and stood on it.’ (2013jul15_BL_frogstory.14)

(214) TWO PP SAME GROUND

ləm^ˈοχ *λaq^wisυχda* *babaG^wəmbidυχ*
 lə-ʔəm=οχ λaq^wis=υχda babaG^wəm-bid=υχ
 AUX-OI=S.DEM kneel=S.DEM boy-DIM=DEM

laχ^wa *x^wəp^ˈəχ* *laχ^wa* *ʔəwínaG^wisοχ.*
la=χ^wa **x^wəp-čəw=χ** **la=χ^wa** **ʔəwínaG^wis=οχ**
 PREP=DEM hole-IN=DEM PREP=DEM ground=T.DEM

‘The little boy is kneeling down on a hole in the ground.’ (2013aug8_BL_1)

(215) TWO PP SAME GROUND

ḳ^wáʔsυχda *wáçíχ*
 ḳ^wa-!s=οχda waçi=χ
 sit-GROUND=S.DEM dog=DEM

laχοχ *ʔúnoçasa* *laχus* *gúk^wiχ.*
la=χοχ **ʔu-no-iʔ=(a)sa** **la=χus** **guk^w=iχ**
 PREP=DEM root-SIDE-NMLZ=GEN PREP=POSS house=T.DEM

‘The dog is sitting on the side of his doghouse.’ (2014jan24_SW)

Although all of these examples include more than one prepositional phrase, both phrases refer to a single Ground. The additional prepositional phrase further specifies the Ground in some way: ‘the hole in the tree’, ‘the hole in the ground’, ‘the side of the doghouse’.

When more than one event is described, but the Ground element remains consistent, one might expect that a single prepositional phrase is sufficient. However, in these cases as well, two clauses are employed, one for each predicate, and another prepositional phrase is also employed — even though the second clause includes the very same Ground element.

(216) ONE GROUND ELEMENT PER CLAUSE

<i>la</i>	<i>həmdʰaʔigada</i>	<i>tiqʷaʔa</i>	<i>laɣgada</i>	<i>qʷaɣiɣ,</i>
la	həmdʰaʔi=gada	tiqʷ-aʔa	la=ɣgada	qʷaɣ=iɣ,
AUX	beehive=DEM	hang-POS	PREP=DEM	tree=T.DEM

‘The beehive was hanging down from the (this) tree

<i>yəɣa</i>	<i>həmdʰaʔi la</i>	<i>tiqəɣa</i>	<i>laɣgada</i>	<i>qʷaɣiɣ.</i>
yəɣa	həmdʰaʔi la	tiq-aɣa	la=ɣgada	qʷaɣ=iɣ
CONJ	beehive AUX	drop-DOWN	PREP=DEM	tree=T.DEM

and the beehive fell down from the (this) tree.’

Speaker’s English translation: ‘The beehive was hanging down from the tree and it fell down.’

(2013aug9_ESBL_1)

Meanwhile, the English translation provided by the speaker conformed to the norms of English motion expressions by leaving out the extra prepositional phrase ‘from the tree’ (which would likely be a violation of Grice’s maxim of quantity.)

As mentioned earlier, expressions of perceptual events in many languages also incorporate several elements of a typical motion expression: Direction, Source, Goal, and Location. Such events can be considered ‘fictive motion’ (Talmy 2000). The example below is one such fictive motion event; furthermore, it is passive. The pattern of a single Ground element identified in a single clause seems unchanged in a passive construction, such as the one below from a frog story narrative (also an example of ‘fictive motion’).

(217) PREFERRED GROUND STRUCTURE

<i>mácatanawis</i>	<i>duq^waxəlasəwasa</i>	<i>babaG^wəmx</i>
maç-afa-ana-wis	duq ^w -axa-əla-suʔ=(a)sa	babaG ^w əm=χ
what-POS-QUOT-AND.SO	see-DOWN-CONT-PASS.O1=OBJ.1	boy
what.is.it	being.seen.downward.by	the boy

‘I wonder what’s being looked down at, by the little boy,

<i>laχ^wa</i>	<i>q^waxix.</i>
la=χ^wa	q^waχ=iχ
PREP=DEM	tree=T.DEM
on.the	tree

on the tree.’

(2013jul15_BL_15)

In this case, the suffix *-axa* DOWN in the predicate specifies the downward direction of the boy’s gaze. The prepositional phrase *laχ^wa q^wax* ‘PREP the tree’ refers not to the location of the boy, but to the unknown-thing-being-looked-at.

In a complex sentence with a dependent clause, the prepositional phrase identifying the Ground occurs before the purposive marker *qəʔeda* PURP.

(218) EMBEDDED PURPOSIVE

<i>ləmisa</i>	<i>babaG^wəmx</i>	<i>dúq^waxəla</i>	<i>laχ^wa</i>	<i>χ^wəpəsi</i>
lə-ʔəm-(w)is-a	babaG ^w əm=χ	duq ^w -axa-əla	la=χ^wa	χ^wəpəs-i
AUX-OI-AND.SO-T	boy=DEM	see-DOWN-CONT	PREP=DEM	hole-T.DEM

qəʔeda wəqes.
qəʔeda wəqes.
 PURP frog.

‘The little boy is looking down (into) the hole for the frog.’ (2013jul14_BL_12)

The purposive clause *qəʔeda wəqes* ‘for the frog’ is translated in English with an additional prepositional phrase ‘for the frog’, but in Kwakwala the semantic role of Goal is distinguished from that of Motive by different grammatical elements; the location of the boy’s gaze, the hole, occurs as an oblique in the prepositional phrase *laχ^wa χ^wəpəs* ‘PREP hole’, while the purposive marker identifies the Motive for gazing. It is interesting to note that this is a rare example where the target of the gaze is marked with a prepositional phrase rather than a

primary object case marker (see section 5.5.2 on argument structure in motion expressions). This may be because the actual thing being looked at is not identified — the hole is just the location where the boy's gaze falls. There are not enough examples in the current corpus to draw broad conclusions about the discourse pressures influencing a speaker's choice between oblique and primary object marking, but this is an interesting avenue for further investigation..

The next section, 5.6, addresses the complex morphology of motion predicates in Kwakwala.

5.6 Motion expressions: Morphology

As shown in the last section, the **syntax** of a motion expression in Kwakwala only tells part of the story. Otherwise, there is a great deal of information about Direction, Manner, and Ground which is packaged inside the Kwakwala predicate, in the form of roots and suffixes and the way in which they are ordered. This section explains the morphological structure of Kwakwala motion predicates: the construction of meaning inside the word. This section examines two semantic types of kinetic predicate, and the meaningful order of locative affixes following the root in each. Following this, I focus on one small set of three morphemes, DIRECTIONAL SUFFIXES, within the very large inventory of affixes found in a motion predicate. The information provided in this section lays the groundwork for the concluding chapter, which examines how the description of spatial grammar in Kwakwala can contribute to our broader understanding of what determines affix order in polysynthetic languages.

As shown in Chapter 3 and Chapter 4, a phonological word in Kwakwala has several layers of structure. The root, at the left-most edge of the word, is a kernel of meaning to which bound morphemes attach. As described in Chapter 3, the root is subject to reduplication. Derivational suffixes attach to the root, marking a range of categories of experience. In a minimal form, a Kwakwala word may consist in a root and single formative affix, but many words include long strings of suffixes. These affixes are largely ordered according to multiple semantic principles, and the resulting meaning of the derived predicate reflects a range of types of interactions among these affixes (Mithun 1999:43; Rice 2000). The characteristics of these interactions are described in Chapter 6.

There are three types of suffix occurring most frequently in kinetic predicates: locative suffixes, aspect markers, and directional markers. Locative suffixes can be further divided into three types: (1) a large unrestricted set which functions to indicate an immediate Ground; (2) a smaller set which can precede this to identify sub-regions of an element of the Ground; and (3) an even more restricted set which can follow to mark the setting or context in which the motion event occurs. The examples in this section illustrate the varied semantic effects derived from combining different types of roots with these suffixes, and the incremental complexity possible within a Kwakwala predicate.

Expressions of motion in Kwakwala broadly distinguish between two types. These types cohere around shared semantic and pragmatic characteristics, rather than sharply defined grammatical categories. These ‘types’ are fuzzy categories, with exceptions and edge-cases. At the same time, the functional interpretation of locative suffixes differs broadly between the two types of predicate described below. In one type, which I call a LOCATIVE KINETIC PREDICATE, the relationship between Figure and Ground results in a **static**

location — for example, the act of taking a step which lands on a rock, in water, or in a hole, for example (see (219), (221), or (222) below). For this locative type of kinetic predicate, locative suffixes function as they would in a static locative predicate. Locative suffixes identify a fixed **immediate** Ground location in relation to a Figure, a **region** of a reference object, or a broader **setting**.

Meanwhile, another type of motion expression emphasizes the **trajectory** of motion, whether because the root is a prototypical motion root implying a trajectory such as *la-* ‘go’ or *qas-* ‘walk’, or because a directional suffix has added a trajectory to the root. Here, I call these DIRECTIONAL KINETIC PREDICATES. In such predicates expressing trajectory, the function of the locative suffixes relates to the trajectory of motion, the points at which it begins or ends, and the elements of the Ground toward which (or away from which) a Figure is oriented on its trajectory. The locative suffix following the root and preceding the directional suffix, labeled LOC.PATH, refers either to the **direction** in which a Figure is moving or the **orientation** of the Figure towards an element of the Ground. Meanwhile, a locative suffix following the directional suffix, LOC.ENDPOINT, refers to location at which motion begins or ends, most prototypically to the **destination** of the trajectory, but (depending on the type of directional suffix employed) otherwise this locative suffix refers to the **origin** or starting point of motion. Finally, a familiar small set of locative suffixes, LOC.CONTEXT, provides information about the setting or context in which an event takes place: indoors, outdoors, on a boat.

The next section, 5.6.1, provides examples illustrating the function and order of affixes within a ‘locative’ type of kinetic predicates. Section 5.6.2 focuses on ‘directional’

kinetic predicates. Section 5.6.3 attends to the subset of three directional suffixes and their interactions with roots and suffixes within the predicate.

5.6.1 'Locative' kinetic predicates

Recall that Figure 13 depicted the order of derivational suffixes in a static locative predicate.

The figure is reprinted here.



Figure 16: Order of locative affixes in static locative predicate

The locative suffixes which appear in locative kinetic predicates share these functions.

As with static locative constructions, no locative suffix is necessary if the predicate contains an aspect marker. The most common aspect marker in static locative predicates was the positional *-ala* POS. In contrast, three aspect markers occur most frequently in kinetic predicates: *-(x)ʔid* MOM ‘momentaneous, inchoative, inceptive’, *-nak^wəla* GRADUAL ‘slow and steady movement’, and *-əla* CONT ‘continuous’. A single momentaneous aspect marker *-(x)ʔid* MOM appears in the first example in the section, (219) and derives a **punctual** meaning from the root *tʰip-* ‘step’.

(219) SINGLE ASPECTUAL SUFFIX

<i>tʰipʔidχa</i>	<i>tʰisəm</i>	
tʰip-(x)ʔid =χa	tʰisəm	
step-MOM =OBJ.1		
‘to put your foot on a rock’		(2013jul17_BL_1)

In the example above, the Ground is merely identified lexically, with the word *tʰisəm* ‘rock’.

The word ‘rock’ is case-marked with a primary object marker, =χa.

The suffix *-nak^wəla*⁶⁸ marks gradual or steady motion. In a sentence volunteered by Mr. Wamiss when a ladybug landed on the table where we recorded, he used *-nak^wəla* to capture the gradual motion of the ladybug⁶⁹.

(220) ASPECTUAL SUFFIXES

<i>gəlnak^wəloχda</i>	<i>ladybug</i>	<i>láχ^wa</i>	<i>kádəd^zuwoχda.</i>
gəl- nak^wəla =oχda	ladybug	la=χ ^w a	kádəd ^z u=oχda.
crawl-GRADUAL=S.DEM	ladybug	PREP=DEM	paper=DEM
‘The ladybug is crawling on the paper.’			(2014jan24_SW_1)

If a locative suffix is used, an aspect marker is not obligatory. In (221), the locative suffix *-(?)sta* LIQUID indicates that the children’s feet step in water.

(221) SINGLE LOCATIVE SUFFIX

típ^zsta
típ^z-(?)sta
 step-LIQUID
 ‘to put your foot in liquid (usually water)’

<i>ləm^zoχ</i>	<i>típ^zstəwoχda</i>	<i>gingənanəməχ</i>	<i>laχ^wa</i>	<i>wápiχ.</i>
lə-?əm=oχ	típ^z-(?)sta =oχda	gingənanəmə=χ	la=χ ^w a	wáp=iχ
AUX-OI=3.SBJ	step-LIQUID =S.DEM	children=DEM	PREP=DEM	water=T.DEM
‘The children stepped in the water.’				(2013jul17_BL_1)

Another suffix, *-(?)sto* OPENING, is employed in (222) to indicate stepping in a hole.

(222) SINGLE LOCATIVE SUFFIX

<i>tátíp^zstuw^zoχaχa</i>	<i>x^wíx^wəp^zəs.</i>
tá-típ ^z -(?)sto=oχ=aχa	x ^w i-x ^w əp ^z əs
RED-step-OPENING=3.SBJ=OBJ.1	RED-hole
‘He keeps stepping in all the holes.’	(2013jul17_BL_1.10)

In the example above, the predicate root *típ^z* ‘step’ is reduplicated to indicate repeated stepping. The location of the repeated stepping is indicated both with a locative suffix *-(?)sto*

⁶⁸ This suffix likely contains the continuous aspect marker *-əla*, although it was provided as a separate entry by Boas in the dictionary, indicating that he saw it as having conventionalized.

⁶⁹ Although the root *gəl*-‘crawl’ might be expected to imply directionality of motion here the meaning of the predicate has more to do with the surface supporting the ladybug than the direction in which the ladybug is moving.

OPENING, which identifies a category of Ground element receiving the steps. The type of opening is further specified with a lexical argument $\chi^w\acute{\alpha}p\acute{\alpha}s$ ‘hole’, which is also reduplicated to indicate multiple holes. The third-person Figure is indicated with the subject demonstrative clitic $=o\chi$; the primary object enclitic $=(a)\chi a$ marks the holes, the destination of stepping, as a primary object.

In (223), the suffix $-! \chi \lambda a$ BEHIND (behind, hind end, or stern of boat), also gives locative information.

(223) SINGLE LOCATIVE SUFFIX

$t\acute{i}p\acute{\chi}\lambda a$
 $t\acute{i}p-! \chi \lambda a$
 step-BEHIND
 ‘to put your foot in the back (of something)’

$l\acute{\alpha}m\acute{\alpha}n$	$\gamma\acute{u}m\pi i\chi$	$t\acute{i}p\acute{\chi}\lambda a$	$l\acute{\alpha}\chi a$	$bot.$
$l\acute{\alpha}-\gamma\acute{\alpha}m=\acute{\alpha}n$	$\gamma\acute{u}m\pi=i\chi$	$t\acute{i}p-\chi\lambda a$	$l\acute{\alpha}=\chi a$	bot
AUX-OI=1.POSS	father=DEM	step=HIND	PREP=DEM	boat
‘My dad stepped in the stern of a boat.’				(2013jul17_BL_1)

More than one locative can combine in a single predicate, as shown in (224). The root $\acute{\lambda}\acute{\alpha}nq-$ ‘poke, push’ is followed by two locative suffixes, $-xs\acute{\alpha}$ THROUGH, and $-!q$ AMONG. Similarly to static locative predicates, the first locative suffix indicates the immediate locative relation between Figure and Ground; the second locative suffix provides additional information about region of reference object.

(224) TWO LOCATIVE SUFFIXES

$\acute{\lambda}\acute{\alpha}n\chi s\acute{\alpha}w\acute{\alpha}q\acute{o}\chi$	$l\acute{\alpha}\chi^w a$	$\acute{\lambda}\acute{\alpha}nGayu.$
$\acute{\lambda}\acute{\alpha}n-\chi s\acute{\alpha}-!q=o\chi$	$l\acute{\alpha}=\chi^w a$	$\acute{\lambda}\acute{\alpha}nGayu$
poke-THROUGH-AMONG=S.DEM	PREP=DEM	needle
‘It’s pierced through (by) the needle.’ (Fig: the paper)		(2014jan24_SW_1.26)

In this example, *-χsâ* THROUGH indicates the immediate relationship of the Figure (a needle) to the ground (paper), and the suffix *-!q* AMONG also refers to the paper, which surrounds the needle.

In (225), the root *típ-* ‘step’ combines with both *-(?)sta* LIQUID and *-əls* OUTSIDE. In this case, the first locative suffix indicates the immediate environment, and the second suffix indicates the broader setting.

(225) TWO LOCATIVE SUFFIXES

<i>laʔəmχ</i>	<i>típ'stalsgən</i>	<i>gúgeG^{wə}yúχ.</i>
la-ʔəm=χ	típ-(?)sta-əls =gən	gugeG ^{wə} yú=χ.
AUX-OI-DEM	step-LIQUID-OUTSIDE-1.POSS	feet=DEM

‘My feet are soaking in the water.’ (2013jul17_BL_1.18)

Here, the suffix *-(?)sta* LIQUID, which multiple speakers have indicated is not necessarily water (“could be jello, mud, or anything”, 2013jul17_BL_1), acquires greater specificity (as water) in combination with the suffix *-əls* OUTSIDE, via pragmatic inference of speakers, who consistently interpret *-(?)sta* as water when it is followed by the contextual suffix *-əls* OUTSIDE.

The suffix *-əls* appears again in a different context, in this sentence recorded while Mrs. Lagis and Mrs. Johnny reminisced about people they used to know in Kingcome.

(226) *-əls* OUTSIDE AS IMMEDIATE LOCATIVE

<i>kíswəle</i>	<i>hiłəla</i>	<i>qása,</i>	<i>ʔóməʔe</i>	<i>χíqəlsəla</i>	<i>ʔóʔəm.</i>
kis-wəl-e	hił-əla	qasa	ʔo-ʔəm-əʔe	χiq-əls-əla	ʔoʔəm.
neg-DIST.PAST	right-CONT	walk	AUX	slide-OUTSIDE-CONT	aux

‘She couldn’t walk (right), she got around on her bum.’ (2014jan29_BL_1)

When this suffix occurs immediately following the root, a different aspect of the semantic profile of the locative suffix *-əls* OUTSIDE is foregrounded: the meaning of support derived from the ground outside, rather than the general outside setting in (225).

As is clear from examples (221) through (225), aspect markers are not obligatory. In a different sentence offered by Mr. Wamiss to describe the location of the ladybug, the aspect marker *-nak^wəla* GRADUAL is replaced with a body-part locative suffix *-x^cano* HAND (also specified in the prepositional phrase *laχ^wa ʔayasu* ‘PREP hand’).

(227) ASPECTUAL AND LOCATIVE SUFFIXES

<i>gəlx^canoχda</i>	<i>ládybug</i>	<i>láχ^wa</i>	<i>ʔáyasuχ.</i>
gəl-x ^c ano=οχda	ladybug	la=χ ^w a	ʔayasu=χ.
crawl-HAND=S.DEM	ladybug	PREP=DEM	hand=DEM

‘The ladybug is crawling on my hand.’ (2014jan24_SW_1)

However, locative suffixes can co-occur with aspect markers and often do. In a third sentence offered by Mr. Wamiss to describe the activity of the ladybug, the suffix *-d^zu* FLAT is combined with the ‘inadvertent’ aspect marker *-awaleʔ* INADV (indicating lack of external causation or agentive intention leading to location of the Figure).

(228) ASPECTUAL AND LOCATIVE SUFFIXES

<i>gəld^zuweyoχda</i>	<i>ládybug</i>	<i>láχ^wa</i>	<i>həmxdəmił.</i>
gəl-d ^z u-aw(al)eʔ=οχda	ladybug	laχ ^w a	həmxdəmił.
crawl-FLAT-INADV=S.DEM	ladybug	PREP=DEM	table

‘The ladybug is crawling on the table.’ (2014jan24_SW_1)

In (229), locative and aspect markers again co-occur. The suffix *-!q* AMONG, used to indicate motion among or in the inside of some material, combines here with the continuative suffix *-əla* CONT.

(229) LOCATIVE AND ASPECTUAL SUFFIX COMBINED

típ^zəqəla
 típ-!q-əla
 step-AMONG-CONT
 ‘to step in or among something, continuously or repeatedly’

<i>ləm^zən</i>	<i>ʔúmpa</i>	<i>típ^zəqəlaχa</i>	<i>m^zámí</i>
lə-ʔəm=ən	ʔumpa	típ-!q-əla=χα	m ^z ámí
AUX-OI=1.POSS	father	step-AMONG-CONT=OBJ.1	blankets

λάχα *λαμάγ'ις.*
 la=χα λαμάγ'ις
 PREP=OBJ.1 beach

'My dad is down the beach using his feet like an agitator, washing our blankets.'
 (2013jul17_BL_1.9)

Where locative and aspect markers do occur together, the general pattern is for the locative suffix marking immediate location to precede the aspect marker.

Two locative suffixes can bookend an aspect marker. The first locative suffix *-(?)sto* OPENING identifies a hole or opening in a larger space, but it could be any such opening: a hole in the ground, an eye or mouth on a body, a hole in a tree, a door or window in a house. The second locative indicates the broader setting in which an event occurs. Because the suffix co-occurs with *-°i!* INDOOR, speakers interpret the opening as a doorway.

(230) *-(?)sto* OPENING AND *-°i!* INDOOR

λα?stolaxs

λα-(?)sto-əla-°i!

stand-OPENING-CONT-INDOOR

'to stand in doorway'

(B47:343)

When the setting is a boat, however, the locative suffix *-(?)sto* OPENING refers to a bailing hole.

(231) *-(ə)χs* BOAT

λα?stolaxs

λα-?sto-əla-əχs

stand-OPENING-POS-BOAT

'to stand in bailing hole (of canoe)'

(B47:343)

Another special suffix **precedes** the cluster of locative morphemes: the reverse locative. This suffix, with the shape *-o* or *-wä*, indicates that motion originates at the point described by the following locative suffix, or that the motion of the event is itself reversed.

In the next example, the reverse locative suffix *-wä* precedes the locative suffix *-(?)ta*

LIQUID, and indicates that the motion is out of and away from the water, rather than towards it, as it would otherwise suggest.

(232) REVERSE LOCATIVE SUFFIX

laʔəm lóstaxdaʔχ^wa

la-ʔəm la-wä-(ʔs)ta-d=aʔχ^wa

AUX-OI go-REV.LOC-LIQUID-TR=3PL.SBJ

‘They’re out of the water now.’

(2013aug9_ESBL_frogstory)

See (233), in which the same locative suffix *-(ʔs)ta* LIQUID indicates that someone has landed in the water rather than emerged from it.

(233) WITHOUT REVERSE LOCATIVE SUFFIX

dəχ^wstá

laχa

wápiχ.

dəχ^w-(ʔs)ta

la=χa

wáp=iχ

jump-LIQUID

PREP=DEM

water

‘He/they jumped in the water.’

(2013jul15_BL_frogstory)

I now turn to the directional type of kinetic predicates in Section 5.6.2, where I discuss predicates that emphasize the trajectory of motion rather than the fixed location of an event.

5.6.2 'Directional' kinetic predicates

In contrast to the predicates described in 5.6.1 emphasizing **location** of a motion event, another type of kinetic predicate emphasizes the **trajectory** of motion and the elements of the Ground that relate to this trajectory. As a result, the locative suffixes in these latter predicates are interpreted differently. These functions are illustrated in Figure 17.

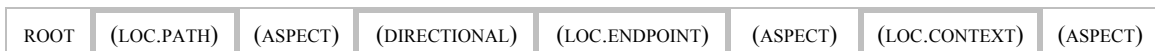


Figure 17: Order of locative affixes in kinetic locative predicate

The three positions in which locative suffixes appear are outlined in bold, as is the position in which directional suffixes appear. As is also true for static locative predicates, there are three possible functions of locative suffixes. However, two of these functions differ. Instead of reflecting **immediate location**, the locative suffix immediately following the root indicates **Path** or **Orientation**. The next locative suffix in a directional kinetic predicate *follows* the directional suffix, and indicates the **Origin** or **Terminus** of the trajectory. The final locative suffix in the diagram serves the same function as in a static locative predicate, to refer to the broader context within which an event takes place.

Note that aspect marking is particularly ‘mobile’ in the sense that it can appear in three ‘positions’ in relation to other suffixes. These ‘positions’ are not templatic, however, they just reflect the possibilities existing within the corpus of data I have collected. Co-occurrences are possible (though rare), as are yet other orders not found in the current corpus. For now, it is enough to note that aspectual marking is not obligatory, that aspect markers are the least fixed of the derivational suffixes, and that when aspectual suffixes appear in a word, they reflect semantic effects. I discuss them briefly in the examples where they appear, and consider their semantic contribution to the predicate further in Chapter 6, on affix ordering.

In (234), the suffix *-°it* INDOOR, which has a range of meanings discussed previously, including floor and house, appears. As we already know it has a special distribution, forming a smaller contrastive pair with *-°is* OUTDOOR. When they occur as the only locative suffix, however, these suffixes often seem to behave just like other single locative suffixes combining with a root, indicating the destination of the motion.

(234) LOCATIVE SUFFIX *-°il*

<i>ləʔəm tɪbiti</i>	<i>Mike</i>	<i>laχa</i>	<i>guk^w.</i>	
lə-ʔəm tɪp-°il=i	Mike	la=χa	guk ^w	
AUX-OI step-INDOOR-SBJ	Mike	PREP=DEM	house	

‘Mike stepped into the house.’ (2013jul17_BL_1.20)

The continuous marker *-əla* CONT occurs very frequently following locative suffixes.

Example (206) is repeated here.

(235) CONTINUOUS ASPECT

<i>ləm'ox</i>	<i>lən'cisəla</i>	<i>qəs</i>	<i>leʔ</i>	<i>laxis</i>	<i>bot.</i>
la-ʔəm=ox	la-ən'cis-əla	qəs	leʔ	la=χis	bot
AUX-OI=S.DEM	go-DOWN.BEACH-CONT	PURP	SUB	go=3.POSS	boat

‘He’s walking (going) down to the beach in order to go to his boat.’ (2014jan27_LJBL_1.10)

In this example, the continuous aspect marker *-əla* follows the locative suffix *-ən'cis* DOWN.BEACH ‘down to the beach’, indicating the direction in which the protagonist walks (the suffix *-ən'cis* ‘down to the beach’ itself combines more than one affix; see Section 3.4.3.1).

Two locative suffixes can be separated by aspect *and* directional suffixes.

(236) TWO LOCATIVE SUFFIXES SEPARATED BY OTHER SUFFIXES

latusəlagəlis
 la-atus-əla-(g)əl-°is
 go-DOWNRIVER-CONT-DIR.ATEL-OUTDOOR
 ‘walk, go downriver’ (B47:329)

In the example above, the suffix *-atus* DOWNRIVER is followed by both the CONTINUOUS aspectual marker *-əla* and the ATELIC DIRECTIONAL *-(g)əl*; the suffix *-°is* OUTDOOR follows, to indicate the broader setting of the motion.⁷⁰

⁷⁰ It is somewhat surprising that *-atus* DOWNRIVER is followed by the suffix *-°is* OUTDOOR; one might assume that this would be pragmatically inferred. However, ‘upriver’ and ‘downriver’ are directional terms that are also used inside residential and ceremonial houses, and so one might indeed want to specify whether the motion takes place inside a built structure or outside.

In another example, the body-part locative *-(x)səy'ap'* SHOULDER combines with the atelic directional suffix *-(g)əl* DIR.ATEL and the OUTDOOR suffix *-°is* to describe a certain kind of chaotic motion with multiple trajectories.

(237) BODY-PART LOCATIVE AND INDOOR SUFFIX

lay'apalagəlis
 la-ayap-əla-(g)əl-°is
 go-SHOULDER-CONT-DIR.ATEL-OUTDOOR
 'people going this way and that, changing places' (B48:396)

In the example below, the locative suffix *-oy'o* MIDDLE identifies a direction of movement, and the suffix *-°il* identifies the broader settings as the indoor space of the house. Note that the locative suffixes are separated by a directional suffix *-°ut*; this suffix is discussed in the next section.

(238) *-oy'o* MIDDLE AND *-°il* INDOOR

caχoɾiy'olitəla
 caχ-oy'o-°ut-°il-əla
 quick_walk-MIDDLE-MOT.DIR-INDOOR-CONT
 'to walk with quick steps in the middle of the house' (B47:339)

The reverse locative precedes a directional suffix, but it not followed by a locative suffix.

(239) REVERSE LOCATIVE SUFFIX

<i>ɾixɾəm</i>	<i>ləɾə</i>	<i>lāwəlida</i>	<i>ləqála.</i>
ɾix-ɾəm	ləɾə	la-wä-(g)əl=ida	ləqala.
good-OI	DEP	go-REV.LOC-DIR.ATEL=S.DEM	congestion

'It's good that the congestion came out.' (2014jan24_SW_1)

Directional suffixes are a special subset of three suffixes with the shapes *-(g)əl*, *-(g)aɾl*, or *-wəl*. When these combine with motion roots, they add a vector — and an endpoint or lack of endpoint — to that motion. These suffixes form an interesting paradigm requiring detailed analysis, provided in the Section 5.6.3. Here I provide some introductory examples to briefly

illustrate their use within a predicate. These directional suffixes must occur in combination with (at minimum) one locative suffix following, as we see in (240).

(240) DIRECTIONAL SUFFIX COMBINED WITH LOCATIVE

típa^hlít ‘to put your feet on the floor’
 típ-(g)aʔl-^oíl
 step-DIR.TEL-INDOOR

típa^hlís ‘to put your feet on the beach’
 típ-(g)aʔl-^oís
 step-DIR.TEL-OUTDOOR

típa^hlís ‘to put your feet on the ground’
 típ-(g)aʔl-!s
 step-DIR.TEL-GROUND

típaʔlaxs ‘to put your feet in a canoe’ (“or any boat”, BL added).
 típ-(g)aʔl-axs
 step-DIR.TEL-BOAT

(2013jul17_BL_1)

As shown in the next section, there are conventionalized meanings associated with these directional suffixes. For now, I focus on the function of locative suffixes in relation to these directional suffixes. The locative suffix immediately following the directional suffix is the endpoint of the trajectory of motion; in (241), it is the literal ground. (The prepositional phrase identifying the ground lexically is optional; the speaker provided both sentences as equally grammatical. She provided the shorter version first, without the prepositional phrase.)

(241) ENDPOINT FOLLOWING DIRECTIONAL SUFFIX -(g)əl

<i>qəp^həlsóχda</i>	<i>hənx^hl^hánox</i>	<i>(laχa</i>	<i>ʔəwínag^{wis}.)</i>
qəp-(g)əl-!s=oxda	hənxlan=ox	la=χa	ʔəwínag ^{wis}
down_vessel-DIR.ATEL-GROUND=S.DEM	pot=DEM	PREP=DEM	ground=DEM
‘The pot fell down to the ground.’			(2013jul17_BL_1)

Another example with a different locative suffix is provided in (242). The locative suffix *-(ə)ʎala* ABOVE follows the telic directional suffix *-(g)aʎ* DIR.TEL to indicate that the Goal of motion was a location ‘above’ (the step on the ladder).

(242) ENDPOINT FOLLOWING DIRECTIONAL SUFFIX *-gaʎ*

<i>ləmox</i>	<i>tᶦpaʎʎaloχ</i>	<i>Mikiχ</i>	<i>laχ^{wa}</i>	<i>təxəldən.</i>
<i>lə-ʎəm=ox</i>	<i>tᶦp-(g)aʎ-(ə)ʎala=ox</i>	Mike	<i>la=χ^{wa}</i>	<i>təxəldən</i>
AUX-OI=S.DEM	step-DIR.TEL-ABOVE-DEM	Mike	PREP=DEM	ladder
‘Mike stepped on the ladder.’				(2013jul17_BL_1.22)

With the reverse directional suffix *-wəʎ*, the meaning of the locative suffix changes from Goal to Source: together *-wəʎ* and the locative suffix *-cəw* IN combine to indicate motion **out of**, rather than into, a contained space.

(243) SOURCE FOLLOWING DIRECTIONAL SUFFIX *-wəʎ*

<i>ləmoxda</i>	<i>wəqəsiχ</i>	<i>dəχ^wətʎól</i>	<i>laχóχda</i>	<i>dəmsisGəmχ</i>
<i>lə-m=oxda</i>	<i>wəqes=iχ</i>	<i>dəχ^w-wəʎ-cəw-(ə)l(a)</i>	<i>la=χoxda</i>	<i>dəmsisGəm=χ</i>
AUX-OI=S.DEM	frog=DEM	jump-REV.DIR-IN-CONT	PREP=DEM	jar=T.DEM
‘Frog jumped out of the jar.’				(2013jul17_BL_1)

Finally, in some cases, the directional suffixes are ‘sandwiched’ between two locative suffixes. These examples occur in both the legacy corpus of materials documented by Boas and Hunt, and the modern corpus recorded since 2008.

(244) LOCATIVE PRECEDING AND FOLLOWING DIRECTIONAL SUFFIX

paχʎstogaʎlil
paq-ʎsto-gaʎ-oi
 flat_horiz-OPENING-DIR.ATEL-INDOOR
 ‘to lay something flat **toward the door** on the floor’ (20140131_SW_4)

kacʎstogaʎlil
kat-ʎsto-gaʎ-oi
 long_horiz-OPENING-DIR.ATEL-INDOOR
 ‘to lay a stick or broom **toward the door** on the floor, to lay a stick or broom on the floor **by the door**’ (20140131_SW_4)

These and other examples reinforce the functional difference between the locative suffixes preceding and following the directional suffixes. The locative suffixes **following** directional suffixes provide information about the points at which motion begins or ends. The locative suffixes **preceding** the directional suffixes in expressions of motion identify the ORIENTATION of the Figure's trajectory rather than providing information about the beginning or endpoint of a trajectory of motion. In example (244), classificatory roots ('positional' roots) combine with two locatives and a directional suffix. The locative suffix - (?)*sto* OPENING combined with the the suffix -^o*i* INDOOR indicates a doorway. If the use of this suffix were interpretable as the endpoint of a trajectory of motion (Source or Goal) , then these predicates would describe a piece of paper (or other similar flat thing) or a broom (other similar long, thin thing) lying **in the doorway**. However, the use of this suffix preceding the directional morpheme instead indicates that the item is oriented **toward the doorway**.

Early documentation contains similar expressions. In (245), the suffix -*cəw* IN preceding the directional suffix indicates the Path or direction of motion **into the house**.

(245) LOCATIVE PRECEDING AND FOLLOWING DIRECTIONAL SUFFIX

<i>lá'coga?li'la?i</i>	<i>laχənc</i>	<i>k^wiχsəmdə?aciχ</i>
la- <i>cəw</i> -gaʔi- ^o i-λ=i	la-χənc	k ^w iχ-s(G)əm-(x?i)d-a'ci=χ
go-IN-DIR.TEL-INDOOR-DEM	PREP-DEM.1INC.POSS	strike-ROUND-MOM-CONTR=DEM
'We will go into our (time-beating — drumming house' (B1947:349; CX 162.10)		

However, when the sentence in (245) was presented to a modern speaker, she commented that this sounded like 'old-fashioned language' (2013jul17_BL). Mrs. Lagis preferred a simpler construction without the directional suffix -*gaʔi* DIR.TEL; in the example she offered, she still employed two locative suffixes, however. In this case, a reduced form of the

add motion to roots. The suffix *-(s)Gəm* FACE again seems to indicate orientation — in this case, which way a figure is facing.

(248) BODY-PART LOCATIVE SUFFIX PRECEDING DIRECTIONAL

wiGəmliʔʔas

wi-(s)(G)əm-ʔiʔ-ʔ=as

where-FACE-MOT.WATER-FUT=2.SBJ

‘Which way will you go (canoeing)?’ (Which way are you headed?) (B47:377)

In contrast, the use of this suffix in a different context, with no directional or locative material following, would instead indicate the location of something **on the face**:

(249) BODY-PART LOCATIVE SUFFIX WITHOUT DIRECTIONAL

ʔəχəmala

ʔəχ-(sG)əm-əla

root-FACE-CONT

‘to have on face’ (B47:239)

In (250), the same suffix *-ʔiʔ* MOT.WATER is preceded by another locative suffix -*(g)usto* UP, which also provides the trajectory of the motion, not the endpoint.⁷²

(250) PATH SUFFIX WITHOUT DIRECTIONAL SUFFIX

qʷáχəmɡustoʔiʔ

qʷaχ-əm-(g)usto-ʔiʔ

grow-PL.LOC-⁷³UP-MOT.WATER

‘pl. to grow up out of the water’ (B48:371)

⁷² Despite the superficial homophony of the suffix *-(sG)əm* FACE and the suffix *-əm* PL.LOC below, this suffix indicates plural figures and appears preceding locative suffixes.

⁷³ Despite the superficial homophony of the suffix *-(sG)əm* face and the suffix *-əm* PL.LOC, the latter suffix indicates plural figures and always appears preceding the ‘zone’ of locative-directional suffixes.

5.6.3 Directional suffixes

As described in previous chapters, a small set of three directional suffixes adds a vector of motion to a predicate. These suffixes and their combinatorial effects with different types of roots and different subclasses of suffixes are described here in greater detail.

Table 17 repeats the information provided in Section 3.4.3.2.

Table 17 DIRECTIONAL SUFFIXES

FORM	MEANING	GLOSS
<i>-(g)əʔ</i>	motion without identified endpoint	DIR.ATEL
<i>-(g)aʔ</i>	motion toward goal	DIR.TEL
<i>-wəʔ</i>	motion away, off, out of; reversal of direction	DIR.REV

(B1947: 349-350)

These morphemes refer to movement through space; they differ in terms of whether the Source or Goal of a vector of motion is foregrounded in the event as encoded within the predicate. The ATELIC DIRECTIONAL suffix *-(g)əʔ* simply indicates motion along any vector without reference to Source or Goal. The *telic* suffix *-(g)aʔ*, glossed as DIR.TEL, for TELIC DIRECTIONAL, indicates the presence of Goal or endpoint and motion toward that Goal. The *reverse directional* suffix *-wəʔ*, indicates a Source or beginning point; the morpheme on the other hand, is so-named because it combines the REVERSE LOCATIVE suffix *-wa* with the ATELIC DIRECTIONAL morpheme *-(g)əʔ*. A locative suffix immediately following these directional suffixes identifies locations of Goal and Source. A graphic representation of these vectors is presented in Figure 18.

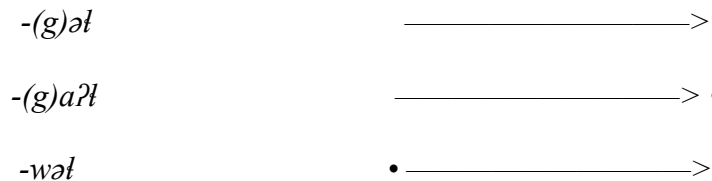


Figure 18: SEMANTICS OF DIRECTIONAL SUFFIXES

As briefly mentioned earlier, the word *telic* is used in here in a spatial sense, that of the Greek word *telos* ‘end.’ TELICITY, within linguistics, commonly refers to the aspectual or temporal marking of event completion: “a telic situation is one that involves a process that leads up to a well-defined terminal point, beyond which the process cannot continue” (Comrie 1976:47). These morphemes are not, however, aspect markers. A separate class of aspect markers (described in Chapter 3) defines the temporal structure of an entire event. The predicate events to which they refer may be aspectually completed, or not — and this is optionally marked with derivational aspect markers.⁷⁴ That is, these predicates may still be, in an aspectual sense, “telic”, even if they include a so-called ‘atelic directional’ suffix. Directional suffixes can contribute to and interact with the aspect of a predicate word; for example, the telic directional suffix *-(g)aʔl* implies movement toward a locative terminal point, resulting in completion of both motion and action at this terminus. In contrast, neither *-(g)əʔl* nor *-wəʔl* inherently imply an terminus to the vector of motion. Directional suffixes thus do not define the temporal structure of an event, but instead mark **spatial telicity** in the event structure: whether a trajectory has a clearly identified starting point, endpoint, or neither. This telicity is reinforced by locative suffixes that follow the directional suffix and identify starting or endpoints of a vector.

The following examples illustrate the interaction between directional and locative suffixes. Locative suffixes immediately following the directional suffixes add information about the Ground. In (251), the locative suffixes are presented in boldface.

⁷⁴ These aspect markers are the most fluid class of suffixes in terms of where they occur in the sequence of morphemes within a word. See Chapter 6 on affix ordering.

(251) LOCATIVE SUFFIXES FOLLOWING DIRECTIONAL SUFFIXES

- | | | |
|----|--|---|
| a. | <i>kəpáʔləχsəla</i>
kəp-(g)áʔ-əχs-əla
tong-DIR.TEL- BOAT -CONT | ‘to put with tongs into canoe’

(B47:349) |
| b. | <i>pəʔləs</i>
pəʔ-(g)əʔ-!s
fly-DIR.ATEL- GROUND | ‘to fly (up) from ground’

(2013aug16_LJSW_frogstory) |
| c. | <i>ləpəʔʔəniʔ</i>
ləp-(g)əʔ-(k)!ən=iʔ
climb-DIR.ATEL- TRUNK =DEM | ‘to climb tree’

(B47:350) |
| d. | <i>pəχʷəhtúsəla</i>
pəχʷ-(g)əʔ-(a)tus-əla
float-REV.DIR- DOWNSTREAM -CONT | ‘to float downstream’

(B47:350) |
| e. | <i>ʔəχʔáʔayod</i>
ʔəχ-(g)aʔ-ʔiʔ-od
root-DIR.TEL-MOT.WATER-TR | ‘to put on water’

(B47:241) |

Some of the more frequent locative suffixes with which the directional suffixes combine are provided in Table 18.

Table 18 LOCATIVE SUFFIXES CO-OCCURRING WITH MOTION SUFFIXES

-!s	GROUND	ground outside
-!a	ROCK	rock
-(ʔs)ta	LIQUID	in liquid, usually water but could be mud, jello, anything
-(°)əχs	BOAT	in, on boat (canoe in Boas examples, now any kind of boat)
-!q(a)	AMONG	(1) among more than two, (2) inside material
-cəw	IN	in, inside, inwards
-!χʔa	BEHIND	hind end, stern of canoe, afterwards, following
-°ʔiʔ	MOT.WATER	moving on water, at sea
-(ʔ)əla	ABOVE	above ground

The impact of directional suffixes varies, in part, according to the type of root with which the suffix combines. When attached to **basic motion** roots such as *la-* ‘go’ or *qas-* ‘walk’, these suffixes add direction to a motion event and indicate spatial telicity, or the lack thereof. Meanwhile, **classificatory** roots such as *hən-* ‘up_vessel’ (‘upright vessel with

open mouth’), *paq-* ‘flat_horiz’, or *kat-* ‘long_horiz’, identify the shape and orientation of a given Figure, but the addition of a directional suffix changes the argument structure, creating a **caused motion** event with an active agent (identified as subject). Other **stative** roots such as *gəy-* ‘be_at’ behave similarly. Finally, with **postural** roots such as *kʷəl-* ‘lie_down’ (lying on back), *laχʷ-* ‘stand_anim’ or *kʷa-* ‘sit’, the directional suffixes indicate the movement of ones’ body into the posture described. Some introductory examples are provided in examples (252), and (253), and (254) to give a sense of the semantic breadth of these forms and their derivations. The directional morphemes in each example appear in boldface.

The telic and atelic directional suffixes, *-(g)aʔ* and *-(g)əl* are obligatorily followed by a single locative suffix.

(252) *-gaʔ* TELIC DIRECTIONAL SUFFIX

- a. *Ləmóχ kʷəlgalit̚* *méχʔidoχda* *gənanəm ləwós wáciχ.*
ləmóχ kʷəl-gaʔ-°it̚ *miχ-(x)ʔid=oxda* *gənanəm ləwós wáciχ.*
 AUX **lie_down-DIR.TEL-INDOOR** sleep-MOM=DEM boy CONJ dog
 ‘The little boy lay down with his dog to sleep.’ (2014aug15_LJ)
- b. *hənəmgalit̚*
hən-əm-(g)aʔ-°it̚
 up_vessel-PL.OBJ-DIR.TEL-INDOOR
 ‘to put dishes down in house’ (B47:349.R207.33; 2013aug12_BL)

(253) *-gəl* ATELIC DIRECTIONAL SUFFIX

- a. *gəyəmgalit̚la*
gəy-əm-(g)əl-°it̚-əla
 be_at-PL.LOC-DIR.ATEL-INDOOR-CONT
 ‘pl. walking/moving about in house’ (B47:349; 2013aug12_BL)
- b. *dágalq̄əla*
da-(g)əl-!q-əla
 handle-DIR.ATEL-AMONG-CONT
 ‘to take from among’ (B47:349)

- c. **həmsayʔalagəlis**
 həms-(gə)ʔala-(g)əl-°is
 pick_berry-LOOK.FOR-DIR.ATEL-OUTDOOR
 ‘go looking for berries’
 (Boas trans: ‘to go after food in the world’)
 (B47:349.M639.1; 2013aug12_BL)

Directional morphemes can attach directly to a root, as in (252a) and (253b). They can also attach following another suffix, as in (252b), (253a), and (253c).

With the telic directional suffix *-(g)al*, the locative morpheme following the directional suffix indicates the Goal (destination) of the motion, as in examples (252a) and (252b) above. Meanwhile, the function of the locative suffix following the atelic directional suffix in (253a), (253b), and (253c) is more variable; sometimes it refers to the broader Ground or location of the trajectory as a whole, and sometimes, with certain roots, it refers to the starting point of a trajectory.

The reverse directional suffix *-wəl* can also precede locative suffixes but does not require them. In (254), however, there is no locative suffix following the reverse directional suffix. The motion is generally understood to be ‘away’ from the known starting point (previously established in the narrative) from which the dog moves.

(254) REVERSE DIRECTIONAL SUFFIX

<i>čəlxʷəlɔχda</i>	<i>wəciχʷ.</i>	
čəlx- wəl =ɔχda	wəciχʷ.	
go_headfirst- DIR.REV =S.DEM	dog	
‘The dog went headfirst.’		(2013jul15_BL_3)

However, when a locative suffix follows the reverse directional suffix, the meaning of that suffix is consistent: it indicates the locative **starting point** of the trajectory, the Source. In example (255), the locative suffix *-čəw* IN following the reverse directional suffix *-wəl* DIR.REV indicates that an enclosed place is the starting point of the jumping motion.

(255) REVERSE DIRECTIONAL SUFFIX AND LOCATIVE SUFFIX

dəχ^wətʃóla

dəχ^w-wət-čəw-əla

jump-DIR.REV-IN-CONT

‘to jump out of something’

(2013jul15_BL_3)

ləm'óχda

ləm'=óχda

AUX=S.DEM

wəqésix

wəqes=iχ

frog=DEM

dəχ^wətʃól

dəχ^w-wət-čəw-(ə)l(a)

jump-DIR.REV-IN-CONT

‘The frog jumped out of the jar.’

laχóχda

la=χoχda

PREP=DEM

dəmsisGəmx.

dəmsisGəm=χ

jar=T.DEM

(2014aug16_LJSW_2.6)

The resulting semantic reading describes a trajectory of motion out of a contained space; instead of having a single ‘elative’ morpheme, K^wak^wala employs a compositional strategy to describe motion outward: the reverse directional suffix -wət + the locative suffix indicating an enclosure -čəw.

These two suffixes occur together frequently enough that Boas identified -wətčə meaning ‘out of’ as a single suffix historically derived from the combination of -wət REV.DIR and -čəw IN (B47:331). This combination is still in frequent in the modern corpus.

(256) *ləp'*- climb AND -wətčəw REV.DIR+IN

ləpəm'óχ

ləpəm'óχ

AUX

ləpwətčəwoχda

ləp-wət-čəw-oχda

climb-DIR.REV-IN-S.DEM

‘The frog is climbing out of the jar.’

wəqésix

wəqes=iχ

frog=dem

ləχ^wa

ləχ^wa

prep

dəmxisGəmx

dəmxisGəm'χ

jar

(2013jul15_BL_3)

(257) *la-* ‘go’ and -wətčəw REV.DIR+IN

Le

le

AUX

gəχʔəmgada

gəχ-ʔəm=gada

come-OI=DEM

wəqés

wəqes

frog

lótčə

la-wət-čəw

go-DIR.REV-IN-CONT=OBJ1

‘This frog jumped (came) out of the glass jar.’

ləχa

la=χa

PREP=DEM

láčəm.

láčəm

glass_jar

(2014aug15_SW_frogstory)

(258) ʔəχ- ‘place holder root’ and -wəłcəw REV.DIR+IN

<i>nəmúχ guG^{wə}yúwása</i>	<i>wəqésix</i>	ʔəχ^{wə}łcəw	<i>láχ^{wə}a</i>	<i>dəmxisGəmx</i>
nəmuχ guG ^{wə} yú=(a)sa	wəqesix	ʔəχ-wəł-cəw-ała	laχ ^{wə} a	dəmxisGəm=χ
one foot/leg=POSS	frog=DEM	root-DIR.REV-IN-POS	PREP	jar=T.DEM

‘One of the frog’s legs is out of the jar,

<i>lída</i>	<i>nəm</i>	<i>gúG^{wə}yú</i>	<i>ʔəχcəw</i>	<i>láχ^{wə}a</i>	<i>dəmxisGəm(χ)</i>
la=ida	nəm	guG ^{wə} yú	ʔəχ-cəw-ała	laχ ^{wə} a	dəmxisGəm(χ)
AUX=SBJ	one	foot/leg	root-IN-POS	PREP	jar

and one leg is in the jar.’ (2013jul15_BL_3)

(259) gaχ- ‘come’ and -wəłolcəw REV.DIR+IN

gáχwəłolcəw	<i>təminasa</i>	<i>láχoxda</i>	<i>k^{wə}áwəsix</i>
gaχ-wəł-ol-cəw=oxda	təminas-a	laχoxda	k ^{wə} áwəs=iχ
come-DIR.REV-MOT.DIR-IN-S.DEM	squirrel-DEM	PREP	hole=T.DEM

‘The squirrel came out of the hole.’ (2013jul15_BL_3)

Such combinations of suffixes are very frequent in the modern corpus. Several other combinations of the reverse directional -wəł with locative suffixes are also identified by Boas in the section in his grammar on -wä, the reverse locative morpheme. Some of these occur with less frequency in the modern corpus.

(260) COMBINATIONS OF -wəł AND LOCATIVE SUFFIXES

- a. -wəłd^o
-wä-(g)əł-d^u
REV.LOC-DIR.ATEL-FLAT
‘off from flat object’
- b. -wəłs
-wä-(g)əł-!s
REV.LOC-DIR.ATEL-GROUND
‘out of house’
- c. -wəłtá
-wä-(g)əł-tá
REV.LOC-DIR.ATEL-?
‘out of enclosed space’

- d. -w'əłto
 -wä-(g)əł-to
 REV.LOC-DIR.ATEL-BOAT
 'out of canoe' (B47:331)

These combinations are sufficiently grammaticalized that in some cases, the originating suffix is no longer productive on its own, as is the case with *-to* BOAT (260d), which has been replaced by *-(ə)χs* BOAT.

In some of the above examples, the predicate expresses *spontaneous motion* of a Figure, whether the figure is engaged in lying down, jumping, looking for berries, flying, climbing, floating. In other examples the predicate expresses *caused motion* of a Figure. Either way, the directional suffix adds a vector and a sense of spatial telicity (or lack thereof) to the motion already inherent in the activity expressed by the root. The locative suffix expresses the origin, terminus, or location of this motion, whether it is directed towards or away from a rock, a canoe, the surface of the water, the ground, and so on. As we have seen, with a telic directional suffix *-(g)a?ł*, the locative suffix is always interpreted as the terminus of motion. With a reverse directional suffix *-(w)əł*, the locative suffix is interpreted as the origin of motion. With an atelic directional suffix *-(g)əł*, however, the locative suffix can be the broader location of motion, as with (253a) and (253c), or determined by the type of relation specified in the locative itself. In the examples below, the locative suffix *-xiwe?* TOP.EDGE indicates a locus of motion *along* or *on an edge*; this is reflected in the translations of these forms.

(261) *-(g)əł* LOCATIVE SUFFIXES: GROUND

- d'əłχ^wəłxiwe?*
d'əłχ^w-(g)əł-xiwe?
 run-DIR.ATEL-TOP.EDGE
 'run along the ridge of hill' (B47:365)

qadʷəlxɪweʔ
 qas-°(g)əɫ-xiweʔ
 walk-DIR.ATEL-TOP.EDGE
 ‘walk along the ridge of hill’ (B47:365)

With specific roots, such as *pəʔ*- ‘fly’, a locative occurring with *-(g)əɫ* can also be interpreted as the starting point of the trajectory, as in (251b), repeated here.

(262) *-(g)əɫ* LOCATIVE SUFFIXES: SOURCE

pəʔəʔs
 pəʔ-(g)əɫ-!s
 fly-DIR.ATEL-GROUND
 ‘to fly (up) from ground’ (2013aug16_LJSW_frogstory)

In contexts of *caused motion*, locative suffixes following the atelic directional suffix are similarly interpreted. This contrast between the telic motion of *-(g)aɫ* and the atelic motion of *-(g)əɫ* is conventionalized as a contrast between PUTTING and TAKING. With the telic directional *-(g)aɫ*, the locative suffix expresses the **terminus** of a trajectory, and with the atelic directional *-(g)əɫ*, the following locative suffix expresses the **point of origin** of the trajectory.

(263) PUT & TAKE SEMANTICS WITH DIRECTIONAL SUFFIXES

a. *pəʔəɫɪɫa*
 pəʔ-(g)əɫ-°iɫ-a
 root-DIR.ATEL-INDOOR-FORM
 ‘to take off from floor’ (B47:349.R73.78)

pəʔəɫɪɫa
 pəʔ-(g)aɫ-°iɫ-a
 root-DIR.TEL-INDOOR-FORM
 ‘to put down on floor’ (B47:349.R115.12)

b. *həŋgəɫɪɫa*
 həŋ-(g)əɫ-°iɫ-a
 up_vessel-DIR.ATEL-INDOOR-FORM
 ‘to shift vessel on floor, to take vessel from floor’ (B47:349.R265.22)

- həŋgalita*
 hən-(g)aʔi-°it-a
 up_vessel-DIR.TEL-INDOOR-FORM
 ‘to put vessel down on floor’ (B47:349)
- c. *típəliṭa*
 tìp-(g)ət-°it-a
 step-DIR.ATEL-INDOOR
 ‘to lift foot from floor’ (B47:349)
- típəliṭa*
 tìp-(g)aʔi-°it-a
 step-DIR.TEL-INDOOR
 ‘to step on floor’ (B47:349)
- d. *ʔuχləgəʔləχsa*
 ʔuχλ(ə)-(g)ət-əχs-əla
 carry_back-DIR.ATEL-BOAT-CONT
 ‘to lift load out of canoe’ (B47:349.R207.48)
- ʔuχləgáʔləχsa*
 ʔuχλ(ə)-(g)aʔi-əχs-əla
 carry_back-DIR.TEL-BOAT-CONT
 ‘to put load down in canoe’ (B47:349.R218.12)
- e. *ləpəlód*
 ləp-(g)ət-!a-d
 spread_flex-DIR.ATEL-ROCK-TR
 ‘to take off from rock’ (B47:349.R207.48)
- ləpáʔód*
 ləp-(g)aʔi-!a-d
 spread_flex-DIR.TEL-ROCK-TR
 ‘to spread on rock’ (B47:349.R207.48)

These minimal pairs of caused motion events reveal the semantic contrast between *-(g)aʔi*, the telic directional, indicating PUT semantics, and *-(g)ət*, the atelic directional, indicating TAKE semantics. In many cases, such as (263a) *típəliṭa* ‘to take foot from floor’, this event — and its trajectory — is not atelic in an aspectual sense, or even in an implied sense. Our bodies have limits, and lifting a foot off the floor is an action which must end at a point determined by the length of a leg or a body’s flexibility. However, by looking at these

forms together, we can see that the forms with the atelic directional *-(g)əł* all share a quality of expressing a trajectory of motion without expressing or focusing on the endpoint of that motion, in contrast with the telic directional forms, which have an endpoint of motion located in and determined by the external world.

Note, as well, that the list above contains several roots that are *not* inherently motion roots. They include handling roots like *λυχλ-* ‘to carry on back’, classificatory roots like *hən-* ‘upright vessel’ and *λəp’-* ‘flexible object spread out’ which identify both shape and orientation of a Figure, and body part roots like *típ-* ‘step, foot’. The root *da-* ‘to hold, handle’ becomes ‘take’ with the addition of an atelic directional suffix.

(264) *da-* ‘hold, handle’ WITH DIRECTIONAL SUFFIX

dágəłqəla
 da-**gəł**-!q-əla
 handle-DIR.ATEL-AMONG-CONT
 'to take from among'

dágəłχλala
 da-**gəł**-!χλa-əla
 handle-DIR.ATEL-BEHIND-CONT
 'to take along' (someone following)

(B47:350)

The contrast between spontaneous and caused motion in the predicate, in most cases, derives from the lexical semantics of the root to which directional suffixes attach. However, in some cases, a single root can produce both types of meaning, spontaneous and caused motion. With the classificatory root *paq-* ‘flat_horiz’, used for flat rectangular objects such as pieces of paper (when contact is between the largest surface area of the flat object and another flat surface) the predicate can describe either the spontaneous motion of the figure, as in the first example below, or an event of caused motion, as in the second event below.

(265) SPONTANEOUS MOTION WITH TELIC DIRECTIONAL *-(g)aʔt*

paχʔaʔliʔ

paq-(g)aʔt-ʔliʔ

flat_horiz-DIR.TEL-MOT.LIQUID

‘to fall flat on water’

(B47:349.CII340.28)

(266) CAUSED MOTION WITH TELIC DIRECTIONAL *-(g)aʔt*

paχʔstogaʔliʔ

paq-ʔsto-gaʔt-ʔil

flat_horiz-OPENING-DIR.TEL-INDOOR

‘to lay something flat toward the door on the floor’

(2014jan31_SW_4)

It seems that pragmatic context is enough to determine how these forms are interpreted.

5.6.3.1 Directional suffixes and predicate roots

Directional suffixes can co-occur with several subclasses of roots, and the semantic value of the derived stem can differ among these subclasses. Motion roots such as *la-* ‘go’ *gaχ-* ‘come’, *qas-* ‘walk’, *dʔikʷ-* ‘run’, and *siχʷ-* ‘paddle’ express spontaneous, autonomous motion of a figure. When added to motion roots, these suffixes add vector to that motion and situate it in relation to the specified ground or reference object.

(267) DIRECTIONAL SUFFIXES WITH *la-* ‘go’

laʔgalis

la-gaʔt-ʔis

go-DIR.TEL-OUTDOOR

‘to arrive at beach’

(B48:397)

laʔcəwʔliʔ

la-čəw-gaʔt-ʔil

go-IN-DIR.TEL-INDOOR

‘to go into house, room’

(B47:349)

laʔwəʔs

la-wəʔt-ʔs

go-REV.DIR-GROUND

‘to go outside’

(2013jul17_BL_1)

lol'co
 la-wəl-čəw
 go-REV.DIR-IN
 'to go out of'

(B48:399)

In contrast to *la-* 'go' and other motion roots, *gaχ-* 'come' has only been found to co-occur with *-wəl*, the reverse directional suffix, and only in cases where a Figure is emerging from a contained space, with a locative *-čəw* IN denoting the place where motion begins. It may be that because the root *gaχ-* carries greater inherent directionality than other roots, its combinatorial productivity is more restricted.

(268) DIRECTIONAL SUFFIXES WITH *gaχ-* 'come'

<i>gáχwəlól'coχda</i>	<i>tə́mínasa</i>	<i>láχoχda</i>	<i>kʷáwəsíχ.</i>
gaχ-wəl-°ul-čəw=oxda	tə́mínas-a	la=χoχda	kʷáwəs=iχ
come-DIR.REV-MOT.DIR-IN-DEM	squirrel-DEM	PREP=DEM	hole=DEM
'The squirrel came out of the hole.'		(2013aug16_LJSW_frogstory_42)	

These examples contain another suffix following this one, the vector suffix *-°ul* which I have glossed MOT.DIR. This suffix is similar to the directionals, in that it contributes a vector to a root. However, this suffix is restricted to co-occurring with a subset of roots that are inherently directional.

(269) DIRECTIONAL ROOTS WITH DIRECTED MOTION SUFFIX *-°ul*

bə́n'otə́la
 bən-°ul-ə́la
 down-MOT.DIR-CONT
 'to go downward', 'to be in downward direction'

ʔík'otə́la
 ʔík-°ulə́la
 up-MOT.DIR-CONT
 'to go up'

n'álotəla
n'al-°uł-əla
upriver-MOT.DIR-CONT
'to go upriver'

G^wâłəla
G^wâ-°uł-əla
downriver-MOT.DIR-CONT
'to go downriver'

G^wásotəla
G^was-°uł-əla
hither-MOT.DIR-CONT
'to approach'

G^wəyútəla
G^wəy-°uł-əla
direction.toward-MOT.DIR-CONT
'to turn towards'

łásotəla
łas-°uł-əla
seaward-MOT.DIR-CONT
'to go seaward'

həyótəla
hě-°uł-əla
straight.dir.distant-MOT.DIR-CONT
'to keep right on'

(B47:334)

These forms continue to be in use today. The sentence below was provided as a speaker watched a video of someone on his boat.

(270) *n'álułəla* 'go_upriver'

n'álułəloχ^w
n'al-°uł-əla=οχ^w
upriver-MOT.DIR-CONT=S.DEM
'Percy is going upriver.'

Percy.
Percy
Percy

(2014jan31_SW)

Speakers frequently used another construction, *G^wəyútəla*, to describe orientation toward something.

(271) *G^wəyútəla* ‘turn_towards’

<i>ləmís</i>	<i>G^wəyútəlagada</i>	<i>nəmúk^wiχ</i>
ləmís	G ^w əy- ^o ut-əla=gada	nəmuk ^w =iχ
AUX	toward-MOT.DIR-CONT=DEM	one=DEM
‘The other one is on his way		

<i>qəs</i>	<i>ləʔəχ</i>	<i>ʔáʔəlusus</i>	<i>gígəlitəlaqsid^əʔəχ</i>
qəs	ləʔəχ	ʔaʔəlusus	gigəlitəlaqsid ^ə ʔəχ
PURP	AUX	back	slipper
to put on the slippers.’			

(2013jul14_BL_1)

However, the combination of this suffix following another directional suffix is relatively rare, and seems to occur only with roots that do not belong to the subclass of ‘directional roots’, but have received a directional suffix.

(272) DERIVED DIRECTIONAL ROOT

<i>gax^məlólóχda</i>	<i>dəχdəχiniχ</i>	<i>láχus</i>	<i>gúk^wəlásix.</i>
<i>gax-ʔəm-(g)ət-^out-čəw=oxda</i>	<i>dəχdəχiniχ</i>	<i>laχ-us</i>	<i>guk^wəla-ʔas-ix</i>
come-OI-DIR.ATEL-MOT.DIR-IN=S.DEM	owl	PREP-POSS	house-LOC.NMLZ-T.DEM
‘The owl came out of his house.’		(2013aug16_LJSW_frogstory)	

Of course, one might rightfully point out that *gax-* ‘come’ is inherently directional, as a root which indicates deictic motion toward the speaker. However, it seems to fall outside of the subclass of roots which K^wak^wala identifies as candidates to receive the *-^out* suffix, and requires derivation as a ‘directional root’ with a directional suffix in order to receive the *-^out* suffix.

Meanwhile, with roots that express manner of motion, even those which include some directionality in their semantics, such as *dəχ^w-* ‘jump’, *ʔəp-* ‘climb’, *tik^w-* ‘hang’, and *tiq-* ‘drop’, the directional and locative suffixes together add information about the direction of a figure’s motion, and the origin or destination of this trajectory, to the full predicate, as we saw in example (256), repeated here.

(273) *λ̣əp-wət-čəw*- ‘climb out of’

<i>ləʔəmóχ</i>	<i>λ̣əp-wət-čəw-oxda</i>	<i>wəqésix</i>	<i>láχ^wa</i>	<i>dəmxisGəmχ</i>
lə-ʔəm=ox	λ̣əp-wət-čəw=oxda	wəqes=iχ	la=χ ^w a	dəmxisGəm=χ
AUX-OI-S.DEM	climb-REV.DIR-IN-DEM	frog=DEM	PREP=DEM	jar=DEM
‘The frog is climbing out of the jar.’				(2013jul15_BL_1)

In this case, the reverse directional *-wət* determines the interpretation of the locative suffix *-čəw* IN as the starting point of motion.

The activity of looking for something is also treated as a manner root, taking a directional suffix before the locative.

(274) *ʔale*- ‘look_for’

<i>ləmēʔida</i>	<i>la-la-</i>	<i>buχ^wid^ːis</i>	<i>guk^wəʔide</i>
lə-ʔəm=ida	la-la-	bəw-(x)ʔid=sis	guk ^w =ide
AUX-OI=S.DEM	go- go-	leave-MOM=OBJ2.POSS	house=DEM
‘The boy and his dog left the house’			

<i>ʔálegəls</i>	<i>laχida</i>	<i>wəqés.</i>	
ʔale-gət-ls	la=χida	wəqes.	
look_for-DIR.ATEL-GROUND	PREP=DEM	frog	
and went to look for the frog.			(2013aug15_SW_frogstory)

Directional suffixes can also derive a motion predicate from the locative copula *gəy-*, which becomes a motion predicate in example (275).

(275) LOCATIVE COPULA *gəy-* WITH DIRECTIONAL SUFFIX

<i>gəyámgəliləla</i>	
gəy-əm-gət- ^o il-əla	
loc.cop-PL.LOC-DIR.ATEL-INDOOR-CONT	
‘pl. walking about in house’	(2013aug12_BL_24)

With a directional suffix, postural roots, such as *k^wa-* ‘sit’ and *k^wəl-* ‘lie’ describe the act of a Figure moving into (or out of) a given posture.

(276) *kʷəl-* ‘lie_down’ followed by *-gaʔ* DIR.TEL and *-oʔ* INDOOR

<i>Ləmóχ</i>	<i>kʷəlgaliʔ</i>	<i>méχʔidoχda</i>	<i>gənanəm</i>	<i>ləwós</i>	<i>wáciχ.</i>
Ləmóχ	kʷəl-gaʔ-oʔ	meχ-(x)ʔid=οχda	gənanəm	ləwós	wáciχ.
AUX	lie_flat-DIR.TEL-INDOOR	sleep-MOM=DEM	boy	CONJ	dog
‘The little boy lay down with his dog to sleep.’					(2014aug15_LJ)

Classificatory roots such as *hən-* ‘up_vessel’ and *kát-* ‘long_horiz’, have a locative sense implied in their semantics. These roots are stative when combined with a positional suffix *-ata*.

(277) STATIVE SEMANTICS OF CLASSIFICATORY ROOTS

<i>hənáloχ</i>	<i>láχoχ</i>	<i>gáyasíχ.</i>
hən-ata=οχ	la=χοχ	gayas=iχ
up_vessel-POS=S.DEM	PREP=DEM	shelf=DEM
‘It (an upright vessel: cup, bottle, etc.) is on the shelf.’		
(2014jan22_LJ_1)		

The meaning of the classificatory root remains stative when combined with locative suffixes.

(278) STATIVE SEMANTICS OF CLASSIFICATORY ROOTS

<i>hənstəloχda</i>	<i>botl</i>	<i>láχoχda</i>	<i>pədl.</i>
hən-(?)sta-əls=οχda	botl	la=χοχda	pədl
up_vessel-LIQUID-OUTSIDE=S.DEM	bottle	PREP=O.DEM	puddle
‘The bottle is sitting in the puddle.’			
(2014jan23_LJ_1)			

The subject of the sentence in both examples above is the vessel itself, which is the Figure in a particular spatial relation to the Ground (in this case, a puddle).

However, when directional suffixes are added to classificatory roots, an external agent causing motion is implied. While I was working with Mrs. Lagis to better understand directional suffixes, I presented her with a situation in which someone was moving upright vessels (in this case, baskets) along the floor; which required the use of the classificatory root *hən-* ‘up_vessel’. She asked: “Who’s doing it now? Who’s the subject?”

(2013aug13_BL). The addition of a directional suffix impacts the argument structure of the

predicate. With the addition of a directional suffix such as *-gaʔl* or *-gəʔl*, the classificatory root now identifies the syntactic **object** of an action of caused motion — even while it remains the semantic Figure. In a sentence with all arguments expressed, the **agent** of motion is marked as **subject**, and the Figure (the item being moved) is marked as **primary object**. The Ground, when lexically specified, is marked as an **oblique** with a preposition. This can be seen in the example below. Relevant case marking appears in bold type.

(279) ARGUMENT STRUCTURE IN CAUSED MOTION EVENT with *hən-* ‘up_vessel’

<i>ləmóχ</i>	<i>hənámgalítóχda</i>	<i>Palomaχa</i>	<i>nəʔənGacıχ</i>
lə-ʔəm=οχ	hən-əm- gaʔl = ^o il=οχda	Paloma=χα	nəʔənGacıχ
AUX-OI= 3.SBJ	up_vessel-PL- DIR.TEL =INDOOR= 3.SBJ	Paloma= OBJ1	basket

<i>laχ^wa</i>	<i>wátqəʔed^zilasix.</i>	
la=χ ^w a	wátqəʔed ^z ilasix	
PREP=DEM	couch	

‘Paloma put the baskets on the comfy couch.’ (2013aug12_BL_35)

When asked to describe a situation in which an earthquake caused vessels to move, Mrs. Lagis avoided using the root *hən-* ‘up_vessel’. First she volunteered the example below.

(280) AGENCY AND DIRECTIONAL SUFFIXES

<i>ləmóχ</i>	<i>χámχasoloχda</i>	<i>láχʔaʔáciχ</i>	<i>gáyala láχ^wa</i>	<i>níniniχ</i>
lə-ʔəm=οχ	χəms- ^o ul=οχda	laχʔaʔáci=χ	gayala	la=χ ^w a
AUX-OI=S.DEM	RED-hit_side-EXCL=S.DEM	basket=DEM	PREP	PREP
				earthquake

‘The baskets are banging together from the earthquake.’ (2013aug13_BL_1)

She then provided another example that did include a directional suffix, but only combined with a non-classificatory root *yawix-* ‘to move, be in motion’.

(281) AGENCY AND DIRECTIONAL SUFFIXES

<i>ləmóχ</i>	<i>hənχλanoχ</i>	<i>yawíxəlagəlix</i>
lə-ʔəm=οχ	hənχλan=οχ	yawíx-əla-(g)əʔl=iχ
AUX-OI=S.DEM	pots=S.DEM	in_motion-CONT=DIR.ATEL=DEM

gáyala laχ^wa nininiχ.
gayala laχ^wa nininiχ.
PREP PREP earthquake

‘The pots are moving around from the earthquake.’

(2013aug13_BL_1)

It does not seem that the directional suffixes themselves entail agency, but rather, that the interaction between the subclass of classificatory roots and the directional suffixes produces semantics of caused motion, then requiring an agent of such motion.

5.6.3.2 Directional suffixes and associated motion

It is striking that motion suffixes are sufficient to create an event predicate that acts as a verb within the syntax of the clause. Per Koch 1984 and Wilkins 1991, should these directional suffixes be analyzed as ‘associated motion’ suffixes? As described by Wilkins, an associated motion morpheme “relates main verb events to background motion events” (Wilkins 1991: 209). Typical associations denoted by these morphemes include meanings such as ‘go and V⁷⁵’, ‘go V-ing along’, ‘come Ving along’, ‘V in passing’, ‘V going along with someone’, ‘V in following along after someone’ and ‘V in going to meet someone’. Such morphemes have been found in Australian languages (Mparntwe Arrernte, Arandic; Kayterye, Arandic), and in South America (Ese Ejja, Takanan) and North America (Atusgewi, Palaihnihan).

K^wak^wala certainly has at least one suffix that might act as an associated motion morpheme: *-anuma* ‘to come to V’. Other suffixes might also be considered ‘associated event’ (or ‘associated action’) morphemes: *-təwⁱ* ‘to do V while V’ (requires two predicates), *-^osdənaq* ‘to work while V’, *-d^zək^w* ‘to do V before doing something else’.

However, the directional suffixes discussed above should not be considered associated motion morphemes. They do not add a background of motion to a main predicate.

⁷⁵ With ‘V’ standing in for the semantic content of a lexeme identifying an event or action.

Rather, if the root inherently expresses the movement of a figure (*la-* ‘go’, *gaχ-* ‘come’, *λəp-* ‘climb’, and so on), these suffixes add a sense of direction. Likewise, if the root expresses a handling concept, such as the root *kəp-* ‘hold with tongs’, these suffixes add agency, direction and telicity. The resulting meanings are ‘put with tongs’ or ‘take with tongs’, or ‘take out with tongs’, depending on which suffix is used. If a root expresses classificatory meaning such as *hən-* ‘up_vessel’, *məq^w-* ‘loc_round’ *kat-* ‘long_horiz’, *paq-* ‘flat_horiz’, these suffixes add a sense of caused motion effected by an active agent on a Figure. The question of whether other ‘associated motion’ morphemes exist in K^wak^wala merits further research, but these directional suffixes should not be considered as such.

5.7 Conclusion

In this chapter, we saw the rich possibilities available to speakers of K^wak^wala for expressing motion. An extensive set of roots allow detailed expression of various types of ‘manner’ of motion, as well as conveyance, distinctions among types of figures, and direction. Elements of Ground are specified in locative suffixes. K^wak^wala syntax employs one semantically vacuous preposition and limits clauses to one expression of Ground. Both tendencies are shared with many other languages that also encode detailed event information in the predicate. Locative, aspectual and directional suffixes combine within the predicate to allow for a dizzying range of possible meanings. The next chapter focuses on the question of affix-ordering in the predicate, and how the domain of spatial grammar illuminates the tension between forces of semantic compositionality, on the one hand, and diachronic conventionalization, on the other.

Chapter 6: Affix-ordering

6.1 Overview

When more than one derivational affix⁷⁶ occurs in a predicate, what determines the order of these affixes? Is the sequence of affixes a meaningful reflection of the semantic structure of an event? Or perhaps a result of other factors: phonological, morphological or syntactic constraints? Alternatively, is the order of affixes determined by a fixed and synchronically arbitrary templatic sequence of position classes? Might different affixes be subject to different constraints?

The domain of spatial relations provides a convenient framework within which to explore the principles that determine the order of affixes in a Kwakwala predicate, especially as a way of examining the extent to which semantic effects contribute to affix order. Chapters 4 and 5 described the grammar of static and kinetic relations in Kwakwala: how the language constructs spatial meaning in both morphology and syntax. The syntactic structure of Kwakwala, with one semantically vacuous preposition linking a lexical Ground to the Figure indicated by the predicate, offers little possibility of semantic specificity beyond lexical choice. In contrast, as illustrated in both chapters, Kwakwala morphological

⁷⁶ My focus here concerns just derivational affixes, and excludes inflectional morphemes (which are, conveniently, clitics rather than suffixes, and concentrated outside the derivational zone of the phonological word). Unlike Rice 2011, I do not limit my focus to ‘word-class-preserving’ suffixes, which I feel is a complex claim for Kwakwala and difficult to support. I leave that question aside for now.

complexity allows rich potential for semantic specificity within a complex predicate word. Kwakwala predicates often contain multiple derivational suffixes, including more than one locative suffix, in intricate combinations. And yet, while Kwakwala has an extensive repertoire of suffixes dedicated to describing spatial relations, suffixes are not assembled in a haphazard patchwork, selected and combined at whim. Rather, the selection of suffixes and the sequence in which they appear reflects the influence of semantic principles, as well as additional constraints.

This chapter advances the argument for a view of word-internal structure in Kwakwala as a product of synchronic semantic effects and diachronic effects of conventionalization working in concert. Semantic principles, in the form of iconicity, scope, and relevance, exert a strong influence on affix selection and sequence. At the same time, additional constraints limit formal variation within morphologically complex words in Kwakwala: first, the rise of cohesion among affixes, and second, the emergence of paradigmatic subclasses of affixes and associated positions (or ‘slots’) of these subclasses relative to other affixes which determine sequence and semantic interpretation. The set of DIRECTIONAL SUFFIXES, described in Section 5.6.3, is one such subclass; the INDOOR/OUTDOOR contrast between *-^oil* and *-^ois* is another.

The cross-linguistic question of what determines affix order has received attention from several scholars, with a range of proposals. This chapter offers a view of Kwakwala morphology by which multiple forces shape affix order. The semantic domain of concrete spatial relations allows us to evaluate these proposals. These proposals fall into two broad camps: some languages are proposed to have templatic morphologies, with fixed and arbitrary synchronic ordering of position-classes of affixes, while other languages have been

found to be sensitive to a variety of non-arbitrary constraints motivated by other levels of grammatical structure. For example, the morphology of Dene (Athabaskan) languages has been represented as prototypically templatic (Hoijer 1971, Kibrik 1995, Leer 2006 *inter alia*), with several features contributing to this interpretation, such as the interleaving of ‘derivational’ and ‘inflectional’ categories of affix and the presence of discontinuous but linked sets of morphemes. Good (2003) is another study of templatic structure in several languages (Bantu, Chechen, Saramaccan), identifying ‘strong linearity’ (a.k.a. templatic structure) as conditioning affix order.

However, in other languages — and in other proposals about languages elsewhere claimed to be templatic, such as languages from the Dene-Athabaskan family — factors of various types have been argued to motivate morphological complexity. Phonological, phonetic, phonotactic, prosodic syntactic and semantic effects have all been argued to condition affix order (Baker 1988; Paster 2006; Rice 2000; Wojdak 2005).

Each section in this chapter addresses one type of principle proposed to govern affix order, and evaluates its relevance with respect to affix order in K^wak^wala predicates. Six proposed factors influencing selection and sequencing of derivational affixes are summarized here in preparation for further discussion.

Semantic effects on affix order have sometimes been grouped together as varied types of ‘scopal relations’ (Rice 2000), but I find it necessary to distinguish **scopal** effects from other types of semantic effects such as **iconicity**. When discussing semantic effects as a group, I identify them all as types of **semantic compositionality**. The principle of compositionality is fulfilled when “the meaning of a complex expression is determined by the structure and the meanings of its constituents” (Szabó 2013). In the context of

morphological structure, I define **morphological compositionality** to mean that the totality of a word is a product of the combined semantic effect of the root and affixes together. This semantic effect results from the principles that condition linguistic forms and identify their communicative function. However, I do not argue that such compositionality occurs in a uniform sequential progression, nor that it possesses ‘directionality’ (from root outwards). In fact, one of the proposals I make in this chapter is that morphological structure in Kwakwala is composed through the combination of chunks of varying sizes, some of them containing multiple affixes. Furthermore, as I will point out below, semantic composition within Kwakwala words is only sometimes linear, and I find a striking *lack of directionality* reflected in some of the relationships among affixes.⁷⁷

Three types of semantic effects are described below; they are discussed together in section 6.3. These effects are interrelated and sometimes overlapping, but distinguishing among these different types of semantic effect illuminates some of the varying ways in which affixes relate to each other and contribute to the meaning of a word.

1. **Iconicity**, or the isomorphic similarity between form and meaning, can impact morphological structure in several ways (Haiman 1980). **Proximity** between a root and an affix, and between affixes, can reflect elements of experience. SPATIAL ICONICITY refers to the way in which *linguistic distance* between a root and affix or between one affix and another can reflect *spatial distance*. TEMPORAL ICONICITY, on the other hand, refers to the way in which an isomorphic parallel between the left-to-right sequence of linguistic forms can reflect temporal experience, such that the leftward morphemes, which would be spoken

⁷⁷ A more restrictive definition of **compositionality** might be called local compositionality, implying that each affix contributes to a newly composed unity, adding incrementally to a word and building a predication sequentially. This, however, would not include the multidirectional and multilayered processes by which Kwakwala words are composed.

or read first, correspond with earlier experiences, and rightward morphemes, which would be spoken later, correspond with later experiences. Both types of linear relationships influencing sequencing and adjacency of affixes, are discussed here, in subsections of 6.3. A third type of iconicity, having to do with quantity and cohesion of individual forms (such as the difference between a morphological and syntactic causative construction), is also identified and briefly discussed, although it does not influence affix-ordering within the word.

2. **Scopal** relationships among affixes are indicated when a change in affix order results in a corollary change in meaning. Two types of scopal relationships are discussed in section 6.4.3: (1) those commonly referred to as AB-BA orders, in which changing the sequence of two adjacent affixes results in demonstrable changes in meaning; and (2) scopal effects resulting from varying the position of a single affix, such as an aspect marker. However, scopal relations are also hierarchical in the sense that an affix with scope over other affixes determines the semantic interpretation of all of these affixes within its domain of influence, not just the immediately adjacent morpheme.

3. A third type of semantic effect, proposed to result from the **RELEVANCE** between an affix and the root, is reflected in both the directional relationship between root and affix, and the proximity of affixes to the root. Both **proximity** and **directionality** are **morphological** or ‘morphotactic’ (Anderson 2005) effects reflected in the sequencing of affixes with respect to the root and to each other. From both synchronic and diachronic perspectives, proximity has been proposed to reflect the semantic **relevance** between affix and root (Bybee 1985).

4. Finally, in section 6.4, I discuss the effects of **co-occurrence**, **cohesion** and **conventionalization** which lead to loss of flexibility and variability in affix order. The

resulting increasingly fixed relationship between position and function is identified here as CONVENTIONALIZATION. Conventionalization is reflected in the cohesion of morphemes with each other as lexicalized combinations of roots and affixes, and grammaticalized combinations among affixes. The other, related effect is the emergence of **paradigmatic subclasses** within the larger set of affixes. Such subclasses are small closed sets with well-defined semantic functions and limited combinatorial properties: members of these subclasses are more restricted in terms of where they appear in the sequence of affixes within a word, and they may determine the functional interpretation of other affixes.

Two types of factors have been determined not to influence affix order in K^wak^wala: phonological effects and syntactic constraints. These are discussed briefly in section 6.2. The rest of the chapter argues that the structure of K^wak^wala predicates results from the convergence of two structural forces, in tension with each other. On the one hand, K^wak^wala predicates are semantically compositional and display a high degree of iconic isomorphism between form and meaning. Section 6.3 focuses on three distinct semantic effects which contribute to the order of affixes in K^wak^wala and produce semantically compositional words. On the other hand, a process of conventionalization allows smaller paradigmatic subclasses of affixes to emerge, contributing to a loss of flexibility in word order and counterbalancing the semantically determined word-internal mobility of affixes. Section 6.4 describes the effect of this conventionalization leading to increasingly fixed relationships between position and function. In this section, I also discuss proposals of templatic structure as they relate to the lack of mobility among affixes. In sum, I argue that K^wak^wala morphology cannot be identified as either fully and exclusively ‘templatic’ or ‘scopal’, but reflects influence from both types of principle.

6.2 Non-contributing factors

Two factors are described in this section. **Phonological** factors such as sonority, phonotactics, and prosody condition affix order in some languages. These factors are discussed briefly in section 6.2.1. Some proposals have also argued that **syntactic** structure is reflected in morphological structure. This hypothesis is discussed with respect to Kwakwala in section 6.2.2.

6.2.1 Phonological conditioning

In several languages, phonological constraints shape affix order. Buckley showed that the pluractional affixes in Kashaya Pomo vary between suffixing and infixing due to avoidance of non-coronal codas (Buckley 2000, cited from Rice 2011). Arnott (1970) argued that the order of affixes in Gomba Fula reflects sonority, although further work by Paster 2005 reanalyzed the sequence in terms of semantic scope. Prosodic shape has also been argued to be a factor in the ordering of affixes in Dene: smaller affixes are closer to the stem, larger affixes are closer to the edge. Finally, on the basis of phonotactic and phonetic evidence, McDonough (1999; 2013) argues for a bipartite structure to the Dene word, with two word structure domains, called TAM and LEX, operating in conjunction with paradigmatic structure in word formation and lexical retrieval.

I have not found that phonological effects influence sequencing or selection of derivational affixes in the predicates in the data analyzed here, so I do not discuss these proposals further here.

6.2.2 Syntactic influence on morphological structure

The Mirror Principle proposed by Baker claims that syntactic principles determine affix order: “(m)orphological derivations must directly reflect syntactic derivations and vice versa” (1985). Distributed Morphology furthered the argument that morphological structure is indistinguishable from syntax (Halle & Marantz 1993). Harley and Noyer summarize this approach to morphology as follows: “**(s)yntactic hierarchical structure all the way down** entails that elements within syntax and within morphology enter into the same types of constituent structures (such as can be diagrammed through binary branching trees)” (Harley and Noyer 1999:1).

This approach has been applied in research with polysynthetic languages such as the Dene family (Rice 2000), and with a Southern Wakashan language, Nuu-Chah-Nulth (Wojdak 2005). In these analyses, the semantic specificity of ‘lexical’ affixes leads adherents of distributed morphology to treat these morphemes as lexical, rather than functional, material. Wojdak, for example, identifies ‘lexical suffixes’ as a “class of morphologically bound predicates” or “affixal predicates” which, though they require a host, are lexical constituents that undergo syntactic transformations and become linearized in the morphology of a word. (Wojdak 2005)

Rice (2000) identifies congruences between morphological structure and syntactic structure in the ordering of grammatical relations in Athabaskan verbs (2011:171). A similar congruence between morphological and syntactic structure might be argued for K^wak^wala, but only in the case of single predicate words which are also free-standing independent clauses. In K^wak^wala clauses that are contained within a single word, the ordering of the clitics representing grammatical relations does echo the syntactic VSO₁O₂ order of lexical

grammatical relations in a clause with lexically- expressed arguments. However, in a longer clause with more words, person- and case-marking clitics end up strung out across several words, rather than stacked together on the predicate. Person- and case-marking clitics thus participate in *syntactic*, rather than *morphological*, structure in Kwakwala. The order of grammatical relations in Kwakwala does not contribute to an argument about morphological structure.

Meanwhile, other evidence for Kwakwala offers strong support for the argument that morphology and syntax are distinct and operate according to different rules of structure. In making a case for maintaining a distinction between morphology and syntax, Anderson employs Kwakwala as a case study in strong contrasts between the morphological and syntactic systems:

“The conclusion that must be drawn...is the following. Although both independent words and word-internal affixes can carry the content of all major word classes (Verbs, Nouns, Adjectives, etc.), quite different principles apply to determine the relative positioning of words within phrases (and clauses) on the one hand, and stems and affixes within words on the other...Rules of morphology (specifically morphotactics) are distinct from rules of syntax...[I]t is clear from the facts of Kwakwala that where one might otherwise anticipate a continuum of principles governing the construction of larger units out of their constituent parts, what is in fact found shows a sharp regard for the difference between domains internal and external to the word ” (Anderson 1992:29; 47, ital DR).⁷⁸

Without dedicating significant space to this argument, I agree with Anderson: one cannot argue that syntactic principles contribute to the word-internal ordering of affixes in Kwakwala, and I leave syntactic proposals aside with respect to Kwakwala morphological structure.

6.3 Semantic effects

Semantic compositionality, as used here, simply means that the totality of a morphologically complex word is semantically transparent; that the whole word does indeed equal the sum of

⁷⁸ See Anderson 1992, Chapter 2, for the details of his argument.

its parts. However, there are many ways in which a sequence of individual morphological pieces can add up to a meaningful whole. This section describes three types of semantic compositionality, each of which conditions affix order in Kwakwala: (1) **iconicity**, both spatial and temporal; (2) **scopal** conditioning; and finally (3) **directionality** and **proximity** between root and affix. These three patterns can be difficult to tease apart; they coincide, overlap and interact. Nevertheless, this section will provide examples of each principle at work in Kwakwala predicate structure.

In discussing morphological structure, I assume that the stem⁷⁹, whether a simplex root or lexicalized combination of root and affix(es), is the nucleus of the morphological word. The stem is often the primary target of semantic modification or semantic affectedness in a morphologically complex predicate word,⁸⁰ but it is not the only possible target. A single predicate can have both scopal and iconic semantic effects among affixes, and the domains of these semantic effects are not always coterminous with the entire word. Here, *scope* refers strictly to a hierarchical relationship between a given element and other linguistic forms, while *iconicity* — whether temporal or spatial — refers to isomorphism between linear order and meaning. Some Kwakwala predicates illustrate both hierarchical and iconic relations between morphemes.

Drawing on Frawley's useful framing of modifiers as functional elements, rather than simply descriptors, I assume that the derivational affixes relate to the stem in the same way that modifiers relate to their semantic target:

⁷⁹ As noted earlier, the stem may be a simplex root morpheme, or a lexicalized stem including (historically) additional derivation.

⁸⁰ Claims about headedness have something of a fraught history, especially in languages such as Kwakwala. I will assume that syntactic headedness is different from morphological headedness, but that within a morphological word, the stem has a role as the domain of modification by affixes.

“...when we think of modification formally, we should not think in the traditional terms of a noun, denoting an object, modified by an adjective, denoting some attribute or ascription. Rather, we should think in terms of entire expressions....The correct way of viewing modification, then, is as an operation that constructs complex predications out of simpler ones” (Frawley 1992:487, italics original).

The relationship of affixes to the stem, as well as relationships among certain affixes, can be seen as analogous to the relationship of modifiers (in other languages) to the element which they modify. Derivational affixes construct complex predications out of simpler ones.

These three types of semantic compositionality and their effects on K^wak^wala predicates are described in more detail below. Section 6.3.1 describes iconicity in affix ordering, and section 6.3.2 describes scopal conditioning, and section 6.3.3 addresses the directionality and proximity.

6.3.1 Iconicity

Iconic relations in K^wak^wala can represent either spatial or temporal semantic relations. In both cases, the direction of iconic relations is left to right, moving away from the root, but for different reasons. In temporal constructions, a correspondence exists between the sequence in which linguistic forms are said, and the temporal profile of an event: leftward elements refer to earlier components of an event, while rightward elements refer to later components of an event. Meanwhile in constructions with spatially iconic ordering of affixes, a correspondence exists between the proximity between a root and affix and the spatial relations between Figure and Ground: morphemes closer to the root represent Ground elements which are closer in space to the Figure, and morphemes farther from the root represent the contextual space surrounding the Figure and encompassing both Figure and Ground.

At the same time, not all sequences of affixes in Kwakwala are iconic, in either spatial or temporal ways. In reversative kinetic constructions, the presence of a reversative locative affix at the beginning of an affixal sequence changes the interpretation of a group of affixes; the reversative locative suffix has ‘scope’ over the affixes which follow it to the right, in the sense that it modifies and determines the interpretation of these affixes. In these constructions, then, the iconicity of left-to-right ordering of affixes no longer matches temporal sequentiality. Although in other languages it has been proposed that scopal effects are unidirectional — perhaps even universally so (cf. Rice 2000), such scopal hierarchy is not unidirectional in Kwakwala.

6.3.1.1 Spatial Iconicity

As shown in Chapters 4 and 5, affixes are very often employed to identify reference objects in relation to Figures, whether the relationship is one of support, containment, or otherwise. Here, we will see ways in which the position of locative affixes relative to the stem reflects the **literal proximity or distance** in space between reference objects in the surrounding environment and the Figure. The sequence of affixes here is best described as iconic, although in some cases, noted below, it can also be seen as hierarchical (and thus scopal).

In the first examples provided below, greater proximity to the stem within the word reflects greater proximity between Figure and reference object, and greater distance from the stem reflects greater distance between Figure and locative referent. Locative suffixes immediately following a static locative stem, whether the root or stem is copular, postural or positional, indicate the **immediate location** of the Figure. These suffixes include a variety of semantic content: some, like *-s(G)əm* ROUND, *-dʷu* FLAT or *-!s* GROUND indicate something

about the shape of the object or material providing support to the Figure. The suffix *-c̣əw* IN can be used to indicate either static containment (‘inside’) or a vector of motion into an enclosure (‘into’). Despite the variety of semantic relationships between the root and immediately following suffix, they all share the element of spatial proximity reflected in proximity of linguistic forms. Meanwhile, locative suffixes farther from the stem refer to the broader setting or context within which an event takes place.

Recall these examples from Chapter 4 in which locative suffixes immediately following the root indicate the immediate location of the Figure. Relevant morphemes are presented in bold type.

(282) LOCATIVE SUFFIXES INDICATE IMMEDIATE LOCATION

- | | | | | |
|----|---|--|---|--|
| a. | <i>hənsGəmoχda</i>
hən-sGəm =oχda
up_vessel-ROUND-S.DEM
‘The bottle is on the rock.’ | <i>dəmsisgəmχ</i>
dəmsisgəm=χ
jar=DEM | <i>laχoχ</i>
la=χoχ
PREP=DEM | <i>ləkáχ.</i>
ləkáχ
rock
(2014jan22_LJ_3) |
| b. | <i>giʔsoχda</i>
gəy-!s =oχda
be_at-GROUND=DEM
‘The ball is on the ground.’ | <i>bal</i>
bal
ball | <i>(laχoχda</i>
la=χoχda
PREP=DEM | <i>ʔásanoχ^w.)</i>
ʔasan=oχ
ground.outside=DEM
(2014jan22_LJ_3) |
| c. | <i>gígicúʔoχda</i>
gi-gəy-c̣əw =oχda
RED- be_at-IN =S.DEM
‘The bottles are in the basket.’ | <i>dəmsisGəm</i>
dəmsisGəm
bottle | <i>láχoχ</i>
la=χoχ
PREP=DEM | <i>básketiχ.</i>
basket=iχ
basket=DEM
(2014jan23_LJ_3) |
| d. | <i>kádəd^wuwoχda</i>
kat-d^w =oχda
long_horiz-FLAT =S.DEM
‘The stick is on the table.’ | <i>q^wáʔχʔu</i>
q ^w aʔχʔu
stick | <i>láχoχ</i>
la=χoχ
PREP=DEM | <i>tébl.</i>
tebl
table
(2014jan22_LJ_3) |
| e. | <i>káʔsoχda</i>
ka-!s =oχda
loose_pl-GROUND =S.DEM
‘The beans are spread on the ground.’ | <i>binsiχ</i>
bins=iχ
beans=DEM | <i>laχoχ</i>
la=χoχ
PREP=DEM | <i>ʔásanoʔχ.</i>
ʔasanoʔ=χ
ground=DEM
(2014jan22_LJ_3) |

- f. *ḳwásʔida* *bəgʷánəm* *laχ* *ʔúnoʔasa* *ləqʷás.*
kwa-!s-ida *bəgʷanəm* *la=χ* ʔu-no-iʔ=sa *ləqʷas*
sit-GROUND=S.DEM man PREP=DEM root-SIDE.RD-NMLZ=GEN fire
‘The man is sitting on the ground next to the campfire.’ (2014jan24_SW_3)

Aspect markers following locative suffixes indicate the temporal configuration of an event. The suffix *-ʔawale* INADV (‘inadvertent’) indicates a Figure that was not deliberately placed but rather left or ended up in a given location. Another aspect marker, the continuous *-əla* CONT, used in the third example below, indicates the continuous presence of something on a boat.

(283) IMMEDIATE LOCATION WITH ASPECT MARKING

- a. *kádaboweyoχda* *kádʔənaqʷiχ* *láχʷa* *dídənGʷayaχʷ.*
kat-°abo-ʔaw(al)eʔ=οχda *kadʔənaqʷ=iχ* *la=χʷa* *dídənGʷay=aχʷ.*
long_horiz-UNDER-INADV-S.DEM spoon=DEM PREP=DEM tea.towel=DEM
‘The spoon is underneath the tea-towel.’ (20140124_SW_3)
- b. *gídʔuwaletoχ* *lodʔo* *láχoχ(da)* *tebl.*
gəy-dʔu-(ʔa)wale-ala=οχ *lodʔo* *la=χoχ(=da)* *tebl*
be_at-FLAT-INADV-POS=S.DEM cloth PREP=DEM(=DEF)
table
‘The cloth is on the table.’ (20140123_LJ_X)
- c. *giʔəχsəlamoχ*
gəy-əχs-əla=ʔəm=οχ
be_at-BOAT-CONT-OI-S.DEM
‘It is/They are on the boat.’ (20140123_LJ_1)

The placement of the aspect marker after the root and locative suffix applies it to the combined predication indicated by these two morphemes together. In this sense, the aspect marker can be considered to have scope over the entire preceding predication: the event in (283c) describes the ongoing location of someone (or something) on a boat.

A secondary locative suffix adds further information to the spatial event. In the examples below, the first suffix indicates the immediate location and the second suffix indicates the broader setting or context of the event. Locative suffixes appear in bold type.

(284) SECONDARY LOCATIVE SUFFIXES MARKING CONTEXT

- a. *laʔəmyχ* *tɨp̣stəlsɣən* *gúgeG^{wə}yúχ.*
 la-ʔəm=χ tɨp̣-(ʔ)sta-əls=gən gugeG^{wə}yú.
 AUX-OI-DEM step-LIQUID-OUTSIDE-1.POSS feet
 ‘My feet are soaking in the water.’ (2013jul17_BL_1.18)
- b. *ḳ^{wə}áʔstəlsɔχda* *gənánəmyχ* *ləwá* *wáçíχ*
 ḳ^{wə}a-(ʔ)sta-əls=ɔχda gənənəm=χ ləwá wáçí=χ
 sit-LIQUID-OUTSIDE=S.DEM boy=DEM CONJ dog=DEM
 ‘The boy and the dog are sitting in (the) water.’ (2014jan20_LJ_1)
- c. *ḳ^{wə}açəlsɔχda* *dəxdəxiniχ* *láχɔχda* *lawus.*
 ḳ^{wə}a-çəw-əls=ɔχda dəxdəxini=χ la=χɔχda lawus
 sit-IN-OUTSIDE=S.DEM owl=DEM PREP=DEM tree=DEM
 ‘The owl is sitting in the tree.’ (2014jan22_LJ_3)

In the first two examples above, the suffix *-ʔsta* LIQUID receives additional pragmatic interpretation from the addition of the suffix *-əls* OUTSIDE, and so is translated as ‘water’, even though, as mentioned earlier, speakers note that the suffix *-(ʔ)sta* can be used for any liquid. In the last example, the suffix *-çəw* IN refers to the immediate location where the owl is sitting; the suffix *-əls* OUTSIDE indicates that the location where the owl is sitting is outside (further specified as in a tree).⁸¹

The suffix *-əls* OUTSIDE is one of a small set of locative suffixes occurring frequently in a secondary position (following another locative suffix) in both modern and legacy data. This set also includes *-^oił* INDOOR, *-^ois* OUTDOOR, and *-əχs* BOAT. Another form, *-!a* ROCK, occurs in Boas and Hunt’s documentation, but not in the modern corpus. Some examples from Boas illustrating these combinations are below.

⁸¹ Incidentally, this suffix has been analyzed by Boas as deriving from the combination *-(g)əł* DIR.TEL with *-!s* GROUND.OUTSIDE, but the use in the third example indicates that this suffix no longer implies support by the literal earth, or implies any kind of motion or direction. It may also be that this hypothesis is erroneous.

(285) SECONDARY LOCATIVE SUFFIXES

- a. *liʔstaliʔəla*
la-(s)iʔsta-lil-əla
go-AROUND-INDOOR=CONT
'to go around in house'
- b. *laʔap'əlit*
la-ʔap'-əlit
stand_inan-NECK-INDOOR
'stands at nape of neck'
- c. *laχ^wənod'əlit*
laχ^w-nos-lil
stand_anim-SIDE-INDOOR
'(man) stands at side'
- d. *mənd'olila*
məχ^w-°d'zo-lila
strike_fist-FLAT-INDOOR
'to strike flat thing with fist'
- e. *k'^waʔgilit*
k'^wa-!q(a)-°e-lil
sit-AMONG-?-INDOOR
'to sit among (indoor)'
- f. *k'^wəsGəmlila*
k'^wa-sGəm-lil
sit-ROUND-INDOOR
'to sit down on a round thing in a house'
- g. *k'^wad'olila*
k'^wa-d'zo-lil
sit-FLAT-INDOOR
'to sit down on a flat thing in the house'
- h. *k'^wad'ol'od*
k'^wa-d'zo-!a-od
sit-FLAT-ROCK-MOM
'to sit down on a flat thing on a stone'
- i. *k'^waʔstələχs*
k'^wa-ʔsta-ləχs
sit-LIQUID-BOAT
'to be seated in water in a canoe'

(B47:329)

In every case, the second locative suffix provides the broader context, or ‘setting’ surrounding the immediate Figure-Ground relationship, as identified between the root and first locative suffix.

Similar examples occur in the modern corpus, although the *-^oit* suffix and its allomorphs are by far the most frequent forms.

(286) POST-ASPECT LOCATIVE SUFFIXES MARKING CONTEXT

- | | | | | |
|----|--|----------------------------------|-------------------------|-----------------------------|
| a. | <i>k^wəʔábolitoχda</i> | <i>búsiχ</i> | <i>láχ^{wa}</i> | <i>hámad^zuχ.</i> |
| | k ^{wa} - ^o abo- lit =oχda | busi=χ | la=χ ^{wa} | hamad ^z u=χ |
| | sit-UNDER-INDOOR=S.DEM | cat=DEM | PREP=DEM | table=T.DEM |
| | ‘The cat is sitting under the table.’ | | | (20140128_SW_3) |
| | | | | |
| b. | <i>Lída</i> | <i>bəg^wánəmbidawá</i> | <i>lačolit</i> | <i>ʔúcolitiχ.</i> |
| | L=ida | bəg ^w anəm-bidu-a | la-čəw- lit | ʔu-čəw- lit =iχ |
| | AUX=SBJ | boy-DIM-DEM | go-IN-INDOOR | PREP=DEM |
| | ‘The boy went into the next room.’ | | | (2013jul17_BL_1.22) |

These secondary locative suffixes *-^oit* INDOOR, *-^ois* OUTDOOR, *-əχs* BOAT have allomorphs which include extra segments and syllables: *-lit*, *-əlit*, *-alit*, *-alis*, *-atəχs*. I address the origin of these extra segments and syllables in §6.4.

Two locative suffixes can also combine immediately following the root to further subcategorize a quality of the immediate Ground. In the example below, the suffix *d^zu-* FLAT indicates the flat surface of the stamp, and the suffix *-^oojo* MIDDLE specifies the region of the reference object where the Figure is located.

(287) LOCATIVE SUFFIXES INDICATING SUPPORT AND SUBREGION OF REF. OBJ.

- | | | | |
|--|---------------|-------------------------|--|
| <i>ʔəχád^zu^ooχ^w</i> | <i>xúmsas</i> | <i>laχ^{wa}</i> | <i>ləqəd^zu^oiχ.</i> |
| ʔəχ- d^zu- ^o o ^o χ ^w | xúms-as | la=χ ^{wa} | ləqəd ^z u ^o =iχ |
| root-FLAT-MIDDLE=S.DEM | head=POSS | PREP=DEM | stamp=T.DEM |
| ‘The head is (centered on) the stamp.’ | | | (20140128_BL_1) |

Examples of this type of combination indicating the subregion of the reference object along with other aspects of the Ground (such as shape/support) are rare in my corpus, and I can not generalize based on this example. It may be that there is a rule that SUPPORT precedes SUBREGION, or these suffixes may occur in variable order. This is an area for further research. No examples seem to exist in the modern corpus of three locative suffixes occurring in a single predicate; this may be a pattern of usage rather than a strict grammatical rule, but it too is a matter for further investigation.

Locative suffixes conform to rational semantic constraints, as we would expect in a predicate shaped by principles of semantic compositionality. With Type V roots indicating *attachment*, pragmatic constraints determine affix selection. For example, the locative suffix *-(s)Gəm* ROUND, used to indicate that a Figure is on or supported by some type of round object such as a rock or a tree stump, can not be used with the root *qəx-* ‘encircle’ with reference to a picture of a rope going around a stump. In contrast, the locative suffix *-(s)i?sta* AROUND is acceptable combined with the root *qəx-* ‘encircle’ to describe the image.

(288) SEMANTIC CONSTRAINTS ON COMBINATIONS BETWEEN ROOTS AND SUFFIXES

- a. * *qəxsəmála* *dənámχ* *láxoχda* ‘*stəmp*’.
 qəx-s[ɡ]əm-əla *dənəm=χ* *la=χoχ=da* ‘*stəmp*’
 encircle-ROUND=CONT=S.DEM rope=DEM PREP=DEM=DEF stump
 *The rope is going around the stump (20140123_LJ_X)
- b. *qəxi?staloχda dənámχ láxoχda* ‘*stəmp*’.
 qəx-(s)i?sta-əla=oχ *dənəm=χ* *la=χoχ=da* *stəmp*
 encircle-AROUND=CONT=S.DEM rope=DEM PREP=DEM=DEF stump
 The rope is going around the stump (20140123_LJ_X)

However, where semantically appropriate, roots indicating attachment can and do combine with locative suffixes that indicate an immediate support relationship between

Figure and Ground. In (289c), locative suffix *-(x)ćano* HAND combines with *qəx-* ‘encircle’ to express the location of a ring, and in (289b) *dʷub-* ‘plug’ combines with *-əχsti* MOUTH.

(289) ATTACHMENT ROOT WITH SUFFIX INDICATING IMMEDIATE LOCATION

- a. *qəχćanoχda* *kixkədʷəχli* *láχwa* *qʷáqʷaχćəmxćanayʷiχ.*
qəχ-(x)ćano=οχda *kixkədʷəχli* *la=χwa* *qʷa qʷaχćəmxćanayʷ=iχ*
 encircle-HAND=S.DEM ring PREP=DEM fingers=DEM
 ‘The ring is on the fingers.’ (20140124_SW_3)
- b. *dʷubəχsteʔida* *dʷubəχsti* *láχa* *lácam.*
dʷub-əχsti-(?)i=da *dʷubəχsti* *la=χα* *lacəm*
 plug-MOUTH=SBJ=DEF cork PREP=DEM glass.bottle
 ‘The cork is plugged into the glass bottle.’ (20140124_SW_3)

Aside from attachment roots, motion roots can also combine with locative suffixes that indicate immediate location of the motion. In some cases, as in (290a) and (290b), this is a support relationship. In other cases, as in (290c), (290d), and (290e), other types of relationship, such as containment or immersion, are implied.

(290) MOTION ROOTS WITH SUFFIX INDICATING IMMEDIATE LOCATION

- a. *gəldʷúweyoχda* *ladybug* *láχwa* *həmxdəmiləχ.*
gəl-dʷu-ʔawale=οχda *ladybug* *la=χwa* *həmxdəmil=əχ*
 crawl-FLAT-INADV=S.DEM ladybug PREP=DEM table=DEM
 ‘The ladybug is crawling on the table.’ (2014124_SW_3)
- b. *gəlxćanoχda* *ladybug* *láχa* *ʔáyasuχ.*
gəl-xćano=οχda *ladybug* *la=χwa* *ʔáyasu=χ*
 crawl-hand=s.dem ladybug prep=dem hand=dem
 ‘The ladybug is crawling on my hand.’ (2014124_SW_3)
- c. *ləməχ* *tʷipstəwoχda* *gingənanəmx* *laχwa* *wəpiχ.*
lə-ʔəm=οχ *tʷip-(?)sta=οχda* *gingənanəm=χ* *la=χwa* *wəp=iχ*
 AUX-OI=3.SBJ step-LIQUID=S.DEM children=DEM PREP=DEM water=T.DEM
 ‘The children stepped in the water.’ (2013jul17_BL_1)
- d. *tátʷipstuwəoχaχa* *xʷixʷəpəs*
tá-tʷip-(?)sto=οχ=aχa *xʷi-xʷəpəs*
 RED-step-OPENING=3.SBJ=OBJ.1 RED-hole
 ‘He keeps stepping in all the holes.’ (2013jul17_BL_1.10)

- e. *lám̄an* *ḡúmp̄iχ* *t̄ip̄áχla* *laχa* *bot.*
 lə-ḡəm=ən ḡump=iχ **t̄ip-χla** la=χα bot
 AUX-OI=1.POSS father=DEM **step=HIND** PREP=DEM boat
 ‘My dad stepped in the stern of a boat.’ (2013jul17_BL_1)

Certain locative suffixes, when combined with motion roots, indicate direction of motion, rather than the immediate location. The motion roots can be ones of spontaneous locomotion, such as *λəp-* ‘climb’ and *la-* ‘go’, or ones of handling, such as *nix-* ‘pull_rope’.

(291) MOTION ROOTS WITH SUFFIX INDICATING DIRECTION

- a. *λəp̄áχəloχda* *yáyaq̄it̄iniGαχ* *láχa* *gúk̄w̄iχ.*
λəp-αχ-əla=οχda *yayaq̄it̄iniG=αχ* la=χα *guk^w=iχ.*
climb-DOWN-CONT=S.DEM spider=DEM PREP=DEM house=DEM
 ‘The spider is climbing down inside the house.’ (2014jan27_BL_1.7)

- b. *λ̄əp̄ústoloχda* *yáyaq̄it̄iniGαχ* *láχ^{wa}* *gúk̄w̄iχ.*
λəp-(g)usto-əla=οχda *yayaq̄it̄iniGαχ* *laχ^{wa}* *guk^wiχ*
climb-UP-CONT=S.DEM spider=DEM PREP=DEM house=DEM
 ‘The spider is climbing up (inside or outside) the house.’ (2014jan27_BL_1.7)

- c. *lám̄oχ* *lán̄cisəla* *qəs* *le?* *láχis* *bot.*
 la-ḡəm=οχ la-**ənc̄is-əla** qəs le? la=χis bot
 AUX-OI=S.DEM go-DOWN.TO.BEACH-CONT PURP SUB go=3.POSS boat
 ‘He’s walking (going) down to the beach in order to go to his boat.’ (2014jan27_LJBL)

- d. *lám̄oχ* *n̄iχαχus...*
 lə-ḡəm=οχ *n̄iχ-αχ=us...*
 AUX-OI=S.DEM pull_rope-DOWN=1.POSS
 ‘He’s pulling his...’ (2014jan27_LJBL_2.12)

n̄iχustolaχus ...
n̄iχ-(g)usto-əla-χ=us
 pull_rope-UP-CONT=O.DEM=3.POSS
 ‘He’s pulling up his... (crabtrap)’ (2014jan27_LJBL_2.13)

- e. *lám̄oχ* *λ̄əp̄ústolaχ^{wa}* *n̄áyəḡαχənc*
 lə-ḡəm=οχda **λəp-(g)usto-əla=χ^{wa}** *n̄ayəḡa-χənc*
 AUX-OI=S.DEM climb-UP-CONT=OBJ1 snow-EVID
 ‘We think he climbed on snow.’ (2013jul15_BL_frogstory.17)

As is true with static locative expressions, a second locative suffix can give broader context within kinetic locative expressions.

(292) MOTION ROOTS WITH TWO LOCATIVE SUFFIXES

<i>ləməox</i>	<i>tíqaxəlsoxda</i>	<i>gənanəməx</i>
ləməox	tiq-axa-əls=oxda	gənanəm=χ
AUX	fall-DOWN-OUTSIDE-DEM	boy=DEM

<i>láxoχda</i>	<i>mək^wərsíχ.</i>
la=χoχda	mək ^w -!s=iχ.
PREP=DEM	loc_round-GROUND=T.DEM

‘Then the little boy fell off the hill (lump on the ground).’ (2013jul15_BL_frogstory.17)

In (292), the locative suffix *-əls* OUTSIDE provides context for the event of the boy falling off a hill.

The combination of two locative suffixes with an attachment or motion root can result in a different type of semantic relationship as well. The example below has an attachment/handling root *λən-* ‘poke’ at the core of the predicate. Here, the first locative suffix *-χsâ* THROUGH indicates the direction of the needle, while the second *-!q* AMONG (also ‘in the inside of material’) refers to the material pierced by the needle.

(293) DIRECTION PRECEDES MATERIAL/LOCATION

<i>λənχsəwaqox</i>	<i>láχ^wa</i>	<i>λənGayu.</i>
λən-χsâ-!q=ox	la=χ ^w a	λənGayu
poke-THROUGH-AMONG=S.DEM	PREP=DEM	needle

‘It’s (the paper) pierced through (by) the needle.’ (2014jan24_SW_1.26)

There is also iconicity in the linear order of these two affixes, with the first suffix indicating the movement and orientation of the needle, preceding a second suffix indicating the surrounding material of the paper and the final location of the needle. However, this is a different semantic relationship than the IMMEDIATE LOCATION-BROADER CONTEXT meaning implied by many of the examples above. In this case, unlike the examples above, it is also difficult to argue this is scopal in addition to iconic; the suffix *-!q* AMONG doesn’t encompass, in a hierarchical sense, the meaning of the preceding suffix *-χsâ* THROUGH.

In the next section, I discuss temporal, rather than spatial, iconicity.

6.3.1.2 Temporal iconicity and directional marking

Another type of iconicity is found in a certain subset of predicates, those which contain one of three directional morphemes described in Chapter 5: *-(g)əł* (DIR.ATEL), *-(g)ał* (DIR.TEL) and *-wəł* (DIR.REV). These directional suffixes affect predicate meaning in several ways: (1) they indicate the presence or absence of a point of origin or terminus; (2) they indicate orientation with respect to such an endpoint (source or goal); and (3) they can add motion to a root that does not indicate motion on its own. The two simple directional suffixes, *-(g)əł* and *-(g)ał* are followed by locative suffixes indicating the location at which directed motion begins or ends. The combination of directional suffix and locative suffix represents DIRECTION-LOCATION.

With the telic directional suffix *-(g)ał*, the semantic relationship between the directional suffix and the following locative suffix is straightforward and iconic in both spatial and temporal senses: a Figure moves along a **vector** and arrives at a **destination**. The directional suffix represents the vector of motion, the locative suffix represents the point at which motion ends.

(294) TELIC DIRECTIONAL SUFFIX COMBINED WITH LOCATIVE⁸²

tɨp'alił

tɨp-(g)ał-°ił

step-DIR.TEL-INDOOR

'to put your feet on the floor'

⁸² Notice that in these examples, immediately following a directional suffix, both *-°ił* INDOOR and *-°is* OUTDOOR are interpreted as indicating Ground support, 'floor' and 'beach', respectively, rather than with the broad contextual setting semantics they have when they follow another locative suffix.

típ̄alis
 típ̄-(g)aʔl-°is
 step-DIR.TEL-OUTDOOR
 ‘to put your feet on the beach’

típ̄als̄
 típ̄-(g)aʔl-!s
 step-DIR.TEL-GROUND
 ‘to put your feet on the ground’

típ̄aʔləχs
 típ̄-(g)aʔl-əχs
 step-DIR.TEL-BOAT
 ‘to put your feet in a canoe’ (“or any boat”, BL added). (2013jul17_BL_1)

In certain conventionalized contexts, the locative suffix following an atelic directional suffix *-(g)əʔl* is interpreted as the starting point or **origin** of a vector of movement, while the locative suffix following a telic directional suffix *-(g)aʔl* maintains status as the **destination**. A few relevant examples are repeated here. Examples (295a) and (295b) illustrate a conventionalized contrast in interpretation between minimal pairs with *-(g)əʔl* DIR.ATEL and *-(g)aʔl* DIR.TEL.

(295) SOURCE FOLLOWING DIRECTIONAL SUFFIX *-(g)əʔl*

a. *ʔəχəlita*
 ʔəχ-(g)əʔl-°il-a
 root-DIR.ATEL-INDOOR-FORM
 ‘to take off from floor’ (B47:349.R73.78)

ʔəχálita
 ʔəχ-(g)aʔl-°il-a
 root-DIR.TEL-INDOOR-FORM
 ‘to put down on floor’ (B47:349.R115.12)

b. *típ̄əlita*
 típ̄-(g)əʔl-°il-a
 step-DIR.ATEL-INDOOR
 ‘to lift foot from floor’ (B47:349)

típálitá
 típ-(g)áŋ-°it-a
 step-DIR.TEL-INDOOR
 ‘to step on floor’ (B47:349)

c. *dágəlqəla*
 da-gəl-!q-əla
 do-DIR.ATEL-AMONG-CONT
 ‘to take from among’ (B47:349)

d. *ləmóχ pə́lə́sux^wda* (owl)
 ləmóχ pə́l-(g)əl-!s-uχ^wda (owl)
 AUX fly-DIR.ATEL-GROUND-DEM
 It flew up (from the ground) (2013jul15_BL_3)

Semantic logic trumps convention with the root *qəp-* ‘down_ves’ (‘overturned vessel’), a classificatory root indicating an overturned container, for which the locative suffix *-!s* GROUND following an atelic directional suffix *-(g)əl* DIR.ATEL must instead be interpreted as a destination rather than a starting point, as seen in two examples (provided by separate speakers).

(296) ENDPOINT FOLLOWING DIRECTIONAL SUFFIX *-(g)əl*

a. *qəpə́lśóχda* *hənχlánoχ* (*laχa* *ʔəwínag^{wis}.*)
 qəp-(g)əl-!s=oxda hənχlan=ox la=χa ʔəwínag^{wis}
 down_ves-DIR.ATEL-GROUND=S.DEM pot=DEM PREP=DEM ground=DEM
 ‘The pot fell down to the ground.’ (2013jul17_BL_1)

b. *lúma yáqsamənoχ* *wəʔoq^{wis},*
 luma yáqsam=ənoχ wəʔoq^{wis}
 really bad=1PL.POSS neighbor
 ‘Our neighbors are (really) bad,

ʔomas **qəpə́lsayisas**
 ʔo-ʔəm=as **qəp-(g)əl-!s=aχ=is=as**
 AUX **down_ves-DIR.ATEL-GROUND=OBJ1=3.POSS=OBJ.2**
 they just dump their garbage in the yard.’ (2014jan27_LJBL_2.41)

Recall that with the reverse directional suffix *-wəl* DIR.REV, the meaning of the locative suffix also changes from Goal to Source: together *-wəl* and the locative suffix *-cəw*

IN combine to indicate motion *out of*, rather than *into*, a contained space, as illustrated in (297).

(297) SOURCE FOLLOWING DIRECTIONAL SUFFIX *-wəł*

- a. *ləmóχda wəqésix dəχ^wətól laχóχda dámsisGəmx*
lə-m=oxda wəqés=iχ dəχ^w-wəł-čəw-(ə)l(a) la=χóχda dámsisGəm=χ
 AUX-OI=S.DEM frog=DEM jump-REV.DIR-IN-CONT PREP=DEM jar=T.DEM
 ‘Frog jumped out of the jar.’ (2013jul15_BL_3)
- b. *gəχmóχ pətəwəłqəwoχda həmd^zalaçix laχ^wa beehivix.*
gəχ-?əm=ox pətəł-wəł-!q=oxda həmd^zalaçi=χ la=χ^wa beehiv=iχ
 AUX-OI=S.DEM fly-REV.DIR-AMONG=S.DEM bees=DEM PREP=DEMBEEHIVE=DEM
 ‘The bees are coming/flying out of their hive.’ (2013jul16_BL_11)

Other Native North American languages have similar patterns of semantic compositionality in ordering affixes of spatial reference. Mithun (1999) identifies combinations of locative affixes in Shasta (Northern California) that also combine a Directional morpheme with a following morpheme identifying the Location. Examples of these Shasta suffixes are reprinted here, with the quote describing their distribution.

(298)[(20)] COOCCURRING SPATIAL SUFFIXES IN SHASTA

- | | | | |
|----------------|---------------|------------------|--------------------------|
| <i>-wak-</i> | ‘within area’ | <i>-kway-</i> | ‘up along’ |
| <i>-uhi-</i> | ‘along with’ | <i>-i·?i-</i> | ‘down along’ |
| <i>-hi·?i-</i> | ‘into’ | <i>-rakmaki-</i> | ‘here and there’ |
| <i>-tac·á-</i> | ‘to’ | <i>-ak·t-</i> | ‘encircling long object’ |
| <i>-kni-</i> | ‘up over’ | <i>-ka·hú-</i> | ‘upstream from mouth’ |
- (Silver 1966:152-5)

Like K^wak^wala, Shasta is suffixing, with the root at the left edge. Mithun describes three examples of combinations where a directional suffix (‘downward’, ‘into’) precedes a suffix indicating a location or destination (‘in liquid’, ‘here and there’).

“Some suffixes can cooccur. The suffix *-ehé-* ‘downward’, for example, can occur first in a sequence, and the suffix *-wa·k-* ‘in liquid’ later. Other first-position suffixes are on the left in (20) and some later suffixes on the right. The combination *-hi·?i-* ‘into’ plus *-wa·k-* ‘in liquid’, for example, appears in the verb *yarakwi·?iwaka-* ‘we fell into the water’. The combination *-ehé-* ‘downward’ plus *-rakmaki-* ‘here and there’ appears in the verb *kúxam·ehempirakmak·ira·?* ‘he’s going from chair to chair (to see which is most comfortable)’.” (Mithun 1999:141)

This echoes the iconic DIRECTION-LOCATION trope we have observed in Kwakwala.

Directional suffixes can also, optionally, be preceded by additional locative suffixes. As demonstrated in Chapter 5, this preceding locative serves to indicate orientation, or direction of the Figure. In these predicates, the sequence LOC-DIR-LOC has a spatio-temporal iconicity, with ORIENTATION indicated by the first locative suffix, VECTOR indicated by the directional suffix, and DESTINATION indicated by the second locative suffix. Several examples illustrating this are provided here.

(299) LOCATIVE SUFFIX PRECEDING DIRECTIONAL SUFFIX

- a. *paχʔstogaʔlił*
 paq-ʔsto-gaʔl-°il
 flat_horiz-OPENING-DIR.TEL-INDOOR
 ‘to lay something flat **toward the door** on the floor’ (2014jan31_SW_4)
- b. *kacʔstogaʔlił*
 kat-ʔsto-gaʔl-°il
 long_horiz-OPENING-DIR.TEL-INDOOR
 ‘to lay a stick or broom **toward the door** on the floor, to lay a stick or broom on the floor **by the door**’ (2014jan31_SW_4)
- c. *laćogaʔliłaʔi* *laχənc* *kʷiχsəmdəʔaciχ*
 la-ćəw-gaʔl-°il-λ=i la-χənc kʷiχ-s(G)əm-(xʔi)d-aci=χ
 go-IN-DIR.TEL-INDOOR-FUT-DEM PREP-1PL.POSS drum.house=DEM
 ‘We will go into our (time-beating) drumming house’ (B1947:349; CX 162.10)
- d. *gaχməʔes* *hiyʔalagəls* *laχanoʔχ* *ʔiʔʔasanoyi.*
 gaχ-ʔəm-ʔas hi-yʔala-gəł-!s la=χanoʔχ ʔiʔʔasanoyi.
 come-OI-LOC 3.pron-LOOK.FOR-DIR.ATEL-GROUND PREP-1PL.POSS yard
 ‘They (cougars) come wander around in our yard.’ (2014jan27_LJBL_2.36)
- e. *caχoʔiyʔoliləla*
 caχ-oʔyo-°ul-°il-əla
 quick.walk-MIDDLE-MOT.DIR-INDOOR-CONT
 ‘to walk with quick steps into the middle of the house’ (B47:238)

These examples, from both the legacy corpus and the modern corpus, illustrate a functional unity among the locative suffixes preceding the directional morphemes. In the first two

examples, the suffix *-ʔsto* OPENING is interpreted pragmatically as doorway in the context of the secondary suffix *-ʔit* INDOOR (also ‘floor’); the speaker made clear with his translation that the items were laying ‘towards the door’, not ‘in the doorway’. In the fourth example, (299d), the cougars are identified with a third-person pronominal root *hi-*. The suffix *-yʔala* LOOK.FOR can co-occur with other roots, such as *la-* ‘go’. In this example, however, *-yʔala* LOOK.FOR coheres with the following two suffixes, the atelic directional suffix and the locative suffix meaning ‘ground’; together, these three suffixes capture the wandering (yet not aimless) path of these cougars (*-yʔala*), the lack of an endpoint to their wandering (*-(g)at*), and their location on the ground outside the house (*-!s*).

In the last example (299e), the path of the Figure is toward the middle of the house. The continuous aspect marker *-ala* comes at the very end, modifying the entire predicate.

6.3.1.3 Iconicity of quantity

By reduplicating the root, a speaker can add pluractionality to the event. In the example below, a continual aspect marker also indicates that the event is ongoing; the suffix *-(g)usto* UP, coheres with the reduplicated root, and the upward jumping motion is understood as repeated and ongoing.

(300) PLURACTIONAL MOTION EVENT WITH SUFFIX INDICATING DIRECTION

<i>ləm̩isux</i>	<i>dádaχustoloχda</i>	<i>wáciχ.</i>
<i>ləm̩isux</i>	<i>da-dəχ^w-(g)usto-əla=oxda</i>	<i>wáci=χ</i>
AUX	RED-jump-UP-CONT=S.DEM	dog=DEM

‘And the dog is jumping up and down

<i>qəʔoχda</i>	<i>beehivix.</i>
<i>qə=oxda</i>	<i>beehiv=iχ.</i>
PURP=DEM	beehive=DEM

for the beehive.’

This section addressed three types of iconic relationships between locative suffixes and the root: in certain examples, the proximity of a locative suffix to the root can indicate proximity, or immediacy, between a Figure and the Ground indicated with the suffix. Greater distance between a suffix and the root can indicate distance or breadth of setting between a Figure and indicated Ground. In this section, we also saw how locative suffixes combine with directional suffixes to contribute meaning to the predicate, and we saw that these linear combinations of affixes have an iconic relationship to event structure.

6.3.2 Scope

Semantic compositionality is often presented as ‘intuitive’ (cf. Rice 2000:3), but not all such intuitions are shared. In many discussions of semantic aspects of language, the ‘underlying’ meaning of a word may be presented as universal rather than language-specific (and as such, written with capital rather than lowercase letters: IN as opposed to ‘in’, UP as opposed to ‘up’). However, the universality of the meanings we assign to grammatical forms is questionable. According to the (admittedly controversial) Neo-Whorfian hypothesis, our perception of the world influences and is influenced by the language with which we might describe the world: “how languages carve up and express universal semantic space in grammatical form...point(s) to mental models, our *view of* the world, not the world itself” (Frawley 1992:xiv).

Scopal relations in morphologically complex languages have often been termed ‘layered’ or ‘hierarchical’ patterns; Yup’ik is one example of a language with hierarchical ordering: “Yup’ik shows layered or hierarchical ordering, as if words were built up step by step, beginning with the root. Each added suffix has semantic and grammatical scope over

all material to its left” (Mithun 1999:43). Rice 2000 argued that scopal effects generally determine affix order in the Dene verb: “[M]orpheme ordering follows largely from scopal relations...with deeper analysis, (Athapaskan) languages can be seen to share many properties with languages with layered morphology” (Rice 2000:18-19). In her work, Rice uses ‘scope’ in a maximally general sense, to refer broadly to iconic representations of spatial and temporal relationships as well as to hierarchical relationships referring to discourse-referential properties such as ‘specificity’ and ‘generality’ (Rice 2000:25, ‘specific has scope over general’), as well as to argument structure (Rice 2000:25, ‘subjects have scope over objects’). In her analysis, these relationships are all seen as inherently hierarchical, because morphological structure is analyzed as a surface representation of syntactic structure; affixal sequences are conditioned by an underlying hierarchical syntactic tree-structure.

As mentioned earlier, I employ ‘scope’ in a more limited sense, distinct from a syntactic interpretation of morphology, and also distinct from the linear and iconic relationships described in the previous section. ‘Scope’ here refers only to hierarchical relationships among affixes, according to which the presence and/or sequence of certain affixes *determines the functional interpretation of other affixes*. Examples of such meaningful alternation in affix order, especially those which are minimal pairs, are examples are often referred to as AB-BA examples.

A commonly cited illustration of such an alternation in Yup’ik is reprinted here from Mithun 1999.

(301) ALTERNATIVE SCOPE RELATIONS IN YUP'IK NOUNS

yugpacuaq
yug-pag-cuar
person-**big**-little
'little giant'

yucuarpak
yug-cuar-pag
person-**little**-big
'big midget'

(Elizabeth Ali, speaker. Mithun 1999:43, also in Sadock and Olsen 1976)

By switching the order of suffixes meaning 'big' and 'little', one can change the meaning of a Yup'ik word from 'little giant' to 'big' midget'.

Another type of evidence concerns variable position of a single affix within a word, and the way in which this affects the meaning of the word, as in another example drawn from Mithun 1999. Yup'ik verbs show similar contrasts in interpretation with the movement of a modal suffix meaning 'probably'.

(302) ALTERNATIVE SCOPE RELATIONS IN YUP'IK VERBS

a. *ayagciqsugnarqnilrruuq*
ayag-ciq-yugnarqe-ni-llru-u-q
go-FUT-**probably**-claim-PAST-INDIC.INTR-3SG
'he said he would probably go'

b. *ayagciqnilrruyugnarquq*
ayag-ciq-ni-llru-yugnarqe-u-q
go-FUT-claim-PAST-**probably**-INDIC.INTR-3SG
'he probably said he would go'

(Elizabeth Ali, speaker. Mithun 1999:43)

In (302), the relation between the modal suffix *yugnarqe* 'probably' and the predication as a whole shifts depending on where the affix is located within the predication. When closer to the root *ayag* 'go', the suffix *yugnarqe* 'probably' refers to the stance of the protagonist: 'he said he would **probably** go'. But when the modal suffix *yugnarqe* 'probably' occurs farther from the root *ayag* 'go' and after the combination *ni-llru* 'claim-PAST', the suffix modifies the meaning of the quotative verb instead: 'he **probably** said he would go'.

Many languages display scopal conditioning according to affix order. Rice (2011)

presented typologically diverse examples drawn from various sources.

(303) CHICHEWA (Hyman & Mchombo 1992)

RECIPROCALIZED CAUSATIVE
mang-its-an
 tie- CAUSATIVE-RECIPROCAL
 [Xi cause [e.o.i tie Y]]
 ‘cause each other to tie’

CAUSATIVIZED RECIPROCAL
mang-an-its
 tie-RECIPROCAL-CAUSATIVE
 [X cause [Yi tie e.o. i]]
 ‘cause to tie each other’

(304) OJIBWEE (ojs; Algonquian, Slavin 2005)⁸³

(a) *ishkwaa-niipaa-sookihpaw*
 finish-at.night-be.snowing
 ‘It stopped snowing at night.’
 (does not snow at night anymore)

nipaa-ishkwaa-sookihpwan
 at.night-finish-be.snowing
 ‘It stopped snowing at night.’
 (was snowing the whole day)

(b) *kiimooci-kishahtapi-wihsini*
 secretly-fast-eat
 ‘He secretly eats fast.’
 (nobody knows that he eats fast)

kishahtapi-kiimooci-wihsini
 fast-secretly-eat
 ‘He eats secretly (nobody knows
 that he eats) and he does it fast.’

(305) PULAAR, FUUTA TOORO DIALECT (Paster 2005)

(a) COMPREHENSIVE-SEPARATIVE
mi udd-id-it-ii baafe Fe fof
 1SG close-COM-SEP-past door det all
 ‘I opened all the doors (in sequence).’ (p. 172)

SEPARATIVE-COMPREHENSIVE
mi udd-it-id-ii baafe Fe fof
 1SG close-SEP-COM-past door det all
 ‘I opened all the doors (at once).’ (p. 173)

(b) CAUSATIVE-REPETITIVE
o jaŋŋ-in-it-ii kam
 3SG learn-CAUS-REP-past 1SG
 ‘He taught me again.’ (taught me before) (p. 176)
 [[he taught me] again]

⁸³ Note that in these examples, and the ones below, reprinted from Rice 2000, many of the derivational affixes are glossed with lowercase characters. In some cases this reflects a theoretical stance aligned with the claims of distributional morphology that suffixes and affixes are actually bound lexical elements representing underlyingly syntactic structure.

REPETITIVE-CAUSATIVE
 o jaNNG-it-in-ii kam
 3SG learn-REP-CAUS-past 1SG
 ‘He made me learn again.’ (p. 177)
 [[he made me [learn again]]]

(Rice 2011:175)

One might also note that certain types of morphemes tend to provide evidence for scopal alternation cross-linguistically. AB-BA orders are especially likely to occur with certain types of affixes, such as modals with EVIDENTIAL, EVALUATIVE OR EPISTEMIC properties (‘stance’ morphemes expressing speaker perception, attitude or knowledge-state), ASPECT markers, CAUSATIVES, DESIDERATIVES, REFLEXIVES and RECIPROCALLS. In the second Yup’ik and second Oji-Cree examples, the mobile affixes involved evaluative modal forms (‘probably’, ‘secretly’), subject to speaker stance. The Chichewa and second Pulaar examples involved the causative. The first Pulaar example involved aspect markers, and in the first Yup’ik example, the involved affixes are a diminutive and augmentative, respectively, which are often evaluative. This raises the question of whether all affixes are equally likely to be involved in alternations in a language sensitive to scopal ordering; some affixes may be more mobile within the morphology, and more involved in the semantic composition of a predicate, than others. As pointed out by Rice (2011:196), factors affecting affix order can be differently weighted in different languages. It may also be, however, that different classes of affixes may be subject to different forces affecting their order. By the same token, there may also be some cross-linguistic uniformity about which types of affixes are more likely to participate in scopal conditioning.

Anderson 1992 provided evidence of AB-BA alternation in Kwakwaka’waka with the *-amas* CAUSATIVE suffix and the *-ixsd* DESIDERATIVE suffix. These are reprinted here.

(306) AB-BA EFFECTS IN K^wAK^wALA morphology

n̄in̄ak^wiχsd-amas
n̄in̄ak^w-iχsd-amas
go.home-WANT-CAUSE
“cause to want to go home”

q̄aq̄oλamad^wiχsd
q̄aq̄oλ-amas-iχsd
learn-CAUSE-WANT
“want to teach”, “want to cause to learn”

(Anderson 1992:37)

Unfortunately, my corpus does not include similar examples of AB-BA effects, so the question of which affixes display these types of scopal conditioning in K^wak^wala must be left for future investigation.

However, the CONTINUATIVE aspect marker *-əla* does display variable positioning. One possible analysis is that mobility of the continuative marker may express alternate temporal structures of an event, thus reflecting a hierarchical relationship between an affix and the predication as a whole.

It is useful to revisit what Boas wrote about this morpheme:

“The suffix *-(ə)la* is used both verbally and nominally. With verbs it expresses actions that imply multiplicity, repetition or continuity. It is used when the action is continued, when the same actor performs the same action several times, when several objects are handled in the same way, or the whole action consists of many parts” (B47:291).

The continuous aspect marker thus has a range of meanings; it can be pluractional, indicating event multiplicity, and it can also be non-pluractional, indicating an event which is just ongoing or continuous but not punctuated by repetition of an action.

Boas identifies some examples for which the continuous aspect marker coheres following a root, and forms a base to which additional derivational suffixes attach during word formation. These support an argument for lexicalization of stems and layered morphological structure. Some examples are provided here.

(307) LEXICALIZED ASPECT

- a. *yawixəlil*
yawix-əla-^oil
in.motion-CONT-INDOOR
'to move in house' (*yawixəla*) (B47:230)
- b. *duq^wəlitəla*
duq^w-əla-^oil-əla
see-CONT-INDOOR-CONT
'to look about in house' (*duq^wəla*) (B47:230)
- c. *bək^wəlitəla*
bək^w-əla-^oil-əla
man-CONT-INDOOR-CONT
'man moving about in house' (*bək^wəla*) (B47:230)

The modern corpus also includes examples in which roots and aspect markers cohere preceding additional derivation.

(308) LEXICALIZED ASPECT

- a. *qásəlagəlil* (*láχgada gúk^wiχ*)
qas-əla-(g)əl-^oil
walk-CONT?-DIR.ATEL-INDOOR
'walking about inside the house' (2013aug13_BL_1)
- b. *ləmóχ* *hənxλanoχ* *yávixəlagəlilix*
lə-ʔəm=οχ *hənxλan=οχ* **yawix-əla-gəl=iχ**
AUX-OI=S.DEM pots=S.DEM **in_motion-CONT=DIR.ATEL=DEM**
'The pots are moving around
- gayala lax^wa nininiχ.*
gayala lax^wa nininiχ
PREP PREP earthquake
'from the earthquake.' (2013aug13_BL_1)

From a synchronic perspective, one might hypothesize that the continuous aspect marker is modifying each successive 'predicate' in the linear construction of a word: first, the root, then the larger combination including the locative suffix -^oil. Taking a diachronic perspective, one might analyze the first two morphemes as a lexicalized stem, to which

additional derivation is added. In examples (307b) and (307c), the repetition of an additional continuous aspect marker *-əla* following the INDOOR suffix *-^oil* supports an interpretation of the root and aspect marker as having lexicalized. Also supporting the lexicalization hypothesis is the occurrence of the same combination *yawixəla* ‘moving around in house’ in two examples, (307a) and (308b), one from the Boas grammar and one produced by a modern speaker.

The continuous aspect marker often intervenes between a locative suffix and the directional suffix, as we see in the two examples below.

(309) ASPECT MARKER BETWEEN LOCATIVE AND DIRECTIONAL SUFFIX

- a. *layapalagəlis*
la-ayap-əla-(g)əl-^ois
 go-SHOULDER-CONT-DIR.ATEL-OUTDOOR
 ‘people going this way and that, changing places’ (B48:396)
- b. *latusəlagəlis*
la-atus-əla-(g)əl-^ois
 go-DOWNRIVER-CONT-DIR.ATEL-OUTDOOR
 ‘walk, go downriver’ (B47:329)

In the first example, *layap-* suggests people changing places shoulder to shoulder, but it is likely to be an idiomatic expression. There is more than one possible way to interpret placement of the continuous aspect marker immediately after the first locative suffix. In a purely synchronic scopal analysis, the aspect marker would be analyzed as having more limited scope, over just the root *la-* and the following locative suffix, but it is not obvious how this would change the interpretation of the predicate. A diachronic perspective provides a plausible alternative hypothesis, although one that would need support from further evidence: that the root, locative suffix and aspect marker have lexicalized into a coherent stem, to which the directional suffix and second locative suffix are added.

Two examples from the modern corpus illustrate synchronic mobility of the continuous aspect marker. These sentences happen to have been spoken within a single conversation by different speakers. In the first example, *-əla* CONT attaches directly to the reduplicated root *dix^w*- ‘jump’ and before the atelic directional suffix *-(g)əł* DIR.ATEL, which is followed by *-^oil*, INDOOR. The jumping is a repeated action performed by several figures. Mrs. Lagis is telling a story about when she was a girl in a residential school, and the students received an unpleasant treatment against lice; the girls were lined up in a row, and so they were all jumping, over and over again.

(310) MOBILITY OF CONTINUOUS ASPECT MARKER

<i>ʔóməgənəχ^w</i>	<i>la</i>	<i>dídix^wəlagəlil</i>	<i>sáqasu?</i>
<i>ʔo-ʔəm=gənəχ^w</i>	<i>la</i>	di-dix^w-əla-gəl-^oil	<i>saqasu?</i>
AUX-OI=1PL.SBJ	go	RED-jump-CONT-DIR.ATEL-INDOOR	stinging
‘We were all jumping up and down cause it was stinging.’			(2012jul24_LJBL_5)

The ongoing repetition of the jumping is likely indicated with the continuous morpheme *-əla*, while the fact that the same action is performed by many figures is likely indicated by reduplication of the root *-dix^w* ‘jump’. However, the function of each the continuous suffix and of reduplication are so variable, it is difficult to be sure — even if one were able to compare many examples. It is not obvious why the atelic directional suffix *-(g)əł* appears here; I would guess that *-(g)əł* may apply here in a conventionalized way, to indicate motion away from the floor; in this interpretation, the INDOOR suffix *-^oil* indicates the floor, rather than setting the scene as indoors. Another possibility is that the girls are moving around the room as they jump, and this atelic directional suffix refers to their meandering movement.

Nevertheless, in the second example, the continuous morpheme *-əla* appears in a very different position: at the very right edge of the word, outside of the INDOOR suffix *-^oil*.

(311) MOBILITY OF CONTINUOUS ASPECT MARKER

<i>ʔómítən</i>	<i>lálabalitəla</i>
ʔo-ʔəm-íł=ən	la-la-bala-°íł-əla
AUX-OI-INDOOR=1.SBJ	RED-go-ON.THE.WAY-INDOOR-CONT
‘I was going back and forth in my house	

<i>láχən</i>	<i>guk^w</i>	<i>nəm^wələn</i>	<i>təm^yayu,</i>
la=χən	guk ^w	nəm ^w əl=ən	təm ^y ayu
PREP=1.POSS	house	only=1.POSS	phone
to (answer) my one phone,			

<i>təm^yigaʔgən</i>	<i>leʔχ</i>
təms-?-gaʔł-gən	leʔχ
beat.time-?-DIR.TEL-1.POSS	PREP-3.OBJ1
when it was ringing.’	(2012jul24_LJBL_5)

Here, in (311), the continuous aspect marker comes after two suffixes: *-bala* ON.THE.WAY (‘while going along, on the way’), which might be called a type of associated motion suffix, as well as the INDOOR setting suffix *-°íł*. Again, the root *la-* ‘go’ is reduplicated; here, however, this results from the addition of the suffix *-bala*, which triggers a particular pattern of reduplication. In this case, the motion is performed by only one person. The position of the continuous marker outside these other suffixes suggests that it takes scope over the whole event — Mrs. Johnny is describing her self walking back and forth to her one phone in her house to answer it as she does other things (baking bread, in this case); the continuous motion is this combination of actions all together.

Examples (307) through (311), taken together, suggest that a single aspect marker, continuous *-əla*, participates in both lexicalized stems and in synchronic scopal effects.

Aside from positional flexibility, aspect markers also have combinatorial flexibility. Below, we see an example of two aspect markers co-occurring in a sentence from a story of Mrs. Lagis and her friends hiding from the Indian Agent who had come to take her to residential school.

(312) TWO ASPECT MARKERS

ləmísənoʔχ^wda *láχ* *ʔólakála máxbiʔsa* *q^waχ*.
lə-ʔəm-is=ənoʔχ^wda laχ ʔolakala maxbiʔ=sa q^waχ
AUX-OI-Q=1PL.POSS PREP really top=POSS tree
‘To the very top of the tree.’

ʔəpátəlaχ
ʔəp-áta-əla=χ

climb-POS-CONT=OBJ.1

Standing there still (in the tree).’

(2013jul25_LJBL_5)

The static positional meaning of *-ata* combines here with the continuous meaning of *-əla*.

Even though the root *ʔəp-* ‘climb’ expresses a motion event, ‘climb’, the positional suffix *-ata* derives a static meaning from the root: the children are standing still at the top of the tree after having climbed. The continuous suffix *-əla*, following positional *-ata*, takes scope over the entire event, indicating that the children remained there, at the top of the tree, for a while.

Examining the role of aspect markers in the construction of meaning in the predicate suggests evidence for both diachronic layering and synchronic scopal conditioning in determining affix ordering. The continuous aspect marker is very frequent in K^wak^wala, and the distribution of this suffix is more variable than that of many other suffixes. The semantic relationship of aspect markers to the rest of the predicate appears to be hierarchical rather than linear. The scopal relationship between aspect markers and preceding affixes also appears to be directional, with aspect markers exerting scope leftward over the preceding, including the root. Some would argue that the semantic effect of aspect on the predicate is thoroughly synchronic, but I believe that the sentences in (305) also support a diachronic view of scopal layering in the predicate, with lexicalized stems including aspect markers forming stem nuclei for further derivation.

As mentioned, semantic effects are not unidirectional. The reverse locative suffix *-wä* can exert scope over preceding morphemes, such as a root, but can also determine the interpretation of *rightward* affixes. This semantic effect is apparent in the combination of the reverse locative *-wä* with the directional suffix *-(g)əł* to create the reverse directional suffix *-wəł*. The reverse locative also combines with other locative suffixes to reverse the direction of motion in relation to that location. An example is below.

(313) REVERSE LOCATIVE

<i>laʔəm</i>	<i>lóstaxdaʔχ^wa</i>	
la-ʔəm	la-wä-(ʔs)ta-d=aʔχ ^w a	
AUX-OI	go-REV.LOC-LIQUID-TR=3PL.SBJ	
‘They’re out of the water now.’		(2013aug9_ESBL_frogstory)

There are many ways to see the semantic relationship between the reverse locative and other morphemes within the predicate. The reverse locative can be seen as (1) referring to the root and reversing the motion indicated by the root *la-* ‘go’, or (2) modifying subsequent affixes by combining with the locative suffix *-(ʔs)ta* LIQUID to indicate motion away from the indicated Ground. Finally, the reverse locative suffix may simply relate to the predicate as a whole. There doesn’t seem to be a clear case to be made for any one of these based on available linguistic data. But in all cases, the reverse locative affects the meaning of the entire word, and one cannot argue that the reverse locative conforms to the leftward directionality displayed by aspect markers.

6.3.3 Proximity and directionality

This section focuses on the directionality of the relationship between a root and affix, and the relationship between this directionality and the morphological profile of a polysynthetic language as prefixing or suffixing. The following generalizations have been proposed about

the link between **morphological proximity** and semantic reference (cf. Frawley 1992 on scope: 399-400). **First**, that elements closer to the stem have a **narrower** referential scope with respect to the predicated meaning preceding them, while the elements farther from the stem have a **wider** scope of reference with respect to this predicated meaning. (Narrower, in this sense, implies that the semantic relevance between an affix and the stem is more restricted and confined, affecting less of the eventual predication, while wider means that such relevance affects more of the predication. A narrow scope of negation, for example, means that the negation affects less of the total predicate; of quantification, that the elements quantified are more restricted.)

Some languages with polysynthetic morphology are exclusively suffixing or exclusively prefixing, and **directionality** of the relation between affix and root may be relevant to semantic compositionality. If, as Bybee proposes, the proximity between affix and stem reflects the degree of relevance between stem and affix, one might expect that the direction of scopal relations between affixes might also differ between prefixing and suffixing languages. Kwakwala is exclusively suffixing, and distance between root and suffix increases from left to right. Although directionality of both iconicity and scope is not uniform, the examples in sections 6.3.1 and 6.3.2 reveal a general pattern in Kwakwala of rightward suffixes, farther from the root, governing the suffixes preceding them. Athapaskan languages, on the other hand, are exclusively prefixing, and the leftmost prefixes are farthest from the root. Because Athapaskan verbs are prefixing and the stem is at the right edge of the predicate word, one possibility is that the order is reversed and Dene verbs leftward prefixes, farther away from the stem, exhibit scope or other semantic effects over rightward prefixes closer to the stem. A comparison between the data provided for Dene verbs by Rice

(2000; 2011) and data from the corpus for Kwakwaka'ala allows comparison between the two patterns.

Rice presents several examples of motion events in Athapaskan languages in which morphemes indicating LOCATION (that is, GOAL or ENDPOINT) *precede* morphemes indicating RELATION between Figure and Ground. These are reprinted here. (Note that Rice identifies what I call prefixes as preverbs, and considers them bound lexical elements, rather than functional elements.)

(314) SLAVE: LOCATION-RELATION

- a. *te-ká-yi-ya*
 water-out.of-aspect-sg.go
 'S/he got out of water' (Rice 1989)

- b. *teh-k'e-ts'e-ne-tah*
 water-around-humanSubject-qualifier-stem
 'look around in water, feel around in water with stick' (Howard 1990:393)

As Rice says, “[t]he[se] forms...show that *preverbs specifying location precede those specifying relational concepts of direction, source, and position*. For example, in (a) *teh* ‘water’ is a location and *ká* ‘out (of)’ specifies a direction; in (b) *teh* specifies the location while *k'e* represents a relative position. The relational items share properties with postpositions, following their complement” (Rice 2000: 86, ital. DR).

Rice presents similar data from other Athabaskan languages, with morphemes identifying Ground LOCATION preceding morphemes that identify RELATIONSHIPS between Figure and Ground.

(315) AHTNA (Kari 1990)

- a. *ti-k'e-ni-yaa*
 trail-on-aspect-sg.go perfective
 'He came to a trail' (*ti* ‘trail’ + *k'e* ‘on’) (335)

- b. *ti-c'a-ni-yaa*
trail-away.from-aspect-sg.go perfective
 'He went into the woods.' (*ti* 'trail' + *c'a* 'away from') (335)
- c. *ta-tes-ni-yaa*
water-across-aspect-sg.go perfective
 'He went over a portage' (*ta* 'water' + *tes* 'over') (334)

(316) CARRIER (Morice 1932)

- a. *tša-ha-d-ez-yê*
mouth-from-qualifier-aspect-stem
 'take food away from one's own mouth' (*tša* 'mouth' + *ha* 'from') (I:629)
- b. *khwen-the-thi*
house-amidst-stem
 'There is a road' (*khwen* 'house' + *the* 'amidst') (I:635)

(317) NAVAJO (Young and Morgan 1987)

- a. *ta-na-'a-sh-gizh*
water-around-unspecifiedObject-1.sg.Subject-stem
 'I thicken it (mush, cream of wheat) by stirring.' (701)
- b. *bi-zá-k'i-dee-sh-nílh*
 3 possessor-**throat/neck-on**-qualifier-1.sg.Subject-act.with.hands
 'I choke him (with the hands).' (*bi* 3, *zá*, 'throat, neck', *k'i* 'on') (57)

As Rice points out, "The same semantic relationship holds in these languages as in Slave: *preverbs specifying location (e.g. woods, shore) precede those specifying direction, source and position (e.g. towards, from, arrival at, on, in, among)*" (Rice 2000:86, ital DR).

These examples from Dene predicates could support a hypothesis that in prefixing languages with verb stems at the right, we find a reversal of scopal relations relative to the stem. In Kwakwáala, suffixes identifying **relation** between Figure and Ground *precede* suffixes identifying **location**. In contrast, in the Dene examples, the order is reversed: prefixes identifying location appear farther to the left, away from the stem, while preverbs specifying relation between Figure occur closer to the stem.

Another set of examples exhibit what Rice calls a ‘**modifying**’ relationship between preverbs. In these combinations, “[a]ll of the constructions in (the examples below) are cases where the second preverb is *ní* ‘terminative, arrival at an endpoint’. The first preverb specifies the manner in which that endpoint is achieved’ (Rice 2000:88). Examples of such modifying relationships from Rice (2000) are presented here.

(318) SLAVE (Howard 1990)

- a. *lé-ní-ts’-i-a*
 in half-terminative-humanSubject-aspect-stem
 ‘fold’ (9)
- b. *séé-ní-ts’-i-h-thi*
 good-terminative-mind-humanSubject-aspect-valence-stem
 ‘think over, get straightened in mind’ (148)
- c. *xo-ní-a-go-ts’-i-h-thi*
 spouse-terminative-iterative-areal-humanSubject-aspect-valence-stem
 ‘get married, establish home’ (182)
- d. *taá-nó-ts’-i-tséh*
 dead-terminative-humanSubject-aspect-stem
 ‘kill with spear’ (567)

In each of these examples, the first element is the last temporal element to occur, the one that Rice identifies as the ‘manner’ in which an endpoint is achieved.

However, I think an equally plausible proposal reverses the interpretation offered by Rice. Something being folded results in it being ‘in half’ *lé-*; something that one thinks over and gets straight in their mind results in ones’ thinking being ‘good’ *séé-*; the act of marrying results in having a spouse *xo-*; and the act of killing results in an object being dead *taá-*. If, rather than manner, these initial morphemes are read as resulting states — then ‘result’, rather than ‘manner’, could be an apt characterization for these ‘final’ (leftmost) Slave preverbs. In contrast to Kwákwála, for which earlier components of an event also

appear closer to the root, these examples could also suggest that a resultative meaning occurs farther away from the root — and that the directionality of scope in an Athabaskan verb would be reversed, proceeding from left to right. Prefixing morphemes (or preverbs) farther away from the root — farther to the left — would have scope over rightward affixes closer to the root.

Rice, however, argues that Dene verbs have a unifying pattern of scopal relations from right to left, as found in many scopal relations in Kwakwaka: “(a)n element of greater scope appears to the right of elements within its scope” (Rice 2000:125). Rice notes that according to this generalization, “a primary idiosyncrasy of the Athapaskan verb is that the verb stem is located in the ‘wrong’ place in the surface string” (Rice 2000:78). Because Rice argues for right-to-left scopal directionality, she must also assume a movement-based account, locating the verb stem originally at the left edge in the ‘deep structure’ of the syntax of a predicate, but surfacing at the right edge through transformations (Rice 2000:78). This analysis counters expectations such as the one established by Baker 1992, that “morpheme order correlates with semantic scope in a simple and predictable way: the morpheme farther from the stem is interpreted as having scope over the morpheme closer to the verb stem... This... is a universal property of languages as far as I know” (Rice 2000:24, quoting Baker 1992:102). But by proposing a movement-based account, Rice finds that Dene predicates still conform to what she considers “an expected and common ordering among languages” (Rice 2000:75). In arguing for a right-to-left scopal hierarchy, however, Rice interprets the ‘relation’ preverbs, with meanings such as ‘on’, ‘away.from’, ‘across’, and ‘amidst’ as having scopal command over the location preverbs with meanings such as ‘water’, ‘trail’, and ‘mouth’. And yet, these preverbs look very similar to data we have seen

in K^wak^wala, and we might just as well argue that these locative affixes replicate, in reverse, the DIRECTION-LOCATION sequence found in K^wak^wala, reflecting a reversed directional relationship between affix and root in the prefixing Dene verb. Similarly, while Rice argues that the terminative marker has scope over the preceding ‘manner’ preverbs with meanings such as ‘in.half’, ‘dead’, ‘spouse’, one might also argue that the left-most preverb describes a final state, arrived at through the action identified in the verb stem — and thus this location of the preverb at the beginning of the word results from the prefixing morphology of the language.

The data from Athabaskan languages might also support a hypothesis that in polysynthetic languages, the semantic compositionality of affix order reflects some degree of proximity between affix and stem as well as morphological directionality. In the realm of event structure and spatial relations, this may be reflected in the linear order of affixes and in the scope of some affixes over others.

In this section, I showed that semantic compositionality takes the form of both iconicity and scopal relations reflecting both spatial and temporal relations. In section 6.3.1 I presented examples of iconicity; in section 6.4.2, I presented examples of scopal relations; and in section 6.4.3 I explored the possibility of a correlation between directionality in morphology and semantic relations. Iconic and scopal effects can coincide but do not necessarily co-occur and that these effects are not necessarily unidirectional within a predicate. Aspectual suffixes take scope over preceding material, while reversative suffixes can take scope over the affixal complexes to their right. Linear relations tend to proceed from left to right in K^wak^wala, which happens to coincide with both spatial and temporal forms of iconicity — but as we saw, this may not be a cross-linguistic universal.

6.4 Conventionalization

As pointed out by Mithun, even in languages such as Yup'ik, which are presented as having layered or hierarchical morphological structure determined by semantic conditioning, “the order of morphemes is still not fully free....Some orders...have occurred so often that they have become routinized, like *-yuumiite-* ‘not want’ (Mithun 1999:43). Such routinization, referred to here as conventionalization, of relations between position and function, contribute to morpheme order in Kwakwala predicates.

Mithun points out with regard to the Tuscaroran (Iroquoian) prefixes TRANSLOCATIVE *y-* ‘away’ and CISLOCATIVE *na*, which occur in different positions in a template, that “[t]heir positions are a result of history. The cislocative prefix became part of the verb morphology early in the evolution of the language while the translocative prefix was grammaticalized later” (Mithun 1999:43, citing Mithun 1999b). In this view, templatic position classes are the *result of* semantic, morphological, phonological and syntactic processes of language change. I refer here to the effects of **conventionalization** as a counterbalance to **productivity**. While at times, conventionalization is associated with **diachronic** processes, while productivity is associated with **synchronic** processes, the primary goal of this research is to describe the way in which affixes are ordered within a predicate, and not to reconstruct the linguistic history of these derivational affixes. The present work does not present a detailed historical study of language change grounded in longitudinal documentation of Kwakwala. Such a study may or may not be possible with the existing documentation, but it is left for a future investigation.

Rice (2000) notes that the synchronic forces she explores as motivations for affix ordering are also crucial in diachronic processes of word building. She links the syntactic argument of Baker's Mirror Principle to Givón's proposal that morphology is the result of grammaticalized syntax (Givón 1971). She also notes the kinship between the semantic principles of iconicity, and scope at work in synchronic processes of word building and Bybee's principle of *relevance* shaping lexical and grammatical structures over time. In this section, my observations are limited to synchronic phenomena that suggest diachronic processes. The synchronic processes discussed here are as follows: (1) **cohesion** of affixes with each other forming affixal constructions; (2) the existence of **subclasses** of affixes which relate to word structure in a paradigmatic (vertical) rather than syntagmatic (horizontal) mode; and (3) **conventionalization of associations between position and function** within both syntagmatic constructions and paradigmatic sets, resulted in divergence from iconic associations between linear position and spatial or temporal meaning.

Bybee (1985) defines the principle of semantic relevance as follows:

"The semantic relevance of an affix to a stem is the extent to which the meaning of the affix directly affects the meaning of the stem....[T]he degree of morpho-phonological fusion of an affix to a stem correlates with the degree of semantic relevance to the stem....A meaning element is relevant to another meaning element if the semantic content of the first direction affects or modifies the semantic content of the second. If two meaning elements are, by their content, highly relevant to one another, then it is predicted that they may have lexical or inflectional expression, but if they are irrelevant to one another, then their combination will be restricted to syntactic expression." (Bybee 1985:5-13).

This hypothesis predicts that morphemes that have close semantic relations are also likely to be close to each other, and eventually lexicalize or fuse further grammatically.

"Relevance...makes predictions concerning the *degree of fusion* of formal elements" (Bybee 1985:16).

The research presented here emphasizes the description of what affix-orders are found in K^wak^wala predicates, and observations about the factors that seem to condition affix-order. Many factors contribute to linguistic change over time. Frequency effects, for example (Mańczak 1980), have been proposed to lead some forms to become dominant or ‘basic’, while also conserving irregularity or zero expressions. Morphemes that are frequently adjacent can cohere, fuse and become portmanteau morphemes, leading to a loss of sequential flexibility. The semantic ‘bleaching’ and phonological reduction associated with processes of grammaticalization can also lead to loss of semantic transparency, productivity, and compositionality. In section 6.5.1, I discuss cross-linguistic research on templatic morphological structure with respect to K^wak^wala data, before moving on to discussions of the synchronic evidence for conventionalization as a contributing factor to K^wak^wala affix order.

6.4.1 Templatic ordering of affixes

When the order of morphemes within a morphologically complex language is rigid and inflexible, and these constraints on affixal sequence are not motivated by other grammatical factors such as semantic, phonological or syntactic rules, these predetermined patterns are often called **templates**. Inkelas defined templates as follows: “morphological systems in which morphemes or morpheme classes are organized into a total linear ordering that has no apparent connection to syntactic, semantic, or even phonological organization” (1993:56). Linguists often discuss templates in terms of numbered ‘position classes’, each of which contains a predictable subclass, or PARADIGM, of affixes. The affixes within a paradigmatic set cannot co-occur, and replacement generates a functional shift in meaning. Such a

paradigm may modify a constituent for tense, or provide locative information, or identify grammatical relations. On the other hand, in some templates, semantically related affixes occur in different positions.

Grammars of native North American languages often included templates as a matter of course and listed affixes according to position class, and where applicable, providing distinct templates for nouns and for verbs (cf. McLendon 1966). An example of a verb template for Iroquoian languages is reprinted here from Mithun (1999).

PREPRONOM. PREFIXES	PRONOMINAL PREFIXES	REFLEXIVE PREFIX	NOUN ROOT	VERB ROOT	DERIVATIONAL SUFFIXES	ASPECT SUFFIXES	FINAL SUFFIXES
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Figure 19: NORTHERN IROQUOIAN VERB TEMPLATE (Mithun 1999:42)

Within the Iroquoian verbal template, there are multiple prepronominal prefixes occurring in first position, as well as multiple derivational suffixes, and within each ‘zone’ identified above for the Iroquoian verb, these individual members of the prepronominal prefix class and the derivational prefix class also co-occur in an equally fixed, or templatic, order in relation to each other. In Tuscarora (Iroquoian) word, multiple pre-pronominal prefixes combine in an obligatory order.

(319) TUSCARORA AFFIX ORDER (Mithun 1999:42)

yaʔnə́:tsyə:t

y-ʔa-ʔn-əts-ye-e-t

TRANSLOCATIVE-FACTUAL-DUALIC-REPETITIVE-INDEFINITE.AGENT-go-PERFECTIVE

‘they two went back there’ (Elton Greene, speaker)

As Mithun says “(Tuscarora) speakers have no choice in morpheme order, which is invariant....The order cannot be said to reflect semantic or syntactic scope. Among the prepronominal prefixes are both the translocative *y-* ‘away’ seen above and a cislocative *na-* ‘toward’. They are nearly perfect counterparts: ‘thither’ and ‘hither’. Yet they occur in different positions in the template.” (Mithun 1999:42-43)

Several features have been proposed as diagnostic of templatic morphological structure. Linguistics expect that in a semantically compositional word, inflectional morphemes will tend to occur ‘outside’ derivational affixes, farther away from the root and closer to the edge of the word. Hence, the unexpected and seemingly-arbitrary interleaving of inflectional and derivational morphology is one motivation for providing a template for verbs in Dene languages, which tend to locate various person markers in different positions in relation to the root and to other derivational prefixes (Rice 2000:10). Another feature considered indicative of templatic morphology is the presence of *discontinuous dependencies* between more than one morpheme, for which the presence of one morpheme conditions or requires the other, as in Caddo, for which the presence of a DATIVE prefix in position 14 requires the presence of a DATIVE-APPLICATIVE prefix in position 9 (Melnar 2004:18). A related phenomenon is the ability of a morpheme from the outer edge of the word to influence the selection of an ‘inner’ morpheme, closer to the root.

Nevertheless, it can be difficult to determine whether a language has templatic structure in its morphology. Dene languages fulfill the criteria above but their morphological structure is still a matter of debate. For this reason, Dene languages have become a crucial testing ground for proposals about affix-ordering. Some describe Dene languages as having prototypical templatic ordering, some integrate a templatic approach with additional factors (Kari 1989; Hargus 2007), while still others argue that the order of Dene prefixes (or preverbs) is sensitive to factors of semantic scope (Rice 2000) or phonology (McDonough 2013), and thus non-arbitrary and non-templatic. In contrast to the Dene language family, the morphological structure of Kwakwala does not appear to be templatic according to the criteria presented above. It is notable that in his work on Kwakwala, Boas never proposed a

morphological template to predict affix order. The zone of derivational suffixes is closer to the root while the zone of inflectional clitics resides on the rightmost edge of the word. The meanings of many words can be explained as a result of semantic composition, the result of a morpheme-by-morpheme process of word building. On the other hand, there are some ways in which the structure of the K^wak^wala predicate cannot be predicted exclusively from semantic effects.

As mentioned, there are three types of evidence for additional levels of structure. Section 6.5.2 addresses cohesion among affixes, leading eventually to fusion and grammaticalization.⁸⁴ Although Bybee focused on the relationship between affixes and the word stem, I also extend her concept of relevance to relationships among adjacent affixes. While adjacent affixes that occur together frequently have underlying shared semantic structure holding them together, these combinations also begin to develop a coherence, a form-meaning pairing, hence becoming a type of construction. Here, the directional suffixes form the core of affixal constructions associated with conventionalized interpretations of the locative suffixes surrounding them. Section 6.5.3 discusses paradigms within the derivational morphology of the predicate, with two subclasses of derivational affixes that operate in a paradigmatic way within K^wak^wala predicates: directional suffixes and context-providing locative suffixes. Section 6.5.4 addresses the conventionalization of the association between position of an affix in a sequence, and the function of this position.

This section does not argue for templatic morphological structure within K^wak^wala. However, it does argue against the hypothesis that morphological structure can be understood exclusively as the result of synchronic semantic effects. The structural features

⁸⁴ The term *cohesion* is used in a specific sense by Halliday and Hasan with reference to the relationship between semantic relations and linguistic structure; they refer to cohesion in syntax and discourse. However, I believe it also extends, especially in polysynthetic languages, to morphology. (Halliday and Hasan 1976)

described here, paradigm and cohesion, are not, in any way, arbitrary: they have their roots in the relationship between meaning and form. But over time, and through what Haiman calls ‘ritualization’, language change through repetition, associations between form and meaning become limited through the process of encoding, or grammaticalization (Haiman 1994). It is this process of language change that gives rise to emergent areas of non-transparent structure within the K^wak^wala predicate.

6.4.2 Cohesion

In earlier sections, I presented evidence for lexicalization between roots and affixes, as well as cohesion between and among affixes. The combination of the reverse locative suffix *-wä* with an atelic directional suffix *-(g)əł* to form the reverse directional suffix *-wəł* is one example of cohesion. Other reverse locative combinations have also been noted.

With the small subset of locative ‘context’ suffixes, we also see effects of cohesion due to frequency. In this case, the cohesion is between aspect markers and the locatives suffixes. Boas noted: “There is a series of forms expressing verbs of position which end in *-alit*, *-alis*, *-əłəχs*. These are presumably derived from *-əłə-^oit* (-POS-INDOOR), *-əłə-^ois* (-POS-OUTDOOR), *-əłə-^oəχs* (-POS-BOAT)... When these suffixes follow another suffix they are in most cases preceded by /l/: *-lit*, *-lis*, (*-^oit* INDOOR, *-^ois* OUTDOOR), *-əłs* (*-!s* GROUND), /l’/ (*-!a* ROCK), and by /ʎ/ (*-^oəχs* BOAT), which in all probability is derived from /ʎ/ since *-^oəχs* is one of the suffixes that does not weaken spirants” (B47:329). According to predictable weakening effects of these suffixes, Boas hypothesizes that in all cases, the /l/, /ʎ/ and /l’/ preceding these locative context markers result from a fossilized combination of the

positional marker *-ala* with locative forms, and that the differences reflect different boundary effects of the locative suffixes.

However, the examples below illustrate a persistent contrast existing between different ‘allomorphs’ of these locative context suffixes.

(320) CONTRASTS BETWEEN ALLOMORPHS OF LOCATIVE CONTEXT SUFFIXES

- a. *kʷásGəmalil*
kʷa-sGəm-[alil]
 sit-ROUND-INDOOR
 ‘to be seated on a round thing in a house’

kʷəsGəmlila
kʷa-sGəm-[lil]-a
 sit-ROUND-INDOOR
 ‘to sit down on a round thing in a house’

- b. *kʷádʷəlil*
kʷa-dʷu-[alil]
 sit-FLAT-INDOOR
 ‘to be seated on a flat thing in a house’

kʷədʷulila
kʷa-dʷu-[lil]-a
 sit-ROUND-INDOOR
 ‘to sit down on a flat thing in a house’

- c. *kʷádʷələʔa*
kʷa-dʷu-[ala]
 sit-FLAT-ROCK
 ‘to be seated on a flat thing on a stone’

kʷədʷulila
kʷa-dʷu-[l]-od
 sit-ROUND-INDOOR
 ‘to sit down on a flat thing on a stone’

- d. *kʷáʔstatəχs*
kʷa-ʔsta-[təχs]
 sit-LIQUID-BOAT
 ‘to be seated in water on a canoe’

kʷədʷulila

k^wa-ʔsta-gaʔl-[əχs]
sit-LIQUID-DIR.TEL-BOAT
'to sit down in water on a canoe.

(B47:329)

These minimal pairs suggest a meaningful aspectual contrast between *{-alit}* and *{-lit}*, between *{-ala}* and */l/*, and between *{-ləχs}* and *{-əχs}*. This is a contrast between stative and active forms, between (in these cases) being seated in a place and sitting down in a place. This is due to a contrast between the way in which the positional aspect marker *-ala* and the continuous aspect marker *-əla* combine with locative suffixes. At the same time, the forms have fused and routinized such that they no longer appear in their fully predictable phonological form. Although even Boas identified forms such as *-alit* and *-lit* as simply locative markers, we can see that the contrasts between the two are semantically significant.

6.4.3 Paradigms

Two subclasses of affix have been described in previous chapters. The first is a subset of locative suffixes which, while they can sometimes be used to express immediate location immediately following the root, can also be used following other derivational suffixes, often at the outside edge of the word, to express a broader context within which a Figure is located or an event takes place. There are four of these suffixes used within the modern corpus: *-^oit* INDOOR, *-^ois* OUTDOOR, *-^oχs* BOAT and *-əls* OUTSIDE. An additional suffix identified by Boas, *-la* ROCK, is not represented in the modern corpus. The first two forms, *-^oit* and *-^ois*, reflect a culturally salient binary contrast between the space inside a house (or other human-built structure), and the space outside, in nature; between space governed by people and the space governed by other forces (Nicolson 2013). The third and fourth suffixes *-^oχs* BOAT and *-əls* OUTSIDE, may also reflect a contrast, between resting or moving on liquid and resting or

moving on solid ground. We have seen the ways in which these forms contrast with each other. In the first example below, the table is inside a house, while in the second example, the table is outside.

(321) CONTEXT LOCATIVES

- a. *gid^zu^waliloχda* *láχoχ* *dámsisGəm.*
 gəy-d^zu-(ʔə)w^əle-^oil=oxda la=χoχ dəmsisGəm
 be_at-FLAT-INADV-INDOOR=S.DEM PREP=DEM table
 ‘The bottles are on top of the table (inside)’ (2014jan23_LJ)
- b. *gid^zu^walisoχda* *laχoχ* *dəmsisGəm.*
 gəy-d^zu-(ʔə)w^əle-^ois=oxda la=χoχ dəmsisGəm
 be_at-FLAT-INADV-OUTDOOR=S.DEM PREP=DEM table
 ‘The bottles are on top of the table (outside)’ (2014jan23_LJ)

Other examples of these forms and their function are present throughout the data presented in the dissertation, most recently in (318). While these suffixes reflect semantic compositionality within the predicate, the restriction of the subclass, and the position of these forms at the very edge of the word, preceding inflectional material, also indicates the emergence of paradigmatic structure.

The second paradigm is the set of three directional suffixes, the atelic directional *-(g)əł*, the telic directional *-(g)ał* and the reverse directional *-wəł*, which were described in section 5.6.3. These suffixes do not co-occur with each other; they contrast in both formal and semantic ways; and they occur in a predictable sequence within the predicate, always followed by a locative suffix, and (in the case of *-(g)əł* and *-(g)ał*), optionally preceded by a locative suffix as well. We have seen extensive examples of the directional suffixes already. The example below illustrates the contrast between the atelic and telic forms.

(322) DIRECTIONAL SUFFIX PARADIGM

ʔuxλəgəłəχsa

ʔuxλ(ə)-(g)əł-əχs-əla

carry.back-DIR.ATEL-BOAT-CONT

‘to lift load out of canoe’

(B47:349.R207.48)

ʔuxλəgáłəχsa

ʔuxλ(ə)-(g)áł-əχs-əla

carry_back-DIR.TEL-BOAT-CONT

‘to put load down in canoe’

(B47:349.R218.12)

The historical origin of the reverse directional is, as discussed earlier, still reconstructible as a combination between the reverse locative *-wā* and the atelic directional *-(g)əł*. The reverse directional does not allow locative suffixes to precede it — at least, I have encountered no examples in which a locative suffix precedes it, likely because it already possesses an inherent directionality (away, off, or out). As such, it may not belong as neatly to the paradigmatic set of *-(g)əł* and *-(g)áł*. The example below, which we have seen before, offers a minimal pair comparing presence and absence of *-wəł* in a predicate.

(323) REVERSE LOCATIVE

ńəmúχ guG^wəyúwása

ńəmuχ guG^wəyú=(a)sa

one foot/leg=POSS

‘One of the frog’s legs is out of the jar,’

wəqəsiχ

wəqesiχ

frog=DEM

ʔəχ^wəłcóta

ʔəχ-wəł-čəw-ala

root-DIR.REV-IN-POS

láχ^wa dəmxisGəmχ

láχ^wa dəmxisGəm=χ

PREP jar=T.DEM

lída

la=ida

AUX=SBJ

and one leg is in the jar.’

ńəm

ńəm

one

guG^wəyú

guG^wəyú

foot/leg

ʔəχ^wcóta

ʔəχ-čəw-ala

root-IN-POS

láχ^wa

láχ^wa

PREP

dəmxisGəm(χ)

dəmxisGəm(χ)

jar

(2013jul15_BL_3)

As described in the previous section and in earlier chapters, locative suffixes preceding these directional suffixes are interpreted as indications of orientation or direction, as will be recalled from the following example and others like it.

While these three suffixes do not form a perfect paradigm, they form a distinctive subclass around which locative suffixes cohere and form an affixal construction.

6.4.4 Conventionalization

Through conventionalization, semantic associations for specific morphemes shift and become diluted, while new associations arise between position and function. Such conventionalization contributes to the semantic contrast between the two forms repeated here in (324).

(324) DIRECTIONAL SUFFIX PARADIGM

ʔuxʎagəʎəʎsa

ʔuxʎ(ə)-(g)əʎ-əʎs-əʎa

carry_back-DIR.ATEL-BOAT-CONT

‘to lift load out of canoe’

(B47:349.R207.48)

ʔuxʎagáʎəʎsa

ʔuxʎ(ə)-(g)áʎ-əʎs-əʎa

carry_back-DIR.TEL-BOAT-CONT

‘to put load down in canoe’

(B47:349.R218.12)

In the above examples, the locative suffixes following the directional suffixes have a predictable meaning related to their position following the directional suffix; the locative suffix following *-(g)əʎ* is analyzed as the starting point of motion, while the locative suffix following *-(g)áʎ* is analyzed as the destination of motion. The semantic interpretation of these pairings of suffixes is neither iconic nor scopal: it is conventionalized.

Similarly, the association between the locative suffix preceding the directional morpheme, and a sense of direction or orientation rather than location, is conventionalized.

(325) LOCATIVE PRECEDING DIRECTIONAL

kacʔstogaʔli

kat-ʔsto-gaʔl-°i

long_horiz-OPENING-DIR.ATEL-INDOOR

‘to lay a stick or broom **toward the door** on the floor, to lay a stick or broom on

the floor **by the door**’

(20140131_SW_4)

These examples were provided as an illustration of the iconicity of the sequence LOC.SUFF-DIR.SUFF-LOC.SUFF. However, they can also serve to illustrate, in combination with the cohesion of these affixes discussed below, the origins of conventionalized meaning; the interpretation of *-ʔsto* OPENING as meaning ‘toward the door’ derives from the combination of semantic meaning, pragmatic interpretation (providing the meaning ‘door’ in the context of an indoor space) *and position* preceding the directional suffix.

6.5 Conclusions

This chapter examined the order of derivational affixes within the Kwakwala predicate, and the forces structuring this sequence. Semantic compositionality exerts a strong effect on the order of affixes, through both iconic and scopal effects. Contrary to findings for other languages, such as the Dene family described by Rice, affix order in Kwakwala is not structured according to a uniform principle of directionality or hierarchical scope. Rather, multiple types of semantic compositionality contribute in different ways to the ordering of affixes, and both linear effects and hierarchical effects operate in both directions within the word (left to right and right to left). In addition to semantic compositionality, the derivational affixes display evidence of emergent structure in both paradigmatic (vertical) relationships among subsets of affixes and cohesive (horizontal) relationships among sequences of affixes.

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APPENDIX I: ORTHOGRAPHIES AND PHONETIC CORRESPONDENCES

Note: All examples have been transliterated to the 'NAPA' (North American Phonetic Alphabet) orthography.

NAPA	BOAS	U'MISTA
CONSONANTS		
b	b	b
p	p	p
p̣	p!	p̣
d	d	d
t	t	t
ṭ	t!	ṭ
g	g	g
g ^w	gw	gw
k	k	k
k ^w	kw	kw
ḳ	k!	ḳ
ḳ ^w	k!w	ḳw
G	g	g
G ^w	gw	gw
q	q	kẉ
q ^w	qw	kẉ
q̣	q!	ḳ
q̣ ^w	q!w	ḳw
λ	Ḷ	dɬ
λ̣	L	tl
λ̣̣	L!	tɬ
d ^z	dz	dz
c	ts	ts
c̣	ts!	ṭs
ɬ	ɬ	ɬ

NAPA	BOAS	U'MISTA
s	s	s
x	x	x
x ^w	xw	xw
χ	x	x̣
χ ^w	xw	x̣w
h	h	h
m	m	m
ṃ	^ε m	‘m
n	n	n
ṇ	^ε n	‘n
l	l	l
ḷ	^ε l	‘l
y	y	y
ỵ	^ε y	‘y
w	w	w
ẉ	^ε w	‘w
VOWELS		
i	e ⁻	i
	i	e
a	a ⁻	a
u	o ⁻	o
	ä	u
ə	ε	a
	ã	
	â	

APPENDIX II: INFLECTIONAL CLITICS

Table 1: 3rd Person Demonstrative Verbal Enclitics and Postnominals

3.DEM	ATTACHED TO PREDICATE		POSTNOMINAL
	PRONOMINAL	PRENOMINAL	
PROX.VIS ⁸⁵	= <i>k</i>		= <i>k</i>
PROX.NVIS	= <i>gaʔ</i>	= <i>ga(da)</i>	= <i>ga</i>
PROX.VIS	= <i>uχ</i>		= <i>iχ</i>
PROX.NVIS	= <i>uʔ</i>	= <i>uχ(da)</i>	= <i>aχ, =ač</i>
DIST.VIS	= <i>iq</i>		--
DIST.NVIS	= <i>iʔ</i>	= <i>i(da)</i>	= <i>a</i> }= <i>i</i>

(adapted from Boas 1947:252)

Table 2: 3rd Person Pronominal and Adnominal demonstrative enclitics

3.DEM	PRONOMINAL			PRENOMINAL		
	SBJ	OBJ1	OBJ2	SBJ	OBJ1	OBJ2
PROX.VIS	= <i>k</i>	= <i>qək</i>	= <i>sək</i>	= <i>ga(da)</i>	= <i>χga(da)</i>	= <i>sga(da)</i>
PROX.NVIS	= <i>gaʔ</i>	= <i>χgaʔ</i>	= <i>sgaʔ</i>			
MED.VIS	= <i>uχ</i>	= <i>q^w</i>	= <i>suχ</i>		= <i>χ^wa</i>	= <i>sa</i>
MED.NVIS	= <i>uʔ</i>	= <i>q^w</i>	= <i>suʔ</i>	= <i>uχ(da)</i>	= <i>χuχ(da)</i>	= <i>suχ(da)</i>
		= <i>quʔ</i>				
DIST.VIS	= <i>iq</i>	= <i>q</i>	= <i>s</i>	= <i>i(da)</i>	= <i>χ(a)</i>	= <i>s(a)</i>
DIST.NVIS	= <i>iʔ</i>	= <i>qi</i>	= <i>si</i>			

(adapted from Boas 1947:252)

Table 3: Transitive predicates with primary object

SUBJECT	PRIMARY OBJECT				
	1SG	1INCL	1EXCL	2 ND	3 RD
1SG	---	---	---	= <i>ənʎoʎ</i>	= <i>ənʎaq</i>
1INCL	---	---	---	---	= <i>əncaq</i>
1EXCL	---	---	---	= <i>ənuʔχ^woʎ</i>	= <i>ənuʔχ^waq</i>
2 ND	<i>gaχən</i>	---	<i>gaχənuʔχ^w</i>	---	= <i>siq</i>
3 RD	<i>gaχən</i>	<i>gaχənχ</i>	<i>gaχənuʔχ^w</i>	= <i>uʎ</i>	= <i>q</i>

(adapted from Boas 1947:253)

⁸⁵ Boas named these demonstratives according to their proximity to speech participants, as ‘Demonstrative of 1st person, visible, Demonstrative of 2nd person, visible, etc.’ It is not clear whether this reflects additional referential qualities other than proximity, such as actual proximity to speakers, or discourse relevance. The labels Proximal, Medial and Distal are not intended to be exclusively concretely referential; and one can assume some degree of metaphoric or deictic extension.

Table 4: Transitive predicates with secondary object

SUBJECT	SECONDARY OBJECT				
	1SG	1INCL	1EXCL	2 ND	3 RD
1SG	---	---	---	= <i>ən</i> λos	= <i>ən</i> λas
1INCL	---	---	---	---	= <i>əncas</i>
1EXCL	---	---	---	= <i>ənu</i> λχ ^w us	= <i>φu</i> λχ ^w as
2 ND	= <i>secən</i>	---	= <i>secən</i> λχ ^w	---	= <i>sis</i>
3 RD	= <i>ən</i>	= <i>ənc</i>	= <i>ənu</i> λχ ^w	= <i>us</i>	= <i>s</i>

(adapted from Boas 1947:253)

Table 5: Possessive enclitics for 1st and 2nd person

3.DEM	PRENOMINAL				POSTNOMINAL	
	1SG	1INCL	1EXCL	2 ND		
PROX.VIS	= <i>gin</i>	= <i>ginc</i>	= <i>ginu</i> λχ ^w	= <i>gas</i>	= <i>g</i> =	<i>With the</i>
PROX.NVIS					= <i>ga</i> =	<i>O2 endings</i>
MED.VIS				= <i>us</i> , = <i>χs</i>	= <i>q</i> =	<i>of the</i>
MED.NVIS	= <i>ən</i>	= <i>ənc</i>		= <i>uχs</i>	= <i>q̇</i> =	<i>appropriate</i>
DIST.VIS				= <i>is</i>	--	<i>persons.</i>
DIST.NVIS					= <i>a</i> =	

(adapted from Boas 1947:253)

Table 6: Possessive enclitics for 3rd person

3.DEM	POSSESSOR SUBJECT OF SENTENCE		POSSESSOR NOT SUBJECT OF SENTENCE	
	PRENOMINAL	POSTNOMINAL	PRENOMINAL	POSTNOMINAL
PROX.VIS		= <i>k</i>		= <i>gas</i>
PROX.NVIS	= <i>gas</i>	= <i>ga</i> λ	= <i>ga</i>	= <i>ga</i> λs
MED.VIS		= <i>q</i> (= <i>iχ</i>)		= <i>χs</i> (= <i>aχs</i>)
MED.NVIS	= <i>us</i>	= <i>q̇</i> (= <i>aq̇</i>)	= <i>uχ</i>	= <i>q̇is</i>
DIST.VIS		---		= <i>s</i>
DIST.NVIS	= <i>is</i>	= <i>a</i>	= <i>i</i>	= <i>as</i>

(adapted from Boas 1947:254)

Table 7: Purposive clauses

1SG	<i>qən...a</i> (λən)
1INCL	<i>qənc...a</i> (λənc)
1EXCL	<i>qənu</i> λχ ^w ... (<i>a</i> (<i>n</i> u)λχ ^w)
2 ND	<i>qaλs...a</i> λus
3 RD (POSSESSOR = SUBJECT)	<i>qaλs...a</i>
3 RD (POSSESSOR ≠ SUBJECT)	<i>qaλ...is</i>

(adapted from Boas 1947:274)

Table 8: Terminal markers on possessed nominals occurring with pronominal predicates

	1.POSS	2.POSS	3.POSS
1	---	<i>nug^waʔams ... =us</i>	<i>nug^waʔams ... =s</i>
2	<i>súmən ... =s</i>	---	<i>súmən ... =s</i>
3	<i>hiʔən ... =∅</i>	<i>hiʔams ... =∅</i>	<i>hiʔəm ... =s</i>

(adapted from Boas 1947:259)

III: BIBLIOGRAPHIC ABBREVIATIONS

- M Social Organization and Secret Society of the Kwakiutl Indians. Rep. US Nat. Museum. 1895.
- III, V, X Kwakiutl Texts: Publications of the Jesup North Pacific Expedition. Memoirs of the AMNH. Vol. III, V, and X. Leyden.
- III Boas & Hunt. 1905.
- V Boas & Hunt. 1902
- X Boas & Hunt. Kwakiutl texts: second series. 1975
- C II, C III, C X, C 26 Columbia University Contributions to Anthropology.
- C II 1910. Kwakiutl Tales. Volume II.
- C III 1925. Contributions to the Ethnology of the Kwakiutl.
- C X 1930. Religion of the Kwakiutl Indians. Volume X. Volume 1 Kwak'wala; Volume 2 English Translation.
- C 26 1935. Kwakiutl Tales New Series.
- R 1921. Boas & Hunt. 35th Annual Report of the Bureau of American Ethnology
- BAV Boas Anniversary Volume, New York 1906
- MS Manuscript Notes
- '93, '00 Manuscript Notes taken in the respective years.

IV: TOPOLOGICAL RELATIONS PICTURE SERIES



V: SAMPLE CONSENT FORM

gáχd'olamoχ ʔəʔédəʔaqa? (It finally came back): Documenting conversation for language revitalization

CONSENT FORM

This document is an agreement intended to explain why we are making these recordings, what they are for, how they will be stored, and to create a record that protects these recordings from being used for any purpose which you do not approve of.

PROJECT DESCRIPTION

We are doing a project to make audio and video recordings of conversations in k^wak^wala and bak^wəmkala for the benefit of future generations. The audio and video recordings we create with you will help to revitalize the language in many ways:

- They can be used to create teaching materials.
- The translated and transcribed conversations will help us better understand the structure of the language so we can better teach it.
- We also hope that you enjoy the process of making the recordings. (So please tell us if there is something we can do to make it more fun for you!)

If you decide to be recorded, we will schedule appointments to make audio and video recordings of you speaking your language with other people who speak it too. If you agree, we would also like to take some still photographs. Students from local schools may help us with some recording sessions.

Afterwards we will also ask you to work with us to listen to the recordings and help translate and transcribe what you have said. These translation sessions will also be recorded.

These sessions can be as long or short as you like, and you will be paid an hourly rate for your time and expertise during both recording sessions and translation sessions. We will schedule our work to accommodate your schedule.

You are welcome to decide to limit the types of recording media we use in any way you like; please let us know if you prefer not to be video-recorded, or if you would prefer not to have your photograph taken.

Because we will be recording natural conversation, there may be times where you forget that you are being recorded or do not think about the potential for something you say to be heard by others. If you decide at any point that you would like us to erase something that has been recorded, we will do so right away. If you decide that you would like for your speech to be protected in other ways, or for access to your recorded speech to be restricted in any way, this will also be done.

STORAGE OF RECORDINGS AND PROTECTION OF YOUR PRIVACY

Copies of the recordings, as well as transcripts once they are ready, will be provided to you as well as to a local archive of your choice; an additional copy will be kept by the researchers (i.e. Daisy) and by another external archive equipped to manage and restrict access to the recordings. These materials will be held in these archives so that future generations have access to your language. In addition, I (Daisy) would like to request permission to study these recordings and analyze the structure of the language in them as a way to fulfill the requirements of my doctoral degree. This would include writing about these recordings and presenting my analysis at conferences and in other public venues; if you prefer to remain anonymous rather than being named in these publications and presentations, let me know and I will create an anonymous alias for you. If you are concerned about confidentiality, I can also create an anonymous alias for you in the archived data.

Because research documents are not protected from subpoena (in a legal case), absolute confidentiality cannot be guaranteed.

HONORARIA

We will pay you \$25/hour, up to and including 50 hours of work. All activities regarding language and culture scheduled in response to researcher requests will be considered paid time, including all recording sessions, translation, and transcription sessions wherever recording or instruction takes place.

You may refuse to participate in the project at any point. You may change your mind about participating and stop after we have started recording.

I understand the above explanation and (check all that apply below):

- I agree to be audio-recorded.
- I agree to be video-recorded.
- I agree to have my photograph taken.
- Transcriptions of my recordings can be published.
- My recordings can be played in public places.
- My recordings can be played on the internet.
- I would like to be anonymous.

Print Name: _____

Signature: _____ Date: _____

Please list contact information for another person you authorize to make decisions about access to these recordings (such as a younger family member you trust).

Name: _____

Address: _____ Phone: _____

Email: _____

CONTACT INFORMATION

If you have any questions about this project, please contact:

** Daisy Rosenblum 1308 Stannage Ave Berkeley CA 94702 Phone: 917 873 8957 Email: drosenblum@umail.ucsb.edu **

UCSB HS ID 12-531.

If you have any questions regarding your rights and participation in this project, you can also contact the Human Subjects Committee at (805) 893-3807 or hsc@research.ucsb.edu, or write to the University of California, Human Subjects Committee, Office of Research, Santa Barbara, CA 93106-2050